



USGS – Suwannee River Water Management District
FL 1.0 Meter LiDAR
Project Survey Report
Contract No. G10PC00093
Task Order No. G12PD00242

April, 2012

Prime Contractor

Digital Aerial Solutions (DAS)
8409 Laurel Fair circle, Suite 100
Tampa, Florida 33610



Sub-Contractor

Gustin, Cothorn & Tucker, Inc. (GCT)
121 Hart Street
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TABLE OF CONTENTS

INTRODUCTION & SPECIFICATIONS.....	3
HORIZONTAL & VERTICAL DATUMS.....	3
SURVEY AREA	3
CONTROL SURVEY	3
BASE STATION OCCUPATIONS - COORDINATE FIXES	4
ADDITIONAL CONTROL OCCUPATIONS - COORD. FIXES	5
FUNDAMENTAL VERTICAL ACCURACY POINTS.....	5
LIDAR CHECK POINTS	6
PPK GPS NETWORK ADJUSTMENT REPORT	8
VRS VERSUS PPK COORDINATE AVERAGES.....	83
NGS DATA SHEETS.....	85
EQUIPMENT, PERSONNEL & SOFTWARE	263

APPENDIX A = CONTROL FIELD DATA SHEETS

APPENDIX B = FUNDAMENTAL VERTICAL ACCURACY FIELD DATA SHEETS

APPENDIX C = CONTROL FORMS FOR OPUS-DB

APPENDIX D = OTHER CONTROL FIELD DATA SHEETS



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INTRODUCTION & SPECIFICATIONS

The purpose of this project was to provide ground truth data which will be used to validate LiDAR Data for the Suwannee River Water Management District Project located in Bradford, Union, Columbia, Madison, Lafayette, and Suwannee Counties, FL. GCT collected 54 check points in five different classifications spread throughout the project area. The Vertical Accuracy Requirements are required to meet or exceed an RMSEz of 9.25 centimeters and a Fundamental Vertical Accuracy requirement of 18.2 centimeters at the 95% Confidence Level according to the NDEP guidelines.

HORIZONTAL & VERTICAL DATUMS

The LiDAR Data and Coordinate Values for this project are referenced to the Universal Transverse Mercator (UTM), WGS 84, Zone 17 North and the North American Vertical Datum of 1988 (NAVD88). GEOID 09 was used to translate the ellipsoid heights to Orthometric heights. All coordinate values are presented in meters.

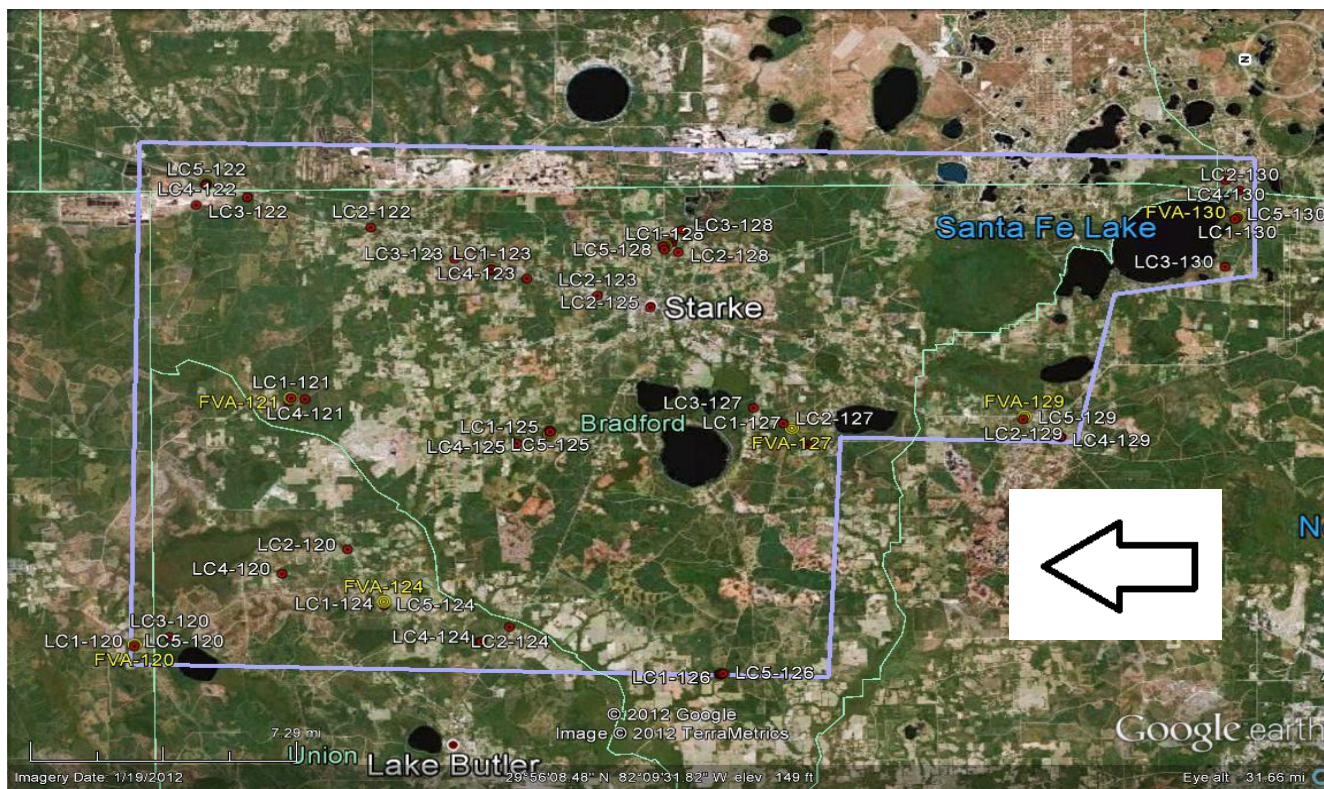
SURVEY AREA

The Survey Area consisted of approximately 725 square miles in Bradford, Union, Columbia, Madison, Lafayette, and Suwannee Counties, FL. The map located on the next page shows the general location of the check points and the FVA Points.

CONTROL SURVEY

This survey references only a portion of the project. The rest of this project has yet to be completed.

GCT used PPK (post processed kinematic) GPS Data and VRS GPS Data Collection to determine coordinate values for the LiDAR Check Points. Check Points were occupied for at least five minutes each with both VRS and PPK. A Network Adjustment was performed using the data that was collected via PPK GPS. For the PPK data collection, four Base stations were setup in a five mile square area, more or less, and check points that fell within the square were tied. Base stations were then positioned in another five mile square and check points falling within that square were located. This process continued until the entire area had been covered. Five of the PPK base stations data were submitted to OPUS for verification. Eight different Control Monuments were used for Base Station locations. Of those eight base stations, all eight were held both horizontally and vertically. Twelve additional control points were located with PPK. Of those twelve stations, three were held both horizontally and vertically; two were held horizontally and seven were held vertically. GNSS technology was used throughout the project area using varying types of Trimble GPS Receivers. Fixed height tripods and/or rover rods were used on all setups. The Network Adjustment was performed using Trimble Business Center Software.



BASE STATION OCCUPATIONS - COORDINATE FIXES

A 039	29°42'34.73213"	82°03'10.26037"	20.727	3287076.463	398157.807	48.615	0.400	48.737	12" RCM
E 621	29°59'31.82285"	82°01'28.98375"	43.633	3318359.925	401157.938	71.596	0.200	71.657	12" RCM
GCT-FL01	30°08'56.56002"	82°01'17.60606"	3.402	3335741.402	401618.130	31.498	0.000	31.498	ALDIRN
GCT-FL02	29°52'34.72065"	82°18'39.27526"	11.117	3305801.262	373403.682	39.023	0.000	39.023	ALDIRN
GCT-FL03	30°00'46.44881"	82°18'14.66033"	11.703	3320931.015	374236.051	39.777	0.000	39.777	ALDIRN
GNV E	29°41'11.14728"	82°16'22.60268"	10.847	3284717.711	376838.044	38.696	0.300	38.787	SSRIS
J 714	30°09'51.31835"	82°16'30.87524"	14.216	3337673.112	377203.750	42.465	0.200	42.526	SSR
KEYPORT	29°50'25.35244"	82°02'45.52697"	27.693	3301556.874	398953.763	55.576	0.350	55.683	SSRIS

Horizontal and Vertical Fixed

Horizontal only Fixed

Vertical only Fixed

ADDITIONAL CONTROL OCCUPATIONS - COORD. FIXES

Name	WGS-84, GEOID 09 (meters)			UTM, Zone 17, NAVD88 (meters)			Ground Elevation (meters)	Description
	Latitude (N)	Longitude (W)	Ellipsoid Ht	Northing	Easting	Elevation		
AD 30	29°54'48.52277"	82°12'15.32744"	16.605	3309807.454	383747.183	44.508	-1.000	44.203
BRADFORD 7	30°00'23.77532"	82°09'11.48486"	15.420	3320076.942	388781.054	43.407	0.200	43.468
BRADFORD 9	30°01'37.87674"	82°03'21.49787"	28.038	3322267.572	398178.854	56.036	0.300	56.127
D 714	30°09'04.38185"	82°12'16.32028"	14.555	3336154.156	383997.811	42.765	0.200	42.826
FLGPS 28	30°05'09.14678"	82°12'57.32164"	11.943	3328924.308	382823.764	40.079	0.300	40.170
FLGPS 29	29°36'19.03043"	82°02'04.00271"	18.806	3275495.910	399834.890	46.730	0.300	46.821
G 445	29°46'39.33463"	82°01'02.36823"	10.408	3294574.876	401660.718	38.308	0.000	38.308
I75 H 1	29°45'37.28008"	82°24'11.17527"	25.384	3293055.892	364342.955	53.239	0.000	53.239
M 368	29°55'39.07337"	82°07'20.91736"	17.763	3311283.579	391657.596	45.674	0.350	45.781
P 597	29°46'53.68568"	82°10'45.51401"	17.492	3295165.732	386005.971	45.348	0.000	45.348
V 368	30°06'13.72197"	82°03'06.59705"	32.128	3330755.225	398656.092	60.192	-0.100	60.162
V 445	29°42'59.65095"	82°08'25.98194"	13.370	3287924.000	389681.561	41.228	0.000	41.228
Horizontal and Vertical Fixed								
Horizontal only Fixed								
Vertical only Fixed								

These same fixes were held in both the PPK Network Adjustment and the VRS Site Calibration

UTM, Ellipsoid and Elevations are in meters.

FUNDAMENTAL VERTICAL ACCURACY POINTS

Name	WGS-84, GEOID 09 (meters)			UTM, Zone 17, NAVD88 (meters)		
	Latitude (N)	Longitude (W)	Ellipsoid Ht	Northing	Easting	Elevation
FVA-120	30°08'58.00571"	82°17'14.29986"	15.246	3336044.956	376023.608	43.489
FVA-121	30°05'14.52458"	82°09'28.81431"	13.779	3329031.879	388407.351	41.876
FVA-122	30°07'14.27074"	82°02'41.88215"	34.094	3332613.032	399334.651	62.170
FVA-123	30°00'26.92046"	82°05'25.71545"	21.101	3320114.523	394830.753	49.081
FVA-124	30°03'01.09089"	82°15'53.14797"	16.730	3325033.311	378073.099	44.841
FVA-125	29°59'03.16364"	82°10'37.65323"	17.116	3317618.932	386446.937	45.081
FVA-126	29°54'57.66882"	82°18'10.03530"	14.250	3310192.804	374238.004	42.184
FVA-127	29°53'17.24986"	82°10'26.01776"	17.453	3306967.472	386649.858	45.340
FVA-128	29°56'18.47665"	82°04'42.23174"	22.767	3312455.734	395923.822	50.686
FVA-129	29°47'44.11242"	82°10'04.76199"	17.556	3296706.848	387115.982	45.413
FVA-130	29°42'37.64294"	82°03'48.83157"	17.303	3287175.550	397122.184	45.186

LIDAR CHECK POINTS

Name	WGS-84, GEOID 09 (meters)			UTM, Zone 17, NAVD88 (meters)		
	Latitude (N)	Longitude (W)	Ellipsoid Ht	Northing	Easting	Elevation
LC1-120	30°08'57.40558"	82°17'15.55983"	15.163	3336026.862	375989.690	43.406
LC1-121	30°05'12.66067"	82°09'27.73518"	14.025	3328974.208	388435.659	42.121
LC1-122	30°07'14.42142"	82°02'43.18222"	33.818	3332617.989	399299.903	61.894
LC1-123	30°00'25.52247"	82°05'25.53145"	20.904	3320071.442	394835.273	48.884
LC1-124	30°02'59.43237"	82°15'56.84030"	16.645	3324983.349	377973.651	44.756
LC1-125	29°59'02.29927"	82°10'31.36907"	15.491	3317590.596	386615.068	43.456
LC1-126	29°54'56.73369"	82°18'07.27659"	14.474	3310163.178	374311.658	42.408
LC1-127	29°53'15.74982"	82°10'24.11741"	16.998	3306920.776	386700.362	44.885
LC1-128	29°56'18.42648"	82°04'48.83380"	22.578	3312455.854	395746.807	50.497
LC1-129	29°47'42.77781"	82°10'04.23730"	17.593	3296665.623	387129.653	45.451
LC1-130	29°42'38.05006"	82°03'49.85921"	17.204	3287188.335	397094.686	45.086
LC2-120	30°03'52.13093"	82°14'13.03160"	11.725	3326575.206	380771.279	39.841
LC2-121	30°05'14.96284"	82°09'29.51552"	13.853	3329045.560	388388.716	41.951
LC2-122	30°03'18.51760"	82°04'05.98880"	20.518	3325376.647	397016.041	48.546
LC2-123	29°57'54.41789"	82°06'15.02926"	22.445	3315432.716	393464.341	50.386
LC2-124	30°00'00.62419"	82°16'39.11719"	2.734	3319491.504	376780.013	30.766
LC2-125	29°56'38.85980"	82°06'37.19690"	31.329	3313112.567	392847.675	59.251
LC2-127	29°53'28.72086"	82°10'15.91517"	17.345	3307317.818	386924.446	45.234
LC2-128	29°55'58.80405"	82°04'53.56372"	24.439	3311853.021	395614.307	52.354
LC2-129	29°47'45.61626"	82°10'08.51516"	18.623	3296754.161	387015.684	46.481
LC2-130	29°42'34.44687"	82°02'58.20369"	20.706	3287064.736	398481.702	48.596
LC3-120	30°08'07.19839"	82°16'58.02016"	13.348	3334475.969	376441.570	41.579
LC3-121	30°05'16.00395"	82°09'34.52906"	12.756	3329078.970	388254.828	40.855
LC3-122	30°06'15.24138"	82°03'08.53251"	31.602	3330802.474	398604.720	59.667
LC3-123	30°01'18.44963"	82°05'05.54859"	19.505	3321695.609	395386.078	47.499
LC3-124	30°00'43.24710"	82°17'07.45817"	13.417	3320812.099	376035.358	41.475
LC3-125	29°59'06.71415"	82°10'40.58940"	16.518	3317729.037	386369.376	44.484
LC3-126	29°54'58.45441"	82°18'08.83249"	14.649	3310216.621	374270.534	42.584
LC3-127	29°54'11.31573"	82°09'46.81098"	14.817	3308621.080	387718.375	42.711
LC3-128	29°55'52.82022"	82°04'11.65691"	24.223	3311658.297	396736.171	52.138
LC3-129	29°46'51.71318"	82°10'42.08561"	17.889	3295104.073	386097.411	45.744
LC3-130	29°42'55.68884"	82°05'22.26476"	20.152	3287754.413	394616.788	48.023
LC4-120	30°05'26.08863"	82°14'58.95928"	15.121	3329480.977	379573.103	43.285
LC4-121	30°04'52.97700"	82°09'29.57745"	12.904	3328368.774	388380.199	40.993
LC4-122	30°07'28.53714"	82°03'22.84572"	31.884	3333062.287	398242.497	59.967
LC4-123	29°59'35.33412"	82°05'42.77416"	19.142	3318530.908	394358.546	47.109

Name	WGS-84, GEOID 09 (meters)			UTM, Zone 17, NAVD88 (meters)		
	Latitude (N)	Longitude (W)	Ellipsoid Ht	Northing	Easting	Elevation
LC4-124	30°00'40.58007"	82°17'06.87623"	13.123	3320729.823	376050.027	41.180
LC4-125	29°59'49.72261"	82°10'53.37410"	13.650	3319056.504	386040.423	41.632
LC4-126	29°55'00.13688"	82°18'07.74311"	14.881	3310268.082	374300.335	42.816
LC4-127	29°52'54.74874"	82°10'55.58572"	16.445	3306282.951	385849.609	44.329
LC4-128	29°56'07.53516"	82°04'34.94807"	23.180	3312117.096	396115.939	51.097
LC4-129	29°46'52.40034"	82°10'41.39911"	17.641	3295125.037	386116.062	45.497
LC4-130	29°42'54.45852"	82°02'38.79780"	20.950	3287675.998	399008.722	48.842
LC5-120	30°08'59.37341"	82°17'15.33831"	14.872	3336087.374	375996.300	43.116
LC5-121	30°05'13.35873"	82°09'25.60308"	13.926	3328995.119	388492.953	42.022
LC5-122	30°07'14.50016"	82°02'45.60021"	34.310	3332621.006	399235.218	62.386
LC5-123	30°00'27.36034"	82°05'27.34207"	20.468	3320128.478	394787.302	48.448
LC5-124	30°02'59.67154"	82°15'58.71044"	16.554	3324991.265	377923.648	44.666
LC5-125	29°59'02.63781"	82°10'28.60777"	14.498	3317600.259	386689.172	42.462
LC5-126	29°54'54.81846"	82°18'06.48638"	14.192	3310103.980	374332.181	42.125
LC5-127	29°53'13.66871"	82°10'24.40331"	16.900	3306856.792	386692.039	44.787
LC5-128	29°56'20.19518"	82°04'42.24420"	21.962	3312508.638	395923.985	49.881
LC5-129	29°47'42.10126"	82°10'06.55424"	17.999	3296645.427	387067.235	45.857
LC5-130	29°42'41.62145"	82°03'52.29732"	16.557	3287298.871	397030.185	44.439

DAS ADDITIONAL VERTICAL ACCURACY POINTS

Name	NAD83, GEOID 09 (meters)			UTM, Zone 17, NAVD88 (meters)		
	Latitude (N)	Longitude (W)	Ellipsoid Ht	Northing	Easting	Elevation
NEW_URBAN_1	30°05'30.64392"	82°14'58.41836"	15.957	3329621.049	379589.117	44.122
NEW_URBAN_2	30°02'23.79544"	82°09'58.54639"	13.116	3323784.328	387557.815	41.150
NEW_TALL_WEEDS_2	30°02'40.98083"	82°10'11.88264"	11.161	3324317.000	387206.038	39.204
NEW_BRUSH_2	30°02'25.62605"	82°09'56.61854"	12.262	3323840.154	387610.023	40.297
NEW_FOREST_2	30°02'28.34778"	82°09'37.85099"	12.364	3323918.830	388113.522	40.398
NEW_URBAN_3	30°04'07.46320"	82°03'56.72649"	19.298	3326881.026	397278.113	47.337
NEW_URBAN_4	29°57'10.59948"	82°07'01.81894"	20.753	3314096.007	392197.105	48.682
NEW_URBAN_5	29°57'43.13918"	82°15'51.36879"	16.075	3315245.013	378012.722	44.040
NEW_TALL-WEEDS_5	29°56'51.68717"	82°12'33.31006"	17.190	3313603.911	383304.871	45.119
NEW_BRUSH_5	29°56'47.60078"	82°14'52.78304"	18.774	3313518.149	379564.486	46.713
NEW_FOREST_5	29°56'49.52615"	82°14'56.79964"	19.193	3313578.590	379457.452	47.133
NEW_URBAN_6	29°54'05.64004"	82°05'20.00168"	23.773	3308376.255	394872.446	51.670
NEW_TALL_WEED_6	29°53'40.41469"	82°05'09.82612"	23.182	3307597.177	395138.015	51.076



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NEW_BRUSH_6	29°52'46.14853"	82°04'48.23378"	24.756	3305921.284	395701.467	52.643
NEW_BRUSH_6B	29°52'46.33227"	82°04'47.46965"	24.907	3305926.747	395722.018	52.795
NEW_FOREST_6	29°53'32.61006"	82°05'13.42605"	22.547	3307357.845	395039.187	50.440
NEW_URBAN_7	29°48'08.72837"	82°03'46.64465"	19.860	3297366.348	397274.798	47.735
NEW_TALL_WE7	29°49'11.17150"	82°03'59.71886"	24.776	3299291.706	396941.594	52.651
NEW_BRUSH_7	29°49'12.80562"	82°03'59.61573"	24.732	3299341.982	396944.828	52.607
NEW_FOREST_7	29°49'06.39252"	82°04'03.89301"	23.449	3299145.638	396828.190	51.324
NEW_URBAN_8	30°01'07.52076"	82°16'53.47239"	12.057	3321555.141	376418.415	40.123
NEW_URBAN_9	29°42'32.64165"	82°02'54.05307"	20.104	3287008.157	398592.730	47.995

Coordinate Table Legend:

12" RCM	12" Round Concrete Monument
12" SCM	12" Square Concrete Monument
SSR	Stainless Steel Rod w/o sleeve (10 ft.+)
SSRiS	Stainless Steel Rod In Sleeve (10 ft.+)
DiRW	Disk set in a Retaining Wall or concrete ledge
ALDIRN	Aluminum Disk set on an Iron Rod (New)
ALDARD	Aluminum Disk on Aluminum Alloy Rod
BDOR	Brass Disk on rebar
ALDASP	Aluminum Disk set in Asphalt

PPK GPS NETWORK ADJUSTMENT REPORT

Project Information		Coordinate System	
Name:	N:\TBC\USGS\T12-017 PPK.vce	Name:	UTM
Size:	4 MB	Datum:	WGS 1984
Modified:	4/25/2012 10:30:54 AM (UTC:-5)	Zone:	17 North (81W)
Time zone:	Central Standard Time	Geoid:	GEOID09 (Conus)
Reference number:		Vertical datum:	
Description:			

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.000 m



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Centering Error: 0.000 m

Covariance Display

Horizontal:

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 m

Scale on Linear Error [S]: 1.960

Three-Dimensional

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 m

Scale on Linear Error [S]: 1.960

Adjustment Statistics

Number of Iterations for Successful Adjustment: 3

Network Reference Factor: 1.04

Chi Square Test (95%): Passed

Precision Confidence Level: 95%

Degrees of Freedom: 609

Post Processed Vector Statistics

Reference Factor: 1.04

Redundancy Number: 609.00

A Priori Scalar: 2.50

Control Coordinate Comparisons

Values shown are control coordinates minus adjusted coordinates.

Point ID	Δ Northing (Meter)	Δ Easting (Meter)	Δ Elevation (Meter)	Δ Height (Meter)
A 039	?	?	?	-0.003
BRADFORD 7	?	?	?	-0.017
BRADFORD 9	?	?	?	0.007
FLGPS 28	?	?	?	-0.007
FLGPS 29	?	?	?	0.026
GNV E	?	?	?	-0.054
KEYPORT	?	?	?	-0.002

Control Point Constraints

Point ID	Type	North σ (Meter)	East σ (Meter)	Height σ (Meter)	Elevation σ (Meter)
A 039	Grid				Fixed
A 039	Local	Fixed	Fixed		
AD 30	Grid				Fixed
BRADFORD 7	Local	Fixed	Fixed		
BRADFORD 9	Grid				Fixed
BRADFORD 9	Local	Fixed	Fixed		
D 714	Grid				Fixed
E 621	Grid	Fixed	Fixed		Fixed
FLGPS 28	Grid				Fixed
FLGPS 28	Local	Fixed	Fixed		
FLGPS 29	Grid				Fixed
FLGPS 29	Local	Fixed	Fixed		
G 445	Grid				Fixed
GCT-FL01	Grid	Fixed	Fixed		Fixed
GCT-FL02	Grid	Fixed	Fixed		Fixed
GCT-FL03	Grid	Fixed	Fixed		Fixed
GNV E	Grid				Fixed
GNV E	Local	Fixed	Fixed		
I75 H 1	Grid				Fixed
J 714	Grid	Fixed	Fixed		Fixed
KEYPORT	Grid				Fixed
KEYPORT	Local	Fixed	Fixed		
M 368	Grid				Fixed
P 597	Grid				Fixed
V 368	Grid				Fixed
V 445	Grid				Fixed

Fixed = 0.000001(Meter)

Adjusted Grid Coordinates

Point ID	Northing (Meter)	Northing Error (Meter)	Easting (Meter)	Easting Error (Meter)	Elevation (Meter)	Elevation Error (Meter)	Constraint
A 039	3287076.463	?	398157.807	?	48.615	?	LLe
AD 30	3309807.454	0.012	383747.183	0.010	44.508	?	e



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BRADFORD 7	3320076.942	?	388781.054	?	43.407	0.035	LL
BRADFORD 9	3322267.572	?	398178.854	?	56.036	?	LLe
D 714	3336154.156	0.015	383997.811	0.013	42.765	?	e
E 621	3318359.925	?	401157.938	?	71.596	?	NEe
FLGPS 28	3328924.308	?	382823.764	?	40.079	?	LLe
FLGPS 29	3275495.910	?	399834.890	?	46.730	?	LLe
FVA-120	3336044.956	0.013	376023.608	0.011	43.489	0.032	
FVA-121	3329031.879	0.016	388407.351	0.013	41.876	0.034	
FVA-122	3332613.032	0.012	399334.651	0.011	62.170	0.034	
FVA-123	3320114.523	0.014	394830.753	0.013	49.081	0.032	
FVA-124	3325033.311	0.013	378073.099	0.016	44.841	0.042	
FVA-125	3317618.932	0.015	386446.937	0.012	45.081	0.034	
FVA-126	3310192.804	0.019	374238.004	0.013	42.184	0.049	
FVA-127	3306967.472	0.012	386649.858	0.015	45.340	0.035	
FVA-128	3312455.734	0.018	395923.822	0.016	50.686	0.044	
FVA-129	3296706.848	0.016	387115.982	0.014	45.413	0.036	
FVA-130	3287175.550	0.012	397122.184	0.011	45.186	0.029	
G 445	3294574.876	0.012	401660.718	0.016	38.308	?	e
GCT-FL01	3335741.402	?	401618.130	?	31.498	?	NEe
GCT-FL02	3305801.262	?	373403.682	?	39.023	?	NEe
GCT-FL03	3320931.015	?	374236.051	?	39.777	?	NEe
GNV E	3284717.711	?	376838.044	?	38.696	?	LLe
I75 H 1	3293055.892	0.006	364342.955	0.005	53.239	?	e
J 714	3337673.112	?	377203.750	?	42.465	?	NEe
KEYPORT	3301556.874	?	398953.763	?	55.576	?	LLe
LC1-120	3336026.862	0.014	375989.690	0.011	43.406	0.031	
LC1-121	3328974.208	0.015	388435.659	0.013	42.121	0.034	
LC1-122	3332617.989	0.012	399299.903	0.012	61.894	0.034	
LC1-123	3320071.442	0.016	394835.273	0.014	48.884	0.035	
LC1-124	3324983.349	0.018	377973.651	0.021	44.756	0.055	
LC1-125	3317590.596	0.015	386615.068	0.012	43.456	0.033	
LC1-126	3310163.178	0.016	374311.658	0.011	42.408	0.035	
LC1-127	3306920.776	0.012	386700.362	0.015	44.885	0.034	
LC1-128	3312455.854	0.016	395746.807	0.015	50.497	0.036	
LC1-129	3296665.623	0.018	387129.653	0.014	45.451	0.037	



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



LC1-130	3287188.335	0.019	397094.686	0.018	45.086	0.062	
LC2-120	3326575.206	0.015	380771.279	0.014	39.841	0.035	
LC2-121	3329045.560	0.016	388388.716	0.013	41.951	0.034	
LC2-122	3325376.647	0.015	397016.041	0.013	48.546	0.039	
LC2-123	3315432.716	0.015	393464.341	0.016	50.386	0.034	
LC2-124	3319491.504	0.016	376780.013	0.015	30.766	0.039	
LC2-127	3307317.818	0.016	386924.446	0.016	45.234	0.039	
LC2-128	3311853.021	0.019	395614.307	0.020	52.354	0.057	
LC2-129	3296754.161	0.016	387015.684	0.015	46.481	0.046	
LC2-130	3287064.736	0.009	398481.702	0.009	48.596	0.022	
LC3-120	3334475.969	0.015	376441.570	0.013	41.579	0.040	
LC3-121	3329078.970	0.013	388254.828	0.013	40.855	0.030	
LC3-122	3330802.474	0.016	398604.720	0.012	59.667	0.036	
LC3-123	3321695.609	0.016	395386.078	0.016	47.499	0.039	
LC3-124	3320812.099	0.012	376035.358	0.014	41.475	0.035	
LC3-125	3317729.037	0.015	386369.376	0.012	44.484	0.035	
LC3-126	3310216.621	0.013	374270.534	0.012	42.584	0.028	
LC3-127	3308621.080	0.013	387718.375	0.015	42.711	0.036	
LC3-128	3311658.297	0.020	396736.171	0.018	52.138	0.041	
LC3-129	3295104.073	0.013	386097.411	0.013	45.744	0.034	
LC3-130	3287754.413	0.016	394616.788	0.014	48.023	0.034	
LC4-120	3329480.977	0.014	379573.103	0.015	43.285	0.034	
LC4-121	3328368.774	0.014	388380.199	0.014	40.993	0.038	
LC4-122	3333062.287	0.013	398242.497	0.010	59.967	0.031	
LC4-123	3318530.908	0.015	394358.546	0.016	47.109	0.036	
LC4-124	3320729.823	0.014	376050.027	0.014	41.180	0.043	
LC4-125	3319056.504	0.017	386040.423	0.016	41.632	0.043	
LC4-126	3310268.082	0.014	374300.335	0.013	42.816	0.030	
LC4-127	3306282.951	0.014	385849.609	0.015	44.329	0.046	
LC4-128	3312117.096	0.017	396115.939	0.013	51.097	0.037	
LC4-129	3295125.037	0.013	386116.062	0.014	45.497	0.033	
LC4-130	3287675.998	0.012	399008.722	0.015	48.842	0.042	
M 368	3311283.579	0.012	391657.596	0.011	45.674	?	e
P 597	3295165.732	0.014	386005.971	0.014	45.348	?	e
V 368	3330755.225	0.028	398656.092	0.018	60.192	?	e



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



V 445	3287924.000	0.012	389681.561	0.010	41.228	?	e
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Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (Meter)	Height Error (Meter)	Constraint
A 039	N29°42'34.73213"	W82°03'10.26037"	20.727	?	LLe
AD 30	N29°54'48.52277"	W82°12'15.32744"	16.605	?	e
BRADFORD 7	N30°00'23.77532"	W82°09'11.48486"	15.420	0.035	LL
BRADFORD 9	N30°01'37.87674"	W82°03'21.49787"	28.038	?	LLe
D 714	N30°09'04.38185"	W82°12'16.32028"	14.555	?	e
E 621	N29°59'31.82285"	W82°01'28.98375"	43.633	?	NEe
FLGPS 28	N30°05'09.14678"	W82°12'57.32164"	11.943	?	LLe
FLGPS 29	N29°36'19.03043"	W82°02'04.00271"	18.806	?	LLe
FVA-120	N30°08'58.00571"	W82°17'14.29986"	15.246	0.032	
FVA-121	N30°05'14.52458"	W82°09'28.81431"	13.779	0.034	
FVA-122	N30°07'14.27074"	W82°02'41.88215"	34.094	0.034	
FVA-123	N30°00'26.92046"	W82°05'25.71545"	21.101	0.032	
FVA-124	N30°03'01.09089"	W82°15'53.14797"	16.730	0.042	
FVA-125	N29°59'03.16364"	W82°10'37.65323"	17.116	0.034	
FVA-126	N29°54'57.66882"	W82°18'10.03530"	14.250	0.049	
FVA-127	N29°53'17.24986"	W82°10'26.01776"	17.453	0.035	
FVA-128	N29°56'18.47665"	W82°04'42.23174"	22.767	0.044	
FVA-129	N29°47'44.11242"	W82°10'04.76199"	17.556	0.036	
FVA-130	N29°42'37.64294"	W82°03'48.83157"	17.303	0.029	
G 445	N29°46'39.33463"	W82°01'02.36823"	10.408	?	e
GCT-FL01	N30°08'56.56002"	W82°01'17.60606"	3.402	?	NEe
GCT-FL02	N29°52'34.72065"	W82°18'39.27526"	11.117	?	NEe
GCT-FL03	N30°00'46.44881"	W82°18'14.66033"	11.703	?	NEe
GNV E	N29°41'11.14728"	W82°16'22.60268"	10.847	?	LLe
I75 H 1	N29°45'37.28008"	W82°24'11.17527"	25.384	?	e
J 714	N30°09'51.31835"	W82°16'30.87524"	14.216	?	NEe
KEYPORT	N29°50'25.35244"	W82°02'45.52697"	27.693	?	LLe
LC1-120	N30°08'57.40558"	W82°17'15.55983"	15.163	0.031	
LC1-121	N30°05'12.66067"	W82°09'27.73518"	14.025	0.034	
LC1-122	N30°07'14.42142"	W82°02'43.18222"	33.818	0.034	



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



LC1-123	N30°00'25.52247"	W82°05'25.53145"	20.904	0.035	
LC1-124	N30°02'59.43237"	W82°15'56.84030"	16.645	0.055	
LC1-125	N29°59'02.29927"	W82°10'31.36907"	15.491	0.033	
LC1-126	N29°54'56.73369"	W82°18'07.27659"	14.474	0.035	
LC1-127	N29°53'15.74982"	W82°10'24.11741"	16.998	0.034	
LC1-128	N29°56'18.42648"	W82°04'48.83380"	22.578	0.036	
LC1-129	N29°47'42.77781"	W82°10'04.23730"	17.593	0.037	
LC1-130	N29°42'38.05006"	W82°03'49.85921"	17.204	0.062	
LC2-120	N30°03'52.13093"	W82°14'13.03160"	11.725	0.035	
LC2-121	N30°05'14.96284"	W82°09'29.51552"	13.853	0.034	
LC2-122	N30°03'18.51760"	W82°04'05.98880"	20.518	0.039	
LC2-123	N29°57'54.41789"	W82°06'15.02926"	22.445	0.034	
LC2-124	N30°00'00.62419"	W82°16'39.11719"	2.734	0.039	
LC2-127	N29°53'28.72086"	W82°10'15.91517"	17.345	0.039	
LC2-128	N29°55'58.80405"	W82°04'53.56372"	24.439	0.057	
LC2-129	N29°47'45.61626"	W82°10'08.51516"	18.623	0.046	
LC2-130	N29°42'34.44687"	W82°02'58.20369"	20.706	0.022	
LC3-120	N30°08'07.19839"	W82°16'58.02016"	13.348	0.040	
LC3-121	N30°05'16.00395"	W82°09'34.52906"	12.756	0.030	
LC3-122	N30°06'15.24138"	W82°03'08.53251"	31.602	0.036	
LC3-123	N30°01'18.44963"	W82°05'05.54859"	19.505	0.039	
LC3-124	N30°00'43.24710"	W82°17'07.45817"	13.417	0.035	
LC3-125	N29°59'06.71415"	W82°10'40.58940"	16.518	0.035	
LC3-126	N29°54'58.45441"	W82°18'08.83249"	14.649	0.028	
LC3-127	N29°54'11.31573"	W82°09'46.81098"	14.817	0.036	
LC3-128	N29°55'52.82022"	W82°04'11.65691"	24.223	0.041	
LC3-129	N29°46'51.71318"	W82°10'42.08561"	17.889	0.034	
LC3-130	N29°42'55.68884"	W82°05'22.26476"	20.152	0.034	
LC4-120	N30°05'26.08863"	W82°14'58.95928"	15.121	0.034	
LC4-121	N30°04'52.97700"	W82°09'29.57745"	12.904	0.038	
LC4-122	N30°07'28.53714"	W82°03'22.84572"	31.884	0.031	
LC4-123	N29°59'35.33412"	W82°05'42.77416"	19.142	0.036	
LC4-124	N30°00'40.58007"	W82°17'06.87623"	13.123	0.043	
LC4-125	N29°59'49.72261"	W82°10'53.37410"	13.650	0.043	
LC4-126	N29°55'00.13688"	W82°18'07.74311"	14.881	0.030	

LC4-127	N29°52'54.74874"	W82°10'55.58572"	16.445	0.046	
LC4-128	N29°56'07.53516"	W82°04'34.94807"	23.180	0.037	
LC4-129	N29°46'52.40034"	W82°10'41.39911"	17.641	0.033	
LC4-130	N29°42'54.45852"	W82°02'38.79780"	20.950	0.042	
M 368	N29°55'39.07337"	W82°07'20.91736"	17.763	?	e
P 597	N29°46'53.68568"	W82°10'45.51401"	17.492	?	e
V 368	N30°06'13.72197"	W82°03'06.59705"	32.128	?	e
V 445	N29°42'59.65095"	W82°08'25.98194"	13.370	?	e

Adjusted ECEF Coordinates

Point ID	X (Meter)	X Error (Meter)	Y (Meter)	Y Error (Meter)	Z (Meter)	Z Error (Meter)	3D Error (Meter)	Constraint
A 039	766552.304	?	-5491049.413	?	3142469.856	?	?	LLe
AD 30	750515.087	?	-5481923.314	?	3162072.305	?	?	e
BRADFORD 7	754696.819	?	-5476144.110	?	3171015.441	?	?	LL
BRADFORD 9	763831.319	?	-5473735.977	?	3172997.488	?	?	LLe
D 714	748699.415	?	-5468857.136	?	3184887.141	?	?	e
E 621	767088.265	?	-5475254.431	?	3169644.119	?	?	NEe
FLGPS 28	748104.287	?	-5472604.888	?	3178620.209	?	?	LLe
FLGPS 29	769109.134	?	-5496470.101	?	3132416.176	?	?	LLe
FVA-120	740811.390	0.011	-5470031.350	0.026	3184717.710	0.023	0.036	
FVA-121	753624.897	0.014	-5471765.188	0.027	3178764.416	0.025	0.040	
FVA-122	764164.940	0.012	-5468453.483	0.032	3181964.581	0.017	0.038	
FVA-123	760684.351	0.015	-5475271.668	0.030	3171102.148	0.016	0.038	
FVA-124	743705.474	0.018	-5475202.385	0.038	3175210.049	0.020	0.046	
FVA-125	752578.167	0.012	-5477689.760	0.029	3168866.518	0.024	0.040	
FVA-126	741067.786	0.015	-5483064.640	0.045	3162315.234	0.026	0.054	
FVA-127	753610.990	0.015	-5482913.509	0.032	3159636.357	0.018	0.040	
FVA-128	762365.537	0.017	-5478898.096	0.041	3164475.942	0.022	0.050	
FVA-129	754871.588	0.015	-5487892.686	0.030	3150738.715	0.026	0.042	
FVA-130	765518.929	0.012	-5491145.721	0.026	3142546.004	0.016	0.033	
G 445	769436.662	?	-5486863.819	?	3149004.088	?	?	e
GCT-FL01	766176.016	?	-5466548.507	?	3184673.266	?	?	NEe
GCT-FL02	740583.679	?	-5485341.133	?	3158497.751	?	?	NEe
GCT-FL03	740226.208	?	-5477763.296	?	3171618.158	?	?	NEe



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



GNV E	745623.755	?	-5495208.499	?	3140229.354	?	?	LLe
I75 H 1	732602.890	?	-5492873.371	?	3147352.932	?	?	e
J 714	741851.997	?	-5469057.148	?	3186136.663	?	?	NEe
KEYPORT	766215.774	?	-5483836.480	?	3155051.297	?	?	LLe
LC1-120	740779.212	0.010	-5470045.002	0.025	3184701.688	0.023	0.036	
LC1-121	753657.479	0.014	-5471789.960	0.027	3178714.877	0.025	0.039	
LC1-122	764130.117	0.013	-5468455.757	0.032	3181968.456	0.017	0.038	
LC1-123	760692.175	0.016	-5475292.144	0.033	3171064.772	0.018	0.041	
LC1-124	743610.895	0.023	-5475240.966	0.051	3175165.801	0.026	0.062	
LC1-125	752746.672	0.012	-5477678.612	0.031	3168842.652	0.020	0.038	
LC1-126	741143.069	0.011	-5483069.152	0.030	3162290.388	0.024	0.040	
LC1-127	753664.585	0.015	-5482928.976	0.030	3159596.085	0.018	0.039	
LC1-128	762190.253	0.016	-5478923.097	0.034	3164474.509	0.018	0.042	
LC1-129	754888.335	0.015	-5487911.027	0.030	3150703.072	0.028	0.043	
LC1-130	765490.702	0.020	-5491143.296	0.055	3142556.843	0.032	0.067	
LC2-120	746256.012	0.016	-5474056.492	0.033	3176567.852	0.018	0.041	
LC2-121	753605.381	0.014	-5471761.112	0.027	3178776.130	0.025	0.040	
LC2-122	762435.644	0.012	-5472357.573	0.031	3175676.422	0.027	0.043	
LC2-123	759697.872	0.017	-5477779.265	0.029	3167035.475	0.023	0.040	
LC2-124	742857.243	0.016	-5478111.400	0.032	3170391.748	0.027	0.045	
LC2-127	753855.546	0.018	-5482702.121	0.032	3159942.536	0.026	0.045	
LC2-128	762106.375	0.022	-5479240.817	0.051	3163951.832	0.030	0.063	
LC2-129	754768.722	0.016	-5487884.543	0.038	3150779.430	0.029	0.050	
LC2-130	766873.867	0.011	-5491008.890	0.019	3142462.217	0.014	0.026	
LC3-120	741348.393	0.013	-5470749.744	0.033	3183363.796	0.027	0.044	
LC3-121	753470.061	0.014	-5471762.565	0.026	3178803.319	0.020	0.036	
LC3-122	763584.177	0.012	-5469453.211	0.029	3180390.949	0.026	0.041	
LC3-123	761110.186	0.018	-5474409.754	0.036	3172475.281	0.021	0.045	
LC3-124	742017.672	0.015	-5477572.174	0.030	3171533.646	0.020	0.040	
LC3-125	752492.685	0.012	-5477645.828	0.029	3168960.915	0.025	0.040	
LC3-126	741098.190	0.013	-5483048.706	0.024	3162336.400	0.020	0.033	
LC3-127	754539.713	0.015	-5481945.881	0.032	3161078.310	0.020	0.041	
LC3-128	763232.235	0.018	-5479176.741	0.033	3163792.046	0.031	0.049	
LC3-129	753987.664	0.014	-5488823.575	0.032	3149338.623	0.017	0.039	
LC3-130	762993.925	0.015	-5491221.580	0.028	3143030.012	0.025	0.041	

LC4-120	744841.976	0.016	-5472788.680	0.030	3179073.195	0.020	0.040	
LC4-121	753649.929	0.015	-5472096.717	0.035	3178189.849	0.019	0.043	
LC4-122	763048.174	0.010	-5468384.892	0.027	3182343.452	0.020	0.035	
LC4-123	760340.525	0.018	-5476119.576	0.031	3169725.518	0.022	0.042	
LC4-124	742038.606	0.015	-5477610.533	0.035	3171462.385	0.027	0.047	
LC4-125	752062.777	0.016	-5477034.162	0.035	3170106.489	0.030	0.049	
LC4-126	741123.714	0.014	-5483019.386	0.027	3162381.419	0.020	0.036	
LC4-127	752871.849	0.016	-5483362.629	0.039	3159035.134	0.028	0.050	
LC4-128	762582.236	0.012	-5479038.056	0.029	3164184.188	0.028	0.042	
LC4-129	754004.473	0.014	-5488810.441	0.031	3149356.864	0.017	0.038	
LC4-130	767348.229	0.017	-5490634.458	0.038	3142997.506	0.021	0.047	
M 368	758232.616	?	-5480078.403	?	3163421.978	?	?	e
P 597	753892.281	?	-5488805.879	?	3149391.140	?	?	e
V 368	763638.807	?	-5469469.738	?	3180350.737	?	?	e
V 445	758093.594	?	-5491833.249	?	3143132.604	?	?	e

Error Ellipse Components

Point ID	Semi-major axis (Meter)	Semi-minor axis (Meter)	Azimuth
AD 30	0.014	0.013	174°
D 714	0.019	0.016	159°
FVA-120	0.018	0.013	151°
FVA-121	0.020	0.016	172°
FVA-122	0.016	0.013	27°
FVA-123	0.017	0.017	158°
FVA-124	0.020	0.016	98°
FVA-125	0.019	0.014	169°
FVA-126	0.024	0.016	8°
FVA-127	0.019	0.015	79°
FVA-128	0.022	0.020	4°
FVA-129	0.021	0.018	2°
FVA-130	0.015	0.014	1°
G 445	0.020	0.015	77°
I75 H 1	0.008	0.006	23°
LC1-120	0.019	0.011	150°



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



LC1-121	0.019	0.016	167°
LC1-122	0.016	0.014	32°
LC1-123	0.020	0.018	172°
LC1-124	0.027	0.022	111°
LC1-125	0.018	0.015	7°
LC1-126	0.021	0.014	2°
LC1-127	0.018	0.015	79°
LC1-128	0.020	0.018	23°
LC1-129	0.022	0.018	1°
LC1-130	0.024	0.023	4°
LC2-120	0.019	0.018	14°
LC2-121	0.021	0.016	166°
LC2-122	0.020	0.014	149°
LC2-123	0.020	0.018	72°
LC2-124	0.020	0.019	18°
LC2-127	0.021	0.019	57°
LC2-128	0.027	0.021	127°
LC2-129	0.020	0.018	28°
LC2-130	0.012	0.011	80°
LC3-120	0.021	0.014	146°
LC3-121	0.017	0.016	36°
LC3-122	0.021	0.014	165°
LC3-123	0.020	0.019	136°
LC3-124	0.018	0.015	106°
LC3-125	0.019	0.014	160°
LC3-126	0.016	0.015	177°
LC3-127	0.018	0.016	89°
LC3-128	0.028	0.017	141°
LC3-129	0.017	0.016	131°
LC3-130	0.020	0.018	170°
LC4-120	0.018	0.018	104°
LC4-121	0.019	0.016	44°
LC4-122	0.017	0.013	180°
LC4-123	0.020	0.019	126°
LC4-124	0.018	0.017	53°

LC4-125	0.023	0.017	140°
LC4-126	0.017	0.016	12°
LC4-127	0.019	0.017	73°
LC4-128	0.022	0.014	154°
LC4-129	0.018	0.016	130°
LC4-130	0.019	0.015	91°
M 368	0.015	0.014	168°
P 597	0.018	0.016	143°
V 368	0.035	0.022	7°
V 445	0.014	0.013	6°

Adjusted GPS Observations

Transformation

Parameters

Deflection in Latitude: -0.044 sec (95%) 0.049 sec

Deflection in Longitude: -0.111 sec (95%) 0.074 sec

Azimuth Rotation: 0.006 sec (95%) 0.009 sec

Scale Factor: 1.00000030 (95%) 0.00000005

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
GCT-FL02 --> E 621 (PV62)	Az.	64°59'58"	0.009 sec	-0.006 sec	-0.358
	ΔHt.	32.503 m	0.008 m	-0.014 m	-0.939
	Ellip Dist.	30470.778 m	0.002 m	-0.015 m	-4.189
GCT-FL01 --> E 621 (PV252)	Az.	181°00'17"	0.009 sec	0.033 sec	0.683
	ΔHt.	40.227 m	0.006 m	0.012 m	0.923
	Ellip Dist.	17392.433 m	0.001 m	0.008 m	3.908
KEYPORT --> E 621 (PV96)	Az.	6°57'05"	0.009 sec	-0.277 sec	-3.689
	ΔHt.	15.942 m	0.006 m	-0.015 m	-0.848
	Ellip Dist.	16951.690 m	0.001 m	0.014 m	2.060
GCT-FL03 --> FLGPS 28 (PV171)	Az.	46°24'00"	0.009 sec	0.408 sec	3.640
	ΔHt.	0.238 m	0.003 m	0.030 m	0.674

	Ellip Dist.	11734.627 m	0.001 m	0.012 m	1.859
GCT-FL01 --> GCT-FL03 (PV253)	Az.	241°04'48"	0.009 sec	-0.049 sec	-3.549
	ΔHt.	8.312 m	0.008 m	-0.003 m	-0.209
	Ellip Dist.	31138.382 m	0.002 m	-0.003 m	-0.764
GCT-FL02 --> E 621 (PV99)	Az.	64°59'58"	0.009 sec	-0.013 sec	-0.491
	ΔHt.	32.503 m	0.008 m	-0.007 m	-0.231
	Ellip Dist.	30470.778 m	0.002 m	-0.012 m	-3.177
KEYPORT --> LC1-126 (PV114)	Az.	288°43'50"	0.127 sec	0.061 sec	0.520
	ΔHt.	-13.204 m	0.035 m	-0.082 m	-2.782
	Ellip Dist.	26108.038 m	0.011 m	0.033 m	3.137
GCT-FL03 --> LC1-124 (PV222)	Az.	42°02'01"	0.783 sec	1.329 sec	3.129
	ΔHt.	4.941 m	0.055 m	0.077 m	2.744
	Ellip Dist.	5513.968 m	0.018 m	0.004 m	0.493
J 714 --> FLGPS 28 (PV174)	Az.	146°38'39"	0.009 sec	-0.388 sec	-2.978
	ΔHt.	-2.278 m	0.003 m	0.042 m	0.961
	Ellip Dist.	10400.681 m	0.001 m	0.013 m	1.921
A 039 --> LC2-130 (PV25)	Az.	91°33'06"	5.534 sec	-4.993 sec	-2.936
	ΔHt.	-0.021 m	0.022 m	-0.004 m	-0.520
	Ellip Dist.	324.195 m	0.009 m	0.000 m	-0.146
E 621 --> J 714 (PV185)	Az.	308°21'50"	0.009 sec	-0.044 sec	-2.859
	ΔHt.	-29.399 m	0.009 m	0.021 m	1.997
	Ellip Dist.	30777.773 m	0.002 m	-0.005 m	-1.799
J 714 --> BRADFORD 7 (PV175)	Az.	146°01'04"	0.009 sec	-0.081 sec	-0.543
	ΔHt.	1.194 m	0.035 m	-0.024 m	-0.631
	Ellip Dist.	21068.078 m	0.001 m	0.042 m	2.837

GCT-FL01 --> E 621 (PV146)	Az.	181°00'17"	0.009 sec	0.111 sec	2.543
	ΔHt.	40.227 m	0.006 m	0.000 m	-0.014
	Ellip Dist.	17392.433 m	0.001 m	0.007 m	2.814
E 621 --> LC1-124 (PV221)	Az.	285°25'52"	0.150 sec	0.072 sec	0.923
	ΔHt.	-26.974 m	0.056 m	-0.070 m	-2.425
	Ellip Dist.	24117.839 m	0.021 m	0.030 m	2.776
A 039 --> FVA-130 (PV24)	Az.	274°56'37"	2.394 sec	1.478 sec	2.701
	ΔHt.	-3.423 m	0.029 m	-0.008 m	-1.150
	Ellip Dist.	1040.634 m	0.011 m	0.002 m	0.777
GCT-FL02 --> LC1-126 (PV112)	Az.	11°06'19"	0.511 sec	0.736 sec	1.960
	ΔHt.	3.357 m	0.035 m	0.067 m	2.663
	Ellip Dist.	4456.323 m	0.016 m	-0.001 m	-0.128
GCT-FL01 --> V 368 (PV167)	Az.	210°11'59"	0.702 sec	-0.120 sec	-0.188
	ΔHt.	28.726 m	0.002 m	0.029 m	0.518
	Ellip Dist.	5801.228 m	0.027 m	0.042 m	2.492
GCT-FL02 --> GCT-FL03 (PV61)	Az.	2°29'40"	0.009 sec	0.083 sec	1.493
	ΔHt.	0.588 m	0.005 m	-0.006 m	-0.406
	Ellip Dist.	15155.713 m	0.001 m	0.005 m	2.348
GCT-FL03 --> LC3-124 (PV230)	Az.	93°07'44"	1.394 sec	-0.355 sec	-0.528
	ΔHt.	1.713 m	0.035 m	0.034 m	2.323
	Ellip Dist.	1803.606 m	0.014 m	-0.012 m	-1.749
GCT-FL02 --> V 445 (PV13)	Az.	137°01'46"	0.094 sec	0.048 sec	0.579
	ΔHt.	2.240 m	0.008 m	0.026 m	0.807
	Ellip Dist.	24183.269 m	0.011 m	0.022 m	2.318

GCT-FL03 --> E 621 (PV148)	Az.	94°48'11"	0.009 sec	0.037 sec	2.313
	ΔHt.	31.915 m	0.007 m	-0.010 m	-0.870
	Ellip Dist.	27050.963 m	0.001 m	-0.004 m	-1.224
I75 H 1 --> GCT-FL02 (PV7)	Az.	34°42'41"	0.064 sec	0.101 sec	2.150
	ΔHt.	-14.268 m	0.005 m	-0.059 m	-2.284
	Ellip Dist.	15640.747 m	0.006 m	-0.008 m	-2.231
A 039 --> V 445 (PV17)	Az.	275°11'17"	0.279 sec	0.570 sec	2.239
	ΔHt.	-7.352 m	0.002 m	0.028 m	0.894
	Ellip Dist.	8520.736 m	0.010 m	0.016 m	1.761
KEYPORT --> LC1-130 (PV275)	Az.	186°51'10"	0.258 sec	-0.154 sec	-0.546
	ΔHt.	-10.491 m	0.062 m	-0.069 m	-0.859
	Ellip Dist.	14492.241 m	0.019 m	-0.075 m	-2.223
GCT-FL03 --> E 621 (PV107)	Az.	94°48'11"	0.009 sec	0.052 sec	2.175
	ΔHt.	31.915 m	0.007 m	-0.006 m	-0.365
	Ellip Dist.	27050.963 m	0.001 m	-0.001 m	-0.217
GCT-FL01 --> BRADFORD 7 (PV255)	Az.	218°49'22"	0.009 sec	-0.317 sec	-2.168
	ΔHt.	12.022 m	0.035 m	-0.008 m	-0.250
	Ellip Dist.	20257.899 m	0.001 m	0.005 m	0.331
GCT-FL02 --> P 597 (PV15)	Az.	129°30'36"	0.162 sec	0.201 sec	1.326
	ΔHt.	6.366 m	0.005 m	0.045 m	1.489
	Ellip Dist.	16494.012 m	0.015 m	0.029 m	2.154
GNV E --> FVA-130 (PV5)	Az.	82°27'37"	0.122 sec	0.393 sec	2.087
	ΔHt.	6.446 m	0.029 m	-0.044 m	-0.792
	Ellip Dist.	20437.446 m	0.011 m	-0.027 m	-1.501
GCT-FL01 --> LC3-124 (PV238)	Az.	239°13'17"	0.092 sec	-0.035 sec	-0.208

	ΔHt.	10.025 m	0.036 m	-0.143 m	-2.080
	Ellip Dist.	29627.606 m	0.013 m	-0.024 m	-1.339
GCT-FL02 --> E 621 (PV106)	Az.	64°59'58"	0.009 sec	0.043 sec	2.037
	ΔHt.	32.503 m	0.008 m	-0.001 m	-0.030
	Ellip Dist.	30470.778 m	0.002 m	-0.007 m	-1.808
J 714 --> LC4-120 (PV220)	Az.	163°13'44"	0.351 sec	-0.090 sec	-0.297
	ΔHt.	0.902 m	0.035 m	-0.062 m	-2.034
	Ellip Dist.	8529.743 m	0.014 m	-0.010 m	-0.859
GCT-FL01 --> GCT-FL03 (PV149)	Az.	241°04'48"	0.009 sec	0.019 sec	1.157
	ΔHt.	8.312 m	0.008 m	0.008 m	0.599
	Ellip Dist.	31138.382 m	0.002 m	0.006 m	1.952
KEYPORT --> AD 30 (PV155)	Az.	297°57'42"	0.133 sec	0.026 sec	0.222
	ΔHt.	-11.077 m	0.005 m	0.052 m	1.561
	Ellip Dist.	17305.032 m	0.011 m	0.020 m	1.926
GCT-FL02 --> LC3-129 (PV49)	Az.	129°28'09"	0.155 sec	0.127 sec	0.853
	ΔHt.	6.762 m	0.035 m	0.017 m	0.544
	Ellip Dist.	16603.690 m	0.014 m	0.024 m	1.906
A 039 --> LC3-129 (PV45)	Az.	303°07'34"	0.177 sec	0.157 sec	1.102
	ΔHt.	-2.830 m	0.034 m	-0.025 m	-0.892
	Ellip Dist.	14491.486 m	0.014 m	0.022 m	1.890
E 621 --> BRADFORD 9 (PV166)	Az.	322°10'00"	0.009 sec	0.556 sec	1.533
	ΔHt.	-15.592 m	0.002 m	-0.034 m	-1.151
	Ellip Dist.	4915.074 m	0.000 m	-0.021 m	-1.878
J 714 --> V 368 (PV169)	Az.	107°13'59"	0.253 sec	-0.481 sec	-1.860
	ΔHt.	17.899 m	0.006 m	0.041 m	0.670

	Ellip Dist.	22545.697 m	0.018 m	-0.018 m	-1.008
GCT-FL02 --> LC2-130 (PV28)	Az.	126°06'47"	0.060 sec	0.158 sec	1.550
	ΔHt.	9.571 m	0.024 m	0.048 m	1.175
	Ellip Dist.	31311.854 m	0.009 m	0.030 m	1.845
KEYPORT --> FVA-128 (PV94)	Az.	343°56'33"	0.294 sec	0.032 sec	0.129
	ΔHt.	-4.922 m	0.044 m	-0.020 m	-0.537
	Ellip Dist.	11315.247 m	0.017 m	0.027 m	1.844
GNV E --> LC1-130 (PV4)	Az.	82°24'56"	0.190 sec	-0.014 sec	-0.132
	ΔHt.	6.347 m	0.062 m	-0.013 m	-0.437
	Ellip Dist.	20411.685 m	0.018 m	-0.020 m	-1.790
KEYPORT --> FVA-125 (PV141)	Az.	321°34'19"	0.127 sec	0.015 sec	0.135
	ΔHt.	-10.566 m	0.035 m	-0.015 m	-0.516
	Ellip Dist.	20362.316 m	0.015 m	0.024 m	1.790
GCT-FL03 --> LC4-120 (PV216)	Az.	31°19'12"	0.299 sec	-0.083 sec	-0.316
	ΔHt.	3.417 m	0.035 m	0.054 m	1.785
	Ellip Dist.	10081.131 m	0.014 m	-0.002 m	-0.192
KEYPORT --> LC1-128 (PV95)	Az.	343°04'57"	0.278 sec	-0.093 sec	-0.375
	ΔHt.	-5.111 m	0.036 m	-0.029 m	-0.945
	Ellip Dist.	11364.066 m	0.016 m	0.025 m	1.776
GCT-FL02 --> FVA-130 (PV2)	Az.	127°29'25"	0.081 sec	0.153 sec	0.567
	ΔHt.	6.169 m	0.030 m	0.009 m	0.146
	Ellip Dist.	30164.801 m	0.012 m	0.037 m	1.772
GCT-FL02 --> LC4-129 (PV48)	Az.	129°22'20"	0.160 sec	0.127 sec	0.894
	ΔHt.	6.515 m	0.034 m	0.010 m	0.336
	Ellip Dist.	16604.467 m	0.014 m	0.022 m	1.766

GCT-FL03 --> E 621 (PV184)	Az.	94°48'11"	0.009 sec	0.020 sec	1.463
	ΔHt.	31.915 m	0.007 m	-0.002 m	-0.160
	Ellip Dist.	27050.963 m	0.001 m	-0.005 m	-1.740
FLGPS 29 --> GNV E (PV8)	Az.	291°20'21"	0.009 sec	-0.086 sec	-1.729
	ΔHt.	-7.945 m	0.006 m	0.014 m	0.360
	Ellip Dist.	24783.015 m	0.001 m	-0.007 m	-1.358
KEYPORT --> LC1-125 (PV140)	Az.	321°53'54"	0.135 sec	-0.060 sec	-0.510
	ΔHt.	-12.191 m	0.034 m	-0.012 m	-0.443
	Ellip Dist.	20236.964 m	0.013 m	0.020 m	1.726
KEYPORT --> LC3-128 (PV92)	Az.	347°05'49"	0.310 sec	-0.097 sec	-0.532
	ΔHt.	-3.466 m	0.041 m	-0.035 m	-1.076
	Ellip Dist.	10344.778 m	0.021 m	0.024 m	1.724
J 714 --> LC3-123 (PV316)	Az.	130°40'03"	0.127 sec	-0.117 sec	-1.032
	ΔHt.	5.276 m	0.040 m	-0.008 m	-0.228
	Ellip Dist.	24210.717 m	0.016 m	-0.024 m	-1.690
E 621 --> AD 30 (PV158)	Az.	243°19'38"	0.121 sec	-0.021 sec	-0.209
	ΔHt.	-27.020 m	0.005 m	0.056 m	1.690
	Ellip Dist.	19402.896 m	0.010 m	-0.006 m	-0.679
G 445 --> A 039 (PV18)	Az.	204°32'06"	0.359 sec	-0.410 sec	-1.430
	ΔHt.	10.319 m	0.003 m	0.009 m	0.259
	Ellip Dist.	8278.552 m	0.013 m	0.019 m	1.679
A 039 --> LC4-130 (PV30)	Az.	54°18'38"	2.651 sec	-1.349 sec	-1.131
	ΔHt.	0.223 m	0.042 m	0.005 m	0.283
	Ellip Dist.	1041.197 m	0.014 m	0.012 m	1.658

GCT-FL01 --> LC4-123 (PV313)	Az.	202°21'31"	0.176 sec	0.030 sec	0.174
	ΔHt.	15.740 m	0.036 m	0.011 m	0.326
	Ellip Dist.	18684.005 m	0.015 m	0.024 m	1.638
J 714 --> LC4-123 (PV317)	Az.	137°29'41"	0.121 sec	-0.156 sec	-1.416
	ΔHt.	4.913 m	0.036 m	-0.034 m	-0.962
	Ellip Dist.	25710.430 m	0.016 m	-0.024 m	-1.634
A 039 --> LC4-129 (PV44)	Az.	303°14'09"	0.183 sec	0.213 sec	1.301
	ΔHt.	-3.077 m	0.033 m	-0.012 m	-0.410
	Ellip Dist.	14487.602 m	0.014 m	0.020 m	1.629
GCT-FL03 --> BRADFORD 7 (PV180)	Az.	92°42'30"	0.009 sec	0.270 sec	1.162
	ΔHt.	3.710 m	0.035 m	0.013 m	0.360
	Ellip Dist.	14573.354 m	0.001 m	0.024 m	1.614
KEYPORT --> M 368 (PV159)	Az.	322°36'17"	0.195 sec	0.367 sec	1.610
	ΔHt.	-9.924 m	0.004 m	0.026 m	0.861
	Ellip Dist.	12162.281 m	0.012 m	0.005 m	0.379
GCT-FL03 --> AD 30 (PV157)	Az.	138°49'00"	0.151 sec	0.110 sec	0.793
	ΔHt.	4.895 m	0.005 m	0.044 m	1.138
	Ellip Dist.	14638.616 m	0.011 m	0.016 m	1.590
KEYPORT --> LC4-128 (PV91)	Az.	344°26'14"	0.214 sec	0.056 sec	0.298
	ΔHt.	-4.509 m	0.037 m	-0.044 m	-1.375
	Ellip Dist.	10937.832 m	0.018 m	0.024 m	1.588
A 039 --> P 597 (PV16)	Az.	303°07'43"	0.184 sec	0.142 sec	0.908
	ΔHt.	-3.226 m	0.004 m	0.016 m	0.562
	Ellip Dist.	14601.797 m	0.014 m	0.021 m	1.581
E 621 --> LC3-128 (PV51)	Az.	212°54'19"	0.563 sec	-0.501 sec	-1.575

	ΔHt.	-19.409 m	0.041 m	0.007 m	0.244
	Ellip Dist.	8031.136 m	0.014 m	0.003 m	0.257
A 039 --> LC2-129 (PV35)	Az.	310°27'14"	0.221 sec	0.144 sec	0.774
	ΔHt.	-2.095 m	0.046 m	-0.013 m	-0.364
	Ellip Dist.	14762.007 m	0.015 m	0.018 m	1.549
GNV E --> LC2-130 (PV27)	Az.	83°10'49"	0.083 sec	0.221 sec	1.539
	ΔHt.	9.848 m	0.023 m	-0.012 m	-0.318
	Ellip Dist.	21775.844 m	0.009 m	-0.009 m	-0.563
KEYPORT --> LC3-126 (PV123)	Az.	288°48'41"	0.102 sec	0.145 sec	1.512
	ΔHt.	-13.028 m	0.028 m	-0.025 m	-0.940
	Ellip Dist.	26164.522 m	0.012 m	0.014 m	1.177
KEYPORT --> P 597 (PV268)	Az.	243°12'31"	0.208 sec	-0.114 sec	-0.575
	ΔHt.	-10.195 m	0.004 m	0.042 m	1.337
	Ellip Dist.	14442.963 m	0.013 m	-0.019 m	-1.507
J 714 --> LC1-123 (PV315)	Az.	134°18'43"	0.123 sec	-0.048 sec	-0.451
	ΔHt.	6.675 m	0.035 m	-0.031 m	-1.056
	Ellip Dist.	24919.597 m	0.015 m	-0.020 m	-1.493
A 039 --> LC3-130 (PV29)	Az.	280°19'00"	0.902 sec	0.899 sec	1.484
	ΔHt.	-0.572 m	0.035 m	0.014 m	0.625
	Ellip Dist.	3606.298 m	0.015 m	0.004 m	0.411
GCT-FL02 --> LC1-130 (PV1)	Az.	127°30'13"	0.127 sec	0.003 sec	0.039
	ΔHt.	6.070 m	0.062 m	0.015 m	0.337
	Ellip Dist.	30135.270 m	0.018 m	0.016 m	1.473
J 714 --> LC1-122 (PV284)	Az.	102°14'45"	0.113 sec	-0.171 sec	-1.470
	ΔHt.	19.588 m	0.035 m	-0.026 m	-0.748

	Ellip Dist.	22672.588 m	0.011 m	-0.005 m	-0.404
KEYPORT --> LC2-128 (PV93)	Az.	341°30'32"	0.351 sec	-0.067 sec	-0.311
	ΔHt.	-3.250 m	0.057 m	0.011 m	0.289
	Ellip Dist.	10827.086 m	0.020 m	0.018 m	1.463
GCT-FL02 --> LC1-129 (PV43)	Az.	122°59'40"	0.212 sec	0.192 sec	1.064
	ΔHt.	6.467 m	0.037 m	0.020 m	0.597
	Ellip Dist.	16491.916 m	0.015 m	0.020 m	1.459
GCT-FL02 --> LC3-130 (PV33)	Az.	129°44'15"	0.112 sec	0.112 sec	0.740
	ΔHt.	9.020 m	0.035 m	0.006 m	0.087
	Ellip Dist.	27857.613 m	0.015 m	0.024 m	1.445
GCT-FL02 --> LC3-126 (PV119)	Az.	10°27'14"	0.551 sec	-0.055 sec	-0.145
	ΔHt.	3.533 m	0.028 m	0.028 m	1.432
	Ellip Dist.	4500.563 m	0.013 m	-0.008 m	-0.792
J 714 --> BRADFORD 9 (PV170)	Az.	125°39'23"	0.009 sec	-0.132 sec	-1.421
	ΔHt.	13.807 m	0.008 m	-0.024 m	-0.607
	Ellip Dist.	26031.054 m	0.001 m	0.005 m	0.339
GCT-FL01 --> LC4-120 (PV245)	Az.	253°38'01"	0.128 sec	-0.162 sec	-1.418
	ΔHt.	11.730 m	0.035 m	0.011 m	0.367
	Ellip Dist.	22922.487 m	0.014 m	0.009 m	0.699
GCT-FL02 --> LC1-127 (PV71)	Az.	84°32'03"	0.180 sec	0.225 sec	1.410
	ΔHt.	5.874 m	0.034 m	0.013 m	0.452
	Ellip Dist.	13346.688 m	0.015 m	0.007 m	0.549
G 445 --> GCT-FL02 (PV11)	Az.	291°09'42"	0.089 sec	0.111 sec	1.406
	ΔHt.	0.727 m	0.008 m	-0.021 m	-0.533
	Ellip Dist.	30412.841 m	0.015 m	0.017 m	1.342

KEYPORT --> V 445 (PV269)	Az.	213°42'05"	0.133 sec	-0.076 sec	-0.604
	ΔHt.	-14.320 m	0.005 m	0.021 m	0.668
	Ellip Dist.	16491.554 m	0.011 m	-0.015 m	-1.400
GCT-FL01 --> LC3-122 (PV295)	Az.	210°52'34"	0.514 sec	-0.105 sec	-0.220
	ΔHt.	28.201 m	0.036 m	-0.002 m	-0.060
	Ellip Dist.	5787.242 m	0.014 m	0.019 m	1.389
GCT-FL02 --> LC4-126 (PV120)	Az.	10°41'49"	0.576 sec	0.014 sec	0.031
	ΔHt.	3.764 m	0.031 m	0.032 m	1.385
	Ellip Dist.	4556.854 m	0.014 m	-0.007 m	-0.587
J 714 --> LC4-122 (PV298)	Az.	101°43'15"	0.127 sec	-0.178 sec	-1.378
	ΔHt.	17.656 m	0.031 m	-0.032 m	-0.943
	Ellip Dist.	21543.323 m	0.010 m	-0.006 m	-0.522
GCT-FL02 --> AD 30 (PV156)	Az.	68°10'28"	0.213 sec	0.145 sec	0.739
	ΔHt.	5.483 m	0.003 m	0.050 m	1.361
	Ellip Dist.	11094.646 m	0.010 m	0.004 m	0.427
GCT-FL03 --> V 368 (PV163)	Az.	67°25'55"	0.203 sec	-0.214 sec	-1.128
	ΔHt.	20.414 m	0.007 m	0.078 m	1.361
	Ellip Dist.	26328.429 m	0.021 m	0.015 m	0.954
GCT-FL03 --> LC1-125 (PV135)	Az.	104°26'57"	0.234 sec	0.073 sec	0.357
	ΔHt.	3.781 m	0.034 m	0.009 m	0.288
	Ellip Dist.	12824.658 m	0.012 m	0.014 m	1.355
GCT-FL03 --> LC2-121 (PV196)	Az.	59°31'08"	0.205 sec	0.015 sec	0.086
	ΔHt.	2.145 m	0.034 m	0.041 m	1.354
	Ellip Dist.	16317.597 m	0.013 m	-0.004 m	-0.354

GCT-FL03 --> FVA-126 (PV109)	Az.	179°20'17"	0.252 sec	0.134 sec	0.682
	ΔHt.	2.545 m	0.049 m	0.043 m	1.347
	Ellip Dist.	10740.409 m	0.019 m	0.007 m	0.460
KEYPORT --> LC1-127 (PV86)	Az.	293°07'13"	0.196 sec	0.231 sec	1.329
	ΔHt.	-10.687 m	0.034 m	-0.031 m	-0.998
	Ellip Dist.	13379.447 m	0.014 m	0.013 m	1.070
J 714 --> LC3-121 (PV203)	Az.	127°13'52"	0.200 sec	-0.150 sec	-0.792
	ΔHt.	-1.468 m	0.031 m	-0.039 m	-1.321
	Ellip Dist.	14002.705 m	0.013 m	-0.011 m	-0.860
E 621 --> LC3-127 (PV79)	Az.	233°33'35"	0.169 sec	-0.069 sec	-0.489
	ΔHt.	-28.810 m	0.036 m	0.040 m	1.320
	Ellip Dist.	16601.547 m	0.014 m	-0.004 m	-0.318
KEYPORT --> LC3-127 (PV84)	Az.	301°38'18"	0.210 sec	0.154 sec	0.821
	ΔHt.	-12.868 m	0.036 m	-0.017 m	-0.537
	Ellip Dist.	13275.100 m	0.014 m	0.017 m	1.319
I75 H 1 --> GCT-FL03 (PV153)	Az.	18°50'28"	0.034 sec	-0.018 sec	-0.679
	ΔHt.	-13.680 m	0.010 m	-0.018 m	-0.600
	Ellip Dist.	29584.224 m	0.006 m	0.008 m	1.314
E 621 --> LC2-128 (PV52)	Az.	219°55'04"	0.519 sec	-0.362 sec	-1.302
	ΔHt.	-19.193 m	0.057 m	0.004 m	0.124
	Ellip Dist.	8550.523 m	0.017 m	-0.007 m	-0.585
KEYPORT --> LC3-125 (PV142)	Az.	321°35'24"	0.119 sec	0.004 sec	0.043
	ΔHt.	-11.164 m	0.035 m	-0.004 m	-0.130
	Ellip Dist.	20496.875 m	0.015 m	0.018 m	1.295
GCT-FL02 --> LC4-130 (PV34)	Az.	124°38'32"	0.087 sec	0.110 sec	1.276

	ΔHt.	9.815 m	0.043 m	0.032 m	0.376
	Ellip Dist.	31378.565 m	0.014 m	0.022 m	0.843
J 714 --> LC2-123 (PV318)	Az.	143°11'22"	0.116 sec	-0.198 sec	-1.274
	ΔHt.	8.216 m	0.034 m	0.040 m	0.667
	Ellip Dist.	27557.254 m	0.015 m	-0.008 m	-0.385
E 621 --> LC1-120 (PV209)	Az.	304°33'12"	0.068 sec	-0.101 sec	-1.273
	ΔHt.	-28.453 m	0.032 m	0.002 m	0.061
	Ellip Dist.	30757.544 m	0.014 m	-0.007 m	-0.446
GCT-FL03 --> LC3-123 (PV304)	Az.	87°16'38"	0.153 sec	0.182 sec	1.271
	ΔHt.	7.791 m	0.040 m	0.010 m	0.260
	Ellip Dist.	21168.829 m	0.016 m	0.004 m	0.276
GCT-FL01 --> LC2-123 (PV314)	Az.	201°21'48"	0.144 sec	-0.074 sec	-0.529
	ΔHt.	19.043 m	0.034 m	-0.038 m	-0.874
	Ellip Dist.	21890.314 m	0.015 m	0.021 m	1.256
J 714 --> FVA-122 (PV285)	Az.	102°14'18"	0.116 sec	-0.150 sec	-1.252
	ΔHt.	19.865 m	0.034 m	-0.027 m	-0.784
	Ellip Dist.	22707.576 m	0.011 m	0.002 m	0.142
KEYPORT --> LC4-126 (PV124)	Az.	288°56'22"	0.110 sec	0.102 sec	1.018
	ΔHt.	-12.796 m	0.031 m	-0.034 m	-1.172
	Ellip Dist.	26153.501 m	0.013 m	0.015 m	1.248
GCT-FL02 --> LC2-129 (PV41)	Az.	122°57'26"	0.200 sec	0.192 sec	1.086
	ΔHt.	7.497 m	0.046 m	0.024 m	0.592
	Ellip Dist.	16347.952 m	0.015 m	0.016 m	1.244
A 039 --> LC1-129 (PV37)	Az.	310°29'06"	0.233 sec	0.262 sec	1.097
	ΔHt.	-3.125 m	0.037 m	0.012 m	0.310

	Ellip Dist.	14617.871 m	0.016 m	0.017 m	1.242
E 621 --> LC4-128 (PV50)	Az.	218°24'51"	0.435 sec	-0.415 sec	-1.238
	ΔHt.	-20.452 m	0.037 m	0.000 m	0.013
	Ellip Dist.	8026.820 m	0.013 m	0.005 m	0.480
FLGPS 29 --> GCT-FL02 (PV9)	Az.	318°23'34"	0.009 sec	-0.043 sec	-1.237
	ΔHt.	-7.668 m	0.013 m	-0.057 m	-1.018
	Ellip Dist.	40221.894 m	0.002 m	0.004 m	0.516
E 621 --> V 368 (PV165)	Az.	348°04'32"	0.311 sec	0.635 sec	1.218
	ΔHt.	-11.501 m	0.004 m	0.069 m	0.992
	Ellip Dist.	12648.755 m	0.027 m	0.051 m	0.970
J 714 --> FVA-120 (PV207)	Az.	215°17'43"	1.387 sec	0.286 sec	0.486
	ΔHt.	1.030 m	0.032 m	-0.015 m	-1.212
	Ellip Dist.	2011.303 m	0.011 m	-0.003 m	-0.756
A 039 --> FVA-129 (PV36)	Az.	310°34'17"	0.220 sec	0.123 sec	0.614
	ΔHt.	-3.163 m	0.036 m	-0.009 m	-0.248
	Ellip Dist.	14655.264 m	0.015 m	0.017 m	1.200
GCT-FL03 --> FVA-128 (PV59)	Az.	110°41'36"	0.156 sec	0.129 sec	1.188
	ΔHt.	11.050 m	0.044 m	0.005 m	0.165
	Ellip Dist.	23290.473 m	0.016 m	0.008 m	0.711
GCT-FL02 --> FVA-129 (PV42)	Az.	122°54'04"	0.199 sec	0.206 sec	1.184
	ΔHt.	6.429 m	0.037 m	0.016 m	0.475
	Ellip Dist.	16457.707 m	0.015 m	0.014 m	1.101
E 621 --> LC2-122 (PV292)	Az.	328°56'04"	0.281 sec	0.250 sec	1.181
	ΔHt.	-23.111 m	0.039 m	-0.010 m	-0.338
	Ellip Dist.	8150.221 m	0.016 m	-0.006 m	-0.522

KEYPORT --> LC4-125 (PV143)	Az.	323°03'14"	0.128 sec	0.015 sec	0.162
	ΔHt.	-14.031 m	0.043 m	-0.005 m	-0.153
	Ellip Dist.	21753.956 m	0.019 m	0.019 m	1.172
E 621 --> LC1-127 (PV81)	Az.	231°08'12"	0.139 sec	-0.065 sec	-0.529
	ΔHt.	-26.629 m	0.034 m	0.034 m	1.156
	Ellip Dist.	18440.523 m	0.014 m	-0.006 m	-0.441
J 714 --> LC2-120 (PV219)	Az.	161°32'23"	0.258 sec	0.001 sec	0.005
	ΔHt.	-2.496 m	0.035 m	-0.010 m	-0.274
	Ellip Dist.	11659.774 m	0.015 m	0.017 m	1.147
I75 H 1 --> GCT-FL02 (PV152)	Az.	34°42'41"	0.064 sec	-0.031 sec	-0.619
	ΔHt.	-14.268 m	0.005 m	-0.030 m	-1.139
	Ellip Dist.	15640.747 m	0.006 m	0.001 m	0.216
E 621 --> LC1-123 (PV307)	Az.	284°38'04"	0.491 sec	0.077 sec	0.208
	ΔHt.	-22.725 m	0.035 m	0.024 m	0.928
	Ellip Dist.	6551.998 m	0.015 m	-0.013 m	-1.138
GCT-FL02 --> FVA-126 (PV111)	Az.	10°06'13"	0.597 sec	-0.239 sec	-0.679
	ΔHt.	3.133 m	0.049 m	-0.032 m	-1.137
	Ellip Dist.	4471.002 m	0.019 m	0.008 m	0.791
E 621 --> LC2-120 (PV211)	Az.	291°26'07"	0.142 sec	0.118 sec	0.919
	ΔHt.	-31.895 m	0.035 m	-0.019 m	-0.625
	Ellip Dist.	21985.242 m	0.014 m	0.014 m	1.136
E 621 --> BRADFORD 7 (PV186)	Az.	277°23'09"	0.009 sec	-0.273 sec	-1.082
	ΔHt.	-28.205 m	0.035 m	-0.005 m	-0.160
	Ellip Dist.	12498.708 m	0.001 m	-0.016 m	-1.120

GNV E --> LC3-130 (PV31)	Az.	79°40'35"	0.182 sec	0.045 sec	0.304
	ΔHt.	9.296 m	0.035 m	-0.029 m	-1.112
	Ellip Dist.	18040.520 m	0.014 m	-0.010 m	-0.843
J 714 --> LC2-124 (PV236)	Az.	180°41'45"	0.171 sec	-0.155 sec	-1.106
	ΔHt.	-11.486 m	0.039 m	-0.001 m	-0.015
	Ellip Dist.	18190.420 m	0.016 m	-0.002 m	-0.112
GNV E --> LC4-130 (PV32)	Az.	81°46'09"	0.114 sec	0.123 sec	1.101
	ΔHt.	10.092 m	0.042 m	-0.006 m	-0.148
	Ellip Dist.	22372.637 m	0.015 m	-0.015 m	-0.954
E 621 --> LC3-126 (PV117)	Az.	252°38'19"	0.096 sec	0.000 sec	0.001
	ΔHt.	-28.971 m	0.028 m	-0.029 m	-1.086
	Ellip Dist.	28100.360 m	0.012 m	-0.009 m	-0.777
GCT-FL02 --> LC4-128 (PV63)	Az.	73°48'22"	0.155 sec	-0.001 sec	-0.003
	ΔHt.	12.051 m	0.037 m	0.038 m	1.073
	Ellip Dist.	23579.610 m	0.011 m	-0.005 m	-0.411
GCT-FL01 --> FVA-124 (PV237)	Az.	245°01'55"	0.110 sec	0.020 sec	0.237
	ΔHt.	13.338 m	0.042 m	-0.033 m	-1.057
	Ellip Dist.	25872.100 m	0.015 m	-0.012 m	-0.990
KEYPORT --> LC3-129 (PV260)	Az.	242°49'38"	0.196 sec	-0.069 sec	-0.364
	ΔHt.	-9.799 m	0.034 m	0.025 m	0.752
	Ellip Dist.	14388.566 m	0.013 m	-0.013 m	-1.046
KEYPORT --> LC4-127 (PV87)	Az.	289°18'40"	0.214 sec	0.174 sec	0.865
	ΔHt.	-11.240 m	0.046 m	0.014 m	0.245
	Ellip Dist.	13933.927 m	0.015 m	0.014 m	1.030
E 621 --> LC4-126 (PV118)	Az.	252°43'17"	0.100 sec	0.011 sec	0.120

	ΔHt.	-28.739 m	0.031 m	-0.029 m	-1.029
	Ellip Dist.	28056.942 m	0.013 m	-0.005 m	-0.422
GCT-FL03 --> FVA-125 (PV136)	Az.	104°31'25"	0.242 sec	0.117 sec	0.560
	ΔHt.	5.407 m	0.035 m	0.009 m	0.294
	Ellip Dist.	12654.920 m	0.012 m	0.011 m	1.025
GCT-FL01 --> FVA-122 (PV283)	Az.	215°36'50"	0.568 sec	0.077 sec	0.220
	ΔHt.	30.692 m	0.034 m	0.012 m	0.573
	Ellip Dist.	3874.184 m	0.013 m	0.008 m	1.022
GCT-FL02 --> LC1-125 (PV130)	Az.	47°36'05"	0.151 sec	0.140 sec	1.020
	ΔHt.	4.370 m	0.034 m	0.018 m	0.586
	Ellip Dist.	17710.683 m	0.013 m	0.002 m	0.139
GCT-FL03 --> LC1-120 (PV213)	Az.	5°58'21"	0.154 sec	-0.011 sec	-0.059
	ΔHt.	3.462 m	0.031 m	0.038 m	1.013
	Ellip Dist.	15200.514 m	0.013 m	0.004 m	0.232
GCT-FL01 --> LC2-121 (PV248)	Az.	242°38'31"	0.227 sec	-0.139 sec	-0.685
	ΔHt.	10.457 m	0.034 m	-0.031 m	-1.003
	Ellip Dist.	14831.304 m	0.013 m	0.002 m	0.174
GCT-FL01 --> BRADFORD 9 (PV168)	Az.	193°48'26"	0.009 sec	-0.214 sec	-1.003
	ΔHt.	24.635 m	0.005 m	-0.012 m	-0.302
	Ellip Dist.	13909.692 m	0.001 m	0.001 m	0.067
E 621 --> LC4-123 (PV309)	Az.	270°55'42"	0.465 sec	-0.078 sec	-0.214
	ΔHt.	-24.487 m	0.036 m	0.009 m	0.368
	Ellip Dist.	6803.383 m	0.016 m	-0.012 m	-0.995
GCT-FL03 --> BRADFORD 9 (PV164)	Az.	86°09'09"	0.009 sec	0.122 sec	0.994
	ΔHt.	16.323 m	0.006 m	0.016 m	0.415

	Ellip Dist.	23985.821 m	0.001 m	0.012 m	0.980
J 714 --> LC2-122 (PV300)	Az.	121°11'09"	0.109 sec	-0.075 sec	-0.732
	ΔHt.	6.289 m	0.039 m	-0.012 m	-0.316
	Ellip Dist.	23323.663 m	0.015 m	-0.015 m	-0.985
KEYPORT --> FVA-127 (PV85)	Az.	293°12'59"	0.197 sec	0.163 sec	0.925
	ΔHt.	-10.232 m	0.035 m	-0.033 m	-0.977
	Ellip Dist.	13444.472 m	0.014 m	0.005 m	0.429
GCT-FL03 --> LC1-121 (PV197)	Az.	59°49'05"	0.194 sec	-0.019 sec	-0.108
	ΔHt.	2.317 m	0.034 m	0.032 m	0.971
	Ellip Dist.	16323.054 m	0.013 m	-0.004 m	-0.329
J 714 --> LC1-121 (PV202)	Az.	127°07'01"	0.205 sec	-0.046 sec	-0.257
	ΔHt.	-0.199 m	0.034 m	-0.028 m	-0.971
	Ellip Dist.	14209.843 m	0.015 m	-0.010 m	-0.787
GCT-FL03 --> LC3-127 (PV74)	Az.	131°44'46"	0.156 sec	0.112 sec	0.832
	ΔHt.	3.105 m	0.036 m	-0.029 m	-0.953
	Ellip Dist.	18260.817 m	0.014 m	-0.001 m	-0.050
E 621 --> LC4-127 (PV82)	Az.	231°13'05"	0.150 sec	-0.128 sec	-0.943
	ΔHt.	-27.182 m	0.046 m	-0.021 m	-0.556
	Ellip Dist.	19503.734 m	0.015 m	-0.008 m	-0.579
GCT-FL03 --> LC2-124 (PV232)	Az.	118°51'05"	1.138 sec	0.784 sec	0.933
	ΔHt.	-8.970 m	0.039 m	0.001 m	0.046
	Ellip Dist.	2923.610 m	0.015 m	0.007 m	0.573
E 621 --> FVA-127 (PV80)	Az.	231°20'52"	0.141 sec	-0.115 sec	-0.925
	ΔHt.	-26.174 m	0.035 m	0.014 m	0.480
	Ellip Dist.	18451.281 m	0.014 m	0.003 m	0.203

GNV E --> LC3-129 (PV47)	Az.	41°05'07"	0.206 sec	-0.092 sec	-0.534
	ΔHt.	7.039 m	0.035 m	-0.013 m	-0.448
	Ellip Dist.	13917.616 m	0.012 m	-0.009 m	-0.921
GNV E --> LC4-129 (PV46)	Az.	41°05'07"	0.209 sec	-0.083 sec	-0.479
	ΔHt.	6.792 m	0.033 m	-0.014 m	-0.531
	Ellip Dist.	13945.682 m	0.013 m	-0.009 m	-0.920
GCT-FL03 --> LC1-126 (PV110)	Az.	178°56'47"	0.208 sec	-0.242 sec	-0.911
	ΔHt.	2.769 m	0.036 m	0.052 m	0.820
	Ellip Dist.	10770.307 m	0.016 m	0.012 m	0.453
GCT-FL02 --> LC3-127 (PV69)	Az.	78°12'10"	0.185 sec	0.159 sec	0.906
	ΔHt.	3.693 m	0.036 m	0.013 m	0.357
	Ellip Dist.	14593.046 m	0.015 m	0.010 m	0.732
GCT-FL03 --> LC4-126 (PV122)	Az.	179°00'11"	0.248 sec	-0.139 sec	-0.620
	ΔHt.	3.176 m	0.031 m	0.016 m	0.577
	Ellip Dist.	10665.309 m	0.014 m	0.012 m	0.904
GCT-FL01 --> LC1-122 (PV282)	Az.	216°04'13"	0.588 sec	-0.112 sec	-0.300
	ΔHt.	30.416 m	0.034 m	0.007 m	0.327
	Ellip Dist.	3890.794 m	0.013 m	0.007 m	0.899
GCT-FL03 --> LC1-128 (PV60)	Az.	110°51'09"	0.145 sec	0.107 sec	0.894
	ΔHt.	10.862 m	0.036 m	0.004 m	0.127
	Ellip Dist.	23125.601 m	0.015 m	0.007 m	0.524
J 714 --> LC3-122 (PV299)	Az.	107°09'31"	0.141 sec	-0.111 sec	-0.894
	ΔHt.	17.373 m	0.036 m	-0.021 m	-0.703
	Ellip Dist.	22482.305 m	0.013 m	-0.001 m	-0.044

J 714 --> FVA-123 (PV301)	Az.	134°14'57"	0.112 sec	-0.052 sec	-0.493
	ΔHt.	6.872 m	0.032 m	-0.019 m	-0.627
	Ellip Dist.	24885.968 m	0.014 m	-0.011 m	-0.894
E 621 --> LC2-124 (PV228)	Az.	272°08'43"	0.136 sec	0.084 sec	0.668
	ΔHt.	-40.885 m	0.039 m	0.005 m	0.133
	Ellip Dist.	24410.203 m	0.015 m	0.012 m	0.877
GCT-FL03 --> FVA-121 (PV195)	Az.	59°35'35"	0.200 sec	0.002 sec	0.009
	ΔHt.	2.071 m	0.034 m	0.033 m	0.876
	Ellip Dist.	16326.974 m	0.014 m	0.001 m	0.051
KEYPORT --> LC4-129 (PV259)	Az.	242°52'07"	0.200 sec	-0.036 sec	-0.184
	ΔHt.	-10.046 m	0.033 m	0.016 m	0.515
	Ellip Dist.	14362.490 m	0.013 m	-0.011 m	-0.864
GCT-FL03 --> LC1-127 (PV76)	Az.	137°41'27"	0.154 sec	0.116 sec	0.855
	ΔHt.	5.286 m	0.034 m	-0.021 m	-0.707
	Ellip Dist.	18756.410 m	0.013 m	-0.005 m	-0.431
FLGPS 29 --> LC2-130 (PV26)	Az.	352°49'00"	0.165 sec	-0.417 sec	-0.842
	ΔHt.	1.903 m	0.023 m	0.010 m	0.228
	Ellip Dist.	11650.892 m	0.009 m	-0.013 m	-0.669
GCT-FL03 --> LC1-123 (PV303)	Az.	91°44'14"	0.158 sec	0.128 sec	0.840
	ΔHt.	9.190 m	0.035 m	-0.004 m	-0.119
	Ellip Dist.	20621.990 m	0.014 m	0.001 m	0.101
GCT-FL03 --> FVA-120 (PV206)	Az.	6°05'29"	0.157 sec	0.025 sec	0.140
	ΔHt.	3.546 m	0.032 m	0.033 m	0.833
	Ellip Dist.	15222.439 m	0.013 m	0.009 m	0.530
GCT-FL03 --> FVA-123 (PV289)	Az.	91°37'05"	0.138 sec	0.069 sec	0.542

	ΔHt.	9.387 m	0.032 m	0.024 m	0.825
	Ellip Dist.	20615.721 m	0.014 m	0.003 m	0.206
GCT-FL01 --> D 714 (PV258)	Az.	270°49'44"	0.174 sec	-0.145 sec	-0.822
	ΔHt.	11.163 m	0.004 m	-0.013 m	-0.366
	Ellip Dist.	17629.694 m	0.013 m	0.002 m	0.155
GNV E --> P 597 (PV14)	Az.	40°38'06"	0.216 sec	-0.150 sec	-0.817
	ΔHt.	6.643 m	0.004 m	0.003 m	0.101
	Ellip Dist.	13903.217 m	0.013 m	-0.009 m	-0.817
GCT-FL03 --> LC3-121 (PV198)	Az.	59°10'52"	0.166 sec	0.053 sec	0.375
	ΔHt.	1.048 m	0.031 m	0.021 m	0.808
	Ellip Dist.	16218.320 m	0.014 m	-0.002 m	-0.164
E 621 --> LC1-128 (PV54)	Az.	221°59'37"	0.379 sec	-0.185 sec	-0.592
	ΔHt.	-21.053 m	0.036 m	0.023 m	0.808
	Ellip Dist.	8010.827 m	0.016 m	0.003 m	0.256
GCT-FL03 --> LC3-126 (PV121)	Az.	179°09'51"	0.230 sec	-0.074 sec	-0.312
	ΔHt.	2.944 m	0.028 m	0.003 m	0.115
	Ellip Dist.	10716.642 m	0.013 m	0.011 m	0.807
GNV E --> LC1-129 (PV40)	Az.	40°06'33"	0.206 sec	-0.036 sec	-0.215
	ΔHt.	6.743 m	0.037 m	-0.018 m	-0.667
	Ellip Dist.	15772.860 m	0.017 m	-0.010 m	-0.803
E 621 --> LC1-121 (PV192)	Az.	309°19'32"	0.175 sec	0.058 sec	0.390
	ΔHt.	-29.598 m	0.034 m	0.003 m	0.101
	Ellip Dist.	16572.985 m	0.015 m	-0.010 m	-0.800
J 714 --> FVA-124 (PV233)	Az.	175°25'33"	0.259 sec	0.205 sec	0.796
	ΔHt.	2.510 m	0.042 m	-0.006 m	-0.137

	Ellip Dist.	12672.386 m	0.013 m	0.010 m	0.797
GCT-FL01 --> LC2-120 (PV244)	Az.	245°45'10"	0.134 sec	-0.035 sec	-0.296
	ΔHt.	8.332 m	0.035 m	0.023 m	0.763
	Ellip Dist.	22778.786 m	0.015 m	0.002 m	0.179
GCT-FL03 --> M 368 (PV161)	Az.	118°19'28"	0.122 sec	0.078 sec	0.753
	ΔHt.	6.048 m	0.005 m	0.001 m	0.030
	Ellip Dist.	19918.986 m	0.012 m	-0.004 m	-0.444
GCT-FL01 --> LC1-123 (PV311)	Az.	202°53'37"	0.178 sec	0.048 sec	0.281
	ΔHt.	17.502 m	0.035 m	0.012 m	0.321
	Ellip Dist.	17079.619 m	0.015 m	0.012 m	0.736
E 621 --> D 714 (PV189)	Az.	315°31'32"	0.108 sec	0.072 sec	0.724
	ΔHt.	-29.064 m	0.008 m	0.001 m	0.023
	Ellip Dist.	24726.886 m	0.015 m	-0.002 m	-0.165
GCT-FL02 --> FVA-125 (PV131)	Az.	47°10'05"	0.170 sec	0.108 sec	0.722
	ΔHt.	5.995 m	0.035 m	0.017 m	0.531
	Ellip Dist.	17604.579 m	0.013 m	0.003 m	0.253
J 714 --> LC3-124 (PV234)	Az.	183°19'29"	0.171 sec	0.298 sec	0.711
	ΔHt.	-0.802 m	0.035 m	0.047 m	0.539
	Ellip Dist.	16905.028 m	0.012 m	-0.009 m	-0.199
KEYPORT --> LC2-129 (PV261)	Az.	247°33'53"	0.242 sec	0.162 sec	0.706
	ΔHt.	-9.064 m	0.046 m	-0.002 m	-0.049
	Ellip Dist.	12871.260 m	0.015 m	-0.003 m	-0.201
GCT-FL01 --> FVA-123 (PV297)	Az.	202°57'55"	0.166 sec	-0.028 sec	-0.178
	ΔHt.	17.699 m	0.032 m	-0.008 m	-0.258
	Ellip Dist.	17041.881 m	0.014 m	0.009 m	0.704

E 621 --> LC1-126 (PV116)	Az.	252°30'35"	0.117 sec	-0.015 sec	-0.143
	ΔHt.	-29.146 m	0.036 m	-0.021 m	-0.702
	Ellip Dist.	28076.559 m	0.012 m	0.000 m	0.022
GCT-FL01 --> LC4-121 (PV251)	Az.	240°22'21"	0.180 sec	-0.098 sec	-0.613
	ΔHt.	9.507 m	0.038 m	0.023 m	0.696
	Ellip Dist.	15156.500 m	0.015 m	0.009 m	0.701
GCT-FL03 --> LC3-125 (PV137)	Az.	104°07'52"	0.234 sec	0.109 sec	0.527
	ΔHt.	4.808 m	0.035 m	-0.002 m	-0.077
	Ellip Dist.	12551.511 m	0.013 m	0.008 m	0.694
GCT-FL03 --> LC4-121 (PV199)	Az.	61°36'33"	0.171 sec	0.102 sec	0.690
	ΔHt.	1.195 m	0.038 m	0.006 m	0.174
	Ellip Dist.	15984.133 m	0.015 m	0.001 m	0.052
GCT-FL01 --> FVA-121 (PV247)	Az.	242°33'44"	0.222 sec	-0.135 sec	-0.687
	ΔHt.	10.383 m	0.034 m	-0.009 m	-0.312
	Ellip Dist.	14820.868 m	0.014 m	0.005 m	0.457
J 714 --> LC4-121 (PV204)	Az.	129°08'14"	0.220 sec	-0.119 sec	-0.608
	ΔHt.	-1.320 m	0.038 m	-0.023 m	-0.687
	Ellip Dist.	14545.827 m	0.013 m	-0.006 m	-0.533
GNV E --> LC2-129 (PV38)	Az.	39°35'07"	0.192 sec	0.119 sec	0.684
	ΔHt.	7.773 m	0.046 m	-0.008 m	-0.205
	Ellip Dist.	15766.217 m	0.016 m	-0.005 m	-0.337
GCT-FL03 --> LC3-120 (PV214)	Az.	8°35'41"	0.209 sec	-0.129 sec	-0.684
	ΔHt.	1.647 m	0.040 m	0.016 m	0.439
	Ellip Dist.	13726.196 m	0.014 m	-0.001 m	-0.111

GCT-FL03 --> LC4-127 (PV77)	Az.	140°56'24"	0.169 sec	0.099 sec	0.683
	ΔHt.	4.733 m	0.046 m	0.020 m	0.526
	Ellip Dist.	18697.479 m	0.014 m	-0.002 m	-0.199
E 621 --> LC4-120 (PV212)	Az.	296°44'44"	0.120 sec	0.076 sec	0.682
	ΔHt.	-28.497 m	0.035 m	-0.001 m	-0.048
	Ellip Dist.	24287.423 m	0.015 m	0.000 m	0.028
GCT-FL03 --> LC4-123 (PV305)	Az.	96°08'59"	0.155 sec	0.096 sec	0.681
	ΔHt.	7.428 m	0.036 m	0.005 m	0.138
	Ellip Dist.	20269.871 m	0.016 m	-0.004 m	-0.288
GCT-FL03 --> LC4-122 (PV286)	Az.	62°32'15"	0.098 sec	0.044 sec	0.443
	ΔHt.	20.171 m	0.031 m	0.010 m	0.362
	Ellip Dist.	26903.973 m	0.011 m	-0.007 m	-0.678
J 714 --> LC4-124 (PV235)	Az.	183°15'22"	0.174 sec	-0.016 sec	-0.100
	ΔHt.	-1.096 m	0.043 m	0.016 m	0.270
	Ellip Dist.	16986.124 m	0.014 m	-0.011 m	-0.668
E 621 --> LC2-123 (PV310)	Az.	248°39'27"	0.370 sec	-0.192 sec	-0.530
	ΔHt.	-21.184 m	0.034 m	0.019 m	0.665
	Ellip Dist.	8233.865 m	0.016 m	0.000 m	0.024
GCT-FL03 --> FVA-124 (PV229)	Az.	42°26'02"	0.554 sec	-0.034 sec	-0.073
	ΔHt.	5.026 m	0.042 m	0.021 m	0.662
	Ellip Dist.	5618.279 m	0.014 m	0.001 m	0.108
GNV E --> V 445 (PV12)	Az.	75°21'08"	0.178 sec	0.044 sec	0.230
	ΔHt.	2.517 m	0.003 m	0.030 m	0.658
	Ellip Dist.	13240.745 m	0.011 m	0.000 m	-0.040
J 714 --> LC1-120 (PV217)	Az.	215°46'01"	1.417 sec	0.166 sec	0.230

	ΔHt.	0.947 m	0.031 m	-0.007 m	-0.454
	Ellip Dist.	2045.936 m	0.010 m	-0.003 m	-0.658
KEYPORT --> LC2-130 (PV266)	Az.	181°20'46"	0.132 sec	-0.101 sec	-0.356
	ΔHt.	-6.990 m	0.023 m	-0.010 m	-0.212
	Ellip Dist.	14503.785 m	0.009 m	0.012 m	0.654
GCT-FL03 --> LC2-122 (PV288)	Az.	78°18'16"	0.139 sec	0.071 sec	0.588
	ΔHt.	8.804 m	0.039 m	0.009 m	0.268
	Ellip Dist.	23215.250 m	0.012 m	-0.006 m	-0.649
FLGPS 28 --> LC2-123 (PV302)	Az.	141°07'45"	0.186 sec	0.099 sec	0.375
	ΔHt.	10.493 m	0.034 m	-0.024 m	-0.646
	Ellip Dist.	17186.907 m	0.015 m	-0.011 m	-0.594
GCT-FL01 --> LC4-122 (PV294)	Az.	231°02'58"	0.584 sec	-0.228 sec	-0.634
	ΔHt.	28.483 m	0.031 m	0.006 m	0.312
	Ellip Dist.	4310.779 m	0.012 m	0.004 m	0.519
E 621 --> LC1-122 (PV280)	Az.	352°03'43"	0.169 sec	0.111 sec	0.633
	ΔHt.	-9.811 m	0.035 m	0.014 m	0.395
	Ellip Dist.	14382.602 m	0.012 m	0.001 m	0.050
E 621 --> FVA-120 (PV205)	Az.	304°37'03"	0.074 sec	-0.014 sec	-0.094
	ΔHt.	-28.369 m	0.032 m	0.040 m	0.622
	Ellip Dist.	30740.195 m	0.014 m	-0.013 m	-0.557
KEYPORT --> FVA-129 (PV262)	Az.	247°12'02"	0.259 sec	0.063 sec	0.252
	ΔHt.	-10.131 m	0.036 m	0.000 m	-0.005
	Ellip Dist.	12796.109 m	0.015 m	-0.008 m	-0.609
GCT-FL03 --> FVA-127 (PV75)	Az.	137°42'40"	0.156 sec	0.084 sec	0.607
	ΔHt.	5.740 m	0.035 m	-0.002 m	-0.058

	Ellip Dist.	18687.938 m	0.013 m	-0.003 m	-0.280
J 714 --> FVA-121 (PV200)	Az.	127°00'09"	0.215 sec	-0.112 sec	-0.605
	ΔHt.	-0.445 m	0.034 m	-0.010 m	-0.342
	Ellip Dist.	14152.165 m	0.015 m	-0.007 m	-0.510
G 445 --> GNV E (PV10)	Az.	247°50'14"	0.092 sec	0.040 sec	0.446
	ΔHt.	0.450 m	0.007 m	0.027 m	0.602
	Ellip Dist.	26714.835 m	0.016 m	-0.005 m	-0.328
GCT-FL01 --> LC3-120 (PV243)	Az.	266°36'34"	0.125 sec	-0.039 sec	-0.344
	ΔHt.	9.959 m	0.040 m	-0.025 m	-0.600
	Ellip Dist.	25214.572 m	0.013 m	-0.007 m	-0.557
KEYPORT --> LC1-129 (PV263)	Az.	247°00'24"	0.279 sec	0.116 sec	0.396
	ΔHt.	-10.094 m	0.037 m	-0.008 m	-0.217
	Ellip Dist.	12799.163 m	0.015 m	-0.008 m	-0.597
E 621 --> FVA-122 (PV281)	Az.	352°11'49"	0.164 sec	0.101 sec	0.590
	ΔHt.	-9.535 m	0.034 m	0.000 m	-0.006
	Ellip Dist.	14373.234 m	0.012 m	0.003 m	0.261
GCT-FL01 --> FVA-120 (PV246)	Az.	270°09'59"	0.108 sec	-0.074 sec	-0.586
	ΔHt.	11.858 m	0.032 m	0.019 m	0.294
	Ellip Dist.	25602.633 m	0.011 m	-0.004 m	-0.131
GCT-FL02 --> LC3-125 (PV132)	Az.	46°44'00"	0.174 sec	0.090 sec	0.579
	ΔHt.	5.397 m	0.035 m	0.017 m	0.503
	Ellip Dist.	17621.538 m	0.012 m	0.002 m	0.208
E 621 --> M 368 (PV162)	Az.	232°48'27"	0.209 sec	-0.102 sec	-0.563
	ΔHt.	-25.866 m	0.003 m	0.011 m	0.424
	Ellip Dist.	11849.312 m	0.011 m	-0.004 m	-0.360

J 714 --> D 714 (PV178)	Az.	101°57'42"	0.429 sec	-0.098 sec	-0.276
	ΔHt.	0.335 m	0.002 m	-0.017 m	-0.561
	Ellip Dist.	6963.346 m	0.013 m	-0.001 m	-0.103
GCT-FL02 --> GCT-FL03 (PV104)	Az.	2°29'40"	0.009 sec	0.027 sec	0.437
	ΔHt.	0.588 m	0.005 m	-0.006 m	-0.310
	Ellip Dist.	15155.713 m	0.001 m	0.002 m	0.556
KEYPORT --> LC3-130 (PV264)	Az.	196°55'27"	0.210 sec	-0.117 sec	-0.554
	ΔHt.	-7.541 m	0.035 m	0.002 m	0.070
	Ellip Dist.	14471.683 m	0.016 m	-0.004 m	-0.227
GCT-FL03 --> FVA-122 (PV279)	Az.	64°23'14"	0.086 sec	0.048 sec	0.542
	ΔHt.	22.380 m	0.035 m	0.000 m	0.013
	Ellip Dist.	27690.769 m	0.012 m	-0.003 m	-0.204
GCT-FL01 --> LC3-121 (PV250)	Az.	242°59'18"	0.180 sec	-0.082 sec	-0.522
	ΔHt.	9.360 m	0.031 m	0.011 m	0.436
	Ellip Dist.	14935.973 m	0.013 m	0.006 m	0.537
GCT-FL03 --> LC4-124 (PV231)	Az.	95°40'36"	1.593 sec	0.264 sec	0.343
	ΔHt.	1.419 m	0.043 m	0.008 m	0.373
	Ellip Dist.	1825.478 m	0.014 m	-0.004 m	-0.526
E 621 --> FVA-126 (PV115)	Az.	252°36'41"	0.134 sec	-0.066 sec	-0.515
	ΔHt.	-29.370 m	0.049 m	-0.004 m	-0.065
	Ellip Dist.	28138.408 m	0.014 m	-0.008 m	-0.504
GCT-FL03 --> LC4-128 (PV56)	Az.	111°17'22"	0.127 sec	0.062 sec	0.504
	ΔHt.	11.463 m	0.037 m	0.006 m	0.156
	Ellip Dist.	23594.025 m	0.015 m	0.000 m	-0.024



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



GCT-FL03 --> LC3-122 (PV287)	Az.	67°17'40"	0.130 sec	-0.022 sec	-0.190
	ΔHt.	19.889 m	0.036 m	0.016 m	0.503
	Ellip Dist.	26298.471 m	0.012 m	0.000 m	0.013
GCT-FL01 --> LC3-123 (PV312)	Az.	203°24'52"	0.216 sec	-0.045 sec	-0.233
	ΔHt.	16.103 m	0.040 m	0.018 m	0.500
	Ellip Dist.	15370.477 m	0.015 m	0.005 m	0.384
GCT-FL03 --> LC2-128 (PV58)	Az.	112°21'22"	0.151 sec	0.079 sec	0.493
	ΔHt.	12.722 m	0.057 m	-0.007 m	-0.113
	Ellip Dist.	23231.323 m	0.021 m	-0.039 m	-0.279
E 621 --> LC3-123 (PV308)	Az.	299°30'43"	0.464 sec	-0.032 sec	-0.085
	ΔHt.	-24.124 m	0.040 m	-0.015 m	-0.488
	Ellip Dist.	6668.234 m	0.016 m	-0.005 m	-0.375
E 621 --> LC4-125 (PV128)	Az.	272°07'33"	0.224 sec	-0.104 sec	-0.419
	ΔHt.	-29.974 m	0.043 m	0.003 m	0.041
	Ellip Dist.	15137.488 m	0.016 m	-0.014 m	-0.478
GCT-FL02 --> LC4-127 (PV72)	Az.	87°07'50"	0.232 sec	0.093 sec	0.476
	ΔHt.	5.321 m	0.046 m	-0.001 m	-0.032
	Ellip Dist.	12457.995 m	0.015 m	0.004 m	0.271
KEYPORT --> G 445 (PV270)	Az.	158°17'18"	0.430 sec	0.008 sec	0.021
	ΔHt.	-17.288 m	0.003 m	0.014 m	0.346
	Ellip Dist.	7490.459 m	0.012 m	-0.005 m	-0.469
GCT-FL02 --> FVA-127 (PV70)	Az.	84°18'55"	0.184 sec	-0.009 sec	-0.055
	ΔHt.	6.329 m	0.035 m	0.014 m	0.469
	Ellip Dist.	13300.366 m	0.015 m	0.003 m	0.244
J 714 --> LC2-121 (PV201)	Az.	127°00'17"	0.210 sec	-0.082 sec	-0.447

	ΔHt.	-0.371 m	0.034 m	-0.014 m	-0.469
	Ellip Dist.	14129.047 m	0.015 m	-0.002 m	-0.176
J 714 --> LC3-120 (PV218)	Az.	192°46'05"	0.897 sec	-0.236 sec	-0.343
	ΔHt.	-0.869 m	0.040 m	-0.006 m	-0.234
	Ellip Dist.	3287.436 m	0.014 m	-0.005 m	-0.467
E 621 --> LC4-124 (PV227)	Az.	274°52'47"	0.115 sec	-0.017 sec	-0.178
	ΔHt.	-30.496 m	0.043 m	-0.011 m	-0.361
	Ellip Dist.	25225.712 m	0.014 m	-0.006 m	-0.465
GCT-FL02 --> LC4-125 (PV133)	Az.	42°58'38"	0.208 sec	0.036 sec	0.189
	ΔHt.	2.529 m	0.043 m	0.020 m	0.462
	Ellip Dist.	18317.669 m	0.014 m	0.000 m	-0.016
GCT-FL03 --> LC1-122 (PV278)	Az.	64°20'51"	0.086 sec	0.039 sec	0.455
	ΔHt.	22.104 m	0.035 m	-0.004 m	-0.107
	Ellip Dist.	27661.356 m	0.012 m	-0.004 m	-0.340
GCT-FL02 --> M 368 (PV160)	Az.	72°37'46"	0.131 sec	-0.008 sec	-0.072
	ΔHt.	6.637 m	0.005 m	0.006 m	0.208
	Ellip Dist.	19063.780 m	0.011 m	-0.005 m	-0.450
KEYPORT --> LC4-130 (PV265)	Az.	179°15'13"	0.226 sec	0.015 sec	0.042
	ΔHt.	-6.746 m	0.042 m	0.018 m	0.252
	Ellip Dist.	13884.785 m	0.012 m	-0.009 m	-0.449
GCT-FL03 --> LC3-128 (PV57)	Az.	111°44'45"	0.135 sec	0.077 sec	0.444
	ΔHt.	12.506 m	0.041 m	-0.016 m	-0.265
	Ellip Dist.	24341.733 m	0.021 m	-0.037 m	-0.263
GCT-FL03 --> LC2-127 (PV73)	Az.	136°21'45"	0.184 sec	0.072 sec	0.442
	ΔHt.	5.633 m	0.039 m	-0.009 m	-0.285

	Ellip Dist.	18613.689 m	0.016 m	0.003 m	0.209
GCT-FL01 --> LC1-120 (PV242)	Az.	270°07'30"	0.109 sec	0.018 sec	0.153
	ΔHt.	11.774 m	0.031 m	-0.015 m	-0.439
	Ellip Dist.	25636.348 m	0.011 m	-0.001 m	-0.101
E 621 --> LC4-121 (PV194)	Az.	307°33'31"	0.197 sec	0.077 sec	0.439
	ΔHt.	-30.720 m	0.038 m	-0.007 m	-0.215
	Ellip Dist.	16235.339 m	0.013 m	0.005 m	0.416
E 621 --> LC2-127 (PV78)	Az.	231°41'05"	0.178 sec	-0.017 sec	-0.106
	ΔHt.	-26.282 m	0.039 m	0.009 m	0.190
	Ellip Dist.	18019.153 m	0.017 m	-0.008 m	-0.432
E 621 --> LC2-121 (PV191)	Az.	309°24'38"	0.177 sec	0.066 sec	0.432
	ΔHt.	-29.770 m	0.034 m	0.000 m	-0.016
	Ellip Dist.	16654.779 m	0.015 m	0.006 m	0.394
E 621 --> FVA-124 (PV225)	Az.	285°36'39"	0.109 sec	0.012 sec	0.122
	ΔHt.	-26.889 m	0.042 m	0.021 m	0.430
	Ellip Dist.	24036.042 m	0.016 m	-0.003 m	-0.171
GCT-FL03 --> D 714 (PV183)	Az.	32°00'58"	0.164 sec	-0.067 sec	-0.396
	ΔHt.	2.851 m	0.006 m	0.011 m	0.244
	Ellip Dist.	18088.104 m	0.014 m	-0.004 m	-0.245
GCT-FL03 --> LC2-120 (PV215)	Az.	48°31'53"	0.348 sec	0.062 sec	0.228
	ΔHt.	0.020 m	0.035 m	0.003 m	0.104
	Ellip Dist.	8637.019 m	0.015 m	0.005 m	0.393
E 621 --> FVA-128 (PV53)	Az.	221°02'43"	0.433 sec	-0.104 sec	-0.376
	ΔHt.	-20.864 m	0.044 m	0.005 m	0.169
	Ellip Dist.	7892.363 m	0.017 m	0.002 m	0.159

GCT-FL02 --> LC1-128 (PV67)	Az.	72°45'39"	0.137 sec	-0.017 sec	-0.108
	ΔHt.	11.450 m	0.036 m	-0.006 m	-0.134
	Ellip Dist.	23318.537 m	0.015 m	0.007 m	0.372
E 621 --> LC4-122 (PV290)	Az.	348°16'14"	0.142 sec	0.054 sec	0.368
	ΔHt.	-11.744 m	0.031 m	0.001 m	0.036
	Ellip Dist.	14992.769 m	0.013 m	0.002 m	0.114
GCT-FL03 --> LC4-125 (PV138)	Az.	98°22'15"	0.273 sec	0.078 sec	0.365
	ΔHt.	1.941 m	0.043 m	-0.002 m	-0.074
	Ellip Dist.	11954.937 m	0.017 m	0.001 m	0.068
GNV E --> FVA-129 (PV39)	Az.	39°58'26"	0.197 sec	-0.032 sec	-0.206
	ΔHt.	6.706 m	0.036 m	-0.010 m	-0.354
	Ellip Dist.	15795.222 m	0.016 m	-0.002 m	-0.176
GCT-FL01 --> LC2-122 (PV296)	Az.	203°25'46"	0.266 sec	0.063 sec	0.239
	ΔHt.	17.116 m	0.039 m	0.013 m	0.334
	Ellip Dist.	11343.634 m	0.013 m	0.005 m	0.352
E 621 --> FVA-125 (PV126)	Az.	266°36'15"	0.216 sec	-0.049 sec	-0.255
	ΔHt.	-26.508 m	0.035 m	-0.006 m	-0.193
	Ellip Dist.	14733.487 m	0.012 m	0.004 m	0.340
E 621 --> LC3-122 (PV291)	Az.	347°53'26"	0.187 sec	0.050 sec	0.331
	ΔHt.	-12.026 m	0.036 m	0.009 m	0.330
	Ellip Dist.	12705.316 m	0.017 m	0.001 m	0.074
E 621 --> LC3-120 (PV210)	Az.	302°35'33"	0.085 sec	-0.015 sec	-0.195
	ΔHt.	-30.268 m	0.040 m	0.014 m	0.310
	Ellip Dist.	29513.642 m	0.016 m	0.003 m	0.211



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



E 621 --> FVA-123 (PV293)	Az.	284°59'13"	0.430 sec	0.097 sec	0.305
	ΔHt.	-22.528 m	0.032 m	0.001 m	0.044
	Ellip Dist.	6567.746 m	0.014 m	-0.001 m	-0.135
E 621 --> LC1-125 (PV125)	Az.	266°27'35"	0.205 sec	0.044 sec	0.243
	ΔHt.	-28.134 m	0.034 m	-0.008 m	-0.289
	Ellip Dist.	14567.001 m	0.012 m	0.003 m	0.304
E 621 --> FVA-121 (PV190)	Az.	309°24'56"	0.182 sec	0.046 sec	0.303
	ΔHt.	-29.844 m	0.034 m	-0.005 m	-0.199
	Ellip Dist.	16631.702 m	0.015 m	0.000 m	0.021
GCT-FL03 --> LC2-123 (PV306)	Az.	105°18'21"	0.155 sec	-0.019 sec	-0.130
	ΔHt.	10.731 m	0.034 m	0.008 m	0.301
	Ellip Dist.	20003.619 m	0.015 m	-0.003 m	-0.262
GCT-FL02 --> LC3-128 (PV64)	Az.	75°15'18"	0.183 sec	-0.111 sec	-0.171
	ΔHt.	13.095 m	0.041 m	0.014 m	0.293
	Ellip Dist.	24062.073 m	0.015 m	-0.023 m	-0.297
KEYPORT --> LC2-127 (PV83)	Az.	295°04'09"	0.253 sec	0.062 sec	0.295
	ΔHt.	-10.340 m	0.039 m	0.002 m	0.082
	Ellip Dist.	13341.095 m	0.016 m	0.004 m	0.254
E 621 --> LC3-121 (PV193)	Az.	309°12'16"	0.167 sec	0.036 sec	0.248
	ΔHt.	-30.867 m	0.031 m	0.000 m	0.001
	Ellip Dist.	16779.038 m	0.013 m	-0.003 m	-0.278
GCT-FL01 --> LC2-124 (PV240)	Az.	236°17'39"	0.107 sec	0.025 sec	0.268
	ΔHt.	-0.658 m	0.039 m	-0.007 m	-0.151
	Ellip Dist.	29688.847 m	0.016 m	-0.001 m	-0.042
E 621 --> LC3-124 (PV226)	Az.	275°03'45"	0.100 sec	-0.004 sec	-0.044

	ΔHt.	-30.202 m	0.035 m	0.001 m	0.018
	Ellip Dist.	25248.182 m	0.014 m	-0.003 m	-0.251
GCT-FL01 --> LC1-121 (PV249)	Az.	242°18'50"	0.215 sec	-0.040 sec	-0.208
	ΔHt.	10.629 m	0.034 m	-0.003 m	-0.116
	Ellip Dist.	14821.884 m	0.013 m	0.002 m	0.213
E 621 --> LC3-125 (PV127)	Az.	267°02'42"	0.210 sec	-0.004 sec	-0.024
	ΔHt.	-27.107 m	0.035 m	-0.006 m	-0.191
	Ellip Dist.	14805.866 m	0.012 m	0.002 m	0.175
GCT-FL02 --> LC2-127 (PV68)	Az.	82°56'49"	0.239 sec	0.013 sec	0.060
	ΔHt.	6.221 m	0.039 m	0.004 m	0.102
	Ellip Dist.	13608.576 m	0.017 m	-0.002 m	-0.156

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
A 039	FVA-129	Az.	310°34'17"	0.220 sec	1 : 969079	1 : 970462
		ΔHt.	-3.171 m	0.036 m		
		ΔElev.	-3.202 m	0.036 m		
		Ellip Dist.	14655.268 m	0.015 m		
A 039	FVA-130	Az.	274°56'37"	2.402 sec	1 : 93346	1 : 93230
		ΔHt.	-3.424 m	0.029 m		
		ΔElev.	-3.429 m	0.029 m		
		Ellip Dist.	1040.634 m	0.011 m		
A 039	LC1-129	Az.	310°29'06"	0.233 sec	1 : 924001	1 : 926041
		ΔHt.	-3.134 m	0.037 m		
		ΔElev.	-3.164 m	0.037 m		
		Ellip Dist.	14617.875 m	0.016 m		
A 039	LC2-129	Az.	310°27'14"	0.221 sec	1 : 1004098	1 : 1004457
		ΔHt.	-2.104 m	0.046 m		
		ΔElev.	-2.134 m	0.046 m		

		Ellip Dist.	14762.011 m	0.015 m		
A 039	LC2-130	Az.	91°33'06"	5.555 sec	1 : 35077	1 : 35073
		ΔHt.	-0.021 m	0.022 m		
		ΔElev.	-0.019 m	0.022 m		
		Ellip Dist.	324.196 m	0.009 m		
A 039	LC3-129	Az.	303°07'34"	0.178 sec	1 : 1046491	1 : 1046611
		ΔHt.	-2.838 m	0.034 m		
		ΔElev.	-2.871 m	0.034 m		
		Ellip Dist.	14491.490 m	0.014 m		
A 039	LC3-130	Az.	280°19'00"	0.904 sec	1 : 247095	1 : 247265
		ΔHt.	-0.574 m	0.034 m		
		ΔElev.	-0.592 m	0.034 m		
		Ellip Dist.	3606.299 m	0.015 m		
A 039	LC4-129	Az.	303°14'09"	0.183 sec	1 : 1024246	1 : 1024322
		ΔHt.	-3.086 m	0.033 m		
		ΔElev.	-3.118 m	0.033 m		
		Ellip Dist.	14487.607 m	0.014 m		
A 039	LC4-130	Az.	54°18'38"	2.650 sec	1 : 72971	1 : 73091
		ΔHt.	0.223 m	0.042 m		
		ΔElev.	0.227 m	0.042 m		
		Ellip Dist.	1041.197 m	0.014 m		
AD 30	KEYPORT	Az.	117°52'58"	0.133 sec	1 : 1620339	1 : 1622276
		ΔHt.	11.087 m	0.000 m		
		ΔElev.	11.068 m	0.000 m		
		Ellip Dist.	17305.038 m	0.011 m		
BRADFORD 7	J 714	Az.	326°04'45"	0.000 sec	1 : 0	1 : 5990370399
		ΔHt.	-1.204 m	0.035 m		
		ΔElev.	-0.942 m	0.035 m		
		Ellip Dist.	21068.084 m	0.000 m		
BRADFORD 9	J 714	Az.	305°45'59"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-13.822 m	0.000 m		
		ΔElev.	-13.571 m	0.000 m		

		Ellip Dist.	26031.062 m	0.000 m		
D 714	J 714	Az.	281°59'50"	0.429 sec	1 : 518754	1 : 519849
		ΔHt.	-0.339 m	0.000 m		
		ΔElev.	-0.300 m	0.000 m		
		Ellip Dist.	6963.349 m	0.013 m		
E 621	AD 30	Az.	243°19'38"	0.121 sec	1 : 1863883	1 : 1862465
		ΔHt.	-27.027 m	0.000 m		
		ΔElev.	-27.088 m	0.000 m		
		Ellip Dist.	19402.902 m	0.010 m		
E 621	BRADFORD 7	Az.	277°23'09"	0.000 sec	1 : 0	1 : 156967972
		ΔHt.	-28.212 m	0.035 m		
		ΔElev.	-28.189 m	0.035 m		
		Ellip Dist.	12498.712 m	0.000 m		
E 621	BRADFORD 9	Az.	322°10'00"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-15.595 m	0.000 m		
		ΔElev.	-15.560 m	0.000 m		
		Ellip Dist.	4915.076 m	0.000 m		
E 621	D 714	Az.	315°31'32"	0.108 sec	1 : 1656941	1 : 1658804
		ΔHt.	-29.077 m	0.000 m		
		ΔElev.	-28.831 m	0.000 m		
		Ellip Dist.	24726.893 m	0.015 m		
E 621	FVA-120	Az.	304°37'03"	0.074 sec	1 : 2271646	1 : 2277527
		ΔHt.	-28.387 m	0.032 m		
		ΔElev.	-28.107 m	0.032 m		
		Ellip Dist.	30740.204 m	0.014 m		
E 621	FVA-121	Az.	309°24'56"	0.181 sec	1 : 1110318	1 : 1113143
		ΔHt.	-29.853 m	0.034 m		
		ΔElev.	-29.720 m	0.034 m		
		Ellip Dist.	16631.707 m	0.015 m		
E 621	FVA-122	Az.	352°11'49"	0.164 sec	1 : 1177148	1 : 1178085
		ΔHt.	-9.539 m	0.034 m		
		ΔElev.	-9.426 m	0.034 m		

		Ellip Dist.	14373.238 m	0.012 m		
E 621	FVA-123	Az.	284°59'13"	0.431 sec	1 : 483097	1 : 481999
		ΔHt.	-22.531 m	0.032 m		
		ΔElev.	-22.515 m	0.032 m		
		Ellip Dist.	6567.748 m	0.014 m		
E 621	FVA-124	Az.	285°36'39"	0.110 sec	1 : 1501988	1 : 1499991
		ΔHt.	-26.903 m	0.042 m		
		ΔElev.	-26.755 m	0.042 m		
		Ellip Dist.	24036.050 m	0.016 m		
E 621	FVA-125	Az.	266°36'15"	0.216 sec	1 : 1265156	1 : 1267048
		ΔHt.	-26.516 m	0.034 m		
		ΔElev.	-26.515 m	0.034 m		
		Ellip Dist.	14733.491 m	0.012 m		
E 621	FVA-126	Az.	252°36'41"	0.134 sec	1 : 1978200	1 : 1971094
		ΔHt.	-29.383 m	0.049 m		
		ΔElev.	-29.412 m	0.049 m		
		Ellip Dist.	28138.417 m	0.014 m		
E 621	FVA-127	Az.	231°20'52"	0.140 sec	1 : 1291982	1 : 1294476
		ΔHt.	-26.180 m	0.035 m		
		ΔElev.	-26.256 m	0.035 m		
		Ellip Dist.	18451.287 m	0.014 m		
E 621	GCT-FL01	Az.	1°00'11"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-40.231 m	0.000 m		
		ΔElev.	-40.098 m	0.000 m		
		Ellip Dist.	17392.438 m	0.000 m		
E 621	GCT-FL03	Az.	274°56'34"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-31.930 m	0.000 m		
		ΔElev.	-31.819 m	0.000 m		
		Ellip Dist.	27050.971 m	0.000 m		
E 621	J 714	Az.	308°21'50"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-29.416 m	0.000 m		
		ΔElev.	-29.131 m	0.000 m		

		Ellip Dist.	30777.783 m	0.000 m		
E 621	KEYPORT	Az.	186°57'44"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-15.940 m	0.000 m		
		ΔElev.	-16.020 m	0.000 m		
		Ellip Dist.	16951.695 m	0.000 m		
E 621	LC1-120	Az.	304°33'12"	0.068 sec	1 : 2192517	1 : 2200085
		ΔHt.	-28.470 m	0.031 m		
		ΔElev.	-28.190 m	0.031 m		
		Ellip Dist.	30757.553 m	0.014 m		
E 621	LC1-121	Az.	309°19'31"	0.175 sec	1 : 1125565	1 : 1128089
		ΔHt.	-29.607 m	0.034 m		
		ΔElev.	-29.475 m	0.034 m		
		Ellip Dist.	16572.990 m	0.015 m		
E 621	LC1-122	Az.	352°03'43"	0.169 sec	1 : 1194630	1 : 1195141
		ΔHt.	-9.815 m	0.034 m		
		ΔElev.	-9.702 m	0.034 m		
		Ellip Dist.	14382.606 m	0.012 m		
E 621	LC1-123	Az.	284°38'03"	0.492 sec	1 : 450587	1 : 449348
		ΔHt.	-22.729 m	0.035 m		
		ΔElev.	-22.712 m	0.035 m		
		Ellip Dist.	6552.000 m	0.015 m		
E 621	LC1-124	Az.	285°25'52"	0.150 sec	1 : 1127223	1 : 1126507
		ΔHt.	-26.988 m	0.055 m		
		ΔElev.	-26.840 m	0.055 m		
		Ellip Dist.	24117.847 m	0.021 m		
E 621	LC1-125	Az.	266°27'35"	0.206 sec	1 : 1241227	1 : 1240643
		ΔHt.	-28.141 m	0.033 m		
		ΔElev.	-28.140 m	0.033 m		
		Ellip Dist.	14567.005 m	0.012 m		
E 621	LC1-126	Az.	252°30'35"	0.118 sec	1 : 2435814	1 : 2427652
		ΔHt.	-29.159 m	0.035 m		
		ΔElev.	-29.188 m	0.035 m		

		Ellip Dist.	28076.568 m	0.012 m		
E 621	LC1-127	Az.	231°08'12"	0.139 sec	1 : 1301163	1 : 1303289
		ΔHt.	-26.635 m	0.034 m		
		ΔElev.	-26.711 m	0.034 m		
		Ellip Dist.	18440.529 m	0.014 m		
E 621	LC2-120	Az.	291°26'07"	0.142 sec	1 : 1539865	1 : 1537884
		ΔHt.	-31.908 m	0.035 m		
		ΔElev.	-31.755 m	0.035 m		
		Ellip Dist.	21985.249 m	0.014 m		
E 621	LC2-121	Az.	309°24'38"	0.176 sec	1 : 1084905	1 : 1087806
		ΔHt.	-29.779 m	0.034 m		
		ΔElev.	-29.645 m	0.034 m		
		Ellip Dist.	16654.784 m	0.015 m		
E 621	LC2-122	Az.	328°56'04"	0.280 sec	1 : 504627	1 : 506025
		ΔHt.	-23.114 m	0.039 m		
		ΔElev.	-23.050 m	0.039 m		
		Ellip Dist.	8150.224 m	0.016 m		
E 621	LC2-123	Az.	248°39'27"	0.371 sec	1 : 526954	1 : 525987
		ΔHt.	-21.187 m	0.034 m		
		ΔElev.	-21.210 m	0.034 m		
		Ellip Dist.	8233.867 m	0.016 m		
E 621	LC2-124	Az.	272°08'43"	0.136 sec	1 : 1627282	1 : 1626547
		ΔHt.	-40.899 m	0.039 m		
		ΔElev.	-40.830 m	0.039 m		
		Ellip Dist.	24410.211 m	0.015 m		
E 621	LC2-127	Az.	231°41'05"	0.178 sec	1 : 1081490	1 : 1080181
		ΔHt.	-26.288 m	0.039 m		
		ΔElev.	-26.362 m	0.039 m		
		Ellip Dist.	18019.158 m	0.017 m		
E 621	LC3-120	Az.	302°35'33"	0.085 sec	1 : 1859188	1 : 1864351
		ΔHt.	-30.285 m	0.040 m		
		ΔElev.	-30.017 m	0.040 m		

		Ellip Dist.	29513.651 m	0.016 m		
E 621	LC3-121	Az.	309°12'16"	0.167 sec	1 : 1295724	1 : 1295001
		ΔHt.	-30.877 m	0.030 m		
		ΔElev.	-30.741 m	0.030 m		
		Ellip Dist.	16779.043 m	0.013 m		
E 621	LC3-122	Az.	347°53'26"	0.187 sec	1 : 762011	1 : 762349
		ΔHt.	-12.030 m	0.036 m		
		ΔElev.	-11.929 m	0.036 m		
		Ellip Dist.	12705.320 m	0.017 m		
E 621	LC3-123	Az.	299°30'43"	0.465 sec	1 : 411438	1 : 409691
		ΔHt.	-24.127 m	0.039 m		
		ΔElev.	-24.097 m	0.039 m		
		Ellip Dist.	6668.236 m	0.016 m		
E 621	LC3-124	Az.	275°03'45"	0.100 sec	1 : 1802238	1 : 1801723
		ΔHt.	-30.216 m	0.035 m		
		ΔElev.	-30.121 m	0.035 m		
		Ellip Dist.	25248.190 m	0.014 m		
E 621	LC3-125	Az.	267°02'42"	0.210 sec	1 : 1260498	1 : 1263886
		ΔHt.	-27.114 m	0.035 m		
		ΔElev.	-27.112 m	0.035 m		
		Ellip Dist.	14805.870 m	0.012 m		
E 621	LC3-126	Az.	252°38'19"	0.096 sec	1 : 2344573	1 : 2342135
		ΔHt.	-28.983 m	0.028 m		
		ΔElev.	-29.012 m	0.028 m		
		Ellip Dist.	28100.369 m	0.012 m		
E 621	LC3-127	Az.	233°33'35"	0.169 sec	1 : 1174069	1 : 1175201
		ΔHt.	-28.815 m	0.036 m		
		ΔElev.	-28.885 m	0.036 m		
		Ellip Dist.	16601.552 m	0.014 m		
E 621	LC4-120	Az.	296°44'44"	0.120 sec	1 : 1661677	1 : 1659804
		ΔHt.	-28.511 m	0.034 m		
		ΔElev.	-28.311 m	0.034 m		

		Ellip Dist.	24287.430 m	0.015 m		
E 621	LC4-121	Az.	307°33'31"	0.197 sec	1 : 1242090	1 : 1239329
		ΔHt.	-30.729 m	0.038 m		
		ΔElev.	-30.603 m	0.038 m		
		Ellip Dist.	16235.344 m	0.013 m		
E 621	LC4-122	Az.	348°16'14"	0.142 sec	1 : 1129657	1 : 1130593
		ΔHt.	-11.748 m	0.031 m		
		ΔElev.	-11.629 m	0.031 m		
		Ellip Dist.	14992.773 m	0.013 m		
E 621	LC4-123	Az.	270°55'42"	0.466 sec	1 : 433891	1 : 432637
		ΔHt.	-24.490 m	0.036 m		
		ΔElev.	-24.487 m	0.036 m		
		Ellip Dist.	6803.385 m	0.016 m		
E 621	LC4-124	Az.	274°52'47"	0.116 sec	1 : 1773624	1 : 1772040
		ΔHt.	-30.510 m	0.043 m		
		ΔElev.	-30.416 m	0.043 m		
		Ellip Dist.	25225.720 m	0.014 m		
E 621	LC4-125	Az.	272°07'33"	0.223 sec	1 : 947384	1 : 950354
		ΔHt.	-29.982 m	0.043 m		
		ΔElev.	-29.964 m	0.043 m		
		Ellip Dist.	15137.492 m	0.016 m		
E 621	LC4-126	Az.	252°43'17"	0.101 sec	1 : 2157968	1 : 2155370
		ΔHt.	-28.751 m	0.030 m		
		ΔElev.	-28.780 m	0.030 m		
		Ellip Dist.	28056.950 m	0.013 m		
E 621	LC4-127	Az.	231°13'05"	0.150 sec	1 : 1276297	1 : 1276478
		ΔHt.	-27.188 m	0.046 m		
		ΔElev.	-27.267 m	0.046 m		
		Ellip Dist.	19503.740 m	0.015 m		
E 621	M 368	Az.	232°48'27"	0.209 sec	1 : 1033822	1 : 1033314
		ΔHt.	-25.870 m	0.000 m		
		ΔElev.	-25.922 m	0.000 m		

		Ellip Dist.	11849.315 m	0.011 m		
E 621	V 368	Az.	348°04'32"	0.310 sec	1 : 464447	1 : 465243
		ΔHt.	-11.505 m	0.000 m		
		ΔElev.	-11.404 m	0.000 m		
		Ellip Dist.	12648.759 m	0.027 m		
FLGPS 28	J 714	Az.	326°40'26"	0.000 sec	1 : 0	1 : 0
		ΔHt.	2.273 m	0.000 m		
		ΔElev.	2.386 m	0.000 m		
		Ellip Dist.	10400.685 m	0.000 m		
FLGPS 28	LC2-123	Az.	141°07'45"	0.186 sec	1 : 1154983	1 : 1154353
		ΔHt.	10.502 m	0.034 m		
		ΔElev.	10.307 m	0.034 m		
		Ellip Dist.	17186.912 m	0.015 m		
FLGPS 29	GNV E	Az.	291°20'21"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-7.959 m	0.000 m		
		ΔElev.	-8.034 m	0.000 m		
		Ellip Dist.	24783.023 m	0.000 m		
FLGPS 29	LC2-130	Az.	352°49'00"	0.164 sec	1 : 1338278	1 : 1338378
		ΔHt.	1.900 m	0.022 m		
		ΔElev.	1.866 m	0.022 m		
		Ellip Dist.	11650.895 m	0.009 m		
FVA-120	J 714	Az.	35°17'21"	1.391 sec	1 : 183959	1 : 183350
		ΔHt.	-1.030 m	0.032 m		
		ΔElev.	-1.024 m	0.032 m		
		Ellip Dist.	2011.303 m	0.011 m		
FVA-121	J 714	Az.	307°03'41"	0.215 sec	1 : 952975	1 : 954969
		ΔHt.	0.437 m	0.034 m		
		ΔElev.	0.589 m	0.034 m		
		Ellip Dist.	14152.169 m	0.015 m		
FVA-124	J 714	Az.	355°25'51"	0.259 sec	1 : 984087	1 : 982566
		ΔHt.	-2.513 m	0.042 m		
		ΔElev.	-2.376 m	0.042 m		

		Ellip Dist.	12672.390 m	0.013 m		
FVA-125	GCT-FL03	Az.	284°35'14"	0.242 sec	1 : 1019366	1 : 1022429
		ΔHt.	-5.414 m	0.034 m		
		ΔElev.	-5.304 m	0.034 m		
		Ellip Dist.	12654.924 m	0.012 m		
FVA-125	KEYPORT	Az.	141°30'24"	0.126 sec	1 : 1378407	1 : 1381624
		ΔHt.	10.576 m	0.034 m		
		ΔElev.	10.495 m	0.034 m		
		Ellip Dist.	20362.322 m	0.015 m		
FVA-126	GCT-FL03	Az.	359°20'20"	0.251 sec	1 : 560693	1 : 561116
		ΔHt.	-2.547 m	0.049 m		
		ΔElev.	-2.407 m	0.049 m		
		Ellip Dist.	10740.412 m	0.019 m		
FVA-127	GCT-FL03	Az.	317°46'34"	0.156 sec	1 : 1470402	1 : 1466850
		ΔHt.	-5.750 m	0.035 m		
		ΔElev.	-5.563 m	0.035 m		
		Ellip Dist.	18687.943 m	0.013 m		
FVA-127	KEYPORT	Az.	113°09'10"	0.198 sec	1 : 961571	1 : 959550
		ΔHt.	10.240 m	0.035 m		
		ΔElev.	10.236 m	0.035 m		
		Ellip Dist.	13444.476 m	0.014 m		
FVA-128	E 621	Az.	41°01'07"	0.434 sec	1 : 462193	1 : 462289
		ΔHt.	20.866 m	0.044 m		
		ΔElev.	20.910 m	0.044 m		
		Ellip Dist.	7892.365 m	0.017 m		
FVA-128	GCT-FL03	Az.	290°48'21"	0.156 sec	1 : 1452436	1 : 1452893
		ΔHt.	-11.064 m	0.044 m		
		ΔElev.	-10.909 m	0.044 m		
		Ellip Dist.	23290.480 m	0.016 m		
FVA-128	KEYPORT	Az.	163°55'35"	0.293 sec	1 : 644464	1 : 644607
		ΔHt.	4.926 m	0.044 m		
		ΔElev.	4.890 m	0.044 m		

		Ellip Dist.	11315.251 m	0.018 m		
FVA-129	GNV E	Az.	220°01'34"	0.197 sec	1 : 1010038	1 : 1008283
		ΔHt.	-6.709 m	0.036 m		
		ΔElev.	-6.717 m	0.036 m		
		Ellip Dist.	15795.227 m	0.016 m		
FVA-129	KEYPORT	Az.	67°08'24"	0.260 sec	1 : 877562	1 : 875963
		ΔHt.	10.137 m	0.036 m		
		ΔElev.	10.163 m	0.036 m		
		Ellip Dist.	12796.113 m	0.015 m		
FVA-130	GNV E	Az.	262°33'51"	0.122 sec	1 : 1831605	1 : 1831029
		ΔHt.	-6.456 m	0.029 m		
		ΔElev.	-6.490 m	0.029 m		
		Ellip Dist.	20437.452 m	0.011 m		
G 445	A 039	Az.	204°32'06"	0.358 sec	1 : 618668	1 : 620242
		ΔHt.	10.319 m	0.000 m		
		ΔElev.	10.307 m	0.000 m		
		Ellip Dist.	8278.555 m	0.013 m		
G 445	GNV E	Az.	247°50'14"	0.092 sec	1 : 1712780	1 : 1713835
		ΔHt.	0.439 m	0.000 m		
		ΔElev.	0.388 m	0.000 m		
		Ellip Dist.	26714.843 m	0.016 m		
G 445	KEYPORT	Az.	338°18'10"	0.430 sec	1 : 629451	1 : 628821
		ΔHt.	17.285 m	0.000 m		
		ΔElev.	17.268 m	0.000 m		
		Ellip Dist.	7490.461 m	0.012 m		
GCT-FL01	BRADFORD 7	Az.	218°49'22"	0.000 sec	1 : 0	1 : 959568328
		ΔHt.	12.018 m	0.035 m		
		ΔElev.	11.909 m	0.035 m		
		Ellip Dist.	20257.905 m	0.000 m		
GCT-FL01	BRADFORD 9	Az.	193°48'26"	0.000 sec	1 : 0	1 : 0
		ΔHt.	24.636 m	0.000 m		
		ΔElev.	24.538 m	0.000 m		

		Ellip Dist.	13909.696 m	0.000 m		
GCT-FL01	D 714	Az.	270°49'44"	0.175 sec	1 : 1362110	1 : 1364106
		ΔHt.	11.153 m	0.000 m		
		ΔElev.	11.267 m	0.000 m		
		Ellip Dist.	17629.699 m	0.013 m		
GCT-FL01	FVA-120	Az.	270°09'59"	0.108 sec	1 : 2285717	1 : 2292420
		ΔHt.	11.844 m	0.032 m		
		ΔElev.	11.991 m	0.032 m		
		Ellip Dist.	25602.641 m	0.011 m		
GCT-FL01	FVA-121	Az.	242°33'44"	0.222 sec	1 : 1097703	1 : 1096676
		ΔHt.	10.377 m	0.034 m		
		ΔElev.	10.378 m	0.034 m		
		Ellip Dist.	14820.873 m	0.014 m		
GCT-FL01	FVA-122	Az.	215°36'50"	0.568 sec	1 : 301622	1 : 300073
		ΔHt.	30.692 m	0.034 m		
		ΔElev.	30.672 m	0.034 m		
		Ellip Dist.	3874.185 m	0.013 m		
GCT-FL01	FVA-123	Az.	202°57'55"	0.165 sec	1 : 1248491	1 : 1247328
		ΔHt.	17.699 m	0.032 m		
		ΔElev.	17.583 m	0.032 m		
		Ellip Dist.	17041.887 m	0.014 m		
GCT-FL01	FVA-124	Az.	245°01'55"	0.110 sec	1 : 1708257	1 : 1711479
		ΔHt.	13.328 m	0.042 m		
		ΔElev.	13.343 m	0.042 m		
		Ellip Dist.	25872.108 m	0.015 m		
GCT-FL01	LC1-120	Az.	270°07'30"	0.109 sec	1 : 2383634	1 : 2394243
		ΔHt.	11.760 m	0.031 m		
		ΔElev.	11.908 m	0.031 m		
		Ellip Dist.	25636.356 m	0.011 m		
GCT-FL01	LC1-121	Az.	242°18'50"	0.215 sec	1 : 1122087	1 : 1121567
		ΔHt.	10.623 m	0.034 m		
		ΔElev.	10.623 m	0.034 m		

		Ellip Dist.	14821.889 m	0.013 m		
GCT-FL01	LC1-122	Az.	216°04'13"	0.587 sec	1 : 307657	1 : 306640
		ΔHt.	30.415 m	0.034 m		
		ΔElev.	30.396 m	0.034 m		
		Ellip Dist.	3890.796 m	0.013 m		
GCT-FL01	LC1-123	Az.	202°53'37"	0.178 sec	1 : 1105760	1 : 1104249
		ΔHt.	17.502 m	0.035 m		
		ΔElev.	17.386 m	0.035 m		
		Ellip Dist.	17079.625 m	0.015 m		
GCT-FL01	LC2-120	Az.	245°45'10"	0.134 sec	1 : 1559973	1 : 1559263
		ΔHt.	8.323 m	0.035 m		
		ΔElev.	8.343 m	0.035 m		
		Ellip Dist.	22778.793 m	0.015 m		
GCT-FL01	LC2-121	Az.	242°38'31"	0.227 sec	1 : 1135986	1 : 1135134
		ΔHt.	10.451 m	0.034 m		
		ΔElev.	10.453 m	0.034 m		
		Ellip Dist.	14831.309 m	0.013 m		
GCT-FL01	LC2-122	Az.	203°25'46"	0.267 sec	1 : 874989	1 : 873129
		ΔHt.	17.116 m	0.039 m		
		ΔElev.	17.048 m	0.039 m		
		Ellip Dist.	11343.637 m	0.013 m		
GCT-FL01	LC2-123	Az.	201°21'48"	0.144 sec	1 : 1446098	1 : 1447440
		ΔHt.	19.043 m	0.034 m		
		ΔElev.	18.888 m	0.034 m		
		Ellip Dist.	21890.320 m	0.015 m		
GCT-FL01	LC2-124	Az.	236°17'39"	0.107 sec	1 : 1891244	1 : 1889854
		ΔHt.	-0.668 m	0.039 m		
		ΔElev.	-0.732 m	0.039 m		
		Ellip Dist.	29688.856 m	0.016 m		
GCT-FL01	LC3-120	Az.	266°36'34"	0.125 sec	1 : 1967862	1 : 1974412
		ΔHt.	9.946 m	0.040 m		
		ΔElev.	10.081 m	0.040 m		

		Ellip Dist.	25214.580 m	0.013 m		
GCT-FL01	LC3-121	Az.	242°59'18"	0.181 sec	1 : 1110099	1 : 1110060
		ΔHt.	9.354 m	0.030 m		
		ΔElev.	9.357 m	0.030 m		
		Ellip Dist.	14935.978 m	0.013 m		
GCT-FL01	LC3-122	Az.	210°52'34"	0.515 sec	1 : 408204	1 : 408076
		ΔHt.	28.200 m	0.036 m		
		ΔElev.	28.169 m	0.036 m		
		Ellip Dist.	5787.244 m	0.014 m		
GCT-FL01	LC3-123	Az.	203°24'52"	0.216 sec	1 : 1017626	1 : 1016875
		ΔHt.	16.103 m	0.039 m		
		ΔElev.	16.001 m	0.039 m		
		Ellip Dist.	15370.481 m	0.015 m		
GCT-FL01	LC3-124	Az.	239°13'17"	0.092 sec	1 : 2267911	1 : 2271354
		ΔHt.	10.015 m	0.035 m		
		ΔElev.	9.977 m	0.035 m		
		Ellip Dist.	29627.615 m	0.013 m		
GCT-FL01	LC4-120	Az.	253°38'01"	0.128 sec	1 : 1582360	1 : 1583454
		ΔHt.	11.719 m	0.034 m		
		ΔElev.	11.787 m	0.034 m		
		Ellip Dist.	22922.494 m	0.014 m		
GCT-FL01	LC4-121	Az.	240°22'21"	0.180 sec	1 : 987067	1 : 986275
		ΔHt.	9.502 m	0.038 m		
		ΔElev.	9.495 m	0.038 m		
		Ellip Dist.	15156.504 m	0.015 m		
GCT-FL01	LC4-122	Az.	231°02'58"	0.586 sec	1 : 375523	1 : 374368
		ΔHt.	28.482 m	0.031 m		
		ΔElev.	28.469 m	0.031 m		
		Ellip Dist.	4310.781 m	0.011 m		
GCT-FL01	LC4-123	Az.	202°21'31"	0.176 sec	1 : 1236705	1 : 1236710
		ΔHt.	15.740 m	0.036 m		
		ΔElev.	15.611 m	0.036 m		

		Ellip Dist.	18684.010 m	0.015 m		
GCT-FL01	V 368	Az.	210°11'59"	0.705 sec	1 : 217866	1 : 217393
		ΔHt.	28.726 m	0.000 m		
		ΔElev.	28.694 m	0.000 m		
		Ellip Dist.	5801.230 m	0.027 m		
GCT-FL02	AD 30	Az.	68°10'28"	0.213 sec	1 : 1071803	1 : 1070980
		ΔHt.	5.488 m	0.000 m		
		ΔElev.	5.485 m	0.000 m		
		Ellip Dist.	11094.650 m	0.010 m		
GCT-FL02	E 621	Az.	64°59'58"	0.000 sec	1 : 0	1 : 0
		ΔHt.	32.515 m	0.000 m		
		ΔElev.	32.573 m	0.000 m		
		Ellip Dist.	30470.788 m	0.000 m		
GCT-FL02	FLGPS 29	Az.	138°15'21"	0.000 sec	1 : 0	1 : 0
		ΔHt.	7.689 m	0.000 m		
		ΔElev.	7.707 m	0.000 m		
		Ellip Dist.	40221.906 m	0.000 m		
GCT-FL02	FVA-125	Az.	47°10'05"	0.170 sec	1 : 1380438	1 : 1375742
		ΔHt.	5.999 m	0.034 m		
		ΔElev.	6.058 m	0.034 m		
		Ellip Dist.	17604.584 m	0.013 m		
GCT-FL02	FVA-126	Az.	10°06'13"	0.597 sec	1 : 232332	1 : 232356
		ΔHt.	3.133 m	0.049 m		
		ΔElev.	3.161 m	0.049 m		
		Ellip Dist.	4471.003 m	0.019 m		
GCT-FL02	FVA-127	Az.	84°18'55"	0.184 sec	1 : 894972	1 : 894654
		ΔHt.	6.336 m	0.035 m		
		ΔElev.	6.317 m	0.035 m		
		Ellip Dist.	13300.370 m	0.015 m		
GCT-FL02	FVA-129	Az.	122°54'04"	0.199 sec	1 : 1111135	1 : 1112996
		ΔHt.	6.439 m	0.036 m		
		ΔElev.	6.390 m	0.036 m		

		Ellip Dist.	16457.712 m	0.015 m		
GCT-FL02	FVA-130	Az.	127°29'25"	0.080 sec	1 : 2622015	1 : 2624217
		ΔHt.	6.186 m	0.029 m		
		ΔElev.	6.163 m	0.029 m		
		Ellip Dist.	30164.810 m	0.012 m		
GCT-FL02	G 445	Az.	111°00'56"	0.089 sec	1 : 2090426	1 : 2084912
		ΔHt.	-0.709 m	0.000 m		
		ΔElev.	-0.715 m	0.000 m		
		Ellip Dist.	30412.851 m	0.015 m		
GCT-FL02	GCT-FL03	Az.	2°29'40"	0.000 sec	1 : 0	1 : 0
		ΔHt.	0.585 m	0.000 m		
		ΔElev.	0.754 m	0.000 m		
		Ellip Dist.	15155.717 m	0.000 m		
GCT-FL02	I75 H 1	Az.	214°45'26"	0.065 sec	1 : 2569375	1 : 2567035
		ΔHt.	14.266 m	0.000 m		
		ΔElev.	14.216 m	0.000 m		
		Ellip Dist.	15640.751 m	0.006 m		
GCT-FL02	LC1-125	Az.	47°36'05"	0.152 sec	1 : 1321770	1 : 1318656
		ΔHt.	4.374 m	0.033 m		
		ΔElev.	4.433 m	0.033 m		
		Ellip Dist.	17710.688 m	0.013 m		
GCT-FL02	LC1-126	Az.	11°06'19"	0.512 sec	1 : 272940	1 : 272577
		ΔHt.	3.357 m	0.035 m		
		ΔElev.	3.385 m	0.035 m		
		Ellip Dist.	4456.324 m	0.016 m		
GCT-FL02	LC1-127	Az.	84°32'03"	0.181 sec	1 : 903659	1 : 903251
		ΔHt.	5.881 m	0.034 m		
		ΔElev.	5.862 m	0.034 m		
		Ellip Dist.	13346.692 m	0.015 m		
GCT-FL02	LC1-128	Az.	72°45'39"	0.138 sec	1 : 1528227	1 : 1526059
		ΔHt.	11.461 m	0.036 m		
		ΔElev.	11.474 m	0.036 m		

		Ellip Dist.	23318.544 m	0.015 m		
GCT-FL02	LC1-129	Az.	122°59'40"	0.212 sec	1 : 1075237	1 : 1078131
		ΔHt.	6.476 m	0.037 m		
		ΔElev.	6.428 m	0.037 m		
		Ellip Dist.	16491.921 m	0.015 m		
GCT-FL02	LC1-130	Az.	127°30'13"	0.128 sec	1 : 1643913	1 : 1644629
		ΔHt.	6.087 m	0.062 m		
		ΔElev.	6.063 m	0.062 m		
		Ellip Dist.	30135.279 m	0.018 m		
GCT-FL02	LC2-127	Az.	82°56'49"	0.240 sec	1 : 826111	1 : 825300
		ΔHt.	6.228 m	0.039 m		
		ΔElev.	6.211 m	0.039 m		
		Ellip Dist.	13608.580 m	0.016 m		
GCT-FL02	LC2-129	Az.	122°57'26"	0.200 sec	1 : 1117166	1 : 1117399
		ΔHt.	7.506 m	0.046 m		
		ΔElev.	7.458 m	0.046 m		
		Ellip Dist.	16347.957 m	0.015 m		
GCT-FL02	LC2-130	Az.	126°06'47"	0.059 sec	1 : 3492951	1 : 3489456
		ΔHt.	9.588 m	0.022 m		
		ΔElev.	9.573 m	0.022 m		
		Ellip Dist.	31311.864 m	0.009 m		
GCT-FL02	LC3-125	Az.	46°44'00"	0.175 sec	1 : 1469298	1 : 1464524
		ΔHt.	5.401 m	0.035 m		
		ΔElev.	5.461 m	0.035 m		
		Ellip Dist.	17621.543 m	0.012 m		
GCT-FL02	LC3-126	Az.	10°27'14"	0.550 sec	1 : 343104	1 : 342822
		ΔHt.	3.532 m	0.028 m		
		ΔElev.	3.561 m	0.028 m		
		Ellip Dist.	4500.564 m	0.013 m		
GCT-FL02	LC3-127	Az.	78°12'10"	0.185 sec	1 : 999450	1 : 999838
		ΔHt.	3.700 m	0.036 m		
		ΔElev.	3.688 m	0.036 m		

		Ellip Dist.	14593.050 m	0.015 m		
GCT-FL02	LC3-128	Az.	75°15'18"	0.183 sec	1 : 1570980	1 : 1581066
		ΔHt.	13.106 m	0.041 m		
		ΔElev.	13.115 m	0.041 m		
		Ellip Dist.	24062.080 m	0.015 m		
GCT-FL02	LC3-129	Az.	129°28'09"	0.155 sec	1 : 1198297	1 : 1198050
		ΔHt.	6.771 m	0.034 m		
		ΔElev.	6.721 m	0.034 m		
		Ellip Dist.	16603.695 m	0.014 m		
GCT-FL02	LC3-130	Az.	129°44'15"	0.112 sec	1 : 1815417	1 : 1817783
		ΔHt.	9.035 m	0.034 m		
		ΔElev.	9.000 m	0.034 m		
		Ellip Dist.	27857.622 m	0.015 m		
GCT-FL02	LC4-125	Az.	42°58'38"	0.208 sec	1 : 1353869	1 : 1352156
		ΔHt.	2.533 m	0.043 m		
		ΔElev.	2.609 m	0.043 m		
		Ellip Dist.	18317.674 m	0.014 m		
GCT-FL02	LC4-126	Az.	10°41'49"	0.575 sec	1 : 326551	1 : 326529
		ΔHt.	3.764 m	0.030 m		
		ΔElev.	3.793 m	0.030 m		
		Ellip Dist.	4556.855 m	0.014 m		
GCT-FL02	LC4-127	Az.	87°07'50"	0.233 sec	1 : 809189	1 : 808742
		ΔHt.	5.328 m	0.046 m		
		ΔElev.	5.306 m	0.046 m		
		Ellip Dist.	12457.999 m	0.015 m		
GCT-FL02	LC4-128	Az.	73°48'22"	0.155 sec	1 : 2079870	1 : 2087139
		ΔHt.	12.062 m	0.037 m		
		ΔElev.	12.074 m	0.037 m		
		Ellip Dist.	23579.617 m	0.011 m		
GCT-FL02	LC4-129	Az.	129°22'20"	0.160 sec	1 : 1173932	1 : 1173718
		ΔHt.	6.524 m	0.033 m		
		ΔElev.	6.474 m	0.033 m		

		Ellip Dist.	16604.472 m	0.014 m		
GCT-FL02	LC4-130	Az.	124°38'32"	0.088 sec	1 : 2194266	1 : 2189185
		ΔHt.	9.833 m	0.042 m		
		ΔElev.	9.819 m	0.042 m		
		Ellip Dist.	31378.575 m	0.014 m		
GCT-FL02	M 368	Az.	72°37'46"	0.131 sec	1 : 1681994	1 : 1681766
		ΔHt.	6.645 m	0.000 m		
		ΔElev.	6.651 m	0.000 m		
		Ellip Dist.	19063.785 m	0.011 m		
GCT-FL02	P 597	Az.	129°30'36"	0.162 sec	1 : 1135803	1 : 1136448
		ΔHt.	6.375 m	0.000 m		
		ΔElev.	6.325 m	0.000 m		
		Ellip Dist.	16494.017 m	0.015 m		
GCT-FL02	V 445	Az.	137°01'46"	0.094 sec	1 : 2221421	1 : 2224329
		ΔHt.	2.253 m	0.000 m		
		ΔElev.	2.205 m	0.000 m		
		Ellip Dist.	24183.276 m	0.011 m		
GCT-FL03	AD 30	Az.	138°49'00"	0.151 sec	1 : 1314619	1 : 1316219
		ΔHt.	4.903 m	0.000 m		
		ΔElev.	4.731 m	0.000 m		
		Ellip Dist.	14638.620 m	0.011 m		
GCT-FL03	BRADFORD 7	Az.	92°42'30"	0.000 sec	1 : 0	1 : 1543232629
		ΔHt.	3.718 m	0.035 m		
		ΔElev.	3.630 m	0.035 m		
		Ellip Dist.	14573.359 m	0.000 m		
GCT-FL03	BRADFORD 9	Az.	86°09'09"	0.000 sec	1 : 0	1 : 0
		ΔHt.	16.335 m	0.000 m		
		ΔElev.	16.259 m	0.000 m		
		Ellip Dist.	23985.828 m	0.000 m		
GCT-FL03	D 714	Az.	32°00'58"	0.164 sec	1 : 1335703	1 : 1332628
		ΔHt.	2.853 m	0.000 m		
		ΔElev.	2.988 m	0.000 m		

		Ellip Dist.	18088.109 m	0.014 m		
GCT-FL03	FLGPS 28	Az.	46°24'00"	0.000 sec	1 : 0	1 : 0
		ΔHt.	0.241 m	0.000 m		
		ΔElev.	0.302 m	0.000 m		
		Ellip Dist.	11734.630 m	0.000 m		
GCT-FL03	FVA-120	Az.	6°05'29"	0.158 sec	1 : 1173539	1 : 1169521
		ΔHt.	3.543 m	0.032 m		
		ΔElev.	3.712 m	0.032 m		
		Ellip Dist.	15222.444 m	0.013 m		
GCT-FL03	FVA-121	Az.	59°35'35"	0.201 sec	1 : 1198632	1 : 1196243
		ΔHt.	2.077 m	0.034 m		
		ΔElev.	2.099 m	0.034 m		
		Ellip Dist.	16326.979 m	0.014 m		
GCT-FL03	FVA-122	Az.	64°23'14"	0.086 sec	1 : 2290209	1 : 2285808
		ΔHt.	22.391 m	0.034 m		
		ΔElev.	22.393 m	0.034 m		
		Ellip Dist.	27690.777 m	0.012 m		
GCT-FL03	FVA-123	Az.	91°37'05"	0.138 sec	1 : 1527278	1 : 1527328
		ΔHt.	9.399 m	0.032 m		
		ΔElev.	9.304 m	0.032 m		
		Ellip Dist.	20615.727 m	0.013 m		
GCT-FL03	FVA-124	Az.	42°26'02"	0.552 sec	1 : 404180	1 : 405267
		ΔHt.	5.027 m	0.042 m		
		ΔElev.	5.064 m	0.042 m		
		Ellip Dist.	5618.280 m	0.014 m		
GCT-FL03	GCT-FL01	Az.	60°56'18"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-8.301 m	0.000 m		
		ΔElev.	-8.279 m	0.000 m		
		Ellip Dist.	31138.392 m	0.000 m		
GCT-FL03	I75 H 1	Az.	198°53'25"	0.034 sec	1 : 4819004	1 : 4820210
		ΔHt.	13.681 m	0.000 m		
		ΔElev.	13.462 m	0.000 m		

		Ellip Dist.	29584.233 m	0.006 m		
GCT-FL03	LC1-120	Az.	5°58'21"	0.155 sec	1 : 1168536	1 : 1162880
		ΔHt.	3.460 m	0.031 m		
		ΔElev.	3.629 m	0.031 m		
		Ellip Dist.	15200.518 m	0.013 m		
GCT-FL03	LC1-121	Az.	59°49'05"	0.195 sec	1 : 1229088	1 : 1227368
		ΔHt.	2.323 m	0.034 m		
		ΔElev.	2.344 m	0.034 m		
		Ellip Dist.	16323.059 m	0.013 m		
GCT-FL03	LC1-122	Az.	64°20'51"	0.086 sec	1 : 2263647	1 : 2260476
		ΔHt.	22.115 m	0.034 m		
		ΔElev.	22.117 m	0.034 m		
		Ellip Dist.	27661.364 m	0.012 m		
GCT-FL03	LC1-123	Az.	91°44'14"	0.158 sec	1 : 1438644	1 : 1438780
		ΔHt.	9.201 m	0.035 m		
		ΔElev.	9.107 m	0.035 m		
		Ellip Dist.	20621.996 m	0.014 m		
GCT-FL03	LC1-124	Az.	42°02'01"	0.783 sec	1 : 303884	1 : 304526
		ΔHt.	4.942 m	0.055 m		
		ΔElev.	4.979 m	0.055 m		
		Ellip Dist.	5513.970 m	0.018 m		
GCT-FL03	LC2-120	Az.	48°31'53"	0.348 sec	1 : 580018	1 : 579637
		ΔHt.	0.022 m	0.035 m		
		ΔElev.	0.064 m	0.035 m		
		Ellip Dist.	8637.021 m	0.015 m		
GCT-FL03	LC2-121	Az.	59°31'08"	0.206 sec	1 : 1238963	1 : 1236536
		ΔHt.	2.151 m	0.034 m		
		ΔElev.	2.174 m	0.034 m		
		Ellip Dist.	16317.602 m	0.013 m		
GCT-FL03	LC2-122	Az.	78°18'16"	0.139 sec	1 : 1970335	1 : 1977925
		ΔHt.	8.816 m	0.039 m		
		ΔElev.	8.769 m	0.039 m		

		Ellip Dist.	23215.257 m	0.012 m		
GCT-FL03	LC2-123	Az.	105°18'21"	0.155 sec	1 : 1302101	1 : 1300930
		ΔHt.	10.743 m	0.034 m		
		ΔElev.	10.609 m	0.034 m		
		Ellip Dist.	20003.625 m	0.015 m		
GCT-FL03	LC2-124	Az.	118°51'05"	1.140 sec	1 : 195585	1 : 195431
		ΔHt.	-8.969 m	0.039 m		
		ΔElev.	-9.011 m	0.039 m		
		Ellip Dist.	2923.611 m	0.015 m		
GCT-FL03	LC3-120	Az.	8°35'41"	0.210 sec	1 : 962029	1 : 957929
		ΔHt.	1.645 m	0.040 m		
		ΔElev.	1.802 m	0.040 m		
		Ellip Dist.	13726.200 m	0.014 m		
GCT-FL03	LC3-121	Az.	59°10'52"	0.166 sec	1 : 1201244	1 : 1200729
		ΔHt.	1.053 m	0.030 m		
		ΔElev.	1.078 m	0.030 m		
		Ellip Dist.	16218.325 m	0.014 m		
GCT-FL03	LC3-122	Az.	67°17'40"	0.130 sec	1 : 2273456	1 : 2270007
		ΔHt.	19.900 m	0.036 m		
		ΔElev.	19.890 m	0.036 m		
		Ellip Dist.	26298.479 m	0.012 m		
GCT-FL03	LC3-123	Az.	87°16'38"	0.153 sec	1 : 1361350	1 : 1362141
		ΔHt.	7.803 m	0.039 m		
		ΔElev.	7.722 m	0.039 m		
		Ellip Dist.	21168.835 m	0.016 m		
GCT-FL03	LC3-124	Az.	93°07'44"	1.398 sec	1 : 128977	1 : 128986
		ΔHt.	1.714 m	0.035 m		
		ΔElev.	1.698 m	0.035 m		
		Ellip Dist.	1803.607 m	0.014 m		
GCT-FL03	LC4-120	Az.	31°19'12"	0.299 sec	1 : 713202	1 : 713314
		ΔHt.	3.418 m	0.034 m		
		ΔElev.	3.508 m	0.034 m		

		Ellip Dist.	10081.134 m	0.014 m		
GCT-FL03	LC4-121	Az.	61°36'33"	0.172 sec	1 : 1042100	1 : 1041053
		ΔHt.	1.201 m	0.038 m		
		ΔElev.	1.216 m	0.038 m		
		Ellip Dist.	15984.138 m	0.015 m		
GCT-FL03	LC4-122	Az.	62°32'15"	0.098 sec	1 : 2474076	1 : 2467132
		ΔHt.	20.182 m	0.031 m		
		ΔElev.	20.190 m	0.031 m		
		Ellip Dist.	26903.981 m	0.011 m		
GCT-FL03	LC4-123	Az.	96°08'59"	0.156 sec	1 : 1286940	1 : 1287204
		ΔHt.	7.440 m	0.036 m		
		ΔElev.	7.332 m	0.036 m		
		Ellip Dist.	20269.877 m	0.016 m		
GCT-FL03	LC4-124	Az.	95°40'36"	1.599 sec	1 : 128503	1 : 128387
		ΔHt.	1.420 m	0.043 m		
		ΔElev.	1.403 m	0.043 m		
		Ellip Dist.	1825.479 m	0.014 m		
GCT-FL03	M 368	Az.	118°19'28"	0.122 sec	1 : 1705740	1 : 1707099
		ΔHt.	6.060 m	0.000 m		
		ΔElev.	5.897 m	0.000 m		
		Ellip Dist.	19918.992 m	0.012 m		
GCT-FL03	V 368	Az.	67°25'55"	0.204 sec	1 : 1279197	1 : 1272366
		ΔHt.	20.425 m	0.000 m		
		ΔElev.	20.415 m	0.000 m		
		Ellip Dist.	26328.437 m	0.021 m		
J 714	FVA-122	Az.	102°14'18"	0.116 sec	1 : 2112670	1 : 2108622
		ΔHt.	19.878 m	0.034 m		
		ΔElev.	19.705 m	0.034 m		
		Ellip Dist.	22707.583 m	0.011 m		
J 714	FVA-123	Az.	134°14'57"	0.112 sec	1 : 1802947	1 : 1802987
		ΔHt.	6.885 m	0.032 m		
		ΔElev.	6.616 m	0.032 m		

		Ellip Dist.	24885.975 m	0.014 m		
J 714	LC1-122	Az.	102°14'45"	0.114 sec	1 : 2015970	1 : 2012258
		ΔHt.	19.601 m	0.034 m		
		ΔElev.	19.429 m	0.034 m		
		Ellip Dist.	22672.595 m	0.011 m		
J 714	LC1-123	Az.	134°18'43"	0.123 sec	1 : 1628419	1 : 1629743
		ΔHt.	6.688 m	0.035 m		
		ΔElev.	6.419 m	0.035 m		
		Ellip Dist.	24919.605 m	0.015 m		
J 714	LC2-122	Az.	121°11'09"	0.109 sec	1 : 1532269	1 : 1536882
		ΔHt.	6.302 m	0.039 m		
		ΔElev.	6.081 m	0.039 m		
		Ellip Dist.	23323.670 m	0.015 m		
J 714	LC2-123	Az.	143°11'22"	0.116 sec	1 : 1854753	1 : 1853952
		ΔHt.	8.229 m	0.034 m		
		ΔElev.	7.921 m	0.034 m		
		Ellip Dist.	27557.263 m	0.015 m		
J 714	LC3-122	Az.	107°09'31"	0.141 sec	1 : 1700076	1 : 1708468
		ΔHt.	17.386 m	0.036 m		
		ΔElev.	17.202 m	0.036 m		
		Ellip Dist.	22482.311 m	0.013 m		
J 714	LC3-123	Az.	130°40'03"	0.127 sec	1 : 1486968	1 : 1486817
		ΔHt.	5.289 m	0.039 m		
		ΔElev.	5.034 m	0.039 m		
		Ellip Dist.	24210.724 m	0.016 m		
J 714	LC4-122	Az.	101°43'15"	0.127 sec	1 : 2084721	1 : 2088714
		ΔHt.	17.668 m	0.031 m		
		ΔElev.	17.502 m	0.031 m		
		Ellip Dist.	21543.330 m	0.010 m		
J 714	LC4-123	Az.	137°29'41"	0.121 sec	1 : 1616270	1 : 1615693
		ΔHt.	4.926 m	0.036 m		
		ΔElev.	4.644 m	0.036 m		

		Ellip Dist.	25710.438 m	0.016 m		
LC1-120	J 714	Az.	35°45'39"	1.422 sec	1 : 204737	1 : 203603
		ΔHt.	-0.946 m	0.031 m		
		ΔElev.	-0.941 m	0.031 m		
		Ellip Dist.	2045.936 m	0.010 m		
LC1-121	J 714	Az.	307°10'34"	0.205 sec	1 : 971350	1 : 973002
		ΔHt.	0.191 m	0.034 m		
		ΔElev.	0.344 m	0.034 m		
		Ellip Dist.	14209.847 m	0.015 m		
LC1-125	GCT-FL03	Az.	284°30'49"	0.234 sec	1 : 1095611	1 : 1096509
		ΔHt.	-3.789 m	0.033 m		
		ΔElev.	-3.679 m	0.033 m		
		Ellip Dist.	12824.662 m	0.012 m		
LC1-125	KEYPORT	Az.	141°50'02"	0.134 sec	1 : 1529304	1 : 1532645
		ΔHt.	12.201 m	0.033 m		
		ΔElev.	12.120 m	0.033 m		
		Ellip Dist.	20236.970 m	0.013 m		
LC1-126	GCT-FL03	Az.	358°56'50"	0.208 sec	1 : 654052	1 : 654274
		ΔHt.	-2.771 m	0.035 m		
		ΔElev.	-2.631 m	0.035 m		
		Ellip Dist.	10770.310 m	0.016 m		
LC1-126	KEYPORT	Az.	108°36'11"	0.127 sec	1 : 2276449	1 : 2285290
		ΔHt.	13.219 m	0.035 m		
		ΔElev.	13.168 m	0.035 m		
		Ellip Dist.	26108.046 m	0.011 m		
LC1-127	GCT-FL03	Az.	317°45'21"	0.154 sec	1 : 1491816	1 : 1488140
		ΔHt.	-5.295 m	0.034 m		
		ΔElev.	-5.108 m	0.034 m		
		Ellip Dist.	18756.415 m	0.013 m		
LC1-127	KEYPORT	Az.	113°03'25"	0.197 sec	1 : 964054	1 : 961933
		ΔHt.	10.695 m	0.034 m		
		ΔElev.	10.691 m	0.034 m		

		Ellip Dist.	13379.451 m	0.014 m		
LC1-128	E 621	Az.	41°57'57"	0.379 sec	1 : 498350	1 : 498405
		ΔHt.	21.055 m	0.036 m		
		ΔElev.	21.099 m	0.036 m		
		Ellip Dist.	8010.830 m	0.016 m		
LC1-128	GCT-FL03	Az.	290°57'52"	0.145 sec	1 : 1592236	1 : 1591404
		ΔHt.	-10.875 m	0.036 m		
		ΔElev.	-10.720 m	0.036 m		
		Ellip Dist.	23125.608 m	0.015 m		
LC1-128	KEYPORT	Az.	163°03'56"	0.277 sec	1 : 729121	1 : 729529
		ΔHt.	5.115 m	0.036 m		
		ΔElev.	5.079 m	0.036 m		
		Ellip Dist.	11364.069 m	0.016 m		
LC1-129	GNV E	Az.	220°09'41"	0.207 sec	1 : 953771	1 : 951360
		ΔHt.	-6.746 m	0.037 m		
		ΔElev.	-6.755 m	0.037 m		
		Ellip Dist.	15772.865 m	0.017 m		
LC1-129	KEYPORT	Az.	66°56'45"	0.280 sec	1 : 860444	1 : 858136
		ΔHt.	10.099 m	0.037 m		
		ΔElev.	10.125 m	0.037 m		
		Ellip Dist.	12799.166 m	0.015 m		
LC1-130	GNV E	Az.	262°31'09"	0.191 sec	1 : 1127680	1 : 1127465
		ΔHt.	-6.357 m	0.062 m		
		ΔElev.	-6.390 m	0.062 m		
		Ellip Dist.	20411.691 m	0.018 m		
LC1-130	KEYPORT	Az.	6°50'38"	0.257 sec	1 : 765322	1 : 765555
		ΔHt.	10.489 m	0.062 m		
		ΔElev.	10.490 m	0.062 m		
		Ellip Dist.	14492.245 m	0.019 m		
LC2-120	J 714	Az.	341°33'32"	0.257 sec	1 : 780912	1 : 781543
		ΔHt.	2.491 m	0.035 m		
		ΔElev.	2.624 m	0.035 m		

		Ellip Dist.	11659.778 m	0.015 m		
LC2-121	J 714	Az.	307°03'49"	0.210 sec	1 : 928931	1 : 931057
		ΔHt.	0.363 m	0.034 m		
		ΔElev.	0.514 m	0.034 m		
		Ellip Dist.	14129.052 m	0.015 m		
LC2-124	J 714	Az.	0°41'41"	0.170 sec	1 : 1130156	1 : 1130194
		ΔHt.	11.482 m	0.039 m		
		ΔElev.	11.699 m	0.039 m		
		Ellip Dist.	18190.425 m	0.016 m		
LC2-127	GCT-FL03	Az.	316°25'44"	0.185 sec	1 : 1191946	1 : 1191529
		ΔHt.	-5.642 m	0.039 m		
		ΔElev.	-5.457 m	0.039 m		
		Ellip Dist.	18613.695 m	0.016 m		
LC2-127	KEYPORT	Az.	115°00'25"	0.253 sec	1 : 839489	1 : 838564
		ΔHt.	10.348 m	0.039 m		
		ΔElev.	10.342 m	0.039 m		
		Ellip Dist.	13341.099 m	0.016 m		
LC2-128	E 621	Az.	39°53'22"	0.519 sec	1 : 511958	1 : 512166
		ΔHt.	19.194 m	0.057 m		
		ΔElev.	19.242 m	0.057 m		
		Ellip Dist.	8550.526 m	0.017 m		
LC2-128	GCT-FL03	Az.	292°28'03"	0.151 sec	1 : 1092022	1 : 1092738
		ΔHt.	-12.736 m	0.057 m		
		ΔElev.	-12.577 m	0.057 m		
		Ellip Dist.	23231.330 m	0.021 m		
LC2-128	KEYPORT	Az.	161°29'28"	0.351 sec	1 : 538890	1 : 537718
		ΔHt.	3.254 m	0.057 m		
		ΔElev.	3.222 m	0.057 m		
		Ellip Dist.	10827.089 m	0.020 m		
LC2-129	GNV E	Az.	219°38'13"	0.192 sec	1 : 996312	1 : 995644
		ΔHt.	-7.776 m	0.046 m		
		ΔElev.	-7.785 m	0.046 m		

		Ellip Dist.	15766.222 m	0.016 m		
LC2-129	KEYPORT	Az.	67°30'13"	0.243 sec	1 : 837313	1 : 836270
		ΔHt.	9.070 m	0.046 m		
		ΔElev.	9.095 m	0.046 m		
		Ellip Dist.	12871.264 m	0.015 m		
LC2-130	GNV E	Az.	263°17'28"	0.082 sec	1 : 2350824	1 : 2349399
		ΔHt.	-9.859 m	0.022 m		
		ΔElev.	-9.900 m	0.022 m		
		Ellip Dist.	21775.851 m	0.009 m		
LC2-130	KEYPORT	Az.	1°20'40"	0.131 sec	1 : 1661849	1 : 1662163
		ΔHt.	6.987 m	0.022 m		
		ΔElev.	6.980 m	0.022 m		
		Ellip Dist.	14503.790 m	0.009 m		
LC3-120	J 714	Az.	12°45'52"	0.900 sec	1 : 236823	1 : 235749
		ΔHt.	0.869 m	0.040 m		
		ΔElev.	0.886 m	0.040 m		
		Ellip Dist.	3287.437 m	0.014 m		
LC3-121	J 714	Az.	307°17'21"	0.200 sec	1 : 1082127	1 : 1082200
		ΔHt.	1.460 m	0.030 m		
		ΔElev.	1.610 m	0.030 m		
		Ellip Dist.	14002.709 m	0.013 m		
LC3-124	J 714	Az.	3°19'10"	0.171 sec	1 : 1383898	1 : 1382762
		ΔHt.	0.799 m	0.035 m		
		ΔElev.	0.990 m	0.035 m		
		Ellip Dist.	16905.033 m	0.012 m		
LC3-125	GCT-FL03	Az.	284°11'39"	0.233 sec	1 : 980058	1 : 983469
		ΔHt.	-4.816 m	0.035 m		
		ΔElev.	-4.707 m	0.035 m		
		Ellip Dist.	12551.515 m	0.013 m		
LC3-125	KEYPORT	Az.	141°31'27"	0.118 sec	1 : 1357754	1 : 1360279
		ΔHt.	11.174 m	0.035 m		
		ΔElev.	11.092 m	0.035 m		

		Ellip Dist.	20496.882 m	0.015 m		
LC3-126	GCT-FL03	Az.	359°09'54"	0.230 sec	1 : 812666	1 : 812668
		ΔHt.	-2.947 m	0.028 m		
		ΔElev.	-2.807 m	0.028 m		
		Ellip Dist.	10716.645 m	0.013 m		
LC3-126	KEYPORT	Az.	108°41'01"	0.103 sec	1 : 2160304	1 : 2161865
		ΔHt.	13.043 m	0.028 m		
		ΔElev.	12.992 m	0.028 m		
		Ellip Dist.	26164.530 m	0.012 m		
LC3-127	GCT-FL03	Az.	311°49'00"	0.156 sec	1 : 1313366	1 : 1311798
		ΔHt.	-3.115 m	0.036 m		
		ΔElev.	-2.934 m	0.036 m		
		Ellip Dist.	18260.822 m	0.014 m		
LC3-127	KEYPORT	Az.	121°34'49"	0.211 sec	1 : 936495	1 : 935335
		ΔHt.	12.875 m	0.036 m		
		ΔElev.	12.865 m	0.036 m		
		Ellip Dist.	13275.104 m	0.014 m		
LC3-128	E 621	Az.	32°52'58"	0.565 sec	1 : 558946	1 : 555223
		ΔHt.	19.409 m	0.041 m		
		ΔElev.	19.458 m	0.041 m		
		Ellip Dist.	8031.139 m	0.014 m		
LC3-128	GCT-FL03	Az.	291°51'46"	0.135 sec	1 : 1165997	1 : 1169962
		ΔHt.	-12.521 m	0.041 m		
		ΔElev.	-12.361 m	0.041 m		
		Ellip Dist.	24341.741 m	0.021 m		
LC3-128	KEYPORT	Az.	167°05'06"	0.310 sec	1 : 489193	1 : 487954
		ΔHt.	3.470 m	0.041 m		
		ΔElev.	3.438 m	0.041 m		
		Ellip Dist.	10344.782 m	0.021 m		
LC3-129	GNV E	Az.	221°07'56"	0.206 sec	1 : 1117929	1 : 1118273
		ΔHt.	-7.042 m	0.034 m		
		ΔElev.	-7.048 m	0.034 m		

		Ellip Dist.	13917.620 m	0.012 m		
LC3-129	KEYPORT	Az.	62°45'41"	0.196 sec	1 : 1136548	1 : 1137662
		ΔHt.	9.804 m	0.034 m		
		ΔElev.	9.832 m	0.034 m		
		Ellip Dist.	14388.570 m	0.013 m		
LC3-130	GNV E	Az.	259°46'02"	0.183 sec	1 : 1254251	1 : 1254059
		ΔHt.	-9.305 m	0.034 m		
		ΔElev.	-9.327 m	0.034 m		
		Ellip Dist.	18040.526 m	0.014 m		
LC3-130	KEYPORT	Az.	16°54'09"	0.210 sec	1 : 923190	1 : 922158
		ΔHt.	7.540 m	0.034 m		
		ΔElev.	7.553 m	0.034 m		
		Ellip Dist.	14471.688 m	0.016 m		
LC4-120	J 714	Az.	343°14'30"	0.351 sec	1 : 599669	1 : 599416
		ΔHt.	-0.905 m	0.034 m		
		ΔElev.	-0.820 m	0.034 m		
		Ellip Dist.	8529.746 m	0.014 m		
LC4-121	J 714	Az.	309°11'45"	0.220 sec	1 : 1114752	1 : 1114460
		ΔHt.	1.312 m	0.038 m		
		ΔElev.	1.472 m	0.038 m		
		Ellip Dist.	14545.831 m	0.013 m		
LC4-124	J 714	Az.	3°15'04"	0.173 sec	1 : 1203321	1 : 1204079
		ΔHt.	1.093 m	0.043 m		
		ΔElev.	1.285 m	0.043 m		
		Ellip Dist.	16986.129 m	0.014 m		
LC4-125	GCT-FL03	Az.	278°25'56"	0.273 sec	1 : 723134	1 : 725367
		ΔHt.	-1.948 m	0.043 m		
		ΔElev.	-1.855 m	0.043 m		
		Ellip Dist.	11954.940 m	0.017 m		
LC4-125	KEYPORT	Az.	142°59'10"	0.128 sec	1 : 1175523	1 : 1175648
		ΔHt.	14.042 m	0.043 m		
		ΔElev.	13.944 m	0.043 m		

		Ellip Dist.	21753.963 m	0.019 m		
LC4-126	GCT-FL03	Az.	359°00'15"	0.247 sec	1 : 767426	1 : 767767
		ΔHt.	-3.179 m	0.030 m		
		ΔElev.	-3.039 m	0.030 m		
		Ellip Dist.	10665.312 m	0.014 m		
LC4-126	KEYPORT	Az.	108°48'43"	0.110 sec	1 : 2055167	1 : 2055324
		ΔHt.	12.812 m	0.030 m		
		ΔElev.	12.760 m	0.030 m		
		Ellip Dist.	26153.509 m	0.013 m		
LC4-127	GCT-FL03	Az.	321°00'04"	0.169 sec	1 : 1318666	1 : 1317726
		ΔHt.	-4.742 m	0.046 m		
		ΔElev.	-4.552 m	0.046 m		
		Ellip Dist.	18697.485 m	0.014 m		
LC4-127	KEYPORT	Az.	109°14'36"	0.215 sec	1 : 931300	1 : 930441
		ΔHt.	11.248 m	0.046 m		
		ΔElev.	11.247 m	0.046 m		
		Ellip Dist.	13933.931 m	0.015 m		
LC4-128	E 621	Az.	38°23'18"	0.436 sec	1 : 642338	1 : 638126
		ΔHt.	20.453 m	0.037 m		
		ΔElev.	20.499 m	0.037 m		
		Ellip Dist.	8026.822 m	0.012 m		
LC4-128	GCT-FL03	Az.	291°24'12"	0.127 sec	1 : 1542824	1 : 1549804
		ΔHt.	-11.477 m	0.037 m		
		ΔElev.	-11.320 m	0.037 m		
		Ellip Dist.	23594.032 m	0.015 m		
LC4-128	KEYPORT	Az.	164°25'19"	0.214 sec	1 : 616391	1 : 615927
		ΔHt.	4.513 m	0.037 m		
		ΔElev.	4.479 m	0.037 m		
		Ellip Dist.	10937.835 m	0.018 m		
LC4-129	GNV E	Az.	221°07'56"	0.209 sec	1 : 1085198	1 : 1085516
		ΔHt.	-6.794 m	0.033 m		
		ΔElev.	-6.801 m	0.033 m		

		Ellip Dist.	13945.686 m	0.013 m		
LC4-129	KEYPORT	Az.	62°48'10"	0.200 sec	1 : 1099364	1 : 1100365
		ΔHt.	10.051 m	0.033 m		
		ΔElev.	10.079 m	0.033 m		
		Ellip Dist.	14362.495 m	0.013 m		
LC4-130	GNV E	Az.	261°52'57"	0.114 sec	1 : 1479237	1 : 1479552
		ΔHt.	-10.103 m	0.042 m		
		ΔElev.	-10.146 m	0.042 m		
		Ellip Dist.	22372.644 m	0.015 m		
LC4-130	KEYPORT	Az.	359°15'16"	0.226 sec	1 : 1126010	1 : 1126468
		ΔHt.	6.743 m	0.042 m		
		ΔElev.	6.734 m	0.042 m		
		Ellip Dist.	13884.790 m	0.012 m		
M 368	KEYPORT	Az.	142°33'59"	0.195 sec	1 : 1013464	1 : 1013965
		ΔHt.	9.930 m	0.000 m		
		ΔElev.	9.902 m	0.000 m		
		Ellip Dist.	12162.284 m	0.012 m		
P 597	A 039	Az.	123°03'57"	0.184 sec	1 : 1011788	1 : 1012531
		ΔHt.	3.234 m	0.000 m		
		ΔElev.	3.267 m	0.000 m		
		Ellip Dist.	14601.802 m	0.014 m		
P 597	GNV E	Az.	220°40'53"	0.216 sec	1 : 1075477	1 : 1074856
		ΔHt.	-6.645 m	0.000 m		
		ΔElev.	-6.652 m	0.000 m		
		Ellip Dist.	13903.221 m	0.013 m		
P 597	KEYPORT	Az.	63°08'32"	0.208 sec	1 : 1117420	1 : 1118029
		ΔHt.	10.200 m	0.000 m		
		ΔElev.	10.228 m	0.000 m		
		Ellip Dist.	14442.967 m	0.013 m		
V 368	J 714	Az.	287°20'43"	0.254 sec	1 : 1236708	1 : 1239732
		ΔHt.	-17.912 m	0.000 m		
		ΔElev.	-17.727 m	0.000 m		

		Ellip Dist.	22545.704 m	0.018 m		
V 445	A 039	Az.	95°08'41"	0.280 sec	1 : 825352	1 : 825340
		ΔHt.	7.356 m	0.000 m		
		ΔElev.	7.387 m	0.000 m		
		Ellip Dist.	8520.738 m	0.010 m		
V 445	GNV E	Az.	255°25'04"	0.178 sec	1 : 1264264	1 : 1263273
		ΔHt.	-2.523 m	0.000 m		
		ΔElev.	-2.532 m	0.000 m		
		Ellip Dist.	13240.749 m	0.010 m		
V 445	KEYPORT	Az.	33°39'16"	0.133 sec	1 : 1460395	1 : 1459122
		ΔHt.	14.322 m	0.000 m		
		ΔElev.	14.348 m	0.000 m		
		Ellip Dist.	16491.559 m	0.011 m		

Date: 4/25/2012 10:31:04 AM	Project: N:\TBC\USGS\T12-017 PPK.vce	Trimble Business Center
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VRS VERSUS PPK COORDINATE AVERAGES

VRS locations were taken on some points as a quality control measure, however a true comparison is not possible due to the VRS base stations in the area not being GNSS receivers. The VRS data that was collected was not used in the computation of this project due to unacceptable errors. Below are examples of some of the errors.



USGS – Suwannee River Water Management District

VPS (meters)

Contract No. G10F00093, Task Order No. G12PD00242

RPB (meters)

Average (meters)

Departure from Average

Name	Northing	Easting	Elev.	Ellip.	Northing	Easting	Elev.	Ellip.	Northing	Easting	Elev.	Ellip.	Northing	Easting	Elev.	Ellip.
LC4-216	3294280.102	410551.419	37.437	9.471	3294278.276	410551.451	36.681	8.715	3294279.189	410551.450	37.059	9.093	-0.913	0.001	-0.378	-0.378
LC2-214	3292721.753	403099.017	39.420	11.508	3292721.765	403099.040	39.189	11.276	3292721.759	403099.029	39.305	11.392	0.006	0.011	-0.116	-0.116
LC3-209	3280427.238	409839.457	42.303	14.304	3280427.291	409839.463	42.165	14.165	3280427.265	409839.460	42.234	14.235	0.027	0.003	-0.069	-0.070
LC4-212	3295389.670	415980.760	50.639	22.627	3295389.674	415980.748	50.505	22.494	3295389.672	415980.754	50.572	22.561	0.002	-0.006	-0.067	-0.066
LC2-208	3272861.230	405680.491	29.472	1.484	3272861.185	405680.482	29.396	1.407	3272861.208	405680.487	29.434	1.446	-0.022	-0.004	-0.038	-0.039
LC4-208	3274072.463	408306.289	23.052	-4.960	3274072.450	408306.282	22.981	-5.030	3274072.457	408306.286	23.017	-4.995	-0.007	-0.003	-0.035	-0.035

Sub-Contractor: Gustin, Cothran & Tucker, Inc. (GCT)



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



NGS DATA SHEETS

1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2749 *****

BD2749 DESIGNATION - 35 92 GPS 4

BD2749 PID - BD2749

BD2749 STATE/COUNTY- FL/MADISON

BD2749 USGS QUAD - CHERRY LAKE (1974)

BD2749

BD2749 *CURRENT SURVEY CONTROL

BD2749

BD2749*	NAD 83 (2007)	-	30 31	12.27759 (N)	083 25	21.07881 (W)	ADJUSTED
BD2749*	NAVD 88	-		39.5 (meters)	130.	(feet)	GPS OBS

BD2749

BD2749	EPOCH DATE	-	2002.00				
BD2749	X	-	629,916.547 (meters)				COMP
BD2749	Y	-	-5,463,016.758 (meters)				COMP
BD2749	Z	-	3,220,177.990 (meters)				COMP
BD2749	LAPLACE CORR-		-1.06 (seconds)				DEFLEC09
BD2749	ELLIP HEIGHT-		11.527 (meters)		(02/10/07)		ADJUSTED
BD2749	GEOID HEIGHT-		-27.93 (meters)				GEOID09

BD2749

BD2749 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2749	Type	PID	Designation	North	East	Ellip
BD2749	NETWORK	BD2749	35 92 GPS 4	0.98	0.96	1.76

BD2749

BD2749 The horizontal coordinates were established by GPS observations

BD2749 and adjusted by the National Geodetic Survey in February 2007.

BD2749

BD2749 The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2749 See [National Readjustment](#) for more information.

BD2749

BD2749 The horizontal coordinates are valid at the epoch date displayed above

BD2749 which is a decimal equivalence of Year/Month/Day.

BD2749

BD2749 The orthometric height was determined by GPS observations and a

BD2749 high-resolution geoid model.

BD2749

BD2749 The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2749

BD2749 The Laplace correction was computed from DEFLEC09 derived deflections.

BD2749

BD2749 The ellipsoidal height was determined by GPS observations

BD2749 and is referenced to NAD 83.

BD2749

BD2749 The geoid height was determined by GEOID09.

BD2749

BD2749;		North	East	Units	Scale Factor	Converg.
BD2749;SPC FL N	-	168,987.247	703,410.573	MT	0.99996732	+0 32 29.3
BD2749;SPC FL N	-	554,418.99	2,307,772.85	sFT	0.99996732	+0 32 29.3
BD2749;UTM 17	-	3,378,912.938	267,547.496	MT	1.00026663	-1 13 50.9

BD2749

BD2749! - Elev Factor x Scale Factor = Combined Factor



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2749!SPC FL N - 0.99999819 x 0.99996732 = 0.99996551
BD2749!UTM 17 - 0.99999819 x 1.00026663 = 1.00026482
BD2749
BD2749: Primary Azimuth Mark Grid Az
BD2749:SPC FL N - 35 92 GPS 5 358 11 50.8
BD2749:UTM 17 - 35 92 GPS 5 359 58 11.0
BD2749
BD2749|-----|
BD2749| PID Reference Object Distance Geod. Az |
BD2749| | | | dddmmss.s |
BD2749| BD2750 35 92 GPS 5 APPROX. 0.6 KM 3584420.1 |
BD2749|-----|
BD2749
BD2749 SUPERSEDED SURVEY CONTROL
BD2749
BD2749 NAD 83(1999)- 30 31 12.27731(N) 083 25 21.07803(W) AD () 1
BD2749 ELLIP H (07/06/01) 11.482 (m) GP () 4 2
BD2749 NAD 83(1990)- 30 31 12.27751(N) 083 25 21.07923(W) AD () 1
BD2749 ELLIP H (02/28/94) 11.637 (m) GP () 3 2
BD2749
BD2749.Superseded values are not recommended for survey control.
BD2749.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BD2749.[See file dsdata.txt](#) to determine how the superseded data were derived.
BD2749
BD2749_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP6754778912(NAD 83)
BD2749
BD2749_MARKER: DD = SURVEY DISK
BD2749_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
BD2749_SP_SET: CONCRETE POST
BD2749_STAMPING: 35 92 GPS 4
BD2749_MARK LOGO: FLDT
BD2749_MAGNETIC: N = NO MAGNETIC MATERIAL
BD2749_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
BD2749+STABILITY: SURFACE MOTION
BD2749_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
BD2749+SATELLITE: SATELLITE OBSERVATIONS - 1992
BD2749
BD2749 HISTORY - Date Condition Report By
BD2749 HISTORY - 1992 MONUMENTED FLDT
BD2749
BD2749 STATION DESCRIPTION
BD2749
BD2749'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1992
BD2749'THE STATION IS LOCATED ABOUT 4 MILES (6.4 KM) NORTH OF MADISON.
BD2749'TO REACH THE STATION FROM THE INTERSECTION OF S.R. 53 AND U.S. 90, AT
BD2749'MADISON, GO NORTH ON S.R. 53 FOR ABOUT 3.5 MILES (5.6 KM) TO THE
BD2749'STATION.
BD2749'THE STATION IS SET IN THE TOP OF A CONCRETE MONUMENT THAT IS FLUSH
BD2749'WITH THE GROUND, 92.0 FEET NORTH OF UTILITY POLE 5-14081, 73.5 FEET
BD2749'(22.4 M) SOUTH OF ANOTHER UTILITY POLE, 22.0 FEET EAST OF THE CENTER
BD2749'OF S.R. 53 AND 17.5 FEET WEST OF A METAL WITNESS POST AT THE
BD2749'FENCELINE.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR1730 *****

AR1730 DESIGNATION - A 039

AR1730 PID - AR1730

AR1730 STATE/COUNTY- FL/ALACHUA

AR1730 USGS QUAD - MELROSE (1981)

AR1730

AR1730 *CURRENT SURVEY CONTROL

AR1730

AR1730*	NAD 83(2007)-	29 42 34.73213(N)	082 03 10.26037(W)	ADJUSTED
AR1730*	NAVD 88	- 48.615 (meters)	159.50 (feet)	ADJUSTED

AR1730

AR1730	EPOCH DATE	-	2002.00	
AR1730	X	-	766,552.304 (meters)	COMP
AR1730	Y	-	-5,491,049.411 (meters)	COMP
AR1730	Z	-	3,142,469.855 (meters)	COMP
AR1730	LAPLACE CORR-	-0.69 (seconds)		DEFLEC09
AR1730	ELLIP HEIGHT-	20.724 (meters)	(02/10/07)	ADJUSTED
AR1730	GEOID HEIGHT-	-27.89 (meters)		GEOID09
AR1730	DYNAMIC HT	- 48.550 (meters)	159.28 (feet)	COMP

AR1730

AR1730 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AR1730	Type	PID	Designation	North	East	Ellip
AR1730	NETWORK	AR1730	A 039	0.96	0.82	1.69

AR1730

AR1730 MODELED GRAV- 979,299.4 (mgal) NAVD 88

AR1730

AR1730 VERT ORDER - SECOND CLASS I

AR1730

AR1730.The horizontal coordinates were established by GPS observations

AR1730.and adjusted by the National Geodetic Survey in February 2007.

AR1730

AR1730.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AR1730.See [National Readjustment](#) for more information.

AR1730

AR1730.The horizontal coordinates are valid at the epoch date displayed above

AR1730.which is a decimal equivalence of Year/Month/Day.

AR1730

AR1730.The orthometric height was determined by differential leveling and

AR1730.adjusted in September 1997.

AR1730

AR1730.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AR1730

AR1730.The Laplace correction was computed from DEFLEC09 derived deflections.

AR1730

AR1730.The ellipsoidal height was determined by GPS observations

AR1730.and is referenced to NAD 83.

AR1730

AR1730.The geoid height was determined by GEOID09.

AR1730

AR1730.The dynamic height is computed by dividing the NAVD 88

AR1730.geopotential number by the normal gravity value computed on the

AR1730.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AR1730.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1730

AR1730.The modeled gravity was interpolated from observed gravity values.

AR1730

AR1730;
AR1730;SPC FL N - North East Units Scale Factor Converg.
AR1730;SPC FL N - 81,203.934 836,777.818 MT 0.99998012 +1 13 47.1
AR1730;SPC FL N - 266,416.57 2,745,328.56 sFT 0.99998012 +1 13 47.1
AR1730;UTM 17 - 3,287,076.463 398,157.807 MT 0.99972797 -0 31 18.6
AR1730
AR1730! - Elev Factor x Scale Factor = Combined Factor
AR1730!SPC FL N - 0.99999675 x 0.99998012 = 0.99997687
AR1730!UTM 17 - 0.99999675 x 0.99972797 = 0.99972472

AR1730

SUPERSEDED SURVEY CONTROL

AR1730

AR1730 NAD 83(1999)- 29 42 34.73303(N) 082 03 10.26058(W) AD () 1
AR1730 ELLIP H (06/19/01) 20.727 (m) GP () 4 1
AR1730 NAD 83(1990)- 29 42 34.73161(N) 082 03 10.26128(W) AD () 1
AR1730 NAD 83(1990)- 29 42 34.73161(N) 082 03 10.26128(W) AD () 2
AR1730 ELLIP H (05/01/91) 20.670 (m) GP () 4 1
AR1730 NAD 83(1986)- 29 42 34.74134(N) 082 03 10.26640(W) AD () 2
AR1730 NAVD 88 (09/22/95) 48.6 (m) 159. (f) GPS OBS
AR1730 NGVD 29 (11/17/89) 49.1 (m) 161. (f) GPS OBS

AR1730

AR1730.Superseded values are not recommended for survey control.

AR1730.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR1730.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR1730

AR1730_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN9815787076(NAD 83)

AR1730

AR1730_MARKER: DD = SURVEY DISK

AR1730_SETTING: 50 = ALUMINUM ALLOY ROD W/O SLEEVE (10 FT.+)

AR1730_SP_SET: OBJECT DRIVEN INTO GROUND

AR1730_STAMPING: A039

AR1730_MARK LOGO: FL-001

AR1730_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT

AR1730_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AR1730_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AR1730+SATELLITE: SATELLITE OBSERVATIONS - June 26, 1996

AR1730

AR1730 HISTORY - Date Condition Report By

AR1730 HISTORY - 1988 MONUMENTED PMC

AR1730 HISTORY - 19950228 GOOD KEISCH

AR1730 HISTORY - 19960626 GOOD FLDEP

AR1730

STATION DESCRIPTION

AR1730

AR1730'DESCRIBED BY PERRY C MCGRUFF COMPANY 1988 (LC)

AR1730'THE STATION IS LOCATED ABOUT 28.3 KM (17.6 MI)

AR1730'NORTHEAST OF THE CITY OF GAINESVILLE.

AR1730'OWNERSHIP--SR 26 R/W.

AR1730'

AR1730'TO REACH THE STATION FROM THE INTERSECTION OF PUTNAM COUNTY ROAD

AR1730'21 AND SR 26 IN MELROSE, GO WEST FOR 0.8 KM (0.5 MI) ON SR 26 TO

AR1730'QUAIL ST (NE 1A), GO EAST FOR 43.0 M (141.0 FT) TO THE STATION

AR1730'9.4 METERS (31 FT) SOUTH OF THE CENTERLINE OF SR26.

[illegible]



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AC5883 *****

AC5883 DESIGNATION - A 302

AC5883 PID - AC5883

AC5883 STATE/COUNTY- FL/ALACHUA

AC5883 USGS QUAD - HIGH SPRINGS (1993)

AC5883

AC5883 *CURRENT SURVEY CONTROL

AC5883

AC5883*	NAD 83(2007)	-	29 52	25.62856(N)	082 32	34.04032(W)	ADJUSTED
AC5883*	NAVD 88	-		44.7 (meters)	147.	(feet)	GPS OBS

AC5883

AC5883	EPOCH DATE	-	2002.00				
AC5883	X	-	718,396.918 (meters)				COMP
AC5883	Y	-	-5,488,436.416 (meters)				COMP
AC5883	Z	-	3,158,257.747 (meters)				COMP
AC5883	LAPLACE CORR-		0.22 (seconds)				DEFLEC09
AC5883	ELLIP HEIGHT-		16.649 (meters)		(02/10/07)		ADJUSTED
AC5883	GEOID HEIGHT-		-28.00 (meters)				GEOID09

AC5883

AC5883 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AC5883	Type	PID	Designation	North	East	Ellip
AC5883	NETWORK	AC5883	A 302	0.29	0.33	0.76

AC5883

AC5883

AC5883.The horizontal coordinates were established by GPS observations

AC5883.and adjusted by the National Geodetic Survey in February 2007.

AC5883

AC5883.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AC5883.See [National Readjustment](#) for more information.

AC5883

AC5883.The horizontal coordinates are valid at the epoch date displayed above

AC5883.which is a decimal equivalence of Year/Month/Day.

AC5883

AC5883.The orthometric height was determined by GPS observations and a

AC5883.high-resolution geoid model.

AC5883

AC5883.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AC5883

AC5883.The Laplace correction was computed from DEFLEC09 derived deflections.

AC5883

AC5883.The ellipsoidal height was determined by GPS observations

AC5883.and is referenced to NAD 83.

AC5883

AC5883.The geoid height was determined by GEOID09.

AC5883

AC5883;		North	East	Units	Scale Factor	Converg.
AC5883;SPC FL N	-	98,479.598	789,065.949	MT	0.99996147	+0 59 00.8
AC5883;SPC FL N	-	323,095.15	2,588,793.87	sFT	0.99996147	+0 59 00.8
AC5883;UTM 17	-	3,305,799.235	351,004.503	MT	0.99987390	-0 46 06.9

AC5883

AC5883!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AC5883!SPC FL N	-	0.99999739	x	0.99996147	=	0.99995886
AC5883!UTM 17	-	0.99999739	x	0.99987390	=	0.99987129



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AC5883

AC5883

SUPERSEDED SURVEY CONTROL

AC5883

AC5883 NAD 83(1999)- 29 52 25.62901(N) 082 32 34.04047(W) AD () 1
AC5883 ELLIP H (05/31/01) 16.625 (m) GP () 4 1
AC5883 NAD 83(1990)- 29 52 25.62770(N) 082 32 34.04009(W) AD () 1
AC5883 ELLIP H (01/28/97) 16.681 (m) GP () 3 1

AC5883

AC5883.Superseded values are not recommended for survey control.

AC5883.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AC5883.[See file dsdata.txt](#) to determine how the superseded data were derived.

AC5883

AC5883_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP5100405799(NAD 83)

AC5883

AC5883_MARKER: DD = SURVEY DISK

AC5883_SETTING: 36 = SET IN A MASSIVE STRUCTURE

AC5883_SP_SET: SET IN A MASSIVE STRUCTURE

AC5883_STAMPING: A 302 1996

AC5883_MARK LOGO: NGS

AC5883_MAGNETIC: O = OTHER; SEE DESCRIPTION

AC5883_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AC5883_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC5883+SATELLITE: SATELLITE OBSERVATIONS - May 02, 1997

AC5883

AC5883 HISTORY - Date Condition Report By

AC5883 HISTORY - 1996 MONUMENTED DCJOHN

AC5883 HISTORY - 19970502 GOOD DCJOHN

AC5883

STATION DESCRIPTION

AC5883

AC5883'DESCRIBED BY DC JOHNSON ASSOC 1996 (DS)

AC5883'THE STATION IS LOCATED APPROXIMATELY 6.5 MI (10.5 KM) NORTH NORTHWEST

AC5883'OF ALACHUA, 16.5 MI (26.6 KM) NORTH NORTHEAST OF NEWBERRY AND 5 MI

AC5883'(8.0 KM) NORTHEAST OF HIGH SPRINGS.-- THE STATION IS LOCATED IN THE

AC5883'SOUTHWEST CORNER OF THE OVERPASS BRIDGE AT THE JUNCTIONM OF INTERSTATE

AC5883'75 AND COUNTY ROAD 236, A BRASS NATIONAL GEODETIC SURVEY DISC SET IN

AC5883'THE WEST CONCRETE WINGWALL OF SAID OVERPASS BRIDGE. THE STATION IS

AC5883'16.9 FT (5.2 M) SOUTH-SOUTHEAST OF THE CENTERLINE OF STATE ROAD 236

AC5883'AND 2.8 FT (0.9 M) NORTHEAST OF A WITNESS POST.- REFERENCES--

AC5883'BENCHMARK (I75 U1) , SET IN CONCRETE GUARDRAIL, NORTH 40 DEGREES EAST

AC5883'AT 6.7 FT (2.0 M) - SOUTH 20 DEGREES WEST AT 2.0 FT,TO WEST END OF

AC5883'CONCRETE GUARDRAIL - SOUTH 35 DEGREES WEST AT 63.5 FT,TO A STORM WATER

AC5883'MAN HOLE -

AC5883

STATION RECOVERY (1997)

AC5883

AC5883'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

AC5883'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED AS

AC5883'PREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AC9622 *****

AC9622 DESIGNATION - A 445

AC9622 PID - AC9622

AC9622 STATE/COUNTY- FL/CLAY

AC9622 USGS QUAD - STARKE (1991)

AC9622

AC9622 *CURRENT SURVEY CONTROL

AC9622

AC9622*	NAD 83(1986)-	29 53 09.	(N)	082 02 18.	(W)	SCALED
AC9622*	NAVD 88	-	61.370	(meters)	201.34	(feet) ADJUSTED

AC9622

AC9622	GEOID HEIGHT-	-27.90	(meters)			GEOID09
AC9622	DYNAMIC HT -	61.289	(meters)	201.08	(feet)	COMP
AC9622	MODELED GRAV-	979,316.6	(mgal)			NAVD 88

AC9622

AC9622 VERT ORDER - SECOND CLASS I

AC9622

AC9622.The horizontal coordinates were scaled from a topographic map and have

AC9622.an estimated accuracy of +/- 6 seconds.

AC9622.

AC9622.The orthometric height was determined by differential leveling and

AC9622.adjusted in September 1997.

AC9622

AC9622.The geoid height was determined by GEOID09.

AC9622

AC9622.The dynamic height is computed by dividing the NAVD 88

AC9622.geopotential number by the normal gravity value computed on the

AC9622.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AC9622.degrees latitude (g = 980.6199 gals.).

AC9622

AC9622.The modeled gravity was interpolated from observed gravity values.

AC9622

AC9622;		North	East	Units	Estimated Accuracy
AC9622;SPC FL E	-	615,670.	99,700.	MT	(+/- 180 meters Scaled)

AC9622

AC9622 SUPERSEDED SURVEY CONTROL

AC9622

AC9622.No superseded survey control is available for this station.

AC9622

AC9622 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP997065(NAD 83)

AC9622

AC9622 MARKER: DV = VERTICAL CONTROL DISK

AC9622 SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AC9622 STAMPING: A 445 1996

AC9622 MARK LOGO: NGS

AC9622 MAGNETIC: N = NO MAGNETIC MATERIAL

AC9622 STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AC9622+STABILITY: SURFACE MOTION

AC9622 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC9622+SATELLITE: SATELLITE OBSERVATIONS - November 10, 2006

AC9622

AC9622	HISTORY	- Date	Condition	Report By
AC9622	HISTORY	- 1996	MONUMENTED	FLDEP
AC9622	HISTORY	- 20061110	GOOD	BAKER



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AC9622

AC9622

STATION DESCRIPTION

AC9622

AC9622'DESCRIBED BY FL DEPT OF ENV PRO 1996 (JLM)

AC9622'THE MARK IS ABOUT 16.0 MI (25.7 KM) SOUTHWEST OF MIDDLEBURG, 6.5 MI
AC9622'(10.5 KM) NORTH OF KEYSTONE HEIGHTS ON TREAT ROAD IN THE CAMP BLANDING
AC9622'MILITARY RESERVATION WILDLIFE MANAGEMENT AREA IN SECTION 18, TOWNSHIP
AC9622'7 SOUTH, RANGE 23 EAST. TO REACH THE MARK FROM THE INTERSECTION OF
AC9622'STATE ROAD 100 (WEST WALKER DRIVE) AND STATE ROAD 21 (SOUTH LAWRENCE
AC9622'BOULEVARD) IN KEYSTONE HEIGHTS, GO NORTHEAST ON STATE ROAD 21 (SOUTH
AC9622'LAWRENCE BOULEVARD) FOR 4.1 MI (6.6 KM) TO THE JUNCTION OF GREBLE ROAD
AC9622'ON THE LEFT, TURN LEFT ON GREBLE ROAD AND GO NORTHWEST, PASSING
AC9622'THROUGH A LOCKED GATE, FOR 2.9 MI (4.7 KM) TO THE T-JUNCTION OF TREAT
AC9622'ROAD RUNNING NORTH-SOUTH, TURN RIGHT ON TREAT ROAD AND GO NORTH FOR
AC9622'3.00 MI (4.83 KM) TO THE JUNCTION OF A DIRT ROAD ON THE LEFT LEADING
AC9622'WEST-NORTHWEST AND THE MARK ON THE LEFT, SET IN THE TOP OF A ROUND
AC9622'CONCRETE MONUMENT RECESSED 0.2 FT (6.1 CM) BELOW THE LEVEL OF THE
AC9622'GROUND AND LEVEL WITH TREAT ROAD. LOCATED 95.6 FT (29.1 M) NORTHEAST
AC9622'OF AND ACROSS TREAT ROAD FROM THE APPROXIMATE CENTERLINE OF A DIRT
AC9622'ROAD LEADING WEST-NORTHWEST, 53.5 FT (16.3 M) EAST OF THE CENTERLINE
AC9622'OF TREAT ROAD, 11.0 FT (3.4 M) WEST OF THE CENTER OF THE GATE ACROSS
AC9622'THE DIRT ROAD LEADING EAST, 2.7 FT (0.8 M) NORTH OF THE CENTER OF THE
AC9622'DIRT ROAD LEADING EAST AND 1.3 FT (0.4 M) SOUTH OF A CARSONITE WITNESS
AC9622'POST. NOTE FOR KEY TO CAMP BLANDING MILITARY RESERVATION WILDLIFE
AC9622'MANAGEMENT AREA CONTACT FFC SERGEANT SHEFFIELD AT (904) 533-3352.

AC9622

STATION RECOVERY (2006)

AC9622

AC9622

AC9622'RECOVERY NOTE BY M BAKER JR INCORPORATED 2006 (LL)

AC9622'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR0249 *****

AR0249 DESIGNATION - AD 30

AR0249 PID - AR0249

AR0249 STATE/COUNTY- FL/BRADFORD

AR0249 USGS QUAD - SAMPSON (1991)

AR0249

AR0249 *CURRENT SURVEY CONTROL

AR0249

AR0249*	NAD 83(1986)	-	29 54	48.50	(N)	082 12	15.35	(W)	HD_HELD1
AR0249*	NAVD 88	-		44.508	(meters)		146.02	(feet)	ADJUSTED

AR0249

AR0249	GEOID HEIGHT-		-27.90	(meters)					GEOID09
AR0249	DYNAMIC HT -		44.449	(meters)		145.83	(feet)		COMP
AR0249	MODELED GRAV-		979,313.9	(mgal)					NAVD 88

AR0249

AR0249 VERT ORDER - SECOND CLASS 0

AR0249

AR0249.The horizontal coordinates were established by differentially corrected

AR0249.hand held GPS obs and have an estimated accuracy of +/- 3 meters.

AR0249.

AR0249.The orthometric height was determined by differential leveling and

AR0249.adjusted in June 1991.

AR0249

AR0249.The geoid height was determined by GEOID09.

AR0249

AR0249.The dynamic height is computed by dividing the NAVD 88

AR0249.geopotential number by the normal gravity value computed on the

AR0249.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AR0249.degrees latitude (g = 980.6199 gals.).

AR0249

AR0249.The modeled gravity was interpolated from observed gravity values.

AR0249

AR0249;		North	East	Units	Estimated Accuracy
AR0249;SPC FL N	-	103,487.7	821,674.7	MT	(+/- 3 meters HH1 GPS)

AR0249

AR0249 SUPERSEDED SURVEY CONTROL

AR0249

AR0249	NGVD 29 (??/??/92)	44.766	(m)	146.87	(f)	ADJ UNCH	2 0
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AR0249

AR0249.Superseded values are not recommended for survey control.

AR0249.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR0249.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR0249

AR0249_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP8374609806(NAD 83)

AR0249

AR0249_MARKER: DD = SURVEY DISK

AR0249_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AR0249_SP_SET: SET IN TOP OF CONCRETE MONUMENT

AR0249_STAMPING: AD 30

AR0249_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AR0249+STABILITY: SURFACE MOTION

AR0249

AR0249	HISTORY	-	Date	Condition	Report By
AR0249	HISTORY	-	UNK	MONUMENTED	FLGS



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AR0249 HISTORY - 1954 GOOD CGS
AR0249 HISTORY - 1977 GOOD NGS

AR0249

AR0249

AR0249

STATION DESCRIPTION

AR0249'DESCRIBED BY COAST AND GEODETIC SURVEY 1954

AR0249'0.3 MI SE FROM SAMPSON CITY.

AR0249'ABOUT 0.3 MILE SOUTHEAST ALONG THE GEORGIA SOUTHERN AND FLORIDA

AR0249'RAILWAY FROM THE STATION AT SAMPSON CITY, IN THE SOUTH QUARTER

AR0249'OF CROSSING OF THE SEABOARD AIR LINE RAILWAY, 30 FEET SOUTH

AR0249'OF CENTER OF CROSSING, 21 1/2 FEET SOUTHWEST OF SOUTHWEST

AR0249'RAIL OF GA. SOU. AND FLA. RY., 24 FEET SOUTHEAST OF SOUTHEAST

AR0249'RAIL OF S.A.L. RY., 140 FEET NORTHWEST OF MILE POST 244, 7 1/2

AR0249'FEET NORTH OF A TELEPHONE POLE, ABOUT LEVEL WITH INTERSECTION

AR0249'AND SET IN THE TOP OF A CONCRETE POST PROJECTING 4 INCHES.

AR0249

AR0249

STATION RECOVERY (1977)

AR0249

AR0249'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977

AR0249'THE MEASUREMENT OF 31.4 FEET SOUTHWEST OF THE SOUTHWEST RAIL OF THE

AR0249'GEORGIA SOUTHERN AND FLORIDA RAILWAY MEASURED 21.0 FEET AT THIS TIME.

AR0249'NEW TO REACH FOLLOWS ABOUT 3.55 MILES SOUTH AND SOUTHWEST ALONG U.S.

AR0249'HIGHWAY 301 FROM ITS JUNCTION WITH STATE HIGHWAY 100 IN STARKE,

AR0249'THENCE WEST ON STATE ROAD 227 FOR 1.25 MILES TO THE JUNCTION OF STATE

AR0249'ROAD 225, THENCE WEST- NORTHWESTERLY ON STATE ROAD 225 FOR 3.0 MILES

AR0249'TO RAILROAD CROSSING, 139.0 FEET NORTHWEST OF MILEPOST 244, 23.9 FEET

AR0249'SOUTHEAST OF THE SOUTHEAST RAIL OF THE SEABOARD AIR LINE RAILWAY,

AR0249'21.0 FEET SOUTHWEST OF THE OTHER RAILROAD TRACK, 1 FOOT NORTHWEST OF

AR0249'A METAL WITNESS POST 1 FOOT NORTHEAST OF A CONCRETE WITNESS POST, 0.5

AR0249'FOOT HIGHER THAN TRACK , AT WHAT WAS SAMPSON CITY, AT THE SOUTH

AR0249'CORNER OF THE INTERSECTION OF THE TWO RAILWAYS AND A STANDARD DISK

AR0249'SET IN THE TOP OF A 6-INCH CON- CRETE POST THAT PROJECTS ABOUT

AR0249'12-INCHES ABOVE THE GROUND.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AE7589 *****

AE7589 DESIGNATION - BAKER 37

AE7589 PID - AE7589

AE7589 STATE/COUNTY- FL/BAKER

AE7589 USGS QUAD - MAXVILLE (1984)

AE7589

AE7589 *CURRENT SURVEY CONTROL

AE7589

AE7589*	NAD 83(2007)-	30 12	31.10171 (N)	082 03	39.32412 (W)	ADJUSTED
AE7589*	NAVD 88	-	54.301 (meters)		178.15 (feet)	ADJUSTED

AE7589

AE7589	EPOCH DATE	-	2002.00			
AE7589	X	-	761,963.951 (meters)			COMP
AE7589	Y	-	-5,463,803.864 (meters)			COMP
AE7589	Z	-	3,190,395.697 (meters)			COMP
AE7589	LAPLACE CORR-		0.65 (seconds)			DEFLEC09
AE7589	ELLIP HEIGHT-		26.133 (meters)		(02/10/07)	ADJUSTED
AE7589	GEOID HEIGHT-		-28.16 (meters)			GEOID09
AE7589	DYNAMIC HT	-	54.229 (meters)		177.92 (feet)	COMP

AE7589

AE7589 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AE7589	Type	PID	Designation	North	East	Ellip
AE7589	NETWORK	AE7589	BAKER 37	0.73	0.65	1.86

AE7589

AE7589	MODELED GRAV-	979,335.0 (mgal)				NAVD 88
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AE7589

AE7589 VERT ORDER - SECOND CLASS I

AE7589

AE7589.The horizontal coordinates were established by GPS observations

AE7589.and adjusted by the National Geodetic Survey in February 2007.

AE7589

AE7589.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AE7589.See [National Readjustment](#) for more information.

AE7589

AE7589.The horizontal coordinates are valid at the epoch date displayed above

AE7589.which is a decimal equivalence of Year/Month/Day.

AE7589

AE7589.The orthometric height was determined by differential leveling and

AE7589.adjusted in June 2005.

AE7589

AE7589.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE7589

AE7589.The Laplace correction was computed from DEFLEC09 derived deflections.

AE7589

AE7589.The ellipsoidal height was determined by GPS observations

AE7589.and is referenced to NAD 83.

AE7589

AE7589.The geoid height was determined by GEOID09.

AE7589

AE7589.The dynamic height is computed by dividing the NAVD 88

AE7589.geopotential number by the normal gravity value computed on the

AE7589.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AE7589.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AE7589

AE7589.The modeled gravity was interpolated from observed gravity values.

AE7589

AE7589;

	North	East	Units	Scale Factor	Converg.
AE7589;SPC FL N	- 136,486.314	834,813.630	MT	0.99994869	+1 13 32.5
AE7589;SPC FL N	- 447,788.85	2,738,884.38	sFT	0.99994869	+1 13 32.5
AE7589;UTM 17	- 3,342,380.355	397,888.214	MT	0.99972864	-0 32 01.9

AE7589

AE7589! - Elev Factor x Scale Factor = Combined Factor

AE7589!SPC FL N - 0.99999590 x 0.99994869 = 0.99994459

AE7589!UTM 17 - 0.99999590 x 0.99972864 = 0.99972454

AE7589

	Primary Azimuth Mark	Grid Az
AE7589:SPC FL N	- BAKER 38	129 49 08.1
AE7589:UTM 17	- BAKER 38	131 34 42.5

AE7589

PID	Reference Object	Distance	Geod. Az
			dddmss.s
AE7589 AE7590	BAKER 38	APPROX. 0.6 KM	1310240.6

AE7589

AE7589 SUPERSEDED SURVEY CONTROL

AE7589

AE7589	NAD 83(1999)-	30 12 31.10205(N)	082 03 39.32408(W)	AD()	1
AE7589	ELLIP H (05/31/01)	26.119 (m)		GP()	4 1
AE7589	NAD 83(1990)-	30 12 31.10095(N)	082 03 39.32404(W)	AD()	1
AE7589	ELLIP H (03/20/98)	26.101 (m)		GP()	3 1
AE7589	NAVD 88 (03/20/98)	54.3 (m)	178. (f)	GPS OBS	

AE7589

AE7589.Superseded values are not recommended for survey control.

AE7589.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AE7589.[See file dsdata.txt](#) to determine how the superseded data were derived.

AE7589

AE7589_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP9788842380(NAD 83)

AE7589

AE7589_MARKER: DD = SURVEY DISK

AE7589_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AE7589_STAMPING: BAKER 37 1997

AE7589_MARK LOGO: NGS

AE7589_PROJECTION: RECESSED 10 CENTIMETERS

AE7589_MAGNETIC: N = NO MAGNETIC MATERIAL

AE7589_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AE7589+STABILITY: SURFACE MOTION

AE7589_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AE7589+SATELLITE: SATELLITE OBSERVATIONS - August 24, 2002

AE7589

HISTORY	Date	Condition	Report By	
AE7589	HISTORY	- 1997	MONUMENTED	DCJOHN
AE7589	HISTORY	- 20020824	GOOD	FLDEP

AE7589

AE7589 STATION DESCRIPTION

AE7589

AE7589'DESCRIBED BY DC JOHNSON ASSOC 1997 (DS)

AE7589'THE STATION IS LOCATED APPROXIMATELY 6.4 MI (10.3 KM) SOUTHEAST OF



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AE7589'MACCLENNY, 8.3 MI (13.4 KM) SOUTHWEST OF BALDWIN AND 11.4 MI (18.3 KM)
AE7589'NORTH OF LAWTEY.-- TO REACH THE STATION FROM THE INTERSECTION OF US
AE7589'HIGHWAY 301 AND BAKER COUNTY ROAD 228, PROCEED WEST ON BAKER COUNTY
AE7589'ROAD 228 FOR 2.7 MI (4.3 KM) TO AN INTERSECTION WITH DEERFIELD ROAD
AE7589'AND THE STATION ON THE LEFT, A BRASS NATIONAL GEODETIC SURVEY DISC SET
AE7589'IN THE TOP OF A 12-INCH DIAMETER CONCRETE MONUMENT RECESSED 0.3 FT
AE7589'(9.1 CM) BELOW THE GROUND. THE STATION IS 36.7 FT (11.2 M) SOUTHWEST
AE7589'OF CENTERLINE OF BAKER COUNTY ROAD 228 AND 2 FT (0.6 M) NORTHEAST OF A
AE7589'CARSONITE WITNESS POST.-- REFERENCES-- NAIL AND DISC (LB4514) , SET
AE7589'IN A 8-INCH PINE TREE, NORTH 25 DEGREES EAST AT 92.39 FT (28.16 M) -
AE7589'NAIL AND DISC (LB4514) , SET IN POWER POLE, SOUTH 40 DEGREES EAST AT
AE7589'64.39 FT (19.63 M) - STREET SIGN, (DEERFIELD ROAD) , NORTH 64 DEGREES
AE7589'WEST AT 25.2 FT (7.7 M) -

AE7589

AE7589 STATION RECOVERY (2002)

AE7589

AE7589'RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (BPJ)

AE7589'RECOVERED AS DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD1164 *****

BD1164 DESIGNATION - BC 48

BD1164 PID - BD1164

BD1164 STATE/COUNTY- FL/COLUMBIA

BD1164 USGS QUAD - ELLISVILLE (1994)

BD1164

BD1164 *CURRENT SURVEY CONTROL

BD1164

BD1164*	NAD 83(1990)-	30 00	13.49194 (N)	082 35	34.89965 (W)	ADJUSTED
BD1164*	NAVD 88	-	37.275 (meters)		122.29 (feet)	ADJUSTED

BD1164

BD1164	LAPLACE CORR-	-1.26 (seconds)			DEFLEC09
BD1164	GEOID HEIGHT-	-27.99 (meters)			GEOID09
BD1164	DYNAMIC HT -	37.225 (meters)	122.13 (feet)		COMP
BD1164	MODELED GRAV-	979,317.4 (mgal)			NAVD 88

BD1164

BD1164 HORZ ORDER - SECOND

BD1164 VERT ORDER - SECOND CLASS 0

BD1164

BD1164.The horizontal coordinates were established by classical geodetic methods

BD1164.and adjusted by the National Geodetic Survey in May 1991.

BD1164.

BD1164.The orthometric height was determined by differential leveling and

BD1164.adjusted in June 1991.

BD1164

BD1164.The Laplace correction was computed from DEFLEC09 derived deflections.

BD1164

BD1164.The geoid height was determined by GEOID09.

BD1164

BD1164.The dynamic height is computed by dividing the NAVD 88

BD1164.geopotential number by the normal gravity value computed on the

BD1164.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD1164.degrees latitude (g = 980.6199 gals.).

BD1164

BD1164.The modeled gravity was interpolated from observed gravity values.

BD1164

BD1164;		North	East	Units	Scale	Factor	Converg.
BD1164;SPC FL N	-	112,801.194	783,972.431	MT	0.99995248		+0 57 29.9
BD1164;SPC FL N	-	370,081.92	2,572,082.88	sFT	0.99995248		+0 57 29.9
BD1164;UTM 17	-	3,320,268.921	346,351.971	MT	0.99989127		-0 47 48.3

BD1164

BD1164!	-	Elev Factor	x	Scale Factor	=	Combined Factor
BD1164!SPC FL N	-	0.99999854	x	0.99995248	=	0.99995102
BD1164!UTM 17	-	0.99999854	x	0.99989127	=	0.99988981

BD1164

BD1164:		Primary Azimuth Mark		Grid Az
BD1164:SPC FL N	-	I75 71 A08		308 08 44.7
BD1164:UTM 17	-	I75 71 A08		309 54 02.9

BD1164

BD1164	-----			
BD1164	PID	Reference Object	Distance	Geod. Az
BD1164				dddmss.s
BD1164	BD1162	I75 71 A06	15.178 METERS	08924
BD1164	BD1156	I75 71 A08	APPROX. 1.7 KM	3090614.6



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD1164|-----|
BD1164
BD1164 SUPERSEDED SURVEY CONTROL
BD1164
BD1164 NAD 83(1986)- 30 00 13.49788(N) 082 35 34.90601(W) AD() 2
BD1164 NAD 27 - 30 00 12.64725(N) 082 35 35.46947(W) AD() 2
BD1164 NGVD 29 (??/??/92) 37.520 (m) 123.10 (f) ADJ UNCH 2 0
BD1164
BD1164.Superseded values are not recommended for survey control.
BD1164.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BD1164.[See file dsdata.txt](#) to determine how the superseded data were derived.
BD1164
BD1164_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP4635120268(NAD 83)
BD1164
BD1164_MARKER: DD = SURVEY DISK
BD1164_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
BD1164_SP_SET: SET IN TOP OF CONCRETE MONUMENT
BD1164_STAMPING: BC 48
BD1164_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
BD1164+STABILITY: SURFACE MOTION
BD1164
BD1164 HISTORY - Date Condition Report By
BD1164 HISTORY - 1971 MONUMENTED FLGS
BD1164 HISTORY - 1975 GOOD NGS
BD1164
BD1164 STATION DESCRIPTION
BD1164
BD1164'DESCRIBED BY FLORIDA GEODETIC SURVEY 1971 (CBM)
BD1164'STATION IS LOCATED AT EAST SIDE OF THE TOWN OF ELLISVILLE WHICH
BD1164'IS ABOUT 13 MILES SOUTH OF LAKE CITY.
BD1164'
BD1164'TO REACH STATION FROM THE INTERSECTION OF INTERSTATE ROUTE 10
BD1164'AND U.S. 41, SOUTH OF ELLISVILLE. GO NORTH ON U.S. 41 FOR 0.3
BD1164'MILE TO SR 238. TURN RIGHT AND GO EAST ON SR 238 FOR 0.25 MILE
BD1164'TO STATION ON RIGHT, SOUTH SIDE OF HIGHWAY, IN LAWN.
BD1164'
BD1164'STATION MARK IS A STANDARD COAST AND GEODETIC SURVEY AND STATE
BD1164'SURVEY BRASS DISK, STAMPED BC 48, SET IN THE TOP OF A 6 IN.
BD1164'SQUARE CONCRETE MONUMENT THAT IS FLUSH WITH THE GROUND. IT IS
BD1164'0.8 FEET NORTH OF A METAL WITNESS POST, 35.0 FEET EAST OF A
BD1164'FENCE CORNER, 36 FEET SOUTH OF CENTER OF SR 238 AND 59.5 FEET
BD1164'NORTHWEST OF AN 18 INCH PINE TREE.
BD1164
BD1164 STATION RECOVERY (1975)
BD1164
BD1164'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975
BD1164'0.2 MI E FROM ELLISVILLE.
BD1164'0.25 MILE ALONG STATE HIGHWAY 238 FROM ITS JUNCTION WITH U.S.
BD1164'HIGHWAY 41 AND 441 IN ELLISVILLE, 141.5 FEET WEST OF THE CENTER
BD1164'OF OLD WIRE ROAD, 93 FEET NORTH-NORTHWEST OF THE NORTHWEST
BD1164'CORNER OF CARPORT OF CONCRETE BLOCK AND BRICK HOUSE, 36 FEET
BD1164'SOUTH OF THE CENTER OF STATE HIGHWAY 238, 32 FEET EAST OF THE
BD1164'FENCE CORNER POST, 26 FEET WEST OF THE CENTER OF DRIVEWAY TO
BD1164'HOUSE, 1 FOOT NORTH OF A METAL WITNESS POST AND A DISK SET IN
BD1164'THE TOP OF A 6-INCH SQUARE CONCRETE MONUMENT THAT IS SET FLUSH



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD1164'WITH THE GROUND SURFACE.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AE7598 *****

AE7598 DESIGNATION - BRADFORD 7

AE7598 PID - AE7598

AE7598 STATE/COUNTY- FL/BRADFORD

AE7598 USGS QUAD - RAIFORD (1984)

AE7598

AE7598 *CURRENT SURVEY CONTROL

AE7598

AE7598*	NAD 83(2007)	-	30 00	23.77532 (N)	082 09	11.48486 (W)	ADJUSTED
AE7598*	NAVD 88	-		43.4 (meters)	142.	(feet)	GPS OBS

AE7598

AE7598	EPOCH DATE	-	2002.00				
AE7598	X	-	754,696.817 (meters)				COMP
AE7598	Y	-	-5,476,144.096 (meters)				COMP
AE7598	Z	-	3,171,015.433 (meters)				COMP
AE7598	LAPLACE CORR-		0.22 (seconds)				DEFLEC09
AE7598	ELLIP HEIGHT-		15.403 (meters)		(02/10/07)		ADJUSTED
AE7598	GEOID HEIGHT-		-27.99 (meters)				GEOID09

AE7598

AE7598 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AE7598	Type	PID	Designation	North	East	Ellip
AE7598	NETWORK	AE7598	BRADFORD 7	0.57	0.49	1.57

AE7598

AE7598

AE7598.The horizontal coordinates were established by GPS observations

AE7598.and adjusted by the National Geodetic Survey in February 2007.

AE7598

AE7598.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AE7598.See [National Readjustment](#) for more information.

AE7598

AE7598.The horizontal coordinates are valid at the epoch date displayed above

AE7598.which is a decimal equivalence of Year/Month/Day.

AE7598

AE7598.The orthometric height was determined by GPS observations and a

AE7598.high-resolution geoid model.

AE7598

AE7598.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE7598

AE7598.The Laplace correction was computed from DEFLEC09 derived deflections.

AE7598

AE7598.The ellipsoidal height was determined by GPS observations

AE7598.and is referenced to NAD 83.

AE7598

AE7598.The geoid height was determined by GEOID09.

AE7598

AE7598;		North	East	Units	Scale Factor	Converg.
AE7598;SPC FL N	-	113,909.308	826,393.172	MT	0.99995234	+1 10 45.6
AE7598;SPC FL N	-	373,717.45	2,711,258.27	sFT	0.99995234	+1 10 45.6
AE7598;UTM 17	-	3,320,076.942	388,781.054	MT	0.99975261	-0 34 36.4

AE7598

AE7598!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AE7598!SPC FL N	-	0.99999758	x	0.99995234	=	0.99994992
AE7598!UTM 17	-	0.99999758	x	0.99975261	=	0.99975019



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AE7598

AE7598: Primary Azimuth Mark Grid Az
AE7598:SPC FL N - BRADFORD 8 175 48 32.1
AE7598:UTM 17 - BRADFORD 8 177 33 54.1

AE7598

PID	Reference Object	Distance	Geod. Az
			ddmmss.s
AE7599	BRADFORD 8	APPROX. 0.6 KM	1765917.7

AE7598

AE7598 SUPERSEDED SURVEY CONTROL

AE7598

AE7598	NAD 83(1999)-	30 00 23.77577 (N)	082 09 11.48500 (W)	AD ()	1
AE7598	ELLIP H (05/31/01)	15.399 (m)		GP ()	4 1
AE7598	NAD 83(1990)-	30 00 23.77464 (N)	082 09 11.48493 (W)	AD ()	1
AE7598	ELLIP H (03/20/98)	15.381 (m)		GP ()	3 1

AE7598

AE7598.Superseded values are not recommended for survey control.

AE7598.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AE7598.[See file dsdata.txt](#) to determine how the superseded data were derived.

AE7598

AE7598_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP8878120076(NAD 83)

AE7598

AE7598_MARKER: DD = SURVEY DISK

AE7598_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AE7598_STAMPING: BRADFORD 7 1997

AE7598_MARK LOGO: NGS

AE7598_MAGNETIC: N = NO MAGNETIC MATERIAL

AE7598_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AE7598_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AE7598+SATELLITE: SATELLITE OBSERVATIONS - December 02, 2009

AE7598

AE7598	HISTORY	- Date	Condition	Report By
AE7598	HISTORY	- 1997	MONUMENTED	DCJOHN
AE7598	HISTORY	- 20091202	GOOD	FLDT

AE7598

AE7598 STATION DESCRIPTION

AE7598

AE7598'DESCRIBED BY DC JOHNSON ASSOC 1997 (DS)

AE7598'THE STATION IS LOCATED APPROXIMATELY 11.5 MI (18.5 KM) EAST OF LAKE
AE7598'BUTLER, 5.4 MI (8.7 KM) SOUTHWEST OF LAWTEY AND 5.1 MI (8.2 KM) NORTH
AE7598'OF STARKE.-- TO REACH THE STATION FROM THE INTERSECTION OF BRADFORD
AE7598'COUNTY ROADS 16 AND 223, PROCEED WEST THEN NORTH ON BRADFORD COUNTY
AE7598'ROAD 233 FOR 1.65 MI (2.66 KM) TO THE STATION ON THE LEFT, A BRASS
AE7598'NATIONAL GEODETIC SURVEY DISC SET IN THE TOP OF A 12-INCH DIAMTER
AE7598'CONCRETE MONUMENT RECESSED 0.2 FT (6.1 CM) BELOW THE GROUND. THE
AE7598'STATION IS 16.6 FT (5.1 M) WEST OF THE CENTERLINE OF BRADFORD COUNTY
AE7598'ROAD 233, 20.6 FT (6.3 M) SOUTH OF CENTERLINE OF PRIVATE DRIVE, 20 FT
AE7598'(6.1 M) EAST OF HOG WIRE FENCE AND 16 FT (4.9 M) EAST OF CARSONITE
AE7598'WITNESS POST.-- REFERENCES-- NAIL AND DISC (ILLEGIBLE) , FOUND AT
AE7598'THE PC OF BRADFORD COUNTY ROAD 233, NORTH.36 DEGREES EAST AT 30.74 FT
AE7598'(9.37 M) - NAIL AND DISC (LB4514) , SET IN POWER POLE, SOUTH 26
AE7598'DEGREES EAST AT 107.03 FT (32.62 M) - FENCE CORNER AT NORTH END OF
AE7598'HOG WIRE FENCE (FENCE CORNER IS JUST SOUTH OF A PRIVATE DRIVE) , NORTH



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AE7598'54 DEGREES WEST AT 27.0 FT (8.2 M) -

AE7598

AE7598

STATION RECOVERY (2009)

AE7598

AE7598'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2009 (JDO)

AE7598'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AE7600 *****

AE7600 DESIGNATION - BRADFORD 9

AE7600 PID - AE7600

AE7600 STATE/COUNTY- FL/BRADFORD

AE7600 USGS QUAD - LAWTEY (1993)

AE7600

AE7600 *CURRENT SURVEY CONTROL

AE7600

AE7600*	NAD 83(2007) -	30 01 37.87674 (N)	082 03 21.49787 (W)	ADJUSTED
AE7600*	NAVD 88 -	56.036 (meters)	183.84 (feet)	ADJUSTED

AE7600

AE7600	EPOCH DATE -	2002.00		
AE7600	X -	763,831.320 (meters)		COMP
AE7600	Y -	-5,473,735.983 (meters)		COMP
AE7600	Z -	3,172,997.492 (meters)		COMP
AE7600	LAPLACE CORR-	0.07 (seconds)		DEFLEC09
AE7600	ELLIP HEIGHT-	28.045 (meters)	(02/10/07)	ADJUSTED
AE7600	GEOID HEIGHT-	-28.00 (meters)		GEOID09
AE7600	DYNAMIC HT -	55.962 (meters)	183.60 (feet)	COMP

AE7600

AE7600 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AE7600	Type	PID	Designation	North	East	Ellip
AE7600	NETWORK	AE7600	BRADFORD 9	0.71	0.57	1.69

AE7600

AE7600 MODELED GRAV- 979,322.0 (mgal) NAVD 88

AE7600

AE7600 VERT ORDER - FIRST CLASS II

AE7600

AE7600.The horizontal coordinates were established by GPS observations

AE7600.and adjusted by the National Geodetic Survey in February 2007.

AE7600

AE7600.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AE7600.See [National Readjustment](#) for more information.

AE7600

AE7600.The horizontal coordinates are valid at the epoch date displayed above

AE7600.which is a decimal equivalence of Year/Month/Day.

AE7600

AE7600.The orthometric height was determined by differential leveling and

AE7600.adjusted in January 2008.

AE7600

AE7600.[Photographs](#) are available for this station.

AE7600

AE7600.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE7600

AE7600.The Laplace correction was computed from DEFLEC09 derived deflections.

AE7600

AE7600.The ellipsoidal height was determined by GPS observations

AE7600.and is referenced to NAD 83.

AE7600

AE7600.The geoid height was determined by GEOID09.

AE7600

AE7600.The dynamic height is computed by dividing the NAVD 88

AE7600.geopotential number by the normal gravity value computed on the



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AE7600.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AE7600.degrees latitude (g = 980.6199 gals.).
AE7600
AE7600.The modeled gravity was interpolated from observed gravity values.
AE7600
AE7600;              North          East      Units Scale Factor Converg.
AE7600;SPC FL N      -   116,387.475    835,721.390    MT   0.99995140   +1 13 41.5
AE7600;SPC FL N      -   381,847.91    2,741,862.59    sFT  0.99995140   +1 13 41.5
AE7600;UTM 17        -   3,322,267.572    398,178.854    MT   0.99972791   -0 31 42.5
AE7600
AE7600!              - Elev Factor x Scale Factor = Combined Factor
AE7600!SPC FL N      -   0.99999560 x 0.99995140 = 0.99994700
AE7600!UTM 17        -   0.99999560 x 0.99972791 = 0.99972351
AE7600
AE7600:              Primary Azimuth Mark                      Grid Az
AE7600:SPC FL N      - BRADFORD 10                             143 41 04.8
AE7600:UTM 17        - BRADFORD 10                             145 26 28.8
AE7600
AE7600|-----|
AE7600| PID      Reference Object                               Distance       Geod. Az |
AE7600|                                         dddmmss.s |
AE7600| AE7601 BRADFORD 10                                APPROX. 1.0 KM 1445446.3 |
AE7600|-----|
AE7600
AE7600                                     SUPERSEDED SURVEY CONTROL
AE7600
AE7600 NAD 83(1999)- 30 01 37.87722(N)      082 03 21.49801(W) AD( ) 1
AE7600 ELLIP H (05/31/01) 28.044 (m) GP( ) 4 1
AE7600 NAD 83(1990)- 30 01 37.87619(N)      082 03 21.49785(W) AD( ) 1
AE7600 ELLIP H (03/20/98) 28.036 (m) GP( ) 3 1
AE7600 NAVD 88 (03/20/98) 56.0 (m) 184. (f) GPS OBS
AE7600
AE7600.Superseded values are not recommended for survey control.
AE7600.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AE7600.See file dsdata.txt to determine how the superseded data were derived.
AE7600
AE7600_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP9817822267(NAD 83)
AE7600
AE7600_MARKER: DH = HORIZONTAL CONTROL DISK
AE7600_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AE7600_STAMPING: BRADFORD 9 1997
AE7600_MARK LOGO: NGS
AE7600_PROJECTION: RECESSED 8 CENTIMETERS
AE7600_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
AE7600_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AE7600+STABILITY: SURFACE MOTION
AE7600_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AE7600+SATELLITE: SATELLITE OBSERVATIONS - November 10, 2006
AE7600
AE7600 HISTORY      - Date      Condition      Report By
AE7600 HISTORY      - 1997      MONUMENTED     DCJOHN
AE7600 HISTORY      - 20050108 GOOD             FLDEP
AE7600 HISTORY      - 20061110 GOOD             BAKER
AE7600
AE7600                                     STATION DESCRIPTION

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USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AE7600

AE7600'DESCRIBED BY DC JOHNSON ASSOC 1997 (DS)

AE7600'THE STATION IS LOCATED APPROXIMATELY 1.7 MI (2.7 KM) SOUTHEAST OF

AE7600'LAWTEY, 6.6 MI (10.6 KM) NORTHEAST OF STARKE AND 11.3 MI (18.2 KM)

AE7600'SOUTHEAST OF RAIFORD.-- TO REACH THE STATION FROM THE INTERSECTION OF

AE7600'US HIGHWAY 301 AND BRADFORD COUNTY ROAD 225 (ALSO KNOWN AS LAKE

AE7600'STREET) PROCEED EAST, THEN SOUTHEAST ON BRADFORD COUNTY ROAD 225 FOR

AE7600'1.55 MI (2.49 KM) TO THE STATION ON THE RIGHT, A BRASS NATIONAL

AE7600'GEODETIC SURVEY DISC SET IN THE TOP OF A 12-INCH DIAMTER CONCRETE

AE7600'MONUMENT RECESSED 0.3 FT (9.1 CM) BELOW THE GROUND. THE STATION IS

AE7600'29.2 FT (8.9 M) SOUTHWEST OF THE CENTERLINE OF BRADFORD COUNTY ROAD

AE7600'225, 205.5 FT (62.6 M) NORTHWEST OF CENTERLINE OF NE 213TH STREET AND

AE7600'11 FT (3.4 M) NORTHEAST OF CARSONITE WITNESS POST.-- REFERENCES--

AE7600'NAIL AND DISC (LB4514) , SET IN POWER POLE, NORTH 83 DEGREES WEST AT

AE7600'90.89 FT (27.70 M) - TELEPHONE CABLE BOX, NORTH 43 DEGREES WEST AT

AE7600'96.9 FT (29.5 M) - MAILBOX (ROUTE 1, NO. 1230) , SOUTH 35 DEGREES

AE7600'EAST AT 53.3 FT (16.2 M) -

AE7600

AE7600 STATION RECOVERY (2005)

AE7600

AE7600'RECOVERY NOTE BY FL DEPT OF ENV PRO 2005 (JLM)

AE7600'THE MARK IS ABOUT 1.7 MI SOUTHEAST OF LAWTEY, IN SECTION 25, TOWNSHIP

AE7600'5 SOUTH, RANGE 22 EAST.

AE7600'

AE7600'TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 301 AND COUNTY

AE7600'ROAD 225 (LAKE STREET) IN LAWTEY, GO SOUTHEAST ON COUNTY ROAD 225

AE7600'(LAKE STREET) FOR 1.65 MI TO THE MARK ON THE RIGHT, SET IN THE TOP OF

AE7600'A ROUND CONCRETE MONUMENT RECESSED 0.3 FT BELOW THE LEVEL OF THE

AE7600'GROUND AND COUNTY ROAD 225.

AE7600'

AE7600'LOCATED 205.5 FT NORTHWEST OF THE APPROXIMATE CENTERLINE OF NORTHEAST

AE7600'213TH STREET, 29.2 FT SOUTHWEST OF THE CENTERLINE OF COUNTY ROAD 225,

AE7600'NOTE A MAGNET WAS IMBEDDED IN THE GROUND ON THE SOUTH SIDE OF THE

AE7600'MARK.

AE7600

AE7600 STATION RECOVERY (2006)

AE7600

AE7600'RECOVERY NOTE BY M BAKER JR INCORPORATED 2006 (LL)

AE7600'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AE7639 *****

AE7639 DESIGNATION - COLUMBIA 29

AE7639 PID - AE7639

AE7639 STATE/COUNTY- FL/COLUMBIA

AE7639 USGS QUAD - O'BRIEN SE (1993)

AE7639

AE7639 *CURRENT SURVEY CONTROL

AE7639

AE7639*	NAD 83(2007)	-	30 00	58.98352 (N)	082 45	38.17148 (W)	ADJUSTED
AE7639*	NAVD 88	-		16.0 (meters)		52. (feet)	GPS OBS

AE7639

AE7639	EPOCH DATE	-	2002.00				
AE7639	X	-	696,529.624 (meters)				COMP
AE7639	Y	-	-5,483,275.592 (meters)				COMP
AE7639	Z	-	3,171,940.539 (meters)				COMP
AE7639	LAPLACE CORR-		-0.38 (seconds)				DEFLEC09
AE7639	ELLIP HEIGHT-		-11.953 (meters)		(02/10/07)		ADJUSTED
AE7639	GEOID HEIGHT-		-27.92 (meters)				GEOID09

AE7639

AE7639 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AE7639	Type	PID	Designation	North	East	Ellip
AE7639	NETWORK	AE7639	COLUMBIA 29	0.39	0.33	0.92

AE7639

AE7639

AE7639.The horizontal coordinates were established by GPS observations

AE7639.and adjusted by the National Geodetic Survey in February 2007.

AE7639

AE7639.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AE7639.See [National Readjustment](#) for more information.

AE7639

AE7639.The horizontal coordinates are valid at the epoch date displayed above

AE7639.which is a decimal equivalence of Year/Month/Day.

AE7639

AE7639.The orthometric height was determined by GPS observations and a

AE7639.high-resolution geoid model.

AE7639

AE7639.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE7639

AE7639.The Laplace correction was computed from DEFLEC09 derived deflections.

AE7639

AE7639.The ellipsoidal height was determined by GPS observations

AE7639.and is referenced to NAD 83.

AE7639

AE7639.The geoid height was determined by GEOID09.

AE7639

AE7639;		North	East	Units	Scale Factor	Converg.
AE7639;SPC FL N	-	113,943.243	767,785.769	MT	0.99995188	+0 52 26.7
AE7639;SPC FL N	-	373,828.79	2,518,977.14	sFT	0.99995188	+0 52 26.7
AE7639;UTM 17	-	3,321,906.128	330,208.351	MT	0.99995569	-0 52 51.4

AE7639

AE7639!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AE7639!SPC FL N	-	1.00000188	x	0.99995188	=	0.99995376
AE7639!UTM 17	-	1.00000188	x	0.99995569	=	0.99995757



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AE7639

AE7639: Primary Azimuth Mark Grid Az
AE7639:SPC FL N - COLUMBIA 28 000 19 38.4
AE7639:UTM 17 - COLUMBIA 28 002 04 56.5

AE7639

PID	Reference Object	Distance	Geod. Az ddmmss.s
AE7638	COLUMBIA 28	APPROX. 0.6 KM	0011205.1

AE7639

AE7639 SUPERSEDED SURVEY CONTROL

AE7639

AE7639	NAD 83(1999)-	30 00 58.98393(N)	082 45 38.17137(W)	AD()	1
AE7639	ELLIP H (05/31/01)	-11.997 (m)		GP()	4 1
AE7639	NAD 83(1990)-	30 00 58.98285(N)	082 45 38.17128(W)	AD()	1
AE7639	ELLIP H (03/20/98)	-11.954 (m)		GP()	3 1
AE7639	NAVD 88 (03/20/98)	16.0 (m)	52. (f)	GPS OBS	

AE7639

AE7639.Superseded values are not recommended for survey control.

AE7639.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AE7639.[See file dsdata.txt](#) to determine how the superseded data were derived.

AE7639

AE7639_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP3020821906(NAD 83)

AE7639

AE7639_MARKER: DD = SURVEY DISK

AE7639_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AE7639_STAMPING: COLUMBIA 29 1997

AE7639_MARK LOGO: NGS

AE7639_PROJECTION: FLUSH

AE7639_MAGNETIC: N = NO MAGNETIC MATERIAL

AE7639_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AE7639_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AE7639+SATELLITE: SATELLITE OBSERVATIONS - January 06, 1998

AE7639

AE7639	HISTORY	- Date	Condition	Report By
AE7639	HISTORY	- 1997	MONUMENTED	DCJOHN
AE7639	HISTORY	- 19980106	GOOD	DCJOHN

AE7639

AE7639 STATION DESCRIPTION

AE7639

AE7639'DESCRIBED BY DC JOHNSON ASSOC 1997 (DS)

AE7639'THE STATION IS LOCATED APPROXIMATELY 7.0 MI (11.3 KM) NORTHWEST OF
AE7639'FORT WHITE, 10.8 MI (17.4 KM) NORTHEAST OF BRANFORD AND 13.9 MI (22.4
AE7639'KM) SOUTHWEST OF LAKE CITY.-- TO REACH THE STATION FROM THE
AE7639'INTERSECTION OF STATE ROAD 47 AND COLUMBIA COUNTY ROAD 238, JUST NORTH
AE7639'OF FORT WHITE, PROCEED NORTHWESTERLY ON COLUMBIA COUNTY ROAD 238 FOR
AE7639'3.6 MI (5.8 KM) TO THE ENTRANCE TO ICHETUCKEE SPRINGS STATE PARK,
AE7639'CONTINUE WEST ON COLUMBIA COUNTY ROAD 238 FOR 0.2 MI (0.3 KM) TO AN
AE7639'INTERSECTION WITH OLD ICHETUCKNEE ROAD TO THE RIGHT, PROCEED NORTH ON
AE7639'OLD ICHETUCKNEE ROAD FOR 2.1 MI (3.4 KM) TO THE STATION ON THE LEFT, A
AE7639'BRASS NATIONAL GEODETIC SURVEY DISC SET IN THE TOP OF A 12-INCH
AE7639'DIAMETER CONCRETE MONUMENT RECESSED 0.2 FT (6.1 CM) BELOW THE GROUND.
AE7639'THE STATION IS 38.4 FT (11.7 M) WEST OF THE CENTERLINE OF OLD
AE7639'ICHETUCKNEE ROAD, 1.2 FT (0.4 M) EAST OF BARBED WIRE FENCE AND 1 FT



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AE7639' (0.3 M) EAST OF A CARSONITE WITNESS POST.-- REFERENCES-- NAIL AND
AE7639'DISC (LB4514) , SET IN 8-INCH OAK TREE, NORTH 83 DEGREES EAST AT 78.3
AE7639'FT (23.9 M) - NAIL AND DISK (LB4514) , SET IN POWER POLE, SOUTH 00
AE7639'DEGREES EAST AT 202.1 FT (61.6 M) -
AE7639
AE7639 STATION RECOVERY (1998)
AE7639
AE7639'RECOVERY NOTE BY DC JOHNSON ASSOC 1998 (CHX)
AE7639'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CX) .-- THE STATION WAS
AE7639'RECOVERED AS PREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AE7641 *****

AE7641 DESIGNATION - COLUMBIA 31

AE7641 PID - AE7641

AE7641 STATE/COUNTY- FL/COLUMBIA

AE7641 USGS QUAD - COLUMBIA (1993)

AE7641

AE7641 *CURRENT SURVEY CONTROL

AE7641

AE7641*	NAD 83(2007)	-	30 00	13.71537 (N)	082 38	35.22651 (W)	ADJUSTED
AE7641*	NAVD 88	-		26.6 (meters)	87.	(feet)	GPS OBS

AE7641

AE7641	EPOCH DATE	-	2002.00				
AE7641	X	-	707,862.029 (meters)				COMP
AE7641	Y	-	-5,482,536.369 (meters)				COMP
AE7641	Z	-	3,170,738.799 (meters)				COMP
AE7641	LAPLACE CORR-		-0.72 (seconds)				DEFLEC09
AE7641	ELLIP HEIGHT-		-1.352 (meters)		(02/10/07)		ADJUSTED
AE7641	GEOID HEIGHT-		-27.96 (meters)				GEOID09

AE7641

AE7641 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AE7641	Type	PID	Designation	North	East	Ellip
AE7641	NETWORK	AE7641	COLUMBIA 31	0.41	0.35	1.00

AE7641

AE7641

AE7641.The horizontal coordinates were established by GPS observations

AE7641.and adjusted by the National Geodetic Survey in February 2007.

AE7641

AE7641.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AE7641.See [National Readjustment](#) for more information.

AE7641

AE7641.The horizontal coordinates are valid at the epoch date displayed above

AE7641.which is a decimal equivalence of Year/Month/Day.

AE7641

AE7641.The orthometric height was determined by GPS observations and a

AE7641.high-resolution geoid model.

AE7641

AE7641.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE7641

AE7641.The Laplace correction was computed from DEFLEC09 derived deflections.

AE7641

AE7641.The ellipsoidal height was determined by GPS observations

AE7641.and is referenced to NAD 83.

AE7641

AE7641.The geoid height was determined by GEOID09.

AE7641

AE7641;		North	East	Units	Scale Factor	Converg.
AE7641;SPC FL N	-	112,728.309	779,140.314	MT	0.99995248	+0 55 59.3
AE7641;SPC FL N	-	369,842.79	2,556,229.51	sFT	0.99995248	+0 55 59.3
AE7641;UTM 17	-	3,320,344.054	341,520.139	MT	0.99990988	-0 49 18.6

AE7641

AE7641!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AE7641!SPC FL N	-	1.00000021	x	0.99995248	=	0.99995269
AE7641!UTM 17	-	1.00000021	x	0.99990988	=	0.99991009



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AE7641

AE7641: Primary Azimuth Mark Grid Az
AE7641:SPC FL N - COLUMBIA 30 357 24 06.0
AE7641:UTM 17 - COLUMBIA 30 359 09 23.9

AE7641

PID	Reference Object	Distance	Geod. Az
AE7640	COLUMBIA 30	APPROX. 0.8 KM	3582005.3

AE7641

AE7641 SUPERSEDED SURVEY CONTROL

AE7641

AE7641	NAD 83(1999)-	30 00 13.71572(N)	082 38 35.22649(W)	AD()	1
AE7641	ELLIP H (05/31/01)	-1.384 (m)		GP()	4 1
AE7641	NAD 83(1990)-	30 00 13.71463(N)	082 38 35.22641(W)	AD()	1
AE7641	ELLIP H (03/20/98)	-1.356 (m)		GP()	3 1

AE7641

AE7641.Superseded values are not recommended for survey control.

AE7641.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AE7641.[See file dsdata.txt](#) to determine how the superseded data were derived.

AE7641

AE7641_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP4152020344(NAD 83)

AE7641

AE7641_MARKER: DD = SURVEY DISK

AE7641_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AE7641_STAMPING: COLUMBIA 31 1997

AE7641_MARK LOGO: NGS

AE7641_MAGNETIC: N = NO MAGNETIC MATERIAL

AE7641_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AE7641_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AE7641+SATELLITE: SATELLITE OBSERVATIONS - November 06, 2007

AE7641

AE7641	HISTORY	- Date	Condition	Report By
AE7641	HISTORY	- 1997	MONUMENTED	DCJOHN
AE7641	HISTORY	- 20071106	GOOD	SESMC

AE7641

AE7641 STATION DESCRIPTION

AE7641

AE7641'DESCRIBED BY DC JOHNSON ASSOC 1997 (DS)

AE7641'THE STATION IS LOCATED APPROXIMATELY 6.9 MI (11.1 KM) NORTH OF FORT
AE7641'WHITE, 12.6 MI (20.3 KM) SOUTH OF LAKE CITY AND 17.4 MI (28.0 KM) EAST
AE7641'OF BRANDFORD.-- TO REACH THE STATION FROM THE INTERSECTION OF
AE7641'COLUMBIA ROADS 131 AND 349, PROCEED SOUTH ON COLUMBIA COUNTY ROAD 131
AE7641'FOR 1.2 MI (1.9 KM) TO THE STATION ON THE LEFT, A BRASS NATIONAL
AE7641'GEODETIC SURVEY DISC SET IN THE TOP OF A 12-INCH DIAMETER CONCRETE
AE7641'MONUMENT RECESSED 0.2 FT (6.1 CM) BELOW THE GROUND. THE STATION IS
AE7641'0.05 MI (0.08 KM) NORTH OF LEO FEAGLE ROAD, 35.2 FT (10.7 M) EAST OF
AE7641'COLUMBIA COUNTY ROAD 131 AND 3 FT (0.9 M) WEST OF A CARSONITE WITNESS
AE7641'POST.-- REFERENCES-- NAIL AND DISC (LB4514) , SET IN 10-INCH CHERRY
AE7641'TREE CLUSTER, NORTH 45 DEGREES WEST AT 96.10 FT (29.29 M) - NAIL AND
AE7641'DISC (LB4514) , SET IN A POWER POLE, NORTH 13 DEGREES EAST AT 59.27 FT
AE7641'(18.07 M) - ROAD SIGN (LEO FEAGLE RD AND STOP) , SOUTH 20 DEGREES
AE7641'WEST AT 321.5 FT (98.0 M) -
AE7641



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AE7641

STATION RECOVERY (2007)

AE7641

AE7641'RECOVERY NOTE BY SOUTHEASTERN SURVEY AND MAPPIN 2007 (SH)

AE7641'RECOVERED AS DESCRIBED



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AE7642 *****

AE7642 DESIGNATION - COLUMBIA 32

AE7642 PID - AE7642

AE7642 STATE/COUNTY- FL/COLUMBIA

AE7642 USGS QUAD - FORT WHITE (1993)

AE7642

AE7642 *CURRENT SURVEY CONTROL

AE7642

AE7642*	NAD 83(2007)	-	29 55	50.91567 (N)	082 38	59.00777 (W)	ADJUSTED
AE7642*	NAVD 88	-		35.8 (meters)	117.	(feet)	GPS OBS

AE7642

AE7642	EPOCH DATE	-	2002.00				
AE7642	X	-	707,748.065 (meters)				COMP
AE7642	Y	-	-5,486,634.759 (meters)				COMP
AE7642	Z	-	3,163,733.070 (meters)				COMP
AE7642	LAPLACE CORR-		-0.78 (seconds)				DEFLEC09
AE7642	ELLIP HEIGHT-		7.885 (meters)		(02/10/07)		ADJUSTED
AE7642	GEOID HEIGHT-		-27.95 (meters)				GEOID09

AE7642

AE7642 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AE7642	Type	PID	Designation	North	East	Ellip
AE7642	NETWORK	AE7642	COLUMBIA 32	0.71	0.61	1.82

AE7642

AE7642

AE7642.The horizontal coordinates were established by GPS observations

AE7642.and adjusted by the National Geodetic Survey in February 2007.

AE7642

AE7642.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AE7642.See [National Readjustment](#) for more information.

AE7642

AE7642.The horizontal coordinates are valid at the epoch date displayed above

AE7642.which is a decimal equivalence of Year/Month/Day.

AE7642

AE7642.The orthometric height was determined by GPS observations and a

AE7642.high-resolution geoid model.

AE7642

AE7642.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AE7642

AE7642.The Laplace correction was computed from DEFLEC09 derived deflections.

AE7642

AE7642.The ellipsoidal height was determined by GPS observations

AE7642.and is referenced to NAD 83.

AE7642

AE7642.The geoid height was determined by GEOID09.

AE7642

AE7642;		North	East	Units	Scale Factor	Converg.
AE7642;SPC FL N	-	104,627.203	778,634.384	MT	0.99995690	+0 55 47.3
AE7642;SPC FL N	-	343,264.42	2,554,569.64	sFT	0.99995690	+0 55 47.3
AE7642;UTM 17	-	3,312,262.579	340,766.512	MT	0.99991284	-0 49 23.9

AE7642

AE7642!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AE7642!SPC FL N	-	0.99999876	x	0.99995690	=	0.99995566
AE7642!UTM 17	-	0.99999876	x	0.99991284	=	0.99991160



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AE7642

AE7642: Primary Azimuth Mark Grid Az
AE7642:SPC FL N - COLUMBIA 33 227 11 18.0
AE7642:UTM 17 - COLUMBIA 33 228 56 29.2

AE7642

PID	Reference Object	Distance	Geod. Az
AE7643	COLUMBIA 33	APPROX. 0.6 KM	2280705.3

AE7642

AE7642 SUPERSEDED SURVEY CONTROL

AE7642

AE7642	NAD 83(1999)-	29 55 50.91603(N)	082 38 59.00778(W)	AD(	) 1
AE7642	ELLIP H (05/31/01)	7.853 (m)		GP(	) 4 1
AE7642	NAD 83(1990)-	29 55 50.91490(N)	082 38 59.00767(W)	AD(	) 1
AE7642	ELLIP H (03/20/98)	7.891 (m)		GP(	) 3 1

AE7642

AE7642.Superseded values are not recommended for survey control.

AE7642.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AE7642.[See file dsdata.txt](#) to determine how the superseded data were derived.

AE7642

AE7642 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP4076612262(NAD 83)

AE7642

AE7642 MARKER: DD = SURVEY DISK

AE7642 SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AE7642 STAMPING: COLUMBIA 32 1997

AE7642 MARK LOGO: NGS

AE7642 MAGNETIC: N = NO MAGNETIC MATERIAL

AE7642 STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AE7642 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AE7642+SATELLITE: SATELLITE OBSERVATIONS - 1997

AE7642

AE7642	HISTORY	- Date	Condition	Report By
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AE7642	HISTORY	- 1997	MONUMENTED	DCJOHN
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AE7642

AE7642 STATION DESCRIPTION

AE7642

AE7642'DESCRIBED BY DC JOHNSON ASSOC 1997 (DS)

AE7642'THE STATION IS LOCATED APPROXIMATELY 3.7 MI (6.0 KM) EAST OF FORT

AE7642'WHITE, 13.8 MI (22.2 KM) WEST OF WORTHINGTON SPRINGS AND 17.6 MI (28.3

AE7642'KM) SOUTH OF LAKE CITY AND 17.6 MI (28.3 KM) SOUTH OF LAKE CITY.-- TO

AE7642'REACH THE STATION FROM THE INTERSECTION OF COLUMBIA ROADS 18 AND 131,

AE7642'PROCEED SOUTHWEST ON COLUMBIA COUNTY ROAD 18 FOR 0.3 MI (0.5 KM) TO

AE7642'THE STATION ON THE RIGHT, A BRASS NATIONAL GEODETIC SURVEY DISC SET IN

AE7642'THE TOP OF A 12-INCH DIAMETER CONCRETE MONUMENT RECESSED 0.2 FT (6.1

AE7642'CM) BELOW THE GROUND. THE STATION IS 43.9 FT (13.4 M) NORTH OF OF

AE7642'COLUMBIA COUNTY ROAD 18, 20.3 FT (6.2 M) SOUTH OF A HOG WIRE FENCE AND

AE7642'8 FT (2.4 M) SOUTH OF A CARSONITE WITNESS POST.-- REFERENCES-- NAIL

AE7642'AND DISC (LB4514) , SET IN A POWER POLE, NORTH 48 DEGREES EAST AT 69.0

AE7642'FT (21.0 M) - NAIL AND DISC (LB4514) , SET IN A POWER POLE, NORTH 56

AE7642'DEGREES WEST AT 220.6 FT (67.2 M) -



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0725 *****

BD0725 DESIGNATION - D 152

BD0725 PID - BD0725

BD0725 STATE/COUNTY- FL/SUWANNEE

BD0725 USGS QUAD - FALMOUTH (1993)

BD0725

BD0725 *CURRENT SURVEY CONTROL

BD0725

BD0725*	NAD 83(1986)-	30 22 18.	(N)	083 09 10.	(W)	SCALED
BD0725*	NAVD 88	- 20.843	(meters)	68.38	(feet)	ADJUSTED

BD0725

BD0725	GEOID HEIGHT-	-28.03	(meters)			GEOID09
BD0725	DYNAMIC HT -	20.816	(meters)	68.29	(feet)	COMP
BD0725	MODELED GRAV-	979,341.5	(mgal)			NAVD 88

BD0725

BD0725 VERT ORDER - FIRST CLASS II

BD0725

BD0725.The horizontal coordinates were scaled from a topographic map and have

BD0725.an estimated accuracy of +/- 6 seconds.

BD0725.

BD0725.The orthometric height was determined by differential leveling and

BD0725.adjusted in June 1991.

BD0725

BD0725.The geoid height was determined by GEOID09.

BD0725

BD0725.The dynamic height is computed by dividing the NAVD 88

BD0725.geopotential number by the normal gravity value computed on the

BD0725.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0725.degrees latitude (g = 980.6199 gals.).

BD0725

BD0725.The modeled gravity was interpolated from observed gravity values.

BD0725

BD0725;		North	East	Units	Estimated Accuracy
BD0725;SPC FL N	-	152,810.	729,490.	MT	(+/- 180 meters Scaled)

BD0725

BD0725 SUPERSEDED SURVEY CONTROL

BD0725

BD0725	NGVD 29 (??/??/92)	21.064	(m)	69.11	(f)	ADJ UNCH	1 2
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BD0725

BD0725.Superseded values are not recommended for survey control.

BD0725.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0725.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0725

BD0725_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP931619(NAD 83)

BD0725

BD0725_MARKER: DB = BENCH MARK DISK

BD0725_SETTING: 30 = SET IN A LIGHT STRUCTURE

BD0725_SP_SET: CULVERT

BD0725_STAMPING: D 152 1954

BD0725_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY

BD0725

BD0725	HISTORY	- Date	Condition	Report By
BD0725	HISTORY	- 1954	MONUMENTED	CGS
BD0725	HISTORY	- 1958	GOOD	CGS



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0725

BD0725

STATION DESCRIPTION

BD0725

BD0725'DESCRIBED BY COAST AND GEODETIC SURVEY 1958

BD0725'11 MI W FROM LIVE OAK.

BD0725'11.05 MILES WEST ALONG THE SEABOARD AIR LINE RAILROAD FROM THE

BD0725'STATION AT LIVE OAK, 0.25 MILE SOUTHEAST OF MILEPOST 727, 76.5

BD0725'FT. SOUTHEAST OF TELEPHONE POLE 416, 69 FT. NORTHWEST OF TELEPHONE

BD0725'POLE 415, 116 FT. SOUTHWEST OF THE SOUTHWEST RAIL, 32.5 FT.

BD0725'NORTHEAST OF THE CENTERLINE OF U.S. HIGHWAY 90, 2.5 FT. BELOW

BD0725'THE LEVEL OF THE HIGHWAY, SET IN THE TOP OF THE CENTER OF THE

BD0725'NORTHEAST HEADWALL OF A CONCRETE CULVERT UNDER THE HIGHWAY.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0078 *****

BD0078 DESIGNATION - D 334

BD0078 PID - BD0078

BD0078 STATE/COUNTY- FL/MADISON

BD0078 USGS QUAD - HAMBURG (1993)

BD0078

BD0078 *CURRENT SURVEY CONTROL

BD0078

BD0078*	NAD 83(1986)-	30 32 51.	(N)	083 34 04.	(W)	SCALED
BD0078*	NAVD 88	-	29.688	(meters)	97.40	(feet) ADJUSTED

BD0078

BD0078	GEOID HEIGHT-	-27.84	(meters)			GEOID09
BD0078	DYNAMIC HT -	29.650	(meters)	97.28	(feet)	COMP
BD0078	MODELED GRAV-	979,346.9	(mgal)			NAVD 88

BD0078

BD0078 VERT ORDER - FIRST CLASS I

BD0078

BD0078.The horizontal coordinates were scaled from a topographic map and have

BD0078.an estimated accuracy of +/- 6 seconds.

BD0078.

BD0078.The orthometric height was determined by differential leveling and

BD0078.adjusted in June 1991.

BD0078

BD0078.The geoid height was determined by GEOID09.

BD0078

BD0078.The dynamic height is computed by dividing the NAVD 88

BD0078.geopotential number by the normal gravity value computed on the

BD0078.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0078.degrees latitude (g = 980.6199 gals.).

BD0078

BD0078.The modeled gravity was interpolated from observed gravity values.

BD0078

BD0078;		North	East	Units	Estimated Accuracy
BD0078;SPC FL N	-	171,900.	689,450.	MT	(+/- 180 meters Scaled)

BD0078

BD0078 SUPERSEDED SURVEY CONTROL

BD0078

BD0078.No superseded survey control is available for this station.

BD0078

BD0078_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP536822(NAD 83)

BD0078

BD0078_MARKER: DB = BENCH MARK DISK

BD0078_SETTING: 46 = COPPER-CLAD STEEL ROD W/O SLEEVE (10 FT.+)

BD0078_SP_SET: 46 FEET

BD0078_STAMPING: D 334 1975

BD0078_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD0078

BD0078	HISTORY	- Date	Condition	Report By
BD0078	HISTORY	- 1975	MONUMENTED	NGS

BD0078

BD0078 STATION DESCRIPTION

BD0078

BD0078'DESCRIBED BY NATIONAL GEODETIC SURVEY 1975

BD0078'5.6 MI N FROM GREENVILLE.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0078'5.65 MILES NORTH ALONG STATE HWY. S-150 FROM ITS JUNCTION WITH
BD0078'U.S. HWY. 90, 46.7 FT. WEST OF CENTERLINE OF STATE HWY. S-150,
BD0078'77.0 FT. SOUTHEAST OF SOUTHEAST CORNER OF ST. JOHNS MISSIONARY
BD0078'CHURCH, 38.7 FT. SOUTH OF SOUTH DRIVE TO THE CHURCH, 1.4 FT
BD0078'NORTH OF POWER POLE, 3.5 FT. SOUTH OF A WOODEN WITNESS POST,
BD0078'AND ABOUT LEVEL WITH STATE HIGHWAYS-150, DISK ON TOP OF A COPPER
BD0078'COATED STEEL ROD DRIVEN TO A DEPTH OF 46 FT. DISK 1 IN. BELOW
BD0078'GROUND, PIPE IS CONCRETE FLUSH. SECTION 30, T 2N, R 8E



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

DM5948 *****

DM5948 DESIGNATION - D 714

DM5948 PID - DM5948

DM5948 STATE/COUNTY- FL/BAKER

DM5948 USGS QUAD - MANNING (1970)

DM5948

DM5948 *CURRENT SURVEY CONTROL

DM5948

DM5948*	NAD 83(1986)-	30 09 04.4	(N)	082 12 16.4	(W)	HD_HELD2
DM5948*	NAVD 88	- 42.765	(meters)	140.30	(feet)	ADJUSTED

DM5948

DM5948	GEOID HEIGHT-	-28.21	(meters)			GEOID09
DM5948	DYNAMIC HT -	42.709	(meters)	140.12	(feet)	COMP
DM5948	MODELED GRAV-	979,320.0	(mgal)			NAVD 88

DM5948

DM5948 VERT ORDER - SECOND CLASS I

DM5948

DM5948.The horizontal coordinates were established by autonomous hand held GPS

DM5948.observations and have an estimated accuracy of +/- 10 meters.

DM5948.

DM5948.The orthometric height was determined by differential leveling and

DM5948.adjusted in March 2011.

DM5948

DM5948.The geoid height was determined by GEOID09.

DM5948

DM5948.The dynamic height is computed by dividing the NAVD 88

DM5948.geopotential number by the normal gravity value computed on the

DM5948.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

DM5948.degrees latitude (g = 980.6199 gals.).

DM5948

DM5948.The modeled gravity was interpolated from observed gravity values.

DM5948

DM5948;		North	East	Units	Estimated Accuracy
DM5948;SPC FL N	-	129,836.	821,116.	MT	(+/- 10 meters HH2 GPS)

DM5948

DM5948 SUPERSEDED SURVEY CONTROL

DM5948

DM5948.No superseded survey control is available for this station.

DM5948

DM5948_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP8399536154(NAD 83)

DM5948

DM5948_MARKER: DD = SURVEY DISK

DM5948_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

DM5948_STAMPING: D 714 2009

DM5948_MARK LOGO: FLDEP

DM5948_PROJECTION: RECESSED 5 CENTIMETERS

DM5948_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

DM5948_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

DM5948+STABILITY: SURFACE MOTION

DM5948_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DM5948+SATELLITE: SATELLITE OBSERVATIONS - January 06, 2009

DM5948

DM5948	HISTORY	- Date	Condition	Report By
DM5948	HISTORY	- 20090106	MONUMENTED	FLDEP



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



DM5948

DM5948

STATION DESCRIPTION

DM5948

DM5948'DESCRIBED BY FL DEPT OF ENV PRO 2009

DM5948'THE MARK IS ABOUT 8.1 MI (13.0 KM) SOUTH-SOUTHEAST OF SANDERSON, 6.3

DM5948'MI (10.2 KM) NORTH-NORTHEAST OF RAIFORD, 2.4 MI (3.9 KM) SOUTHWEST OF

DM5948'MANNING, IN SECTION 16, TOWNSHIP 4 SOUTH, RANGE 21 EAST.

DM5948'

DM5948'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 10 (EXIT

DM5948'335) AND STATE HIGHWAY 121 NEAR MACCLENNY, GO SOUTH ON STATE HIGHWAY

DM5948'121 FOR 8.95 MI (14.4 KM) TO THE JUNCTION OF SAPP ROAD ON THE RIGHT,

DM5948'TURN RIGHT ON SAPP ROAD AND GO WESTERLY FOR 1.15 MI (1.9 KM) TO THE

DM5948'JUNCTION OF A DIM TRACK DIRT ROAD ON THE RIGHT AND THE MARK ON THE

DM5948'RIGHT, SET IN THE TOP OF A ROUND CONCRETE MONUMENT RECESSED 0.2 FT

DM5948'(0.1 M) BELOW THE LEVEL OF THE GROUND AND ABOUT 1.0 FT (0.3 M) ABOVE

DM5948'THE LEVEL OF SAPP ROAD.

DM5948'

DM5948'LOCATED 99.1 FT (30.2 M) SOUTHWEST OF AN OLD STEEL PIPE GATE THAT IS

DM5948'115.4 FT (35.2 M) NORTH OF THE APPROXIMATE CENTERLINE OF SAPP ROAD,

DM5948'32.5 FT (9.9 M) WEST OF THE APPROXIMATE CENTERLINE OF THE DIM TRACK

DM5948'ROAD LEADING NORTH-NORTHWEST (ON THE WEST SIDE OF A STEEL PIPE GATE),

DM5948'23.2 FT (7.1 M) NORTH OF THE APPROXIMATE CENTERLINE OF SAPP ROAD AND

DM5948'1.1 FT (0.3 M) SOUTH OF A CARSONITE WITNESS POST.

DM5948'

DM5948'NOTE A MAGNET WAS EMBEDDED IN THE GROUND ON THE SOUTH SIDE OF THE

DM5948'MONUMENT.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0041 *****

BD0041 DESIGNATION - DRIFTON 2 RM A

BD0041 PID - BD0041

BD0041 STATE/COUNTY- FL/JEFFERSON

BD0041 USGS QUAD - LAKE MICCOSUKEE (1993)

BD0041

BD0041 *CURRENT SURVEY CONTROL

BD0041

BD0041*	NAD 83(2007)	-	30	30	42.57651(N)	083	52	35.06449(W)	ADJUSTED
BD0041*	NAVD 88	-			68.546 (meters)			224.89 (feet)	ADJUSTED

BD0041

BD0041	EPOCH DATE	-	2002.00						
BD0041	X	-	586,672.623 (meters)						COMP
BD0041	Y	-	-5,468,322.273 (meters)						COMP
BD0041	Z	-	3,219,404.935 (meters)						COMP
BD0041	LAPLACE CORR-		0.07 (seconds)						DEFLEC09
BD0041	ELLIP HEIGHT-		40.867 (meters)				(02/10/07)		ADJUSTED
BD0041	GEOID HEIGHT-		-27.68 (meters)						GEOID09
BD0041	DYNAMIC HT	-	68.457 (meters)				224.60 (feet)		COMP

BD0041

BD0041 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD0041	Type	PID	Designation	North	East	Ellip
BD0041	NETWORK	BD0041	DRIFTON 2 RM A	0.84	0.63	1.49

BD0041

BD0041	MODELED GRAV-	979,344.9 (mgal)				NAVD 88
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BD0041

BD0041 VERT ORDER - SECOND CLASS I

BD0041

BD0041.The horizontal coordinates were established by GPS observations

BD0041.and adjusted by the National Geodetic Survey in February 2007.

BD0041

BD0041.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD0041.See [National Readjustment](#) for more information.

BD0041

BD0041.The horizontal coordinates are valid at the epoch date displayed above

BD0041.which is a decimal equivalence of Year/Month/Day.

BD0041

BD0041.The orthometric height was determined by differential leveling and

BD0041.adjusted in July 2004.

BD0041

BD0041.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD0041

BD0041.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0041

BD0041.The ellipsoidal height was determined by GPS observations

BD0041.and is referenced to NAD 83.

BD0041

BD0041.The geoid height was determined by GEOID09.

BD0041

BD0041.The dynamic height is computed by dividing the NAVD 88

BD0041.geopotential number by the normal gravity value computed on the

BD0041.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0041.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0041

BD0041.The modeled gravity was interpolated from observed gravity values.

BD0041

BD0041;

	North	East	Units	Scale Factor	Converg.
BD0041;SPC FL N	- 167,747.691	659,854.727	MT	0.99996645	+0 18 48.1
BD0041;SPC FL N	- 550,352.22	2,164,873.38	sFT	0.99996645	+0 18 48.1
BD0041;UTM 17	- 3,379,021.998	223,955.302	MT	1.00054015	-1 27 40.8

BD0041

BD0041!	- Elev Factor	x	Scale Factor	=	Combined Factor
BD0041!SPC FL N	- 0.99999358	x	0.99996645	=	0.99996003
BD0041!UTM 17	- 0.99999358	x	1.00054015	=	1.00053373

BD0041

BD0041:

	Primary Azimuth Mark	Grid Az
BD0041:SPC FL N	- HIGH	078 04 56.9
BD0041:UTM 17	- HIGH	079 51 25.8

BD0041

BD0041|-----|

PID	Reference Object	Distance	Geod. Az
			dddmmss.s
BD0041 BD2523	MONTICELLO SE CO MICROWAVE	APPROX. 3.6 KM	0072159.5
BD0041 BD2515	MONTICELLO JEFFERSON CTHSE CUP	APPROX. 3.7 KM	0091350.4
BD0041 BD2521	MONTICELLO MUNICIPAL TANK	APPROX. 4.1 KM	0095023.6
BD0041 BD2522	MONTICELLO ATT MICROWAVE MAST	APPROX. 4.0 KM	0114124.1
BD0041 BD2520	MONTICELLO FLA PWR MICROWAVE	APPROX. 4.5 KM	0260621.3
BD0041 BD2519	HIGH	APPROX. 8.4 KM	0782345.0
BD0041 BD0043	DRIFTON 2	64.490 METERS	19343
BD0041 BD2524	MONTICELLO JEFFERSON CTY LOT	49.956 METERS	20005

BD0041|-----|

BD0041

BD0041

SUPERSEDED SURVEY CONTROL

BD0041

BD0041	NAD 83(1999)-	30 30 42.57663(N)	083 52 35.06491(W)	AD(	) 1
BD0041	ELLIP H (05/31/01)	40.851 (m)		GP(	) 4 1
BD0041	NAD 83(1990)-	30 30 42.57642(N)	083 52 35.06417(W)	AD(	) 1
BD0041	ELLIP H (07/26/00)	40.833 (m)		GP(	) 3 2
BD0041	NAD 83(1990)-	30 30 42.57642(N)	083 52 35.06417(W)	AD(	) 1
BD0041	NAD 83(1986)-	30 30 42.58424(N)	083 52 35.06838(W)	AD(	) 1
BD0041	NAD 27	- 30 30 41.85363(N)	083 52 35.48153(W)	AD(	) 1
BD0041	NAVD 88 (07/26/00)	68.55 (m)	224.9 (f)	LEVELING	3
BD0041	NAVD 88 (06/15/91)	68.550 (m)	224.90 (f)	UNKNOWN	2 2
BD0041	NGVD 29 (??/??/92)	68.76 (m)	225.6 (f)	COMPUTED	2 2

BD0041

BD0041.Superseded values are not recommended for survey control.

BD0041.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0041.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0041

BD0041_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP2395579021(NAD 83)

BD0041

BD0041_MARKER: DR = REFERENCE MARK DISK

BD0041_SETTING: 30 = SET IN A LIGHT STRUCTURE

BD0041_SP_SET: CONCRETE MONUMENT

BD0041_STAMPING: DRIFTON 2 RMA 1964

BD0041_MARK LOGO: NGS

BD0041_MAGNETIC: N = NO MAGNETIC MATERIAL

BD0041_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0041_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD0041+SATELLITE: SATELLITE OBSERVATIONS - September 14, 2010

BD0041

BD0041	HISTORY	- Date	Condition	Report By
BD0041	HISTORY	- 1964	MONUMENTED	CGS
BD0041	HISTORY	- 1971	GOOD	NGS
BD0041	HISTORY	- 1971	GOOD	NGS
BD0041	HISTORY	- 1974	GOOD	NGS
BD0041	HISTORY	- 1974	GOOD	FLDT
BD0041	HISTORY	- 19930123	GOOD	FLDNR
BD0041	HISTORY	- 19990115	GOOD	DCJOHN
BD0041	HISTORY	- 20100914	GOOD	SESMC

BD0041

BD0041 STATION DESCRIPTION

BD0041

BD0041'DESCRIBED BY COAST AND GEODETIC SURVEY 1964 (CKT)

BD0041'STATION IS ON THE RIGHT-OF-WAY OF U.S. HIGHWAY 19 AND NEAR THE

BD0041'SAME LOCATION AS TRIANGULATION STATION DRIFTON 2.

BD0041'

BD0041'STATION IS MARKED BY A STANDARD TRIANGULATION STATION DISK

BD0041'CEMENTED IN THE TOP OF A 12X12 INCH CONCRETE MONUMENT, THAT PROJECTS

BD0041'1 INCH ABOVE THE SURFACE OF THE GROUND. THE DISK IS STAMPED

BD0041'DRIFTON 2 RM A 1964. IT IS 150 FEET NORTH OF THE NORTHEAST LEG

BD0041'OF FOREST SERVICE LOOKOUT TOWER, 111-1/2 FEET NORTH-NORTHEAST OF

BD0041'THE STEP OF THE FOREST RANGERS OFFICE, 75 FEET NORTH OF THE

BD0041'APPROXIMATE CENTER OF SURFACE DRIVE AND 48-1/2 FEET WEST OF THE

BD0041'CENTERLINE OF SOUTHBOUND LANE OF U.S. HIGHWAY 19.

BD0041'

BD0041'OBSERVATIONS WERE TAKEN FROM A 77 FOOT STEEL TOWER.

BD0041'

BD0041'A TRAVERSE CONNECTION WAS MADE TO TRIANGULATION STATION DRIFTON 2

BD0041'A DISTANCE OF 211.56 FEET OR 64.485 METERS.

BD0041

BD0041 STATION RECOVERY (1971)

BD0041

BD0041'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1971 (CAA)

BD0041'THE STATION MARK WAS RECOVERED IN GOOD CONDITION. THE 1964

BD0041'DESCRIPTION IS ADEQUATE.

BD0041'

BD0041'THE STATION WAS NOT OCCUPIED THIS DATE.

BD0041'

BD0041'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN

BD0041'2.3 MILES SOUTH OF MONTICELLO, FLORIDA.

BD0041

BD0041 STATION RECOVERY (1971)

BD0041

BD0041'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1971

BD0041'STATION RECOVERED IN GOOD CONDITION.

BD0041'

BD0041'1971 RECONNAISSANCE DESCRIPTION ADEQUATE.

BD0041

BD0041 STATION RECOVERY (1974)

BD0041

BD0041'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1974 (CBM)

BD0041'PREVIOUS DESCRIPTION BY H.C. HOWES IN 1964 IS ADEQUATE.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0041

BD0041

STATION RECOVERY (1974)

BD0041

BD0041'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1974

BD0041'2.4 MI S FROM MONTICELLO.

BD0041'FROM THE JEFFERSON COUNTY COURTHOUSE IN MONTICELLO, PROCEED

BD0041'SOUTH ON U.S. ROUTE 19 FOR ABOUT 2.4 MILES AND REFERENCE MARK,

BD0041'WHICH IS SET IN THE TOP OF A 12 X 12 INCH CONCRETE MONUMENT

BD0041'THAT IS 1 INCH ABOVE THE GROUND. IT IS 48.5 FEET WEST OF CENTER

BD0041'OF U.S. ROUTE 19 SOUTHBOUND LANE, 75.0 FEET NORTH OF THE

BD0041'APPROXIMATE CENTER OF THE SURFACE DRIVE, 111.5 FEET

BD0041'NORTH-NORTHEAST OF THE STEP TO THE FOREST RANGERS OFFICE AND

BD0041'150.0 FEET NORTH OF THE NORTHEAST LEG OF THE FOREST SERVICE

BD0041'LOOKOUT TOWER. SECTION 1, T1N, R4E.

BD0041

BD0041

STATION RECOVERY (1993)

BD0041

BD0041'RECOVERY NOTE BY FL DEPT OF NAT RES 1993 (PBM)

BD0041'THE MARK IS LOCATED ABOUT 29 MI (46.7 KM) EAST-NORTHEAST OF

BD0041'TALLAHASSEE, 2.4 MI (3.9 KM) SOUTH OF MONTICELLO ON THE WEST SIDE OF

BD0041'U.S. HIGHWAY 19, IN SECTION 1, TOWNSHIP 2 NORTH, RANGE 4 EAST. TO

BD0041'REACH THE MARK FROM THE COURTHOUSE AT THE INTERSECTION OF U.S. HIGHWAY

BD0041'90 AND U.S. HIGHWAY 19 IN MONTICELLO, GO SOUTH ON U.S. HIGHWAY 19 FOR

BD0041'2.4 MI (3.9 KM) TO THE REFERENCE MARK ON THE RIGHT. LOCATED 150.0 FT

BD0041'(45.7 M) NORTH OF THE NORTHEAST LEG OF THE FOREST SERVICE LOOKOUT

BD0041'TOWER, 111.5 FT (34.0 M) NORTH-NORTHEAST OF THE STEP TO THE FOREST

BD0041'RANGERS OFFICE, 75.0 FT (22.9 M) NORTH OF THE APPROXIMATE CENTER OF

BD0041'THE DRIVEWAY, 48.5 FT (14.8 M) WEST OF THE CENTERLINE OF U.S. HIGHWAY

BD0041'19 SOUTHBOUND LANE, 1.0 FT (0.3 M) EAST OF A CARSONITE WITNESS POST,

BD0041'THE MARK IS SET IN THE TOP OF A CONCRETE MONUMENT THAT PROJECTS 0.1 FT

BD0041'(3.0 CM) ABOVE THE GROUND.

BD0041

BD0041

STATION RECOVERY (1999)

BD0041

BD0041'RECOVERY NOTE BY DC JOHNSON ASSOC 1999 (DS)

BD0041'RECOVERED AS DESCRIBED (AG) .

BD0041

BD0041

STATION RECOVERY (2010)

BD0041

BD0041'RECOVERY NOTE BY SOUTHEASTERN SURVEY AND MAPPIN 2010 (SFS)

BD0041'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012
BD2300 *****
BD2300 DESIGNATION - E 369
BD2300 PID - BD2300
BD2300 STATE/COUNTY- FL/SUWANNEE
BD2300 USGS QUAD - LIVE OAK WEST (1993)
BD2300
BD2300 *CURRENT SURVEY CONTROL
BD2300
BD2300* NAD 83(1986)- 30 15 38. (N) 083 01 49. (W) SCALED
BD2300* NAVD 88 - 31.062 (meters) 101.91 (feet) ADJUSTED
BD2300
BD2300 GEOID HEIGHT- -28.01 (meters) GEOID09
BD2300 DYNAMIC HT - 31.021 (meters) 101.77 (feet) COMP
BD2300 MODELED GRAV- 979,330.3 (mgal) NAVD 88
BD2300
BD2300 VERT ORDER - FIRST CLASS II
BD2300
BD2300.The horizontal coordinates were scaled from a topographic map and have
BD2300.an estimated accuracy of +/- 6 seconds.
BD2300.
BD2300.The orthometric height was determined by differential leveling and
BD2300.adjusted in June 1991.
BD2300
BD2300.The geoid height was determined by GEOID09.
BD2300
BD2300.The dynamic height is computed by dividing the NAVD 88
BD2300.geopotential number by the normal gravity value computed on the
BD2300.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BD2300.degrees latitude (g = 980.6199 gals.).
BD2300
BD2300.The modeled gravity was interpolated from observed gravity values.
BD2300
BD2300;
BD2300;SPC FL N - North East Units Estimated Accuracy
BD2300; 140,640. 741,430. MT (+/- 180 meters Scaled)
BD2300
BD2300 SUPERSEDED SURVEY CONTROL
BD2300
BD2300.No superseded survey control is available for this station.
BD2300
BD2300_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP046494 (NAD 83)
BD2300
BD2300_MARKER: DB = BENCH MARK DISK
BD2300_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
BD2300_SP_SET: STAINLESS STEEL ROD
BD2300_STAMPING: E 369 1979
BD2300_PROJECTION: RECESSED 10 CENTIMETERS
BD2300_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
BD2300_ROD/PIPE-DEPTH: 4.88 meters
BD2300
BD2300 HISTORY - Date Condition Report By
BD2300 HISTORY - 1979 MONUMENTED NGS
BD2300
BD2300 STATION DESCRIPTION
BD2300



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2300'DESCRIBED BY NATIONAL GEODETIC SURVEY 1979
BD2300'3.4 MI SOUTH FROM LIVE OAK.
BD2300'3.4 MILES SOUTH ALONG STATE HIGHWAY 51 FROM THE JUNCTION OF STATE
BD2300'HIGHWAYS 51 AND 129 IN LIVE OAK TO THE MARK ON THE LEFT, AT A Y
BD2300'JUNCTION, 95 FEET SOUTHEAST OF THE CENTER OF THE Y-JUNCTION, 45 FEET
BD2300'EAST OF CENTERLINE OF HIGHWAY, 17 FEET SOUTHWEST OF CENTER OF DIRT
BD2300'ROAD, 2 FEET SOUTH OF POWER POLE WITH STEPS.
BD2300'THE MARK IS 2 FT S FROM A WITNESS POST.
BD2300'THE MARK IS ABOVE LEVEL WITH HIGHWAY.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

DI8476 *****

DI8476 DESIGNATION - E 621

DI8476 PID - DI8476

DI8476 STATE/COUNTY- FL/CLAY

DI8476 USGS QUAD - STARKE (1991)

DI8476

DI8476 *CURRENT SURVEY CONTROL

DI8476

DI8476*	NAD 83(1986)-	29 59 31.	(N)	082 01 28.	(W)	SCALED
DI8476*	NAVD 88	-	71.596	(meters)	234.89	(feet) ADJUSTED

DI8476

DI8476	GEOID HEIGHT-	-27.96	(meters)			GEOID09
DI8476	DYNAMIC HT -	71.502	(meters)	234.59	(feet)	COMP
DI8476	MODELED GRAV-	979,325.6	(mgal)			NAVD 88

DI8476

DI8476 VERT ORDER - FIRST CLASS II

DI8476

DI8476.The horizontal coordinates were scaled from a topographic map and have

DI8476.an estimated accuracy of +/- 6 seconds.

DI8476.

DI8476.The orthometric height was determined by differential leveling and

DI8476.adjusted in January 2008.

DI8476

DI8476.The geoid height was determined by GEOID09.

DI8476

DI8476.The dynamic height is computed by dividing the NAVD 88

DI8476.geopotential number by the normal gravity value computed on the

DI8476.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

DI8476.degrees latitude (g = 980.6199 gals.).

DI8476

DI8476.The modeled gravity was interpolated from observed gravity values.

DI8476

DI8476;		North	East	Units	Estimated Accuracy
DI8476;SPC FL E	-	627,420.	101,150.	MT	(+/- 180 meters Scaled)

DI8476

DI8476 SUPERSEDED SURVEY CONTROL

DI8476

DI8476.No superseded survey control is available for this station.

DI8476

DI8476_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMP011183(NAD 83)

DI8476

DI8476_MARKER: DD = SURVEY DISK

DI8476_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

DI8476_STAMPING: E 621 2005

DI8476_MARK LOGO: FLDEP

DI8476_PROJECTION: FLUSH

DI8476_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

DI8476_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

DI8476+STABILITY: SURFACE MOTION

DI8476_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DI8476+SATELLITE: SATELLITE OBSERVATIONS - January 22, 2005

DI8476

DI8476	HISTORY	- Date	Condition	Report By
DI8476	HISTORY	- 20050122	MONUMENTED	FLDEP



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



DI8476

DI8476

STATION DESCRIPTION

DI8476

DI8476'DESCRIBED BY FL DEPT OF ENV PRO 2005 (JLM)

DI8476'THE MARK IS ABOUT 5.4 MI SOUTHEAST OF LAWTEY, IN SECTION 8, TOWNSHIP 6

DI8476'SOUTH, RANGE 23 EAST.

DI8476'

DI8476'TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 301 AND COUNTY

DI8476'ROAD 225 (LAKE STREET) IN LAWTEY, GO SOUTHEAST ON COUNTY ROAD 225

DI8476'(LAKE STREET) FOR 5.4 MI TO THE MARK ON THE RIGHT, SET IN THE TOP OF

DI8476'A ROUND CONCRETE MONUMENT FLUSH WITH THE GROUND AND ABOUT 1.0 FT

DI8476'BELOW THE LEVEL OF COUNTY ROAD 225.

DI8476'

DI8476'LOCATED 46.8 FT SOUTHWEST OF THE CENTERLINE OF COUNTY ROAD 225, 33.3

DI8476'FT NORTHWEST OF A CABLE BOX, 19.3 FT SOUTHEAST OF A RIGHT-OF-WAY

DI8476'MARKER, 14.0 FT NORTHEAST OF AN OLD FENCE AND 4.0 FT NORTHEAST OF A

DI8476'CARSONITE WITNESS POST.

DI8476'

DI8476'NOTE A MAGNET WAS IMBEDDED IN THE GROUND ON THE SOUTH SIDE OF THE

DI8476'MARK.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2705 *****

BD2705 FBN - This is a Federal Base Network Control Station.

BD2705 DESIGNATION - FLGPS 17

BD2705 PID - BD2705

BD2705 STATE/COUNTY- FL/MADISON

BD2705 USGS QUAD - SHADY GROVE (1993)

BD2705

BD2705 *CURRENT SURVEY CONTROL

BD2705

BD2705*	NAD 83(2007)-	30 21	20.22696(N)	083 39	11.05857(W)	ADJUSTED
BD2705*	NAVD 88	-	28.502 (meters)		93.51 (feet)	ADJUSTED

BD2705

BD2705	EPOCH DATE	-	2002.00			
BD2705	X	-	608,949.163 (meters)			COMP
BD2705	Y	-	-5,474,677.807 (meters)			COMP
BD2705	Z	-	3,204,453.470 (meters)			COMP
BD2705	LAPLACE CORR-		-0.60 (seconds)			DEFLEC09
BD2705	ELLIP HEIGHT-		0.885 (meters)		(02/10/07)	ADJUSTED
BD2705	GEOID HEIGHT-		-27.62 (meters)			GEOID09
BD2705	DYNAMIC HT	-	28.465 (meters)		93.39 (feet)	COMP

BD2705

BD2705 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2705	Type	PID	Designation	North	East	Ellip
BD2705	-----					
BD2705	NETWORK	BD2705	FLGPS 17	0.31	0.29	0.96
BD2705	-----					

BD2705

BD2705	MODELED GRAV-	979,351.4 (mgal)				NAVD 88
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BD2705

BD2705 VERT ORDER - SECOND CLASS I

BD2705

BD2705.The horizontal coordinates were established by GPS observations

BD2705.and adjusted by the National Geodetic Survey in February 2007.

BD2705

BD2705.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2705.See [National Readjustment](#) for more information.

BD2705

BD2705.The horizontal coordinates are valid at the epoch date displayed above

BD2705.which is a decimal equivalence of Year/Month/Day.

BD2705

BD2705.The orthometric height was determined by differential leveling and

BD2705.adjusted in May 2001.

BD2705

BD2705.No vertical observational check was made to the station.

BD2705

BD2705.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2705

BD2705.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2705

BD2705.The ellipsoidal height was determined by GPS observations

BD2705.and is referenced to NAD 83.

BD2705

BD2705.The geoid height was determined by GEOID09.

BD2705

BD2705.The dynamic height is computed by dividing the NAVD 88



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2705.geopotential number by the normal gravity value computed on the
BD2705.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BD2705.degrees latitude (g = 980.6199 gals.).

BD2705

BD2705.The modeled gravity was interpolated from observed gravity values.

BD2705

BD2705;		North	East	Units	Scale Factor	Converg.
BD2705;SPC FL N	-	150,569.900	681,419.512	MT	0.99995381	+0 25 32.2
BD2705;SPC FL N	-	493,994.75	2,235,623.85	sFT	0.99995381	+0 25 32.2
BD2705;UTM 17	-	3,361,176.915	244,989.708	MT	1.00040234	-1 20 29.4

BD2705

BD2705! - Elev Factor x Scale Factor = Combined Factor

BD2705!SPC FL N - 0.99999986 x 0.99995381 = 0.99995367

BD2705!UTM 17 - 0.99999986 x 1.00040234 = 1.00040220

BD2705

BD2705:	Primary Azimuth Mark	Grid Az
BD2705:SPC FL N	- FLGPS 17 AZ MK	157 32 56.3
BD2705:UTM 17	- FLGPS 17 AZ MK	159 18 57.9

BD2705

BD2705	PID	Reference Object	Distance	Geod. Az
BD2705				ddmmss.s
BD2705	BD2716	FLGPS 17 AZ MK	APPROX. 1.5 KM	1575828.5

BD2705

BD2705

BD2705

SUPERSEDED SURVEY CONTROL

BD2705	NAD 83(1999)-	30 21 20.22729(N)	083 39 11.05864(W)	AD()	A
BD2705	ELLIP H (04/12/01)	0.898 (m)		GP()	4 1
BD2705	NAD 83(1990)-	30 21 20.22677(N)	083 39 11.05838(W)	AD()	B
BD2705	ELLIP H (09/13/90)	1.003 (m)		GP()	4 1
BD2705	NAVD 88 (02/28/94)	28.5 (m)	94. (f)	GPS OBS	
BD2705	NGVD 29 (09/13/90)	28.9 (m)	95. (f)	GPS OBS	

BD2705

BD2705.Superseded values are not recommended for survey control.

BD2705.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2705.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2705

BD2705_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP4498961176(NAD 83)

BD2705

BD2705_MARKER: F = FLANGE-ENCASED ROD

BD2705_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

BD2705_SP SET: STAINLESS STEEL ROD IN SLEEVE

BD2705_STAMPING: FLGPS 17 1988

BD2705_MARK LOGO: NGS

BD2705_PROJECTION: FLUSH

BD2705_MAGNETIC: N = NO MAGNETIC MATERIAL

BD2705_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD

BD2705+STABILITY: POSITION/ELEVATION WELL

BD2705_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD2705+SATELLITE: SATELLITE OBSERVATIONS - April 05, 1999

BD2705_ROD/PIPE-DEPTH: 12.4 meters

BD2705_SLEEVE-DEPTH : 0.91 meters

BD2705

BD2705 HISTORY - Date Condition Report By



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2705	HISTORY	- 1988	MONUMENTED	NGS
BD2705	HISTORY	- 19890330	GOOD	
BD2705	HISTORY	- 19890501	GOOD	
BD2705	HISTORY	- 19921112	GOOD	FLDT
BD2705	HISTORY	- 19930624	GOOD	FLDNR
BD2705	HISTORY	- 19951126	GOOD	NGS
BD2705	HISTORY	- 19990115	GOOD	DCJOHN
BD2705	HISTORY	- 19990405	GOOD	FLDT

BD2705

BD2705 STATION DESCRIPTION

BD2705

BD2705'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

BD2705'THE STATION IS LOCATED ABOUT 30.42 KM (18.90 MI) SOUTHEAST OF
BD2705'MONTICELLO, 26.07 KM (16.20 MI) SOUTHWEST OF MADISON, IN THE TOWN OF
BD2705'SIRMANS, NEAR THE RESIDENCE OF MR. FENLEY TERRELL, RT. 1 BOX 259,
BD2705'GREENVILLE FL 32331, PHONE 904-948-2037. OWNERSHIP--HIGHWAY
BD2705'RIGHT-OF-WAY.

BD2705'TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 221 AND
BD2705'INTERSTATE HIGHWAY 10, ABOUT 3.22 KM (2.00 MI) SOUTH OF GREENVILLE, GO
BD2705'SOUTH FOR 10.06 KM (6.25 MI) ON HIGHWAY 221 TO THE INTERSECTION OF
BD2705'COUNTY ROAD 360 AND THE STATION ON LEFT.

BD2705'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 12.92 M
BD2705'(42.4 FT) SOUTHEAST FROM THE POINT OF INTERSECTION OF HIGHWAY 221 AND
BD2705'COUNTY ROAD 360, 12.04 M (39.5 FT) SOUTH-SOUTHEAST FROM THE
BD2705'APPROXIMATE CENTER OF COUNTY ROAD 360, 7.99 M (26.2 FT) NORTHEAST FROM
BD2705'THE APPROXIMATE CENTER OF HIGHWAY 221, 7.68 M (25.2 FT) NORTHWEST FROM
BD2705'A UTILITY POLE AND 7.41 M (24.3 FT) NORTH-NORTHWEST FROM A CARSONITE
BD2705'WITNESS POST. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH
BD2705'LOGO CAP.

BD2705'DESCRIBED BY R.L. MALLOY.

BD2705

BD2705 STATION RECOVERY (1989)

BD2705

BD2705'RECOVERED 1989

BD2705'RECOVERED IN GOOD CONDITION.

BD2705

BD2705 STATION RECOVERY (1989)

BD2705

BD2705'RECOVERED 1989

BD2705'RECOVERED IN GOOD CONDITION.

BD2705

BD2705 STATION RECOVERY (1992)

BD2705

BD2705'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1992

BD2705'RECOVERED IN GOOD CONDITION.

BD2705

BD2705 STATION RECOVERY (1993)

BD2705

BD2705'RECOVERY NOTE BY FL DEPT OF NAT RES 1993 (PBM)

BD2705'THE STATION IS ABOUT 18.9 MI (30.4 KM) SOUTHEAST OF MONTICELLO, 16.2
BD2705'MI (26.1 KM) SOUTHWEST OF MADISON, IN SIRMANS IN SECTION 32, T 1 S, R
BD2705'7 E, NEAR THE RESIDENCE OF MR. FENLEY TERRELL, RT. 1 BOX 259,
BD2705'GREENVILLE FL 32331. OWNERSHIP--HIGHWAY RIGHT-OF-WAY. TO REACH THE
BD2705'STATION FROM THE INTERSECTION OF U.S. HIGHWAY 221 AND INTERSTATE
BD2705'HIGHWAY 10, ABOUT 2.0 MI (3.2 KM) SOUTH OF GREENVILLE, GO SOUTH ON



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2705'U.S. HIGHWAY 221 FOR 5.8 MI (9.3 KM) TO THE INTERSECTION OF COUNTY
BD2705'ROAD 360 AND THE STATION ON THE LEFT RECESSED 0.3 FT (9.1 CM) BELOW
BD2705'THE LEVEL OF THE GROUND. LOCATED 42.4 FT (12.9 M) SOUTHEAST OF THE
BD2705'POINT OF INTERSECTION OF HIGHWAY 221 AND COUNTY ROAD 360, 39.5 FT
BD2705'(12.0 M) SOUTH-SOUTHEAST OF THE CENTERLINE OF COUNTY ROAD 360, 26.2 FT
BD2705'(8.0 M) NORTHEAST OF THE CENTERLINE OF U.S. HIGHWAY 221, 25.2 FT (7.7
BD2705'M) NORTHWEST OF A UTILITY POLE AND 24.3 FT (7.4 M) NORTH-NORTHWEST OF
BD2705'A CARSONITE WITNESS POST. NOTE ACCESS TO DATUM POINT IS HAD THROUGH A
BD2705'5-INCH LOGO CAP.

BD2705

STATION RECOVERY (1995)

BD2705

BD2705

BD2705'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)

BD2705'THE STATION IS LOCATED ABOUT 18.9 MI (30.4 KM) SOUTHEAST OF
BD2705'MONTICELLO, 16.2 MI (26.1 KM) SOUTHWEST OF MADISON AND IN THE TOWN OF
BD2705'SIRMANS NEAR THE RESIDENCE OF MR. FENLEY TERRELL. PHONE (904)
BD2705'948-2037. OWNERSHIP -- FLORIDA DEPARTMENT OF TRANSPORTATION,
BD2705'RIGHT-OF-WAY. TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE
BD2705'HIGHWAY 10 AND U.S. HIGHWAY 221, (EXIT 35, ABOUT 2.0 MI (3.2 KM) SOUTH
BD2705'OF GREENVILLE), GO SOUTH ON U.S. HIGHWAY 221 FOR 6.05 MI (9.74 KM) TO
BD2705'A PAVED COUNTY ROAD 360 AND THE STATION ON THE LEFT. THE STATION IS
BD2705'RECESSED 5 CM, 69.2 FT (21.1 M) SOUTHWEST OF A METAL COUNTY ROAD SIGN,
BD2705'39.9 FT (12.2 M) SOUTH-SOUTHEAST OF THE COUNTY ROAD CENTER, 25.7 FT
BD2705'(7.8 M) EAST-NORTHEAST OF THE HIGHWAY CENTER, 24.5 NORTHWEST OF A
BD2705'UTILITY POLE AND 24.2 FT (7.4 M) NORTHWEST OF A WITNESS POST. DRL.

BD2705

STATION RECOVERY (1999)

BD2705

BD2705

BD2705'RECOVERY NOTE BY DC JOHNSON ASSOC 1999 (DS)

BD2705'RECOVERED AS DESCRIBED (AG) .

BD2705

STATION RECOVERY (1999)

BD2705

BD2705

BD2705'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1999

BD2705'RECOVERED AS DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2707 *****

BD2707 CBN - This is a Cooperative Base Network Control Station.

BD2707 DESIGNATION - FLGPS 19

BD2707 PID - BD2707

BD2707 STATE/COUNTY- FL/LAFAYETTE

BD2707 USGS QUAD - DAY (1993)

BD2707

BD2707 *CURRENT SURVEY CONTROL

BD2707

BD2707*	NAD 83(2007)-	30 10 14.08844 (N)	083 17 27.72234 (W)	ADJUSTED
BD2707*	NAVD 88 -	25.357 (meters)	83.19 (feet)	ADJUSTED

BD2707

BD2707	EPOCH DATE -	2002.00		
BD2707	X -	644,737.295 (meters)		COMP
BD2707	Y -	-5,480,984.867 (meters)		COMP
BD2707	Z -	3,186,734.439 (meters)		COMP
BD2707	LAPLACE CORR-	-0.84 (seconds)		DEFLEC09
BD2707	ELLIP HEIGHT-	-2.542 (meters)	(02/10/07)	ADJUSTED
BD2707	GEOID HEIGHT-	-27.91 (meters)		GEOID09
BD2707	DYNAMIC HT -	25.323 (meters)	83.08 (feet)	COMP

BD2707

BD2707 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2707	Type	PID	Designation	North	East	Ellip
BD2707	-----					
BD2707	NETWORK	BD2707	FLGPS 19	0.47	0.47	1.14
BD2707	-----					

BD2707

BD2707	MODELED GRAV-	979,321.9 (mgal)		NAVD 88
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BD2707

BD2707 VERT ORDER - SECOND CLASS I

BD2707

BD2707.The horizontal coordinates were established by GPS observations

BD2707.and adjusted by the National Geodetic Survey in February 2007.

BD2707

BD2707.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2707.See [National Readjustment](#) for more information.

BD2707

BD2707.The horizontal coordinates are valid at the epoch date displayed above

BD2707.which is a decimal equivalence of Year/Month/Day.

BD2707

BD2707.The orthometric height was determined by differential leveling and

BD2707.adjusted in July 2004.

BD2707

BD2707.No vertical observational check was made to the station.

BD2707

BD2707.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2707

BD2707.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2707

BD2707.The ellipsoidal height was determined by GPS observations

BD2707.and is referenced to NAD 83.

BD2707

BD2707.The geoid height was determined by GEOID09.

BD2707

BD2707.The dynamic height is computed by dividing the NAVD 88



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2707.geopotential number by the normal gravity value computed on the
BD2707.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BD2707.degrees latitude (g = 980.6199 gals.).

BD2707

BD2707.The modeled gravity was interpolated from observed gravity values.

BD2707

BD2707; North East Units Scale Factor Converg.

BD2707;SPC FL N - 130,373.075 716,440.434 MT 0.99994843 +0 36 27.1

BD2707;SPC FL N - 427,732.33 2,350,521.66 sFT 0.99994843 +0 36 27.1

BD2707;UTM 17 - 3,339,904.751 279,384.649 MT 1.00020051 -1 09 06.8

BD2707

BD2707! - Elev Factor x Scale Factor = Combined Factor

BD2707!SPC FL N - 1.00000040 x 0.99994843 = 0.99994883

BD2707!UTM 17 - 1.00000040 x 1.00020051 = 1.00020091

BD2707

BD2707: Primary Azimuth Mark

Grid Az

BD2707:SPC FL N - FLGPS 19 AZ MK 358 12 47.5

BD2707:UTM 17 - FLGPS 19 AZ MK 359 58 21.4

BD2707

PID	Reference Object	Distance	Geod. Az dddmmss.s
BD2718	FLGPS 19 AZ MK	APPROX. 1.3 KM	3584914.6

BD2707

BD2707

SUPERSEDED SURVEY CONTROL

BD2707

BD2707 NAD 83(1999) - 30 10 14.08863(N) 083 17 27.72183(W) AD () B

BD2707 ELLIP H (05/31/01) -2.646 (m) GP () 5 1

BD2707 NAD 83(1990) - 30 10 14.08776(N) 083 17 27.72155(W) AD () B

BD2707 ELLIP H (09/13/90) -2.635 (m) GP () 4 1

BD2707 NAVD 88 (10/02/98) 25.36 (m) 83.2 (f) LEVELING 3

BD2707 NAVD 88 (02/28/94) 25.4 (m) 83. (f) GPS OBS

BD2707 NGVD 29 (09/13/90) 25.6 (m) 84. (f) GPS OBS

BD2707

BD2707.Superseded values are not recommended for survey control.

BD2707.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2707.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2707

BD2707 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP7938439904(NAD 83)

BD2707

BD2707 MARKER: DD = SURVEY DISK

BD2707 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

BD2707 SP SET: STAINLESS STEEL ROD IN SLEEVE

BD2707 STAMPING: FLGPS 19 1988

BD2707 MARK LOGO: NGS

BD2707 PROJECTION: FLUSH

BD2707 MAGNETIC: N = NO MAGNETIC MATERIAL

BD2707 STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD2707 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD2707+SATELLITE: SATELLITE OBSERVATIONS - December 08, 2009

BD2707 ROD/PIPE-DEPTH: 7.7 meters

BD2707 SLEEVE-DEPTH : 0.9 meters

BD2707

BD2707 HISTORY - Date Condition Report By



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2707	HISTORY	- 1988	MONUMENTED	NGS
BD2707	HISTORY	- 19890406	GOOD	
BD2707	HISTORY	- 19890503	GOOD	
BD2707	HISTORY	- 19920301	GOOD	NGS
BD2707	HISTORY	- 19921112	GOOD	FLDT
BD2707	HISTORY	- 19971120	GOOD	DCJOHN
BD2707	HISTORY	- 19990115	GOOD	DCJOHN
BD2707	HISTORY	- 20091207	GOOD	INDIV
BD2707	HISTORY	- 20091208	GOOD	INDIV

BD2707

STATION DESCRIPTION

BD2707

BD2707'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

BD2707'THE STATION IS LOCATED ABOUT 37.82 KM (23.50 MI) SOUTHEAST OF MADISON,
BD2707'35.57 KM (22.10 MI) SOUTHWEST OF LIVE OAK, ALONG STATE ROAD 53.

BD2707'OWNERSHIP--STATE ROAD RIGHT-OF-WAY.

BD2707'TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 27 AND

BD2707'STATE ROAD 51 IN MAYO, GO WEST FOR 14.08 KM (8.75 MI) ON HIGHWAY 27 TO
BD2707'THE INTERSECTION OF STATE ROAD 53. TURN RIGHT AND GO NORTH FOR 4.51

BD2707'KM (2.80 MI) ON STATE ROAD 53 TO THE STATION ON RIGHT.

BD2707'THE STATION IS RECESSED 9 CM BELOW GROUND. LOCATED 33.56 M

BD2707'(110.1 FT) SOUTH FROM UTILITY POLE NUMBER G1-02-80-60 WITH TWO

BD2707'TRANSFORMERS, 13.44 M (44.1 FT) EAST FROM THE APPROXIMATE CENTER OF

BD2707'STATE ROAD 53, 3.11 M (10.2 FT) WEST FROM A FENCE LINE AND 1.83 M

BD2707'(6.0 FT) WEST FROM A CARSONITE WITNESS POST. NOTE--ACCESS TO DATUM

BD2707'POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2707'DESCRIBED BY R.L. MALLOY.

BD2707

STATION RECOVERY (1989)

BD2707

BD2707'RECOVERED 1989

BD2707'RECOVERED IN GOOD CONDITION.

BD2707

STATION RECOVERY (1989)

BD2707

BD2707'RECOVERED 1989

BD2707'RECOVERED IN GOOD CONDITION.

BD2707

STATION RECOVERY (1992)

BD2707

BD2707'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992 (RLT)

BD2707'THE STATION IS ABOUT 23.5 MI (37.8 KM) SOUTHEAST OF MADISON, 22.1 MI

BD2707'(35.6 KM) SOUTHWEST OF LIVE OAK ON STATE ROAD 53 IN SECTION 2, T 4 S,

BD2707'R 10 E. OWNERSHIP--STATE RIGHT-OF-WAY. TO REACH THE STATION FROM THE

BD2707'INTERSECTION OF U.S. HIGHWAY 27 AND STATE ROAD 51 IN MAYO, GO WEST ON

BD2707'U.S. HIGHWAY 27 FOR 8.75 MI (14.08 KM) TO THE INTERSECTION OF STATE

BD2707'ROAD 53, TURN RIGHT ON STATE ROAD 53 AND GO NORTH FOR 2.9 MI (4.7 KM)

BD2707'TO THE STATION ON THE RIGHT, RECESSED 9 CM BELOW THE GROUND. ALSO

BD2707'1.65 MI (2.66 KM) SOUTH FROM THE POST OFFICE IN DAY. LOCATED 110.1 FT

BD2707'(33.6 M) SOUTH OF A POWER POLE NUMBER G1-02-80-60 WITH THREE

BD2707'TRANSFORMERS AND A GUY WIRE ATTACHED, 44.1 FT (13.4 M) EAST OF THE

BD2707'CENTERLINE OF STATE ROAD 53, 10.2 FT (3.1 M) WEST OF THE FENCE LINE

BD2707'AND 6.0 FT (1.8 M) WEST OF A CARSONITE WITNESS POST. NOTE ACCESS TO

BD2707'DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2707



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2707 STATION RECOVERY (1992)
BD2707
BD2707'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1992
BD2707'RECOVERED IN GOOD CONDITION.
BD2707
BD2707 STATION RECOVERY (1997)
BD2707
BD2707'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
BD2707'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS
BD2707'RECOVERED AS PREVIOUSLY DESCRIBED.
BD2707
BD2707 STATION RECOVERY (1999)
BD2707
BD2707'RECOVERY NOTE BY DC JOHNSON ASSOC 1999 (DS)
BD2707'RECOVERED AS DESCRIBED (AG) .
BD2707
BD2707 STATION RECOVERY (2009)
BD2707
BD2707'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2009 (JA)
BD2707'RECOVERED IN GOOD CONDITION.
BD2707
BD2707 STATION RECOVERY (2009)
BD2707
BD2707'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2009 (JA)
BD2707'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2708 *****

BD2708 CBN - This is a Cooperative Base Network Control Station.

BD2708 DESIGNATION - FLGPS 21

BD2708 PID - BD2708

BD2708 STATE/COUNTY- FL/HAMILTON

BD2708 USGS QUAD - HILLCOAT (1993)

BD2708

BD2708 *CURRENT SURVEY CONTROL

BD2708

BD2708*	NAD 83(2007) -	30 26 56.82708(N)	082 55 58.99320(W)	ADJUSTED
BD2708*	NAVD 88 -	54.225 (meters)	177.90 (feet)	ADJUSTED

BD2708

BD2708	EPOCH DATE -	2002.00		
BD2708	X -	677,055.157 (meters)		COMP
BD2708	Y -	-5,461,409.144 (meters)		COMP
BD2708	Z -	3,213,406.311 (meters)		COMP
BD2708	LAPLACE CORR-	-0.33 (seconds)		DEFLEC09
BD2708	ELLIP HEIGHT-	26.158 (meters)	(02/10/07)	ADJUSTED
BD2708	GEOID HEIGHT-	-28.07 (meters)		GEOID09
BD2708	DYNAMIC HT -	54.155 (meters)	177.67 (feet)	COMP

BD2708

BD2708 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2708	Type	PID	Designation	North	East	Ellip
BD2708	-----					
BD2708	NETWORK	BD2708	FLGPS 21	0.55	0.45	1.37
BD2708	-----					

BD2708

BD2708	MODELED GRAV-	979,346.1 (mgal)		NAVD 88
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BD2708

BD2708 VERT ORDER - SECOND CLASS I

BD2708

BD2708.The horizontal coordinates were established by GPS observations

BD2708.and adjusted by the National Geodetic Survey in February 2007.

BD2708

BD2708.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2708.See [National Readjustment](#) for more information.

BD2708

BD2708.The horizontal coordinates are valid at the epoch date displayed above

BD2708.which is a decimal equivalence of Year/Month/Day.

BD2708

BD2708.The orthometric height was determined by differential leveling and

BD2708.adjusted in July 2004.

BD2708

BD2708.[Photographs](#) are available for this station.

BD2708

BD2708.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2708

BD2708.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2708

BD2708.The ellipsoidal height was determined by GPS observations

BD2708.and is referenced to NAD 83.

BD2708

BD2708.The geoid height was determined by GEOID09.

BD2708

BD2708.The dynamic height is computed by dividing the NAVD 88



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2708.geopotential number by the normal gravity value computed on the
BD2708.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BD2708.degrees latitude (g = 980.6199 gals.).
BD2708
BD2708.The modeled gravity was interpolated from observed gravity values.

BD2708
BD2708;
BD2708;SPC FL N - North 161,666.544 East 750,492.719 Units MT Scale Factor 0.99996048 Conver. +0 47 14.8
BD2708;SPC FL N - 530,400.99 2,462,241.53 sFT 0.99996048 +0 47 14.8
BD2708;UTM 17 - 3,370,140.164 314,389.419 MT 1.00002502 -0 58 47.6
BD2708
BD2708!
BD2708!SPC FL N - Elev Factor x Scale Factor = Combined Factor
BD2708!SPC FL N - 0.99999589 x 0.99996048 = 0.99995637
BD2708!UTM 17 - 0.99999589 x 1.00002502 = 1.00002091

BD2708

BD2708

SUPERSEDED SURVEY CONTROL

BD2708

BD2708 NAD 83(1999)- 30 26 56.82696(N) 082 55 58.99253(W) AD() B
BD2708 ELLIP H (05/31/01) 26.080 (m) GP() 5 1
BD2708 NAD 83(1990)- 30 26 56.82623(N) 082 55 58.99240(W) AD() B
BD2708 ELLIP H (09/13/90) 26.105 (m) GP() 4 1
BD2708 NAVD 88 (03/20/98) 54.22 (m) 177.9 (f) LEVELING 3
BD2708 NAVD 88 (06/02/94) 54.3 (m) 178. (f) GPS OBS
BD2708 NGVD 29 (09/13/90) 54.5 (m) 179. (f) GPS OBS

BD2708

BD2708.Superseded values are not recommended for survey control.
BD2708.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BD2708.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2708

BD2708_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP1438970140(NAD 83)

BD2708

BD2708_MARKER: F = FLANGE-ENCASED ROD

BD2708_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

BD2708_SP_SET: STAINLESS STEEL ROD IN SLEEVE

BD2708_STAMPING: FLGPS 21 1988

BD2708_MARK LOGO: NGS

BD2708_PROJECTION: FLUSH

BD2708_MAGNETIC: N = NO MAGNETIC MATERIAL

BD2708_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD2708_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD2708+SATELLITE: SATELLITE OBSERVATIONS - November 19, 2008

BD2708_ROD/PIPE-DEPTH: 18.3 meters

BD2708_SLEEVE-DEPTH : 0.9 meters

BD2708

BD2708	HISTORY	- Date	Condition	Report By
BD2708	HISTORY	- 1988	MONUMENTED	NGS
BD2708	HISTORY	- 19890406	GOOD	
BD2708	HISTORY	- 19890512	GOOD	
BD2708	HISTORY	- 19920110	GOOD	FLDNR
BD2708	HISTORY	- 19930403	GOOD	NGS
BD2708	HISTORY	- 19970502	GOOD	DCJOHN
BD2708	HISTORY	- 19971120	GOOD	DCJOHN
BD2708	HISTORY	- 20081119	GOOD	JCLS

BD2708

BD2708 STATION DESCRIPTION



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2708

BD2708'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

BD2708'THE STATION IS LOCATED ABOUT 44.26 KM (27.50 MI) EAST OF MADISON, 9.49

BD2708'KM (5.90 MI) SOUTH OF JASPER, AT THE NORTHWEST EDGE OF THE U.S.

BD2708'HIGHWAY 129 OVERPASS OF INTERSTATE HIGHWAY 75. OWNERSHIP--HIGHWAY

BD2708'RIGHT-OF-WAY.

BD2708'TO REACH THE STATION FROM THE CENTERLINE INTERSECTION OF U.S. HIGHWAY

BD2708'129 AND INTERSTATE HIGHWAY 75, ABOUT 9.49 KM (5.90 MI) SOUTH OF

BD2708'JASPER, GO NORTH FOR 0.08 KM (0.05 MI) ON HIGHWAY 129 TO THE EDGE OF

BD2708'OVERPASS AND THE STATION ON LEFT.

BD2708'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 6.98 M (22.9 FT)

BD2708'WEST FROM THE APPROXIMATE CENTER OF HIGHWAY 129, 4.21 M (13.8 FT)

BD2708'NORTH FROM FLDT BENCH MARK I75 P7 IN THE NORTHWEST EDGE OF HEADWALL OF

BD2708'OVERPASS BRIDGE AND 0.91 M (3.0 FT) WEST FROM THE CURB. NOTE--ACCESS

BD2708'TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2708'DESCRIBED BY R.L. MALLOY.

BD2708

BD2708

STATION RECOVERY (1989)

BD2708

BD2708'RECOVERED 1989

BD2708'RECOVERED IN GOOD CONDITION.

BD2708

BD2708

STATION RECOVERY (1989)

BD2708

BD2708'RECOVERED 1989

BD2708'RECOVERED IN GOOD CONDITION.

BD2708

BD2708

STATION RECOVERY (1992)

BD2708

BD2708'RECOVERY NOTE BY FL DEPT OF NAT RES 1992 (VAC)

BD2708'THE STATION IS LOCATED ABOUT 27.5 MI (44.3 KM) EAST OF MADISON, 5.9 MI

BD2708'(9.5 KM) SOUTH OF JASPER, AT THE NORTHWEST END OF THE U.S. HIGHWAY 129

BD2708'OVERPASS OVER INTERSTATE HIGHWAY 75. OWNERSHIP HIGHWAY RIGHT OF WAY.

BD2708'THE STATION IS LOCATED AT THE INTERSECTION OF U.S. 129 AND INTERSTATE

BD2708'HIGHWAY 75 AT THE NORTHERN END OF THE BRIDGE, WEST OF U.S. HIGHWAY

BD2708'129. THE STATION IS RECESSED BELOW THE LEVEL OF THE GROUND. 22.9 FT

BD2708'(7.0 M) WEST OF THE CENTERLINE OF U.S. HIGHWAY 129, 13.8 FT (4.2 M)

BD2708'NORTH OF FLDT BENCH MARK I75 P7 WHICH IS IN THE NORTHWEST CORNER OF

BD2708'THE HEADWALL OF THE OVERPASS BRIDGE, 3.0 FT (0.9 M) WEST OF THE CURB

BD2708'AND 6.0 FT (1.8 M) NORTHEAST OF A CARSONITE WITNESS POST.

BD2708

BD2708

STATION RECOVERY (1993)

BD2708

BD2708'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993

BD2708'THE STATION IS LOCATED ABOUT 44.26 KM (27.50 MI) EAST OF MADISON, 9.49

BD2708'KM (5.90 MI) SOUTH OF JASPER, AT THE NORTHWEST EDGE OF THE U.S.

BD2708'HIGHWAY 129 OVERPASS OF INTERSTATE HIGHWAY 75. OWNERSHIP--HIGHWAY

BD2708'RIGHT-OF-WAY.

BD2708'TO REACH THE STATION FROM THE CENTER OF THE INTERSECTION (OVERPASS) OF

BD2708'U.S. HIGHWAY 129 AND INTERSTATE HIGHWAY 75, ABOUT 9.49 KM (5.90 MI)

BD2708'SOUTH OF JASPER, GO NORTH FOR 0.08 KM (0.05 MI) ON HIGHWAY 129 TO THE

BD2708'EDGE OF THE OVERPASS AND THE STATION ON THE LEFT.

BD2708'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 6.98 M

BD2708'(22.90 FT) WEST FROM THE APPROXIMATE CENTERLINE OF U.S. HIGHWAY 129,

BD2708'4.21 M (13.81 FT) NORTH FROM FLORIDA DEPARTMENT OF TRANSPORTATION



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2708'MARK STAMPED I 75 P7 SET IN THE NORTHWEST EDGE OF CONCRETE GUARDRAIL
BD2708'OF OVERPASS BRIDGE, 0.91 M (2.99 FT) WEST FROM THE CURB.
BD2708'DESCRIBED BY RONNIE L. TAYLOR.

BD2708

BD2708

STATION RECOVERY (1997)

BD2708

BD2708'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

BD2708'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED AS

BD2708'PREVIOUSLY DESCRIBED.

BD2708

BD2708

STATION RECOVERY (1997)

BD2708

BD2708'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

BD2708'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS

BD2708'RECOVERED AS PREVIOUSLY DESCRIBED.

BD2708

BD2708

STATION RECOVERY (2008)

BD2708

BD2708'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2008 (MRY)

BD2708'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR1841 *****

AR1841 CBN - This is a Cooperative Base Network Control Station.

AR1841 DESIGNATION - FLGPS 22

AR1841 PID - AR1841

AR1841 STATE/COUNTY- FL/LAFAYETTE

AR1841 USGS QUAD - BRANFORD (1993)

AR1841

AR1841 *CURRENT SURVEY CONTROL

AR1841

AR1841*	NAD 83(2007) -	29 57 29.01460 (N)	082 57 55.44458 (W)	ADJUSTED
AR1841*	NAVD 88 -	13.63 (meters)	44.7 (feet)	LEVELING

AR1841

AR1841	EPOCH DATE -	2002.00		
AR1841	X -	677,321.301 (meters)		COMP
AR1841	Y -	-5,488,935.398 (meters)		COMP
AR1841	Z -	3,166,339.465 (meters)		COMP
AR1841	LAPLACE CORR-	-0.06 (seconds)		DEFLEC09
AR1841	ELLIP HEIGHT-	-14.242 (meters)	(02/10/07)	ADJUSTED
AR1841	GEOID HEIGHT-	-27.86 (meters)		GEOID09

AR1841

AR1841 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AR1841	Type	PID	Designation	North	East	Ellip
AR1841	NETWORK	AR1841	FLGPS 22	0.31	0.33	0.82

AR1841 -----

AR1841 VERT ORDER - THIRD

AR1841

AR1841.The horizontal coordinates were established by GPS observations

AR1841.and adjusted by the National Geodetic Survey in February 2007.

AR1841

AR1841.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AR1841.See [National Readjustment](#) for more information.

AR1841

AR1841.The horizontal coordinates are valid at the epoch date displayed above

AR1841.which is a decimal equivalence of Year/Month/Day.

AR1841

AR1841.The orthometric height was determined by differential leveling.

AR1841.The vertical network tie was performed by a horz. field party for horz.

AR1841.obs reductions. Reset procedures were used to establish the elevation.

AR1841

AR1841.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AR1841

AR1841.The Laplace correction was computed from DEFLEC09 derived deflections.

AR1841

AR1841.The ellipsoidal height was determined by GPS observations

AR1841.and is referenced to NAD 83.

AR1841

AR1841.The geoid height was determined by GEOID09.

AR1841

AR1841;		North	East	Units	Scale	Factor	Converg.
AR1841;SPC	FL N	- 107,195.067	748,118.815	MT	0.99995506		+0 46 16.2
AR1841;SPC	FL N	- 351,689.15	2,454,453.15	sFT	0.99995506		+0 46 16.2
AR1841;UTM	17	- 3,315,762.809	310,343.156	MT	1.00004380		-0 58 54.3

AR1841



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



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AR1841! - Elev Factor x Scale Factor = Combined Factor
AR1841!SPC FL N - 1.00000224 x 0.99995506 = 0.99995730
AR1841!UTM 17 - 1.00000224 x 1.00004380 = 1.00004604
AR1841
AR1841: Primary Azimuth Mark Grid Az
AR1841:SPC FL N - FLGPS 22 AZ MK 128 21 53.9
AR1841:UTM 17 - FLGPS 22 AZ MK 130 07 04.4
AR1841
AR1841|-----|
AR1841| PID Reference Object Distance Geod. Az |
AR1841| | | | dddmmss.s |
AR1841| AR1867 FLGPS 22 AZ MK APPROX. 1.0 KM 1290810.1 |
AR1841|-----|
AR1841
AR1841 SUPERSEDED SURVEY CONTROL
AR1841
AR1841 NAD 83(1999)- 29 57 29.01491(N) 082 57 55.44440(W) AD( ) B
AR1841 ELLIP H (05/31/01) -14.275 (m) GP( ) 5 1
AR1841 NAD 83(1990)- 29 57 29.01362(N) 082 57 55.44396(W) AD( ) B
AR1841 ELLIP H (09/13/90) -14.242 (m) GP( ) 4 1
AR1841 NAVD 88 (01/28/97) 13.6 (m) 45. (f) GPS OBS
AR1841 NAVD 88 (06/02/94) 13.5 (m) 44. (f) GPS OBS
AR1841 NGVD 29 (09/13/90) 13.9 (m) 46. (f) GPS OBS
AR1841
AR1841 Superseded values are not recommended for survey control.
AR1841 NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AR1841 See file dsdata.txt to determine how the superseded data were derived.
AR1841
AR1841 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP1034315762(NAD 83)
AR1841
AR1841 MARKER: F = FLANGE-ENCASED ROD
AR1841 SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AR1841 SP_SET: STAINLESS STEEL ROD IN SLEEVE
AR1841 STAMPING: FLGPS 22 1988
AR1841 MARK LOGO: NGS
AR1841 PROJECTION: FLUSH
AR1841 MAGNETIC: N = NO MAGNETIC MATERIAL
AR1841 STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AR1841+STABILITY: POSITION/ELEVATION WELL
AR1841 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AR1841+SATELLITE: SATELLITE OBSERVATIONS - November 20, 1997
AR1841 ROD/PIPE-DEPTH: 15.5 meters
AR1841 SLEEVE-DEPTH : 0.9 meters
AR1841
AR1841 HISTORY - Date Condition Report By
AR1841 HISTORY - 1988 MONUMENTED NGS
AR1841 HISTORY - 19890412 GOOD
AR1841 HISTORY - 19890515 GOOD
AR1841 HISTORY - 19920215 GOOD NGS
AR1841 HISTORY - 19920723 GOOD FLDT
AR1841 HISTORY - 19960606 GOOD DCJOHN
AR1841 HISTORY - 19970502 GOOD DCJOHN
AR1841 HISTORY - 19971120 GOOD DCJOHN
AR1841
AR1841 STATION DESCRIPTION
```




AR1841'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
AR1841'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED AS
AR1841'PREVIOUSLY DESCRIBED.
AR1841
AR1841
AR1841
AR1841
AR1841
AR1841'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
AR1841'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS
AR1841'RECOVERED AS PREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2711 *****

BD2711 CBN - This is a Cooperative Base Network Control Station.

BD2711 DESIGNATION - FLGPS 28

BD2711 PID - BD2711

BD2711 STATE/COUNTY- FL/UNION

BD2711 USGS QUAD - RAIFORD (1984)

BD2711

BD2711 *CURRENT SURVEY CONTROL

BD2711

BD2711*	NAD 83(2007) -	30 05 09.14678 (N)	082 12 57.32164 (W)	ADJUSTED
BD2711*	NAVD 88 -	40.079 (meters)	131.49 (feet)	ADJUSTED

BD2711

BD2711	EPOCH DATE -	2002.00		
BD2711	X -	748,104.286 (meters)		COMP
BD2711	Y -	-5,472,604.882 (meters)		COMP
BD2711	Z -	3,178,620.206 (meters)		COMP
BD2711	LAPLACE CORR-	0.88 (seconds)		DEFLEC09
BD2711	ELLIP HEIGHT-	11.937 (meters)	(02/10/07)	ADJUSTED
BD2711	GEOID HEIGHT-	-28.14 (meters)		GEOID09
BD2711	DYNAMIC HT -	40.025 (meters)	131.32 (feet)	COMP

BD2711

BD2711 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2711	Type	PID	Designation	North	East	Ellip
BD2711	-----					
BD2711	NETWORK	BD2711	FLGPS 28	0.51	0.45	1.53
BD2711	-----					

BD2711

BD2711	MODELED GRAV-	979,314.6 (mgal)		NAVD 88
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BD2711

BD2711 VERT ORDER - SECOND CLASS I

BD2711

BD2711.The horizontal coordinates were established by GPS observations

BD2711.and adjusted by the National Geodetic Survey in February 2007.

BD2711

BD2711.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2711.See [National Readjustment](#) for more information.

BD2711

BD2711.The horizontal coordinates are valid at the epoch date displayed above

BD2711.which is a decimal equivalence of Year/Month/Day.

BD2711

BD2711.The orthometric height was determined by differential leveling and

BD2711.adjusted in July 2004.

BD2711

BD2711.No vertical observational check was made to the station.

BD2711

BD2711.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2711

BD2711.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2711

BD2711.The ellipsoidal height was determined by GPS observations

BD2711.and is referenced to NAD 83.

BD2711

BD2711.The geoid height was determined by GEOID09.

BD2711

BD2711.The dynamic height is computed by dividing the NAVD 88



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2711.geopotential number by the normal gravity value computed on the
BD2711.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BD2711.degrees latitude (g = 980.6199 gals.).

BD2711

BD2711.The modeled gravity was interpolated from observed gravity values.

BD2711

BD2711;		North	East	Units	Scale Factor	Converg.
BD2711;SPC FL N	-	122,571.532	820,166.273	MT	0.99994944	+1 08 52.1
BD2711;SPC FL N	-	402,136.77	2,690,828.85	sFT	0.99994944	+1 08 52.1
BD2711;UTM 17	-	3,328,924.308	382,823.764	MT	0.99976940	-0 36 34.6

BD2711

BD2711! - Elev Factor x Scale Factor = Combined Factor

BD2711!SPC FL N - 0.99999813 x 0.99994944 = 0.99994757

BD2711!UTM 17 - 0.99999813 x 0.99976940 = 0.99976753

BD2711

BD2711:		Primary Azimuth Mark	Grid Az
BD2711:SPC FL N	-	FLGPS 28 AZ MK	357 56 07.8
BD2711:UTM 17	-	FLGPS 28 AZ MK	359 41 34.5

BD2711

BD2711	PID	Reference Object	Distance	Geod. Az
BD2711				ddmmss.s
BD2711	BD2721	FLGPS 28 AZ MK	APPROX. 1.6 KM	3590459.9

BD2711

BD2711

SUPERSEDED SURVEY CONTROL

BD2711

BD2711	NAD 83(1999)-	30 05	09.14725(N)	082 12 57.32173(W)	AD()	B
BD2711	ELLIP H (05/31/01)		11.933 (m)		GP()	5 1
BD2711	NAD 83(1990)-	30 05	09.14610(N)	082 12 57.32183(W)	AD()	B
BD2711	ELLIP H (09/13/90)		11.892 (m)		GP()	4 1
BD2711	NAVD 88 (03/20/98)		40.08 (m)	131.5 (f)	LEVELING	3
BD2711	NAVD 88 (06/02/94)		40.1 (m)	132. (f)	GPS OBS	
BD2711	NGVD 29 (09/13/90)		40.4 (m)	133. (f)	GPS OBS	

BD2711

BD2711.Superseded values are not recommended for survey control.

BD2711.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2711.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2711

BD2711_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP8282328924(NAD 83)

BD2711

BD2711_MARKER: F = FLANGE-ENCASED ROD

BD2711_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

BD2711_SP_SET: STAINLESS STEEL ROD IN SLEEVE

BD2711_STAMPING: FLGPS 28 1988

BD2711_MARK LOGO: NGS

BD2711_PROJECTION: RECESSED 10 CENTIMETERS

BD2711_MAGNETIC: N = NO MAGNETIC MATERIAL

BD2711_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD2711_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD2711+SATELLITE: SATELLITE OBSERVATIONS - August 22, 2002

BD2711_ROD/PIPE-DEPTH: 7.6 meters

BD2711_SLEEVE-DEPTH : 0.9 meters

BD2711

BD2711 HISTORY - Date Condition Report By



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2711	HISTORY	- 1988	MONUMENTED	NGS
BD2711	HISTORY	- 19890410	GOOD	
BD2711	HISTORY	- 19890519	GOOD	
BD2711	HISTORY	- 19920208	GOOD	NGS
BD2711	HISTORY	- 19970502	GOOD	DCJOHN
BD2711	HISTORY	- 20020423	GOOD	DCJOHN
BD2711	HISTORY	- 20020822	GOOD	FLDEP

BD2711

BD2711 STATION DESCRIPTION

BD2711

BD2711'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

BD2711'THE STATION IS LOCATED ABOUT 23.33 KM (14.50 MI) SOUTHWEST OF

BD2711'MACCLENNY, 3.70 KM (2.30 MI) NORTHEAST OF RAIFORD, ALONG STATE ROAD

BD2711'121. OWNERSHIP--ROAD RIGHT-OF-WAY.

BD2711'TO REACH THE STATION FROM THE INTERSECTION OF INTERSTATE HIGHWAY 10

BD2711'AND STATE ROAD 121 NEAR MACCLENNY, GO SOUTH FOR 14.40 KM (8.95 MI) ON

BD2711'STATE ROAD 121 TO THE UNION COUNTY LINE. CONTINUE SOUTH FOR 3.46 KM

BD2711'(2.15 MI) ON STATE ROAD 121 TO THE INTERSECTION OF COUNTY ROAD 125.

BD2711'CONTINUE SOUTH FOR 3.62 KM (2.25 MI) ON STATE ROAD 121 TO THE STATION

BD2711'ON LEFT.

BD2711'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 56.54 M

BD2711'(185.5 FT) NORTH FROM A LONE 64-CM PINE TREE, 12.04 M (39.5 FT) EAST

BD2711'FROM THE APPROXIMATE CENTER OF STATE ROAD 121, 10.09 M (33.1 FT) WEST

BD2711'FROM A FENCE LINE AND 9.81 M (32.2 FT) WEST FROM A CARSONITE WITNESS

BD2711'POST. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2711'DESCRIBED BY R.L. MALLOY.

BD2711

BD2711 STATION RECOVERY (1989)

BD2711

BD2711'RECOVERED 1989

BD2711'RECOVERED IN GOOD CONDITION.

BD2711

BD2711 STATION RECOVERY (1989)

BD2711

BD2711'RECOVERED 1989

BD2711'RECOVERED IN GOOD CONDITION.

BD2711

BD2711 STATION RECOVERY (1992)

BD2711

BD2711'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992 (RLT)

BD2711'THE STATION IS ABOUT 14.5 MI (23.3 KM) SOUTHWEST OF MACCLENNY, 2.3 MI

BD2711'(3.7 KM) NORTHEAST OF RAIFORD, ON STATE ROAD 121 ON STATE ROAD

BD2711'RIGHT-OF-WAY, IN SECTION 4, T 5 S, R 21 E. TO REACH THE STATION FROM

BD2711'THE INTERSECTION OF INTERSTATE HIGHWAY 10 AND STATE ROAD 121 NEAR

BD2711'MACCLENNY, GO SOUTH ON STATE ROAD 121 FOR 8.95 MI (14.40 KM) TO THE

BD2711'UNION COUNTY LINE, CONTINUE SOUTH ON STATE ROAD 121 FOR 2.15 MI (3.46

BD2711'KM) TO THE INTERSECTION OF COUNTY ROAD 125, CONTINUE SOUTH ON STATE

BD2711'ROAD 121 FOR 2.25 MI (3.62 KM) TO THE STATION ON THE LEFT. LOCATED

BD2711'185.5 FT (56.5 M) NORTH OF A LONE PINE TREE, 39.5 FT (12.0 M) EAST OF

BD2711'THE CENTERLINE OF STATE ROAD 121, 33.1 FT (10.1 M) WEST OF THE FENCE

BD2711'LINE AND 32.2 FT (9.8 M) WEST OF A CARSONITE WITNESS POST. NOTE

BD2711'ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2711

BD2711 STATION RECOVERY (1997)

BD2711



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2711'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
BD2711'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED AS
BD2711'PREVIOUSLY DESCRIBED.
BD2711
BD2711
STATION RECOVERY (2002)
BD2711
BD2711'RECOVERY NOTE BY DC JOHNSON ASSOC 2002 (ARG)
BD2711'RECOVERED AS DESCRIBED. (ARG)
BD2711'
BD2711
BD2711
STATION RECOVERY (2002)
BD2711
BD2711'RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (BPJ)
BD2711'RECOVERED IN GOOD CONDITION.
BD2711'
BD2711'NOTE ACCESS COVER TO NGS LOGO CAP IS MISSING.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR1844 *****

AR1844 CBN - This is a Cooperative Base Network Control Station.

AR1844 DESIGNATION - FLGPS 29

AR1844 PID - AR1844

AR1844 STATE/COUNTY- FL/PUTNAM

AR1844 USGS QUAD - HAWTHORNE (1984)

AR1844

AR1844 *CURRENT SURVEY CONTROL

AR1844

AR1844*	NAD 83(2007) -	29 36 19.03043(N)	082 02 04.00271(W)	ADJUSTED
AR1844*	NAVD 88 -	46.730 (meters)	153.31 (feet)	ADJUSTED

AR1844

AR1844	EPOCH DATE -	2002.00		
AR1844	X -	769,109.133 (meters)		COMP
AR1844	Y -	-5,496,470.100 (meters)		COMP
AR1844	Z -	3,132,416.176 (meters)		COMP
AR1844	LAPLACE CORR-	-0.91 (seconds)		DEFLEC09
AR1844	ELLIP HEIGHT-	18.805 (meters)	(02/10/07)	ADJUSTED
AR1844	GEOID HEIGHT-	-27.92 (meters)		GEOID09
AR1844	DYNAMIC HT -	46.667 (meters)	153.11 (feet)	COMP

AR1844

AR1844 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AR1844	Type	PID	Designation	North	East	Ellip
AR1844	-----					
AR1844	NETWORK	AR1844	FLGPS 29	0.74	0.71	1.61
AR1844	-----					

AR1844

AR1844	MODELED GRAV-	979,288.4 (mgal)		NAVD 88
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AR1844

AR1844 VERT ORDER - SECOND CLASS I

AR1844

AR1844.The horizontal coordinates were established by GPS observations

AR1844.and adjusted by the National Geodetic Survey in February 2007.

AR1844

AR1844.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AR1844.See [National Readjustment](#) for more information.

AR1844

AR1844.The horizontal coordinates are valid at the epoch date displayed above

AR1844.which is a decimal equivalence of Year/Month/Day.

AR1844

AR1844.The orthometric height was determined by differential leveling and

AR1844.adjusted in August 2004.

AR1844

AR1844.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AR1844

AR1844.The Laplace correction was computed from DEFLEC09 derived deflections.

AR1844

AR1844.The ellipsoidal height was determined by GPS observations

AR1844.and is referenced to NAD 83.

AR1844

AR1844.The geoid height was determined by GEOID09.

AR1844

AR1844.The dynamic height is computed by dividing the NAVD 88

AR1844.geopotential number by the normal gravity value computed on the

AR1844.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1844.degrees latitude (g = 980.6199 gals.).

AR1844

AR1844.The modeled gravity was interpolated from observed gravity values.

AR1844

AR1844;		North	East	Units	Scale Factor	Converg.
AR1844;SPC FL E	-	584,563.380	99,800.702	MT	1.00006501	-0 30 39.9
AR1844;SPC FL E	-	1,917,855.02	327,429.47	sFT	1.00006501	-0 30 39.9
AR1844;SPC FL N	-	69,677.008	838,808.472	MT	0.99999620	+1 14 20.4
AR1844;SPC FL N	-	228,598.65	2,751,990.80	sFT	0.99999620	+1 14 20.4
AR1844;UTM 17	-	3,275,495.910	399,834.890	MT	0.99972379	-0 30 39.9

AR1844

AR1844! - Elev Factor x Scale Factor = Combined Factor

AR1844!SPC FL E - 0.99999705 x 1.00006501 = 1.00006206

AR1844!SPC FL N - 0.99999705 x 0.99999620 = 0.99999325

AR1844!UTM 17 - 0.99999705 x 0.99972379 = 0.99972084

AR1844

AR1844:		Primary Azimuth Mark	Grid Az
AR1844:SPC FL E	-	FLGPS 29 AZ MK	072 09 44.9
AR1844:SPC FL N	-	FLGPS 29 AZ MK	070 24 44.6
AR1844:UTM 17	-	FLGPS 29 AZ MK	072 09 44.9

AR1844

AR1844	PID	Reference Object	Distance	Geod. Az
AR1844				ddmmss.s
AR1844	AR1870	FLGPS 29 AZ MK	APPROX. 0.9 KM	0713905.0

AR1844

AR1844

AR1844

SUPERSEDED SURVEY CONTROL

AR1844	NAD 83(1999)-	29 36 19.03094 (N)	082 02 04.00307 (W)	AD () B
AR1844	ELLIP H (05/31/01)	18.841 (m)		GP () 5 1
AR1844	NAD 83(1990)-	29 36 19.02977 (N)	082 02 04.00275 (W)	AD () B
AR1844	ELLIP H (09/13/90)	18.816 (m)		GP () 4 1
AR1844	NAVD 88 (07/09/04)	46.745 (m)	153.36 (f)	UNKNOWN 2 1
AR1844	NAVD 88 (05/18/04)	46.731 (m)	153.32 (f)	UNKNOWN 2 1
AR1844	NAVD 88 (06/02/94)	46.8 (m)	154. (f)	GPS OBS
AR1844	NGVD 29 (09/13/90)	47.2 (m)	155. (f)	GPS OBS

AR1844

AR1844.Superseded values are not recommended for survey control.

AR1844.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR1844.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR1844

AR1844_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN9983475495(NAD 83)

AR1844

AR1844_MARKER: F = FLANGE-ENCASED ROD

AR1844_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

AR1844_SP_SET: STAINLESS STEEL ROD IN SLEEVE

AR1844_STAMPING: FLGPS 29 1988

AR1844_MARK LOGO: NGS

AR1844_PROJECTION: FLUSH

AR1844_MAGNETIC: N = NO MAGNETIC MATERIAL

AR1844_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AR1844_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AR1844+SATELLITE: SATELLITE OBSERVATIONS - March 05, 2010

AR1844_ROD/PIPE-DEPTH: 19.0 meters



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1844 _SLEEVE-DEPTH : 0.91 meters

AR1844

AR1844	HISTORY	- Date	Condition	Report By
AR1844	HISTORY	- 1988	MONUMENTED	NGS
AR1844	HISTORY	- 19890424	GOOD	
AR1844	HISTORY	- 19890606	GOOD	
AR1844	HISTORY	- 19900314	GOOD	MCGRIF
AR1844	HISTORY	- 19921010	GOOD	FLDNR
AR1844	HISTORY	- 19950109	GOOD	KEISCH
AR1844	HISTORY	- 20000512	GOOD	FLDEP
AR1844	HISTORY	- 20010523	GOOD	FLDEP
AR1844	HISTORY	- 20100305	GOOD	INDIV

AR1844

AR1844 STATION DESCRIPTION

AR1844

AR1844'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988
AR1844'THE STATION IS LOCATED ABOUT 38.30 KM (23.80 MI) WEST OF PALATKA,
AR1844'29.77 KM (18.50 MI) SOUTHEAST OF GAINESVILLE, ALONG STATE ROAD 20.
AR1844'OWNERSHIP--STATE ROAD RIGHT-OF-WAY.
AR1844'TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 301 AND
AR1844'STATE ROAD 20 IN HAWTHORNE, GO EAST FOR 3.06 KM (1.90 MI) ON STATE
AR1844'ROAD 20 TO THE PUTNAM COUNTY LINE. CONTINUE AHEAD FOR 2.25 KM
AR1844'(1.40 MI) ON STATE ROAD 20 TO THE STATION ON RIGHT.
AR1844'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 58.52 M
AR1844'(192.0 FT) NORTHEAST FROM UTILITY POLE NUMBER 200-40A, 10.06 M
AR1844'(33.0 FT) NORTH-NORTHWEST FROM A FENCE LINE, 6.37 M (20.9 FT)
AR1844'SOUTH-SOUTHEAST FROM THE APPROXIMATE CENTER OF STATE ROAD 20 AND 9.54
AR1844'M (31.3 FT) NORTH FROM A CARSONITE WITNESS POST. NOTE--ACCESS TO
AR1844'DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.
AR1844'DESCRIBED BY R.L. MALLOY.

AR1844

AR1844 STATION RECOVERY (1989)

AR1844

AR1844'RECOVERED 1989
AR1844'RECOVERED IN GOOD CONDITION.

AR1844

AR1844 STATION RECOVERY (1989)

AR1844

AR1844'RECOVERED 1989
AR1844'RECOVERED IN GOOD CONDITION.

AR1844

AR1844 STATION RECOVERY (1990)

AR1844

AR1844'RECOVERY NOTE BY P C MCGRIF COMPANY 1990
AR1844'RECOVERED IN GOOD CONDITION AS DESCRIBED IN PART I OF THE RECOVERY
AR1844'NOTES FROM FLORIDA HIGH PRECISION NETWORK NGS PROJECT NUMBER-
AR1844'NGS-170.

AR1844

AR1844 STATION RECOVERY (1992)

AR1844

AR1844'RECOVERY NOTE BY FL DEPT OF NAT RES 1992 (PBM)
AR1844'THE STATION IS ABOUT 24.3 MI (39.1 KM) WEST OF PALATKA, 18.5 MI (29.8
AR1844'KM) SOUTHEAST OF GAINESVILLE, 3.4 MI (5.5 KM) EAST OF HAWTHORNE ON
AR1844'STATE ROAD 20 RIGHT-OF-WAY IN SECTION 19, T 10 S, R 23 E. TO REACH THE
AR1844'STATION FROM THE INTERSECTION OF U.S. HIGHWAY 301 AND STATE ROAD 20 IN



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1844'HAWTHORNE, GO EAST ON STATE ROAD 20 FOR 1.95 MI (3.14 KM) TO THE
AR1844'PUTNAM COUNTY LINE, CONTINUE EAST ON STATE ROAD 20 FOR 1.45 MI (2.33
AR1844'KM) TO THE STATION ON THE RIGHT, RECESSED 0.3 FT (9.1 CM) BELOW THE
AR1844'LEVEL OF THE GROUND. LOCATED 180.0 FT (54.9 M) NORTHEAST OF A POWER
AR1844'POLE NUMBER 200-40 WITH A GUY WIRE, 31.2 FT (9.5 M) NORTH-NORTHWEST OF
AR1844'A FENCE LINE, 31.2 FT (9.5 M) NORTH-NORTHWEST OF A CARSONITE WITNESS
AR1844'POST AND 22.5 FT (6.9 M) SOUTH-SOUTHEAST OF THE CENTERLINE OF STATE
AR1844'ROAD 20. NOTE ACCESS TO DATUM POINT IS HAD THROUGH A5-INNCH LOGO CAP.

AR1844

AR1844

STATION RECOVERY (1995)

AR1844

AR1844'RECOVERY NOTE BY KEITH AND SCHNARS - LAKELAND 1995 (JFO)

AR1844'RECOVERED IN GOOD CONDITION WITH THESE CHANGES, SET NAIL AND DISC

AR1844'(KEITH AND SCHNARS PA) AT THE EDGE OF PAVEMENT, MAGNETIC AZIMUTH OF

AR1844'347 DEGREES AT 11.11 FT (3.39 M), SET NAIL AND DISC (KEITH AND SCHNARS

AR1844'PA) IN A WOODED FENCE POST, MAGNETIC AZIMUTH OF 129 DEGREES AT 39.13

AR1844'FT (11.93 M), SET NAIL AND DISC (KEITH AND SCHNARS PA) IN A WOODEN

AR1844'FENCE POST, MAGNETIC AZIMUTH OF 214 DEGREES AT 44.55 FT (13.58 M),

AR1844'FOUND A CARSONITE WITNESS POST, MAGNETIC AZIMUTH OF 165 DEGREES AT

AR1844'31.12 FT (9.49 M).

AR1844

AR1844

STATION RECOVERY (2000)

AR1844

AR1844'RECOVERY NOTE BY FL DEPT OF ENV PRO 2000 (JLM)

AR1844'RECOVERED AS DESCRIBED.

AR1844

AR1844

STATION RECOVERY (2001)

AR1844

AR1844'RECOVERY NOTE BY FL DEPT OF ENV PRO 2001 (JLM)

AR1844'RECOVERED AS DESCRIBED.

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

AR1844'

STATION RECOVERY (2010)

AR1844

AR1844

AR1844'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2010 (EPM)

AR1844'RECOVERED AS DESCRIBED



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2753 *****

BD2753 DESIGNATION - FLGPS 71

BD2753 PID - BD2753

BD2753 STATE/COUNTY- FL/MADISON

BD2753 USGS QUAD - PINETTA (1993)

BD2753

BD2753 *CURRENT SURVEY CONTROL

BD2753

BD2753*	NAD 83(2007) -	30 33	31.11334 (N)	083 21	58.64803 (W)	ADJUSTED
BD2753*	NAVD 88 -		28.952 (meters)		94.99 (feet)	ADJUSTED

BD2753

BD2753	EPOCH DATE -	2002.00				
BD2753	X -	635,025.695 (meters)				COMP
BD2753	Y -	-5,460,228.954 (meters)				COMP
BD2753	Z -	3,223,854.973 (meters)				COMP
BD2753	LAPLACE CORR-	-1.05 (seconds)				DEFLEC09
BD2753	ELLIP HEIGHT-	0.969 (meters)		(02/10/07)		ADJUSTED
BD2753	GEOID HEIGHT-	-27.99 (meters)				GEOID09
BD2753	DYNAMIC HT -	28.914 (meters)		94.86 (feet)		COMP

BD2753

BD2753 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2753	Type	PID	Designation	North	East	Ellip
BD2753	NETWORK	BD2753	FLGPS 71	0.47	0.45	1.12

BD2753

BD2753	MODELED GRAV-	979,344.6 (mgal)				NAVD 88
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BD2753

BD2753 VERT ORDER - SECOND CLASS I

BD2753

BD2753.The horizontal coordinates were established by GPS observations

BD2753.and adjusted by the National Geodetic Survey in February 2007.

BD2753

BD2753.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2753.See [National Readjustment](#) for more information.

BD2753

BD2753.The horizontal coordinates are valid at the epoch date displayed above

BD2753.which is a decimal equivalence of Year/Month/Day.

BD2753

BD2753.The orthometric height was determined by differential leveling and

BD2753.adjusted in May 2001.

BD2753

BD2753.No vertical observational check was made to the station.

BD2753

BD2753.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2753

BD2753.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2753

BD2753.The ellipsoidal height was determined by GPS observations

BD2753.and is referenced to NAD 83.

BD2753

BD2753.The geoid height was determined by GEOID09.

BD2753

BD2753.The dynamic height is computed by dividing the NAVD 88

BD2753.geopotential number by the normal gravity value computed on the



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2753 STATION DESCRIPTION

BD2753

BD2753'DESCRIBED BY NATIONAL GEODETIC SURVEY 1993

BD2753'THE STATION IS LOCATED ABOUT 9.25 KM (5.75 MI) NORTHEAST OF MADISON, BD2753'6.52 KM (4.05 MI) SOUTHWEST OF PINETTA ALONG STATE HIGHWAY 145, IN BD2753'SECTION 12, T 1 N, R 9 E. OWNERSHIP--HIGHWAY RIGHT-OF-WAY. BD2753'TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 90 (BASE BD2753'STREET) AND STATE HIGHWAY 145 (DUVAL STREET) IN MADISON, GO NORTH BD2753'0.30 KM (0.20 MI) ON STATE HIGHWAY 145 TO A STOP SIGN AND A BD2753'CROSSROAD, TURN RIGHT AND CONTINUE NORTHEAST ALONG STATE HIGHWAY 145 BD2753'FOR FOR 11.91 KM (7.40 MI) TO A DIRT ROAD WEST AND THE STATION ON THE BD2753'LEFT.

BD2753'THE STATION IS LOCATED 34.4 M (112.9 FT) WEST-NORTHWEST OF THE BD2753'CENTERLINE OF THE HIGHWAY, 18.6 M (61.0 FT) WEST-NORTHWEST OF A STOP BD2753'SIGN, 10.9 M (35.8 FT) SOUTHWEST OF THE APPROXIMATE CENTER OF THE BD2753'DIRT ROAD, 6.2 M (20.3 FT) SOUTH-SOUTHWEST OF A FENCE CORNER, 0.5 M BD2753'(1.6 FT) EAST-SOUTHEAST OF THE FENCELINE AND 0.5 M (1.6 FT) BD2753'EAST-SOUTHEAST OF A CARSONITE WITNESS POST.

BD2753

BD2753 STATION RECOVERY (1993)

BD2753

BD2753'RECOVERY NOTE BY FL DEPT OF ENV PRO 1993 (PBM)

BD2753'THE STATION IS ABOUT 5.75 MI (9.25 KM) NORTH OF MADISON, 4.05 MI (6.52 BD2753'KM) SOUTH OF PILNETTA ON STATE HIGHWAY 145 IN SECTION 12, T 1 N, R 9 BD2753'E. TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 90 (BASE BD2753'STREET) AND STATE HIGHWAY 145 (DUVAL STREET) IN MADISON, GO NORTH ON BD2753'STATE HIGHWAY 145 FOR 0.2 MI (0.3 KM) TO A SHARP RIGHT TURN, TURN BD2753'RIGHT AND CONTINUE AHEAD ON STATE HIGHWAY 145 FOR 7.20 MI (11.59 KM) BD2753'TO A DIRT ROAD WEST AND THE STATION ON THE LEFT. LOCATED 113.0 FT BD2753'(34.4 M) WEST-NORTHWEST OF THE CENTERLINE OF STATE ROAD 145, 61.0 FT BD2753'(18.6 M) WEST-NORTHWEST OF A STOP SIGN, 35.7 FT (10.9 M) SOUTHWEST OF BD2753'THE CENTERLINE OF A DIRT ROAD, 20.4 FT (6.2 M) SOUTH-SOUTHWEST OF A BD2753'FENCE CORNER, 1.8 FT (0.5 M) EAST-SOUTHEAST OF THE FENCE LINE AND 1.8 BD2753'FT (0.5 M) EAST-SOUTHEAST OF A CARSONITE WITNESS POST. NOTE ACCESS BD2753'TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2753

BD2753 STATION RECOVERY (1994)

BD2753

BD2753'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1994 (CFS)

BD2753'THE STATION IS LOCATED ABOUT 9.25 KM (5.75 MI) NORTHEAST OF MADISON, BD2753'6.52 KM (4.05 MI) SOUTHWEST OF PINETTA ALONG STATE HIGHWAY 145, IN BD2753'SECTION 12, T 1 N, R 9 E. OWNERSHIP--HIGHWAY RIGHT-OF-WAY. TO REACH BD2753'THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 90 (BASE STREET) AND BD2753'STATE HIGHWAY 145 (DUVAL STREET) IN MADISON, GO NORTH 0.30 KM (0.20 BD2753'MI) ON STATE HIGHWAY 145 TO A STOP SIGN AND A CROSSROAD, TURN RIGHT BD2753'AND CONTINUE NORTHEAST ALONG STATE HIGHWAY 145 FOR FOR 11.91 KM (7.40 BD2753'MI) TO A DIRT ROAD WEST AND THE STATION ON THE LEFT. THE STATION IS BD2753'LOCATED 34.4 M (112.9 FT) WEST-NORTHWEST OF THE CENTERLINE OF THE BD2753'HIGHWAY, 18.6 M (61.0 FT) WEST-NORTHWEST OF A STOP SIGN, 10.9 M (35.8 BD2753'FT) SOUTHWEST OF THE APPROXIMATE CENTER OF THE DIRT ROAD, 6.2 M (20.3 BD2753'FT) SOUTH-SOUTHWEST OF A FENCE CORNER, 0.5 M (1.6 FT) EAST-SOUTHEAST BD2753'OF THE FENCELINE AND 0.5 M (1.6 FT) EAST-SOUTHEAST OF A CARSONITE BD2753'WITNESS POST.

BD2753

BD2753 STATION RECOVERY (1997)

BD2753



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2753
BD2753'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
BD2753'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS
BD2753'RECOVERED AS PREVIOUSLY DESCRIBED.
BD2753
BD2753 STATION RECOVERY (1999)
BD2753
BD2753'RECOVERY NOTE BY DC JOHNSON ASSOC 1999 (DS)
BD2753'RECOVERED AS DESCRIBED (AG) .
BD2753
BD2753 STATION RECOVERY (2009)
BD2753
BD2753'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2009 (JDO)
BD2753'RECOVERED IN GOOD CONDITION.
BD2753
BD2753 STATION RECOVERY (2011)
BD2753
BD2753'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2011 (GDS)
1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012
AC9630 *****
AC9630 DESIGNATION - G 445
AC9630 PID - AC9630
AC9630 STATE/COUNTY- FL/CLAY
AC9630 USGS QUAD - KEYSTONE HEIGHTS (1993)
AC9630
AC9630 *CURRENT SURVEY CONTROL
AC9630
AC9630* NAD 83(1986)- 29 46 39. (N) 082 01 03. (W) SCALED
AC9630* NAVD 88 - 38.308 (meters) 125.68 (feet) ADJUSTED
AC9630
AC9630 GEOID HEIGHT- -27.90 (meters) GEOID09
AC9630 DYNAMIC HT - 38.257 (meters) 125.51 (feet) COMP
AC9630 MODELED GRAV- 979,307.3 (mgal) NAVD 88
AC9630
AC9630 VERT ORDER - SECOND CLASS I
AC9630
AC9630.The horizontal coordinates were scaled from a topographic map and have
AC9630.an estimated accuracy of +/- 6 seconds.
AC9630.
AC9630.The orthometric height was determined by differential leveling and
AC9630.adjusted in September 1997.
AC9630
AC9630.The geoid height was determined by GEOID09.
AC9630
AC9630.The dynamic height is computed by dividing the NAVD 88
AC9630.geopotential number by the normal gravity value computed on the
AC9630.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AC9630.degrees latitude (g = 980.6199 gals.).
AC9630
AC9630.The modeled gravity was interpolated from observed gravity values.
AC9630
AC9630;
AC9630;SPC FL E - North East Units Estimated Accuracy
AC9630; 603,640. 101,610. MT (+/- 180 meters Scaled)
AC9630
AC9630 SUPERSEDED SURVEY CONTROL



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AC9630

AC9630.No superseded survey control is available for this station.

AC9630

AC9630_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMN016945(NAD 83)

AC9630

AC9630_MARKER: DV = VERTICAL CONTROL DISK

AC9630_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AC9630_STAMPING: G 445 1996

AC9630_MARK LOGO: NGS

AC9630_MAGNETIC: N = NO MAGNETIC MATERIAL

AC9630_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AC9630+STABILITY: SURFACE MOTION

AC9630_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC9630+SATELLITE: SATELLITE OBSERVATIONS - 1996

AC9630

AC9630	HISTORY	- Date	Condition	Report By
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AC9630	HISTORY	- 1996	MONUMENTED	FLDEP
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AC9630

AC9630 STATION DESCRIPTION

AC9630

AC9630'DESCRIBED BY FL DEPT OF ENV PRO 1996 (JLM)

AC9630'THE MARK IS ABOUT 1.0 MI (1.6 KM) SOUTHEAST OF KEYSTONE HEIGHTS ON

AC9630'STATE ROAD 100 AT THE ENTRANCE OF HIGHRIDGE ESTATES IN SECTION 20,

AC9630'TOWNSHIP 8 SOUTH, RANGE 23 EAST. TO REACH THE MARK FROM THE

AC9630'INTERSECTION OF STATE ROAD 100 (WEST WALKER DRIVE) AND STATE ROAD 21

AC9630'(SOUTH LAWRENCE BOULEVARD) IN KEYSTONE HEIGHTS, GO SOUTHEAST ON STATE

AC9630'ROAD 100 (WEST WALKER DRIVE) FOR 1.0 MI (1.6 KM) TO THE ENTRANCE TO

AC9630'HIGHRIDGE ESTATES ON THE LEFT AND THE MARK ON THE LEFT AT THE

AC9630'SOUTHEAST END OF A HIGHRIDGE ESTATES SIGN, SET IN THE TOP OF A ROUND

AC9630'CONCRETE MONUMENT FLUSH WITH THE GROUND AND 1.0 FT (0.3 M) ABOVE THE

AC9630'LEVEL OF STATE ROAD 100. LOCATED 125.0 FT (38.1 M) NORTH OF THE

AC9630'CENTERLINE OF STATE ROAD 100, 51.5 FT (15.7 M) EAST OF THE APPROXIMATE

AC9630'CENTERLINE OF HIGHRIDGE ESTATES ENTRANCE ROAD, 44.3 FT (13.5 M) WEST

AC9630'OF A 10-INCH OAK TREE, 41.8 FT (12.7 M) SOUTH OF THE APPROXIMATE

AC9630'CENTERLINE OF SWARTHMORE DRIVE AND 1.3 FT (0.4 M) SOUTH OF A CARSONITE

AC9630'WITNESS POST.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AC5887 *****

AC5887 DESIGNATION - GILCHRIST 4

AC5887 PID - AC5887

AC5887 STATE/COUNTY- FL/COLUMBIA

AC5887 USGS QUAD - FORT WHITE (1993)

AC5887

AC5887 *CURRENT SURVEY CONTROL

AC5887

AC5887*	NAD 83(2007) -	29 54	49.39535 (N)	082 44	35.19415 (W)	ADJUSTED
AC5887*	NAVD 88 -		15.6 (meters)	51.	(feet)	GPS OBS

AC5887

AC5887	EPOCH DATE -	2002.00				
AC5887	X -	698,921.736 (meters)				COMP
AC5887	Y -	-5,488,701.002 (meters)				COMP
AC5887	Z -	3,162,081.163 (meters)				COMP
AC5887	LAPLACE CORR-	-0.62 (seconds)				DEFLEC09
AC5887	ELLIP HEIGHT-	-12.331 (meters)		(02/10/07)		ADJUSTED
AC5887	GEOID HEIGHT-	-27.91 (meters)				GEOID09

AC5887

AC5887 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AC5887	Type	PID	Designation	North	East	Ellip
AC5887	NETWORK	AC5887	GILCHRIST 4	0.51	0.47	1.31

AC5887

AC5887.The horizontal coordinates were established by GPS observations

AC5887.and adjusted by the National Geodetic Survey in February 2007.

AC5887

AC5887.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AC5887.See [National Readjustment](#) for more information.

AC5887

AC5887.The horizontal coordinates are valid at the epoch date displayed above

AC5887.which is a decimal equivalence of Year/Month/Day.

AC5887

AC5887.The orthometric height was determined by GPS observations and a

AC5887.high-resolution geoid model.

AC5887

AC5887.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AC5887

AC5887.The Laplace correction was computed from DEFLEC09 derived deflections.

AC5887

AC5887.The ellipsoidal height was determined by GPS observations

AC5887.and is referenced to NAD 83.

AC5887

AC5887.The geoid height was determined by GEOID09.

AC5887

AC5887;		North	East	Units	Scale Factor	Converg.
AC5887;SPC FL N	-	102,590.556	769,648.463	MT	0.99995816	+0 52 58.4
AC5887;SPC FL N	-	336,582.52	2,525,088.33	sFT	0.99995816	+0 52 58.4
AC5887;UTM 17	-	3,310,501.779	331,722.742	MT	0.99994938	-0 52 10.1

AC5887

AC5887!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AC5887!SPC FL N	-	1.00000194	x	0.99995816	=	0.99996010
AC5887!UTM 17	-	1.00000194	x	0.99994938	=	0.99995132



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AC5887

AC5887:	Primary Azimuth Mark	Grid Az
AC5887:SPC FL N	- GILCHRIST 3	268 06 46.0
AC5887:UTM 17	- GILCHRIST 3	269 51 54.5

AC5887

AC5887	-----	-----	-----	-----
AC5887	PID	Reference Object	Distance	Geod. Az
AC5887				dddmms.s
AC5887	AC5886	GILCHRIST 3	APPROX. 0.7 KM	2685944.4
AC5887	-----	-----	-----	-----

AC5887

AC5887

SUPERSEDED SURVEY CONTROL

AC5887

AC5887	NAD 83(1999)-	29 54 49.39577(N)	082 44 35.19412(W)	AD(	) 1
AC5887	ELLIP H (05/31/01)	-12.369 (m)		GP(	) 4 1
AC5887	NAD 83(1990)-	29 54 49.39474(N)	082 44 35.19447(W)	AD(	) 1
AC5887	ELLIP H (01/28/97)	-12.301 (m)		GP(	) 3 1

AC5887

AC5887.Superseded values are not recommended for survey control.

AC5887.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AC5887.[See file dsdata.txt](#) to determine how the superseded data were derived.

AC5887

AC5887_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP3172210501(NAD 83)

AC5887

AC5887_MARKER: DH = HORIZONTAL CONTROL DISK

AC5887_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AC5887_STAMPING: GILCHRIST 4 1996

AC5887_MARK LOGO: NGS

AC5887_MAGNETIC: N = NO MAGNETIC MATERIAL

AC5887_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AC5887_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC5887+SATELLITE: SATELLITE OBSERVATIONS - May 02, 1997

AC5887

AC5887	HISTORY	- Date	Condition	Report By
AC5887	HISTORY	- 1996	MONUMENTED	DCJOHN
AC5887	HISTORY	- 19970502	GOOD	DCJOHN

AC5887

STATION DESCRIPTION

AC5887

AC5887'DESCRIBED BY DC JOHNSON ASSOC 1996 (DS)

AC5887'THE STATION IS LOCATED APPROXIMATELY 2.3 MI (3.7 KM) WEST-SOUTHWEST OF
AC5887'FORT WHITE, 11.2 MI (18.0 KM) WEST-NORTHWEST OF BLANFORD AND 11 MI
AC5887'(17.7 KM) NORTHWEST OF HIGH SPRINGS.-- TO REACH THE STATION FROM THE
AC5887'INTERSECTION OF US HIGHWAY 27 AND STATE ROAD 47 (ALSO KNOWN AS SOUTH
AC5887'1ST STREET) , PROCEED SOUTH ON STATE ROAD 47 FOR 0.1 MI (0.2 KM) TO
AC5887'INTERSECTION WITH WEST RIGHT-OF-WAY. PROCEED WEST ON WEST RIGHT-OF-WAY
AC5887'FOR 0.1 MI (0.2 KM) TO INTERSECTION WITH WILSON SPRINGS ROAD. PROCEED
AC5887'SOUTHWEST AND WEST ON WILSON SPRINGS ROAD FOR 1.8 MI (2.9 KM) TO THE
AC5887'STATION ON THE LEFT, A BRASS NATIONAL GEODETIC SURVEY DISC SET IN THE
AC5887'TOP OF A 12-INCH DIAMETER CONCRETE MONUMENT RECESSED 0.3 FT (0.1 M)
AC5887'BELOW THE GROUND. THE STATION IS 20.5 FT (6.2 M) SOUTH OF THE
AC5887'CENTERLINE OF WILSON SPRINGS ROAD, 12.7 FT (3.9 M) NORTH OF A BARBED
AC5887'WIRE FENCE AND 6 FT (1.8 M) NORTH OF A WITNESS POST.- REFERENCES--
AC5887'NAIL AND DISC (LB4514) , SET IN A POWER POLE, SOUTH 86 DEGREES WEST AT
AC5887'115.37 FT (35.16 M) - NAIL AND DISC (LB4514) , SET IN A POWER POLE,



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AC5887'SOUTH 77 DEGREES EAST AT 40.61 FT (12.38 M) - NAIL AND DISC (LB4514) ,
AC5887'SET IN A 10-INCH CHERRY TREE, NORTH 55 DEGREES WEST AT 86.95 FT (26.50
AC5887'M)

AC5887

AC5887

STATION RECOVERY (1997)

AC5887

AC5887'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

AC5887'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) STATION WAS RECOVERED AS

AC5887'PREVIOUSLY DESCRIBED, WITH ONE EXCEPTION. STATION IS INCORRECTLY

AC5887'SHOWN TO BE IN UNION COUNTY. STATION IS ACTUALLY IN COLUMBIA COUNTY.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AC5888 *****

AC5888 DESIGNATION - GILCHRIST 5

AC5888 PID - AC5888

AC5888 STATE/COUNTY- FL/GILCHRIST

AC5888 USGS QUAD - HIGH SPRINGS SW (1988)

AC5888

AC5888 *CURRENT SURVEY CONTROL

AC5888

AC5888*	NAD 83(2007)	-	29 49 33.16504 (N)	082 44 29.79205 (W)	ADJUSTED
AC5888*	NAVD 88	-	14.8 (meters)	49. (feet)	GPS OBS

AC5888

AC5888	EPOCH DATE	-	2002.00		
AC5888	X	-	699,678.104 (meters)		COMP
AC5888	Y	-	-5,493,492.644 (meters)		COMP
AC5888	Z	-	3,153,637.033 (meters)		COMP
AC5888	LAPLACE CORR-		-1.12 (seconds)		DEFLEC09
AC5888	ELLIP HEIGHT-		-13.081 (meters)	(02/10/07)	ADJUSTED
AC5888	GEOID HEIGHT-		-27.93 (meters)		GEOID09

AC5888

AC5888 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AC5888	Type	PID	Designation	North	East	Ellip
AC5888	NETWORK	AC5888	GILCHRIST 5	0.51	0.49	1.29

AC5888

AC5888

AC5888.The horizontal coordinates were established by GPS observations

AC5888.and adjusted by the National Geodetic Survey in February 2007.

AC5888

AC5888.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AC5888.See [National Readjustment](#) for more information.

AC5888

AC5888.The horizontal coordinates are valid at the epoch date displayed above

AC5888.which is a decimal equivalence of Year/Month/Day.

AC5888

AC5888.The orthometric height was determined by GPS observations and a

AC5888.high-resolution geoid model.

AC5888

AC5888.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AC5888

AC5888.The Laplace correction was computed from DEFLEC09 derived deflections.

AC5888

AC5888.The ellipsoidal height was determined by GPS observations

AC5888.and is referenced to NAD 83.

AC5888

AC5888.The geoid height was determined by GEOID09.

AC5888

AC5888;		North	East	Units	Scale Factor	Converg.
AC5888;SPC FL N	-	92,857.038	769,943.511	MT	0.99996607	+0 53 01.1
AC5888;SPC FL N	-	304,648.47	2,526,056.34	sFT	0.99996607	+0 53 01.1
AC5888;UTM 17	-	3,300,763.913	331,720.199	MT	0.99994940	-0 51 59.1

AC5888

AC5888!	-	Elev Factor	x	Scale Factor	=	Combined Factor
AC5888!SPC FL N	-	1.00000205	x	0.99996607	=	0.99996812
AC5888!UTM 17	-	1.00000205	x	0.99994940	=	0.99995145



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AC5888

AC5888: Primary Azimuth Mark Grid Az
AC5888:SPC FL N - GILCHRIST 6 176 52 58.8
AC5888:UTM 17 - GILCHRIST 6 178 37 59.0

AC5888

PID	Reference Object	Distance	Geod. Az
AC5889	GILCHRIST 6	APPROX. 0.8 KM	1774559.9

AC5888

AC5888 SUPERSEDED SURVEY CONTROL

AC5888

AC5888	NAD 83(1999)-	29 49 33.16548(N)	082 44 29.79206(W)	AD()	1
AC5888	ELLIP H (05/31/01)	-13.119 (m)		GP()	4 1
AC5888	NAD 83(1990)-	29 49 33.16447(N)	082 44 29.79261(W)	AD()	1
AC5888	ELLIP H (01/28/97)	-13.040 (m)		GP()	3 1
AC5888	NAVD 88 (01/28/97)	14.8 (m)	49. (f)	GPS OBS	

AC5888

AC5888.Superseded values are not recommended for survey control.

AC5888.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AC5888.[See file dsdata.txt](#) to determine how the superseded data were derived.

AC5888

AC5888_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP3172000763(NAD 83)

AC5888

AC5888_MARKER: DH = HORIZONTAL CONTROL DISK

AC5888_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AC5888_STAMPING: GILCHRIST 5 1996

AC5888_MARK LOGO: NGS

AC5888_MAGNETIC: N = NO MAGNETIC MATERIAL

AC5888_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AC5888_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC5888+SATELLITE: SATELLITE OBSERVATIONS - May 02, 1997

AC5888

HISTORY	- Date	Condition	Report By	
AC5888	HISTORY	- 1996	MONUMENTED	DCJOHN
AC5888	HISTORY	- 19970502	GOOD	DCJOHN

AC5888

AC5888

AC5888

AC5888

AC5888

AC5888

AC5888'DESCRIBED BY DC JOHNSON ASSOC 1996 (DS)

AC5888'THE STATION IS LOCATED APPROXIMATELY 15.5 MI (24.9 KM) NORTH-NORTHEAST

AC5888'OF TRENTON, 15 MI (24.1 KM) NORTHWEST OF NEWBERRY AND 9 MI (14.5 KM)

AC5888'WEST OF HIGH SPRINGS.-- TO REACH THE STATION FROM THE INTERSECTION OF

AC5888'STATE ROAD 47 AND COUNTY ROAD 340, PROCEED NORTH ON STATE ROAD 47 FOR

AC5888'1.05 MI (1.69 KM) TO THE STATION ON THE LEFT, A BRASS NATIONAL

AC5888'GEODETIC SURVEY DISC SET IN THE TOP OF A 12-INCH DIAMETER CONCRETE

AC5888'MONUMENT RECESSED 0.2 FT (0.1 M) BELOW THE GROUND. THE STATION IS

AC5888'24.8 FT (7.6 M) WEST OF THE CENTERLINE OF STATE ROAD 47, 231.89 FT

AC5888'(70.68 M) NORTH-NORTHWEST OF THE NORTH END OF A CONCRETE HEADWALL AND

AC5888'3 FT (0.9 M) EAST OF A WITNESS POST.- REFERENCES-- NAIL AND DISC

AC5888'(LB4514) , SET IN A 6-INCH CHERRY TREE, NORTH 45 DEGREES EAST AT

AC5888'132.42 FT (40.36 M) - NAIL AND DISC (LB4514) , SET IN A POWER POLE,

AC5888'SOUTH 16 DEGREES EAST AT 216.90 FT (66.11 M) -

AC5888



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AC5888

STATION RECOVERY (1997)

AC5888

AC5888'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

AC5888'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED AS

AC5888'PREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AD9133 *****

AD9133 PACS - This is a Primary Airport Control Station.

AD9133 DESIGNATION - GNV E

AD9133 PID - AD9133

AD9133 STATE/COUNTY- FL/ALACHUA

AD9133 USGS QUAD - GAINESVILLE EAST (1988)

AD9133

AD9133 *CURRENT SURVEY CONTROL

AD9133

AD9133*	NAD 83(2007) -	29 41 11.14728 (N)	082 16 22.60268 (W)	ADJUSTED
AD9133*	NAVD 88 -	38.696 (meters)	126.96 (feet)	ADJUSTED

AD9133

AD9133	EPOCH DATE -	2002.00		
AD9133	X -	745,623.749 (meters)		COMP
AD9133	Y -	-5,495,208.452 (meters)		COMP
AD9133	Z -	3,140,229.327 (meters)		COMP
AD9133	LAPLACE CORR-	-0.18 (seconds)		DEFLEC09
AD9133	ELLIP HEIGHT-	10.793 (meters)	(02/17/10)	ADJUSTED
AD9133	GEOID HEIGHT-	-27.85 (meters)		GEOID09
AD9133	DYNAMIC HT -	38.644 (meters)	126.78 (feet)	COMP

AD9133

AD9133 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AD9133	Type	PID	Designation	North	East	Ellip
AD9133	-----					
AD9133	NETWORK	AD9133	GNV E	0.43	0.45	1.51
AD9133	-----					

AD9133

AD9133	MODELED GRAV-	979,291.1 (mgal)		NAVD 88
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AD9133

AD9133 VERT ORDER - FIRST CLASS II

AD9133 ELLP ORDER - THIRD CLASS II

AD9133

AD9133.This mark is at Gainesville Airport (GNV)

AD9133

AD9133.The horizontal coordinates were established by GPS observations

AD9133.and adjusted by the National Geodetic Survey in February 2007.

AD9133

AD9133.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AD9133.See [National Readjustment](#) for more information.

AD9133

AD9133.The horizontal coordinates are valid at the epoch date displayed above

AD9133.which is a decimal equivalence of Year/Month/Day.

AD9133

AD9133.The orthometric height was determined by differential leveling and

AD9133.adjusted in August 2010.

AD9133

AD9133.No vertical observational check was made to the station.

AD9133

AD9133.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AD9133

AD9133.The Laplace correction was computed from DEFLEC09 derived deflections.

AD9133

AD9133.The ellipsoidal height was determined by GPS observations

AD9133.and is referenced to NAD 83.

AD9133



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AD9133.The geoid height was determined by GEOID09.

AD9133

AD9133.The dynamic height is computed by dividing the NAVD 88

AD9133.geopotential number by the normal gravity value computed on the

AD9133.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AD9133.degrees latitude (g = 980.6199 gals.).

AD9133

AD9133.The modeled gravity was interpolated from observed gravity values.

AD9133

AD9133;

	North	East	Units	Scale Factor	Converg.
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AD9133;SPC FL N	- 78,194.293	815,535.282	MT	0.99998341	+1 07 08.9
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AD9133;SPC FL N	- 256,542.44	2,675,635.34	sFT	0.99998341	+1 07 08.9
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AD9133;UTM 17	- 3,284,717.711	376,838.044	MT	0.99978716	-0 37 49.8
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AD9133

AD9133! - Elev Factor x Scale Factor = Combined Factor

AD9133!SPC FL N - 0.99999830 x 0.99998341 = 0.99998171

AD9133!UTM 17 - 0.99999830 x 0.99978716 = 0.99978547

AD9133

PID	Reference Object	Distance	Geod. Az ddmmss.s
AA7191	GNV ARP 2	387.929 METERS	33956

AD9133

AD9133 SUPERSEDED SURVEY CONTROL

AD9133

AD9133 ELLIP H (02/10/07) 10.829 (m) GP ()

AD9133 NAD 83(1999) - 29 41 11.14762(N) 082 16 22.60294(W) AD () B

AD9133 ELLIP H (05/31/01) 10.818 (m) GP () 5 1

AD9133 NAD 83(1990) - 29 41 11.14651(N) 082 16 22.60255(W) AD () B

AD9133 ELLIP H (07/14/97) 10.836 (m) GP () 1 1

AD9133 NAVD 88 (02/17/10) 38.70 (m) 127.0 (f) LEVELING 3

AD9133 NAVD 88 (07/14/97) 38.68 (m) 126.9 (f) GPS OBS

AD9133

AD9133.Superseded values are not recommended for survey control.

AD9133.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AD9133.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD9133

AD9133_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN7683884717(NAD 83)

AD9133

AD9133_MARKER: F = FLANGE-ENCASED ROD

AD9133_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

AD9133_STAMPING: GNV E 1996

AD9133_MARK LOGO: NGS

AD9133_PROJECTION: FLUSH

AD9133_MAGNETIC: N = NO MAGNETIC MATERIAL

AD9133_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AD9133_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AD9133+SATELLITE: SATELLITE OBSERVATIONS - August 03, 2009

AD9133_ROD/PIPE-DEPTH: 12.7 meters

AD9133_SLEEVE-DEPTH : 1.0 meters

AD9133

AD9133 HISTORY - Date Condition Report By

AD9133 HISTORY - 1996 MONUMENTED NGS

AD9133 HISTORY - 19970902 GOOD NGS



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AD9133 HISTORY - 20080125 GOOD WOOLPT
AD9133 HISTORY - 20090710 GOOD FLDEP
AD9133 HISTORY - 20090803 GOOD FLDEP

AD9133

AD9133 STATION DESCRIPTION

AD9133

AD9133'DESCRIBED BY NATIONAL GEODETIC SURVEY 1996 (CFS)

AD9133'THE STATION IS ABOUT 3.5 MI (5.6 KM) NORTHEAST OF GAINESVILLE, AT THE

AD9133'GAINESVILLE REGIONAL AIRPORT, NEAR THE CONTROL TOWER. OWNERSHIP --

AD9133'CITY OF GAINESVILLE, 3400 NE 39TH AVENUE, GAINESVILLE, FL 32609.

AD9133'AIRPORT MANAGER IS GENE CLERKIN, PHONE 904-373-1622. OPERATIONS

AD9133'MANAGER IS TATOM FISHER, PHONE 904-373-0249. TO REACH THE STATION

AD9133'FROM THE INTERSECTION OF STATE HIGHWAY 24 (WALDO ROAD) AND STATE

AD9133'HIGHWAY 222 (NORTHEAST 39TH AVENUE) IN GAINESVILLE, GO SOUTHEAST ON

AD9133'STATE HIGHWAY 222 FOR 0.85 MI (1.37 KM) TO THE AIRPORT ENTRANCE ROAD

AD9133'ON THE LEFT, TURN LEFT AND GO NORTHERLY ON AIRPORT ENTRANCE ROAD FOR

AD9133'0.4 MI (0.6 KM) TO A PAVED ROAD ON THE RIGHT LEADING TO AIR CARGO,

AD9133'EMPLOYEE PARKING, AND FAA CONTROL TOWER (MARKED BY SIGN), TURN RIGHT

AD9133'ON PAVED ROAD AND GO EAST, NORTH, THEN WEST FOLLOWING THE PAVED ROAD

AD9133'FOR 0.2 MI (0.3 KM) TO A GATE 40 ON THE EAST SIDE OF THE TERMINAL

AD9133'BUILDING, PASS THROUGH GATE, TURN RIGHT AND GO EAST ON THE GRASS ALONG

AD9133'A FENCE LINE FOR 0.15 MI (0.24 KM) TO THE STATION ON THE LEFT. THE

AD9133'STATION IS 203.0 FT (61.9 M) NORTH-NORTHWEST OF THE SOUTHEAST CORNER

AD9133'OF A CHAIN LINK FENCE, 193.5 FT (59.0 M) WEST-SOUTHWEST OF A 2 FT (0.6

AD9133'M) BY 2.5 FT (0.8 M) CONCRETE DUCT COVER (FAA C CABLE) , 188.6 FT

AD9133'(57.5 M) NORTHWEST OF THE NORTHWEST CORNER OF THE AIR TRAFFIC CONTROL

AD9133'TOWER, 179.5 FT (54.7 M) NORTH-NORTHEAST OF A EAST-WEST CHAIN LINK

AD9133'FENCE, 94.5 FT (28.8 M) WEST-NORTHWEST OF THE NORTHWEST CORNER OF A

AD9133'CHAIN LINK FENCE, 2.4 FT (0.7 M) SOUTH-SOUTHWEST OF A WITNESS POST.

AD9133'THIS IS THE PRIMARY AIRPORT CONTROL STATION.

AD9133

AD9133 STATION RECOVERY (1997)

AD9133

AD9133'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1997 (AJL)

AD9133'RECOVERED AS DESCRIBED.

AD9133

AD9133 STATION RECOVERY (2008)

AD9133

AD9133'RECOVERY NOTE BY WOOLPERT CONSULTANTS 2008 (JAY)

AD9133'RECOVERED IN GOOD CONDITION.

AD9133

AD9133 STATION RECOVERY (2009)

AD9133

AD9133'RECOVERY NOTE BY FL DEPT OF ENV PRO 2009 (BPJ)

AD9133'RECOVERED AS DESCRIBED.

AD9133

AD9133 STATION RECOVERY (2009)

AD9133

AD9133'RECOVERY NOTE BY FL DEPT OF ENV PRO 2009 (BPJ)

AD9133'RECOVERED AS DESCRIBED IN L27305.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012
AR1397 *****
AR1397 DESIGNATION - H 368
AR1397 PID - AR1397
AR1397 STATE/COUNTY- FL/BRADFORD
AR1397 USGS QUAD - WALDO (1991)
AR1397
AR1397 *CURRENT SURVEY CONTROL
AR1397
AR1397* NAD 83(1986)- 29 51 04. (N) 082 09 25. (W) SCALED
AR1397* NAVD 88 - 42.669 (meters) 139.99 (feet) ADJUSTED
AR1397
AR1397 GEOID HEIGHT- -27.87 (meters) GEOID09
AR1397 DYNAMIC HT - 42.612 (meters) 139.80 (feet) COMP
AR1397 MODELED GRAV- 979,309.7 (mgal) NAVD 88
AR1397 OBS GRAVITY - 979,309.9 (mgal) GRAV_OBS
AR1397
AR1397 VERT ORDER - FIRST CLASS II
AR1397
AR1397.The horizontal coordinates were scaled from a topographic map and have
AR1397.an estimated accuracy of +/- 6 seconds.
AR1397.
AR1397.The orthometric height was determined by differential leveling and
AR1397.adjusted in June 1991.
AR1397
AR1397.The geoid height was determined by GEOID09.
AR1397
AR1397.The dynamic height is computed by dividing the NAVD 88
AR1397.geopotential number by the normal gravity value computed on the
AR1397.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AR1397.degrees latitude (g = 980.6199 gals.).
AR1397
AR1397.The modeled gravity was interpolated from observed gravity values.
AR1397
AR1397.The observed gravity was obtained from relative gravimeter ties
AR1397.to the IGSN71 gravity network.
AR1397
AR1397;
AR1397;SPC FL N - North East Units Estimated Accuracy
AR1397; 96,670. 826,390. MT (+/- 180 meters Scaled)
AR1397
AR1397 SUPERSEDED SURVEY CONTROL
AR1397
AR1397 NGVD 29 (09/01/92) 42.931 (m) 140.85 (f) ADJUSTED 1 2
AR1397
AR1397.Superseded values are not recommended for survey control.
AR1397.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AR1397.[See file dsdata.txt](#) to determine how the superseded data were derived.
AR1397
AR1397_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP882028(NAD 83)
AR1397
AR1397_MARKER: DB = BENCH MARK DISK
AR1397_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
AR1397_SP_SET: STAINLESS STEEL ROD
AR1397_STAMPING: H 368 1979
AR1397_PROJECTION: FLUSH



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AR1397_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AR1397_ROD/PIPE-DEPTH: 4.88 meters

AR1397_

AR1397	HISTORY	- Date	Condition	Report By
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AR1397	HISTORY	- 1979	MONUMENTED	NGS
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AR1397

AR1397 STATION DESCRIPTION

AR1397

AR1397'DESCRIBED BY NATIONAL GEODETIC SURVEY 1979

AR1397'1.55 MI SW FROM HAMPTON.

AR1397'1.55 MILES SOUTHWEST ALONG STATE HIGHWAY 221 FROM THE JUNCTION OF

AR1397'HIGHWAY 221 AND THE RAILROAD TRACKS IN HAMPTON TO THE MAR ON THE

AR1397'RIGHT, 4.1 MILES NORTH OF WALDO, SET BETWEEN POWER POLE AND GUY

AR1397'WIRE, AT THE JUNCTION OF US HIGHWAY 301 AND STATE HIGHWAY 221, 120

AR1397'FEET NORTH OF POWER POLE NUMBER A 114, 100 FEET WEST OF CENTERLINE OF

AR1397'HIGHWAY 221, 62 FEET EAST OF CENTERLINE OF SOUTH BOUND LANES OF

AR1397'HIGHWAY 301, 27.5 FEET SOUTHEAST OF A CONCRETE CULVERT, 5 FEET EAST

AR1397'OF POWER POLE NUMBER A115, 4FEET WEST OF GUY WIRE, 0.85 MILE NORTH

AR1397'OF ALACHUA BRADFORD COUNTY LINE.

AR1397'THE MARK IS 5 FT E FROM A WITNESS POST.

AR1397'THE MARK IS 1 FT BELOW HIGHWAY 301.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2218 *****

BD2218 DESIGNATION - I10 73 A11

BD2218 PID - BD2218

BD2218 STATE/COUNTY- FL/SUWANNEE

BD2218 USGS QUAD - LIVE OAK WEST (1993)

BD2218

BD2218 *CURRENT SURVEY CONTROL

BD2218

BD2218*	NAD 83(1990)-	30 21 05.19244 (N)	083 01 36.19271 (W)	ADJUSTED
BD2218*	NAVD 88	- 52.085 (meters)	170.88 (feet)	ADJUSTED

BD2218

BD2218	LAPLACE CORR-	-0.18 (seconds)	DEFLEC09
BD2218	GEOID HEIGHT-	-28.05 (meters)	GEOID09
BD2218	DYNAMIC HT -	52.017 (meters)	170.66 (feet) COMP
BD2218	MODELED GRAV-	979,338.2 (mgal)	NAVD 88

BD2218

BD2218 HORZ ORDER - SECOND

BD2218 VERT ORDER - SECOND CLASS II

BD2218

BD2218.The horizontal coordinates were established by classical geodetic methods

BD2218.and adjusted by the National Geodetic Survey in May 1991.

BD2218.

BD2218.The orthometric height was determined by differential leveling and

BD2218.adjusted in June 1991.

BD2218

BD2218.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2218

BD2218.The geoid height was determined by GEOID09.

BD2218

BD2218.The dynamic height is computed by dividing the NAVD 88

BD2218.geopotential number by the normal gravity value computed on the

BD2218.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2218.degrees latitude (g = 980.6199 gals.).

BD2218

BD2218.The modeled gravity was interpolated from observed gravity values.

BD2218

BD2218;		North	East	Units	Scale	Factor	Converg.
BD2218;SPC FL N	-	150,719.661	741,637.222	MT	0.99995358	+0 44 25.3	
BD2218;SPC FL N	-	494,486.09	2,433,188.12	sFT	0.99995358	+0 44 25.3	
BD2218;UTM 17	-	3,359,470.443	305,199.931	MT	1.00006816	-1 01 27.9	

BD2218

BD2218!	-	Elev Factor	x	Scale Factor	=	Combined Factor
BD2218!SPC FL N	-	0.99999623	x	0.99995358	=	0.99994981
BD2218!UTM 17	-	0.99999623	x	1.00006816	=	1.00006439

BD2218

BD2218:		Primary Azimuth Mark	Grid Az
BD2218:SPC FL N	-	I10 73 A10	092 38 05.5
BD2218:UTM 17	-	I10 73 A10	094 23 58.7

BD2218

BD2218	-----			
BD2218	PID	Reference Object	Distance	Geod. Az
BD2218				dddmss.s
BD2218	BD2214	I10 73 A10	APPROX. 1.5 KM	0932230.8
BD2218	BD2219	I10 73 A11 RM 1	8.912 METERS	29257



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2218| CW4194 I10 73 A11 RM 2 3.524 METERS 33849 |

BD2218|-----|

BD2218

BD2218 SUPERSEDED SURVEY CONTROL

BD2218

BD2218 NAD 83(1986)- 30 21 05.20337(N) 083 01 36.19754(W) AD() 2

BD2218 NAD 27 - 30 21 04.40944(N) 083 01 36.71752(W) AD() 2

BD2218 NGVD 29 (??/??/92) 52.307 (m) 171.61 (f) ADJ UNCH 2 2

BD2218

BD2218.Superseded values are not recommended for survey control.

BD2218.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2218.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2218

BD2218_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP0519959470(NAD 83)

BD2218

BD2218_MARKER: DD = SURVEY DISK

BD2218_SETTING: 30 = SET IN A LIGHT STRUCTURE

BD2218_SP_SET: MONUMENT

BD2218_STAMPING: I10 73 A11

BD2218_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY

BD2218

HISTORY	- Date	Condition	Report By
HISTORY	- 1975	MONUMENTED	FLDT
HISTORY	- 1975	GOOD	FLDT

BD2218

BD2218 STATION DESCRIPTION

BD2218

BD2218'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1975 (CBM)

BD2218'STATION IS LOCATED ABOUT 4-1/2 MILES NORTHWEST OF LIVE OAK AND

BD2218'ABOUT 16 MILES WEST OF WHITE SPRINGS, AT THE INTERSECTION OF

BD2218'STATE ROUTE 249 AND INTERSTATE ROUTE 10.

BD2218'

BD2218'TO REACH STATION FROM THE SEABOARD COAST LINE RAILROAD STATION

BD2218'IN LIVE OAK. GO NORTH ON U.S. ROUTE 129 FOR 2.9 MILES TO

BD2218'INTERSECTION OF INTERSTATE ROUTE 10. TURN LEFT AND GO WEST ON

BD2218'INTERSTATE ROUTE 10 FOR 4.3 MILES TO THE STATE ROUTE 249 BRIDGE

BD2218'OVER HIGHWAY AND STATION, AT SOUTHEAST CORNER OF THE BRIDGE, ON

BD2218'THE EMBANKMENT. THERE IS NO INTERCHANGE AT THIS INTERSECTION.

BD2218'

BD2218'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION

BD2218'BRASS DISK, STAMPED I10 73 A11, SET IN THE TOP OF A ROUND CONCRETE

BD2218'MONUMENT THAT IS 1 INCH BELOW THE GROUND. IT IS 3.4 FEET EAST OF

BD2218'A METAL GUARDRAIL, 4.8 FEET WEST OF A METAL WITNESS POST, 6.4

BD2218'FEET SOUTH OF THE SOUTHEAST END OF THE CONCRETE BRIDGE GUARDRAIL

BD2218'AND 16.5 FEET EAST OF CENTER OF STATE ROUTE S-249.

BD2218'

BD2218'REFERENCE MARK NUMBER 1 IS A STANDARD FLORIDA, DEPARTMENT OF

BD2218'TRANSPORTATION BRASS DISK, STAMPED I10 73 A11 RM 1, SET IN A

BD2218'DRILL HOLE FLUSH WITH THE TOP SOUTHWEST CONCRETE GUARDRAIL. IT

BD2218'IS 4.8 FEET NORTH OF THE SOUTHWEST END OF THE CONCRETE GUARDRAIL

BD2218'AND 13.8 FEET WEST OF CENTER OF STATE ROUTE S-249.

BD2218'

BD2218'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA, STATE ROAD

BD2218'DEPARTMENT BRASS DISK, STAMPED I10 X12, SET IN A DRILL HOLE

BD2218'FLUSH WITH THE TOP SOUTHEAST CONCRETE GUARDRAIL. IT IS 2.0 FEET



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2218'NORTH OF THE NORTH END OF A METAL GUARDRAIL, 5.2 FEET NORTH OF
BD2218'THE SOUTHEAST END OF THE CONCRETE GUARDRAIL AND 14.0 FEET EAST
BD2218'OF CENTER OF STATE ROUTE S-249.
BD2218'
BD2218'DISTANCE BETWEEN REFERENCE MARK NUMBER 1 AND REFERENCE MARK
BD2218'NUMBER 2 IS 11.000 METERS, OR 36.09 FEET.
BD2218
BD2218 STATION RECOVERY (1975)
BD2218
BD2218'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1975
BD2218'6.7 MI NW FROM LIVE OAK.
BD2218'FROM THE CITY HALL IN LIVE OAK. GO NORTHEAST ON U.S. ROUTE 129 FOR
BD2218'2.5 MILES TO INTERSTATE ROUTE 10, THEN WEST ON INTERSTATE ROUTE 10 FOR
BD2218'4.2 MILES TO STATE ROUTE S-249 BRIDGE OVER INTERSTATE ROUTE 10 AND
BD2218'STATION MARK. WHICH IS SET IN THE TOP OF A ROUND CONCRETE MONUMENT
BD2218'THAT IS 1 INCH BELOW THE GROUND. IT IS 3.4 FEET EAST OF A METAL
BD2218'GUARDRAIL, 4.8 FEET WEST OF A METAL WITNESS POST, 6.4 FEET SOUTH OF
BD2218'THE SOUTHEAST END OF THE CONCRETE BRIDGE GUARDRAIL AND 16.5 FEET EAST
BD2218'OF CENTERLINE OF STATE ROUTE S-249. SECTION 33, T 1S, R 13E.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2237 *****

BD2237 DESIGNATION - I10 73 A17

BD2237 PID - BD2237

BD2237 STATE/COUNTY- FL/SUWANNEE

BD2237 USGS QUAD - LIVE OAK WEST (1993)

BD2237

BD2237 *CURRENT SURVEY CONTROL

BD2237

BD2237*	NAD 83(1990)-	30 20	38.11571(N)	083 05	23.71726(W)	ADJUSTED
BD2237*	NAVD 88	-	37.384 (meters)		122.65 (feet)	ADJUSTED

BD2237

BD2237	LAPLACE CORR-	-0.24 (seconds)				DEFLEC09
BD2237	GEOID HEIGHT-	-28.04 (meters)				GEOID09
BD2237	DYNAMIC HT -	37.335 (meters)		122.49 (feet)		COMP
BD2237	MODELED GRAV-	979,338.3 (mgal)				NAVD 88

BD2237

BD2237 HORZ ORDER - SECOND

BD2237 VERT ORDER - SECOND CLASS II

BD2237

BD2237.The horizontal coordinates were established by classical geodetic methods

BD2237.and adjusted by the National Geodetic Survey in May 1991.

BD2237.

BD2237.The orthometric height was determined by differential leveling and

BD2237.adjusted in June 1991.

BD2237

BD2237.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2237

BD2237.The geoid height was determined by GEOID09.

BD2237

BD2237.The dynamic height is computed by dividing the NAVD 88

BD2237.geopotential number by the normal gravity value computed on the

BD2237.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2237.degrees latitude (g = 980.6199 gals.).

BD2237

BD2237.The modeled gravity was interpolated from observed gravity values.

BD2237

BD2237;		North	East	Units	Scale	Factor	Converg.
BD2237;SPC FL N	-	149,809.134	735,571.847	MT	0.99995317		+0 42 31.0
BD2237;SPC FL N	-	491,498.80	2,413,288.63	sFT	0.99995317		+0 42 31.0
BD2237;UTM 17	-	3,358,747.046	299,108.604	MT	1.00009790		-1 03 22.2

BD2237

BD2237!	-	Elev Factor	x	Scale Factor	=	Combined Factor
BD2237!SPC FL N	-	0.99999853	x	0.99995317	=	0.99995170
BD2237!UTM 17	-	0.99999853	x	1.00009790	=	1.00009643

BD2237

BD2237:		Primary Azimuth Mark		Grid Az
BD2237:SPC FL N	-	I10 73 A18		292 20 36.0
BD2237:UTM 17	-	I10 73 A18		294 06 29.2

BD2237

BD2237	-----				
BD2237	PID	Reference Object	Distance	Geod. Az	
BD2237				dddmss.s	
BD2237	CW4196	I10 73 A17 RM 2	2.661 METERS	21802	
BD2237	BD0762	I10 73 A17 RM 1	11.292 METERS	23249	



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2237| BD0751 I10 73 A18 APPROX. 1.0 KM 2930307.0 |

BD2237|-----|

BD2237

BD2237 SUPERSEDED SURVEY CONTROL

BD2237

BD2237 NAD 83(1986)- 30 20 38.12657(N) 083 05 23.72199(W) AD() 2

BD2237 NAD 27 - 30 20 37.33521(N) 083 05 24.23671(W) AD() 2

BD2237 NGVD 29 (??/??/92) 37.605 (m) 123.38 (f) ADJ UNCH 2 2

BD2237

BD2237.Superseded values are not recommended for survey control.

BD2237.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2237.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2237

BD2237 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP9910858747(NAD 83)

BD2237

BD2237 MARKER: DD = SURVEY DISK

BD2237 SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD2237 SP_SET: SET IN TOP OF CONCRETE MONUMENT

BD2237 STAMPING: I10 73 A17

BD2237 STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD2237+STABILITY: SURFACE MOTION

BD2237

HISTORY	- Date	Condition	Report By
BD2237	HISTORY - 1973	MONUMENTED	FLDT
BD2237	HISTORY - 1974	GOOD	FLDT
BD2237	HISTORY - 1975	GOOD	NGS

BD2237

BD2237 STATION DESCRIPTION

BD2237

BD2237'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1973 (CBM)

BD2237'STATION IS LOCATED ABOUT 7.0 MILES NORTHWEST OF LIVE OAK, ABOUT 3-3/4

BD2237'MILES SOUTHEAST OF FALMOUTH AND ABOUT 5-3/4 MILES NORTHEAST OF

BD2237'NEWBURN.

BD2237'

BD2237'TO REACH STATION FROM THE INTERSECTION OF U.S. ROUTE 90 AND STATE

BD2237'ROUTE 51 IN LIVE OAK, GO NORTHWEST ON U.S. ROUTE 90 FOR 7.1 MILES TO

BD2237'INTERSECTION OF U.S. ROUTE 90 AND INTERSTATE ROUTE 10 AND STATION.

BD2237'WHICH IS LOCATED AT NORTHEAST END OF INTERSTATE ROUTE 10 BRIDGE

BD2237'OVER U.S. ROUTE 90 AND SEABOARD COASTLINE RAIL ROAD TRACKS.

BD2237'

BD2237'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION

BD2237'BRASS DISK, STAMPED I10 73 A17, SET IN THE TOP OF A ROUND CONCRETE

BD2237'MONUMENT THAT IS 12 INCHES BELOW THE GROUND. IT IS 3.7 FEET

BD2237'NORTH-NORTHEAST OF NORTHEAST END OF NORTHWEST GUARDRAIL OF WESTBOUND

BD2237'LANE BRIDGE, 4.0 FEET WEST-NORTHWEST OF A METAL GUARDRAIL, 5.0

BD2237'FEET EAST-NORTHEAST OF METAL WITNESS POST AND 30.0 FEET

BD2237'WEST-NORTHWEST OF CENTER OF INTERSTATE ROUTE 10 WESTBOUND

BD2237'LANE.

BD2237'

BD2237'REFERENCE MARK NUMBER 1 IS A STANDARD FLORIDA, DEPARTMENT OF

BD2237'TRANSPORTATION BRASS DISK, STAMPED I10 73 A17 RM NO 1, SET IN DRILL

BD2237'HOLE IN BRIDGE GUARDRAIL, PROJECTING ABOUT 1/2 INCHES. IT IS 24.0

BD2237'FEET NORTHWEST OF BRIDGE EXPANSION JOINT, 27.4 FEET NORTHWEST OF

BD2237'CENTER OF INTERSTATE ROUTE 10 WESTBOUND LANE AND 33.6 FEET

BD2237'SOUTHWEST OF NORTHEAST END OF NORTHWEST GUARDRAIL OF INTERSTATE



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2237'ROUTE 10 WESTBOUND LANE BRIDGE.

BD2237'

BD2237'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA, STATE ROAD DEPARTMENT
BD2237'OF TRANSPORTATION BRASS DISK, STAMPED I10 B6, SET FLUSH IN DRILL
BD2237'HOLE IN BRIDGE GUARDRAIL. IT IS 1.6 FEET SOUTH-SOUTHWEST OF SOUTH
BD2237'END OF METAL GUARDRAIL, 5.0 FEET SOUTHEAST OF NORTHWEST END OF
BD2237'NORTHWEST GUARDRAIL OF INTERSTATE ROUTE 10 WESTBOUND LANE
BD2237'BRIDGE, 8.9 FEET SOUTHEAST OF METAL WITNESS POST AND 27.4 FEET
BD2237'NORTHWEST OF CENTER OF INTERSTATE ROUTE 10 WESTBOUND LANE.

BD2237'

BD2237'DISTANCE BETWEEN REFERENCE MARK NUMBER 1 AND REFERENCE MARK NUMBER 2
BD2237'IS 8.743 METERS, OR 28.68 FEET.

BD2237

BD2237

STATION RECOVERY (1974)

BD2237

BD2237'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1974

BD2237'7.1 MI NW FROM LIVE OAK.

BD2237'FROM THE INTERSECTION OF U.S. ROUTE 90 AND U.S. ROUTE 129 IN LIVE OAK,
BD2237'GO NORTHWEST ON U.S. ROUTE 90 FOR ABOUT 7.1 MILES TO INTERSECTION OF
BD2237'INTERSTATE ROUTE 10 AND THE STATION MARK. WHICH IS SET IN THE TOP OF
BD2237'A ROUND CONCRETE MONUMENT THAT IS 12 INCHES BELOW THE GROUND. IT IS
BD2237'3.7 FEET NORTH-NORTHEAST OF NORTHEAST END OF THE NORTHWEST CONCRETE
BD2237'GUARDRAIL OF INTERSTATE ROUTE 10 WESTBOUND BRIDGE OVER U.S. ROUTE 90,
BD2237'4.0 FEET WEST-NORTHWEST OF A METAL GUARDWALL, 5.0 FEET EAST-NORTHEAST
BD2237'OF A METAL WITNESS POST AND 30.0 FEET WEST-NORTHWEST OF CENTER OF
BD2237'INTERSTATE ROUTE 10 WESTBOUND LANE. SECTION 2, T 2S, R 12E.

BD2237

BD2237

STATION RECOVERY (1975)

BD2237

BD2237'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975 (CBM)

BD2237'RECOVERED AS DESCRIBED BY G. FLAVIN IN 1973.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0406 *****

BD0406 DESIGNATION - I10 73 C31

BD0406 PID - BD0406

BD0406 STATE/COUNTY- FL/MADISON

BD0406 USGS QUAD - GREENVILLE NE (1993)

BD0406

BD0406 *CURRENT SURVEY CONTROL

BD0406

BD0406*	NAD 83(1994)	-	30 25	49.24937 (N)	083 34	46.14205 (W)	ADJUSTED
BD0406*	NAVD 88	-		34.527 (meters)		113.28 (feet)	ADJUSTED

BD0406

BD0406	LAPLACE CORR-		-1.03 (seconds)				DEFLEC09
BD0406	GEOID HEIGHT-		-27.72 (meters)				GEOID09
BD0406	DYNAMIC HT -		34.483 (meters)		113.13 (feet)		COMP
BD0406	MODELED GRAV-		979,352.2 (mgal)				NAVD 88

BD0406

BD0406 HORZ ORDER - SECOND

BD0406 VERT ORDER - SECOND CLASS II

BD0406

BD0406.The horizontal coordinates were established by classical geodetic methods

BD0406.and adjusted by the National Geodetic Survey in September 1997.

BD0406.

BD0406.The orthometric height was determined by differential leveling and

BD0406.adjusted in June 1991.

BD0406

BD0406.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0406

BD0406.The geoid height was determined by GEOID09.

BD0406

BD0406.The dynamic height is computed by dividing the NAVD 88

BD0406.geopotential number by the normal gravity value computed on the

BD0406.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0406.degrees latitude (g = 980.6199 gals.).

BD0406

BD0406.The modeled gravity was interpolated from observed gravity values.

BD0406

BD0406;		North	East	Units	Scale	Factor	Converg.
BD0406;SPC FL N	-	158,908.428	688,426.865	MT	0.99995893	+0 27 45.3	
BD0406;SPC FL N	-	521,352.07	2,258,613.81	sFT	0.99995893	+0 27 45.3	
BD0406;UTM 17	-	3,369,298.662	252,254.126	MT	1.00035726	-1 18 25.7	

BD0406

BD0406!	-	Elev Factor	x	Scale Factor	=	Combined Factor
BD0406!SPC FL N	-	0.99999893	x	0.99995893	=	0.99995786
BD0406!UTM 17	-	0.99999893	x	1.00035726	=	1.00035619

BD0406

BD0406:		Primary Azimuth Mark		Grid Az
BD0406:SPC FL N	-	I10 73 C30		087 49 15.1
BD0406:UTM 17	-	I10 73 C30		089 35 26.1

BD0406

BD0406	-----				
BD0406	PID	Reference Object	Distance	Geod. Az	
BD0406				dddmss.s	
BD0406	BD0409	I10 73 C30	APPROX. 1.0 KM	0881700.4	
BD0406	BD0407	I10 73 C31 RM 1	18.243 METERS	13851	



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0406| BD0405 I10 73 C31 RM 2 15.648 METERS 21244 |

BD0406|-----|

BD0406

BD0406 SUPERSEDED SURVEY CONTROL

BD0406

BD0406 NAD 83(1990)- 30 25 49.24266(N) 083 34 46.14642(W) AD() 2

BD0406 NAD 83(1986)- 30 25 49.25121(N) 083 34 46.15063(W) AD() 2

BD0406 NAD 27 - 30 25 48.49391(N) 083 34 46.60271(W) AD() 2

BD0406 NGVD 29 (??/??/92) 34.742 (m) 113.98 (f) ADJ UNCH 2 2

BD0406

BD0406.Superseded values are not recommended for survey control.

BD0406.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0406.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0406

BD0406_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP5225469298(NAD 83)

BD0406

BD0406_MARKER: DD = SURVEY DISK

BD0406_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0406_SP_SET: SET IN TOP OF CONCRETE MONUMENT

BD0406_STAMPING: I10 73 C31

BD0406_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0406+STABILITY: SURFACE MOTION

BD0406

HISTORY	- Date	Condition	Report By
HISTORY	- 1973	MONUMENTED	FLDT
HISTORY	- 1974	GOOD	FLDT
HISTORY	- 20091123	GOOD	FLDT

BD0406

BD0406 STATION DESCRIPTION

BD0406

BD0406'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1973 (CBM)

BD0406'STATION IS LOCATED ABOUT 10-1/4 MILES WEST-SOUTHWEST OF MADISON

BD0406'AND ABOUT 4-1/2 MILES SOUTHEAST OF GREENVILLE.

BD0406'

BD0406'TO REACH STATION FROM THE MADISON COUNTY COURTHOUSE IN MADISON.

BD0406'GO SOUTH ON STATE ROUTE 14 FOR 4.0 MILES TO INTERSECTION OF

BD0406'STATE ROUTE 14 AND INTERSTATE ROUTE 10. TURN RIGHT AND GO WEST ON

BD0406'INTERSTATE ROUTE 10 FOR 7.70 MILES TO STATION. WHICH IS LOCATED

BD0406'ON SOUTH SIDE OF INTERSTATE ROUTE 10 EASTBOUND LANE ON CREST OF

BD0406'HILL.

BD0406'

BD0406'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION

BD0406'BRASS DISK, STAMPED I10 73 C31, SET IN TOP OF ROUND CONCRETE

BD0406'MONUMENT THAT IS 6 INCHES BELOW THE GROUND. IT IS 45.7 FEET NORTH

BD0406'OF A METAL WITNESS POST, 46.5 FEET NORTH OF RIGHT-OF-WAY AND 59.5

BD0406'FEET SOUTH OF CENTER OF INTERSTATE ROUTE 10 EASTBOUND LANE.

BD0406'

BD0406'REference mark number 1 is a standard Florida, Department of

BD0406'Transportation brass disk, stamped I10 73 C31 RM NO 1, set in top

BD0406'of a round concrete monument that is 4 inches below the ground.

BD0406'It is 1.8 feet north of a metal witness post, 2.5 feet north

BD0406'of right-of-way fence, 103 feet south of center of interstate

BD0406'route 10 eastbound lane and 135.6 feet west of center one of

BD0406'triple fence brace posts.

BD0406'



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0406'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA, DEPARTMENT OF
BD0406'TRANSPORTATION BRASS DISK, STAMPED I10 73 C31 RM NO 2, SET IN TOP
BD0406'OF A ROUND CONCRETE MONUMENT THAT IS 4 INCHES BELOW THE GROUND.
BD0406'IT IS 1.4 FEET NORTH OF A METAL WITNESS POST, 2.0 FEET NORTH OF
BD0406'RIGHT-OF-WAY FENCE AND 103.5 FEET SOUTH OF CENTER OF INTERSTATE
BD0406'ROUTE 10 EASTBOUND LANE.

BD0406'

BD0406'DISTANCE BETWEEN REFERENCE MARK NUMBER 1 AND REFERENCE MARK NUMBER 2
BD0406'IS 20.474 METERS, OR 67.17 FEET.

BD0406

BD0406

STATION RECOVERY (1974)

BD0406

BD0406'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1974

BD0406'5.4 MI SE FROM GREENVILLE.

BD0406'FROM THE INTERSECTION OF U.S. ROUTE 90 AND U.S. ROUTE 221 IN
BD0406'GREENVILLE, PROCEED SOUTH ON U.S. ROUTE 221 FOR 2.5 MILES TO
BD0406'INTERSECTION OF INTERSTATE ROUTE 10, THEN EAST ON INTERSTATE
BD0406'ROUTE 10 FOR 2.9 MILES AND STATION MARK, WHICH IS SET IN THE
BD0406'TOP OF A ROUND CONCRETE MONUMENT THAT IS 6 INCHES BELOW THE
BD0406'GROUND, ON THE SOUTH SIDE OF INTERSTATE ROUTE 10. IT IS 45.7
BD0406'FEET NORTH OF A METAL WITNESS POST, 46.5 FEET NORTH OF
BD0406'RIGHT-OF-WAY FENCE AND 59.5 FEET SOUTH OF CENTERLINE OF
BD0406'INTERSTATE ROUTE 10 EASTBOUND LANE. SECTION 1, T 1S, R 7E.

BD0406

BD0406

STATION RECOVERY (2009)

BD0406

BD0406'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2009 (RH)

BD0406'TO EP OF I-10, N10E, 35.8 . TO METAL WITNESS POST, S10W, 1 . TO

BD0406'WESTERLY WOOD BRACE POST, S48E, 81.4 . TO 16 CHERRY, S2W, 31.5 . TO

BD0406'16 PINE, S80E, 123.1 .



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0364 *****

BD0364 DESIGNATION - I10 73 C34

BD0364 PID - BD0364

BD0364 STATE/COUNTY- FL/MADISON

BD0364 USGS QUAD - GREENVILLE (1993)

BD0364

BD0364 *CURRENT SURVEY CONTROL

BD0364

BD0364*	NAD 83(2007)-	30 25	59.96471 (N)	083 37	34.83154 (W)	ADJUSTED
BD0364*	NAVD 88	-	35.547 (meters)	116.62	(feet)	ADJUSTED

BD0364

BD0364	EPOCH DATE	-	2002.00			
BD0364	X	-	611,019.982 (meters)			COMP
BD0364	Y	-	-5,470,067.603 (meters)			COMP
BD0364	Z	-	3,211,887.360 (meters)			COMP
BD0364	LAPLACE CORR-		-0.66 (seconds)			DEFLEC09
BD0364	ELLIP HEIGHT-		7.829 (meters)	(02/10/07)		ADJUSTED
BD0364	GEOID HEIGHT-		-27.69 (meters)			GEOID09
BD0364	DYNAMIC HT	-	35.501 (meters)	116.47	(feet)	COMP

BD0364

BD0364 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD0364	Type	PID	Designation	North	East	Ellip
BD0364	NETWORK	BD0364	I10 73 C34	1.16	1.16	2.06

BD0364

BD0364 MODELED GRAV- 979,353.8 (mgal) NAVD 88

BD0364

BD0364 VERT ORDER - SECOND CLASS II

BD0364

BD0364.The horizontal coordinates were established by GPS observations

BD0364.and adjusted by the National Geodetic Survey in February 2007.

BD0364

BD0364.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD0364.See [National Readjustment](#) for more information.

BD0364

BD0364.The horizontal coordinates are valid at the epoch date displayed above

BD0364.which is a decimal equivalence of Year/Month/Day.

BD0364

BD0364.The orthometric height was determined by differential leveling and

BD0364.adjusted in June 1991.

BD0364

BD0364.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD0364

BD0364.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0364

BD0364.The ellipsoidal height was determined by GPS observations

BD0364.and is referenced to NAD 83.

BD0364

BD0364.The geoid height was determined by GEOID09.

BD0364

BD0364.The dynamic height is computed by dividing the NAVD 88

BD0364.geopotential number by the normal gravity value computed on the

BD0364.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0364.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0364

BD0364.The modeled gravity was interpolated from observed gravity values.

BD0364

BD0364;		North	East	Units	Scale Factor	Converg.
BD0364;SPC FL N	-	159,202.961	683,923.123	MT	0.99995917	+0 26 20.5
BD0364;SPC FL N	-	522,318.38	2,243,837.78	sFT	0.99995917	+0 26 20.5
BD0364;UTM 17	-	3,369,732.334	247,759.778	MT	1.00038499	-1 19 51.7

BD0364

BD0364! - Elev Factor x Scale Factor = Combined Factor

BD0364!SPC FL N - 0.99999877 x 0.99995917 = 0.99995794

BD0364!UTM 17 - 0.99999877 x 1.00038499 = 1.00038376

BD0364

BD0364:		Primary Azimuth Mark	Grid Az
BD0364:SPC FL N	-	I10 73 C33	096 09 31.9
BD0364:UTM 17	-	I10 73 C33	097 55 44.1

BD0364

BD0364	PID	Reference Object	Distance	Geod. Az
BD0364				dddmss.s
BD0364	BD0400	I10 73 C33	APPROX. 2.2 KM	0963552.4
BD0364	BD0363	I10 73 C34 RM 1	11.116 METERS	09948
BD0364	BD0362	I10 73 C34 RM 2	6.264 METERS	29504

BD0364

BD0364

SUPERSEDED SURVEY CONTROL

BD0364

BD0364	NAD 83(1999)-	30 25 59.96487(N)	083 37 34.83134(W)	AD()	1
BD0364	ELLIP H (07/06/01)	7.816 (m)		GP()	4 2
BD0364	NAD 83(1990)-	30 25 59.96450(N)	083 37 34.83151(W)	AD()	1
BD0364	ELLIP H (02/28/94)	7.940 (m)		GP()	3 2
BD0364	NAD 83(1990)-	30 25 59.96043(N)	083 37 34.83550(W)	AD()	2
BD0364	NAD 83(1986)-	30 25 59.96860(N)	083 37 34.83962(W)	AD()	2
BD0364	NAD 27	30 25 59.21395(N)	083 37 35.28602(W)	AD()	2
BD0364	NAVD 88 (02/28/94)	35.55 (m)	116.6 (f)	LEVELING	3
BD0364	NGVD 29 (??/??/92)	35.761 (m)	117.33 (f)	ADJ UNCH	2 2

BD0364

BD0364.Superseded values are not recommended for survey control.

BD0364.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0364.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0364

BD0364_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP4775969732(NAD 83)

BD0364

BD0364_MARKER: DD = SURVEY DISK

BD0364_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0364_SP_SET: CONCRETE POST

BD0364_STAMPING: I 10 73 C 34

BD0364_MARK LOGO: FLDT

BD0364_MAGNETIC: N = NO MAGNETIC MATERIAL

BD0364_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0364+STABILITY: SURFACE MOTION

BD0364_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD0364+SATELLITE: SATELLITE OBSERVATIONS - November 12, 1992

BD0364

BD0364 HISTORY - Date Condition Report By

BD0364 HISTORY - 1973 MONUMENTED FLDT



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0364 HISTORY - 1974 GOOD NGS
BD0364 HISTORY - 19921112 GOOD FLDT

BD0364

BD0364

BD0364

STATION DESCRIPTION

BD0364

BD0364'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1973 (CBM)

BD0364'STATION IS LOCATED ABOUT 13 MILES WEST-SOUTHWEST OF MADISON AND

BD0364'ABOUT 2-1/2 MILES SOUTHWEST OF GREENVILLE.

BD0364'

BD0364'TO REACH STATION FROM THE INTERSECTION OF U.S. ROUTE 90 AND U.S.

BD0364'ROUTE 221 IN GREENVILLE. GO SOUTH ON U.S. ROUTE 221 FOR 2.5 MILES

BD0364'TO INTERSECTION OF U.S. ROUTE 221 AND INTERSTATE ROUTE 10 AND

BD0364'STATION. WHICH IS LOCATED AT THE SOUTHEAST CORNER OF INTERSTATE

BD0364'ROUTE 10 EASTBOUND LANE BRIDGE OVER U.S. ROUTE 221.

BD0364'

BD0364'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION

BD0364'BRASS DISK, STAMPED I10 73 C34, SET IN TOP OF A ROUND CONCRETE

BD0364'MONUMENT THAT IS 6 INCHES BELOW THE GROUND. IT IS 3.1 FEET NORTH

BD0364'OF A METAL WITNESS POST, 5.4 FEET SOUTH OF A METAL GUARDRAIL, 12.8

BD0364'FEET EAST-SOUTHEAST OF SOUTHEAST CORNER OF BRIDGE GUARDRAIL AND

BD0364'28.2 FEET SOUTH OF CENTER OF INTERSTATE ROUTE 10 EASTBOUND

BD0364'LANE.

BD0364'

BD0364'REFERENCE MARK NUMBER 1 IS A STANDARD FLORIDA, DEPARTMENT OF

BD0364'TRANSPORTATION BRASS DISK, STAMPED I10 73 C34 RM NO 1, SET IN TOP

BD0364'OF A ROUND CONCRETE MONUMENT THAT IS 6 INCHES BELOW THE GROUND.

BD0364'IT IS 1.6 FEET NORTH OF METAL WITNESS POST, 4.7 FEET SOUTH OF A

BD0364'METAL GUARDRAIL, 29.0 FEET SOUTH OF CENTER OF INTERSTATE ROUTE 10

BD0364'EASTBOUND LANE AND 48.3 FEET EAST OF SOUTHEAST CORNER OF

BD0364'CONCRETE GUARDRAIL OF BRIDGE.

BD0364'

BD0364'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA, DEPARTMENT OF

BD0364'TRANSPORTATION BRASS DISK, STAMPED I10 73 C34 RM NO 2, SET FLUSH IN

BD0364'DRILL HOLE IN CONCRETE BRIDGE GUARDRAIL. IT IS 0.6 FOOT EAST OF

BD0364'AN EXPANSION JOINT, 8.5 FEET WEST OF SOUTHEAST END OF GUARDRAIL

BD0364'AND 22.2 FEET SOUTH OF CENTER OF INTERSTATE ROUTE 10 EASTBOUND

BD0364'LANE.

BD0364'

BD0364'DISTANCE BETWEEN REFERENCE MARK NUMBER 1 AND REFERENCE MARK NUMBER 2

BD0364'IS 17.234 METERS, OR 56.54 FEET.

BD0364

BD0364

STATION RECOVERY (1974)

BD0364

BD0364'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1974

BD0364'2.5 MI S FROM GREENVILLE.

BD0364'FROM THE INTERSECTION OF U.S. ROUTE 90 AND U.S. ROUTE 221 IN

BD0364'GREENVILLE, PROCEED SOUTH ON U.S. ROUTE 221 FOR 2.5 MILES TO

BD0364'INTERSTATE ROUTE 10 OVERPASS, OVER U.S. ROUTE 221 AND STATION

BD0364'MARK, WHICH IS SET IN THE TOP OF A ROUND CONCRETE MONUMENT THAT

BD0364'IS 6 INCHES BELOW THE GROUND, NEAR THE SOUTHEAST CORNER OF

BD0364'INTERSTATE ROUTE 10 EASTBOUND OVERPASS. IT IS 3.1 FEET NORTH

BD0364'OF A MEATL WITNESS POST, 5.4 FEET SOUTH OF A METAL GUARDRAIL,

BD0364'12.8 FEET EAST-SOUTHEAST OF THE SOUTHEAST END OF CONCRETE

BD0364'GUARDRAIL OF OVERPASS AND 28.2 FEET SOUTH OF CENTERLINE OF

BD0364'INTERSTATE ROUTE 10 EASTBOUND LANE. SECTION 4, T1S, R7E.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0364

BD0364

STATION RECOVERY (1992)

BD0364

BD0364'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1992

BD0364'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0338 *****

BD0338 DESIGNATION - I10 73 C39

BD0338 PID - BD0338

BD0338 STATE/COUNTY- FL/JEFFERSON

BD0338 USGS QUAD - GREENVILLE (1993)

BD0338

BD0338 *CURRENT SURVEY CONTROL

BD0338

BD0338*	NAD 83(1990)-	30 26	43.59981(N)	083 43	30.11451(W)	ADJUSTED
BD0338*	NAVD 88	-	24.499 (meters)		80.38 (feet)	ADJUSTED

BD0338

BD0338	LAPLACE CORR-	-0.30 (seconds)			DEFLEC09
BD0338	GEOID HEIGHT-	-27.67 (meters)			GEOID09
BD0338	DYNAMIC HT -	24.468 (meters)		80.28 (feet)	COMP
BD0338	MODELED GRAV-	979,354.7 (mgal)			NAVD 88

BD0338

BD0338 HORZ ORDER - SECOND

BD0338 VERT ORDER - SECOND CLASS II

BD0338

BD0338.The horizontal coordinates were established by classical geodetic methods

BD0338.and adjusted by the National Geodetic Survey in May 1991.

BD0338.

BD0338.The orthometric height was determined by differential leveling and

BD0338.adjusted in June 1991.

BD0338

BD0338.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0338

BD0338.The geoid height was determined by GEOID09.

BD0338

BD0338.The dynamic height is computed by dividing the NAVD 88

BD0338.geopotential number by the normal gravity value computed on the

BD0338.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0338.degrees latitude (g = 980.6199 gals.).

BD0338

BD0338.The modeled gravity was interpolated from observed gravity values.

BD0338

BD0338;		North	East	Units	Scale	Factor	Converg.
BD0338;SPC FL N	-	160,478.053	674,434.063	MT	0.99996017	+0 23 22.0	
BD0338;SPC FL N	-	526,501.75	2,212,705.76	sFT	0.99996017	+0 23 22.0	
BD0338;UTM 17	-	3,371,300.716	238,310.346	MT	1.00044491	-1 22 53.8	

BD0338

BD0338!	-	Elev Factor	x	Scale Factor	=	Combined Factor
BD0338!SPC FL N	-	1.00000050	x	0.99996017	=	0.99996067
BD0338!UTM 17	-	1.00000050	x	1.00044491	=	1.00044541

BD0338

BD0338:		Primary Azimuth Mark		Grid Az
BD0338:SPC FL N	-	I10 73 C38		089 47 26.4
BD0338:UTM 17	-	I10 73 C38		091 33 42.2

BD0338

BD0338|-----|

BD0338	PID	Reference Object	Distance	Geod. Az
BD0338				dddmms.s
BD0338	BD0336	I10 73 C39 RM 1	4.683 METERS	04901
BD0338	BD0341	I10 73 C38	APPROX. 1.5 KM	0901048.4



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0338| BD0337 I10 73 C39 RM 2 14.198 METERS 15214 |

BD0338|-----|

BD0338

BD0338 SUPERSEDED SURVEY CONTROL

BD0338

BD0338 NAD 83(1986)- 30 26 43.60746(N) 083 43 30.11847(W) AD() 2

BD0338 NAD 27 - 30 26 42.86009(N) 083 43 30.55228(W) AD() 2

BD0338 NGVD 29 (??/??/92) 24.716 (m) 81.09 (f) ADJ UNCH 2 2

BD0338

BD0338.Superseded values are not recommended for survey control.

BD0338.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0338.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0338

BD0338_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP3831071300(NAD 83)

BD0338

BD0338_MARKER: DD = SURVEY DISK

BD0338_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0338_SP_SET: SET IN TOP OF CONCRETE MONUMENT

BD0338_STAMPING: I10 73 C39

BD0338_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0338+STABILITY: SURFACE MOTION

BD0338_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD0338+SATELLITE: SATELLITE OBSERVATIONS - March 12, 2009

BD0338

HISTORY	- Date	Condition	Report By
HISTORY	- 1973	MONUMENTED	FLDT
HISTORY	- 1974	GOOD	FLDT
HISTORY	- 20090312	GOOD	SESMC

BD0338

BD0338 STATION DESCRIPTION

BD0338

BD0338'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1973 (CBM)

BD0338'STATION IS LOCATED ABOUT 5-3/4 MILES SOUTHWEST OF GREENVILLE,

BD0338'ABOUT 3 MILES SOUTHEAST OF AUCILLA AT THE MADISON-JEFFERSON COUNTY

BD0338'LINE.

BD0338'

BD0338'TO REACH STATION FROM THE INTERSECTION OF U.S. ROUTE 90 AND

BD0338'U.S. ROUTE 221 IN GREENVILLE. GO SOUTH ON U.S. ROUTE 221 FOR 2.5

BD0338'MILES TO INTERSECTION OF U.S. ROUTE 221 AND INTERSTATE ROUTE 10.

BD0338'TURN RIGHT AND GO WEST ON INTERSTATE ROUTE 10 FOR 5.90 MILES TO

BD0338'INTERSTATE ROUTE 10 BRIDGE OVER THE AUCILLA RIVER AT THE

BD0338'MADISON-JEFFERSON COUNTY LINE AND STATION. WHICH IS LOCATED IN

BD0338'MEDIAN AT WEST END OF BRIDGE.

BD0338'

BD0338'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION

BD0338'BRASS DISK, STAMPED I10 73 C39, SET IN THE TOP OF A ROUND CONCRETE

BD0338'MONUMENT THAT IS 7 INCHES BELOW THE GROUND. IT IS 7.3 FEET WEST OF

BD0338'A METAL GUARDRAIL BETWEEN BRIDGES, 7.5 FEET WEST-SOUTHWEST OF A

BD0338'METAL WITNESS POST, 10.7 FEET SOUTH OF CURB OF INTERSTATE ROUTE

BD0338'10 WESTBOUND LANE AND 29.0 FEET SOUTH OF CENTER OF INTERSTATE

BD0338'ROUTE 10 WESTBOUND LANE.

BD0338'

BD0338'REFERENCE MARK NUMBER 1 IS A STANDARD FLORIDA, DEPARTMENT OF

BD0338'TRANSPORTATION BRASS DISK, STAMPED I10 73 C39 RM NO 1, SET FLUSH IN

BD0338'DRILL HOLE IN TOP OF CONCRETE BRIDGE GUARDRAIL, 5.4 FEET EAST OF



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0338'SOUTHWEST END OF CONCRETE GUARDRAIL, 1.0 FOOT WEST OF AN EXPANSION
BD0338'JOINT AND 18.5 FEET SOUTH OF CENTER OF INTERSTATE ROUTE 10
BD0338'WESTBOUND LANE.
BD0338'
BD0338'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA, DEPARTMENT OF
BD0338'TRANSPORTATION BRASS DISK, STAMPED I10 73 C39 RM NO 2, SET FLUSH IN
BD0338'A DRILL HOLE IN CONCRETE BRIDGE GUARDRAIL. IT IS 1.4 FEET EAST OF
BD0338'NORTHWEST END OF CONCRETE GUARDRAIL, 2.8 FEET EAST OF A METAL
BD0338'GUARDRAIL BETWEEN BRIDGES AND 18.8 FEET NORTH OF CENTER OF
BD0338'INTERSTATE ROUTE 10 EASTBOUND LANE.
BD0338'
BD0338'DISTANCE BETWEEN REFERENCE MARK NUMBER 1 AND REFERENCE MARK NUMBER 2
BD0338'IS 15.932 METERS, OR 52.29 FEET.
BD0338
BD0338 STATION RECOVERY (1974)
BD0338
BD0338'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1974
BD0338'8.3 MI SW FROM GREENVILLE.
BD0338'FROM THE INTERSECTION OF U.S. ROUTE 90 AND U.S. ROUTE 221 IN
BD0338'GREENVILLE, PROCEED SOUTH ON U.S. ROUTE 221 FOR 2.5 MILES TO
BD0338'INTERSECTION OF INTERSTATE ROUTE 10, THEN WEST ON INTERSTATE
BD0338'ROUTE 10 FOR 5.8 MILES TO INTERSTATE ROUTE 10 BRIDGE OVER AUCILLA
BD0338'RIVER AND STATION MARK, WHICH IS SET IN THE TOP OF A ROUND
BD0338'CONCRETE MONUMENT THAT IS 7 INCHES BELOW THE GROUND, IN THE MEDIAN
BD0338'OF INTERSTATE ROUTE 10. IT IS 7.3 FEET WEST OF A METAL GUARDRAIL
BD0338'BETWEEN BRIDGES, 7.5 FEET WEST OF A METAL WITNESS POST, 29.0
BD0338'FEET SOUTH OF CENTERLINE OF INTERSTATE ROUTE 10 WESTBOUND LANE
BD0338'AND 10.7 FEET SOUTH OF CURB. SECTION 33, T 1N, R 6E
BD0338
BD0338 STATION RECOVERY (2009)
BD0338
BD0338'RECOVERY NOTE BY SOUTHEASTERN SURVEY AND MAPPIN 2009 (JM)
BD0338'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0716 *****

BD0716 DESIGNATION - I10 F 6

BD0716 PID - BD0716

BD0716 STATE/COUNTY- FL/SUWANNEE

BD0716 USGS QUAD - FALMOUTH (1993)

BD0716

BD0716 *CURRENT SURVEY CONTROL

BD0716

BD0716*	NAD 83(1986)-	30 20 59.	(N)	083 09 31.	(W)	SCALED
BD0716*	NAVD 88	- 23.423	(meters)	76.85	(feet)	ADJUSTED

BD0716

BD0716	GEOID HEIGHT-	-28.03	(meters)			GEOID09
BD0716	DYNAMIC HT -	23.393	(meters)	76.75	(feet)	COMP
BD0716	MODELED GRAV-	979,339.4	(mgal)			NAVD 88

BD0716

BD0716 VERT ORDER - SECOND CLASS II

BD0716

BD0716.The horizontal coordinates were scaled from a topographic map and have

BD0716.an estimated accuracy of +/- 6 seconds.

BD0716.

BD0716.The orthometric height was determined by differential leveling and

BD0716.adjusted in June 1991.

BD0716

BD0716.The geoid height was determined by GEOID09.

BD0716

BD0716.The dynamic height is computed by dividing the NAVD 88

BD0716.geopotential number by the normal gravity value computed on the

BD0716.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0716.degrees latitude (g = 980.6199 gals.).

BD0716

BD0716.The modeled gravity was interpolated from observed gravity values.

BD0716

BD0716;		North	East	Units	Estimated Accuracy
BD0716;SPC FL N	-	150,370.	728,960.	MT	(+/- 180 meters Scaled)

BD0716

BD0716 SUPERSEDED SURVEY CONTROL

BD0716

BD0716	NGVD 29 (??/??/92)	23.643	(m)	77.57	(f)	ADJ UNCH	2 2
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BD0716

BD0716.Superseded values are not recommended for survey control.

BD0716.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0716.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0716

BD0716_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP925595(NAD 83)

BD0716

BD0716_MARKER: DD = SURVEY DISK

BD0716_SETTING: 30 = SET IN A LIGHT STRUCTURE

BD0716_STAMPING: I10 F6

BD0716_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY

BD0716

BD0716	HISTORY	- Date	Condition	Report By
BD0716	HISTORY	- UNK	MONUMENTED	FLDT
BD0716	HISTORY	- 1974	GOOD	FLDT

BD0716



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0716

STATION DESCRIPTION

BD0716

BD0716'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1974

BD0716'11.45 MI NW FROM LIVE OAK.

BD0716'FROM THE INTERSECTION OF U.S. ROUTE 90 AND U.S. ROUTE 129 IN LIVE OAK,

BD0716'GO NORTHWEST ON U.S. ROUTE 90 FOR ABOUT 7.1 MILES TO THE INTERSECTION

BD0716'OF INTERSTATE ROUTE 10, THEN WEST ON INTERSTATE ROUTE 10 FOR ABOUT

BD0716'4.35 MILES AND BENCH MARK. WHICH IS SET IN A DRILL HOLE IN THE TOP OF

BD0716'THE NORTH CONCRETE HEADWALL OF A PIPE CULVERT UNDER INTERSTATE ROUTE

BD0716'10. IT IS 0.5 FOOT SOUTH OF A METAL WITNESS POST, 0.8 FOOT EAST OF

BD0716'THE WEST END OF THE HEADWALL AND 53.5 FEET NORTH OF CENTER OF

BD0716'INTERSTATE ROUTE 10 WESTBOUND LANE. SECTION 31, T1S, R12E.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0595 *****

BD0595 DESIGNATION - I10 N 7

BD0595 PID - BD0595

BD0595 STATE/COUNTY- FL/MADISON

BD0595 USGS QUAD - MADISON (1993)

BD0595

BD0595 *CURRENT SURVEY CONTROL

BD0595

BD0595*	NAD 83(2007)-	30 26 09.80829(N)	083 29 49.18757(W)	ADJUSTED
BD0595*	NAVD 88	- 64.007 (meters)	210.00 (feet)	ADJUSTED

BD0595

BD0595	EPOCH DATE	-	2002.00	
BD0595	X	-	623,352.501 (meters)	COMP
BD0595	Y	-	-5,468,546.009 (meters)	COMP
BD0595	Z	-	3,212,163.081 (meters)	COMP
BD0595	LAPLACE CORR-	-1.42 (seconds)		DEFLEC09
BD0595	ELLIP HEIGHT-	36.181 (meters)	(02/10/07)	ADJUSTED
BD0595	GEOID HEIGHT-	-27.81 (meters)		GEOID09
BD0595	DYNAMIC HT	- 63.924 (meters)	209.72 (feet)	COMP

BD0595

BD0595 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD0595	Type	PID	Designation	North	East	Ellip
BD0595	NETWORK	BD0595	I10 N 7	1.02	1.02	1.80

BD0595

BD0595 MODELED GRAV- 979,348.5 (mgal) NAVD 88

BD0595

BD0595 VERT ORDER - SECOND CLASS II

BD0595

BD0595.The horizontal coordinates were established by GPS observations

BD0595.and adjusted by the National Geodetic Survey in February 2007.

BD0595

BD0595.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD0595.See [National Readjustment](#) for more information.

BD0595

BD0595.The horizontal coordinates are valid at the epoch date displayed above

BD0595.which is a decimal equivalence of Year/Month/Day.

BD0595

BD0595.The orthometric height was determined by differential leveling and

BD0595.adjusted in June 1991.

BD0595

BD0595.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD0595

BD0595.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0595

BD0595.The ellipsoidal height was determined by GPS observations

BD0595.and is referenced to NAD 83.

BD0595

BD0595.The geoid height was determined by GEOID09.

BD0595

BD0595.The dynamic height is computed by dividing the NAVD 88

BD0595.geopotential number by the normal gravity value computed on the

BD0595.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0595.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0595

BD0595.The modeled gravity was interpolated from observed gravity values.

BD0595

BD0595;

	North	East	Units	Scale	Factor	Converg.
BD0595;SPC FL N	- 159,608.318	696,345.022	MT	0.99995939	+0 30	14.5
BD0595;SPC FL N	- 523,648.29	2,284,591.96	sFT	0.99995939	+0 30	14.5
BD0595;UTM 17	- 3,369,753.866	260,193.089	MT	1.00030950	-1 15	55.9

BD0595

BD0595! - Elev Factor x Scale Factor = Combined Factor

BD0595!SPC FL N - 0.99999432 x 0.99995939 = 0.99995371

BD0595!UTM 17 - 0.99999432 x 1.00030950 = 1.00030382

BD0595

BD0595

SUPERSEDED SURVEY CONTROL

BD0595

BD0595	NAD 83(1999)-	30 26 09.80837(N)	083 29 49.18719(W)	AD(	)	1
BD0595	ELLIP H (07/06/01)	36.157 (m)		GP(	)	4 2
BD0595	NAD 83(1990)-	30 26 09.80809(N)	083 29 49.18767(W)	AD(	)	1
BD0595	ELLIP H (02/28/94)	36.289 (m)		GP(	)	3 2
BD0595	NAVD 88 (02/28/94)	64.01 (m)	210.0	(f)	LEVELING	3
BD0595	NGVD 29 (??/??/92)	64.221 (m)	210.70	(f)	ADJ UNCH	2 2

BD0595

BD0595.Superseded values are not recommended for survey control.

BD0595.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0595.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0595

BD0595_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP6019369753(NAD 83)

BD0595

BD0595_MARKER: DD = SURVEY DISK

BD0595_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0595_SP_SET: CONCRETE POST

BD0595_STAMPING: I 10 N 7

BD0595_MARK LOGO: FLDT

BD0595_MAGNETIC: N = NO MAGNETIC MATERIAL

BD0595_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0595+STABILITY: SURFACE MOTION

BD0595_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD0595+SATELLITE: SATELLITE OBSERVATIONS - November 12, 1992

BD0595

BD0595	HISTORY	- Date	Condition	Report By
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BD0595	HISTORY	- 1973	MONUMENTED	FLDT
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BD0595	HISTORY	- 1974	GOOD	FLDT
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BD0595	HISTORY	- 19921112	GOOD	FLDT
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BD0595

BD0595

STATION DESCRIPTION

BD0595

BD0595'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1974

BD0595'6.1 MI SW FROM MADISON.

BD0595'FROM THE INTERSECTION OF STATE ROUTE 53 AND STATE ROUTE 14

BD0595'IN MADISON, PROCEED SOUTHWEST ON STATE ROUTE 14 FOR 3.6 MILES

BD0595'TO INTERSECTION OF INTERSTATE ROUTE 10, THEN WEST ON INTERSTATE

BD0595'ROUTE 10 FOR 2.5 MILES TO CAPTAIN BROWN ROAD OVERPASS, OVER

BD0595'INTERSTATE ROUTE 10 AND BENCH MARK, WHICH IS SET IN THE TOP OF

BD0595'THE CONCRETE GUARDRAIL OF OVERPASS, IN THE NORTHWEST CORNER OF

BD0595'OVERPASS. IT IS 2.4 FEET SOUTH OF THE NORTH END OF GUARDRAIL

BD0595'AND 16.3 FEET WEST OF CENTERLINE OF CAPTAIN BROWN ROAD. SECTION



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0595'35, T 1N, R 8E.

BD0595

BD0595

STATION RECOVERY (1992)

BD0595

BD0595'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1992

BD0595'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR0117 *****

AR0117 DESIGNATION - I75 71 A04

AR0117 PID - AR0117

AR0117 STATE/COUNTY- FL/COLUMBIA

AR0117 USGS QUAD - MIKESVILLE (1993)

AR0117

AR0117 *CURRENT SURVEY CONTROL

AR0117

AR0117*	NAD 83(2007) -	29 57 08.12366(N)	082 34 09.45908(W)	ADJUSTED
AR0117*	NAVD 88 -	51.772 (meters)	169.86 (feet)	ADJUSTED

AR0117

AR0117	EPOCH DATE -	2002.00		
AR0117	X -	715,297.667 (meters)		COMP
AR0117	Y -	-5,484,472.841 (meters)		COMP
AR0117	Z -	3,165,801.093 (meters)		COMP
AR0117	LAPLACE CORR-	-1.16 (seconds)		DEFLEC09
AR0117	ELLIP HEIGHT-	23.757 (meters)	(02/10/07)	ADJUSTED
AR0117	GEOID HEIGHT-	-28.01 (meters)		GEOID09
AR0117	DYNAMIC HT -	51.702 (meters)	169.63 (feet)	COMP

AR0117

AR0117 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AR0117	Type	PID	Designation	North	East	Ellip
AR0117	NETWORK	AR0117	I75 71 A04	0.47	0.43	1.16

AR0117 -----

AR0117 MODELED GRAV- 979,303.9 (mgal) NAVD 88

AR0117

AR0117 VERT ORDER - SECOND CLASS 0

AR0117

AR0117.The horizontal coordinates were established by GPS observations

AR0117.and adjusted by the National Geodetic Survey in February 2007.

AR0117

AR0117.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AR0117.See [National Readjustment](#) for more information.

AR0117

AR0117.The horizontal coordinates are valid at the epoch date displayed above

AR0117.which is a decimal equivalence of Year/Month/Day.

AR0117

AR0117.The orthometric height was determined by differential leveling and

AR0117.adjusted in June 1991.

AR0117

AR0117.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AR0117

AR0117.The Laplace correction was computed from DEFLEC09 derived deflections.

AR0117

AR0117.The ellipsoidal height was determined by GPS observations

AR0117.and is referenced to NAD 83.

AR0117

AR0117.The geoid height was determined by GEOID09.

AR0117

AR0117.The dynamic height is computed by dividing the NAVD 88

AR0117.geopotential number by the normal gravity value computed on the

AR0117.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AR0117.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR0117

AR0117.The modeled gravity was interpolated from observed gravity values.

AR0117

AR0117;

	North	East	Units	Scale Factor	Converg.
AR0117;SPC FL N	- 107,132.905	786,358.515	MT	0.99995543	+0 58 12.8
AR0117;SPC FL N	- 351,485.21	2,579,911.23	sFT	0.99995543	+0 58 12.8
AR0117;UTM 17	- 3,314,530.618	348,563.245	MT	0.99988295	-0 47 01.2

AR0117

AR0117!	- Elev Factor	x	Scale Factor	=	Combined Factor
AR0117!SPC FL N	- 0.99999627	x	0.99995543	=	0.99995170
AR0117!UTM 17	- 0.99999627	x	0.99988295	=	0.99987922

AR0117

AR0117:

	Primary Azimuth Mark	Grid Az
AR0117:SPC FL N	- I75 71 A04 AZ	345 52 08.0
AR0117:UTM 17	- I75 71 A04 AZ	347 37 22.0

AR0117

AR0117|-----|

PID	Reference Object	Distance	Geod. Az
			dddmss.s
AR0117 CW4188 I75 71 A04 RM 2		2.954 METERS	12509
AR0117 AR0114 I75 71 A04 AZ			3465020.8
AR0117 AR0118 I75 71 A04 RM 1		9.964 METERS	35043

AR0117|-----|

AR0117

AR0117

SUPERSEDED SURVEY CONTROL

AR0117

AR0117	NAD 83(1999)-	29 57 08.12401(N)	082 34 09.45910(W)	AD(	) 1
AR0117	ELLIP H (05/31/01)	23.729 (m)		GP(	) 4 1
AR0117	NAD 83(1990)-	29 57 08.12287(N)	082 34 09.45895(W)	AD(	) 1
AR0117	ELLIP H (03/20/98)	23.753 (m)		GP(	) 3 1
AR0117	NAD 83(1990)-	29 57 08.12468(N)	082 34 09.45747(W)	AD(	) 2
AR0117	NAD 83(1986)-	29 57 08.12988(N)	082 34 09.46337(W)	AD(	) 2
AR0117	NAD 27	- 29 57 07.27463(N)	082 34 10.03823(W)	AD(	) 2
AR0117	NAVD 88 (03/20/98)	51.77 (m)	169.8 (f)	LEVELING	3
AR0117	NGVD 29 (??/??/92)	52.014 (m)	170.65 (f)	ADJ UNCH	2 0

AR0117

AR0117.Superseded values are not recommended for survey control.

AR0117.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR0117.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR0117

AR0117_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP4856314530(NAD 83)

AR0117

AR0117_MARKER: DD = SURVEY DISK

AR0117_SETTING: 36 = SET IN A MASSIVE STRUCTURE

AR0117_SP_SET: SET IN A MASSIVE STRUCTURE

AR0117_STAMPING: I75 71 A04

AR0117_MARK LOGO: FLDT

AR0117_MAGNETIC: O = OTHER; SEE DESCRIPTION

AR0117_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AR0117_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AR0117+SATELLITE: SATELLITE OBSERVATIONS - May 02, 1997

AR0117

AR0117	HISTORY	- Date	Condition	Report By
AR0117	HISTORY	- 1971	MONUMENTED	FLDT
AR0117	HISTORY	- 1971	GOOD	FLDT



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR0117 HISTORY - 19970502 GOOD DCJOHN

AR0117

AR0117 STATION DESCRIPTION

AR0117

AR0117'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1971 (CBM)

AR0117'STATION IS LOCATED ABOUT 9 MILES EAST-NORTHEAST OF FORT WHITE, 17

AR0117'MILES SOUTH-SOUTHEAST OF LAKE CITY AND 2 MILES NORTH OF THE

AR0117'INTERSTATE ROUTE 75 BRIDGE OVER THE SANTE FE RIVER. IT IS ON THE

AR0117'STATE ROUTE 18 BRIDGE OVER I-75.

AR0117'

AR0117'TO REACH STATION FROM THE POST OFFICE IN HIGH SPRINGS, GO NORTH ON

AR0117'MAIN STREET FOR 0.4 MILE TO THE INTERSECTION WITH U.S. ROUTES 41 AND

AR0117'441. TURN RIGHT AND GO SOUTHEAST ON ROUTE 41 AND 441 FOR 5.4 MILES

AR0117'TO THE INTERSECTION WITH I-75. TURN LEFT AND GO NORTH ON I-75 FOR

AR0117'11.00 MILES TO SR 18 BRIDGE OVER I-75 AND STATION, AS DESCRIBED.

AR0117'AZIMUTH MARK IS REACHED BY CONTINUING NORTH ALONG I-75 FOR 0.90

AR0117'MILE TO MARK ON EAST SIDE OF I-75, NEXT TO FENCELINE AND IN LINE

AR0117'WITH AN OUTDOOR ADVERTISING SIGN.

AR0117'

AR0117'STATION MARK IS A STANDARD D.O.T. BRASS DISK, STAMPED I 75 71 A04,

AR0117'SET IN A DRILL HOLE IN THE SOUTHWEST BRIDGE CONCRETE APPROACH APRON.

AR0117'IT IS 9.5 FEET NORTHWEST OF A METAL WITNESS POST AND ABOUT 8 FEET

AR0117'SOUTH OF THE CENTERLINE OF SR 18.

AR0117'

AR0117'REFERENCE MARK NUMBER 1 IS A STANDARD D.O.T. BRASS DISK, STAMPED I 75

AR0117'71 A04 R.M. NO 1, SET IN A DRILL HOLE IN GUARD RAIL CURB AT

AR0117'NORTHWEST END OF THE SR 18 BRIDGE.

AR0117'

AR0117'REFERENCE MARK NUMBER 2 IS A STANDARD S.R.D. BRASS DISK, STAMPED B.M.

AR0117'I 75 B2, PRECAST IN THE SOUTHWEST END OF THE SR 18 BRIDGE GUARD

AR0117'RAIL. IT IS ABOUT 3 FEET HIGHER THAN THE STATION MARK.

AR0117'

AR0117'AZIMUTH MARK IS A STANDARD D.O.T. BRASS DISK, STAMPED I 75 71 A04

AR0117'AZ. MK., SET IN THE TOP OF A ROUND CONCRETE MONUMENT THAT IS 2

AR0117'INCHES BELOW THE GROUND. IT IS 1.6 FEET NORTHWEST OF A METAL

AR0117'WITNESS POST, 2.5 FEET NORTHWEST OF A FENCELINE AND 92.0 FEET

AR0117'SOUTHEAST OF THE EAST SIDE OF THE I-75 NORTHBOUND LANE.

AR0117'

AR0117'DISTANCE FROM R.M. NO. 1 TO R.M. NO. 2 IS 40.08 FT., (12.216)M.

AR0117'

AR0117'HEIGHT OF LIGHT ABOVE STATION MARK 1.6 METERS.

AR0117

AR0117 STATION RECOVERY (1971)

AR0117

AR0117'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1971

AR0117'4 MI SE FROM ELLISVILLE.

AR0117'ABOUT 3.90 MILES SOUTHEASTERLY ALONG INTERSTATE ROUTE 75 FROM THE

AR0117'INTERSECTION OF I-75 AND U.S. ROUTES 441 AND 41 AT ELLISVILLE,

AR0117'AT THE STATE ROUTE 18 BRIDGE OVER I-75, 9.5 FEET NORTHWEST OF

AR0117'METAL WITNESS POST AND 8 FEET SOUTH OF CENTERLINE STATE ROUTE

AR0117'18. A BRASS DISK SET IN THE WESTERN CONCRETE APPROACH APRON

AR0117'FOR BRIDGE. SECTION 24, T 6S, R 17E.

AR0117

AR0117 STATION RECOVERY (1997)

AR0117



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR0117'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
AR0117'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED AS
AR0117'PREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD1147 *****

BD1147 DESIGNATION - I75 71 A10

BD1147 PID - BD1147

BD1147 STATE/COUNTY- FL/COLUMBIA

BD1147 USGS QUAD - COLUMBIA (1993)

BD1147

BD1147 *CURRENT SURVEY CONTROL

BD1147

BD1147*	NAD 83(1990)-	30 04 11.74666(N)	082 37 43.92764(W)	ADJUSTED
BD1147*	NAVD 88	- 53.858 (meters)	176.70 (feet)	ADJUSTED

BD1147

BD1147	LAPLACE CORR-	-0.66 (seconds)	DEFLEC09
BD1147	GEOID HEIGHT-	-28.02 (meters)	GEOID09
BD1147	DYNAMIC HT -	53.787 (meters)	176.47 (feet) COMP
BD1147	MODELED GRAV-	979,319.3 (mgal)	NAVD 88

BD1147

BD1147 HORZ ORDER - SECOND

BD1147 VERT ORDER - SECOND CLASS 0

BD1147

BD1147.The horizontal coordinates were established by classical geodetic methods

BD1147.and adjusted by the National Geodetic Survey in May 1991.

BD1147.

BD1147.The orthometric height was determined by differential leveling and

BD1147.adjusted in June 1991.

BD1147

BD1147.The Laplace correction was computed from DEFLEC09 derived deflections.

BD1147

BD1147.The geoid height was determined by GEOID09.

BD1147

BD1147.The dynamic height is computed by dividing the NAVD 88

BD1147.geopotential number by the normal gravity value computed on the

BD1147.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD1147.degrees latitude (g = 980.6199 gals.).

BD1147

BD1147.The modeled gravity was interpolated from observed gravity values.

BD1147

BD1147;		North	East	Units	Scale	Factor	Converg.
BD1147;SPC FL N	-	120,079.021	780,394.636	MT	0.99994987	+0 56 25.1	
BD1147;SPC FL N	-	393,959.25	2,560,344.73	sFT	0.99994987	+0 56 25.1	
BD1147;UTM 17	-	3,327,652.561	342,999.029	MT	0.99990412	-0 48 58.8	

BD1147

BD1147!	-	Elev Factor	x	Scale Factor	=	Combined Factor
BD1147!SPC FL N	-	0.99999594	x	0.99994987	=	0.99994581
BD1147!UTM 17	-	0.99999594	x	0.99990412	=	0.99990006

BD1147

BD1147:		Primary Azimuth Mark	Grid Az
BD1147:SPC FL N	-	I75 71 A10 AZ MK	159 50 20.4
BD1147:UTM 17	-	I75 71 A10 AZ MK	161 35 44.3

BD1147

BD1147	-----
BD1147	PID Reference Object Distance Geod. Az
BD1147	dddmss.s
BD1147	BD1150 I75 71 A10 AZ MK 1604645.5
BD1147	BD1148 I75 71 A10 RM 1 9.717 METERS 17232



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD1147| CW5893 I75 71 A10 RM 2 3.286 METERS 29717 |

BD1147|-----|

BD1147

BD1147 SUPERSEDED SURVEY CONTROL

BD1147

BD1147 NAD 83(1986)- 30 04 11.75322(N) 082 37 43.93443(W) AD() 2

BD1147 NAD 27 - 30 04 10.90940(N) 082 37 44.49161(W) AD() 2

BD1147 NGVD 29 (??/??/92) 54.11 (m) 177.5 (f) COMPUTED 2 0

BD1147

BD1147.Superseded values are not recommended for survey control.

BD1147.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD1147.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD1147

BD1147 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP4299927652(NAD 83)

BD1147

BD1147 MARKER: DE = TRAVERSE STATION DISK

BD1147 SETTING: 36 = SET IN A MASSIVE STRUCTURE

BD1147 SP_SET: BRIDGE

BD1147 STAMPING: I 75 71 A10

BD1147 STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD1147

HISTORY	- Date	Condition	Report By
HISTORY	- 1971	MONUMENTED	FLDT
HISTORY	- 1971	GOOD	FLDT

BD1147

BD1147

BD1147 STATION DESCRIPTION

BD1147

BD1147'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1971 (CBM)

BD1147'STATION IS LOCATED ABOUT 8 MILES SOUTH OF LAKE CITY AND 5 MILES

BD1147'NORTH-NORTHWEST OF ELLISVILLE ON THE NORTHEAST CONCRETE

BD1147'APPROACH APRON FOR THE STATE ROUTE 240 BRIDGE OVER INTERSTATE

BD1147'ROUTE 75.

BD1147'

BD1147'TO REACH STATION FROM THE POST OFFICE IN LAKE CITY, GO SOUTH

BD1147'FOR 0.05 MILE TO U.S. ROUTE 90. TURN RIGHT AND GO WEST ON U.S.

BD1147'90 FOR 3.4 MILES TO THE INTERSECTION OF U.S. 90 AND I-75. TURN

BD1147'LEFT AND GO SOUTH ON I-75 FOR 8.5 MILES TO THE SR 240 BRIDGE OVER

BD1147'I-75 AND STATION, AS DESCRIBED. NOTE--THERE IS NO EXIT FROM I-75

BD1147'AT SR 240.

BD1147'

BD1147'AZIMUTH MARK IS REACHED FROM STATION BY CONTINUING SOUTH ON

BD1147'I-75 FOR 1.25 MILES TO MARK ON EAST SIDE OF I-75, NEXT TO FENCELINE.

BD1147'

BD1147'STATION MARK IS A STANDARD D.O.T. BRASS DISK, STAMPED I 75 71

BD1147'A10, SET IN A DRILL HOLE IN THE CONCRETE DRIVING SURFACE OF THE

BD1147'BRIDGE. IT IS 4.6 FEET SOUTHEAST OF A METAL WITNESS POST, 5.3

BD1147'FEET EAST-SOUTHEAST OF NORTHEAST CORNER OF NORTH BRIDGE RAILING

BD1147'AND 14.0 FEET NORTH OF CENTER OF SR 240.

BD1147'

BD1147'REFERENCE MARK NUMBER 1 IS A STANDARD D.O.T. BRASS DISK,

BD1147'STAMPED I 75 71 A10 R.M. NO. 1, SET IN DRILL HOLE IN CURB OF

BD1147'BRIDGE, NEAR SOUTHEAST CORNER OF BRIDGE. IT IS 1.7 FEET NORTH

BD1147'OF SOUTHEAST CORNER OF SOUTH RAILING OF BRIDGE, 2.6 FEET

BD1147'NORTHWEST OF A WOOD FENCE POST AND 14.7 FEET SOUTHWEST OF

BD1147'CENTER OF SR 240.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD1147'

BD1147'REFERENCE MARK NUMBER 2 IS A FLA. SRD B.M. DISK, STAMPED I 75

BD1147'L2, SET IN THE CONCRETE RAILING OF BRIDGE. IT IS A PRESET

BD1147'BENCH MARK DISK IN NORTH RAILING OF THE BRIDGE.

BD1147'

BD1147'AZIMUTH MARK IS A STANDARD D.O.T. BRASS DISK, STAMPED I 75 71

BD1147'A10 AZI. MK., SET IN TOP OF A ROUND CONCRETE MONUMENT THAT IS 5

BD1147'INCHES BELOW THE GROUND. IT IS 1.7 FEET WEST OF A METAL

BD1147'WITNESS POST, 2.8 FEET WEST OF A FENCELINE AND 6.1 FEET WEST OF

BD1147'A POWERLINE POLE.

BD1147'

BD1147'DISTANCE FROM REFERENCE MARK NUMBER 1 TO REFERENCE MARK NUMBER

BD1147'2 IS 39.81 FEET, OR (12.134 METERS).

BD1147'

BD1147'HEIGHT OF LIGHT ABOVE STATION MARK 1.54 METERS.

BD1147

BD1147

STATION RECOVERY (1971)

BD1147

BD1147'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1971

BD1147'5 MI NW FROM ELLISVILLE.

BD1147'ABOUT 4.8 MILES NORTHERLY ALONG INTERSTATE ROUTE 75 FROM THE

BD1147'INTERSECTION OF I-75 AND U.S. ROUTES 441 AND 41 AT ELLISVILLE,

BD1147'TO THE STATE ROUTE 240 BRIDGE OVER I-75. 4.6 FEET SOUTHEAST OF

BD1147'A METAL WITNESS POST, 5.3 FEET EAST-SOUTHEAST OF NORTHEAST CORNER

BD1147'OF NORTH BRIDGE RAILING AND 14.0 FEET NORTH OF CENTER OF STATE

BD1147'ROUTE 240. A BRASS DISK, SET FLUSH IN EASTERN CONCRETE APPROACH

BD1147'APRON FOR BRIDGE. THIS MONUMENT IS A TRAVERSE STATION. SECTION

BD1147'8, T 5 S, R 17 E



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR0299 *****

AR0299 DESIGNATION - I75 H 1

AR0299 PID - AR0299

AR0299 STATE/COUNTY- FL/ALACHUA

AR0299 USGS QUAD - ALACHUA (1993)

AR0299

AR0299 *CURRENT SURVEY CONTROL

AR0299

AR0299*	NAD 83(1986)-	29 45 35.	(N)	082 24 09.	(W)	SCALED
AR0299*	NAVD 88	- 53.239	(meters)	174.67	(feet)	ADJUSTED

AR0299

AR0299	GEOID HEIGHT-	-27.86	(meters)			GEOID09
AR0299	DYNAMIC HT -	53.167	(meters)	174.43	(feet)	COMP
AR0299	MODELED GRAV-	979,295.6	(mgal)			NAVD 88

AR0299

AR0299 VERT ORDER - SECOND CLASS 0

AR0299

AR0299.The horizontal coordinates were scaled from a topographic map and have

AR0299.an estimated accuracy of +/- 6 seconds.

AR0299.

AR0299.The orthometric height was determined by differential leveling and

AR0299.adjusted in June 1991.

AR0299

AR0299.The geoid height was determined by GEOID09.

AR0299

AR0299.The dynamic height is computed by dividing the NAVD 88

AR0299.geopotential number by the normal gravity value computed on the

AR0299.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AR0299.degrees latitude (g = 980.6199 gals.).

AR0299

AR0299.The modeled gravity was interpolated from observed gravity values.

AR0299

AR0299;		North	East	Units	Estimated Accuracy
AR0299;SPC FL N	-	86,080.	802,850.	MT	(+/- 180 meters Scaled)

AR0299

AR0299 SUPERSEDED SURVEY CONTROL

AR0299

AR0299	NGVD 29 (??/??/92)	53.474	(m)	175.44	(f)	ADJ UNCH	2 0
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AR0299

AR0299.Superseded values are not recommended for survey control.

AR0299.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR0299.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR0299

AR0299_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN644929(NAD 83)

AR0299

AR0299_MARKER: DD = SURVEY DISK

AR0299_SETTING: 30 = SET IN A LIGHT STRUCTURE

AR0299_SP_SET: CULVERT

AR0299_STAMPING: BM I-75 H1

AR0299_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY

AR0299

AR0299	HISTORY	- Date	Condition	Report By
AR0299	HISTORY	- UNK	MONUMENTED	FLDT
AR0299	HISTORY	- 1971	GOOD	FLDT



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR0299

AR0299

STATION DESCRIPTION

AR0299

AR0299'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1971

AR0299'2 MI SE FROM HAGUE.

AR0299'ABOUT 1.3 MILES SOUTHEAST ALONG U.S. ROUTE 441 AND 41 FROM THE
AR0299'INTERSECTION OF STATE ROUTE 237 AND U.S. 441 AND 41 AT HAGUE,
AR0299'IN MEDIAN OF U.S. 441 AND 41. 36 FEET WEST OF CENTERLINE OF
AR0299'U.S. 441 AND 41 NORTHBOUND LANE, 44.4 FEET EAST OF U.S. 441 AND
AR0299'41 SOUTHBOUND LANE AND 117 FEET SOUTH OF A METAL POST WITH
AR0299'S-25A RIGHT LANE SIGN. A BRASS DISK SET IN SOUTHEAST CORNER OF
AR0299'CONCRETE HEADWALL FOR DROP INLET IN MEDIAN OF U.S. 441 AND 41.
AR0299'SECTION 27, T 8 S, R 19 E.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012
AR0199 *****
AR0199 DESIGNATION - J 282
AR0199 PID - AR0199
AR0199 STATE/COUNTY- FL/DIXIE
AR0199 USGS QUAD - FANNING SPRINGS (1988)
AR0199
AR0199 *CURRENT SURVEY CONTROL
AR0199
AR0199* NAD 83(1986)- 29 36 13. (N) 082 59 30. (W) SCALED
AR0199* NAVD 88 - 6.795 (meters) 22.29 (feet) ADJUSTED
AR0199
AR0199 GEOID HEIGHT- -27.75 (meters) GEOID09
AR0199 DYNAMIC HT - 6.785 (meters) 22.26 (feet) COMP
AR0199 MODELED GRAV- 979,279.9 (mgal) NAVD 88
AR0199
AR0199 VERT ORDER - FIRST CLASS I
AR0199
AR0199.The horizontal coordinates were scaled from a topographic map and have
AR0199.an estimated accuracy of +/- 6 seconds.
AR0199.
AR0199.The orthometric height was determined by differential leveling and
AR0199.adjusted in June 1991.
AR0199
AR0199.[Photographs](#) are available for this station.
AR0199
AR0199.The geoid height was determined by GEOID09.
AR0199
AR0199.The dynamic height is computed by dividing the NAVD 88
AR0199.geopotential number by the normal gravity value computed on the
AR0199.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AR0199.degrees latitude (g = 980.6199 gals.).
AR0199
AR0199.The modeled gravity was interpolated from observed gravity values.
AR0199
AR0199;
AR0199;SPC FL N - North East Units Estimated Accuracy
AR0199; 67,880. 746,100. MT (+/- 180 meters Scaled)
AR0199
AR0199 SUPERSEDED SURVEY CONTROL
AR0199
AR0199 NGVD 29 (??/??/92) 7.005 (m) 22.98 (f) ADJ UNCH 1 1
AR0199
AR0199.Superseded values are not recommended for survey control.
AR0199.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AR0199.[See file dsdata.txt](#) to determine how the superseded data were derived.
AR0199
AR0199_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN071765(NAD 83)
AR0199
AR0199_MARKER: DB = BENCH MARK DISK
AR0199_SETTING: 46 = COPPER-CLAD STEEL ROD W/O SLEEVE (10 FT.+)
AR0199_SP_SET: 48 FEET
AR0199_STAMPING: J 282 1966
AR0199_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AR0199_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AR0199+SATELLITE: SATELLITE OBSERVATIONS - February 27, 2003



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AR0199

AR0199	HISTORY	- Date	Condition	Report By
AR0199	HISTORY	- 1966	MONUMENTED	CGS
AR0199	HISTORY	- 1967	GOOD	CGS
AR0199	HISTORY	- 1976	GOOD	FLDNR
AR0199	HISTORY	- 19981020	GOOD	USPSQD
AR0199	HISTORY	- 20030227	GOOD	JCLS

AR0199

AR0199 STATION DESCRIPTION

AR0199

AR0199'DESCRIBED BY COAST AND GEODETIC SURVEY 1967

AR0199'8.7 MI SE FROM CROSS CITY.

AR0199'ABOUT 8.7 MILES SOUTHEAST ALONG STATE HIGHWAY 19 AND 98 FROM

AR0199'THE ATLANTIC COAST LINE RAILROAD STATION AT CROSS CITY, ALSO

AR0199'ABOUT 4.6 MILES NORTHWEST OF THE CROSSING OF THE ATLANTIC COAST

AR0199'LINE AT SUWANNEE RIVER, IN SECTION 23, R 13 E, T 10 S, ABOUT

AR0199'0.5 MILE WEST OF THE CROSSING OF U.S. HIGHWAY 129 ALTERNATE AT

AR0199'OLD TOWN, ABOUT 0.4 MILE EAST OF MILEPOST 803, ABOUT 0.1 MILE

AR0199'NORTH OF THE HIGHWAYS, 112 FEET SOUTHEAST OF THE CENTER OF A

AR0199'GRADED ROAD CROSSING, 31.5 FEET SOUTH OF THE SOUTH RAIL, 42 FEET

AR0199'NORTH OF THE CENTER LINE OF A GRADED ROAD, 3 1/2 FEET WEST OF

AR0199'TELEGRAPH POLE NO. 1031, 0.6 FOOT EAST OF A METAL WITNESS POST,

AR0199'2 FEET BELOW THE LEVEL OF THE TRACK, ABOUT LEVEL WITH THE ROAD

AR0199'AND IS A DISK ON THE TOP OF A COPPER COATED STEEL ROD 0.3 FOOT

AR0199'UNDERGROUND AND PROTECTED BY A 6 INCH TILE WHICH IS FLUSH WITH

AR0199'THE GROUND. THE ROD WAS DRIVEN TO A DEPTH OF 48 FEET. NOTE-- MARK

AR0199'MAY BE REACHED BY GOING 8.7 MILES SOUTHEAST ALONG THE ATLANTIC

AR0199'COAST LINE RAILROAD FROM THE STATION AT CROSS CITY.

AR0199

AR0199 STATION RECOVERY (1976)

AR0199

AR0199'RECOVERY NOTE BY FL DEPT OF NAT RES 1976

AR0199'RECOVERED IN GOOD CONDITION.

AR0199

AR0199 STATION RECOVERY (1998)

AR0199

AR0199'RECOVERY NOTE BY US POWER SQUADRON 1998

AR0199'RECOVERED IN GOOD CONDITION.

AR0199

AR0199 STATION RECOVERY (2003)

AR0199

AR0199'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2003 (FJO)

AR0199'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

DM5943 *****

DM5943 DESIGNATION - J 714

DM5943 PID - DM5943

DM5943 STATE/COUNTY- FL/BAKER

DM5943 USGS QUAD - SANDERSON SOUTH (1988)

DM5943

DM5943 *CURRENT SURVEY CONTROL

DM5943

DM5943*	NAD 83(1986)-	30 09 51.4	(N)	082 16 31.0	(W)	HD_HELD2
DM5943*	NAVD 88	- 42.465	(meters)	139.32	(feet)	ADJUSTED

DM5943

DM5943	GEOID HEIGHT-	-28.25	(meters)			GEOID09
DM5943	DYNAMIC HT -	42.409	(meters)	139.14	(feet)	COMP
DM5943	MODELED GRAV-	979,318.1	(mgal)			NAVD 88

DM5943

DM5943 VERT ORDER - SECOND CLASS I

DM5943

DM5943.The horizontal coordinates were established by autonomous hand held GPS

DM5943.observations and have an estimated accuracy of +/- 10 meters.

DM5943.

DM5943.The orthometric height was determined by differential leveling and

DM5943.adjusted in March 2011.

DM5943

DM5943.The geoid height was determined by GEOID09.

DM5943

DM5943.The dynamic height is computed by dividing the NAVD 88

DM5943.geopotential number by the normal gravity value computed on the

DM5943.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

DM5943.degrees latitude (g = 980.6199 gals.).

DM5943

DM5943.The modeled gravity was interpolated from observed gravity values.

DM5943

DM5943;		North	East	Units	Estimated Accuracy
DM5943;SPC FL N	-	131,148.	814,276.	MT	(+/- 10 meters HH2 GPS)

DM5943

DM5943 SUPERSEDED SURVEY CONTROL

DM5943

DM5943.No superseded survey control is available for this station.

DM5943

DM5943_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP7720037675(NAD 83)

DM5943

DM5943_MARKER: F = FLANGE-ENCASED ROD

DM5943_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

DM5943_STAMPING: J 714 2009

DM5943_MARK LOGO: NGS

DM5943_PROJECTION: RECESSED 5 CENTIMETERS

DM5943_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

DM5943_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

DM5943_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DM5943+SATELLITE: SATELLITE OBSERVATIONS - January 06, 2009

DM5943_ROD/PIPE-DEPTH: 7.2 meters

DM5943

DM5943	HISTORY	- Date	Condition	Report By
DM5943	HISTORY	- 20090106	MONUMENTED	FLDEP



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



DM5943

DM5943

STATION DESCRIPTION

DM5943

DM5943'DESCRIBED BY FL DEPT OF ENV PRO 2009

DM5943'THE MARK IS ABOUT 7.3 MI (11.7 KM) NORTH-NORTHWEST OF RAIFORD, 6.1 MI

DM5943'(9.8 KM) WEST OF MANNING, 6.0 MI (9.7 KM) SOUTH OF SANDERSON, IN

DM5943'SECTION 11, TOWNSHIP 4 SOUTH, RANGE 20 EAST.

DM5943'

DM5943'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 10 (EXIT

DM5943'335) AND STATE HIGHWAY 121 NEAR MACCLENNY, GO SOUTH ON STATE HIGHWAY

DM5943'121 FOR 8.95 MI (14.4 KM) TO THE JUNCTION OF SAPP ROAD ON THE RIGHT.

DM5943'TURN RIGHT ON SAPP ROAD AND GO WESTERLY FOR 5.75 MI (9.3 KM) TO THE

DM5943'T-JUNCTION OF COUNTY ROAD 229 AND THE MARK ON THE RIGHT. THE MARK CAN

DM5943'ALSO BE REACHED FROM THE JUNCTION OF U.S. HIGHWAY 90 AND COUNTY ROAD

DM5943'229, GO SOUTH ON COUNTY ROAD 229 FOR 1.0 MI (1.6 KM) TO THE NORTH END

DM5943'OF THE BRIDGE OVER INTERSTATE 10 (EXIT 327). CONTINUE SOUTH ON COUNTY

DM5943'ROAD 229 FOR 5.6 MI (9.0 KM) TO THE JUNCTION OF SAPP ROAD ON THE LEFT

DM5943'AND THE MARK ON THE LEFT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A

DM5943'DEPTH OF 23.5 FT (7.2 M) WITH A NATIONAL GEODETIC SURVEY LOGO CAP

DM5943'RECESSED 0.2 FT (6 CM) BELOW THE LEVEL OF THE GROUND AND ABOUT LEVEL

DM5943'WITH SAPP ROAD, THE DATUM POINT IS RECESSED 0.4 FT (12 CM) BELOW THE

DM5943'LEVEL OF THE NATIONAL GEODETIC SURVEY LOGO CAP.

DM5943'

DM5943'LOCATED 54.2 FT (16.5 M) SOUTHEAST OF THE CENTERLINE OF COUNTY ROAD

DM5943'229, 45.3 FT (13.8 M) NORTHEAST OF THE APPROXIMATE CENTERLINE OF SAPP

DM5943'ROAD, 42.3 FT (12.9 M) NORTHEAST OF A POWER POLE NUMBER 5175522F140,

DM5943'4.4 FT (1.3 M) SOUTHEAST OF THE SOUTHWEST CORNER OF THE FENCE, 2.2 FT

DM5943'(0.7 M) SOUTHWEST OF A FENCE AND 2.0 FT (0.6 M) SOUTHWEST OF A

DM5943'CARSONITE WITNESS POST.

DM5943'

DM5943'NOTE A MAGNET WAS PLACED INSIDE OF THE NATIONAL GEODETIC SURVEY LOGO

DM5943'CAP.

DM5943'

DM5943'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH (13 CM)

DM5943'NATIONAL GEODETIC SURVEY LOGO CAP.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR1849 *****

AR1849 CBN - This is a Cooperative Base Network Control Station.

AR1849 PACS - This is a Primary Airport Control Station.

AR1849 DESIGNATION - KEYPORT

AR1849 PID - AR1849

AR1849 STATE/COUNTY- FL/CLAY

AR1849 USGS QUAD - KEYSTONE HEIGHTS (1993)

AR1849

AR1849 *CURRENT SURVEY CONTROL

AR1849

AR1849*	NAD 83(2007)-	29 50 25.35244 (N)	082 02 45.52697 (W)	ADJUSTED
AR1849*	NAVD 88 -	55.576 (meters)	182.34 (feet)	ADJUSTED

AR1849

AR1849	EPOCH DATE -	2002.00		
AR1849	X -	766,215.774 (meters)		COMP
AR1849	Y -	-5,483,836.479 (meters)		COMP
AR1849	Z -	3,155,051.296 (meters)		COMP
AR1849	LAPLACE CORR-	-0.34 (seconds)		DEFLEC09
AR1849	ELLIP HEIGHT-	27.691 (meters)	(02/10/07)	ADJUSTED
AR1849	GEOID HEIGHT-	-27.88 (meters)		GEOID09
AR1849	DYNAMIC HT -	55.502 (meters)	182.09 (feet)	COMP

AR1849

AR1849 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AR1849	Type	PID	Designation	North	East	Ellip
AR1849	-----					
AR1849	NETWORK	AR1849	KEYPORT	0.45	0.45	1.53
AR1849	-----					

AR1849

AR1849	MODELED GRAV-	979,312.4 (mgal)		NAVD 88
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AR1849

AR1849 VERT ORDER - SECOND CLASS I

AR1849

AR1849.This mark is at Keystone Heights Airport (42J)

AR1849

AR1849.The horizontal coordinates were established by GPS observations

AR1849.and adjusted by the National Geodetic Survey in February 2007.

AR1849

AR1849.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AR1849.See [National Readjustment](#) for more information.

AR1849

AR1849.The horizontal coordinates are valid at the epoch date displayed above

AR1849.which is a decimal equivalence of Year/Month/Day.

AR1849

AR1849.The orthometric height was determined by differential leveling and

AR1849.adjusted in September 1997.

AR1849

AR1849.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AR1849

AR1849.The Laplace correction was computed from DEFLEC09 derived deflections.

AR1849

AR1849.The ellipsoidal height was determined by GPS observations

AR1849.and is referenced to NAD 83.

AR1849

AR1849.The geoid height was determined by GEOID09.

AR1849



AR1849.The dynamic height is computed by dividing the NAVD 88
AR1849.geopotential number by the normal gravity value computed on the
AR1849.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AR1849.degrees latitude (g = 980.6199 gals.).
AR1849
AR1849.The modeled gravity was interpolated from observed gravity values.

AR1849;		North	East	Units	Scale Factor	Converg.
AR1849;SPC	FL E	- 610,633.238	98,919.275	MT	1.00006719	-0 31 13.8
AR1849;SPC	FL E	- 2,003,385.88	324,537.65	sFT	1.00006719	-0 31 13.8
AR1849;SPC	FL N	- 95,705.467	837,130.605	MT	0.99996461	+1 13 59.6
AR1849;SPC	FL N	- 313,993.69	2,746,485.99	sFT	0.99996461	+1 13 59.6
AR1849;UTM	17	- 3,301,556.874	398,953.763	MT	0.99972597	-0 31 13.8
AR1849						
AR1849!		- Elev Factor	x	Scale Factor	=	Combined Factor
AR1849!SPC	FL E	- 0.99999565	x	1.00006719	=	1.00006284
AR1849!SPC	FL N	- 0.99999565	x	0.99996461	=	0.99996026
AR1849!UTM	17	- 0.99999565	x	0.99972597	=	0.99972162

AR1849:		Primary	Azimuth	Mark		Grid Az
AR1849:SPC	FL E	-	KEYPORT	AZ MK		225 39 02.8
AR1849:SPC	FL N	-	KEYPORT	AZ MK		223 53 49.4
AR1849:UTM	17	-	KEYPORT	AZ MK		225 39 02.8

AR1849	-----			
AR1849	PID	Reference Object	Distance	Geod. Az
AR1849				dddmss.s
AR1849	AR1877	KEYPORT AZ MK	APPROX. 0.6 KM	2250749.0
AR1849	-----			

SUPERSEDED SURVEY CONTROL

AR1849	NAD 83(1999)-	29 50	25.35295(N)	082 02	45.52728(W)	AD (	)	B
AR1849	ELLIP H (05/31/01)		27.681 (m)			GP (	)	5 1
AR1849	NAD 83(1990)-	29 50	25.35197(N)	082 02	45.52692(W)	AD (	)	B
AR1849	ELLIP H (09/13/90)		27.706 (m)			GP (	)	4 1
AR1849	NAVD 88 (03/20/98)		55.58 (m)	182.3	(f)	LEVELING		3
AR1849	NAVD 88 (07/14/97)		55.59 (m)	182.4	(f)	GPS OBS		
AR1849	NAVD 88 (06/02/94)		55.63 (m)	182.5	(f)	GPS OBS		
AR1849	NGVD 29 (09/13/90)		55.97 (m)	183.6	(f)	GPS OBS		

AR1849.Superseded values are not recommended for survey control.
AR1849.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AR1849.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR1849 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP9895301556 (NAD 83)

```
AR1849_MARKER: I = METAL ROD
AR1849_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AR1849_SP_SET: STAINLESS STEEL ROD IN SLEEVE
AR1849_STAMPING: KEYPORT 1988
AR1849_MARK LOGO: NGS
AR1849_PROJECTION: FLUSH
AR1849_MAGNETIC: N = NO MAGNETIC MATERIAL
AR1849_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
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USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1849_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AR1849+SATELLITE: SATELLITE OBSERVATIONS - December 02, 2009

AR1849_ROD/PIPE-DEPTH: 32.0 meters

AR1849_SLEEVE-DEPTH : 0.9 meters

AR1849

AR1849	HISTORY	- Date	Condition	Report By
AR1849	HISTORY	- 1988	MONUMENTED	NGS
AR1849	HISTORY	- 19890424	GOOD	
AR1849	HISTORY	- 19890601	GOOD	
AR1849	HISTORY	- 19951208	GOOD	NGS
AR1849	HISTORY	- 19951208	GOOD	NGS
AR1849	HISTORY	- 19960416	GOOD	FLDEP
AR1849	HISTORY	- 19970502	GOOD	DCJOHN
AR1849	HISTORY	- 20020423	GOOD	DCJOHN
AR1849	HISTORY	- 20061110	GOOD	BAKER
AR1849	HISTORY	- 20091202	GOOD	FLDT

AR1849

AR1849

STATION DESCRIPTION

AR1849

AR1849'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

AR1849'THE STATION IS LOCATED ABOUT 6.44 KM (4.00 MI) NORTH-NORTHWEST OF
AR1849'KEYSTONE HEIGHTS, AT THE KEYSTONE AIRPARK, IN SECTION 31, T 7 S, R 28
AR1849'E, BETWEEN RUNWAY 04-22 AND A TAXIWAY, NEAR THE WINDSOCK.

AR1849'OWNERSHIP--CITY OF KEYSTONE HEIGHTS, P.O. BOX 336, KEYSTONE HEIGHTS FL
AR1849'32656, JIM YOUNG - AIRPORT MANAGER, PHONE 904-473-2178.

AR1849'NOTE--PERMISSION MUST BE OBTAINED BEFORE ENTERING AIRPORT.

AR1849'TO REACH THE STATION FROM THE INTERSECTION OF STATE HIGHWAYS 21 AND
AR1849'100 IN KEYSTONE HEIGHTS, GO NORTHWEST, THEN NORTHERLY FOR 5.07 KM

AR1849'(3.15 MI) ON HIGHWAY 100 TO THE GEORGIA SOUTHERN AND FLORIDA RAILROAD
AR1849'CROSSING. CONTINUE STRAIGHT AHEAD AND GO NORTHERLY FOR 1.77 KM

AR1849'(1.10 MI) ON HIGHWAY 100 TO A PAVED ROAD RIGHT, AIRPORT SIGN ON RIGHT.

AR1849'TURN RIGHT AND GO EASTERLY FOR 2.01 KM (1.25 MI) ON THE PAVED ROAD TO
AR1849'A SHARP CURVE RIGHT. BEAR RIGHT AND GO SOUTHERLY FOR 0.08 KM

AR1849'(0.05 MI) ON THE PAVED ROAD TO A DIRT ROAD LEFT. TURN LEFT AND GO

AR1849'EASTERLY, THEN NORTHERLY FOR 0.32 KM (0.20 MI) ON THE DIRT ROAD TO A
AR1849'FENCE OPENING, JIM YOUNG AVIATION ON LEFT. PASS THROUGH FENCE OPENING

AR1849'AND GO 40 M (131.2 FT) TO THE TAXIWAY. TURN LEFT AND GO SOUTHWEST FOR
AR1849'0.08 KM (0.05 MI) ON THE TAXIWAY TO THE WINDSOCK AND THE STATION ON

AR1849'RIGHT.

AR1849'THE STATION IS RECESSED 11 CM BELOW GROUND. LOCATED 117.04 M

AR1849'(384.0 FT) SOUTHEAST FROM THE APPROXIMATE CENTER OF RUNWAY 04-22,

AR1849'56.54 M (185.5 FT) SOUTH-SOUTHEAST FROM A WIND TEE, 55.78 M

AR1849'(183.0 FT) SOUTHWEST FROM THE APPROXIMATE CENTER OF A RAMP, 42.98 M

AR1849'(141.0 FT) NORTHWEST FROM THE APPROXIMATE CENTER OF A TAXIWAY, 18.17 M

AR1849'(59.6 FT) SOUTHWEST FROM THE WINDSOCK POLE AND 1.83 M (6.0 FT)

AR1849'SOUTHWEST FROM A CARSONITE WITNESS POST. NOTE--ACCESS TO DATUM POINT
AR1849'IS HAD THROUGH A 5-INCH LOGO CAP.

AR1849'DESCRIBED BY D.F. CALLAHAN.

AR1849

AR1849

STATION RECOVERY (1989)

AR1849

AR1849'RECOVERED 1989

AR1849'RECOVERED IN GOOD CONDITION.

AR1849

AR1849

STATION RECOVERY (1989)



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1849

AR1849'RECOVERED 1989

AR1849'RECOVERED IN GOOD CONDITION.

AR1849

AR1849

STATION RECOVERY (1995)

AR1849

AR1849'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)

AR1849'THE STATION IS LOCATED ABOUT 4.0 MI (6.4 KM) NORTH-NORTHWEST OF
AR1849'KEYSTONE HEIGHTS, AT THE KEYSTONE AIRPARK, NEAR THE WINDSOCK BETWEEN
AR1849'RUNWAY 04-22 AND PARALLEL TAXIWAY. OWNERSHIP -- CITY OF KEYSTONE
AR1849'HEIGHTS, P.O. BOX 336, KEYSTONE HEIGHTS, FL 32656. AIRPORT MANAGER IS
AR1849'JIM SMITH, PHONE 904-473-4807 (CITY HALL), 473-0031 (AIRPARK OFFICE),
AR1849'473-0540 (R.C. AIRLINES HANGAR OFFICE) . MANAGER IS AT AIRPARK OFFICE
AR1849'ONLY ON MON-WEN-FRI BUT PHONE IS EQUIPED WITH AN ANSWERING MACHINE.
AR1849'TO REACH THE STATION FROM THE INTERSECTION OF STATE HIGHWAYS 21 AND
AR1849'100 IN KEYSTONE HEIGHTS, GO NORTHWEST, THEN NORTHERLY ON HIGHWAY 100
AR1849'FOR 4.25 MI (6.84 KM) TO AN AIRPORT SIGN AND PAVED ROAD RIGHT. TURN
AR1849'RIGHT AND GO EASTERLY ON PAVED ROAD FOR 1.25 MI (2.01 KM) TO A CURVE
AR1849'RIGHT. BEAR RIGHT AND GO SOUTHERLY ON PAVED ROAD FOR 0.05 MI (0.08
AR1849'KM) TO A PAVED ROAD LEFT. TURN LEFT AND GO EASTERLY ON PAVED ROAD FOR
AR1849'0.05 MI (0.08 KM) TO A PAVED ROAD LEFT. TURN LEFT AND GO NORTHERLY ON
AR1849'PAVED ROAD FOR 0.1 MI (0.2 KM) TO A LOCKED GATE. PASS THROUGH GATE
AR1849'AND GO ACROSS GRASS FOR 150 FT (45.7 M) TO A PARALLEL TAXIWAY. TURN
AR1849'LEFT AND GO SOUTHWEST ON PARALLEL TAXIWAY FOR 0.05 MI (0.08 KM) TO THE
AR1849'STATION ON THE RIGHT. THE STATION IS 384.0 FT (117.0 M) SOUTHEAST OF
AR1849'THE APPROXIMATE CENTER OF RUNWAY 04-22, 183.6 FT (56.0 M) SOUTHWEST OF
AR1849'THE APPROXIMATE CENTER OF A CONNECTOR TAXIWAY, 141.0 FT (43.0 M)
AR1849'NORTHWEST OF THE APPROXIMATE CENTER OF PARALLEL TAXIWAY, 59.8 FT (18.2
AR1849'M) WEST-SOUTHWEST OF THE WINDSOCK POLE, AND 2.4 FT (0.7 M) SOUTHEAST
AR1849'OF A WITNESS POST. NOTE -- A SHORT SECTION OF REBAR HAS BEEN PLACED
AR1849'INSIDE THE PVC PIPE. THE STATION IS THE PRIMARY AIRPORT CONTROL
AR1849'STATION.

AR1849

AR1849

STATION RECOVERY (1995)

AR1849

AR1849'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)

AR1849'THE STATION IS LOCATED ABOUT 4.0 MI (6.4 KM) NORTH-NORTHWEST OF
AR1849'KEYSTONE HEIGHTS, AT THE KEYSTONE AIRPARK, NEAR THE WINDSOCK BETWEEN
AR1849'RUNWAY 04-22 AND PARALLEL TAXIWAY. OWNERSHIP--CITY OF KEYSTONE
AR1849'HEIGHTS, P.O. BOX 336, KEYSTONE HEIGHTS, FL 32656. AIRPORT MANAGER
AR1849'IS JIM SMITH, PHONE 904-473-4807. TO REACH THE STATION FROM THE
AR1849'INTERSECTION OF STATE HIGHWAYS 21 AND 100 IN KEYSTONE HEIGHTS, GO
AR1849'NORTHWEST, THEN NORTHERLY ON HIGHWAY 100 FOR 4.25 MI (6.84 KM) TO AN
AR1849'AIRPORT SIGN AND PAVED ROAD RIGHT. TURN RIGHT AND GO EASTERLY ON
AR1849'PAVED ROAD FOR 1.25 MI (2.01 KM) TO A CURVE RIGHT. BEAR RIGHT AND GO
AR1849'SOUTHERLY ON PAVED ROAD FOR 0.05 MI (0.08 KM) TO A PAVED ROAD LEFT.
AR1849'TURN LEFT AND GO EASTERLY ON PAVED ROAD FOR 0.05 MI (0.08 KM) TO A
AR1849'PAVED ROAD LEFT. TURN LEFT AND GO NORTHERLY ON PAVED ROAD FOR 0.1 MI
AR1849'(0.2 KM) TO A LOCKED GATE. PASS THROUGH GATE AND GO ACROSS GRASS FOR
AR1849'150 FT (45.7 M) TO A PARALLEL TAXIWAY. TURN LEFT AND GO SOUTHWEST ON
AR1849'PARALLEL TAXIWAY FOR 0.05 MI (0.08 KM) TO THE STATION ON THE RIGHT.
AR1849'THE STATION IS 384.0 FT (117.0 M) SOUTHEAST OF THE APPROXIMATE CENTER
AR1849'OF RUNWAY 04-22, 183.6 FT (56.0 M) SOUTHWEST OF THE APPROXIMATE CENTER
AR1849'OF A CONNECTOR TAXIWAY, 141.0 FT (43.0 M) NORTHWEST OF THE APPROXIMATE
AR1849'CENTER OF PARALLEL TAXIWAY, 59.8 FT (18.2 M) WEST-SOUTHWEST OF THE



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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AR1849'WINDSOCK POLE, AND 2.4 FT (0.7 M) SOUTHEAST OF A WITNESS POST. THE
AR1849'STATION IS THE PRIMARY AIRPORT CONTROL STATION.

AR1849

AR1849

STATION RECOVERY (1996)

AR1849

AR1849'RECOVERY NOTE BY FL DEPT OF ENV PRO 1996 (JLM)

AR1849'THE STATION IS LOCATED ABOUT 3.75 MI (6.03 KM) NORTH-NORTHWEST OF
AR1849'KEYSTONE HEIGHTS, AT THE KEYSTONE HEIGHTS AIR PORT, IN SECTION 31,
AR1849'TOWNSHIP 7 SOUTH, RANGE 23 EAST, NEAR THE WINDSOCK, OWNERSHIP-- CITY
AR1849'OF KEYSTONE HEIGHTS, P.O. BOX 336, KEYSTONE HEIGHTS FL 32656, JIM
AR1849'YOUNG - AIRPORT MANAGER, PHONE 904-473-2178 NOTE PERMISSION MUST BE
AR1849'OBTAINED BEFORE ENTERING AIRPORT. TO REACH THE STATION FROM THE
AR1849'INTERSECTION OF STATE ROAD 21 (SOUTH LAWRENCE BOULEVARD) AND STATE
AR1849'ROAD 100 (WEST WALKER DRIVE) IN KEYSTONE HEIGHTS, GO NORTHWEST, THEN
AR1849'NORTHERLY ON STATE ROAD 100 (WEST WALKER DRIVE) FOR 4.25 MI (6.84 KM)
AR1849'TO A PAVED ROAD ON THE RIGHT AND A AIRPORT SIGN ON THE RIGHT, TURN
AR1849'RIGHT AND GO EASTERLY FOR 1.25 MI (2.01 KM) ON THE PAVED ROAD TO A
AR1849'SHARP CURVE RIGHT, BEAR RIGHT AND GO SOUTHERLY FOR 0.05 MI (0.08 KM)
AR1849'ON THE PAVED ROAD TO A PAVED ROAD LEFT, TURN LEFT AND GO EASTERLY,
AR1849'THEN NORTHERLY FOR 0.2 MI (0.3 KM) ON THE PAVED ROAD TO A FENCE
AR1849'OPENING, JIM YOUNG AVIATION ON THE LEFT, PASS THROUGH FENCE THE
AR1849'OPENING AND GO 131.2 FT (40.0 M) TO THE TAXIWAY, TURN LEFT AND GO
AR1849'SOUTHWEST FOR 0.05 MI (0.08 KM) ON THE TAXIWAY TO THE WINDSOCK AND THE
AR1849'STATION ON THE RIGHT, A STAINLESS STEEL ROD DRIVEN INTO THE GROUND
AR1849'WITH A LOGO CAP FLUSH WITH THE GROUND, THE DATUM POINT IS RECESSED 0.4
AR1849'FT (12.2 CM) BELOW THE LEVEL OF THE LOGO CAP. LOCATED 384.0 FT (117.0
AR1849'M) SOUTHEAST OF THE APPROXIMATE CENTER OF RUNWAY 04-22, 185.5 FT (56.5
AR1849'M) SOUTH-SOUTHEAST OF A WIND TEE, 183.0 FT (55.8 M) SOUTHWEST OF THE
AR1849'APPROXIMATE CENTER OF THE RAMP, 141.0 FT (43.0 M) NORTHWEST OF THE
AR1849'APPROXIMATE CENTER OF A TAXIWAY, 59.6 FT (18.2 M) SOUTHWEST OF THE
AR1849'WINDSOCK POLE AND 6.0 FT (1.8 M) SOUTHWEST OF A CARSONITE WITNESS
AR1849'POST. NOTE ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

AR1849

AR1849

STATION RECOVERY (1997)

AR1849

AR1849'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

AR1849'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED IN
AR1849'GOOD CONDITION. ALL DIRT ROADS REFERENCED IN DESCRIPTION ARE NOW
AR1849'PAVED. JIM YOUNG AVIATION IS NOW RC AIRCRAFT MAINTAINANCE SALES AND
AR1849'SERVICE.

AR1849

AR1849

STATION RECOVERY (2002)

AR1849

AR1849'RECOVERY NOTE BY DC JOHNSON ASSOC 2002 (ARG)

AR1849'RECOVERED AS DESCRIBED. (ARG)

AR1849'

AR1849

AR1849

STATION RECOVERY (2006)

AR1849

AR1849'RECOVERY NOTE BY M BAKER JR INCORPORATED 2006 (LL)

AR1849'RECOVERED IN GOOD CONDITION.

AR1849

AR1849

STATION RECOVERY (2009)

AR1849

AR1849'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2009 (JDO)



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR1849'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0322 *****

BD0322 DESIGNATION - L 153

BD0322 PID - BD0322

BD0322 STATE/COUNTY- FL/MADISON

BD0322 USGS QUAD - GREENVILLE (1993)

BD0322

BD0322 *CURRENT SURVEY CONTROL

BD0322

BD0322*	NAD 83(1986)-	30 28 08.	(N)	083 38 04.	(W)	SCALED
BD0322*	NAVD 88	- 30.828	(meters)	101.14	(feet)	ADJUSTED

BD0322

BD0322	GEOID HEIGHT-	-27.73	(meters)			GEOID09
BD0322	DYNAMIC HT -	30.788	(meters)	101.01	(feet)	COMP
BD0322	MODELED GRAV-	979,354.5	(mgal)			NAVD 88

BD0322

BD0322 VERT ORDER - FIRST CLASS I

BD0322

BD0322.The horizontal coordinates were scaled from a topographic map and have

BD0322.an estimated accuracy of +/- 6 seconds.

BD0322.

BD0322.The orthometric height was determined by differential leveling and

BD0322.adjusted in June 1991.

BD0322

BD0322.WARNING-Repeat measurements at this control monument indicate possible

BD0322.vertical movement.

BD0322

BD0322.The geoid height was determined by GEOID09.

BD0322

BD0322.The dynamic height is computed by dividing the NAVD 88

BD0322.geopotential number by the normal gravity value computed on the

BD0322.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0322.degrees latitude (g = 980.6199 gals.).

BD0322

BD0322.The modeled gravity was interpolated from observed gravity values.

BD0322

BD0322;		North	East	Units	Estimated Accuracy
BD0322;SPC FL N	-	163,140.	683,120.	MT	(+/- 180 meters Scaled)

BD0322

BD0322 SUPERSEDED SURVEY CONTROL

BD0322

BD0322	NGVD 29 (??/??/92)	31.039	(m)	101.83	(f)	ADJ UNCH	1 1
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BD0322

BD0322.Superseded values are not recommended for survey control.

BD0322.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0322.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0322

BD0322_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP470736(NAD 83)

BD0322

BD0322_MARKER: DB = BENCH MARK DISK

BD0322_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0322_SP SET: SET IN TOP OF CONCRETE MONUMENT

BD0322_STAMPING: L 153 1954

BD0322_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0322+STABILITY: SURFACE MOTION



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0322

BD0322	HISTORY	- Date	Condition	Report By
BD0322	HISTORY	- 1954	MONUMENTED	CGS
BD0322	HISTORY	- 1961	GOOD	CGS
BD0322	HISTORY	- 1975	GOOD	NGS
BD0322	HISTORY	- 20100304	GOOD	EXACTA
BD0322	HISTORY	- 20111104	GOOD	JCLS

BD0322

BD0322 STATION DESCRIPTION

BD0322

BD0322'DESCRIBED BY COAST AND GEODETIC SURVEY 1961

BD0322'0.2 MI W FROM GREENVILLE.

BD0322'0.2 MILE WEST ALONG THE SEABOARD AIR LINE RAILROAD FROM THE

BD0322'STATION AT GREENVILLE, 45 YARDS SOUTHEAST OF THE CROSSING OF THE

BD0322'SEABOARD AIR LINE RAILROAD AND THE SOUTH GEORGIA RAILROAD, 50

BD0322'YARDS NORTHEAST OF A BRICK SCHOOL BUILDING, 92 FT. SOUTH OF THE

BD0322'SOUTH RAIL OF THE MAIN TRACK OF THE SEABOARD AIR LINE RAILROAD,

BD0322'19 FT. SOUTHWEST OF A POWER POLE, 1.2 FT. ABOVE THE GROUND, SET

BD0322'IN THE TOP OF THE NORTH CORNER OF THE CONCRETE FOUNDATION OF

BD0322'THE NORTHEAST LEG OF THE MUNICIPAL WATER TANK.

BD0322

BD0322 STATION RECOVERY (1975)

BD0322

BD0322'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975

BD0322'RECOVERED IN GOOD CONDITION.

BD0322

BD0322 STATION RECOVERY (2010)

BD0322

BD0322'RECOVERY NOTE BY EXACTA FL SURVEYING 2010 (CDM)

BD0322'RECOVERED IN GOOD CONDITION.

BD0322

BD0322 STATION RECOVERY (2011)

BD0322

BD0322'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2011

BD0322'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0640 *****

BD0640 DESIGNATION - L 45

BD0640 PID - BD0640

BD0640 STATE/COUNTY- FL/MADISON

BD0640 USGS QUAD - LEE (1993)

BD0640

BD0640 *CURRENT SURVEY CONTROL

BD0640

BD0640*	NAD 83(2007)-	30 25	07.50816(N)	083 18	01.15952(W)	ADJUSTED
BD0640*	NAVD 88	-	28.259 (meters)		92.71 (feet)	ADJUSTED

BD0640

BD0640	EPOCH DATE	-	2002.00			
BD0640	X	-	642,229.954 (meters)			COMP
BD0640	Y	-	-5,467,308.277 (meters)			COMP
BD0640	Z	-	3,210,490.618 (meters)			COMP
BD0640	LAPLACE CORR-		-0.63 (seconds)			DEFLEC09
BD0640	ELLIP HEIGHT-		0.251 (meters)		(02/10/07)	ADJUSTED
BD0640	GEOID HEIGHT-		-28.00 (meters)			GEOID09
BD0640	DYNAMIC HT	-	28.222 (meters)		92.59 (feet)	COMP

BD0640

BD0640 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD0640	Type	PID	Designation	North	East	Ellip
BD0640	NETWORK	BD0640	L 45	1.00	0.94	1.82

BD0640

BD0640	MODELED GRAV-	979,339.2 (mgal)				NAVD 88
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BD0640

BD0640 VERT ORDER - FIRST CLASS II

BD0640

BD0640.The horizontal coordinates were established by GPS observations

BD0640.and adjusted by the National Geodetic Survey in February 2007.

BD0640

BD0640.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD0640.See [National Readjustment](#) for more information.

BD0640

BD0640.The horizontal coordinates are valid at the epoch date displayed above

BD0640.which is a decimal equivalence of Year/Month/Day.

BD0640

BD0640.The orthometric height was determined by differential leveling and

BD0640.adjusted in June 1991.

BD0640

BD0640.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD0640

BD0640.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0640

BD0640.The ellipsoidal height was determined by GPS observations

BD0640.and is referenced to NAD 83.

BD0640

BD0640.The geoid height was determined by GEOID09.

BD0640

BD0640.The dynamic height is computed by dividing the NAVD 88

BD0640.geopotential number by the normal gravity value computed on the

BD0640.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0640.degrees latitude (g = 980.6199 gals.).



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0640

BD0640.The modeled gravity was interpolated from observed gravity values.

BD0640

BD0640;
BD0640;SPC FL N - 157,872.498 715,256.431 MT 0.99995803 +0 36 10.3
BD0640;SPC FL N - 517,953.35 2,346,637.14 sFT 0.99995803 +0 36 10.3
BD0640;UTM 17 - 3,367,434.461 279,047.498 MT 1.00020231 -1 09 54.6
BD0640
BD0640! - Elev Factor x Scale Factor = Combined Factor
BD0640!SPC FL N - 0.99999996 x 0.99995803 = 0.99995799
BD0640!UTM 17 - 0.99999996 x 1.00020231 = 1.00020227

BD0640

BD0640

SUPERSEDED SURVEY CONTROL

BD0640

BD0640 NAD 83(1999)- 30 25 07.50789(N) 083 18 01.15874(W) AD () 1
BD0640 ELLIP H (07/06/01) 0.205 (m) GP () 4 2
BD0640 NAD 83(1990)- 30 25 07.50806(N) 083 18 01.15996(W) AD () 1
BD0640 ELLIP H (02/28/94) 0.359 (m) GP () 3 2
BD0640 NAVD 88 (02/28/94) 28.26 (m) 92.7 (f) LEVELING 3
BD0640 NGVD 29 (??/??/92) 28.477 (m) 93.43 (f) ADJ UNCH 1 2

BD0640

BD0640.Superseded values are not recommended for survey control.

BD0640.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0640.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0640

BD0640_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP7904767434(NAD 83)

BD0640

BD0640_MARKER: DB = BENCH MARK DISK

BD0640_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0640_SP_SET: CONCRETE POST

BD0640_STAMPING: L 45

BD0640_MARK LOGO: CGS

BD0640_MAGNETIC: O = OTHER; SEE DESCRIPTION

BD0640_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0640+STABILITY: SURFACE MOTION

BD0640_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD0640+SATELLITE: SATELLITE OBSERVATIONS - November 09, 1992

BD0640

BD0640 HISTORY - Date Condition Report By

BD0640 HISTORY - 1992 MONUMENTED NGS

BD0640 HISTORY - 1954 GOOD CGS

BD0640 HISTORY - 19921109 GOOD FLDT

BD0640

BD0640

STATION DESCRIPTION

BD0640

BD0640'DESCRIBED BY COAST AND GEODETIC SURVEY 1954

BD0640'7.4 MI SE FROM MADISON.

BD0640'ABOUT 7.45 MILES SOUTHEAST ALONG THE SEABOARD AIR LINE RAILWAY

BD0640'FROM THE STATION AT MADISON, AT LEE, 15 1/2 FEET NORTH OF NORTH

BD0640'RAIL OF MAIN TRACK, 48 FEET EAST-NORTHEAST OF CENTER OF CROSSING

BD0640'OF MAIN TRACK AND STATE HIGHWAY 255, 47 1/2 FEET EAST OF CENTER

BD0640'LINE OF HIGHWAY, 12 1/2 FEET WEST OF SOUTHWEST CORNER OF STATION,

BD0640'21 FEET EAST OF EAST EDGE OF A SIDE WALK, ABOUT 1 FOOT BELOW

BD0640'LEVEL OF TRACK AND SET IN THE TOP OF A CONCRETE POST ABOUT 2

BD0640'INCHES UNDERGROUND.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0640

BD0640

STATION RECOVERY (1992)

BD0640

BD0640'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1992

BD0640'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0582 *****

BD0582 DESIGNATION - L 70

BD0582 PID - BD0582

BD0582 STATE/COUNTY- FL/MADISON

BD0582 USGS QUAD - MADISON (1993)

BD0582

BD0582 *CURRENT SURVEY CONTROL

BD0582

BD0582*	NAD 83(1986)-	30 28 19.	(N)	083 28 23.	(W)	SCALED
BD0582*	NAVD 88	-	31.927	(meters)	104.75	(feet) ADJUSTED

BD0582

BD0582	GEOID HEIGHT-	-27.86	(meters)			GEOID09
BD0582	DYNAMIC HT -	31.886	(meters)	104.61	(feet)	COMP
BD0582	MODELED GRAV-	979,348.9	(mgal)			NAVD 88

BD0582

BD0582 VERT ORDER - FIRST CLASS II

BD0582

BD0582.The horizontal coordinates were scaled from a topographic map and have

BD0582.an estimated accuracy of +/- 6 seconds.

BD0582.

BD0582.The orthometric height was determined by differential leveling and

BD0582.adjusted in June 1991.

BD0582

BD0582.The geoid height was determined by GEOID09.

BD0582

BD0582.The dynamic height is computed by dividing the NAVD 88

BD0582.geopotential number by the normal gravity value computed on the

BD0582.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD0582.degrees latitude (g = 980.6199 gals.).

BD0582

BD0582.The modeled gravity was interpolated from observed gravity values.

BD0582

BD0582;		North	East	Units	Estimated Accuracy
BD0582;SPC FL N	-	163,610.	698,610.	MT	(+/- 180 meters Scaled)

BD0582

BD0582 SUPERSEDED SURVEY CONTROL

BD0582

BD0582	NGVD 29 (??/??/92)	32.143	(m)	105.46	(f) ADJ UNCH	1 2
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BD0582

BD0582.Superseded values are not recommended for survey control.

BD0582.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0582.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0582

BD0582_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP625736(NAD 83)

BD0582

BD0582_MARKER: DD = SURVEY DISK

BD0582_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0582_SP_SET: SET IN TOP OF CONCRETE MONUMENT

BD0582_STAMPING: L 70

BD0582_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0582+STABILITY: SURFACE MOTION

BD0582

BD0582	HISTORY	- Date	Condition	Report By
BD0582	HISTORY	- 1954	MONUMENTED	FLGS



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0582 HISTORY - 1954 GOOD CGS
BD0582 HISTORY - 1959 MARK NOT FOUND USGS

BD0582

BD0582

BD0582

STATION DESCRIPTION

BD0582'DESCRIBED BY COAST AND GEODETIC SURVEY 1954

BD0582'3.8 MI W FROM MADISON.

BD0582'ABOUT 3.85 MILES WEST ALONG THE SEABOARD AIR LINE RAILWAY

BD0582'FROM THE STATION AT MADISON, ABOUT 0.45 MILE EAST OF MILE POST

BD0582'748, 14 1/2 FEET NORTH OF NORTH RAIL, 30 1/2 FEET NORTHEAST OF

BD0582'CENTER LINE OF A PRIVATE ROAD CROSSING, 22 FEET EAST OF CENTER

BD0582'LINE OF ROAD, 49 1/2 FEET SOUTHEAST OF A FENCE CORNER, 13 1/2

BD0582'FEET EAST-NORTHEAST OF EAST END OF A 20-INCH TILE PIPE CULVERT

BD0582'UNDER ROAD, 1 FOOT SOUTH OF A WHITE WOODEN WITNESS POST, ABOUT

BD0582'2 1/2 FEET BELOW LEVEL OF TRACK AND SET IN THE TOP OF A CONCRETE

BD0582'POST ABOUT FLUSH WITH GROUND.

BD0582

BD0582

STATION RECOVERY (1959)

BD0582

BD0582'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1959

BD0582'MARK NOT FOUND.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2726 *****

BD2726 SACS - This is a Secondary Airport Control Station.

BD2726 DESIGNATION - LAKEPORT AZ MK

BD2726 PID - BD2726

BD2726 STATE/COUNTY- FL/COLUMBIA

BD2726 USGS QUAD - LAKE CITY EAST (1993)

BD2726

BD2726 *CURRENT SURVEY CONTROL

BD2726

BD2726*	NAD 83(2007)-	30 10 53.25076(N)	082 34 17.14145(W)	ADJUSTED
BD2726*	NAVD 88	- 58.70 (meters)	192.6 (feet)	GPS OBS

BD2726

BD2726	EPOCH DATE	-	2002.00	
BD2726	X	-	713,448.338 (meters)	COMP
BD2726	Y	-	-5,471,882.495 (meters)	COMP
BD2726	Z	-	3,187,793.578 (meters)	COMP
BD2726	LAPLACE CORR-	-	-0.58 (seconds)	DEFLEC09
BD2726	ELLIP HEIGHT-		30.534 (meters)	(02/10/07) ADJUSTED
BD2726	GEOID HEIGHT-		-28.13 (meters)	GEOID09

BD2726

BD2726 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2726	Type	PID	Designation	North	East	Ellip
BD2726	NETWORK	BD2726	LAKEPORT AZ MK	0.35	0.31	0.98

BD2726

BD2726 This mark is at Lake City Airport (31J)

BD2726

BD2726 The horizontal coordinates were established by GPS observations

BD2726 and adjusted by the National Geodetic Survey in February 2007.

BD2726

BD2726 The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2726 See [National Readjustment](#) for more information.

BD2726

BD2726 The horizontal coordinates are valid at the epoch date displayed above

BD2726 which is a decimal equivalence of Year/Month/Day.

BD2726

BD2726 The orthometric height was determined by GPS observations and a

BD2726 high-resolution geoid model.

BD2726

BD2726 GPS derived orthometric heights for airport stations designated as

BD2726 PACS or SACS are published to 2 decimal places. This maintains

BD2726 centimeter relative accuracy between the PACS and SACS. It does

BD2726 not indicate centimeter accuracy relative to other marks which are

BD2726 part of the NAVD 88 network.

BD2726

BD2726 The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2726

BD2726 The Laplace correction was computed from DEFLEC09 derived deflections.

BD2726

BD2726 The ellipsoidal height was determined by GPS observations

BD2726 and is referenced to NAD 83.

BD2726

BD2726 The geoid height was determined by GEOID09.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2726
BD2726; North East Units Scale Factor Convergency.
BD2726;SPC FL N - 132,532.387 785,722.822 MT 0.99994846 +0 58 09.0
BD2726;SPC FL N - 434,816.67 2,577,825.63 sFT 0.99994846 +0 58 09.0
BD2726;UTM 17 - 3,339,935.924 348,706.433 MT 0.99988240 -0 47 24.6

BD2726
BD2726! - Elev Factor x Scale Factor = Combined Factor
BD2726!SPC FL N - 0.99999520 x 0.99994846 = 0.99994366
BD2726!UTM 17 - 0.99999520 x 0.99988240 = 0.99987761

BD2726
BD2726: Primary Azimuth Mark Grid Az
BD2726:SPC FL N - LAKEPORT 275 33 45.8
BD2726:UTM 17 - LAKEPORT 277 19 19.4

BD2726
BD2726|-----|
BD2726| PID Reference Object Distance Geod. Az |
BD2726| | dddmmss.s |
BD2726| BD2712 LAKEPORT APPROX. 1.2 KM 2763154.8 |
BD2726|-----|

BD2726
BD2726 SUPERSEDED SURVEY CONTROL
BD2726
BD2726 NAD 83(1999)- 30 10 53.25096(N) 082 34 17.14154(W) AD () 1
BD2726 ELLIP H (05/31/01) 30.542 (m) GP () 4 1
BD2726 ELLIP H (03/27/98) 30.488 (m) GP () 4 2
BD2726 ELLIP H (03/20/98) 30.503 (m) GP () 3 1
BD2726 NAD 83(1990)- 30 10 53.24993(N) 082 34 17.14170(W) AD () 1
BD2726 NAVD 88 (03/20/98) 58.67 (m) 192.5 (f) GPS OBS
BD2726 NGVD 29 (02/04/91) 58.96 (m) 193.4 (f) GPS OBS

BD2726
BD2726.Superseded values are not recommended for survey control.
BD2726.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BD2726.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2726
BD2726_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP4870639935(NAD 83)

BD2726
BD2726_MARKER: I = METAL ROD
BD2726_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
BD2726_SP_SET: STAINLESS STEEL ROD IN SLEEVE
BD2726_STAMPING: LAKEPORT AZ MK 1988
BD2726_MARK LOGO: NGS
BD2726_PROJECTION: FLUSH
BD2726_MAGNETIC: I = MARKER IS A STEEL ROD
BD2726_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
BD2726_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
BD2726+SATELLITE: SATELLITE OBSERVATIONS - May 02, 1997
BD2726_ROD/PIPE-DEPTH: 17.1 meters
BD2726_SLEEVE-DEPTH : 0.9 meters

BD2726
BD2726 HISTORY - Date Condition Report By
BD2726 HISTORY - 1988 MONUMENTED NGS
BD2726 HISTORY - 19890510 GOOD
BD2726 HISTORY - 19951129 GOOD NGS
BD2726 HISTORY - 19970502 GOOD DCJOHN
BD2726



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2726

STATION DESCRIPTION

BD2726

BD2726'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

BD2726'THE STATION IS LOCATED ABOUT 6.12 KM (3.80 MI) EAST OF LAKE CITY, AT
BD2726'THE LAKE CITY MUNICIPAL AIRPORT, IN SECTION 36, T 3 S, R 17 E, ON THE
BD2726'SOUTH SIDE OF RUNWAY 10-28, IN THE GRASS MEDIAN BETWEEN RUNWAY 05-23
BD2726'AND AN OLD TAXIWAY. OWNERSHIP--CITY OF LAKE CITY, P.O. BOX 1687, LAKE
BD2726'CITY FL 32056-1687, MRS. BARBARA K. MOORE - AIRPORT AND DOWNTOWN
BD2726'MANAGER, PHONE 904-752-2031. NOTE--PERMISSION MUST BE OBTAINED BEFORE
BD2726'ENTERING AIRPORT.

BD2726'TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 90 (DUVAL
BD2726'ST) AND U.S. HIGHWAY 441 (MARION ST) IN LAKE CITY, GO EASTERLY FOR
BD2726'3.22 KM (2.00 MI) ON HIGHWAY 90 TO A FORK. FOLLOW THE LEFT FORK AND
BD2726'GO EAST FOR 2.25 KM (1.40 MI) ON HIGHWAY 90 TO A PAVED DRIVE RIGHT.
BD2726'TURN RIGHT AND GO SOUTH FOR 0.08 KM (0.05 MI) ON THE PAVED DRIVE TO A
BD2726'LOCKED GATE ON THE EAST SIDE OF THE TERMINAL BUILDING. PASS THROUGH
BD2726'GATE, TURN RIGHT AND GO SOUTHWEST FOR 0.56 KM (0.35 MI) ON THE TAXIWAY
BD2726'TO RUNWAY 10-28. CROSS RUNWAY, TURN LEFT AND GO EAST FOR 0.97 KM
BD2726'(0.60 MI) ALONG EDGE OF RUNWAY TO THE NORTHWEST EDGE OF RUNWAY 05-23.
BD2726'CONTINUE STRAIGHT AHEAD AND GO EAST FOR 0.24 KM (0.15 MI) ALONG EDGE
BD2726'OF RUNWAY TO THE STATION ON RIGHT, JUST BEFORE AN OLD TAXIWAY.
BD2726'THE STATION IS RECESSED 11 CM BELOW GROUND. LOCATED 65.23 M
BD2726'(214.0 FT) SOUTH-SOUTHWEST FROM THE APPROXIMATE CENTER OF RUNWAY
BD2726'10-28, 53.74 M (176.3 FT) SOUTHWEST FROM A WHITE RUNWAY LIGHT ON THE
BD2726'WEST SIDE OF OLD TAXIWAY, 44.65 M (146.5 FT) EAST-SOUTHEAST FROM THE
BD2726'SOUTHEAST CORNER OF THE SOUTH ONE OF TWO 1.98 M (6.5 FT) BY 2.74 M
BD2726'(9.0 FT) CONCRETE SLABS FLUSH WITH GROUND, 44.20 M (145.0 FT)
BD2726'SOUTH-SOUTHEAST FROM THE THIRD WHITE RUNWAY LIGHT THAT IS EAST FROM
BD2726'RUNWAY 05-23, 34.50 M (113.2 FT) NORTH-NORTHWEST FROM THE APPROXIMATE
BD2726'CENTER OF OLD TAXIWAY, 28.65 M (94.0 FT) SOUTH-SOUTHWEST FROM A BLACK
BD2726'TRIANGULAR METAL SIGN NUMBERED 2 ON THE WEST SIDE AND 6 ON THE EAST
BD2726'SIDE AND 1.83 M (6.0 FT) NORTH FROM A CARSONITE WITNESS POST.
BD2726'NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.
BD2726'DESCRIBED BY D.F. CALLAHAN.

BD2726

BD2726

STATION RECOVERY (1989)

BD2726

BD2726'RECOVERED 1989

BD2726'RECOVERED IN GOOD CONDITION.

BD2726

BD2726

STATION RECOVERY (1995)

BD2726

BD2726'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (MLB)

BD2726'THE STATION IS LOCATED ABOUT 3.10 MI (4.99 KM) EAST OF LAKE CITY, AT
BD2726'THE LAKE CITY MUNICIPAL AIRPORT, ON THE SOUTH SIDE OF RUNWAY 10-28, IN
BD2726'THE GRASS MEDIAN BETWEEN RUNWAY 05-23 AND AN OLD TAXIWAY.
BD2726'OWNERSHIP--CITY OF LAKE CITY, P.O. BOX 1687, LAKE CITY, FL
BD2726'32056-1687. AIRPORT MANAGER IS FAYE BOWLING, PHONE 904-752-2031.
BD2726'NOTE--PERMISSION MUST BE OBTAINED BEFORE ENTERING AIRPORT. TO REACH
BD2726'THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 90 (DUVAL ST) AND
BD2726'U.S. HIGHWAY 441 (MARION ST) IN LAKE CITY, GO EASTERLY FOR 2.00 MI
BD2726'(3.22 KM) ON HIGHWAY 90 TO A FORK. FOLLOW THE LEFT FORK AND GO EAST
BD2726'FOR 1.40 MI (2.25 KM) ON HIGHWAY 90 TO A PAVED DRIVE RIGHT. TURN
BD2726'RIGHT AND GO SOUTH FOR 0.05 MI (0.08 KM) ON PAVED DRIVE TO A LOCKED
BD2726'GATE ON THE EAST SIDE OF THE TERMINAL BUILDING. PASS THROUGH GATE,



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2726'TURN RIGHT, AND GO SOUTHWEST FOR 0.35 MI (0.56 KM) ON THE TAXIWAY TO
BD2726'RUNWAY 10-28. CROSS RUNWAY, TURN LEFT AND GO EAST FOR 0.60 MI (0.97
BD2726'KM) PARALLEL WITH RUNWAY 10-28 TO THE NORTHWEST EDGE OF RUNWAY 05-23.
BD2726'CONTINUE AHEAD, CROSSING RUNWAY 05-23, AND GO EAST FOR 0.15 MI, (0.24
BD2726'KM) PARALLELING RUNWAY 10-28, TO THE STATION JUST BEFORE AN OLD
BD2726'TAXIWAY. THE STATION IS 214.0 FT (65.2 M) SOUTH-SOUTHWEST OF THE
BD2726'APPROXIMATE CENTER OF RUNWAY 10-28, 176.3 FT (53.7 M) SOUTHWEST OF A
BD2726'RUNWAY LIGHT ON THE WEST SIDE OF OLD TAXIWAY, 146.5 FT (44.7 M)
BD2726'EAST-SOUTHEAST OF THE SOUTHEAST CORNER OF THE SOUTH ONE OF TWO 6.5 FT
BD2726'(2.0 M) BY 9.0 FT (2.7 M) CONCRETE SLABS FLUSH WITH THE GROUND, 145.0
BD2726'FT (44.2 M) SOUTH-SOUTHEAST OF THE THIRD RUNWAY LIGHT THAT IS EAST OF
BD2726'RUNWAY 05-23, 113.2 FT (34.5 M) NORTH-NORTHWEST OF THE APPROXIMATE
BD2726'CENTER OF OLD TAXIWAY, 94.0 FT (28.7 M) SOUTH-SOUTHWEST OF A BLACK
BD2726'TRIANGULAR METAL SIGN NUMBERED 2 ON THE WEST SIDE AND 6 ON THE EAST
BD2726'SIDE, AND 6.0 FT (1.8 M) NORTH OF A WITNESS POST. NOTE--ACCESS TO
BD2726'DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP. THE STATION IS A
BD2726'SECONDARY AIRPORT CONTROL STATION.

BD2726

BD2726

STATION RECOVERY (1997)

BD2726

BD2726'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

BD2726'RECOVERY NOTE BY DC JOHNSON ASSOC (CHX) THE STATION WAS RECOVERED

BD2726'ASPREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR1401 *****

AR1401 DESIGNATION - M 368

AR1401 PID - AR1401

AR1401 STATE/COUNTY- FL/BRADFORD

AR1401 USGS QUAD - STARKE (1991)

AR1401

AR1401 *CURRENT SURVEY CONTROL

AR1401

AR1401*	NAD 83(1986)-	29 55 40.	(N)	082 07 21.	(W)	SCALED
AR1401*	NAVD 88	-	45.674	(meters)	149.85	(feet) ADJUSTED

AR1401

AR1401	GEOID HEIGHT-	-27.91	(meters)			GEOID09
AR1401	DYNAMIC HT -	45.614	(meters)	149.65	(feet)	COMP
AR1401	MODELED GRAV-	979,316.7	(mgal)			NAVD 88

AR1401

AR1401 VERT ORDER - FIRST CLASS II

AR1401

AR1401.The horizontal coordinates were scaled from a topographic map and have

AR1401.an estimated accuracy of +/- 6 seconds.

AR1401.

AR1401.The orthometric height was determined by differential leveling and

AR1401.adjusted in June 1991.

AR1401

AR1401.The geoid height was determined by GEOID09.

AR1401

AR1401.The dynamic height is computed by dividing the NAVD 88

AR1401.geopotential number by the normal gravity value computed on the

AR1401.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AR1401.degrees latitude (g = 980.6199 gals.).

AR1401

AR1401.The modeled gravity was interpolated from observed gravity values.

AR1401

AR1401;		North	East	Units	Estimated Accuracy
AR1401;SPC FL N	-	105,240.	829,540.	MT	(+/- 180 meters Scaled)

AR1401

AR1401 SUPERSEDED SURVEY CONTROL

AR1401

AR1401	NGVD 29 (09/01/92)	45.934	(m)	150.70	(f) ADJUSTED	1 2
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AR1401

AR1401.Superseded values are not recommended for survey control.

AR1401.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR1401.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR1401

AR1401_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP916113(NAD 83)

AR1401

AR1401_MARKER: DB = BENCH MARK DISK

AR1401_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

AR1401_SP_SET: STAINLESS STEEL ROD

AR1401_STAMPING: M 368 1979

AR1401_PROJECTION: RECESSED 10 CENTIMETERS

AR1401_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AR1401_ROD/PIPE-DEPTH: 4.88 meters

AR1401

AR1401 HISTORY - Date Condition Report By



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AR1401 HISTORY - 1979 MONUMENTED NGS

AR1401

AR1401

STATION DESCRIPTION

AR1401

AR1401'DESCRIBED BY NATIONAL GEODETIC SURVEY 1979

AR1401'1.4 MI SW FROM STARKE.

AR1401'1.4 MILES SOUTHWEST ALONG U.S. HIGHWAY 301 FROM THE JUNCTION OF 301

AR1401'AND STATE HIGHWAY 100 IN STARKE TO THE MARK ON THE LEFT, SET

AR1401'BETWEEN A POWER POLE AND GUY WIRE, 143 FEET NORTHEAST OF THE CENTER

AR1401'OF EXPRESS STREET, 52 FEET SOUTHEAST OF THE CENTERLINE OF THE NORTH-

AR1401'BOUND LANES OF HIGHWAY, 12 FEET NORTHEAST OF GUY WIRE, 9 FEET NORTH-

AR1401'WEST OF A ROW OF BUSHES, 3.5 FEET SOUTHWEST OF POWER POLE. ALSO

AR1401'4.95 MILES NORTHEAST OF HAMPTON.

AR1401'THE MARK IS 4 FT SW FROM A WITNESS POST.

AR1401'THE MARK IS ABOVE LEVEL WITH HIGHWAY.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2361 *****

BD2361 DESIGNATION - MAD 8 FLDNR

BD2361 PID - BD2361

BD2361 STATE/COUNTY- FL/MADISON

BD2361 USGS QUAD - CHERRY LAKE (1974)

BD2361

BD2361 *CURRENT SURVEY CONTROL

BD2361

BD2361*	NAD 83(1986)-	30 31 43.	(N)	083 28 11.	(W)	SCALED
BD2361*	NAVD 88	- 30.629	(meters)	100.49	(feet)	ADJUSTED

BD2361

BD2361	GEOID HEIGHT-	-27.90	(meters)			GEOID09
BD2361	DYNAMIC HT -	30.589	(meters)	100.36	(feet)	COMP
BD2361	MODELED GRAV-	979,344.4	(mgal)			NAVD 88

BD2361

BD2361 VERT ORDER - SECOND CLASS I

BD2361

BD2361.The horizontal coordinates were scaled from a topographic map and have

BD2361.an estimated accuracy of +/- 6 seconds.

BD2361.

BD2361.The orthometric height was determined by differential leveling and

BD2361.adjusted in June 1991.

BD2361

BD2361.The geoid height was determined by GEOID09.

BD2361

BD2361.The dynamic height is computed by dividing the NAVD 88

BD2361.geopotential number by the normal gravity value computed on the

BD2361.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2361.degrees latitude (g = 980.6199 gals.).

BD2361

BD2361.The modeled gravity was interpolated from observed gravity values.

BD2361

BD2361;	North	East	Units	Estimated Accuracy
BD2361;SPC FL N	- 169,890.	698,870.	MT	(+/- 180 meters Scaled)

BD2361

BD2361 SUPERSEDED SURVEY CONTROL

BD2361

BD2361.No superseded survey control is available for this station.

BD2361

BD2361_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP630799(NAD 83)

BD2361

BD2361_MARKER: DB = BENCH MARK DISK

BD2361_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD2361_SP_SET: CONCRETE POST

BD2361_STAMPING: MAD 8 1979 CLB

BD2361_PROJECTION: RECESSED 5 CENTIMETERS

BD2361_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD2361+STABILITY: SURFACE MOTION

BD2361

BD2361	HISTORY	- Date	Condition	Report By
BD2361	HISTORY	- 1979	MONUMENTED	FLDNR

BD2361

BD2361 STATION DESCRIPTION

BD2361



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2361'DESCRIBED BY FL DEPT OF NAT RES 1979
BD2361'5 MI WNW FROM MADISON.
BD2361'BEGIN AT THE COUNTY COURT HOUSE IN MADISON. PROCEED 0.15 MILE WEST ON
BD2361'US 90 TO THE JUNCTION OF STATE ROAD 53, THENCE NORTH ON STATE ROAD 53
BD2361'1.8 MILES TO THE JUNCTION OF COUNTY ROAD C-146, THENCE WEST ON C-146
BD2361'3.82 MILES. THE MARK BEARS 48.3 FEET NORTHEAST OF THE JUNCTION OF
BD2361'C-146 AND HOPEFUL BAPTIST CHURCH ROAD, 100 FEET SOUTHEAST OF THE
BD2361'CENTERLINE OF HOPEFUL BAPTIST CHURCH ROAD, 2.2 FEET SOUTHWEST OF A
BD2361'FENCELINE, AND 12.4 FEET WEST SOUTHWEST OF A POWER POLE.
BD2361'THE MARK IS 1 FT SW FROM A WITNESS POST.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

DG5916 *****

DG5916 DESIGNATION - N 570

DG5916 PID - DG5916

DG5916 STATE/COUNTY- FL/CLAY

DG5916 USGS QUAD - MAXVILLE (1984)

DG5916

DG5916 *CURRENT SURVEY CONTROL

DG5916

DG5916*	NAD 83(1986)-	30 08 56.	(N)	082 01 12.	(W)	SCALED
DG5916*	NAVD 88	- 31.165	(meters)	102.25	(feet)	ADJUSTED

DG5916

DG5916	GEOID HEIGHT-	-28.10	(meters)			GEOID09
DG5916	DYNAMIC HT -	31.124	(meters)	102.11	(feet)	COMP
DG5916	MODELED GRAV-	979,333.2	(mgal)			NAVD 88

DG5916

DG5916 VERT ORDER - SECOND CLASS I

DG5916

DG5916.The horizontal coordinates were scaled from a topographic map and have

DG5916.an estimated accuracy of +/- 6 seconds.

DG5916.

DG5916.The orthometric height was determined by differential leveling and

DG5916.adjusted in August 2004.

DG5916

DG5916.The geoid height was determined by GEOID09.

DG5916

DG5916.The dynamic height is computed by dividing the NAVD 88

DG5916.geopotential number by the normal gravity value computed on the

DG5916.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

DG5916.degrees latitude (g = 980.6199 gals.).

DG5916

DG5916.The modeled gravity was interpolated from observed gravity values.

DG5916

DG5916;		North	East	Units	Estimated Accuracy
DG5916;SPC FL E	-	644,810.	101,730.	MT	(+/- 180 meters Scaled)

DG5916

DG5916 SUPERSEDED SURVEY CONTROL

DG5916

DG5916.No superseded survey control is available for this station.

DG5916

DG5916_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMP017357(NAD 83)

DG5916

DG5916_MARKER: DD = SURVEY DISK

DG5916_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

DG5916_STAMPING: N 570 2002

DG5916_MARK LOGO: FLDEP

DG5916_PROJECTION: RECESSED 10 CENTIMETERS

DG5916_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

DG5916_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

DG5916+STABILITY: SURFACE MOTION

DG5916_SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR

DG5916+SATELLITE: SATELLITE OBSERVATIONS - July 13, 2004

DG5916

DG5916	HISTORY	- Date	Condition	Report By
DG5916	HISTORY	- 20020810	MONUMENTED	FLDEP



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



DG5916 HISTORY - 20040713 GOOD FLDEP

DG5916

DG5916

STATION DESCRIPTION

DG5916

DG5916'DESCRIBED BY FL DEPT OF ENV PRO 2002 (BPJ)

DG5916'THE MARK IS ABOUT 10.6 MI NORTHWEST OF MIDDLEBURG, IN SECTION 17,

DG5916'TOWNSHIP 4 SOUTH, RANGE 23 EAST.

DG5916'

DG5916'TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 301 AND COUNTY

DG5916'ROAD 228 (WEST) IN MAXVILLE, GO SOUTH ON U.S. HIGHWAY 301 FOR 3.6 MI

DG5916'TO THE JUNCTION OF COUNTY ROAD 218 ON THE LEFT, TURN LEFT ON COUNTY

DG5916'ROAD 218 AND GO SOUTHEAST FOR 0.8 MI TO THE MARK ON THE LEFT, SET IN

DG5916'THE TOP OF A ROUND CONCRETE MONUMENT RECESSED 0.4 FT BELOW THE LEVEL

DG5916'OF THE GROUND AND ABOUT 1.0 FT BELOW THE LEVEL OF COUNTY ROAD 218.

DG5916'

DG5916'LOCATED 162.0 FT NORTHWEST OF A POWER POLE WITH A CLAY HILL HUNT CLUB

DG5916'POSTED SIGN, 48.5 FT NORTH-NORTHEAST OF THE APPROXIMATE CENTERLINE OF

DG5916'COUNTY ROAD 218 AND 0.9 FT SOUTHWEST OF A CARSONITE WITNESS POST.

DG5916'

DG5916'NOTE A BAR MAGNET WAS BURIED ON THE SOUTH SIDE OF THE MARK.

DG5916

DG5916

STATION RECOVERY (2004)

DG5916

DG5916'RECOVERY NOTE BY FL DEPT OF ENV PRO 2004 (BPJ)

DG5916'RECOVERED AS DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012
BD2290 *****
BD2290 DESIGNATION - P 369
BD2290 PID - BD2290
BD2290 STATE/COUNTY- FL/SUWANNEE
BD2290 USGS QUAD - WELLBORN (1969)
BD2290
BD2290 *CURRENT SURVEY CONTROL
BD2290
BD2290* NAD 83(1986)- 30 12 32. (N) 082 48 35. (W) SCALED
BD2290* NAVD 88 - 60.348 (meters) 197.99 (feet) ADJUSTED
BD2290
BD2290 GEOID HEIGHT- -28.06 (meters) GEOID09
BD2290 DYNAMIC HT - 60.268 (meters) 197.73 (feet) COMP
BD2290 MODELED GRAV- 979,318.3 (mgal) NAVD 88
BD2290
BD2290 VERT ORDER - FIRST CLASS II
BD2290
BD2290.The horizontal coordinates were scaled from a topographic map and have
BD2290.an estimated accuracy of +/- 6 seconds.
BD2290.
BD2290.The orthometric height was determined by differential leveling and
BD2290.adjusted in June 1991.
BD2290
BD2290.The geoid height was determined by GEOID09.
BD2290
BD2290.The dynamic height is computed by dividing the NAVD 88
BD2290.geopotential number by the normal gravity value computed on the
BD2290.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BD2290.degrees latitude (g = 980.6199 gals.).
BD2290
BD2290.The modeled gravity was interpolated from observed gravity values.
BD2290
BD2290;
BD2290;SPC FL N - North East Units Estimated Accuracy
BD2290; 135,210. 762,730. MT (+/- 180 meters Scaled)
BD2290
BD2290 SUPERSEDED SURVEY CONTROL
BD2290
BD2290.No superseded survey control is available for this station.
BD2290
BD2290_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP258433(NAD 83)
BD2290
BD2290_MARKER: DB = BENCH MARK DISK
BD2290_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
BD2290_SP_SET: STAINLESS STEEL ROD
BD2290_STAMPING: P 369 1979
BD2290_PROJECTION: RECESSED 10 CENTIMETERS
BD2290_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
BD2290_ROD/PIPE-DEPTH: 4.88 meters
BD2290
BD2290 HISTORY - Date Condition Report By
BD2290 HISTORY - 1979 MONUMENTED NGS
BD2290 HISTORY - 20100923 GOOD FLDT
BD2290
BD2290 STATION DESCRIPTION



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD2290

BD2290'DESCRIBED BY NATIONAL GEODETIC SURVEY 1979

BD2290'1.25 MI SE FROM WELLBORN.

BD2290'1.25 MILES SOUTHEAST ALONG U.S. HIGHWAY 90 FROM THE JUNCTION OF
BD2290'HIGHWAY 90 AND COUNTY ROAD 137 IN WELLBORN TO THE MARK ON THE RIGHT,
BD2290'0.15 MILE SOUTHEAST OF BETHEL MISSIONARY BAPTIST CHURCH, 2 FEET
BD2290'NORTHWEST OF TELEPHONE POLE NUMBER 3, 53 FEET SOUTHWEST OF THE
BD2290'CENTERLINE OF THE HIGHWAY, 69 FEET SOUTHEAST OF THE CENTER OF A DIRT
BD2290'ROAD WITH A GATE LEADING SOUTHWEST INTO A FARM FIELD.

BD2290'THE MARK IS 2 FT NW FROM A WITNESS POST.

BD2290'THE MARK IS 1 FT ABOVE HIGHWAY.

BD2290

STATION RECOVERY (2010)

BD2290

BD2290'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2010 (JDO)

BD2290'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

DL6704 *****

DL6704 DESIGNATION - P 597

DL6704 PID - DL6704

DL6704 STATE/COUNTY- FL/ALACHUA

DL6704 USGS QUAD - WALDO (1991)

DL6704

DL6704 *CURRENT SURVEY CONTROL

DL6704

DL6704*	NAD 83(1986)-	29 46 56.	(N)	082 10 40.	(W)	SCALED
DL6704*	NAVD 88	- 45.348	(meters)	148.78	(feet)	ADJUSTED

DL6704

DL6704	GEOID HEIGHT-	-27.86	(meters)			GEOID09
DL6704	DYNAMIC HT -	45.288	(meters)	148.58	(feet)	COMP
DL6704	MODELED GRAV-	979,303.1	(mgal)			NAVD 88

DL6704

DL6704 VERT ORDER - SECOND CLASS I

DL6704

DL6704.The horizontal coordinates were scaled from a topographic map and have

DL6704.an estimated accuracy of +/- 6 seconds.

DL6704.

DL6704.The orthometric height was determined by differential leveling and

DL6704.adjusted in April 2010.

DL6704

DL6704.No vertical observational check was made to the station.

DL6704

DL6704.The geoid height was determined by GEOID09.

DL6704

DL6704.The dynamic height is computed by dividing the NAVD 88

DL6704.geopotential number by the normal gravity value computed on the

DL6704.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

DL6704.degrees latitude (g = 980.6199 gals.).

DL6704

DL6704.The modeled gravity was interpolated from observed gravity values.

DL6704

DL6704;		North	East	Units	Estimated Accuracy
DL6704;SPC FL N	-	88,990.	824,530.	MT	(+/- 180 meters Scaled)

DL6704

DL6704 SUPERSEDED SURVEY CONTROL

DL6704

DL6704.No superseded survey control is available for this station.

DL6704

DL6704_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN861952(NAD 83)

DL6704

DL6704_MARKER: F = FLANGE-ENCASED ROD

DL6704_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

DL6704_STAMPING: P 597 2003

DL6704_MARK LOGO: NGS

DL6704_PROJECTION: FLUSH

DL6704_MAGNETIC: N = NO MAGNETIC MATERIAL

DL6704_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

DL6704_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DL6704+SATELLITE: SATELLITE OBSERVATIONS - 2003

DL6704_ROD/PIPE-DEPTH: 24.0 meters

DL6704



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



DL6704	HISTORY	- Date	Condition	Report By
DL6704	HISTORY	- 2003	MONUMENTED	FLDEP

DL6704

DL6704

DL6704

STATION DESCRIPTION

DL6704'DESCRIBED BY FL DEPT OF ENV PRO 2003 (JLM)

DL6704'THE MARK IS ABOUT 1.0 MI SOUTHWEST OF WALDO, IN SECTION 23, TOWNSHIP 8

DL6704'SOUTH, RANGE 21 EAST.

DL6704'

DL6704'TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 301 AND STATE ROAD

DL6704'24 IN WALDO, GO SOUTHWEST ON STATE ROAD 24 FOR 1.0 TO THE MARK ON THE

DL6704'RIGHT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH OF 78.6 FT

DL6704'WITH A NGS LOGO CAP FLUSH WITH THE GROUND AND ABOUT LEVEL THE STATE

DL6704'ROAD 24, THE DATUM POINT IS RECESSED 0.6 FT BELOW THE LEVEL OF THE

DL6704'NGS LOGO CAP.

DL6704'

DL6704'LOCATED 129.0 FT NORTHEAST OF A HAG WIRE FENCE CORNER, 76.0 FT

DL6704'NORTHWEST OF THE CENTERLINE OF STATE ROAD 24 WESTBOUND LANES AND 1.0

DL6704'FT SOUTH OF A CARSONITE WITNESS POST.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2486 *****

BD2486 CBN - This is a Cooperative Base Network Control Station.

BD2486 DESIGNATION - RANDELL

BD2486 PID - BD2486

BD2486 STATE/COUNTY- FL/MADISON

BD2486 USGS QUAD - GREENVILLE NE (1993)

BD2486

BD2486 *CURRENT SURVEY CONTROL

BD2486

BD2486*	NAD 83(2007) -	30 22 52.45456(N)	083 32 50.41174(W)	ADJUSTED
BD2486*	NAVD 88 -	53.869 (meters)	176.74 (feet)	ADJUSTED

BD2486

BD2486	EPOCH DATE -	2002.00		
BD2486	X -	618,892.335 (meters)		COMP
BD2486	Y -	-5,472,139.670 (meters)		COMP
BD2486	Z -	3,206,916.645 (meters)		COMP
BD2486	LAPLACE CORR-	-1.44 (seconds)		DEFLEC09
BD2486	ELLIP HEIGHT-	26.174 (meters)	(02/10/07)	ADJUSTED
BD2486	GEOID HEIGHT-	-27.72 (meters)		GEOID09
BD2486	DYNAMIC HT -	53.799 (meters)	176.51 (feet)	COMP

BD2486

BD2486 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2486	Type	PID	Designation	North	East	Ellip
BD2486	NETWORK BD2486 RANDELL			0.74	0.65	1.53

BD2486

BD2486	MODELED GRAV-	979,348.9 (mgal)		NAVD 88
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BD2486

BD2486 VERT ORDER - SECOND CLASS I

BD2486

BD2486.The horizontal coordinates were established by GPS observations

BD2486.and adjusted by the National Geodetic Survey in February 2007.

BD2486

BD2486.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2486.See [National Readjustment](#) for more information.

BD2486

BD2486.The horizontal coordinates are valid at the epoch date displayed above

BD2486.which is a decimal equivalence of Year/Month/Day.

BD2486

BD2486.The orthometric height was determined by differential leveling and

BD2486.adjusted in May 2001.

BD2486

BD2486.No vertical observational check was made to the station.

BD2486

BD2486.WARNING-GPS observations at this control monument resulted in a GPS

BD2486.derived orthometric height which differed from the leveled height by

BD2486.more than one decimeter (0.1 meter).

BD2486

BD2486.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2486

BD2486.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2486

BD2486.The ellipsoidal height was determined by GPS observations

BD2486.and is referenced to NAD 83.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2486

BD2486.The geoid height was determined by GEOID09.

BD2486

BD2486.The dynamic height is computed by dividing the NAVD 88

BD2486.geopotential number by the normal gravity value computed on the

BD2486.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2486.degrees latitude (g = 980.6199 gals.).

BD2486

BD2486.The modeled gravity was interpolated from observed gravity values.

BD2486

BD2486; North East Units Scale Factor Converg.

BD2486;SPC FL N - 153,489.956 691,560.425 MT 0.99995538 +0 28 43.5

BD2486;SPC FL N - 503,574.96 2,268,894.49 sFT 0.99995538 +0 28 43.5

BD2486;UTM 17 - 3,363,783.898 255,220.112 MT 1.00033925 -1 17 20.3

BD2486

BD2486! - Elev Factor x Scale Factor = Combined Factor

BD2486!SPC FL N - 0.99999589 x 0.99995538 = 0.99995127

BD2486!UTM 17 - 0.99999589 x 1.00033925 = 1.00033514

BD2486

BD2486: Primary Azimuth Mark

Grid Az

BD2486:SPC FL N - BIRD 206 09 09.6

BD2486:UTM 17 - BIRD 207 55 13.4

BD2486

PID	Reference Object	Distance	Geod. Az
			ddmmss.s
BD2480	MADISON CO COURTHOUSE CUPOLA	APPROX.16.2 KM	0530348.2
BD2481	MADISON MUNICIPAL STANDPIPE	APPROX.16.2 KM	0531024.6
CW4982	RANDELL AZ MK		0633144.6
AI1673	RANDELL RM 1	44.068 METERS	08506
CW4983	RANDELL RM 2	79.065 METERS	17850
BD0487	BIRD	APPROX.16.2 KM	2063753.1
BD2487	GREENVILLE MUNICIPAL TANK	APPROX.12.8 KM	3191626.9
AI1671	RANDELL RM 3	27.964 METERS	32839

BD2486

BD2486

SUPERSEDED SURVEY CONTROL

BD2486

NAD 83(1999)-	30 22 52.45544 (N)	083 32 50.41287 (W)	AD () B
ELLIP H (05/31/01)	26.185 (m)		GP () 4 1
ELLIP H (05/31/01)	26.505 (m)		GP () 5 1
NAD 83(1990)-	30 22 52.45497 (N)	083 32 50.41261 (W)	AD () B
ELLIP H (09/13/90)	26.590 (m)		GP () 4 1
NAD 83(1986)-	30 22 52.46360 (N)	083 32 50.41683 (W)	AD () 1
NAD 27	- 30 22 51.70300 (N)	083 32 50.88100 (W)	AD () 1
NAVD 88 (07/26/00)	53.9 (m)	177. (f)	GPS OBS
NAVD 88 (06/02/94)	54.3 (m)	178. (f)	GPS OBS
NGVD 29 (09/13/90)	54.6 (m)	179. (f)	GPS OBS

BD2486

BD2486.Superseded values are not recommended for survey control.

BD2486.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2486.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2486

BD2486_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP5522063783(NAD 83)

BD2486



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2486_MARKER: DS = TRIANGULATION STATION DISK
BD2486_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
BD2486_SP_SET: CONCRETE POST
BD2486_STAMPING: RANDELL 1933
BD2486_MARK LOGO: NGS
BD2486_MAGNETIC: N = NO MAGNETIC MATERIAL
BD2486_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
BD2486+STABILITY: SURFACE MOTION
BD2486_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
BD2486+SATELLITE: SATELLITE OBSERVATIONS - January 15, 1999

BD2486	HISTORY	- Date	Condition	Report By
BD2486	HISTORY	- 1933	MONUMENTED	CGS
BD2486	HISTORY	- 1933	GOOD	CGS
BD2486	HISTORY	- 1935	GOOD	CGS
BD2486	HISTORY	- 1954	GOOD	USGS
BD2486	HISTORY	- 1954	GOOD	CGS
BD2486	HISTORY	- 1973	GOOD	NGS
BD2486	HISTORY	- 19881010	GOOD	NGS
BD2486	HISTORY	- 19890405	GOOD	
BD2486	HISTORY	- 19930303	GOOD	FLDNR
BD2486	HISTORY	- 19990115	GOOD	DCJOHN

BD2486

BD2486 STATION DESCRIPTION

BD2486

BD2486'DESCRIBED BY COAST AND GEODETIC SURVEY 1933 (HCW)
BD2486'THIS STATION IS ABOUT 11 MILES SW OF MADISON, AND ABOUT 100 METERS
BD2486'NW OF THE MADISON-EBB DIRT ROAD, ON LAND OWNED BY THEODORE RANDELL
BD2486'OF MADISON. THE MARK IS ON TOP OF A SMALL RIDGE ABOUT 0.5 MILE W
BD2486'OF A SMALL LAKE, IN A CULTIVATED PLOT, 89 FEET SW OF THE SW CORNER
BD2486'OF A DILAPIDATED CABIN OCCUPIED BY A NEGRO TENANT. 87 FEET ENE OF
BD2486'A 24-INCH PECAN TREE, AND 143 FEET NW OF A 7-FOOT LIVE OAK
BD2486'TREE OUTSIDE THE FENCE, AND SW OF THE GATE LEADING TO THE
BD2486'CABIN. THERE ARE TWO OTHER LARGE LIVE OAK TREES JUST NE OF THE
BD2486'CABIN, AND NUMEROUS LARGE PECAN TREES ON TOP OF THE RIDGE
BD2486'ON BOTH SIDES OF THE ROAD. THE TOP OF THE MARK IS ABOUT 6 INCHES
BD2486'BELOW THE SURFACE.

BD2486'

BD2486'SURFACE, REFERENCE AND AZIMUTH MARKS ARE STANDARD BRONZE DISKS SET
BD2486'IN THE TOPS OF CONCRETE CYLINDERS.

BD2486'

BD2486'UNDERGROUND MARK IS A STANDARD BRONZE DISK SET IN CONCRETE.

BD2486'

BD2486'REFERENCE MARK NO. 1 IS E OF THE STATION, 22 FEET E OF THE GATE
BD2486'LEADING TO THE CABIN AND 1 FOOT N OF AN E-W FENCE, AND PROJECTS
BD2486'6 INCHES.

BD2486'

BD2486'REFERENCE MARK NO. 2 IS SSW OF THE STATION, 21 FEET N OF THE N
BD2486'EDGE OF THE CUT, 32 FEET N OF THE CENTER LINE OF THE ROAD, 38 FEET
BD2486'E OF A MULTIPLE (9 TRUNKS) PECAN TREE, AND PROJECTS 6 INCHES.

BD2486'

BD2486'THE AZIMUTH MARK IS ENE OF THE STATION, 46 FEET NW OF THE CENTER
BD2486'LINE OF THE ROAD, 26 FEET E OF A 20-INCH PECAN TREE, 1 FOOT N OF A
BD2486'FENCE AND 6 FEET NE OF A GATE, AND PROJECTS 8 INCHES.

BD2486'



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2486'TO REACH THE STATION FROM MADISON RAILROAD STATION, TAKE THE
BD2486'MADISON-EBB DIRT ROAD AND GO 1.3 MILES TO A FORK. TAKE THE RIGHT
BD2486'FORK AND GO 8.2 MILES TO STATION.
BD2486'
BD2486'HEIGHT OF TOWER USED WAS 116 FEET.
BD2486
BD2486 STATION RECOVERY (1933)
BD2486
BD2486'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1933
BD2486'RECOVERED IN GOOD CONDITION.
BD2486
BD2486 STATION RECOVERY (1935)
BD2486
BD2486'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1935 (MAH)
BD2486'STATION, REFERENCE AND AZIMUTH MARKS WERE RECOVERED IN GOOD
BD2486'CONDITION AS DESCRIBED, EXCEPT THAT THE AZIMUTH MARK WAS FOUND S OF
BD2486'FENCE.
BD2486
BD2486 STATION RECOVERY (1954)
BD2486
BD2486'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1954
BD2486'STATION AND REFERENCE MARKS RECOVERED IN GOOD CONDITION.
BD2486'
BD2486'AZIMUTH MARK FOUND DISTURBED, BUT SOLID IN ITS PRESENT POSITION
BD2486'(TILTED). FROM THE DESCRIPTION OF THE AZIMUTH MARK DELETE--26 FT.
BD2486'E OF A 20-IN. PECAN TREE, 1 FT. N OF A FENCE, AND 6 FT. NE OF A
BD2486'GATE. ADD--30 FT. NW OF A FENCE, IN A PLOWED FIELD.
BD2486
BD2486 STATION RECOVERY (1954)
BD2486
BD2486'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1954 (MWC)
BD2486'THE STATION IS 11 MI. SW OF MADISON. IT IS BURIED IN THE GROUND
BD2486'ABOUT 1 FT., AND IS STAMPED RANDELL 1933. IT APPEARS TO BE IN GOOD
BD2486'CONDITION.
BD2486'
BD2486'REFERENCE MARK 2 IS APPARENTLY IN GOOD CONDITION AND
BD2486'UNDISTURBED. IT IS STAMPED REF 2 1933.
BD2486'
BD2486'REFERENCE MARK 1 IS APPARENTLY IN GOOD CONDITION, EXCEPT FOR THE
BD2486'FACT THAT THE DISK HAS BEEN POUNDED WITH A TOOL, SUCH AS A SMALL
BD2486'HAMMER, WHICH MAKES IT DIFFICULT TO READ THE INSCRIPTION. IT IS
BD2486'STAMPED REF 1 1933 AND EXTENDS 18 IN. ABOVE THE GROUND.
BD2486'
BD2486'THE AZIMUTH MARK IS NOW 10 FT. INSIDE THE FENCE, AND IT HAS
BD2486'PARTIALLY OVERTURNED, APPARENTLY FROM THE USE OF PLOWING
BD2486'EQUIPMENT. IT IS STAMPED AZIM 1933.
BD2486'
BD2486'A NEW HOME STANDS ABOUT 50 FT. E OF REFERENCE MARK 1. A PAVED
BD2486'ROAD NOW RUNS FROM MADISON TO EBB. THE NEW PAVED ROAD RUNS ON THE
BD2486'OLD ROADBED AS DESCRIBED IN THE PAMPHLET UNTIL IT REACHES A POINT
BD2486'3.1 MI. FROM MADISON. YOU SHOULD GO STRAIGHT AHEAD HERE INSTEAD
BD2486'OF FOLLOWING THE NEW PAVING, THUS MAKING THE MONUMENT ABOUT 6.4
BD2486'MI. DISTANT AFTER LEAVING THE PAVED ROAD RUNNING FROM MADISON TO
BD2486'EBB.
BD2486'



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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BD2486'THE OWNER OF THE LAND IS NOW MR. LAWTON.

BD2486

BD2486

STATION RECOVERY (1973)

BD2486

BD2486'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973 (LAL)

BD2486'NO MEASUREMENT BETWEEN REFERENCE MARKS DUE TO BRUSH ON LINE.

BD2486'

BD2486'THE STATION MARK, REFERENCE MARK 1 AND REFERENCE MARK 2 WERE

BD2486'RECOVERED AND FOUND TO BE IN GOOD CONDITION. THE AZIMUTH MARK WAS

BD2486'SEARCHED FOR AND NOT FOUND. REFERENCE MARK 3 WAS ESTABLISHED AT

BD2486'THIS TIME. NO PLACE AVAILABLE FOR AN AZIMUTH MARK TO BE

BD2486'ESTABLISHED. DUE TO THE CHANGES A NEW DESCRIPTION FOLLOWS.

BD2486'

BD2486'THE STATION IS LOCATED ABOUT 11 MILES SOUTHWEST OF MADISON, 7-1/2

BD2486'MILES SOUTHEAST OF GREENVILLE AND ON THE PROPERTY OF MR. JONAS

BD2486'BRINSON, ROUTE 3, BOX 145, GREENVILLE, FLORIDA.

BD2486'

BD2486'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 90 AND 221

BD2486'IN GREENVILLE, GO SOUTH ON U.S. HIGHWAY 221 FOR 2.7 MILES TO THE

BD2486'JUNCTION OF INTERSTATE HIGHWAY 10. CONTINUE SOUTH ON U.S. HIGHWAY

BD2486'221 FOR 6.1 MILES TO THE JUNCTION OF STATE HIGHWAY S-360. TURN

BD2486'LEFT AND GO EAST ON STATE HIGHWAY S-360 FOR 4.65 MILES TO MOSLEY

BD2486'BAPTIST CHURCH ON THE RIGHT. CONTINUE EAST ON STATE HIGHWAY S-360

BD2486'FOR 0.85 MILE TO A FORK, GRADED ROAD TO THE LEFT. TAKE LEFT FORK

BD2486'AND GO EASTERLY ON GRADED ROAD FOR 2.05 MILES TO A DRIVEWAY ON

BD2486'THE LEFT. TURN SHARP LEFT AND GO NORTHWEST FOR ABOUT 100

BD2486'FEET TO A WOODEN GATE. PASS THROUGH GATE AND GO NORTHWEST ON

BD2486'A TRACK ROAD FOR ABOUT 50 YARDS TO THE STATION ON THE LEFT.

BD2486'

BD2486'THE STATION MARKS ARE STANDARD DISKS STAMPED RANDELL 1933. THE

BD2486'SURFACE DISK IS SET IN THE TOP OF A 12-INCH SQUARE CONCRETE

BD2486'MONUMENT THAT IS 4 INCHES BELOW THE GROUND SURFACE. IT IS 94 FEET

BD2486'SOUTH OF A FENCE AND A METAL WITNESS POST, 74 FEET SOUTHEAST OF A

BD2486'24-INCH PECAN TREE AND 45 FEET WEST-NORTHWEST OF A FENCE. THE

BD2486'UNDERGROUND DISK IS SET IN THE TOP OF AN IRREGULAR MASS OF

BD2486'CONCRETE 42 INCHES BELOW THE GROUND SURFACE.

BD2486'

BD2486'REFERENCE MARK 1, A STANDARD DISK STAMPED RANDELL NO 1 1933, IS SET

BD2486'IN THE TOP OF A 12-INCH SQUARE CONCRETE MONUMENT THAT PROJECTS 1.5

BD2486'FEET ABOVE THE GROUND SURFACE. IT IS 39 FEET SOUTHEAST OF A

BD2486'POWERLINE POLE, 25 FEET WEST OF A FENCE, 20 FEET EAST OF THE

BD2486'CENTER OF A TRACK ROAD AND 2.5 FEET SOUTHWEST OF A METAL WITNESS

BD2486'POST.

BD2486'

BD2486'REFERENCE MARK 2, A STANDARD DISK STAMPED RANDELL NO 2 1933, IS SET

BD2486'IN THE TOP OF A 12-INCH SQUARE CONCRETE MONUMENT THAT PROJECTS 6

BD2486'INCHES ABOVE THE GROUND SURFACE. IT IS 32 FEET NORTH OF THE CENTER

BD2486'OF A TRACK ROAD AND 21 FEET NORTH OF A CUT BANK. THE MARK COULD

BD2486'NOT BE USED DUE TO TOBACCO AND HEAVY BRUSH ON LINE.

BD2486'

BD2486'REFERENCE MARK 3, A STANDARD DISK STAMPED RANDELL NO 3 1933 1973,

BD2486'IS SET IN THE TOP OF A 12-INCH CYLINDRICAL CONCRETE MONUMENT THAT

BD2486'PROJECTS 4 INCHES ABOVE THE GROUND SURFACE. IT IS 48 FEET

BD2486'NORTHEAST OF A 24-INCH PECAN TREE, 2.5 FEET SOUTH OF A FENCE AND

BD2486'2.5 FEET SOUTH-SOUTHEAST OF A METAL WITNESS POST.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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BD2486'

BD2486'HEIGHT OF LIGHT ABOVE STATION MARK 100.4 FEET.

BD2486'

BD2486'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN

BD2486'7-1/2 MILES SOUTHEAST OF GREENVILLE.

BD2486

BD2486

BD2486

STATION RECOVERY (1988)

BD2486'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988

BD2486'THE STATION IS LOCATED ABOUT 17.70 KM (11.00 MI) SOUTHWEST OF MADISON,

BD2486'12.07 KM (7.50 MI) SOUTHEAST OF GREENVILLE. OWNERSHIP--MR. JONAS

BD2486'BRINSON, RT 2 BOX 251, GREENVILLE FL, PHONE 904-973-2740.

BD2486'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 90 AND 221 IN

BD2486'GREENVILLE, GO SOUTH FOR 4.35 KM (2.70 MI) ON HIGHWAY 221 TO THE

BD2486'JUNCTION OF INTERSTATE HIGHWAY 10. CONTINUE SOUTH FOR 9.82 KM

BD2486'(6.10 MI) ON HIGHWAY 221 TO THE JUNCTION OF COUNTY ROAD 360. TURN

BD2486'LEFT AND GO EAST FOR 7.48 KM (4.65 MI) ON COUNTY ROAD 360 TO MOSLEY

BD2486'BAPTIST CHURCH ON THE RIGHT. CONTINUE EAST FOR 1.37 KM (0.85 MI) ON

BD2486'COUNTY ROAD 360 TO A FORK, GRADED ROAD TO THE LEFT. FOLLOW THE LEFT

BD2486'FORK AND GO EASTERLY FOR 3.30 KM (2.05 MI) ON THE GRADED ROAD TO A

BD2486'DRIVEWAY ON LEFT. TURN SHARP LEFT AND GO NORTHWEST FOR ABOUT 30 M

BD2486'(98.4 FT) TO A WOODEN GATE. PASS THROUGH GATE AND GO NORTHWEST FOR

BD2486'ABOUT 50 M (164.0 FT) ON A TRACK ROAD TO THE STATION ON LEFT.

BD2486'LOCATED 28.65 M (94.0 FT) SOUTH FROM A FENCE AND METAL WITNESS POST,

BD2486'22.56 M (74.0 FT) SOUTHEAST FROM A 61-CM PECAN TREE AND 13.72 M

BD2486'(45.0 FT) WEST-NORTHWEST FROM A FENCE.

BD2486'DESCRIBED BY F.W. ROSSMANN.

BD2486

BD2486

STATION RECOVERY (1989)

BD2486

BD2486'RECOVERED 1989

BD2486'RECOVERED IN GOOD CONDITION.

BD2486

BD2486

STATION RECOVERY (1993)

BD2486

BD2486'RECOVERY NOTE BY FL DEPT OF NAT RES 1993 (PBM)

BD2486'THE STATION IS ABOUT 11.0 MI (17.7 KM) SOUTHWEST OF MADISON, 7.5 MI

BD2486'(12.1 KM) SOUTHEAST OF GREENVILLE, IN A SMALL FIELD ON A RIDGE,

BD2486'APPROXIMATELY 300.0 FT (91.4 M) NORTHWEST OF A NORTHEAST-SOUTHWEST

BD2486'DIRT ROAD BETWEEN COUNTY ROAD 360 SOUTH AND COUNTY ROAD 14 NORTH IN

BD2486'SECTION 20, T 1 S, R 8 E. TO REACH THE STATION FROM THE INTERSECTION

BD2486'OF U.S. HIGHWAY 221 AND INTERSTATE 10, ABOUT 2.0 MI (3.2 KM) SOUTH OF

BD2486'GREENVILLE, GO SOUTH ON U.S. HIGHWAY 221 FOR 5.8 MI (9.3 KM) TO COUNTY

BD2486'ROAD 360 EAST, TURN LEFT ON COUNTY ROAD 360 AND GO EAST FOR 5.2 MI

BD2486'(8.4 KM) TO A DIRT ROAD LEADING NORTHEAST TO MADISON, TURN LEFT ON THE

BD2486'DIRT ROAD AND GO NORTHEAST FOR 2.05 MI (3.30 KM) TO A DRIVEWAY ON THE

BD2486'LEFT TO A YELLOW AND BROWN MOBILE HOME, TURN LEFT ON THE DRIVEWAY AND

BD2486'GO NORTHWEST PASSING THROUGH THE GATE TO THE RESIDENCE, WALK WEST FOR

BD2486'APPROXIMATELY 200.0 FT (61.0 M) TO THE STATION, SET IN THE TOP OF A

BD2486'SQUARE CONCRETE MONUMENT RECESSED 0.5 FT (15.2 CM) BELOW THE LEVEL OF

BD2486'THE GROUND. LOCATED 200.0 FT (61.0 M) WEST OF THE MOBILE HOME, 144.6

BD2486'FT (44.1 M) WEST OF RANDELL NO 1, 94.0 FT (28.7 M) SOUTHEAST OF A

BD2486'NORTH-SOUTH FENCE LINE AND 91.5 FT (27.9 M) SOUTHEAST OF RANDELL NO 3.

BD2486

BD2486

STATION RECOVERY (1999)



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2486

BD2486'RECOVERY NOTE BY DC JOHNSON ASSOC 1999 (DS)

BD2486'RECOVERED AS DESCRIBED (AG) .



USGS – Suwannee River Water Management District

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Prime Contractor: Digital Aerial Solutions (DAS)

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1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AR0022 *****

AR0022 FBN - This is a Federal Base Network Control Station.

AR0022 DESIGNATION - SALEM NW BASE

AR0022 PID - AR0022

AR0022 STATE/COUNTY- FL/TAYLOR

AR0022 USGS QUAD - SALEM (1993)

AR0022

AR0022 *CURRENT SURVEY CONTROL

AR0022

AR0022*	NAD 83(2007) -	29 53 09.13038(N)	083 24 42.71937(W)	ADJUSTED
AR0022*	NAVD 88 -	12.294 (meters)	40.33 (feet)	ADJUSTED

AR0022

AR0022	EPOCH DATE -	2002.00		
AR0022	X -	634,987.658 (meters)		COMP
AR0022	Y -	-5,498,010.884 (meters)		COMP
AR0022	Z -	3,159,403.184 (meters)		COMP
AR0022	LAPLACE CORR-	0.49 (seconds)		DEFLEC09
AR0022	ELLIP HEIGHT-	-15.478 (meters)	(02/10/07)	ADJUSTED
AR0022	GEOID HEIGHT-	-27.75 (meters)		GEOID09
AR0022	DYNAMIC HT -	12.278 (meters)	40.28 (feet)	COMP

AR0022

AR0022 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

AR0022	Type	PID	Designation	North	East	Ellip
AR0022	NETWORK AR0022 SALEM NW BASE			0.29	0.27	0.92

AR0022

AR0022 MODELED GRAV- 979,307.8 (mgal) NAVD 88

AR0022

AR0022 VERT ORDER - FIRST CLASS I

AR0022

AR0022.The horizontal coordinates were established by GPS observations

AR0022.and adjusted by the National Geodetic Survey in February 2007.

AR0022

AR0022.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

AR0022.See [National Readjustment](#) for more information.

AR0022

AR0022.The horizontal coordinates are valid at the epoch date displayed above

AR0022.which is a decimal equivalence of Year/Month/Day.

AR0022

AR0022.The orthometric height was determined by differential leveling and

AR0022.adjusted in June 1991.

AR0022

AR0022.WARNING-GPS observations at this control monument resulted in a GPS

AR0022.derived orthometric height which differed from the leveled height by

AR0022.more than one decimeter (0.1 meter).

AR0022

AR0022.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AR0022

AR0022.The Laplace correction was computed from DEFLEC09 derived deflections.

AR0022

AR0022.The ellipsoidal height was determined by GPS observations

AR0022.and is referenced to NAD 83.

AR0022

AR0022.The geoid height was determined by GEOID09.



USGS – Suwannee River Water Management District

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AR0022

AR0022.The dynamic height is computed by dividing the NAVD 88

AR0022.geopotential number by the normal gravity value computed on the

AR0022.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AR0022.degrees latitude (g = 980.6199 gals.).

AR0022

AR0022.The modeled gravity was interpolated from observed gravity values.

AR0022

AR0022;		North	East	Units	Scale Factor	Converg.
AR0022;SPC FL N	-	98,697.781	705,104.127	MT	0.99996042	+0 32 48.5
AR0022;SPC FL N	-	323,810.97	2,313,329.12	sFT	0.99996042	+0 32 48.5
AR0022;UTM 17	-	3,308,582.523	267,080.456	MT	1.00026940	-1 12 08.3

AR0022

AR0022! - Elev Factor x Scale Factor = Combined Factor

AR0022!SPC FL N - 1.00000243 x 0.99996042 = 0.99996285

AR0022!UTM 17 - 1.00000243 x 1.00026940 = 1.00027183

AR0022

AR0022:		Primary Azimuth Mark	Grid Az
AR0022:SPC FL N	-	SALEM NW BASE AZ MK	139 43 49.5
AR0022:UTM 17	-	SALEM NW BASE AZ MK	141 28 46.3

AR0022

AR0022	PID	Reference Object	Distance	Geod. Az
AR0022				ddmmss.s
AR0022	AR0023	SALEM NW BASE AZ MK		1401638.0
AR0022	CW5029	SALEM NW BASE RM 2	47.442 METERS	22402
AR0022	AR0021	SALEM NW BASE RM 1	93.391 METERS	35652

AR0022

AR0022

SUPERSEDED SURVEY CONTROL

AR0022

AR0022	NAD 83(1999)-	29 53 09.13054(N)	083 24 42.71943(W)	AD(	) A
AR0022	ELLIP H (04/12/01)	-15.469 (m)		GP(	) 4 1
AR0022	NAD 83(1990)-	29 53 09.12929(N)	083 24 42.71878(W)	AD(	) B
AR0022	ELLIP H (09/13/90)	-15.546 (m)		GP(	) 4 1
AR0022	NAD 83(1986)-	29 53 09.14012(N)	083 24 42.72733(W)	AD(	) 1
AR0022	NAD 27	- 29 53 08.35100(N)	083 24 43.21900(W)	AD(	) 1
AR0022	NAVD 88 (07/14/97)	12.29 (m)	40.3 (f)	LEVELING	3
AR0022	NAVD 88 (06/02/94)	12.2 (m)	40. (f)	GPS OBS	
AR0022	NAVD 88 (12/19/91)	12.29 (m)	40.3 (f)	LEVELING	3
AR0022	NGVD 29 (??/??/92)	12.497 (m)	41.00 (f)	ADJ UNCH	1 1

AR0022

AR0022.Superseded values are not recommended for survey control.

AR0022.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AR0022.[See file dsdata.txt](#) to determine how the superseded data were derived.

AR0022

AR0022_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP6708008582(NAD 83)

AR0022

AR0022_MARKER: DS = TRIANGULATION STATION DISK

AR0022_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AR0022_SP_SET: CONCRETE POST

AR0022_STAMPING: SALEM NORTH WEST BASE 1933

AR0022_MARK LOGO: CGS

AR0022_PROJECTION: FLUSH

AR0022_MAGNETIC: N = NO MAGNETIC MATERIAL



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR0022_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AR0022+STABILITY: SURFACE MOTION
AR0022_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AR0022+SATELLITE: SATELLITE OBSERVATIONS - April 23, 2002

AR0022

AR0022	HISTORY	- Date	Condition	Report By
AR0022	HISTORY	- 1933	MONUMENTED	CGS
AR0022	HISTORY	- 1933	GOOD	CGS
AR0022	HISTORY	- 1934	GOOD	FLGS
AR0022	HISTORY	- 1940	GOOD	CGS
AR0022	HISTORY	- 1963	GOOD	CGS
AR0022	HISTORY	- 1967	GOOD	CGS
AR0022	HISTORY	- 1967	GOOD	CGS
AR0022	HISTORY	- 1977	GOOD	NGS
AR0022	HISTORY	- 19881017	GOOD	NGS
AR0022	HISTORY	- 19890414	GOOD	
AR0022	HISTORY	- 19900326	GOOD	FLDT
AR0022	HISTORY	- 19930303	GOOD	NGS
AR0022	HISTORY	- 19951130	SEE DESCRIPTION	NGS
AR0022	HISTORY	- 19971120	GOOD	DCJOHN
AR0022	HISTORY	- 19990115	GOOD	DCJOHN
AR0022	HISTORY	- 19990405	GOOD	FLDT
AR0022	HISTORY	- 20020423	GOOD	DCJOHN

AR0022

AR0022 STATION DESCRIPTION

AR0022

AR0022'DESCRIBED BY COAST AND GEODETIC SURVEY 1933 (HCW)
AR0022'THIS STATION IS ABOUT 19 MILES SE OF PERRY, ABOUT 100 YARDS
AR0022'SE OF SALEM ATLANTIC COAST LINE RAILROAD STATION. IT IS ON THE
AR0022'EXTENSION OF THE NE RAIL FROM THE SE, ABOUT 230 PACES FROM THE
AR0022'POINT OF TANGENCY. THE MARK IS 62.4 FEET WSW OF THE SW RAIL,
AR0022'60 FEET ENE OF THE NEW HIGHWAY GRADE, AND 119 FEET S OF THE E
AR0022'CORNER OF THE FENCE AROUND THE SECTION HOUSES. THE MARK
AR0022'PROJECTS 7 INCHES.
AR0022'
AR0022'SURFACE, UNDERGROUND, REFERENCE, AND AZIMUTH MARKS ARE STANDARD
AR0022'BRONZE DISKS SET IN CONCRETE.
AR0022'
AR0022'REFERENCE MARK NO.1 IS N OF THE STATION, AT THE E CORNER OF THE
AR0022'SECTION TOOL-HOUSE, 46 FEET E OF THE NE RAIL. THE MARK PROJECTS
AR0022'7 INCHES.
AR0022'
AR0022'REFERENCE MARK NO.2 IS WSW OF THE STATION, AND 65 FEET WSW OF
AR0022'THE NEW GRADE. IT PROJECTS 7 INCHES.
AR0022'
AR0022'THE AZIMUTH MARK IS SE OF THE STATION ON THE RAILROAD
AR0022'RIGHT-OF-WAY. TO REACH FROM THE STATION, GO SE ON HIGHWAY 0.5 MILE
AR0022'TO A TRAIL LEADING ACROSS THE RAILROAD. THE MARK IS 55 FEET NW OF
AR0022'THIS ROAD, AND 47.2 FEET NE OF THE NE RAIL. IT PROJECTS 7 INCHES.
AR0022'
AR0022'TO REACH FROM THE COURTHOUSE IN PERRY, GO SE ON U.S. HIGHWAY 19,
AR0022'19.6 MILES TO SALEM, AND THE STATION. THIS DISTANCE WILL BE
AR0022'SOMEWHAT LESS WHEN THE NEW HIGHWAY IS COMPLETED.

AR0022

AR0022 STATION RECOVERY (1933)



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AR0022'(NOT 47.2) NE OF THE NE RAIL AND 57 FEET NW OF THE CENTER OF THE
AR0022'SAND ROAD, IT PROJECTS ABOUT 9 INCHES ABOVE THE GROUND AND IS
AR0022'STAMPED SALEM NORTHWEST BASE 1933 AZIMUTH.

AR0022'

AR0022'A 116-FOOT TOWER WAS BUILT AT THIS STATION IN 1933.

AR0022'

AR0022'THE DIRECTIONS WERE NOT CHECKED.

AR0022

AR0022 STATION RECOVERY (1963)

AR0022

AR0022'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1963 (VRS)

AR0022'STATION MARK, REFERENCE MARKS AND THE AZIMUTH MARK WERE RECOVERED

AR0022'AND FOUND IN GOOD CONDITION. THE CARBOR POST OFFICE AND RAILROAD

AR0022'STATION HAVE BEEN REMOVED.

AR0022'

AR0022'STATION IS LOCATED IN THE COMMUNITY OF SALEM ABOUT 500 FEET

AR0022'SOUTHEAST OF THE SALEM SCHOOL, OPPOSITE THE ROAD LEADING TO THE

AR0022'SALEM LOOKOUT TOWER.

AR0022'

AR0022'STATION MARK IS A STANDARD DISK STAMPED SALEM NORTHWEST BASE

AR0022'1933 SET IN THE TOP OF A CONCRETE MONUMENT PROJECTING 6 INCHES,

AR0022'82 FEET NORTHEAST OF THE CENTER OF U.S. HIGHWAY 19, 63.5 FEET

AR0022'SOUTHWEST OF THE SOUTHWEST RAIL OF THE RAILROAD TRACKS, 87.5 FEET

AR0022'SOUTH OF CONCRETE POST NUMBER 770 ON THE EAST SIDE OF THE TRACKS

AR0022'AND PROJECTING ABOUT 4 FEET, 38 FEET NORTHEAST OF A POWER POLE

AR0022'AND 1.5 FEET NORTHEAST OF A WITNESS SIGN.

AR0022'

AR0022'REFERENCE MARK 1 IS A STANDARD DISK STAMPED SALEM NORTHWEST BASE

AR0022'NO 1 1933, SET IN THE TOP OF A ROUND CONCRETE MONUMENT PROJECTING

AR0022'6 INCHES, 46 FEET EAST OF THE EAST RAIL OF THE RAILROAD.

AR0022'

AR0022'REFERENCE MARK 2 IS A STANDARD DISK STAMPED SALEM NORTHWEST BASE

AR0022'NO 2 1933 SET IN THE TOP OF A ROUND CONCRETE MONUMENT PROJECTING

AR0022'8 INCHES, 65 FEET SOUTHWEST OF THE CENTER OF HIGHWAY 19, 110 FEET

AR0022'SOUTH OF A SIGN SALEM TOWER AND 1.5 FEET NORTHEAST OF A WITNESS

AR0022'SIGN.

AR0022'

AR0022'AZIMUTH MARK IS A STANDARD REFERENCE MARK DISK STAMPED SALEM

AR0022'NORTHWEST BASE 1933 AZIMUTH SET IN THE TOP OF A ROUND CONCRETE

AR0022'MONUMENT PROJECTING 4 INCHES, 43.2 FEET NORTHEAST OF THE NORTHEAST

AR0022'RAIL OF THE RAILROAD, 57 FEET NORTHWEST OF THE CENTER OF A SAND

AR0022'ROAD AND 1.5 FEET NORTH OF A WITNESS SIGN.

AR0022'

AR0022'TO REACH THE AZIMUTH MARK FROM THE STATION, GO SOUTHEAST ON

AR0022'U.S. HIGHWAY 19 FOR 0.5 MILE TO THE FIRST SAND ROAD, TURN LEFT

AR0022'AND GO EAST ON THE SAND ROAD FOR 0.1 MILE TO RAILROAD TRACKS AND

AR0022'THE MARK AS DESCRIBED.

AR0022

AR0022 STATION RECOVERY (1967)

AR0022

AR0022'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1967 (RRG)

AR0022'TO REACH FROM THE JUNCTION OF U.S. HIGHWAY 19 AND U.S. HIGHWAY

AR0022'221 AT PERRY, GO ABOUT 17.85 MILES SOUTHEAST ALONG U.S. HIGHWAY

AR0022'19, TO THE VILLAGE OF SALEM, AND THE STATION. NEAR THE JUNCTION OF

AR0022'A SAND ROAD LEADING TO THE NORTHEAST, 85 FEET NORTHEAST OF THE



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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AR0022'CENTER LINE OF THE NORTH BOUND LANE OF THE HIGHWAY, 64 FEET
AR0022'SOUTHWEST OF THE SOUTHWEST RAIL OF THE ATLANTIC COAST LINE
AR0022'RAILROAD, 86 FEET SOUTHWEST OF AND ACROSS THE TRACK FROM
AR0022'MILEPOST 770, 516 FEET SOUTHEAST OF THE CENTER LINE OF THE SAND
AR0022'ROAD, 39 FEET EAST OF A POWER LINE POLE, 2 FEET NORTHEAST OF A
AR0022'METAL WITNESS POST, ABOUT LEVEL WITH THE HIGHWAY AND SET IN THE
AR0022'TOP OF A CONCRETE POST PROJECTING 3 INCHES ABOVE THE
AR0022'LEVEL OF THE GROUND. RM 1 IS 206.0 FEET NORTH OF AND
AR0022'ACROSS TRACK FROM THE STATION. 253 FEET NORTHWEST OF
AR0022'MILEPOST 770, ABOUT LEVEL WITH THE TRACK AND SET IN THE TOP
AR0022'OF A CONCRETE POST. RM NO. 2 WAS FOUND DESTROYED. THE
AR0022'AZIMUTH MARK WAS FOUND AND IN GOOD CONDITION, IT IS LOCATED ABOUT
AR0022'0.5 MILE SOUTHEAST ALONG THE RAILROAD FROM THE STATION
AR0022'DESCRIBED, 42 FEET NORTHEAST OF THE NORTHEAST RAIL, 63 FEET
AR0022'NORTH OF THE CENTER OF A SAND ROAD CROSSING, 1.5 FEET
AR0022'NORTHWEST OF A METAL WITNESS POST, SET IN THE TOP OF A CONCRETE
AR0022'POST.

AR0022

AR0022

STATION RECOVERY (1967)

AR0022

AR0022'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1967

AR0022'17.8 MI SE FROM PERRY.

AR0022'ABOUT 17.85 MILES SOUTHEAST ALONG U.S. HIGHWAY 19 AND 98 FROM

AR0022'THE JUNCTION OF U.S. HIGHWAY 221 AT PERRY, IN SECTION 10, R 9

AR0022'E, T 7 S, AT THE SMALL VILLAGE OF SALEM, NEAR THE JUNCTION OF

AR0022'A SAND ROAD LEADING NORTHEAST, 85 FEET NORTHEAST OF THE CENTER

AR0022'LINE OF THE NORTHBOUND LANE OF THE HIGHWAY, 64 FEET SOUTHWEST

AR0022'OF THE SOUTHWEST RAIL OF THE ATLANTIC COAST LINE RAILROAD, 86

AR0022'FEET SOUTHWEST OF AND ACROSS THE TRACK FROM MILEPOST 770, 516

AR0022'FEET SOUTHEAST OF THE CENTER LINE OF THE SAND ROAD, 39 FEET

AR0022'EAST OF A POWER LINE POLE, 2 FEET NORTHEAST OF A METAL WITNESS

AR0022'POST, ABOUT LEVEL WITH THE HIGHWAY AND SET IN THE TOP OF A CONCRETE

AR0022'POST PROJECTING 3 INCHES ABOVE THE LEVEL OF THE GROUND.

AR0022

AR0022

STATION RECOVERY (1977)

AR0022

AR0022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977

AR0022'RECOVERED IN GOOD CONDITION.

AR0022

AR0022

STATION RECOVERY (1988)

AR0022

AR0022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988

AR0022'THE STATION WAS RECOVERED IN GOOD CONDITION. THE NORTH SIDE OF THE

AR0022'CONCRETE POST IS CHIPPED, BUT THE STATION DOES NOT APPEAR TO HAVE BEEN

AR0022'DISTURBED.

AR0022'THE STATION IS LOCATED ABOUT 30.58 KM (19.00 MI) SOUTHEAST OF PERRY,

AR0022'ON THE SOUTHEAST SIDE OF THE COMMUNITY OF SALEM, ON THE NORTHEAST SIDE

AR0022'OF U.S. HIGHWAY 19, 98, 27 ALTERNATE, IN SECTION 10, T 7 S, R 4 E.

AR0022'OWNERSHIP--BILL SHAW, SALEM FL 32356, PHONE 904-584-7398.

AR0022'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 19, 98, 27

AR0022'ALTERNATE (BYRON BUTLER PARKWAY) AND U.S. HIGHWAY 221 (JEFFERSON ST)

AR0022'IN PERRY, GO SOUTHEAST FOR 29.05 KM (18.05 MI) ON HIGHWAY 19, 98, 27

AR0022'ALTERNATE TO THE SALEM POST OFFICE ON LEFT. CONTINUE STRAIGHT AHEAD

AR0022'AND GO SOUTHEAST FOR 70 M (229.7 FT) ON HIGHWAY 19, 98, 27 ALTERNATE

AR0022'TO THE STATION ON LEFT.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

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AR0022'THE STATION PROJECTS 8 CM ABOVE GROUND. LOCATED 68.88 M (226.0 FT)
AR0022'SOUTH-SOUTHEAST FROM THE SOUTH CORNER OF THE POST OFFICE, 25.30 M
AR0022'(83.0 FT) EAST-NORTHEAST FROM THE APPROXIMATE CENTER OF THE NORTHBOUND
AR0022'LANES OF HIGHWAY, 11.89 M (39.0 FT) EAST FROM A JUNCTION UTILITY POLE
AR0022'WITH GUY WIRE, 0.52 M (1.7 FT) WEST-NORTHWEST FROM A CARSONITE WITNESS
AR0022'POST AND 0.46 M (1.5 FT) SOUTH-SOUTHWEST FROM A FLORIDA POWER
AR0022'CARSONITE POST.
AR0022'DESCRIBED BY D.F. CALLAHAN.
AR0022
AR0022 STATION RECOVERY (1989)
AR0022
AR0022 RECOVERED 1989
AR0022'RECOVERED IN GOOD CONDITION.
AR0022
AR0022 STATION RECOVERY (1990)
AR0022
AR0022'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1990
AR0022'RECOVERED IN GOOD CONDITION.
AR0022
AR0022 STATION RECOVERY (1993)
AR0022
AR0022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
AR0022'THE STATION WAS RECOVERED IN GOOD CONDITION. THE NORTH SIDE OF THE
AR0022'CONCRETE POST IS CHIPPED, BUT THE STATION DOES NOT APPEAR TO HAVE
AR0022'BEEN DISTURBED.
AR0022'THE STATION IS LOCATED ABOUT 30.58 KM (19.00 MI) SOUTHEAST OF PERRY,
AR0022'ON THE SOUTHEAST SIDE OF THE COMMUNITY OF SALEM, ON THE NORTHEAST
AR0022'SIDE OF U.S. HIGHWAY 19, 98, 27 ALTERNATE, IN SECTION 10, T 7 S, R 4
AR0022'E. OWNERSHIP--BILL SHAW, SALEM FL 32356, PHONE 904-584-7398.
AR0022'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 19, 98, 27
AR0022'ALTERNATE (BYRON BUTLER PARKWAY) AND U.S. HIGHWAY 221 (JEFFERSON
AR0022'STREET) IN PERRY, GO SOUTHEAST FOR 29.05 KM (18.05 MI) ON HIGHWAY 19,
AR0022'98, 27 ALTERNATE TO THE SALEM POST OFFICE ON LEFT. CONTINUE STRAIGHT
AR0022'AHEAD AND GO SOUTHEAST FOR 70 M (229.7 FT) ON HIGHWAY 19, 98, 27
AR0022'ALTERNATE TO THE STATION ON LEFT.
AR0022'THE STATION PROJECTS 8 CM ABOVE GROUND. LOCATED 68.88 M (225.98 FT)
AR0022'SOUTH-SOUTHEAST FROM THE SOUTH CORNER OF THE POST OFFICE, 25.30 M
AR0022'(83.01 FT) EAST-NORTHEAST FROM THE APPROXIMATE CENTER OF THE
AR0022'NORTHBOUND LANES OF HIGHWAY, 11.89 M (39.01 FT) EAST FROM A JUNCTION
AR0022'UTILITY POLE WITH GUY WIRE, 0.52 M (1.71 FT) WEST-NORTHWEST FROM A
AR0022'CARSONITE WITNESS POST AND 0.46 M (1.51 FT) SOUTH-SOUTHWEST FROM A
AR0022'FLORIDA POWER CARSONITE POST.
AR0022
AR0022 STATION RECOVERY (1995)
AR0022
AR0022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)
AR0022'THE STATION IS LOCATED ABOUT 19.0 MI (30.6 KM) SOUTHEAST OF PERRY, 9.0
AR0022'MI (14.5 KM) NORTH OF TENNILLE, AND ALONG THE EAST SIDE OF U.S.
AR0022'HIGHWAYS 19, ALTERNATE 27, AND 98 IN THE SMALL COMMUNITY OF SALEM AND
AR0022'JUST SOUTH-SOUTHEAST OF THE U.S. POST OFFICE IN SECTION 10, T 7 S, R 4
AR0022'E. OWNERSHIP -- MRS. BILL SHAW, POSTMASTER, P.O. BOX 226, SALEM FL
AR0022'32356. TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 19,
AR0022'ALTERNATE 27, 98 AND U.S. HIGHWAY 221 IN PERRY, GO SOUTHEAST ON U.S.
AR0022'HIGHWAYS 19, ALTERNATE 27 AND 98 FOR 17.8 MI (28.6 KM) TO THE STATION
AR0022'ON THE LEFT ABOUT 70-METERS SOUTH-SOUTHEAST OF THE SOUTHWEST CORNER OF



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AR0022'THE POST OFFICE. THE SOIL HAS BUILT UP AROUND THE MARK AND IT ONLY
AR0022'PROJECTS ABOUT 4 CM AT THIS TIME. IT HAS CHIPS OFF THE NORTH SIDE,
AR0022'BUT APPEARS TO BE SOLID. IT IS 68.88 M (225.98 FT) SOUTH-SOUTHEAST
AR0022'FROM THE SOUTHWEST CORNER OF THE POST OFFICE, 25.4 M (83.3 FT)
AR0022'EAST-NORTHEAST FROM THE CENTER OF THE NORTHBOUND LANES OF HIGHWAY,
AR0022'20.2 M (66.3 FT) WEST-SOUTHWEST OF CENTER OF TRACK ROAD IN OLD
AR0022'RAILROAD BED, 12.0 M (39.4 FT) EAST-NORTHEAST OF SOUTH LEG OF 4-FT BY
AR0022'4-FT WOODEN PUBLIC BULLETIN BOARD, 11.75 M (38.55 FT) EAST FROM A
AR0022'JUNCTION UTILITY POLE WITH GUY WIRE, 0.52 M (1.71 FT) WEST-NORTHWEST
AR0022'FROM A WITNESS POST AND 0.46 M (1.51 FT) SOUTH-SOUTHEAST FROM A
AR0022'FLORIDA POWER WITNESS POST. WJR

AR0022

STATION RECOVERY (1997)

AR0022

AR0022'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

AR0022'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS

AR0022'RECOVERED AS PREVIOUSLY DESCRIBED.

AR0022

AR0022

STATION RECOVERY (1999)

AR0022

AR0022'RECOVERY NOTE BY DC JOHNSON ASSOC 1999 (DS)

AR0022'RECOVERED AS DESCRIBED (AG) .

AR0022

AR0022

STATION RECOVERY (1999)

AR0022

AR0022'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1999

AR0022'RECOVERED AS DESCRIBED.

AR0022

AR0022

STATION RECOVERY (2002)

AR0022

AR0022'RECOVERY NOTE BY DC JOHNSON ASSOC 2002 (ARG)

AR0022'RECOVERED AS DESCRIBED. (ARG)

AR0022'



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2714 *****

BD2714 CBN - This is a Cooperative Base Network Control Station.

BD2714 DESIGNATION - SUWAPORT

BD2714 PID - BD2714

BD2714 STATE/COUNTY- FL/SUWANNEE

BD2714 USGS QUAD - LIVE OAK WEST (1993)

BD2714

BD2714 *CURRENT SURVEY CONTROL

BD2714

BD2714*	NAD 83(2007) -	30 18 00.44345 (N)	083 01 22.85065 (W)	ADJUSTED
BD2714*	NAVD 88 -	30.389 (meters)	99.70 (feet)	ADJUSTED

BD2714

BD2714	EPOCH DATE -	2002.00		
BD2714	X -	669,491.379 (meters)		COMP
BD2714	Y -	-5,470,735.327 (meters)		COMP
BD2714	Z -	3,199,144.019 (meters)		COMP
BD2714	LAPLACE CORR-	-0.27 (seconds)		DEFLEC09
BD2714	ELLIP HEIGHT-	2.359 (meters)	(02/10/07)	ADJUSTED
BD2714	GEOID HEIGHT-	-28.03 (meters)		GEOID09
BD2714	DYNAMIC HT -	30.350 (meters)	99.57 (feet)	COMP

BD2714

BD2714 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD2714	Type	PID	Designation	North	East	Ellip
BD2714	-----					
BD2714	NETWORK	BD2714	SUWAPORT	0.47	0.41	1.16
BD2714	-----					

BD2714

BD2714	MODELED GRAV-	979,333.5 (mgal)		NAVD 88
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BD2714

BD2714 VERT ORDER - SECOND CLASS I

BD2714

BD2714.This mark is at Live Oak Airport (24J)

BD2714

BD2714.The horizontal coordinates were established by GPS observations

BD2714.and adjusted by the National Geodetic Survey in February 2007.

BD2714

BD2714.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD2714.See [National Readjustment](#) for more information.

BD2714

BD2714.The horizontal coordinates are valid at the epoch date displayed above

BD2714.which is a decimal equivalence of Year/Month/Day.

BD2714

BD2714.The orthometric height was determined by differential leveling and

BD2714.adjusted in July 2004.

BD2714

BD2714.No vertical observational check was made to the station.

BD2714

BD2714.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD2714

BD2714.The Laplace correction was computed from DEFLEC09 derived deflections.

BD2714

BD2714.The ellipsoidal height was determined by GPS observations

BD2714.and is referenced to NAD 83.

BD2714

BD2714.The geoid height was determined by GEOID09.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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BD2714

BD2714.The dynamic height is computed by dividing the NAVD 88

BD2714.geopotential number by the normal gravity value computed on the

BD2714.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2714.degrees latitude (g = 980.6199 gals.).

BD2714

BD2714.The modeled gravity was interpolated from observed gravity values.

BD2714

BD2714;		North	East	Units	Scale Factor	Converg.
BD2714;SPC FL N	-	145,035.882	742,067.192	MT	0.99995111	+0 44 32.0
BD2714;SPC FL N	-	475,838.56	2,434,598.78	sFT	0.99995111	+0 44 32.0
BD2714;UTM 17	-	3,353,775.466	305,454.765	MT	1.00006695	-1 01 15.6

BD2714

BD2714! - Elev Factor x Scale Factor = Combined Factor

BD2714!SPC FL N - 0.99999963 x 0.99995111 = 0.99995074

BD2714!UTM 17 - 0.99999963 x 1.00006695 = 1.00006658

BD2714

BD2714:		Primary Azimuth Mark	Grid Az
BD2714:SPC FL N	-	SUWAPORT AZ MK	064 44 16.3
BD2714:UTM 17	-	SUWAPORT AZ MK	066 30 03.9

BD2714

BD2714	PID	Reference Object	Distance	Geod. Az
BD2714				dddmms.s
BD2714	BD2735	SUWAPORT AZ MK	APPROX. 0.6 KM	0652848.3

BD2714

BD2714

BD2714

BD2714	NAD 83(1999)-	30 18 00.44368(N)	083 01 22.85034(W)	AD() B
BD2714	ELLIP H (05/31/01)	2.277 (m)		GP() 5 1
BD2714	NAD 83(1990)-	30 18 00.44283(N)	083 01 22.85015(W)	AD() B
BD2714	ELLIP H (09/13/90)	2.295 (m)		GP() 4 1
BD2714	NAVD 88 (10/02/98)	30.40 (m)	99.7 (f)	LEVELING 3
BD2714	NAVD 88 (06/02/94)	30.4 (m)	100. (f)	GPS OBS
BD2714	NGVD 29 (09/13/90)	30.7 (m)	101. (f)	GPS OBS

BD2714

BD2714.Superseded values are not recommended for survey control.

BD2714.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2714.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2714

BD2714_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP0545453775(NAD 83)

BD2714

BD2714_MARKER: F = FLANGE-ENCASED ROD

BD2714_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

BD2714_SP_SET: STAINLESS STEEL ROD IN SLEEVE

BD2714_STAMPING: SUWAPORT 1988

BD2714_MARK LOGO: NGS

BD2714_PROJECTION: FLUSH

BD2714_MAGNETIC: N = NO MAGNETIC MATERIAL

BD2714_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD2714_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD2714+SATELLITE: SATELLITE OBSERVATIONS - November 20, 1997

BD2714_ROD/PIPE-DEPTH: 6.0 meters

BD2714_SLEEVE-DEPTH : 0.9 meters



USGS – Suwannee River Water Management District

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BD2714

	HISTORY	- Date	Condition	Report By
BD2714	HISTORY	- 1988	MONUMENTED	NGS
BD2714	HISTORY	- 19890406	GOOD	
BD2714	HISTORY	- 19890510	GOOD	
BD2714	HISTORY	- 19920123	GOOD	FLDNR
BD2714	HISTORY	- 19971120	GOOD	DCJOHN

BD2714

BD2714 STATION DESCRIPTION

BD2714

BD2714'DESCRIBED BY NATIONAL GEODETIC SURVEY 1988

BD2714'THE STATION IS LOCATED ABOUT 3.70 KM (2.30 MI) WEST OF LIVE OAK, AT

BD2714'THE SUWANNEE COUNTY AIRPORT, ON THE SOUTH-SOUTHEAST SIDE OF RUNWAY

BD2714'07-25, NEAR THE WINDSOCK. OWNERSHIP--COUNTY OF SUWANNEE, BOARD OF

BD2714'COUNTY COMMISSIONERS, COURTHOUSE, LIVE OAK FL 32060, DWIGHT STANSEL -

BD2714'AIRPORT MANAGER, ROUTE 7 BOX 474, LIVE OAK FL 32060, PHONE

BD2714'904-362-2617. NOTE--PERMISSION MUST BE OBTAINED BEFORE ENTERING

BD2714'AIRPORT.

BD2714'TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 90 (HOWARD

BD2714'ST) AND U.S. HIGHWAY 129 (OHIO AVE) IN LIVE OAK, GO NORTHWEST FOR 3.86

BD2714'KM (2.40 MI) ON HIGHWAY 90 TO A PAVED ROAD LEFT. TURN LEFT AND GO

BD2714'SOUTHERLY FOR 0.80 KM (0.50 MI) ON THE PAVED ROAD TO A PAVED

BD2714'CROSSROAD. CONTINUE STRAIGHT AHEAD AND GO SOUTHERLY FOR 0.16 KM

BD2714'(0.10 MI) ON THE PAVED ROAD TO A CURVE RIGHT, SUWANNEE AVIATION

BD2714'STRAIGHT AHEAD. BEAR RIGHT AND GO WESTERLY FOR 0.08 KM (0.05 MI) ON

BD2714'THE PAVED ROAD TO A GATE. PASS THROUGH GATE AND CONTINUE WESTERLY FOR

BD2714'ABOUT 20 M (65.6 FT) ON THE PAVED ROAD, THEN TURN LEFT AND GO

BD2714'SOUTHERLY FOR 0.16 KM (0.10 MI) ON THE ASPHALT APRON AND RAMP TO

BD2714'RUNWAY 07-25. CROSS RUNWAY, TURN RIGHT AND GO WEST-SOUTHWEST FOR

BD2714'ABOUT 110 M (360.9 FT) ALONG THE EDGE OF RUNWAY TO THE STATION ON

BD2714'LEFT.

BD2714'THE STATION IS RECESSED 11 CM BELOW GROUND. LOCATED 75.90 M

BD2714'(249.0 FT) SOUTH-SOUTHEAST FROM THE APPROXIMATE CENTER OF RUNWAY,

BD2714'43.95 M (144.2 FT) WEST-SOUTHWEST FROM THE WINDSOCK POLE, 40.08 M

BD2714'(131.5 FT) WEST-SOUTHWEST FROM THE CENTER OF THE WESTERN ONE OF TWO

BD2714'0.6 M (2.0 FT) SQUARE CONCRETE CABLE COVERS ON THE SOUTH SIDE OF

BD2714'WINDSOCK, 1.83 M (6.0 FT) NORTH FROM A CARSONITE WITNESS POST AND 1.83

BD2714'M (6.0 FT) SOUTH FROM A CARSONITE WITNESS POST. NOTE--ACCESS TO DATUM

BD2714'POINT IS HAD THROUGH A 5-INCH LOGO CAP.

BD2714'DESCRIBED BY D.F. CALLAHAN.

BD2714

BD2714 STATION RECOVERY (1989)

BD2714

BD2714'RECOVERED 1989

BD2714'RECOVERED IN GOOD CONDITION.

BD2714

BD2714 STATION RECOVERY (1989)

BD2714

BD2714'RECOVERED 1989

BD2714'RECOVERED IN GOOD CONDITION.

BD2714

BD2714 STATION RECOVERY (1992)

BD2714

BD2714'RECOVERY NOTE BY FL DEPT OF NAT RES 1992 (VAC)

BD2714'RECOVERED AS DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2714

BD2714

STATION RECOVERY (1997)

BD2714

BD2714'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)

BD2714'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS

BD2714'RECOVERED AS PREVIOUSLY DESCRIBED.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD0832 *****

BD0832 CBN - This is a Cooperative Base Network Control Station.

BD0832 DESIGNATION - U 151

BD0832 PID - BD0832

BD0832 STATE/COUNTY- FL/SUWANNEE

BD0832 USGS QUAD - LIVE OAK EAST (1993)

BD0832

BD0832 *CURRENT SURVEY CONTROL

BD0832

BD0832*	NAD 83(2007) -	30 16 40.94914(N)	082 56 31.32049(W)	ADJUSTED
BD0832*	NAVD 88 -	32.735 (meters)	107.40 (feet)	ADJUSTED

BD0832

BD0832	EPOCH DATE -	2002.00		
BD0832	X -	677,374.877 (meters)		COMP
BD0832	Y -	-5,471,010.899 (meters)		COMP
BD0832	Z -	3,197,031.428 (meters)		COMP
BD0832	LAPLACE CORR-	-0.51 (seconds)		DEFLEC09
BD0832	ELLIP HEIGHT-	4.684 (meters)	(02/10/07)	ADJUSTED
BD0832	GEOID HEIGHT-	-28.05 (meters)		GEOID09
BD0832	DYNAMIC HT -	32.692 (meters)	107.26 (feet)	COMP

BD0832

BD0832 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----

BD0832	Type	PID	Designation	North	East	Ellip
BD0832	-----					
BD0832	NETWORK	BD0832	U 151	0.43	0.39	1.00
BD0832	-----					

BD0832

BD0832	MODELED GRAV-	979,329.8 (mgal)		NAVD 88
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BD0832

BD0832 VERT ORDER - FIRST CLASS II

BD0832

BD0832.The horizontal coordinates were established by GPS observations

BD0832.and adjusted by the National Geodetic Survey in February 2007.

BD0832

BD0832.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).

BD0832.See [National Readjustment](#) for more information.

BD0832

BD0832.The horizontal coordinates are valid at the epoch date displayed above

BD0832.which is a decimal equivalence of Year/Month/Day.

BD0832

BD0832.The orthometric height was determined by differential leveling and

BD0832.adjusted in June 1991.

BD0832

BD0832.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BD0832

BD0832.The Laplace correction was computed from DEFLEC09 derived deflections.

BD0832

BD0832.The ellipsoidal height was determined by GPS observations

BD0832.and is referenced to NAD 83.

BD0832

BD0832.The geoid height was determined by GEOID09.

BD0832

BD0832.The dynamic height is computed by dividing the NAVD 88

BD0832.geopotential number by the normal gravity value computed on the

BD0832.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD0832.degrees latitude (g = 980.6199 gals.).

BD0832

BD0832.The modeled gravity was interpolated from observed gravity values.

BD0832

BD0832;

	North	East	Units	Scale	Factor	Converg.
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BD0832;SPC FL N	-	142,691.977	749,889.467	MT	0.99995029	+0 46 58.5
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BD0832;SPC FL N	-	468,148.59	2,460,262.36	sFT	0.99995029	+0 46 58.5
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BD0832;UTM 17	-	3,351,191.792	313,201.994	MT	1.00003050	-0 58 46.0
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BD0832

BD0832!

	Elev Factor	x	Scale Factor	=	Combined Factor
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BD0832!SPC FL N	-	0.99999926	x	0.99995029	= 0.99994955
-----------------	---	------------	---	------------	--------------

BD0832!UTM 17	-	0.99999926	x	1.00003050	= 1.00002976
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BD0832

BD0832 SUPERSEDED SURVEY CONTROL

BD0832

BD0832 NAD 83(1999)- 30 16 40.94951(N) 082 56 31.32005(W) AD () B

BD0832 ELLIP H (05/31/01) 4.563 (m) GP () 5 1

BD0832 ELLIP H (06/02/94) 4.585 (m) GP () 3 1

BD0832 NAD 83(1990)- 30 16 40.94818(N) 082 56 31.31980(W) AD () B

BD0832 ELLIP H (09/13/90) 4.548 (m) GP () 4 1

BD0832 NAVD 88 (06/02/94) 32.74 (m) 107.4 (f) LEVELING 3

BD0832 NGVD 29 (??/??/92) 32.951 (m) 108.11 (f) ADJ UNCH 1 2

BD0832

BD0832.Superseded values are not recommended for survey control.

BD0832.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD0832.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD0832

BD0832_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP1320151191(NAD 83)

BD0832

BD0832_MARKER: DB = BENCH MARK DISK

BD0832_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BD0832_SP_SET: CONCRETE POST

BD0832_STAMPING: U 151 1954

BD0832_MARK LOGO: CGS

BD0832_PROJECTION: FLUSH

BD0832_MAGNETIC: O = OTHER; SEE DESCRIPTION

BD0832_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BD0832+STABILITY: SURFACE MOTION

BD0832_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD0832+SATELLITE: SATELLITE OBSERVATIONS - April 02, 2011

BD0832

HISTORY	- Date	Condition	Report By
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BD0832 HISTORY	- 1954	MONUMENTED	CGS
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BD0832 HISTORY	- 1958	GOOD	CGS
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BD0832 HISTORY	- 1969	GOOD	CGS
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BD0832 HISTORY	- 1979	GOOD	NGS
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BD0832 HISTORY	- 1988	GOOD	NGS
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BD0832 HISTORY	- 19890421	GOOD	
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BD0832 HISTORY	- 19930403	GOOD	NGS
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BD0832 HISTORY	- 19971120	GOOD	DCJOHN
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BD0832 HISTORY	- 20110402	GOOD	INDIV
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BD0832

BD0832 STATION DESCRIPTION

BD0832

BD0832'DESCRIBED BY COAST AND GEODETIC SURVEY 1958



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



BD0832'2.8 MI SE FROM LIVE OAK.

BD0832'2.75 MILES SOUTHEAST ALONG THE SEABOARD AIR LINE RAILROAD FROM
BD0832'THE STATION AT LIVE OAK, 150 YARDS NORTHWEST OF A POWER LINE
BD0832'CROSSING, 100 YARDS NORTH OF A FARMHOUSE, 71 FT. NORTHWEST OF
BD0832'THE CENTER LINE OF A PRIVATE DRIVEWAY LEADING TO THE FARMHOUSE,
BD0832'91 FT. SOUTHWEST OF THE CENTER LINE OF U.S. HIGHWAY 90, 179
BD0832'FT. SOUTHWEST OF THE SOUTHWEST RAIL, 10 FT. NORTHEAST OF A
BD0832'POWER POLE, 0.8 FT. NORTHEAST OF A FENCE, 14 POLES SOUTHEAST
BD0832'OF MILEPOST 713, SET IN THE TOP OF A CONCRETE POST WHICH PROJECTS
BD0832'0.1 FT. ABOVE THE GROUND. NOTE-- A STEEL WITNESS POST WAS
BD0832'SET 1.4 FT. NW OF THE MARK.

BD0832

BD0832 STATION RECOVERY (1969)

BD0832

BD0832'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1969

BD0832'RECOVERED IN GOOD CONDITION.

BD0832

BD0832 STATION RECOVERY (1979)

BD0832

BD0832'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979

BD0832'RECOVERED IN GOOD CONDITION.

BD0832

BD0832 STATION RECOVERY (1988)

BD0832

BD0832'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988

BD0832'THE STATION IS LOCATED ABOUT 15.37 KM (9.55 MI) NORTH OF MCALPIN,
BD0832'13.04 KM (8.10 MI) WEST OF WELLBORN, 4.51 KM (2.80 MI) EAST OF LIVE
BD0832'OAK AND 0.56 KM (0.35 MI) WEST OF A MICROWAVE TOWER.
BD0832'OWNERSHIP--HIGHWAY RIGHT-OF-WAY.

BD0832'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 129 AND 90 IN
BD0832'LIVE OAK, GO EAST FOR 0.56 KM (0.35 MI) ON HIGHWAY 90 TO THE RAILROAD
BD0832'CROSSING. CONTINUE AHEAD FOR 2.09 KM (1.30 MI) ON HIGHWAY 90 TO A
BD0832'REVERSE FORK, COUNTY ROAD 10. CONTINUE AHEAD FOR 1.77 KM (1.10 MI) ON
BD0832'HIGHWAY 90 TO THE OPPORTUNITY STORE ON LEFT. CONTINUE AHEAD FOR 0.80
BD0832'KM (0.50 MI) ON HIGHWAY 90 TO THE STATION ON RIGHT, IN THE FENCE LINE,
BD0832'BETWEEN TWO POWERLINES PARALLEL TO HIGHWAY.

BD0832'LOCATED 25.60 M (84.0 FT) WEST FROM UTILITY POLE NUMBER 2 3883 3960 04
BD0832'WITH TRANSFORMER, 25.15 M (82.5 FT) WEST FROM TELEPHONE CABLE PEDESTAL
BD0832'NUMBER 001, 22.74 M (74.6 FT) SOUTH-SOUTHWEST FROM THE APPROXIMATE
BD0832'CENTER OF HIGHWAY 90, 3.35 M (11.0 FT) NORTH FROM A UTILITY POLE ON
BD0832'SOUTH SIDE OF FENCE LINE AND 0.37 M (1.2 FT) SOUTHEAST FROM A METAL
BD0832'WITNESS POST.

BD0832'DESCRIBED BY R.W. MCALLISTER.

BD0832

BD0832 STATION RECOVERY (1989)

BD0832

BD0832'RECOVERED 1989

BD0832'RECOVERED IN GOOD CONDITION.

BD0832

BD0832 STATION RECOVERY (1993)

BD0832

BD0832'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993

BD0832'THE STATION IS LOCATED ABOUT 15.37 KM (9.55 MI) NORTH OF MCALPIN,
BD0832'13.04 KM (8.10 MI) WEST OF WELLBORN, 4.51 KM (2.80 MI) EAST OF LIVE
BD0832'OAK AND 0.56 KM (0.35 MI) WEST OF A MICROWAVE TOWER.

BD0832'OWNERSHIP--HIGHWAY RIGHT-OF-WAY.
BD0832'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 90 AND 129 IN
BD0832'LIVE OAK, GO EAST FOR 2.75 KM (1.70 MI) ON U.S. HIGHWAY 90 TO A
BD0832'REVERSE FORK, COUNTY ROAD 10 A, CONTINUE EAST 0.50 KM (0.30 MI) ALONG
BD0832'U.S. HIGHWAY 90 TO THE JUNCTION OF COUNTY ROAD 49, CONTINUE EAST 0.57
BD0832'KM (0.35 MI) ALONG U.S. HIGHWAY 90 TO THE OPPORTUNITY STORE ON THE
BD0832'LEFT, CONTINUE AHEAD FOR 0.80 KM (0.50 MI) ALONG U.S. HIGHWAY 90 TO
BD0832'THE STATION ON THE RIGHT IN A FENCE LINE BETWEEN TWO POWERLINES
BD0832'PARALLEL TO HIGHWAY AND NORTH OF A UTILITY POLE.
BD0832'LOCATED 25.15 M (82.51 FT) WEST FROM UTILITY POLE NUMBER 2 3883 3960
BD0832'04 WITH A TRANSFORMER, 25.60 M (83.99 FT) WEST FROM TELEPHONE CABLE
BD0832'PEDESTAL NUMBER 001, 22.74 M (74.61 FT) SOUTH-SOUTHWEST FROM THE
BD0832'APPROXIMATE CENTERLINE OF U.S. HIGHWAY 90, 3.35 M (10.99 FT) NORTH
BD0832'FROM A UTILITY POLE ON SOUTH SIDE OF FENCE LINE AND 0.37 M (1.21 FT)
BD0832'EAST-SOUTHEAST FROM A METAL WITNESS POST.
BD0832'DESCRIBED BY RONNIE L. TAYLOR.
BD0832
BD0832 STATION RECOVERY (1997)
BD0832
BD0832'RECOVERY NOTE BY DC JOHNSON ASSOC 1997 (CHX)
BD0832'RECOVERY NOTE BY DC JOHNSON AND ASSOC (CHX) .-- THE STATION WAS
BD0832'RECOVERED AS PREVIOUSLY DESCRIBED.
BD0832
BD0832 STATION RECOVERY (2011)
BD0832
BD0832'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2011
BD0832'RECOVERED BY DEWBERRY



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2309 *****

BD2309 DESIGNATION - U 355

BD2309 PID - BD2309

BD2309 STATE/COUNTY- FL/SUWANNEE

BD2309 USGS QUAD - DOWLING PARK (1993)

BD2309

BD2309 *CURRENT SURVEY CONTROL

BD2309

BD2309*	NAD 83(1986)-	30 14 46.	(N)	083 12 17.	(W)	SCALED
BD2309*	NAVD 88	- 24.723	(meters)	81.11	(feet)	ADJUSTED

BD2309

BD2309	GEOID HEIGHT-	-27.97	(meters)			GEOID09
BD2309	DYNAMIC HT -	24.690	(meters)	81.00	(feet)	COMP
BD2309	MODELED GRAV-	979,329.0	(mgal)			NAVD 88

BD2309

BD2309 VERT ORDER - FIRST CLASS II

BD2309

BD2309.The horizontal coordinates were scaled from a topographic map and have

BD2309.an estimated accuracy of +/- 6 seconds.

BD2309.

BD2309.The orthometric height was determined by differential leveling and

BD2309.adjusted in June 1991.

BD2309

BD2309.The geoid height was determined by GEOID09.

BD2309

BD2309.The dynamic height is computed by dividing the NAVD 88

BD2309.geopotential number by the normal gravity value computed on the

BD2309.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2309.degrees latitude (g = 980.6199 gals.).

BD2309

BD2309.The modeled gravity was interpolated from observed gravity values.

BD2309

BD2309;		North	East	Units	Estimated Accuracy
BD2309;SPC FL N	-	138,840.	724,660.	MT	(+/- 180 meters Scaled)

BD2309

BD2309 SUPERSEDED SURVEY CONTROL

BD2309

BD2309.No superseded survey control is available for this station.

BD2309

BD2309_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RKP878481(NAD 83)

BD2309

BD2309_MARKER: DB = BENCH MARK DISK

BD2309_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

BD2309_SP_SET: STAINLESS STEEL ROD

BD2309_STAMPING: U 355 1978

BD2309_PROJECTION: RECESSED 10 CENTIMETERS

BD2309_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD2309_SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR

BD2309+SATELLITE: SATELLITE OBSERVATIONS - November 24, 2006

BD2309_ROD/PIPE-DEPTH: 4.88 meters

BD2309

BD2309	HISTORY	- Date	Condition	Report By
BD2309	HISTORY	- 1978	MONUMENTED	NGS
BD2309	HISTORY	- 20061124	GOOD	USPSQD



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2309

BD2309

STATION DESCRIPTION

BD2309

BD2309'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978

BD2309'2.25 MI EAST FROM DOWLING PARK.

BD2309'2.25 MILES EAST ALONG COUNTY ROAD 250 FROM THE JUNCTION OF COUNTY

BD2309'ROAD 136 IN DOWLING PARK TO THE MAR ON THE LEFT, SET 2 FEET EAST OF

BD2309'POWER POLE NUMBER P2 3 0 65, 032427T WITH A TRANSFORMER AND GUYWIRE,

BD2309'DIRECTLY ACROSS THE ROAD FROM THE HOUSE OF MR. J. F. TOOLE, 45.5

BD2309'FEET NORTH OF THE CENTERLINE OF THE ROAD, 5 FEET SOUTH OF A WIRE

BD2309'FENCE.

BD2309'THE MARK IS 2 FT E FROM A WITNESS POST.

BD2309'THE MARK IS 1 FT ABOVE ROAD.

BD2309

STATION RECOVERY (2006)

BD2309

BD2309

BD2309'RECOVERY NOTE BY US POWER SQUADRON 2006 (DAW)

BD2309'FOUND IN LOCATION AS DESCRIBED. BELOW GROUND LEVEL AND SURROUNDED BY

BD2309'WHITE PVC PIPE.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012
AR0108 *****
AR0108 DESIGNATION - U 51
AR0108 PID - AR0108
AR0108 STATE/COUNTY- FL/COLUMBIA
AR0108 USGS QUAD - FORT WHITE (1993)
AR0108
AR0108 *CURRENT SURVEY CONTROL
AR0108
AR0108* NAD 83(1986)- 29 53 02. (N) 082 40 05. (W) SCALED
AR0108* NAVD 88 - 19.083 (meters) 62.61 (feet) ADJUSTED
AR0108
AR0108 GEOID HEIGHT- -27.97 (meters) GEOID09
AR0108 DYNAMIC HT - 19.058 (meters) 62.53 (feet) COMP
AR0108 MODELED GRAV- 979,305.0 (mgal) NAVD 88
AR0108
AR0108 VERT ORDER - SECOND CLASS 0
AR0108
AR0108.The horizontal coordinates were scaled from a topographic map and have
AR0108.an estimated accuracy of +/- 6 seconds.
AR0108.
AR0108.The orthometric height was determined by differential leveling and
AR0108.adjusted in June 1991.
AR0108
AR0108.The geoid height was determined by GEOID09.
AR0108
AR0108.The dynamic height is computed by dividing the NAVD 88
AR0108.geopotential number by the normal gravity value computed on the
AR0108.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AR0108.degrees latitude (g = 980.6199 gals.).
AR0108
AR0108.The modeled gravity was interpolated from observed gravity values.
AR0108
AR0108;
AR0108;SPC FL N - North East Units Estimated Accuracy
AR0108; 99,400. 776,950. MT (+/- 180 meters Scaled)
AR0108
AR0108 SUPERSEDED SURVEY CONTROL
AR0108
AR0108 NGVD 29 (??/??/92) 19.317 (m) 63.38 (f) ADJ UNCH 2 0
AR0108
AR0108.Superseded values are not recommended for survey control.
AR0108.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AR0108.[See file dsdata.txt](#) to determine how the superseded data were derived.
AR0108
AR0108_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP389070(NAD 83)
AR0108
AR0108_MARKER: DB = BENCH MARK DISK
AR0108_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AR0108_SP_SET: SET IN TOP OF CONCRETE MONUMENT
AR0108_STAMPING: U 51 1934
AR0108_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AR0108+STABILITY: SURFACE MOTION
AR0108
AR0108 HISTORY - Date Condition Report By
AR0108 HISTORY - 1934 MONUMENTED CGS



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothern & Tucker, Inc. (GCT)



AR0108 HISTORY - 1959 GOOD CGS

AR0108

AR0108

STATION DESCRIPTION

AR0108

AR0108'DESCRIBED BY COAST AND GEODETIC SURVEY 1959

AR0108'4 MI SE FROM FORT WHITE.

AR0108'4.0 MILES SOUTHEAST ALONG THE ATLANTIC COAST LINE RAILROAD FROM

AR0108'THE STATION AT FORT WHITE, 5.4 MILES NORTHWEST ALONG THE ATLANTIC

AR0108'COAST LINE RAILROAD FROM THE STATION AT HIGH SPRINGS, 0.25

AR0108'MILE NORTHWEST OF MILEPOST S 221, 97 FT. SOUTHWEST OF THE

AR0108'CENTER LINE OF U.S. HIGHWAY 27, 33 FT. NORTHEAST OF THE NORTHEAST

AR0108'RAIL, 61 FT. SOUTHEAST OF THE CENTER LINE OF A PRIVATE ROAD, 20

AR0108'FT. NORTH OF A TELEPHONE POLE, 1.3 FT. NORTH OF A STEEL WITNESS

AR0108'POST, AT A PRIVATE ROAD CROSSING, SET IN THE TOP OF A CONCRETE

AR0108'POST WHICH PROJECTS 0.3 FT. ABOVE THE GROUND.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

BD2255 *****

BD2255 DESIGNATION - V 368

BD2255 PID - BD2255

BD2255 STATE/COUNTY- FL/BRADFORD

BD2255 USGS QUAD - LAWTEY (1993)

BD2255

BD2255 *CURRENT SURVEY CONTROL

BD2255

BD2255*	NAD 83(1986)-	30 06 14.	(N)	082 03 06.	(W)	SCALED
BD2255*	NAVD 88	- 60.192	(meters)	197.48	(feet)	ADJUSTED

BD2255

BD2255	GEOID HEIGHT-	-28.06	(meters)			GEOID09
BD2255	DYNAMIC HT -	60.112	(meters)	197.22	(feet)	COMP
BD2255	MODELED GRAV-	979,327.8	(mgal)			NAVD 88
BD2255	OBS GRAVITY -	979,325.1	(mgal)			GRAV_OBS

BD2255

BD2255 VERT ORDER - FIRST CLASS II

BD2255

BD2255.The horizontal coordinates were scaled from a topographic map and have

BD2255.an estimated accuracy of +/- 6 seconds.

BD2255.

BD2255.The orthometric height was determined by differential leveling and

BD2255.adjusted in June 1991.

BD2255

BD2255.[Photographs](#) are available for this station.

BD2255

BD2255.The geoid height was determined by GEOID09.

BD2255

BD2255.The dynamic height is computed by dividing the NAVD 88

BD2255.geopotential number by the normal gravity value computed on the

BD2255.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

BD2255.degrees latitude (g = 980.6199 gals.).

BD2255

BD2255.The modeled gravity was interpolated from observed gravity values.

BD2255

BD2255.The observed gravity was obtained from relative gravimeter ties

BD2255.to the IGSN71 gravity network.

BD2255

BD2255;		North	East	Units	Estimated Accuracy
BD2255;SPC FL N	-	124,900.	835,950.	MT	(+/- 180 meters Scaled)

BD2255

BD2255 SUPERSEDED SURVEY CONTROL

BD2255

BD2255	NGVD 29 (09/01/92)	60.467	(m)	198.38	(f)	ADJUSTED	1 2
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BD2255

BD2255.Superseded values are not recommended for survey control.

BD2255.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BD2255.[See file dsdata.txt](#) to determine how the superseded data were derived.

BD2255

BD2255_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLP986307(NAD 83)

BD2255

BD2255_MARKER: DV = VERTICAL CONTROL DISK

BD2255_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

BD2255_SP_SET: STAINLESS STEEL ROD



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



BD2255_STAMPING: V 368 1979

BD2255_MARK LOGO: NGS

BD2255_PROJECTION: PROJECTING 3 CENTIMETERS

BD2255_MAGNETIC: O = OTHER; SEE DESCRIPTION

BD2255_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

BD2255_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BD2255+SATELLITE: SATELLITE OBSERVATIONS - February 09, 1992

BD2255_ROD/PIPE-DEPTH: 4.9 meters

BD2255

BD2255	HISTORY	- Date	Condition	Report By
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BD2255	HISTORY	- 1979	MONUMENTED	NGS
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BD2255	HISTORY	- 1987	GOOD	USPSQD
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BD2255	HISTORY	- 19920209	GOOD	NGS
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BD2255	HISTORY	- 20050725	GOOD	JCLS
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BD2255

BD2255

STATION DESCRIPTION

BD2255

BD2255'DESCRIBED BY NATIONAL GEODETIC SURVEY 1979

BD2255'4.3 MI NE FROM LAWTEY.

BD2255'4.3 MILES NORTHEAST ALONG U.S. HIGHWAY 301 FROM THE JUNCTION OF 301

BD2255'AND STATE HIGHWAY 225 TO THE MARK ON THE RIGHT, SET BY POWER POLE AT

BD2255'A POWERLINE CROSSING, 48 FEET EAST OF CENTERLINE OF THE NORTHBOUND

BD2255'LANES, 20 FEET WEST OF GUY WIRE, 2 FEET SOUTH OF POWER POLE.

BD2255'THE MARK IS 2 FT S FROM A WITNESS POST.

BD2255'THE MARK IS ABOVE LEVEL WITH HIGHWAY.

BD2255

BD2255

STATION RECOVERY (1987)

BD2255

BD2255'RECOVERY NOTE BY US POWER SQUADRON 1987 (CER)

BD2255'RECOVERED IN GOOD CONDITION.

BD2255

BD2255

STATION RECOVERY (1992)

BD2255

BD2255'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992 (RLT)

BD2255'THE MARK IS ABOUT 4.2 MI (6.8 KM) NORTHEAST OF LAWTEY IN SECTION 36, T

BD2255'4 S, R 22 E. TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 301

BD2255'AND COUNTY ROAD 125, GO NORTHEAST ON U.S. HIGHWAY 301 FOR 3.55 MI

BD2255'(5.71 KM) TO WHERE THE GUY WIRES CROSS OVER THE HIGHWAY TO THE POWER

BD2255'LINE ON THE WEST SIDE OF U.S. HIGHWAY 301 AND THE MARK ON THE RIGHT,

BD2255'SET ON THE TOP OF A STAINLESS STEEL ROD, PROJECTING 0.1 FT (3.0 CM)

BD2255'ABOVE THE GROUND AND LEVEL WITH U.S. HIGHWAY 301. LOCATED 48.0 FT

BD2255'(14.6 M) EAST OF THE CENTERLINE OF THE NORTHBOUND LANES OF U.S.

BD2255'HIGHWAY 301, 20.0 FT (6.1 M) WEST OF THE GUY WIRE AND 2.0 FT (0.6 M)

BD2255'SOUTH OF THE GUY POLE WITH A WITNESS PLAQUE ATTACHED. NOTE ACCESS TO

BD2255'DISK IS HAD THROUGH A 4-INCH PVC SCREWCAP. MARK WAS NOT LEVELED TO

BD2255'THIS DATE.

BD2255

BD2255

STATION RECOVERY (2005)

BD2255

BD2255'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2005 (CEL)

BD2255'THIS MARK IS GPS'ABLE IF YOU DO NOT INTEND ON COLLECTING DATA FROM GPS

BD2255'SAT'S ON THE EASTERN SIDE OFTHE STATION - IT IS LOCATED ON THE WEST

BD2255'EDGE OF A HEAVY TREE LINE.



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

Prime Contractor: Digital Aerial Solutions (DAS)

Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



1 National Geodetic Survey, Retrieval Date = MARCH 26, 2012

AC9645 *****

AC9645 DESIGNATION - V 445

AC9645 PID - AC9645

AC9645 STATE/COUNTY- FL/ALACHUA

AC9645 USGS QUAD - ORANGE HEIGHTS (1993)

AC9645

AC9645 *CURRENT SURVEY CONTROL

AC9645

AC9645*	NAD 83(1986)-	29 42 59.	(N)	082 08 25.	(W)	SCALED
AC9645*	NAVD 88	-	41.228	(meters)	135.26	(feet) ADJUSTED

AC9645

AC9645	GEOID HEIGHT-	-27.86	(meters)			GEOID09
AC9645	DYNAMIC HT -	41.173	(meters)	135.08	(feet)	COMP
AC9645	MODELED GRAV-	979,298.1	(mgal)			NAVD 88

AC9645

AC9645 VERT ORDER - SECOND CLASS I

AC9645

AC9645.The horizontal coordinates were scaled from a topographic map and have

AC9645.an estimated accuracy of +/- 6 seconds.

AC9645.

AC9645.The orthometric height was determined by differential leveling and

AC9645.adjusted in April 2010.

AC9645

AC9645.[Photographs](#) are available for this station.

AC9645

AC9645.The geoid height was determined by GEOID09.

AC9645

AC9645.The dynamic height is computed by dividing the NAVD 88

AC9645.geopotential number by the normal gravity value computed on the

AC9645.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AC9645.degrees latitude (g = 980.6199 gals.).

AC9645

AC9645.The modeled gravity was interpolated from observed gravity values.

AC9645

AC9645;		North	East	Units	Estimated Accuracy
AC9645;SPC FL N	-	81,770.	828,300.	MT	(+/- 180 meters Scaled)

AC9645

AC9645 SUPERSEDED SURVEY CONTROL

AC9645

AC9645	NAVD 88 (09/10/97)	41.223	(m)	135.25	(f)	UNKNOWN	2 1
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AC9645

AC9645.Superseded values are not recommended for survey control.

AC9645.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AC9645.[See file dsdata.txt](#) to determine how the superseded data were derived.

AC9645

AC9645_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLN897879(NAD 83)

AC9645

AC9645_MARKER: DV = VERTICAL CONTROL DISK

AC9645_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AC9645_STAMPING: V 445 1996

AC9645_MARK LOGO: NGS

AC9645_PROJECTION: FLUSH

AC9645_MAGNETIC: N = NO MAGNETIC MATERIAL

AC9645_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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Sub-Contractor: Gustin, Cothorn & Tucker, Inc. (GCT)



AC9645+STABILITY: SURFACE MOTION

AC9645_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC9645+SATELLITE: SATELLITE OBSERVATIONS - July 01, 2003

AC9645

AC9645	HISTORY	- Date	Condition	Report By
AC9645	HISTORY	- 1996	MONUMENTED	FLDEP
AC9645	HISTORY	- 20021017	GOOD	FLDEP
AC9645	HISTORY	- 20021123	GOOD	FLDEP
AC9645	HISTORY	- 20030701	GOOD	FLDEP
AC9645	HISTORY	- 20050726	GOOD	JCLS

AC9645

STATION DESCRIPTION

AC9645

AC9645'DESCRIBED BY FL DEPT OF ENV PRO 1996 (JLM)

AC9645'THE MARK IS ABOUT 6.3 MI (10.1 KM) WEST OF MELROSE, 11.0 MI (17.7 KM) WEST OF PUTNAM HALL AND 14.0 MI (22.5 KM) EAST OF GAINESVILLE ON STATE ROAD 26 IN SECTION 18, TOWNSHIP 9 SOUTH, RANGE 22 EAST. TO REACH THE MARK FROM THE POST OFFICE IN MELROSE ON STATE ROAD 21, GO SOUTH ON STATE ROAD 21 FOR 0.2 MI (0.3 KM) TO THE INTERSECTION OF STATE ROAD 26, TURN RIGHT ON STATE ROAD 26 AND GO WEST FOR 5.9 MI (9.5 KM) TO THE INTERSECTION OF STATE ROAD 301, CONTINUE WEST ON STATE ROAD 26 FOR 0.1 MI (0.2 KM) TO THE RAILROAD CROSSING AND THE MARK ON THE LEFT, SET IN THE TOP OF A ROUND CONCRETE MONUMENT FLUSH WITH THE GROUND AND 2.0 FT (0.6 M) BELOW THE LEVEL OF STATE ROAD 26. THE MARK CAN ALSO BE REACHED FROM THE INTERSECTION OF U.S. HIGHWAY 441 (13TH STREET-DR. MARTIN LUTHER KING JR. HIGHWAY) AND STATE ROAD 26 (UNIVERSITY AVENUE) IN GAINESVILLE, GO EAST ON STATE ROAD 26 (UNIVERSITY AVENUE) FOR 0.85 MI (1.37 KM) TO THE INTERSECTION OF MAIN STREET, CONTINUE EAST ON STATE ROAD 26 (UNIVERSITY AVENUE) FOR 1.05 MI (1.69 KM) TO THE Y-JUNCTION OF STATE ROAD 20 ON THE RIGHT, BEAR LEFT AND CONTINUE EAST ON STATE ROAD 26 FOR 11.75 MI (18.91 KM) TO THE RAILROAD CROSSING AND THE MARK ON THE RIGHT. LOCATED 39.3 FT (12.0 M) SOUTH OF THE CENTERLINE OF STATE ROAD 26, 29.0 FT (8.8 M) WEST OF THE CENTER OF THE RAILROAD TRACK, 8.6 FT (2.6 M) NORTH OF A CUT OFF POWER POLE WITH A TRANSFORMER BOX AND 8.0 FT (2.4 M) NORTH OF A CARSONITE WITNESS POST.

AC9645

STATION RECOVERY (2002)

AC9645

AC9645'RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (BPJ)

AC9645'RECOVERED IN GOOD CONDITION.

AC9645'

AC9645'THE MARK IS AT THE INTERSECTION OF U.S. HIGHWAY 301 AND STATE ROAD 26 ON THE SOUTH SIDE OF ORANGE HEIGHTS.

AC9645'

AC9645

STATION RECOVERY (2002)

AC9645

AC9645'RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (BPJ)

AC9645'RECOVERED AS DESCRIBED.

AC9645'

AC9645

STATION RECOVERY (2003)

AC9645

AC9645'RECOVERY NOTE BY FL DEPT OF ENV PRO 2003 (BPJ)



USGS – Suwannee River Water Management District

Contract No.G10PC00093, Task Order No.G12PD00242

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AC9645'RECOVERED AS DESCRIBED.

AC9645

AC9645

STATION RECOVERY (2005)

AC9645

AC9645'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2005

AC9645'RECOVERED IN GOOD CONDITION.



USGS – Suwannee River Water Management District

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EQUIPMENT, PERSONNEL & SOFTWARE

Equipment

GPS

Trimble Model R7 GNSS	SN:5131K22021	Zephyr Geodetic Model II Antenna	SN:1441127110
Trimble Model R7 GNSS	SN:4815K31960	Zephyr Geodetic Model II Antenna	SN:1441021044
Trimble Model R7 GNSS	SN:5002K15774	Zephyr Geodetic Model II Antenna	SN:60130780
Trimble Model R7 GNSS	SN:4723K30231	Zephyr Geodetic Model II Antenna	SN:30403594
Trimble Model R8III GNSS	SN:5013421947		
Trimble Model R8II GNSS	SN:4629119319		

Cellular Modems

Verizon Mifi SN:AB87

Total Stations

Topcon GPT3002LW SN:050655

Data Collectors

Trimble Model TSC2 SN:SS27A19162

Trimble Model TSC2 SN:SS27A19144

Cameras (Geo-Referenced)

Ricoh Model Caplio 500SE-W SN:23106851

Personnel

Wayne Walker, PLS – Project Manager

Mike Stone, CST III – Office Technician

David Ham, CST II – Party Chief

Jason Tucker – Party Chief

Bill Payne, Mike Franklin – Instrument Technician

Software

Trimble Business Center

Google Earth Pro

Microsoft Word

Microsoft Excel



USGS – Suwannee River Water Management District

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