

Horizontal and Vertical Control Survey Report

St. Johns County Continuously Operating Reference Stations (CORS)



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February 15, 2008

Report prepared for:
St. Johns County Land Management Systems
Surveying and Mapping/GIS Divisions
4020 Lewis Speedway
St. Augustine, Florida 32084

The following Survey Report contains a comprehensive outline of the Surveying Procedure used for the Horizontal and Vertical Control Survey, St. Johns County Continuously Operating Reference Stations (CORS)

Scope of Work

Establish Horizontal Control to the accuracy of 1 centimeter and Vertical Control to the accuracy of .02 feet for the CORS located at Pedro Menendez High School (PEDR), Bartram High School (BART), and Cornerstone Park (CRNR). The horizontal coordinates were to be tied to the existing St. Johns County Geodetic Network as shown in the Survey Report prepared by the St. Johns County Development Services Department, Surveying and Mapping Program dated September 1994 through February 1999.

Project Area

The project area is within St. Johns County Florida.

Date of Survey

All surveying procedures began on January 7, 2008 and were completed by January 10, 2008.

Methodology

Static Global Positioning Systems (G.P.S.) methods were utilized to determine the horizontal positions of the three new CORS. Five Trimble Navigation Dual Frequency G.P.S. units, two R-8's, and three 5700's were used to observe baseline data for the duration of 1.5 hours per session. A network was designed utilizing existing St. Johns County Geodetic Control monuments and other control monuments that were held fixed for the County Network. Trimble Geomatics Office Version 1.63 was used for baseline processing and the network adjustment. Trig Leveling procedure was utilized to determine the vertical values for the three new CORS. A Sokkia Set 3 30R3 total station was used in reflector less mode to determine the antenna heights of the CORS. The control for the vertical survey was supplied by the St. Johns County Surveying and Mapping Division and is on file at that office. The elevation data for the CORS antennae phase centers was input into Trimble Geomatics Office during the network adjustment to determine ellipsoid heights.

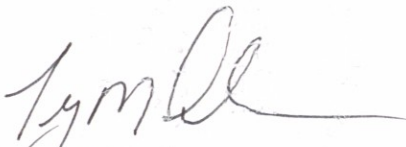
Datum Reference

The horizontal coordinates for the three new CORS are based on the North American Datum of 1983/ 1990 adjustment (NAD 83/90) and are expressed in United States Survey Feet. The horizontal control used was: National Geodetic Survey (NGS) marker "FLGPS31" point identification (PID) AQ2646, NGS marker "PALAPORT" PID AQ2650, NGS marker "STAUPORT" PID AQ2652, NGS marker "FLAGPORT" PID AQ2644, NGS marker "D 322" PID AQ0346, NGS marker "DURBIN 2" PID AQ0581, NGS marker "Q 321" PID AQ0448, NGS marker "Q 323" PID AQ0511, Coast and Geodetic Survey (CGS) marker "ELLZEY" PID AQ0208, St. Johns County Geodetic Monuments G058, G089, G117. Coordinate values for the horizontal control can be found in the Survey Report for St. Johns County, Florida Geodetic Control Project September 1994 through February 1999.

The vertical values for the three new CORS are based on the National Geodetic Vertical Datum of 1988 expressed in United States Survey Feet. The vertical control used was: Florida Department of Environmental Protection marker "K 497", National Geodetic Survey Point Identification "DE5756", Florida Department of Transportation marker "I95 K 6", National Geodetic Survey Point Identification "AQ0374", National Geodetic Survey marker "K 323", Point Identification "BC0533".

This Survey Report is not valid without the signature and original raised seal of a Florida licensed Professional Surveyor and Mapper (PSM).

This Survey Report is not complete without pages 1 through 4.



Terry M. Durden
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PROJECT: St. Johns County Continuously Operating Stations

COORDINATE SYSTEM- North America Datum of 1983, 1990 adjustment.

POINT	LATITUDE	LONGITUDE	ELLIPSOID HEIGHT	DESCRIPTION
1	N 29 45 21.62064	W 81 20 00.89688	-2.877	PEDR
2	N 30 02 45.92590	W 81 36 35.54048	-2.479	BART
3	N 30 10 02.92049	W 81 22 09.06297	-43.856	CRNR