
Surveyor's Report

Specific Purpose Survey Well Site GT Lohmeyer

SFWMD Work Order Number: 4500016343

Contractors Project No. 07050.07

Report Date: 5/14/08

Submittal: Final

Prepared for:

**South Florida Water Management
District**



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Licensed Business (L.B.) 6860

TABLE OF CONTENTS

Overview of the Project.....	1
Purpose.....	1
Location of Project.....	1
Items Delivered to The District.....	2
Vertical Datum for the Project.....	2
Leveling Methods.....	2
Configuration of Level Run.....	2
Equipment Used.....	2
GPS Methods.....	3
Introduction.....	3
Data Processing.....	3
Vertical Control.....	4-6
Project Results.....	7
Site Photos.....	8-9
Comments.....	10
Surveyor’s Certification.....	10

OVERVIEW OF THE PROJECT

PURPOSE

This survey request consists of the establishment of elevations to third order National Geodetic Survey (NGS) Standards at the existing well site in Section 22, Township 50 South, Range 42 East, Broward County Florida:

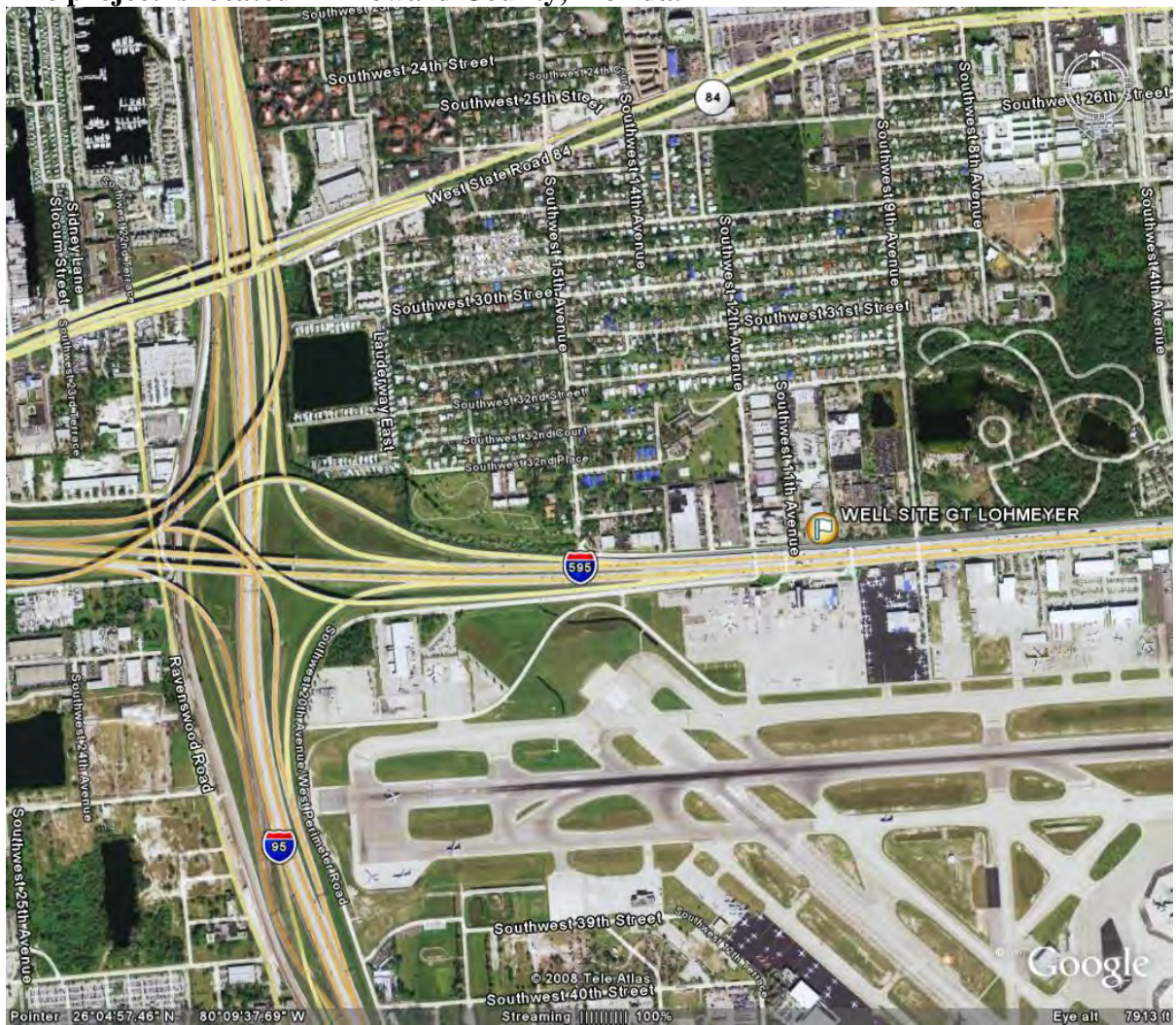
The objective of this Work Order is to:

1. Establish elevations on the wells.
2. Set a third-order benchmark at the well site.

The services listed in this report were performed under the direction of a Professional Surveyor and Mapper (PSM) registered in the State of Florida in accordance with Chapter 472 of the Florida Statutes.

LOCATION OF PROJECT

The project is located in Broward County, Florida.



ITEMS DELIVERED TO THE DISTRICT

The following items were delivered to the District with this report.

Two signed and sealed paper copies of the surveyor's report.

A CD containing the following:

- The survey report in Microsoft Word format.
- Digital photos.
- Scanned copies of field notes.
- Any other digital files associated with the survey.
- Completed District benchmark description sheet for all set marks.
- Completed Excel benchmark spread sheet
- Completed Excel well activation sheet
- CorpsMet 95 Meta Data files

VERTICAL DATUM FOR THE PROJECT

The vertical datum for the project is the North American Vertical Datum of 1988. For correlation with older data sets, the elevations of the benchmarks are also shown in the National Geodetic Vertical Datum (NGVD) of 1929. The NGVD 29 elevations were derived using data provided by the South Florida Water Management District in a file named "NGVD29.txt" when applicable, otherwise NGS superseded values or South Florida Water Management District's Benchmark Data Base values were used. The linear unit for all elevations is U.S. survey feet unless otherwise stated.

LEVELING METHODS

CONFIGURATION OF LEVEL RUN

Third-Order leveling procedures were used to establish elevations on the wells and site benchmark.

Benchmark "GT LOH 2007" (the site benchmark) was used as the primary vertical control for establishing the elevations on the measuring points. A level loop was run starting at NGS benchmark X-235, through NGS benchmark 190 BCED, through site benchmark GT LOH 2007 and back to Benchmark X-235.

The SFWMD maximum allowable misclosure for this type of run is 0.03' multiplied by the square root of the length of the level line in miles.

EQUIPMENT USED

All leveling during the project was performed with a Wild NA1 conventional level and a three-section, fiberglass level rod.

GPS METHODS

INTRODUCTION

A GPS horizontal value for the site benchmark and well was required as part of this contract. The site benchmark was occupied for a minimum of fifteen minutes for rapid static processing to obtain sub-meter accuracy. The wells were located using RTK methods and processed via the Verizon Wireless/GP-Serv RTK Cellular Network.

The following instrumentation was used for the GPS observation:

- (1) Trimble 5700 receiver/antenna
- (2) Trimble TSC2 (GPS) data collectors
- (3) Zephyr Antenna / Airlink Raven CDMA C3211 Antenna

DATA PROCESSING

Data Acquisition

The static session data was downloaded from the receiver using Trimble Geomatics Office, version 1.62 (TGO). The DAT file was then sent to the National Geodetic Survey program OPUS RS (On-line Positioning User Service rapid static) for processing. Each data file submitted to OPUS RS is processed with respect to 3 CORS sites. The sites selected may not be the nearest to the static session but are selected by distance, number of observations, site stability, etc. The results of the three baselines are then added together and averaged to obtain the unknown station(s) (site benchmark GT LOH 2007) values. Those values for the site benchmark (latitude and longitude) are shown in the corresponding Vertical Control and Project Results sections below .

Comments

Elevations shown hereon are NGVD 1929 datum unless noted otherwise.

Party Chief: D. Ferels / S. Grees Field Book: 279 Page Pages 65-71

Bench Mark: "GT LOH 2007" El. 6.550', Vertical Datum: NAVD1988

El. 8.134', Vertical Datum: NGVD1929

Offset: 1.584' SFWMD VALUE (subtract this value from NGVD 1929 to convert to NAVD 1988)

Offset: 1.584' NGS VALUE (subtract this value from NGVD 1929 to convert to NAVD 1988)

The offset values referred to as "SFWMD VALUE" and "NGS VALUE" were derived by subtracting the NAVD 1988 value from the NGVD 1929 value at NGS benchmark X-235. The NGVD 1929 value for benchmark X-235 was obtained from file "NGVD 1929.txt" supplied by the South Florida Water Management District.

NAVD 88 - North American Vertical Datum of 1988

NGVD29 -National Geodetic Vertical Datum of 1929

NAD 83 -99 (Horizontal Datum) North American Datum

NGS - National Geodetic Survey

SFWMD - South Florida Water Management District

PVC - Polyvinyl Chloride

L.B. - Licensed Business

RTK – Real Time Kinematic

K&A – Keith and Associates

PSM – Professional Surveyor & Mapper

USGS – United States Geological Survey

QUAD – Quadrangle Map

PID - Permanent Identifier

SURVEYOR'S CERTIFICATION

I hereby certify that this Specific Purpose Survey meets applicable portions of the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61-G17, Florida Administrative Code. This report is prepared for the sole and specific use of the South Florida Water Management District and is not assignable.

Keith and Associates, Inc.


L.B. number 6860

By:

Date of Survey
December 20, 2007

Michael M. Mossey, PSM
Professional Surveyor and Mapper
State of Florida
Certificate No. 5660

VERTICAL CONTROL

X-235		Elevation:	NAVD 1988	9.252'	NGVD 1929	10.836'
PID AD2481	Latitude	26° 05' 33.24363"	From NGS Data Sheet		From the NGVD29.txt file supplied by the South Florida Water Management District	
State/County FL/Broward	Longitude	-80° 08' 30.78735"				
USGS QUAD Fort Lauderdale South						
Vertical Order Class Horizontal Order	First II First	<p>The orthometric height was determined by differential leveling and adjusted in May 1994. The mark is about 0.8 km (0.47 mi) west of Port Everglades in Section 22, Township 50 South, Range 42 East, Broward County, Florida. To reach the mark from the intersection of Interstate Highway 75 and U.S. Highway 27 (I-75 Exit 13, near Andytown) go east on Interstate Highway 75 8.1 km (5.04 mi) to the junction with Interstate Highway 595 East, exit right onto Interstate Highway 595 East, and go east along Interstate Highway 595 16.3 km (10.13 mi) to the junction with State Road 84, go east on State Road 84 6.7 km (4.19 mi) to the intersection with the Florida East Coast Railroad and the mark on the right. Also to reach the mark from the intersection of State Road 84 and Eisenhower Boulevard in Port Everglades, go west on State Road 84 1.0 km (0.62 mi) to the entrance-exit of Port Everglades, continue west on State Road 84 0.8 km (0.47 mi) to the station on the intersection with the Florida East Coast Railroad and the mark on the left. The mark is 16.03 m (52.6 ft) south of the centerline of State Road 84, 7.74 m (25.4 ft) east of the most eastern rail of railroad tracks, 0.61 m (2.0 ft) east of a metal witness post, 0.49 m (1.6 ft) south of a chain link fence, and 0.43 m (1.4 ft) east of a chain link fence. The mark is a disk set flush in the top of a concrete monument flush with the level of the ground about the same level as the highway.</p>				
						

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 14, 2008
AD2481 *****
AD2481 DESIGNATION - X 235
AD2481 PID - AD2481
AD2481 STATE/COUNTY- FL/BROWARD
AD2481 USGS QUAD - FORT LAUDERDALE SOUT (1994)
AD2481
AD2481 *CURRENT SURVEY CONTROL
AD2481
AD2481 * NAD 83(2007)- 26 05 33.24363(N) 080 08 30.78735(W) ADJUSTED
AD2481 * NAVD 88 - 2.820 (meters) 9.25 (feet) ADJUSTED
AD2481
AD2481 EPOCH DATE - 2002.00
AD2481 X - 981,334.994 (meters) COMP
AD2481 Y - -5,647,167.429 (meters) COMP
AD2481 Z - 2,788,265.814 (meters) COMP
AD2481 LAPLACE CORR- -3.55 (seconds) DEFLEC99
AD2481 ELLIP HEIGHT- -22.819 (meters) (02/10/07) ADJUSTED
AD2481 GEOID HEIGHT- -25.65 (meters) GEOID03
AD2481 DYNAMIC HT - 2.815 (meters) 9.24 (feet) COMP
AD2481
AD2481 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AD2481 Type PID Designation North East Ellip
AD2481 -----
AD2481 NETWORK AD2481 X 235 1.29 1.37 2.65
AD2481 -----
AD2481 MODELED GRAV- 979,056.0 (mgal) NAVD 88
AD2481
AD2481 VERT ORDER - FIRST CLASS II
AD2481
AD2481.The horizontal coordinates were established by GPS observations
AD2481.and adjusted by the National Geodetic Survey in February 2007.
AD2481
AD2481.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AD2481.See National Readjustment for more information.
AD2481.The horizontal coordinates are valid at the epoch date displayed above.
AD2481.The epoch date for horizontal control is a decimal equivalence
AD2481.of Year/Month/Day.
AD2481
AD2481.The orthometric height was determined by differential leveling
AD2481.and adjusted in May 1994.
AD2481.WARNING-Repeat measurements at this control monument indicate possible
AD2481.vertical movement.
AD2481
AD2481.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AD2481
AD2481.The Laplace correction was computed from DEFLEC99 derived deflections.
AD2481
AD2481.The ellipsoidal height was determined by GPS observations
AD2481.and is referenced to NAD 83.
AD2481
AD2481.The geoid height was determined by GEOID03.
AD2481
AD2481.The dynamic height is computed by dividing the NAVD 88
AD2481.geopotential number by the normal gravity value computed on the
AD2481.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD2481.degrees latitude (g = 980.6199 gals.).
AD2481
AD2481.The modeled gravity was interpolated from observed gravity values.
AD2481
AD2481;
AD2481;SPC FL E - 195,152.439 285,841.964 MT 1.00003213 +0 22 38.8
AD2481;SPC FL E - 640,262.63 937,799.84 sFT 1.00003213 +0 22 38.8
AD2481;UTM 17 - 2,886,217.835 585,812.675 MT 0.99969092 +0 22 38.8
AD2481
AD2481!
AD2481! - Elev Factor x Scale Factor = Combined Factor
AD2481!SPC FL E - 1.00000359 x 1.00003213 = 1.00003572
AD2481!UTM 17 - 1.00000359 x 0.99969092 = 0.99969450

```


AD2481
 AD2481: Primary Azimuth Mark Grid Az
 AD2481:SPC FL E - 190 BCED 267 38 16.7
 AD2481:UTM 17 - 190 BCED 267 38 16.7

PID	Reference Object	Distance	Geod. Az ddmmss.s
AD5698	190 BCED	APPROX. 0.5 KM	2680055.5

AD2481
 AD2481 SUPERSEDED SURVEY CONTROL

AD2481	NAD 83(1999)- 26 05 33.24365(N)	080 08 30.78734(W)	AD() 1
AD2481	ELLIP H (12/12/02) -22.811 (m)		GP() 4 1
AD2481	NAVD 88 (06/15/91) 2.814 (m)	9.23 (f)	UNKNOWN 1 2
AD2481	NGVD 29 (09/01/92) 3.303 (m)	10.84 (f)	ADJUSTED 1 2

AD2481.Superseded values are not recommended for survey control.
 AD2481.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AD2481.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD2481 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNJ8581386218(NAD 83)

AD2481_MARKER: DB = BENCH MARK DISK

AD2481_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AD2481_SP_SET: CONCRETE POST

AD2481_STAMPING: X 235 1965

AD2481_MARK LOGO: CGS

AD2481_PROJECTION: FLUSH

AD2481_MAGNETIC: N = NO MAGNETIC MATERIAL

AD2481_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AD2481+STABILITY: SURFACE MOTION

AD2481_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AD2481+SATELLITE: SATELLITE OBSERVATIONS - May 12, 2002

HISTORY	- Date	Condition	Report By
AD2481	HISTORY - 1965	MONUMENTED	CGS
AD2481	HISTORY - 1973	GOOD	NGS
AD2481	HISTORY - 1978	GOOD	FL-011
AD2481	HISTORY - 1981	GOOD	FLDNR
AD2481	HISTORY - 1982	GOOD	USPSQD
AD2481	HISTORY - 19901221	GOOD	NGS
AD2481	HISTORY - 19980927	GOOD	USPSQD
AD2481	HISTORY - 20011018	GOOD	LDBLS
AD2481	HISTORY - 20020512	GOOD	MAPTEC

AD2481
 AD2481 STATION DESCRIPTION

AD2481 DESCRIBED BY COAST AND GEODETIC SURVEY 1965
 AD2481 0.4 MI S FROM FORT LAUDERDALE.
 AD2481 ABOUT 0.35 MILE SOUTH ALONG THE FLORIDA EAST COAST RAILWAY FROM
 AD2481 THE STATION AT FORT LAUDERDALE, IN SECTION 22, R 42 E, T 50 S,
 AD2481 13 1/2 RAILS SOUTH OF MILEPOST 343, 25.1 FEET EAST OF THE EAST
 AD2481 RAIL OF THE NORTHBOUND TRACK, 8.6 FEET SOUTH OF THE SOUTH CURB
 AD2481 OF STATE HIGHWAY 84 (SW 24TH STREET), 1.3 FEET SOUTH OF THE
 AD2481 SOUTH EDGE OF A CONCRETE SIDEWALK, 2 FEET WEST OF A STEEL RAIL
 AD2481 WHICH IS SET IN GROUND AND PROJECTS 3 FEET ABOVE THE LEVEL OF
 AD2481 THE GROUND, ABOUT LEVEL WITH THE TRACK AND SET IN THE TOP OF
 AD2481 A CONCRETE POST FLUSH WITH THE GROUND.

AD2481 STATION RECOVERY (1973)

AD2481 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973
 AD2481 RECOVERED IN GOOD CONDITION.

AD2481 STATION RECOVERY (1978)

AD2481 RECOVERY NOTE BY BROWARD COUNTY FLORIDA 1978
 AD2481 RECOVERED IN GOOD CONDITION.

AD2481 STATION RECOVERY (1981)

AD2481 RECOVERY NOTE BY FL DEPT OF NAT RES 1981
 AD2481 RECOVERED IN GOOD CONDITION.

AD2481 STATION RECOVERY (1982)

AD2481 RECOVERY NOTE BY US POWER SQUADRON 1982
 AD2481 CHANGE DESC: MARKER NOW INSIDE CHAIN LINK FENCE OF LUMBER YARD.

AD2481 STATION RECOVERY (1990)



AD2481
AD2481 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1990
AD2481 IN FORT LAUDERDALE, AT THE INTERSECTION OF SOUTHWEST 24TH STREET
AD2481 (STATE HIGHWAY 84) AND THE FLORIDA EAST COAST RAILROAD, 7.7 M (25.3
AD2481 FT) EAST OF AND LEVEL WITH THE NEAR RAIL, 5.3 M (17.4 FT) SOUTH OF
AD2481 THE CENTER OF THE EASTBOUND LANES OF THE STREET, 1.0 M (3.3 FT) EAST
AD2481 OF A WITNESS POST, 0.7 M (2.3 FT) SOUTHEAST OF A CHAIN-LINK FENCE
AD2481 CORNER, AND THE MONUMENT PROJECTS 0.1 M (0.3 FT) ABOVE THE GROUND
AD2481 SURFACE.
AD2481
AD2481 STATION RECOVERY (1998)
AD2481
AD2481 RECOVERY NOTE BY US POWER SQUADRON 1998
AD2481 RECOVERED IN GOOD CONDITION.
AD2481
AD2481 STATION RECOVERY (2001)
AD2481
AD2481 RECOVERY NOTE BY LD BRADLEY LAND SURVEYORS 2001 (JCH)
AD2481 THE MARK IS ABOUT 0.8 KM (0.47 MI) WEST OF PORT EVERGLADES IN SECTION
AD2481 22,
AD2481 TOWNSHIP 50 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA.
AD2481
AD2481 TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
AD2481 U.S.
AD2481 HIGHWAY 27 (I-75 EXIT 13, NEAR ANDYTOWN) GO EAST ON INTERSTATE HIGHWAY
AD2481 75 8.1
AD2481 KM (5.04 MI) TO THE JUNCTION WITH INTERSTATE HIGHWAY 595 EAST, EXIT
AD2481 RIGHT ONTO
AD2481 INTERSTATE HIGHWAY 595 EAST, AND GO EAST ALONG INTERSTATE HIGHWAY 595
AD2481 16.3 KM
AD2481 (10.13 MI) TO THE JUNCTION WITH STATE ROAD 84, GO EAST ON STATE ROAD
AD2481 84 6.7 KM
AD2481 (4.19 MI) TO THE INTERSECTION WITH THE FLORIDA EAST COAST RAILROAD AND
AD2481 THE
AD2481 MARK ON THE RIGHT. ALSO TO REACH THE MARK FROM THE INTERSECTION OF
AD2481 STATE ROAD
AD2481 84 AND EISENHOWER BOULEVARD IN PORT EVERGLADES, GO WEST ON STATE ROAD
AD2481 84 1.0
AD2481 KM (0.62 MI) TO THE ENTRANCE-EXIT OF PORT EVERGLADES, CONTINUE WEST ON
AD2481 STATE
AD2481 ROAD 84 0.8 KM (0.47 MI) TO THE STATION ON THE INTERSECTION WITH THE
AD2481 FLORIDA
AD2481 EAST COAST RAILROAD AND THE MARK ON THE LEFT.
AD2481
AD2481 THE MARK IS 16.03 M (52.6 FT) SOUTH OF THE CENTERLINE OF STATE ROAD
AD2481 84, 7.74 M
AD2481 (25.4 FT) EAST OF THE MOST EASTERN RAIL OF RAILROAD TRACTS, 0.61 M
AD2481 (2.0 FT)
AD2481 EAST OF A METAL WITNESS POST, 0.49 M (1.6 FT) SOUTH OF A CHAIN LINK
AD2481 FENCE, AND
AD2481 0.43 M (1.4 FT) EAST OF A CHAIN LINK FENCE. THE MARK IS A DISK SET
AD2481 FLUSH IN
AD2481 THE TOP OF A CONCRETE MONUMENT FLUSH WITH THE LEVEL OF THE GROUND
AD2481 ABOUT THE
AD2481 SAME LEVEL AS THE HIGHWAY.
AD2481
AD2481
AD2481 STATION RECOVERY (2002)
AD2481
AD2481 RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
AD2481 THE MARK IS ABOUT 0.8 KM (0.47 MI) WEST OF PORT EVERGLADES IN SECTION
AD2481 22,
AD2481 TOWNSHIP 50 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA.
AD2481
AD2481 TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
AD2481 U.S.
AD2481 HIGHWAY 27 (I-75 EXIT 13, NEAR ANDYTOWN) GO EAST ON INTERSTATE HIGHWAY
AD2481 75 8.1
AD2481 KM (5.04 MI) TO THE JUNCTION WITH INTERSTATE HIGHWAY 595 EAST, EXIT
AD2481 RIGHT ONTO
AD2481 INTERSTATE HIGHWAY 595 EAST, AND GO EAST ALONG INTERSTATE HIGHWAY 595
AD2481 16.3 KM
AD2481 (10.13 MI) TO THE JUNCTION WITH STATE ROAD 84, GO EAST ON STATE ROAD
AD2481 84 6.7 KM
AD2481 (4.19 MI) TO THE INTERSECTION WITH THE FLORIDA EAST COAST RAILROAD AND
AD2481 THE
AD2481 MARK ON THE RIGHT. ALSO TO REACH THE MARK FROM THE INTERSECTION OF
AD2481 STATE ROAD
AD2481 84 AND EISENHOWER BOULEVARD IN PORT EVERGLADES, GO WEST ON STATE ROAD
AD2481 84 1.0
AD2481 KM (0.62 MI) TO THE ENTRANCE-EXIT OF PORT EVERGLADES, CONTINUE WEST ON

DATASHEETS

AD2481 STATE
AD2481 ROAD 84 0.8 KM (0.47 MI) TO THE STATION ON THE INTERSECTION WITH THE
AD2481 FLORIDA
AD2481 EAST COAST RAILROAD AND THE MARK ON THE LEFT.
AD2481
AD2481 THE MARK IS 16.03 M (52.6 FT) SOUTH OF THE CENTERLINE OF STATE ROAD
AD2481 84, 7.74 M
AD2481 (25.4 FT) EAST OF THE MOST EASTERN RAIL OF RAILROAD TRACTS, 0.61 M
AD2481 (2.0 FT)
AD2481 EAST OF A METAL WITNESS POST, 0.49 M (1.6 FT) SOUTH OF A CHAIN LINK
AD2481 FENCE, AND
AD2481 0.43 M (1.4 FT) EAST OF A CHAIN LINK FENCE. THE MARK IS A DISK SET
AD2481 FLUSH IN
AD2481 THE TOP OF A CONCRETE MONUMENT FLUSH WITH THE LEVEL OF THE GROUND
AD2481 ABOUT THE
AD2481 SAME LEVEL AS THE HIGHWAY.
AD2481
AD2481 STATION RECOVERY (2002)
AD2481 RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CP)
AD2481 RECOVERED AS DESCRIBED.
AD2481

*** retrieval complete.
Elapsed Time = 00:00:00

VERTICAL CONTROL

190 BCED		Elevation:	NAVD 1988	7.434'	NGVD 1929	9.039'
PID AD5698	Latitude		26° 05' 32.63020"	From NGS Data Sheet		From the NGVD29.txt file supplied by the South Florida Water Management District
State/County FL/Broward	Longitude		-80° 08' 50.38068"			
USGS QUAD Fort Lauderdale South						
Vertical Order Class Horizontal Order	First II First		<p>The orthometric height was determined by differential leveling and adjusted in June 1991. The mark is about 1.3 km (0.81 mi) west of Port Everglades in Section 15, Township 50 South, Range 42 East, Broward County, Florida. Ownership- Army National Guard to reach the mark from the intersection of Interstate Highway 75 and U.S. Highway 27 (I-75 Exit 13, near Andytown) go east on Interstate Highway 75 8.1 km (5.04 mi) to the junction with Interstate Highway 595 East, exit right onto Interstate Highway 595 East, and go east along Interstate Highway 595 16.3 km (10.13 mi) to the junction with state road 84, go east on State Road 84 6.2 km 3.85 mi) to the station on the right. Also to reach the mark from the intersection of State Road 84 and Eisenhower Boulevard in Port Everglades, go west on State Road 84 1.0 km (0.62 mi) to the entrance-exit of Port Everglades, continue west on State Road 84 1.3 km (0.81 mi) to the station on the left. The mark is 55.47 m (182.0 ft) west of the centerline of SW 4th Avenue, 28.65m (94.0 ft) south of the centerline of State Road 84, 12.62 m (41.4 ft) south of the south edge a concrete walk, and 12.50 m (41.0 ft) north of the entrance doors of the national guard armory, the mark is a disk set flush in the northeast corner of a concrete flagpole foundation, flush with the level of the ground and about the same level as the highway.</p>			
						
						

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 14, 2008
AD5698 *****
AD5698 DESIGNATION - 190 BCED
AD5698 PID - AD5698
AD5698 STATE/COUNTY- FL/BROWARD
AD5698 USGS QUAD - FORT LAUDERDALE SOUT (1994)
AD5698
AD5698 *CURRENT SURVEY CONTROL
AD5698
AD5698 *-----
AD5698 * NAD 83(2007)- 26 05 32.63020(N) 080 08 50.38068(W) ADJUSTED
AD5698 * NAVD 88 - 2.266 (meters) 7.43 (feet) ADJUSTED
AD5698 *-----
AD5698 EPOCH DATE - 2002.00
AD5698 X - 980,799.900 (meters) COMP
AD5698 Y - -5,647,268.347 (meters) COMP
AD5698 Z - 2,788,248.633 (meters) COMP
AD5698 LAPLACE CORR- -3.52 (seconds) DEFLEC99
AD5698 ELLIP HEIGHT- -23.334 (meters) (02/10/07) ADJUSTED
AD5698 GEOID HEIGHT- -25.63 (meters) GEOID03
AD5698 DYNAMIC HT - 2.262 (meters) 7.42 (feet) COMP
AD5698
AD5698 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AD5698 Type PID Designation North East Ellip
AD5698 -----
AD5698 NETWORK AD5698 190 BCED 2.12 2.21 3.76
AD5698 -----
AD5698 MODELED GRAV- 979,056.3 (mgal) NAVD 88
AD5698
AD5698 VERT ORDER - FIRST CLASS II
AD5698
AD5698.The horizontal coordinates were established by GPS observations
AD5698.and adjusted by the National Geodetic Survey in February 2007.
AD5698
AD5698.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AD5698.See National Readjustment for more information.
AD5698.The horizontal coordinates are valid at the epoch date displayed above.
AD5698.The epoch date for horizontal control is a decimal equivalence
AD5698.of Year/Month/Day.
AD5698
AD5698.The orthometric height was determined by differential leveling
AD5698.and adjusted in June 1991.
AD5698
AD5698.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AD5698
AD5698.The Laplace correction was computed from DEFLEC99 derived deflections.
AD5698
AD5698.The ellipsoidal height was determined by GPS observations
AD5698.and is referenced to NAD 83.
AD5698
AD5698.The geoid height was determined by GEOID03.
AD5698
AD5698.The dynamic height is computed by dividing the NAVD 88
AD5698.geopotential number by the normal gravity value computed on the
AD5698.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD5698.degrees latitude (g = 980.6199 gals.).
AD5698
AD5698.The modeled gravity was interpolated from observed gravity values.
AD5698
AD5698; North East Units Scale Factor Converg.
AD5698;SPC FL E - 195,129.985 285,297.610 MT 1.00003098 +0 22 30.2
AD5698;SPC FL E - 640,188.96 936,013.91 sFT 1.00003098 +0 22 30.2
AD5698;UTM 17 - 2,886,195.389 585,268.507 MT 0.99968977 +0 22 30.2
AD5698
AD5698! Elev Factor x Scale Factor = Combined Factor
AD5698!SPC FL E - 1.00000367 x 1.00003098 = 1.00003465
AD5698!UTM 17 - 1.00000367 x 0.99968977 = 0.99969343
AD5698
AD5698: Primary Azimuth Mark Grid Az

```

DATASHEETS

AD5698:SPC FL E - X 235 087 38 16.6
 AD5698:UTM 17 - X 235 087 38 16.6

PID	Reference Object	Distance	Geod. Az ddmmss.s
AD2481	X 235	APPROX. 0.5 KM	0880046.8

AD5698
 AD5698 SUPERSEDED SURVEY CONTROL
 AD5698 NAD 83(1999)- 26 05 32.63023(N) 080 08 50.38069(W) AD() 1
 AD5698 ELLIP H (12/12/02) -23.328 (m) GP() 4 1
 AD5698 NAVD 88 (12/12/02) 2.27 (m) 7.4 (f) LEVELING 3
 AD5698 NGVD 29 (09/01/92) 2.755 (m) 9.04 (f) ADJUSTED 1 2

AD5698.Superseded values are not recommended for survey control.
 AD5698.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AD5698.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD5698_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNJ8526986195(NAD 83)
 AD5698_MARKER: DB = BENCH MARK DISK
 AD5698_SETTING: 35 = SET IN A MAT FOUNDATION OR CONCRETE SLAB OTHER THAN
 AD5698+WITH SETTING: PAVEMENT
 AD5698_SP_SET: FLAGPOLE BASE
 AD5698_STAMPING: BC 190
 AD5698_MARK LOGO: BCE
 AD5698_MAGNETIC: N = NO MAGNETIC MATERIAL
 AD5698_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AD5698+STABILITY: SURFACE MOTION
 AD5698_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AD5698+SATELLITE: SATELLITE OBSERVATIONS - May 12, 2002

HISTORY	- Date	Condition	Report By
AD5698	HISTORY - 1978	MONUMENTED	FL-011
AD5698	HISTORY - 19910628	GOOD	USPSQD
AD5698	HISTORY - 19960123	GOOD	USPSQD
AD5698	HISTORY - 19980121	GOOD	USPSQD
AD5698	HISTORY - 20011018	GOOD	LDBLS
AD5698	HISTORY - 20020512	GOOD	MAPTEC

AD5698
 AD5698 STATION DESCRIPTION
 AD5698 DESCRIBED BY BROWARD COUNTY FLORIDA 1978
 AD5698 FORT LAUDERDALE.
 AD5698 THE BENCH MARK IS LOCATED AT THE INTERSECTION OF STATE ROAD 84,
 AD5698 AND SW 4TH AVENUE IN THE SOUTHWEST CORNER. MARK BEARS 15 FEET
 AD5698 NORTH OF THE CENTER LINE OF A CIRCULAR DRIVE, 45 FEET SOUTH OF
 AD5698 THE SOUTH EDGE OF A CONCRETE SIDEWALK, 100 FEET SOUTH OF THE CENTER
 AD5698 LINE OF THE MEDIAN OF STATE ROAD 84, 185 FEET WEST OF THE CENTER
 AD5698 LINE OF SW 4TH AVENUE, SET IN THE NORTHEAST CORNER OF A CONCRETE
 AD5698 BASE FOR A FLAG POLE 45 FEET NORTH OF THE ENTRANCE DOOR TO THE
 AD5698 NATIONAL GUARD ARMORY. DISK WAS CHIPPED PRIOR TO LEVELING. DISK
 AD5698 IS A STANDARD BROWARD COUNTY BRASS DISK.

AD5698
 AD5698 STATION RECOVERY (1991)
 AD5698 RECOVERY NOTE BY US POWER SQUADRON 1991 (JHH)
 AD5698 RECOVERED IN GOOD CONDITION.

AD5698
 AD5698 STATION RECOVERY (1996)
 AD5698 RECOVERY NOTE BY US POWER SQUADRON 1996
 AD5698 RECOVERED IN GOOD CONDITION.

AD5698
 AD5698 STATION RECOVERY (1998)
 AD5698 RECOVERY NOTE BY US POWER SQUADRON 1998
 AD5698 RECOVERED IN GOOD CONDITION.

AD5698
 AD5698 STATION RECOVERY (2001)
 AD5698 RECOVERY NOTE BY LD BRADLEY LAND SURVEYORS 2001 (JCH)
 AD5698 THE MARK IS ABOUT 1.3 KM (0.81 MI) WEST OF PORT EVERGLADES IN SECTION
 AD5698 15,
 AD5698 TOWNSHIP 50 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA. OWNERSHIP -
 AD5698 ARMY
 AD5698 NATIONAL GUARD
 AD5698
 AD5698 TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
 AD5698 U.S.

AD5698' HIGHWAY 27 (I-75 EXIT 13, NEAR ANDYTOWN) GO EAST ON INTERSTATE HIGHWAY
 AD5698' 75 8.1
 AD5698' KM (5.04 MI) TO THE JUNCTION WITH INTERSTATE HIGHWAY 595 EAST, EXIT
 AD5698' RIGHT ONTO
 AD5698' INTERSTATE HIGHWAY 595 EAST, AND GO EAST ALONG INTERSTATE HIGHWAY 595
 AD5698' 16.3 KM
 AD5698' (10.13 MI) TO THE JUNCTION WITH STATE ROAD 84, GO EAST ON STATE ROAD
 AD5698' 84 6.2 KM
 AD5698' (3.85 MI) TO THE STATION ON THE RIGHT. ALSO TO REACH THE MARK FROM THE
 AD5698' INTERSECTION OF STATE ROAD 84 AND EISENHOWER BOULEVARD IN PORT
 AD5698' EVERGLADES, GO
 AD5698' WEST ON STATE ROAD 84 1.0 KM (0.62 MI) TO THE ENTRANCE-EXIT OF PORT
 AD5698' EVERGLADES, CONTINUE WEST ON STATE ROAD 84 1.3 KM (0.81 MI) TO THE
 AD5698' STATION ON
 AD5698' THE LEFT.
 AD5698'
 AD5698' THE MARK IS 55.47 M (182.0 FT) WEST OF THE CENTERLINE OF SW 4TH
 AD5698' AVENUE, 28.65
 AD5698' M (94.0 FT) SOUTH OF THE CENTERLINE OF STATE ROAD 84, 12.62 M (41.4
 AD5698' FT) SOUTH
 AD5698' OF THE SOUTH EDGE A CONCRETE WALK, AND 12.50 M (41.0 FT) NORTH OF THE
 AD5698' ENTRANCE
 AD5698' DOORS OF THE NATIONAL GUARD ARMORY, THE MARK IS A DISK SET FLUSH IN
 AD5698' THE
 AD5698' NORTHEAST CORNER OF A CONCRETE FLAGPOLE FOUNDATION, FLUSH WITH THE
 AD5698' LEVEL OF
 AD5698' THE GROUND AND ABOUT THE SAME LEVEL AS THE HIGHWAY.
 AD5698'
 AD5698'
 AD5698'
 AD5698' STATION RECOVERY (2002)
 AD5698'
 AD5698' RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
 AD5698' THE MARK IS ABOUT 1.3 KM (0.81 MI) WEST OF PORT EVERGLADES IN SECTION
 AD5698' 15,
 AD5698' TOWNSHIP 50 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA. OWNERSHIP -
 AD5698' ARMY
 AD5698' NATIONAL GUARD
 AD5698'
 AD5698' TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
 AD5698' U.S.
 AD5698' HIGHWAY 27 (I-75 EXIT 13, NEAR ANDYTOWN) GO EAST ON INTERSTATE HIGHWAY
 AD5698' 75 8.1
 AD5698' KM (5.04 MI) TO THE JUNCTION WITH INTERSTATE HIGHWAY 595 EAST, EXIT
 AD5698' RIGHT ONTO
 AD5698' INTERSTATE HIGHWAY 595 EAST, AND GO EAST ALONG INTERSTATE HIGHWAY 595
 AD5698' 16.3 KM
 AD5698' (10.13 MI) TO THE JUNCTION WITH STATE ROAD 84, GO EAST ON STATE ROAD
 AD5698' 84 6.2 KM
 AD5698' (3.85 MI) TO THE STATION ON THE RIGHT. ALSO TO REACH THE MARK FROM THE
 AD5698' INTERSECTION OF STATE ROAD 84 AND EISENHOWER BOULEVARD IN PORT
 AD5698' EVERGLADES, GO
 AD5698' WEST ON STATE ROAD 84 1.0 KM (0.62 MI) TO THE ENTRANCE-EXIT OF PORT
 AD5698' EVERGLADES, CONTINUE WEST ON STATE ROAD 84 1.3 KM (0.81 MI) TO THE
 AD5698' STATION ON
 AD5698' THE LEFT.
 AD5698'
 AD5698' THE MARK IS 55.47 M (182.0 FT) WEST OF THE CENTERLINE OF SW 4TH
 AD5698' AVENUE, 28.65
 AD5698' M (94.0 FT) SOUTH OF THE CENTERLINE OF STATE ROAD 84, 12.62 M (41.4
 AD5698' FT) SOUTH
 AD5698' OF THE SOUTH EDGE A CONCRETE WALK, AND 12.50 M (41.0 FT) NORTH OF THE
 AD5698' ENTRANCE
 AD5698' DOORS OF THE NATIONAL GUARD ARMORY, THE MARK IS A DISK SET FLUSH IN
 AD5698' THE
 AD5698' NORTHEAST CORNER OF A CONCRETE FLAGPOLE FOUNDATION, FLUSH WITH THE
 AD5698' LEVEL OF
 AD5698' THE GROUND AND ABOUT THE SAME LEVEL AS THE HIGHWAY.
 AD5698'
 AD5698' STATION RECOVERY (2002)
 AD5698' RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CP)
 AD5698' RECOVERED AS DESCRIBED.
 AD5698'
 AD5698'

*** retrieval complete.
 Elapsed Time = 00:00:00

PROJECT RESULTS

Upper Zone (North Well)	Lower Zone (South Well)
<p>Reference mark: <u>Found mark on pipe just below pressure gauge.</u></p> <p>New Information at the site: Wrote the following information on the side of the well pipe. Mark El. <u>12.374' NGVD 29</u> Mark El. <u>10.790' NAVD 88</u> Initials: <u>K&A</u> Date: <u>12/20/07</u> Offset: <u>-1.584</u></p> <p>Previous Information at the site: Reference Mark Elevation(s) El. <u>None</u> Date: <u>None</u> Initials: <u>None</u> Reference Mark location: <u>Same as noted above.</u></p>	<p>Reference mark: <u>Found mark on pipe just below pressure gauge.</u></p> <p>New Information at the site: Wrote the following information on the side of the well pipe. Mark El. <u>12.384' NGVD 29</u> Mark El. <u>10.800' NAVD 88</u> Initials: <u>K&A</u> Date: <u>12/20/07</u> Offset: <u>-1.584</u></p> <p>Previous Information at the site: Reference Mark Elevation(s) El. <u>None</u> Date: <u>None</u> Initials: <u>None</u> Reference Mark location: <u>Same as noted above</u></p>
<p><u>DTW (Distance to water inside well)</u> <u>Unable to obtain, well sealed.</u> Reference mark: <u>N/A</u> El. <u>N/A (NGVD 29)</u> Measurement to water: <u>N/A</u> Date: <u>N/A</u> Time: <u>N/A</u> Ground Elevation next to Well: <u>6.58' (NGVD 1929) (on concrete pad).</u></p> <p style="text-align: center;"><u>NAD 1983/90 Florida East Zone</u></p> <p>Latitude: <u>26° 04' 55.4"</u> Longitude: <u>- 80° 09' 08.9"</u> Northing:(Y) <u>636422</u> Easting:(X) <u>934365</u></p>	<p><u>DTW (Distance to water inside well)</u> <u>Unable to obtain, well sealed.</u> Reference mark: <u>N/A</u> El. <u>N/A (NGVD 29)</u> Measurement to water: <u>N/A</u> Date: <u>N/A</u> Time: <u>N/A</u> Ground Elevation next to Well: <u>6.58' (NGVD 1929) (on concrete pad).</u></p> <p style="text-align: center;"><u>NAD 1983/90 Florida East Zone</u></p> <p>Latitude: <u>26° 04' 55.4"</u> Longitude: <u>- 80° 09' 08.9"</u> Northing:(Y) <u>636421</u> Easting: (X) <u>934364</u></p>

Site Photos



UPPER ZONE WELL



**UPPER ZONE WELL
MEASURE POINT**

**Upper Zone Well 12/20/07
Keith and Associates**

Site Photos



**Lower Zone Well 12/20/07
Keith and Associates**

GT LOHMEYER WELL SITE



12/20/07

Keith and Associates, Inc.

GT LOHMEYER WELL SITE



BENCHMARK GT LOH 2007

12/20/07

Keith and Associates, Inc.

Benchmark GT LOH 2007 Location

GT LOHMEYER WELL SITE



12/20/07

Keith and Associates, Inc.

Benchmark GT LOH 2007

GT LOHMEYER WELL SITE



12/20/07

Keith and Associates, Inc.

GT Lohmeyer Upper and Lower Transducers

GT LOHMEYER WELL SITE



12/20/07

Keith and Associates, Inc.

GT Lohmeyer Upper and Lower Transducers Survey Information

GT LOHMEYER WELL SITE





12/20/07

Keith and Associates, Inc.

GT Lohmeyer Upper and Lower Measuring Points

VERTICAL CONTROL

SITE BENCHMARK "GT LOH 2007"		Elevation:	NAVD 1988	6.550'	NGVD 1929	8.134'
	Latitude		26° 04' 55.4"	Derived from the level loop as described in the Leveling Methods section of this report.		Derived from the level loop as described in the Leveling Methods section of this report.
State/County FL/Broward	Longitude		-80° 09' 08.9"			
USGS QUAD Fort Lauderdale South						
Vertical Order	Third	The mark is about 0.8 km (0.47 mi) west of Port Everglades in Section 22, Township 50 South, Range 42 East, Broward County, Florida. To reach the mark from the intersection of Interstate Highway 75 and U.S. Highway 27 (I-75 Exit 13, near Andytown) go east on Interstate Highway 175 8.1 km (5.04 mi) to the junction with Interstate Highway 595 East, exit right onto Interstate Highway 595 East, and go east along Interstate Highway 595 16.3 km (10.13 mi) to the junction with State Road 84, go east on State Road 84 2.9 miles to the junction of S.W. 4 th Avenue, turn right onto S.W. 4 th Avenue heading south for 0.6 miles to the junction of S.W. 33 rd Street / Snyder Park Road, turn right heading west and entering Snyder Park, Continue on S.W. 33 rd Street / Snyder Park Road for 0.7 miles to the southwest corner of the park and the mark on the left. Also to reach the mark from the intersection of State Road 84 and Eisenhower Boulevard in Port Everglades, go west on State Road 84 1.4 miles to the junction of S.W. 4 th Avenue, turn left onto S.W. 4 th Avenue heading south for 0.6 miles to the junction of S.W. 33 rd Street / Snyder Park Road, turn right heading west and entering Snyder Park, Continue on S.W. 33 rd Street / Snyder Park Road for 0.7 miles to the southwest corner of the park and the mark on the left. The mark is a 3-1/2" SFWMD brass disk set in the southwest corner of a concrete slab, 2' north of the south edge of the slab and 2' east of the west edge of the slab.				
Horizontal Order	Third					
						
						



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY BROWARD	PROJECT GT Lohmeyer	DESIGNATION GT LOH 2007	
SECTION 22	TOWNSHIP 50 SOUTH	RANGE 42 EAST	
GEOGRAPHIC INDEX OF QUAD			
Established by <u>KEITH AND ASSOCIATES</u>		NAME OF QUADRANGLE <u>FORT LAUDERDALE</u> <u>SOUTH</u>	
SURVEYOR <u>D. FERELS</u> DATE <u>12/20/2007</u>		FIELD BOOK <u>279</u> PAGES <u>66-71</u>	
HORIZONTAL DATUM: 1983/90 ZONE EAST			
VERTICAL DATUM: NGVD 1929 AND NAVD 1988			
CONTROL ACCURACY: HORIZONTAL 3rd VERTICAL 3rd			
STATE PLANE COORDINATES	X 934350	Y 636416	NAVD 1988 EL. 6.550' NGVD 1929 EL. 8.134'
LATITUDE 26°04'55.4"	LONGITUDE 80°09'08.9"		
DESCRIPTION			
To Reach:			
The mark is about 0.8 km (0.47 mi) west of Port Everglades in Section 22, Township 50 South, Range 42 East, Broward County, Florida. To reach the mark from the intersection of Interstate Highway 75 and U.S. Highway 27 (I-75 Exit 13, near Andytown) go east on Interstate Highway 1 75 8.1 km (5.04 mi) to the junction with Interstate Highway 595 East, exit right onto Interstate Highway 595 East, and go east along Interstate Highway 595 16.3 km (10.13 mi) to the junction with State Road 84, go east on State Road 84 2.9 miles to the junction of S.W. 4 th Avenue, turn right onto S.W. 4 th Avenue heading south for 0.6 miles to the junction of S.W. 33 rd Street / Snyder Park Road, turn right heading west and entering Snyder Park, Continue on S.W. 33 rd Street / Snyder Park Road for 0.7 miles to the southwest corner of the park and the mark on the left. Also to reach the mark from the intersection of State Road 84 and Eisenhower Boulevard in Port Everglades, go west on State Road 84 1.4 miles to the junction of S.W. 4 th Avenue , turn left onto S.W. 4 th Avenue heading south for 0.6 miles to the junction of S.W. 33 rd Street / Snyder Park Road, turn right heading west and entering Snyder Park, Continue on S.W. 33 rd Street / Snyder Park Road for 0.7 miles to the southwest corner of the park and the mark on the left.			
The mark is a 3-1/2" SFWMD brass disk set in the southwest corner of a concrete slab, 2' north of the south edge of the slab and 2' east of the west edge of the slab.			
Notable Land marks:			
Located at the southwest corner of Snyder Park.			

SKETCH



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01



**BENCHMARK
GT LOH 2007**



JOB#	7050.07 GT LOH	PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007	Datum:	NAVD88	FIELD BOOK	279	PAGES	66-71		
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	4.869												
BM	3.622	3.624	12.876			9.252	9.252						NGS BM X-235
NGS BM	2.380	-0.002											
X-235													
STADIA		248.900											
	5.619			7.482									
TP1	4.369	4.371	11.017	6.230	6.230	6.645		499.20	-0.000306583	-0.000306583	6.646	2.026	
	3.126	-0.002		4.979	0.000			-1.40					
	13.114			18.691				-1.40					
STADIA		249.300			250.300								
	6.225			5.568									
TP2	4.982	4.982	11.679	4.322	4.320	6.697		499.10	-0.000306521	-0.000613104	6.697	2.041	
	3.739	0.000		3.070	0.002			-0.50					
	14.946			12.960				-1.90					
STADIA		248.600			249.800								
	6.232			6.779									
TP3	5.503	5.504	11.654	5.528	5.529	6.149		498.40	-0.000306091	-0.000919196	6.150	1.875	
	4.776	-0.001		4.281	-0.001			-1.20					
	16.511			16.588				-3.10					
STADIA		145.600			249.800								
	5.309			4.939									
TP4	4.579	4.581	12.022	4.213	4.213	7.441		290.70	-0.000178533	-0.001097729	7.442	2.268	CHECK NGS BM 190 BCED PUB.
NGS BM	3.855	-0.002		3.488	0.000			0.50					ELEV. = 7.434'
190BCED	13.743			12.640				-2.60					
STADIA		145.400			145.100								
	4.603			5.110									
TP5	3.362	3.362	10.999	4.386	4.385	7.636		290.40	-0.000178349	-0.001276077	7.638	2.328	
	2.120	0.000		3.660	0.001			0.40					
	10.085			13.156				-2.20					
STADIA		248.300			145.000								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007			Datum:	NAVD88	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION	
	6.067			6.091										
TP6	4.828	4.827	10.986	4.842	4.840	6.159		498.60	-0.000306214	-0.001582291	6.160	1.878		
	3.586	0.001		3.588	0.002			-2.00						
	14.481			14.521				-4.20						
STADIA		248.100			250.300									
	6.120			6.248										
TP7	5.140	5.141	11.119	5.008	5.008	5.978		496.20	-0.000304740	-0.001887032	5.980	1.823		
	4.162	-0.001		3.767	0.000			0.00						
	15.422			15.023				-4.20						
STADIA		195.800			248.100									
	5.658			6.219										
TP8	4.412	4.413	10.296	5.238	5.236	5.882		392.50	-0.000241053	-0.002128085	5.884	1.794		
	3.170	-0.001		4.252	0.002			-0.90						
	13.240			15.709				-5.10						
STADIA		248.800			196.700									
	5.743			6.162										
TP9	4.492	4.494	9.873	4.919	4.917	5.378		497.90	-0.000305784	-0.002433869	5.381	1.640		
	3.247	-0.002		3.671	0.002			-0.30						
	13.482			14.752				-5.40						
STADIA		249.600			249.100									
	6.030			6.267										
TP10	4.782	4.782	9.635	5.020	5.020	4.853		499.10	-0.000306521	-0.002740391	4.856	1.480		
	3.535	0.000		3.772	0.000			0.10						
	14.347			15.059				-5.30						
STADIA		249.500			249.500									
	5.591			6.371										
TP11	4.732	4.732	9.247	5.121	5.120	4.515		499.70	-0.000306890	-0.003047281	4.518	1.377		
	3.873	0.000		3.869	0.001			-0.70						
	14.196			15.361				-6.00						
STADIA		171.800			250.200									

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NAVD88	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	6.029			5.922									
TP12	4.762	4.760	8.945	5.062	5.062	4.185		343.80	-0.000211144	-0.003258425	4.188	1.276	
	3.488	0.002		4.202	0.000			-0.20					
	14.279			15.186				-6.20					
STADIA		254.100			172.000								
	5.384			6.091									
TP13	4.128	4.127	8.231	4.842	4.841	4.104		504.30	-0.000309715	-0.003568140	4.108	1.252	
	2.870	0.001		3.589	0.001			3.90					
	12.382			14.522				-2.30					
STADIA		251.400			250.200								
	8.431			5.467									
TP14	7.481	7.481	11.495	4.218	4.217	4.014		501.50	-0.000307995	-0.003876135	4.018	1.225	
	6.531	0.000		2.966	0.001			1.30					
	22.443			12.651				-1.00					
STADIA		190.000			250.100								
	6.448			2.472									
TP15	5.201	5.199	15.171	1.523	1.523	9.972		379.80	-0.000233253	-0.004109389	9.976	3.041	
	3.948	0.002		0.574	0.000			0.20					
	15.597			4.569				-0.80					
STADIA		250.000			189.800								
	2.533			7.298									
TP16	1.468	1.469	10.596	6.044	6.044	9.127		500.70	-0.000307504	-0.004416893	9.131	2.783	
	0.407	-0.001		4.791	0.000			-0.70					
	4.408			18.133				-1.50					
STADIA		212.600			250.700								
	4.133			5.583									
TP17	3.834	3.835	9.910	4.522	4.521	6.075		425.10	-0.000261074	-0.004677967	6.080	1.853	
	3.537	-0.001		3.458	0.001			0.10					
	11.504			13.563				-1.40					
STADIA		59.600			212.500								

JOB#	7050.07 GT LOH	PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007	Datum:	NAVD88	FIELD BOOK	279	PAGES	66-71		
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	3.782			3.649									
TP18	3.500	3.500	10.045	3.365	3.365	6.545		116.50	-0.000071548	-0.004749515	6.550	1.996	SET 3-1/2" SFWMD BRASS DISK
BM GT	3.219	0.000		3.080	0.000			2.70					IN SW COR CONC. SLAB @
LOH 2007	10.501			10.094				1.30					WELL SITE GT LOHMEYER
STADIA		56.300			56.900								STAMPED "GT LOH 2007"
	5.603			4.289									
TP19	4.538	4.537	10.612	3.969	3.970	6.075		120.00	-0.000073698	-0.004823213	6.080	1.853	
	3.471	0.001		3.652	-0.001			-7.40					
	13.612			11.910				-6.10					
STADIA		213.200			63.700								
	7.371			2.552									
TP20	6.120	6.120	15.244	1.488	1.488	9.124		425.90	-0.000261566	-0.005084779	9.129	2.782	
	4.868	0.000		0.425	0.000			0.50					
	18.359			4.465				-5.60					
STADIA		250.300			212.700								
	2.269			6.528									
TP21	1.322	1.320	11.287	5.278	5.277	9.967		500.70	-0.000307504	-0.005392283	9.973	3.040	
	0.370	0.002		4.024	0.001			-0.10					
	3.961			15.830				-5.70					
STADIA		189.900			250.400								
	5.810			8.231									
TP22	4.555	4.555	8.567	7.273	7.275	4.012		380.80	-0.000233868	-0.005626150	4.017	1.224	
	3.300	0.000		6.322	-0.002			-1.00					
	13.665			21.826				-6.70					
STADIA		251.000			190.900								
	6.473			5.730									
TP23	5.219	5.221	9.318	4.469	4.470	4.097		502.90	-0.000308855	-0.005935006	4.103	1.250	
	3.970	-0.002		3.211	-0.001			-0.90					
	15.662			13.410				-7.60					
STADIA		250.300			251.900								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NAVD88	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	5.891			6.409									
TP24	5.030	5.030	9.211	5.135	5.138	4.180		504.30	-0.000309715	-0.006244721	4.187	1.276	
	4.170	0.000		3.869	-0.003			-3.70					
	15.091			15.413				-11.30					
STADIA		172.100			254.000								
	6.671			5.782									
TP25	5.401	5.402	9.721	4.891	4.891	4.320		350.40	-0.000215198	-0.006459918	4.326	1.319	
	4.135	-0.001		3.999	0.000			-6.20					
	16.207			14.672				-17.50					
STADIA		253.600			178.300								
	6.499			6.120									
TP26	5.255	5.255	10.102	4.875	4.874	4.847		502.90	-0.000308855	-0.006768773	4.854	1.479	
	4.010	0.000		3.627	0.001			4.30					
	15.764			14.622				-13.20					
STADIA		248.900			249.300								
	6.431			5.980									
TP27	5.189	5.187	10.560	4.730	4.729	5.373		499.20	-0.000306583	-0.007075356	5.380	1.640	
	3.940	0.002		3.477	0.001			-1.40					
	15.560			14.187				-14.60					
STADIA		249.100			250.300								
	6.633			5.931									
TP28	5.651	5.651	11.525	4.689	4.686	5.874		498.30	-0.000306030	-0.007381386	5.881	1.793	
	4.670	0.000		3.439	0.003			-0.10					
	16.954			14.059				-14.70					
STADIA		196.300			249.200								
	6.520			6.533									
TP29	5.280	5.280	11.246	5.559	5.559	5.966		391.10	-0.000240193	-0.007621579	5.974	1.821	
	4.040	0.000		4.585	0.000			1.50					
	15.840			16.677				-13.20					
STADIA		248.000			194.800								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007			Datum:	NAVD88	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION	
	6.535			6.349										
TP30	5.279	5.278	11.422	5.100	5.102	6.144		497.20	-0.000305354	-0.007926934	6.152	1.875		
	4.020	0.001		3.857	-0.002			-1.20						
	15.834			15.306				-14.40						
STADIA		251.500			249.200									
	5.257			5.040										
TP31	4.530	4.531	12.155	3.799	3.798	7.624		500.00	-0.000307074	-0.008234008	7.632	2.326		
	3.807	-0.001		2.555	0.001			3.00						
	13.594			11.394				-11.40						
STADIA		145.000			248.500									
	7.391			6.750										
TP32	6.139	6.140	12.275	6.020	6.020	6.135		291.00	-0.000178717	-0.008412725	6.144	1.873		
	4.889	-0.001		5.290	0.000			-1.00						
	18.419			18.060				-12.40						
STADIA		250.200			146.000									
	6.055			6.837										
TP33	4.800	4.803	11.486	5.591	5.590	6.685		499.60	-0.000306828	-0.008719554	6.693	2.040		
	3.555	-0.003		4.343	0.001			0.80						
	14.410			16.771				-11.60						
STADIA		250.000			249.400									

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NAVD88		FIELD BOOK	279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION		
	7.470			6.099											
TP34	6.213	6.213	12.844	4.853	4.855	6.631		248.60	-0.000152677	-0.009025768	6.640	2.024			
	4.957	0.000		3.613	-0.002			-248.60							
	18.640			14.565				-10.20							
STADIA		251.300				248.600									
				4.850											
BM				3.600	3.602	9.243	9.252	500.80	-0.000307565	-0.009333333	9.252	2.820	BM CHECK @ X-235		
NGS BM				2.355	-0.002			1.80							
X-235				10.805				-8.40							
						249.500									
							LOR=	15197.20	CHECK VALUES TO VERIFY SAME OR TO SEE THEY ARE WITHIN						
	TOTAL +=	7594.400		TOTAL -=	7602.800			15197.20	THIRD ORDER SPECS(MAX DIFF. 33 FT.)						
					-8.40										
					RAW CLOSURE=			-0.009							
					ERROR PER FOOT=			0.000							
					MTS ALLOWABLE ERROR FOR THIRD ORDER=			0.051							
					ACTUAL ERROR=			0.009	RED IF BAD-----GREEN IF GOOD						

copy and insert to expand worksheet

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NGVD29	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	4.869												
BM	3.622	3.624	14.460			10.836	10.836						NGS BM X-235
NGS BM	2.380	-0.002											
X-235													
STADIA		248.900											
	5.619			7.482									
TP1	4.369	4.371	12.601	6.230	6.230	8.229		499.20	-0.000306583	-0.000306583	8.230	2.508	
	3.126	-0.002		4.979	0.000			-1.40					
	13.114			18.691				-1.40					
STADIA		249.300			250.300								
	6.225			5.568									
TP2	4.982	4.982	13.263	4.322	4.320	8.281		499.10	-0.000306521	-0.000613104	8.281	2.524	
	3.739	0.000		3.070	0.002			-0.50					
	14.946			12.960				-1.90					
STADIA		248.600			249.800								
	6.232			6.779									
TP3	5.503	5.504	13.238	5.528	5.529	7.733		498.40	-0.000306091	-0.000919196	7.734	2.357	
	4.776	-0.001		4.281	-0.001			-1.20					
	16.511			16.588				-3.10					
STADIA		145.600			249.800								
	5.309			4.939									
TP4	4.579	4.581	13.606	4.213	4.213	9.025		290.70	-0.000178533	-0.001097729	9.026	2.751	CHECK NGS BM 190 BCED PUB.
NGS BM	3.855	-0.002		3.488	0.000			0.50					ELEV. = 9.039'
190BCED	13.743			12.640				-2.60					
STADIA		145.400			145.100								
	4.603			5.110									
TP5	3.362	3.362	12.583	4.386	4.385	9.220		290.40	-0.000178349	-0.001276077	9.222	2.811	
	2.120	0.000		3.660	0.001			0.40					
	10.085			13.156				-2.20					
STADIA		248.300			145.000								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NGVD29	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	6.067			6.091									
TP6	4.828	4.827	12.570	4.842	4.840	7.743		498.60	-0.000306214	-0.001582291	7.744	2.360	
	3.586	0.001		3.588	0.002			-2.00					
	14.481			14.521				-4.20					
STADIA		248.100			250.300								
	6.120			6.248									
TP7	5.140	5.141	12.703	5.008	5.008	7.562		496.20	-0.000304740	-0.001887032	7.564	2.305	
	4.162	-0.001		3.767	0.000			0.00					
	15.422			15.023				-4.20					
STADIA		195.800			248.100								
	5.658			6.219									
TP8	4.412	4.413	11.880	5.238	5.236	7.466		392.50	-0.000241053	-0.002128085	7.468	2.276	
	3.170	-0.001		4.252	0.002			-0.90					
	13.240			15.709				-5.10					
STADIA		248.800			196.700								
	5.743			6.162									
TP9	4.492	4.494	11.457	4.919	4.917	6.962		497.90	-0.000305784	-0.002433869	6.965	2.123	
	3.247	-0.002		3.671	0.002			-0.30					
	13.482			14.752				-5.40					
STADIA		249.600			249.100								
	6.030			6.267									
TP10	4.782	4.782	11.219	5.020	5.020	6.437		499.10	-0.000306521	-0.002740391	6.440	1.963	
	3.535	0.000		3.772	0.000			0.10					
	14.347			15.059				-5.30					
STADIA		249.500			249.500								
	5.591			6.371									
TP11	4.732	4.732	10.831	5.121	5.120	6.099		499.70	-0.000306890	-0.003047281	6.102	1.860	
	3.873	0.000		3.869	0.001			-0.70					
	14.196			15.361				-6.00					
STADIA		171.800			250.200								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NGVD29	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	6.029			5.922									
TP12	4.762	4.760	10.529	5.062	5.062	5.769		343.80	-0.000211144	-0.003258425	5.772	1.759	
	3.488	0.002		4.202	0.000			-0.20					
	14.279			15.186				-6.20					
STADIA		254.100			172.000								
	5.384			6.091									
TP13	4.128	4.127	9.815	4.842	4.841	5.688		504.30	-0.000309715	-0.003568140	5.692	1.735	
	2.870	0.001		3.589	0.001			3.90					
	12.382			14.522				-2.30					
STADIA		251.400			250.200								
	8.431			5.467									
TP14	7.481	7.481	13.079	4.218	4.217	5.598		501.50	-0.000307995	-0.003876135	5.602	1.707	
	6.531	0.000		2.966	0.001			1.30					
	22.443			12.651				-1.00					
STADIA		190.000			250.100								
	6.448			2.472									
TP15	5.201	5.199	16.755	1.523	1.523	11.556		379.80	-0.000233253	-0.004109389	11.560	3.524	
	3.948	0.002		0.574	0.000			0.20					
	15.597			4.569				-0.80					
STADIA		250.000			189.800								
	2.533			7.298									
TP16	1.468	1.469	12.180	6.044	6.044	10.711		500.70	-0.000307504	-0.004416893	10.715	3.266	
	0.407	-0.001		4.791	0.000			-0.70					
	4.408			18.133				-1.50					
STADIA		212.600			250.700								
	4.133			5.583									
TP17	3.834	3.835	11.494	4.522	4.521	7.659		425.10	-0.000261074	-0.004677967	7.664	2.336	
	3.537	-0.001		3.458	0.001			0.10					
	11.504			13.563				-1.40					
STADIA		59.600			212.500								

JOB#	7050.07 GT LOH	PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007	Datum:	NGVD29	FIELD BOOK	279	PAGES	66-71		
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	3.782			3.649									
TP18	3.500	3.500	11.629	3.365	3.365	8.129		116.50	-0.000071548	-0.004749515	8.134	2.479	SET 3-1/2" SFWMD BRASS DISK
BM GT	3.219	0.000		3.080	0.000			2.70					IN SW COR CONC. SLAB @
LOH 2007	10.501			10.094				1.30					WELL SITE GT LOHMEYER
STADIA		56.300			56.900								STAMPED "GT LOH 2007"
	5.603			4.289									
TP19	4.538	4.537	12.916	3.969	3.970	7.659		120.00	-0.000073698	-0.004823213	7.664	2.336	
	3.471	0.001		3.652	-0.001			-7.40					
	13.612			11.910				-6.10					
STADIA		213.200			63.700								
	7.371			2.552									
TP20	6.120	6.120	16.828	1.488	1.488	11.428		425.90	-0.000261566	-0.005084779	11.433	3.485	
	4.868	0.000		0.425	0.000			0.50					
	18.359			4.465				-5.60					
STADIA		250.300			212.700								
	2.269			6.528									
TP21	1.322	1.320	12.871	5.278	5.277	11.551		500.70	-0.000307504	-0.005392283	11.557	3.522	
	0.370	0.002		4.024	0.001			-0.10					
	3.961			15.830				-5.70					
STADIA		189.900			250.400								
	5.810			8.231									
TP22	4.555	4.555	10.151	7.273	7.275	5.596		380.80	-0.000233868	-0.005626150	5.601	1.707	
	3.300	0.000		6.322	-0.002			-1.00					
	13.665			21.826				-6.70					
STADIA		251.000			190.900								
	6.473			5.730									
TP23	5.219	5.221	10.902	4.469	4.470	5.681		502.90	-0.000308855	-0.005935006	5.687	1.733	
	3.970	-0.002		3.211	-0.001			-0.90					
	15.662			13.410				-7.60					
STADIA		250.300			251.900								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NGVD29	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	5.891			6.409									
TP24	5.030	5.030	10.795	5.135	5.138	5.764		504.30	-0.000309715	-0.006244721	5.771	1.759	
	4.170	0.000		3.869	-0.003			-3.70					
	15.091			15.413				-11.30					
STADIA		172.100			254.000								
	6.671			5.782									
TP25	5.401	5.402	11.305	4.891	4.891	5.904		350.40	-0.000215198	-0.006459918	5.910	1.802	
	4.135	-0.001		3.999	0.000			-6.20					
	16.207			14.672				-17.50					
STADIA		253.600			178.300								
	6.499			6.120									
TP26	5.255	5.255	11.686	4.875	4.874	6.431		502.90	-0.000308855	-0.006768773	6.438	1.962	
	4.010	0.000		3.627	0.001			4.30					
	15.764			14.622				-13.20					
STADIA		248.900			249.300								
	6.431			5.980									
TP27	5.189	5.187	12.144	4.730	4.729	6.957		499.20	-0.000306583	-0.007075356	6.964	2.123	
	3.940	0.002		3.477	0.001			-1.40					
	15.560			14.187				-14.60					
STADIA		249.100			250.300								
	6.633			5.931									
TP28	5.651	5.651	13.109	4.689	4.686	7.458		498.30	-0.000306030	-0.007381386	7.465	2.275	
	4.670	0.000		3.439	0.003			-0.10					
	16.954			14.059				-14.70					
STADIA		196.300			249.200								
	6.520			6.533									
TP29	5.280	5.280	12.830	5.559	5.559	7.550		391.10	-0.000240193	-0.007621579	7.558	2.304	
	4.040	0.000		4.585	0.000			1.50					
	15.840			16.677				-13.20					
STADIA		248.000			194.800								

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007			Datum:	NGVD29	FIELD BOOK 279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION	
	6.535			6.349										
TP30	5.279	5.278	13.006	5.100	5.102	7.728		497.20	-0.000305354	-0.007926934	7.736	2.358		
	4.020	0.001		3.857	-0.002			-1.20						
	15.834			15.306				-14.40						
STADIA		251.500			249.200									
	5.257			5.040										
TP31	4.530	4.531	13.739	3.799	3.798	9.208		500.00	-0.000307074	-0.008234008	9.216	2.809		
	3.807	-0.001		2.555	0.001			3.00						
	13.594			11.394				-11.40						
STADIA		145.000			248.500									
	7.391			6.750										
TP32	6.139	6.140	13.859	6.020	6.020	7.719		291.00	-0.000178717	-0.008412725	7.728	2.355		
	4.889	-0.001		5.290	0.000			-1.00						
	18.419			18.060				-12.40						
STADIA		250.200			146.000									
	6.055			6.837										
TP33	4.800	4.803	13.070	5.591	5.590	8.269		499.60	-0.000306828	-0.008719554	8.277	2.523		
	3.555	-0.003		4.343	0.001			0.80						
	14.410			16.771				-11.60						
STADIA		250.000			249.400									

JOB#	7050.07 GT LOH		PARTY CHIEF	FERELS/GR EES	DATE:	12/19-20/2007		Datum:	NGVD29		FIELD BOOK	279	PAGES	66-71	
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION		
	7.470			6.099											
TP34	6.213	6.213	14.428	4.853	4.855	8.215		248.60	-0.000152677	-0.009025768	8.224	2.507			
	4.957	0.000		3.613	-0.002			-248.60							
	18.640			14.565				-10.20							
STADIA		251.300													
				4.850											
BM				3.600	3.602	10.827	10.836	500.80	-0.000307565	-0.009333333	10.836	3.303	BM CHECK @ X-235		
NGS BM				2.355	-0.002			1.80							
X-235				10.805				-8.40							
						249.500									
							LOR=	15197.20	CHECK VALUES TO VERIFY SAME OR TO SEE THEY ARE WITHIN						
	TOTAL +=	7594.400		TOTAL -=	7602.800			15197.20	THIRD ORDER SPECS(MAX DIFF. 33 FT.)						
					-8.40										
					RAW CLOSURE=			-0.009							
					ERROR PER FOOT=			0.000							
					MTS ALLOWABLE ERROR FOR THIRD ORDER=			0.051							
					ACTUAL ERROR=			0.009	RED IF BAD-----GREEN IF GOOD						

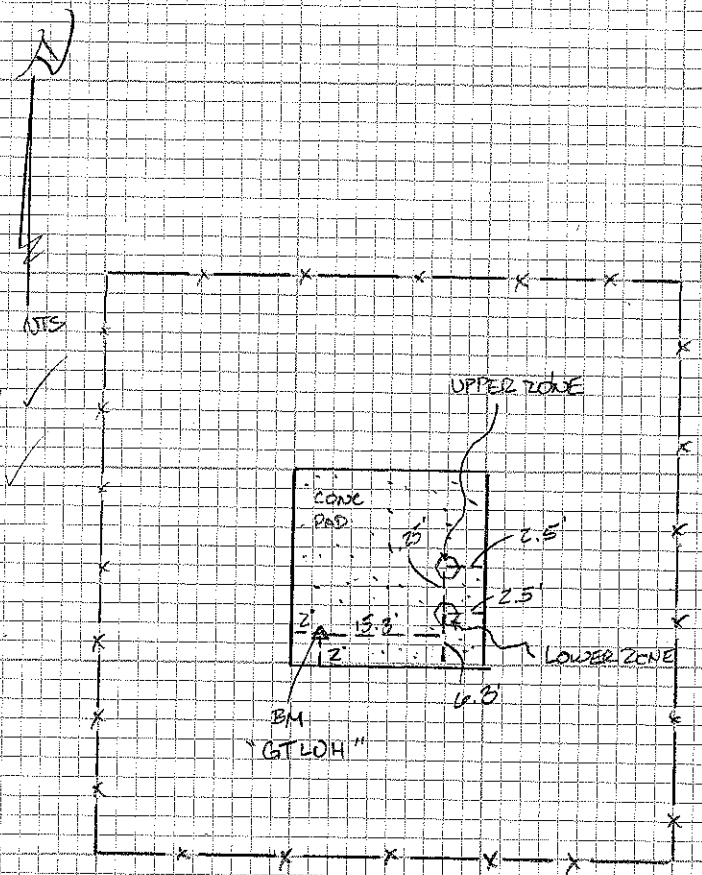
copy and insert to expand worksheet

12-19-07
 FEELS
 GRES
 ROBAZIO

E.F.W.M.D.
 GT LOH

STA	(+)	HI	(-)	NAVD 1988 ELEV	NGVD 1929 ELEV (+1.584')
BM GT LOH	3.70'	10.25' ✓		6.550'	(+1.584')
LOWER	.74' (-)	10.06' ✓	0.55' (+)	10.80' ✓	12.384' ✓
UPPER	0.63' (-)	10.16' ✓	0.73' (+)	10.79' ✓	12.374' ✓
CONC.			3.58'	6.58' ✓	
GRND			3.75'	6.41' ✓	
TP 1	1.42'	10.29' ✓	1.29'	8.87' ✓	
BM GT LOH			3.74'	6.55' ✓	

DESC.
 BM
 LOWER ZONE M.P.
 UPPER ZONE M.P.
 CONC. @ WELLS
 GRND NEXT TO CONC.



GPS. FILE 98693540

B.M. GTLOH 2007

START TIME 2:10 pm - 2:40 pm.

HI = 4.80'

12.19.07		S. F. W. M. D.		
FERELS		GT LOH		
GREGG				
ROSARIO		NAVD 1988		
	+	HI	-	ELEV
BM	4.869			9.252
	3.622			
(249)	2.380			
	3.624	12.876		
TP1	5.619		7.482	
	4.369		6.230	
(249)	3.126		(250) 4.979	
	4.371	11.017	6.230	6.646
TP2	6.225		5.568	
	4.982		4.322	
(249)	3.739		(250) 3.070	
	4.982	11.679	4.320	6.697
TP3	6.232		6.779	
	5.503		5.528	
(145)	4.776		(250) 4.281	
	5.504	11.654	5.529	6.150
TP4	5.309		4.939	
	4.579		4.213	
(145)	3.855		(145) 3.488	
	4.581	12.022	4.213	7.441
TP5	4.603'		5.110	
	3.562'		4.386	
(248)	2.120'		(145) 3.660	
	3.562'	10.999'	4.385	7.637
TP6	6.067		6.091	
	4.828		4.842	
(248)	3.586		(250) 3.588	
	4.827	10.986	4.840	6.159

FND BRASS DISC IN CONC. MON. STAMPED X235 1965

SET DL IN CONC SWK SOUTH SIDE SR 84

" " " " "

SET NL IN EP SOUTH SIDE SR 84

FND BROW CO. BRASS DISC IN CONC BASE FOR FLAGPOLE
STAMPED BM 190
NAVD 1988 ELEV. = 7.434

SET NL IN CONC SWK WEST SIDE SW 4 AVE

SET NL IN EP WEST SIDE SW 4 AVE

12-19-07	S.F.W.M.D.			
FERELS	GT LGH			
GREES				
ROBARIO				NAVD 1988
	L	H	-	ELEV
TP7	6.120		6.248	
	5.140		5.008	
(196)	4.162		(248) 3.767	
	5.141	11.119	5.008	5.978
TP8	5.658		6.219	
	4.412		5.238	
(249)	3.170		(197) 4.252	
	4.413	10.296	5.236	5.883
TP9	5.743		6.162	
	4.492		4.919	
(249)	3.247		(249) 3.671	
	4.494	9.873	4.917	5.379
TP10	6.030		6.267	
	4.782		5.020	
(249)	3.535		(250) 3.772	
	4.782	9.635	5.020	4.853
TP11	5.591		6.371	
	4.732		5.121	
(172)	3.873		(250) 3.819	
	4.732	9.247	5.120	4.515
TP12	6.029		5.922	
	4.762		5.062	
(25A)	3.488		(172) 4.202	
	4.760	8.945	5.062	4.185
TP13	5.384		6.091	
	4.128		4.842	
(251)	2.870		(250) 3.581	
	4.127	8.231	4.841	4.104

SET NL IN SOUTH EP SW 28 ST			
"	"	"	"
"	"	"	"
"	"	"	"
"	"	"	"
"	"	"	"
"	"	"	"
SET NL IN WEST EP SW 9 AVE.			
"	"	"	"

12.19.07		S. F. W. M. D.			
FERELS		GT LOH			
GREGG					
ROSGARD				NAVD 1988	
	T	HI	-	ELEV	
TP14	8.431		5.467		
	7.481		4.218		
(90)	6.531	(250)	2.966		
	7.481	11.495	4.217	4.014	
TP15	6.448		2.472		
	5.201		1.523		
(250)	3.948	(190)	0.574		
	5.199	15.171	1.523	9.972	
TP16	2.533		7.298		
	1.468		6.044		
(212)	0.407	(257)	4.791		
	1.469	10.596	6.044	9.127	
TP17	4.133		5.583		
	3.834		4.522		
(59)	3.537	(212)	3.458		
	3.835	9.910	4.521	6.075	
TP18	3.782		3.649		
	3.500		3.365		
(56)	3.219	(57)	3.080		
	3.500	10.045	3.365	6.545	ADJ. EL 6.550'
TP19	5.603		4.289		
	4.538		3.969		
(213)	3.471	(64)	3.652		
	4.537	10.612	3.970	6.075	
TP20	7.371		2.552		
	6.120		1.488		
(250)	4.868	(212)	0.425		
	6.120	15.244	1.488	9.124	

SET NL IN WEST EP SW 9 AVE	
SET NL IN E SW 9 AVE	
" " "	
SET NL IN EAST EP SW 9 AVE	
GET EPWMD BRASS DISC IN CONC PAD STAMPED GT LOH 2007 REF. PG. 65	7,130.0'
7735	
	7,130.0'

12-19-07		S. F. W. M. D.			
FERRELLS		GT LOH			
GRIFFES				NAVD 1988	
ROSARIO				ELEV	
	H	HI	-		
TP21	2.269		6.528		
	1.322		5.278		
(190)	0.370	(25)	4.024		
	1.320	11.287	5.277	9.967	
TP22	5.810		8.231		
	4.555		7.273		
(251)	3.300	(191)	6.322		
	4.555	8.567	7.275	4.012	
TP23	6.473		5.730		
	5.219		4.469		
(250)	3.970	(250)	3.211		
	5.221	9.318	4.470	4.097	
TP24	5.891		6.409		
	5.030		5.135		
(172)	4.170	(254)	3.860		
	5.030	9.21	5.136	4.18	
TP25	6.671		5.782		
	5.401		4.891		
(253)	4.135	(178)	5.999		
	5.402	9.721	4.891	4.319	
TP26	6.499		6.120		
	5.255		4.875		
(249)	4.010	(249)	3.627		
	5.255	10.102	4.874	4.847	
TP27	6.431		5.980		
	5.189		4.730		
(249)	3.940	(250)	3.477		
	5.187	10.56	4.729	5.373	

SET 60 D NAIL

12/20/07
S. GREES
F. LINEHAN
F. ROSARIO

S.F.W.M.D.
GT LSH

NAVD. ELEV.
1988

	(+)	H I	(-)	NAVD. ELEV. 1988
TP 27	6.431 5.189 3.940 5.187		10.560	5.373
	CARRY OVER FROM PREV. PAGE			
TP 28	6.633 5.651 (196) 4.670 5.651		5.931 (249) 4.684 3.439 4.686 11.525	5.874
TP 29	6.520 5.280 (248) 4.040 5.280		6.533 5.559 (195) 4.585 5.559 11.246	5.966
TP 30	6.535 5.279 (25) 4.020 5.278		6.349 5.100 (249) 3.857 5.102 11.422	6.144
TP 31	5.257 4.550 (145) 3.807 4.531		5.040 3.799 (247) 2.555 3.798 12.155	7.624
TP 32	7.391 6.139 (250) 4.889 6.140		6.750 6.020 (146) 5.290 6.020 12.275	6.135
TP 33	6.055 (250) 4.800 3.555 4.803		6.837 (249) 5.591 4.348 5.592 11.486	6.683

12/20/07

S.F.W.M.D.

S. GREENS \checkmark

GT LOH

F. LINEHAN \times

F. ROSARIO \checkmark

279/71

NAVD 1988
ELEV

TP 33

6.055
4.800
3.555
4.803

CARRY OVER FROM
PREV. PAGE

11.486'

6.683'

TP 34

7.470
(25) 6.213'
4.957'
6.213'

12.844'

6.099'
(249) 4.853
3.613'
4.855'

6.681'

BM

4.850'
(255) 3.600'
2.355'
3.602'

9.242'
 + 9.252'
 (ECC ROD = 0.010')
 TOTAL DIST. = 15.191

Office

Project

28 July 2017

INPUT

Geographic, flhp gn - Florida HPGN
Vertical - NAVD88, U.S. Feet

OUTPUT

State Plane, flhp gn - Florida HPGN
0901 - Florida East, U.S. Feet
Vertical - NGVD29 (Custom), U.S. Feet

GT LOH

1/1

Latitude: 26 04 55.4
Longitude: 80 09 08.9
Elevation/Z: 0

Northing/Y: 636418.885
Easting/X: 934349.940
Elevation/Z: 1.594
Convergence: 0 22 21.52043
Scale Factor: 1.000029913
Combined Factor: 1.000033854

Remark:

Corpscon v6.0.1, U.S. Army Corps of Engineers

DBHYDRO | by station

STATION INFORMATION

Station	LOH_RMW-1
Site	
Type	WELL
Latitude (ddmmss.sss)	260454.324
Longitude (ddmmss.sss)	800908.166
X Coord (ft) NAD83	934417.439
Y Coord (ft) NAD83	636310.565
County	Broward
Basin	CORAL REEF
Section	14
Township	50
Range	42
Show Map	Google Map
Well Info	Info
Description	REGIONAL MONITOR WELL RMW-1 FOR G.T. LOHMEYER WWTP
Notes	
Nearby Stations	Nearby Stations
Attachments	Show Attachments

Query returned 1 station record(s).