

SURVEYOR'S REPORT

**Specific Purpose Survey of the
United States Geological Survey
Recorder Wells C-687, C-1078 and Lake Trafford
in
Collier County, Florida**

Prepared for:

South Florida Water Management District

Prepared by:

Howard J. Ehmke II PSM 4191

An employee of the

South Florida Water Management District



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**Field Date: September 8, 2016
Report Date: September 21, 2016**

SURVEYOR'S REPORT

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SURVEYOR'S REPORT

PURPOSE

The purpose of this survey is to establish a North American Vertical Datum of 1988 (NAVD 88) elevation on the reference point for three (3) recorder wells C-687, C-1078 and Lake Trafford.

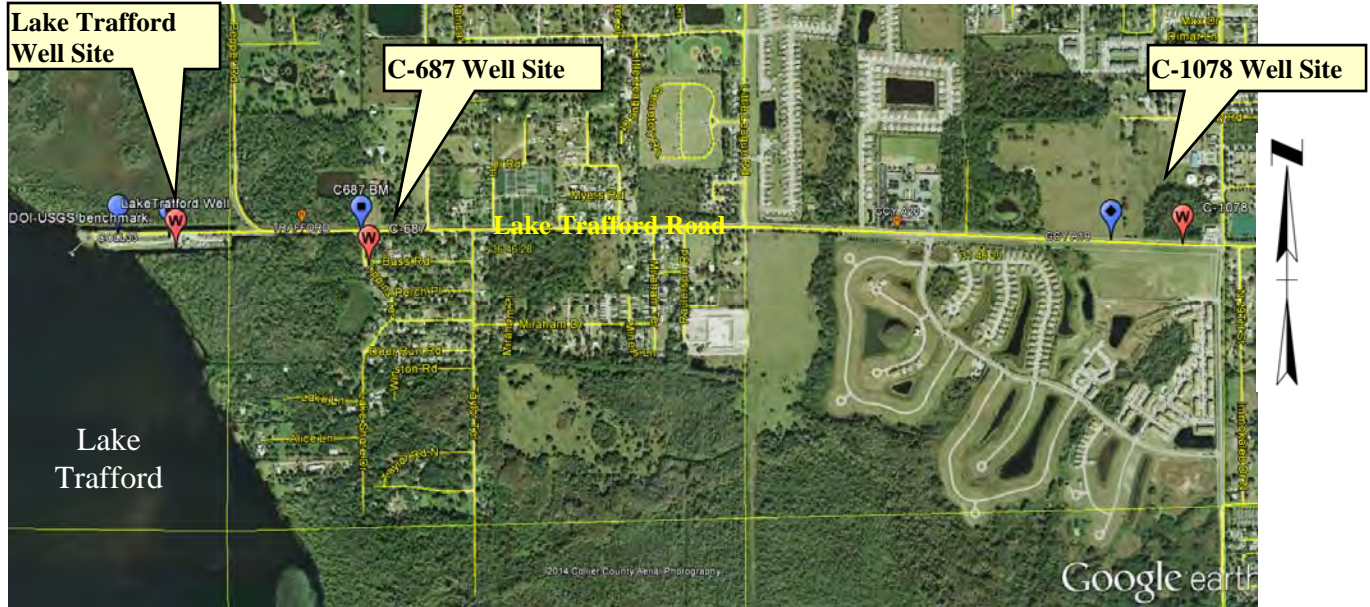
LOCATION OF PROJECT

The United States Geological Survey's Recorder Well locations:

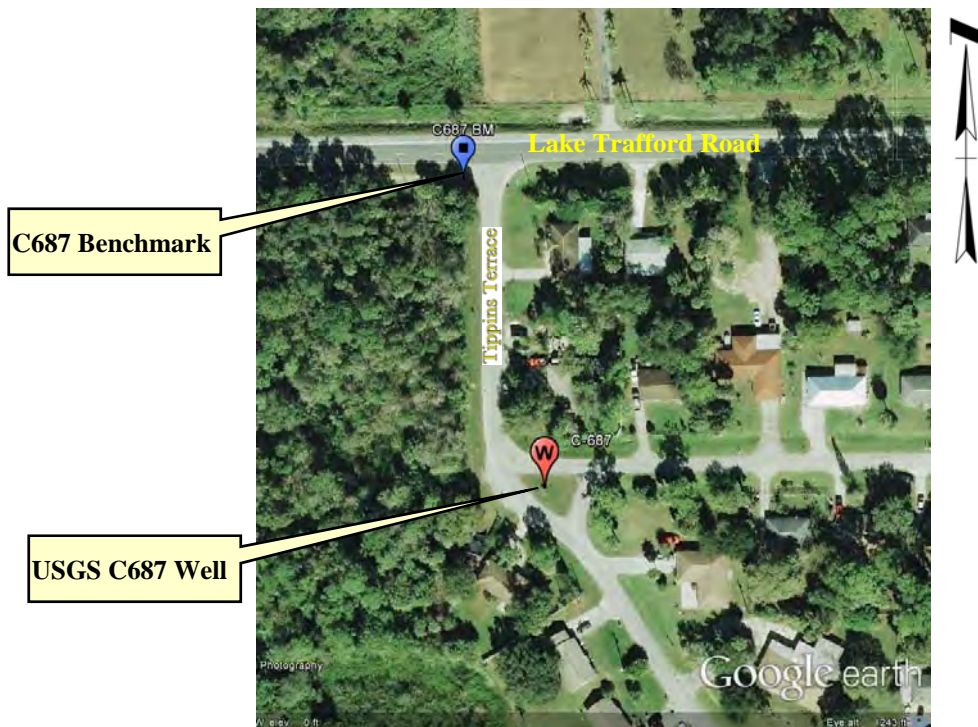
C-687 in Section 36 Township 46 South, Range 28 East

C-1078 in Section 31 Township 46 South, Range 29 East

Lake Trafford in Section 35 Township 46 South, Range 28 East, all in Collier County Florida.



General Location (Intended Display scale is "Not to Scale")



C-687 (Not to Scale)

SURVEYOR'S REPORT

Continued



C-1138 (Not to Scale)



Lake Trafford Well Site (Not to Scale)

SURVEYOR'S REPORT

Continued

PROJECT VERTICAL DATUM

The project vertical datum is the North American Vertical Datum (NAVD) of 1988.

To convert the NAVD 88 elevation to the National Geodetic Vertical Datum of 1929 at station **C-687 add 1.286 feet**, at station **C-1078 add 1.293** and at station **Lake Trafford add 1.283**. These values are based on Corpscon 6.0.1 a U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville Fl.

LEVELING METHODS

The leveling for this project was performed in accordance with standard survey practice using conventional third order methods, techniques and equipment.

The elevations of the control monuments GCYA19 (AH7805) and GCYA20 (AH7806) are based on a 2003 level run by Consul-tech for the District's.

The allowable error on this project meets or exceeds third order closures ($.05\sqrt{\text{miles}}$) as required by law for this type of work.

A level loop was run from the National Geodetic Survey (NGS) monument "GCYA19 (PID AH7805) through GCY A20 (AH7806) to the site benchmarks and back. The measurements were hand written in South Florida Water Management District Field Book Misc 6Z page 41-44, 46 & 47, last date September 8, 2016, reduced and adjusted electronically. Additional data was manually recorded in the field book.

EQUIPMENT USED

The Tremble DiNi digital level Serial Number 772297 and a folding bar code rod.

Topcon Hiper V Serial number: 1122-15378 District Unit number 744.


A hand held Garmin GPS Map 78.


SURVEYOR'S REPORT

Continued

VERTICAL CONTROL POINT


The Vertical Control point utilized and set as part of this survey is the:

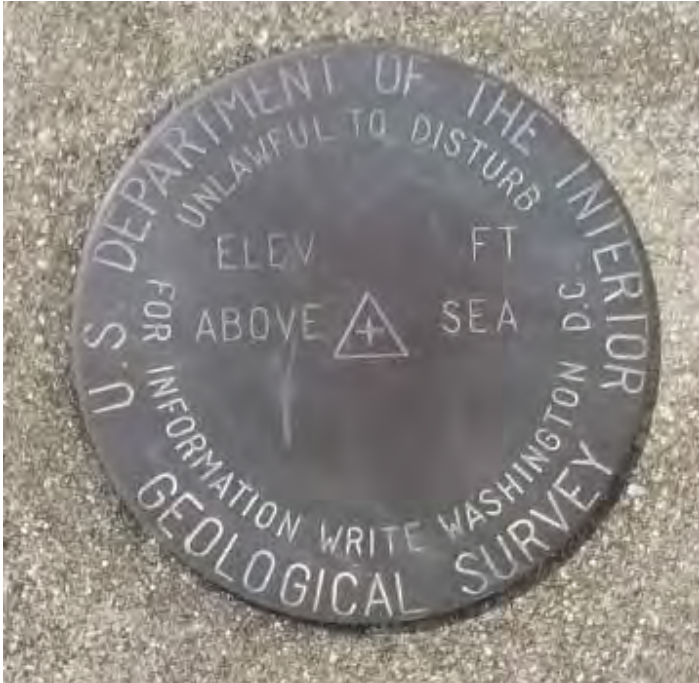
| BM: GCY A19 (PID AH7805) (NGS HORIZONTAL ONLY) | | | | | | |
|--|----------------------|-----------|---|-----------|-----------|----------------|
| 26°25'58.81876" (N) | 081°27'12.87895"(W): | Published | 30.250 ft. | (NAVD 88) | 9.220m | Level run |
| | | | 31.545 ft. | (NAVD 29) | 9.6149m | Level run |
| | | | 31.539 ft. | (NGVD29) | 1.289 ft. | Corpscon 6.0.1 |
|  | | | <p>The station is about 2.5 miles Northwesterly of Immokalee, and 23.1 miles Southwest of the intersection of State Road 80 and State Road 29, along County Road 890 (Lake Trafford Road).</p> <p>To reach the station from the intersection of State Road 82 and State Road 29, go South on State Road 29 about 3.7 miles to Lake Trafford Road (County Road 890), turn right and go 1.2 miles to the station on the right, set in a concrete monument. Located approximately 20.6 feet north of the edge of pavement of Lake Trafford Road, approximately 22.8 feet South of a barbed wire fence, and 3.2 feet South of an asphalt sidewalk.</p> <p>Note-set cut nail and brass washer, GCY, Inc. LB 4108, in northerly edge of pavement of Lake Trafford Road with a magnetic azimuth of 253 degrees at a distance of 54.4 feet set cut nail and brass washer, GCY, Inc. LB 4108, in the northerly edge of pavement of Lake Trafford Road with a magnetic azimuth of 184 degrees at a distance of 21.6 feet set cut nail and brass washer, GCY, Inc. LB 4108, in the north edge of pavement with a magnetic azimuth of 119 degrees at a distance of 55.0 feet.</p> | | | |

| BM: GCY A20 (PID AH7806) (NGS Horizontal only) | | | | | | |
|---|----------------------|-----------|--|-----------|-----------|----------------|
| 26°25'59.62534" (N) | 081°27'37.29250"(W): | Published | 29.807 ft. | (NAVD 88) | 9.085m | Level run |
| | | | 31.102 ft. | (NAVD 29) | 9.48m | Level run |
| | | | 31.096 ft. | (NGVD29) | 1.289 ft. | Corpscon 6.0.1 |
|  | | | <p>The station is about 2.5 miles northwesterly of Immokalee, and 23.1 miles southwest of the intersection of state road 80 and state road 29, along county road 890 (Lake Trafford road). To reach the station from the intersection of state road 82 and state road 29, go south on state road 29 about 3.7 miles to Lake Trafford road (county road 890), turn right and go 1.6 miles to the station on the right, set in a concrete monument. Located approximately 21.7 feet north of the edge of pavement of Lake Trafford road, approximately 80 feet west of the edge of pavement of a driveway for the Lake Trafford elementary school parking lot, and 2.4 feet south of a concrete sidewalk.</p> <p>Note-set cut nail and brass washer, GCY, Inc. LB 4108, in northerly edge of pavement of Lake Trafford road with a magnetic azimuth of 253 degrees at a distance of 54.9 feet set cut nail and brass washer, GCY, Inc. LB 4108, in the northerly edge of pavement of Lake Trafford road with a magnetic azimuth of 187 degrees at a distance of 22.7 feet set cut nail and brass washer, GCY, Inc. LB 4108, in the north edge of pavement with a magnetic azimuth of 122 degrees at a distance of 50.9 feet.</p> | | | |

SURVEYOR'S REPORT

Continued

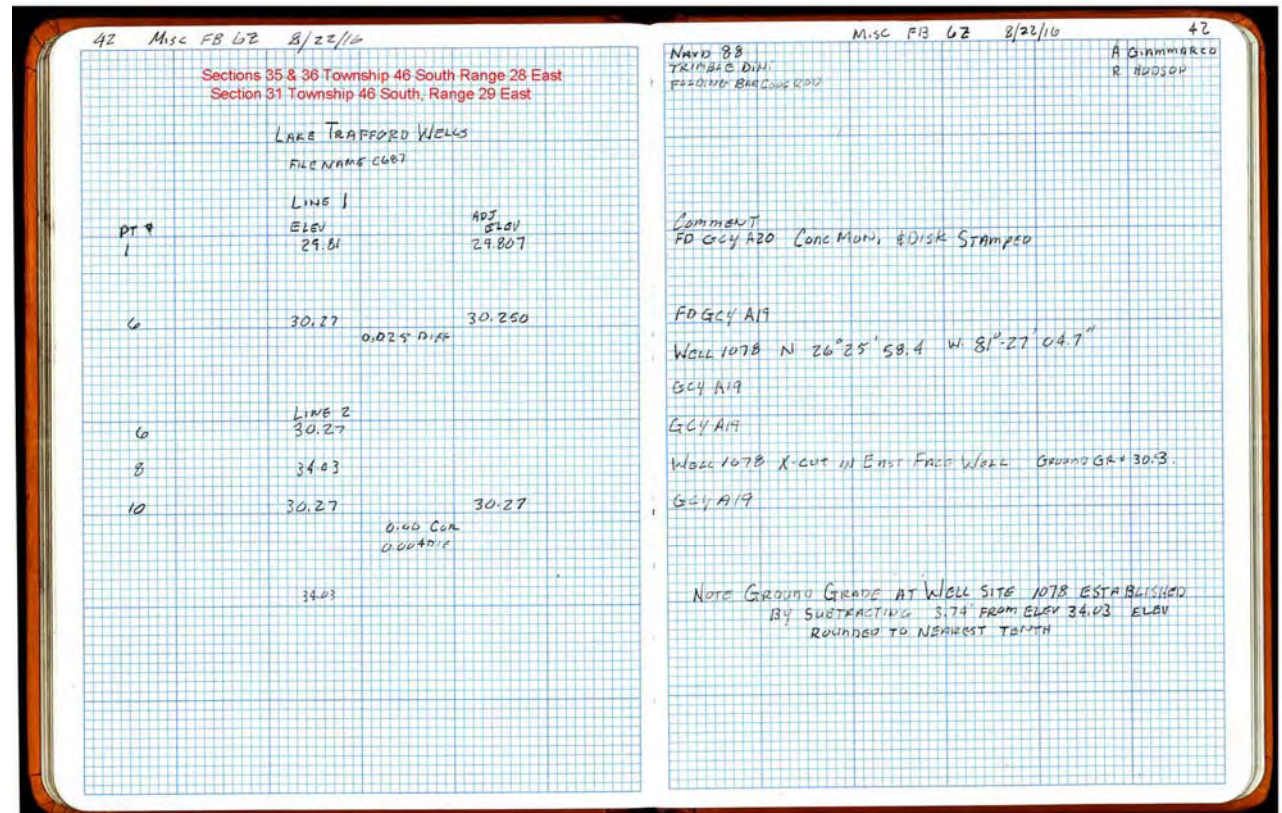
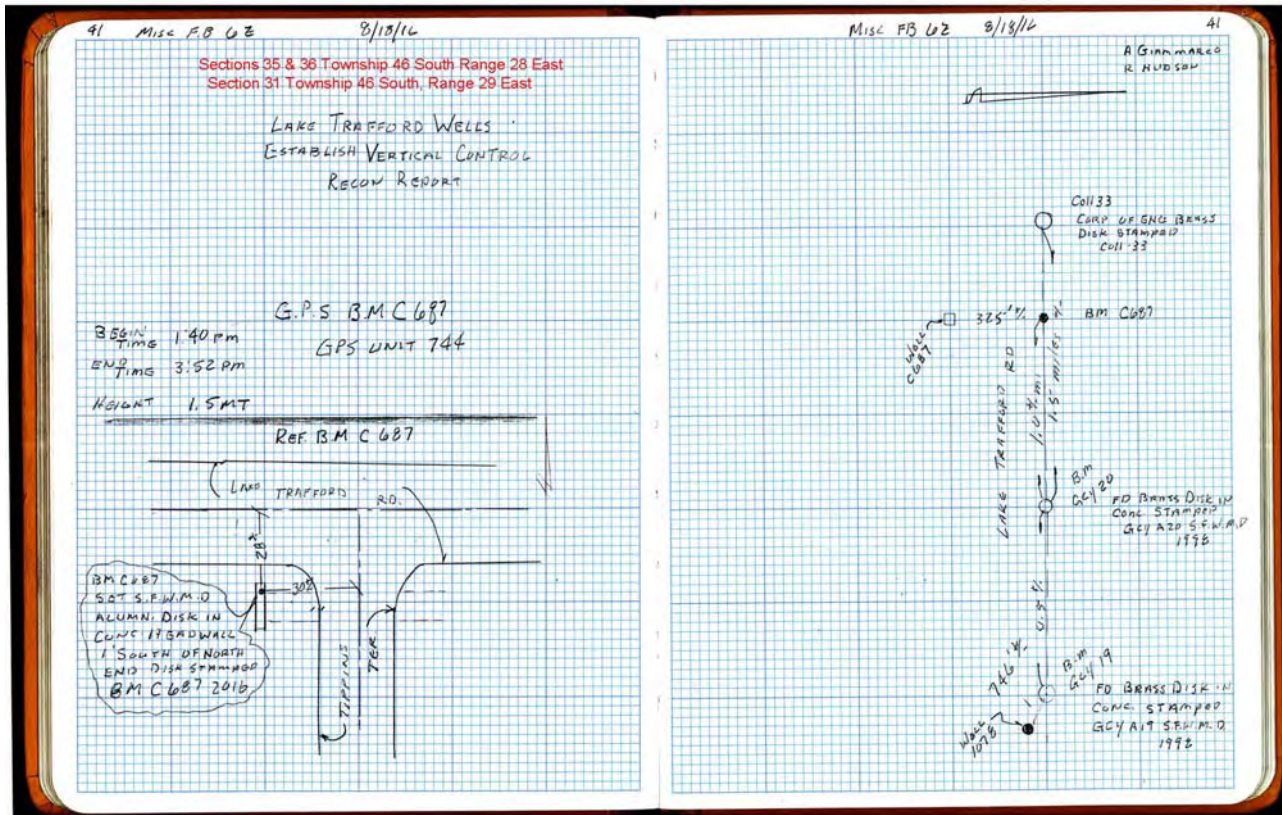
| BM: C687 SFWMD (Set as part of this survey) | | | | | |
|---|-----------------------|---|-----------|-----------|----------------|
| 26°25'59.62534" (N) | 081°27'37.29250" (W): | 23.267 ft. | (NAVD 88) | 7.0917m | Level run |
| | | 24.569 ft. | (NAVD 29) | 7.489m | Level run |
|  | | 24.553 ft. | (NGVD29) | 1.286 ft. | Corpscon 6.0.1 |
| | | <p>To Reach: From the intersection of State Road 29 and Lake Trafford Road, go West on Lake Trafford Road 2.7 miles to Tippins Terrace on the left and station location.</p> <p>The station is set in the west wing wall of the culvert under Tippins Terrace, 1 foot South of the North end of the wing wall, 28 feet more or less South of the centerline of Lake Trafford Road and 30.7 feet more or less and West of the centerline of Tippins Terrace to the East.</p> <p>The station is a South Florida Water Management District aluminum disk stamped "C687 BM 2016."</p> | | | |

| BM: DOI- USGS "No designation" (Found as part of this survey) | | | | | |
|---|-------------------------------|---|-----------|-----------|----------------|
| 26°25'58.5" (N) | 081°29'00.3" (W): (hand held) | 21.783 ft. | (NAVD 88) | 6.639m | Level run |
| | | 23.085 ft. | (NAVD 29) | 7.036m | Level run |
|  | | 23.066 ft. | (NGVD29) | 1.283 ft. | Corpscon 6.0.1 |
| | | <p>To Reach: From the intersection of State Road 29 and Lake Trafford Road, go West on Lake Trafford Road 2.9 miles to Pepper Road; then, continue West along Lake Trafford Road 0.2 of a mile to the station location on the left.</p> <p>The station is located on a rectangular concrete slab, south of the road.</p> <p>The station is a Department of the Interior (DOI), U.S. Geological Survey (USGS) disk, no station stamping.</p> | | | |

SURVEYOR'S REPORT

Continued

Field Book Misc 6Z page 41-44,46&47



SURVEYOR'S REPORT

Continued

43 Misc. FB 62 8/23/16
 Sections 35 & 36 Township 46 South Range 28 East
 Section 31 Township 46 South, Range 29 East

LARG TRAFFORD WELLS
 FILE NAME C687

| PT# | LINE 3 ELEV | ADJ GP |
|-----|----------------|-----------|
| 1 | 29.81 | |
| | 11 | |
| 20 | 26.667 | |
| | 21.55 | |

GPS UNIT 665
 G.P.S. Coll 33

BOOKING 2:18 PM
 END TIME 4:23
 HEIGHT 1.5 MT.

BUST
IN
RUN
VOID

Misc. FB 62 8/23/16 43
A. GIMMARCO
R. HUDSON

Comment
 G64 A20

B.M. C687 SET S.F.W.M.D. ALUMN. CAP SET IN CONC. HEADWALL
 N. 26° 25' 56.2" STAMPED C687 BM 2016
 W. 81° 28' 37.5"

Coll 33 FD

44 Misc. FB 62 8/24/16
 Section 36 Township 46 South Range 28 East

WELL C687
 ESTABLISH VERTICAL
 CONTROL ON RECORDERS

| BM | + | HI | - | Elev |
|-------------------|------|--------|------|------------------|
| C687 | | | | 23.26 |
| | 3.65 | 26.917 | | 23.26 |
| GROUNDING C687 | | | 4.7 | 22.2 |
| WELL C687 | 1.55 | 26.747 | 1.72 | 25.147 |
| C687 | | | 3.45 | 23.267 |

8/24/16 44
A. GIMMARCO
R. HUDSON

NAVD 88
 ZONE N. Z
 25' RPD

Comment
 SEE PG 48 Misc. FB 62 FOR DETAIL
 46

Ground: C Well
 * MARK ON WELL DECK



SURVEYOR'S REPORT

Continued

46 Misc FB 62 9/6/16

Sections 35 & 36 Township 46 South Range 28 East
Section 31 Township 46 South Range 29 East

LAKE TRAFFORD WELL
BENCH RUN WELL C687
FILE NAME C687A

| PT# | LINE 1 ELEV | ADJ ELEV |
|--------------|-------------------|------------------|
| 1 | 29.81 | 29.807 ✓ |
| 7 | 28.939 | 28.95 |
| 13/1 | 29.804 | — |
| ERROR: 0.005 | | |
| 7 | 28.939 | 28.95 |
| 7 | LINE 2 28.939 | 9/7/16 28.95 |
| 18 | 23.256 | 23.27 |
| 23/7 | 28.939 (wood die) | 28.95 |
| LINE 3 | | |
| 18 | 23.256 | 23.27 |
| 29 | 21.532 | 21.55 ✓ |
| ... | | |
| 27 | 21.787 | 21.80 |

46 Misc FB 62 9/6/16

NAVO 88 R.K. A. GIAMMARCA
R. HUDSON
N. STRICKLAND

TRIMBLE D.I.N.
FOLDING BAR CODED ROD

Comment
G.C.Y. A20
PK SET AS T.B.M.
G.C.Y. A20

T.B.M. P.K. NAIL

SET S.F.W.M. D ALUMN DISK IN CONC HEADWALL
STAMPED C687A206 560 PG 41 MISC FB 62
G.C.Y. A20 FOR DESCRIPTION

C687 B.M.

Coll 33 Fd. A.C.E. BRASS DISK SET IN CONC STAMPED Coll 33
2003

Box CUT ON CONC PAD ON N.W. COR. OF CONC. PAD @
LIFT STATION

47 Misc FB 62 9/8/16


Section 35 Township 46 South Range 28 East

LINE 4
ESTABLISH BENCH
FOR RECORDER LAKE TRAFFORD

| PT | ELEV | ADJ ELEV |
|-------|--------|-------------|
| 27 | 21.787 | 21.80 |
| 30 | 21.767 | 21.78 |
| 31 | 24.625 | 24.64 |
| 32/27 | 21.787 | 21.80 |

47 Misc FB 62 9/8/16

A. GIAMMARCA
R. HUDSON
N. STRICKLAND




T.B.M. BOX CUT ON CONC PAD N 26° 25' 58.5" W 081° 29' 00.3"

US DEPT OF INT BRASS DISK NO STAMPING

RECORDER PLATFORM N 26° 25' 57.4" W 081° 28' 59.8"

T.B.M.



SURVEYOR'S REPORT

Continued

PROJECT RESULTS

Tabular Form

Reference and Ground Elevations:

| <u>Well</u> | <u>Ref. El.</u> | <u>Ground El.</u> | <u>Comments</u> |
|---------------|-----------------|-------------------|-----------------------|
| C-687 | 25.20 | 22.2 | Mark on Recorder Deck |
| C-1078 | 34.03 | 30.3 | Red mark on PVC pipe |
| Lake Trafford | 24.64 | N/A | Mark on Recorder Deck |

| Source & Site Benchmark: | NAVD88 | Corpscon | NGVD29 |
|-------------------------------------|---------------|-----------------|---------------|
| NGS GCY A19 (AH7805) | El. 30.250 | +1.289 | El. 31.539 |
| NGS GCYA20 (AH7806) | El. 29.807 | +1.289 | El. 31.096 |
| C687 (SFWMD) | El. 23.267 | +1.286 | El. 24.553 |
| DOI- USGS "no designation" | El. 21.783 | +1.283 | El. 23.066 |

Surveyor's Notes

1. All measurements herein are in United States Survey feet and decimal thereof, unless otherwise specified.
2. Underground utilities were not located as part of this survey.
3. This survey report or copies thereof are not valid without the signature and the original raised seal of a Florida licensed Surveyor and Mapper.
4. Additions or deletions to this survey report by other than the signing party (or parties) is prohibited without written consent of the signing party (or parties).
5. To convert from NAVD 88 to NGVD 29 add 1.250 feet. This value is based on Corpscon 6.0.1 a U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville Fl.
6. Date of last field work: **September 8, 2016**
7. SFWMD Data records (on file at the District's headquarters):
 - A. Electronic Data files:
 - Miscellaneous picture files
 - Digital level run
 - File names: C687 & C687A
 - GPS OPUS data report File: C687.tps OP1472473709667
 - B. Conventional reporting
 - Field Book: Misc 6Z page 41-44, 46 & 47

Abbreviations:

| | | |
|----------------|---|--|
| DOI | - | Department of the Interior |
| El. | - | Elevation |
| NAVD 88 | - | North American Vertical Datum of 1988 |
| NGVD29 | - | National Geodetic Vertical Datum of 1929 |
| NGS | - | National Geodetic Survey |
| PSM | - | Professional Surveyor & Mapper |
| PID | - | Permanent Identifiers |
| SFWMD | - | South Florida Water Management District |
| USGS | - | United States Geological Survey |

SURVEYOR'S REPORT

Continued

SURVEYOR'S CERTIFICATION

In my professional opinion this Specific Purpose Survey meets applicable portions of the Standards of Practice set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J, Florida Administrative Code. This report is prepared for the sole and specific use of the South Florida Water Management District and is not assignable.

Last date of Survey

08-sep-16

Howard J. Ehmke II PSM
(Responsible Surveyor and Mapper)
Professional Surveyor and Mapper
State of Florida Certificate No. 4191
South Florida Water Management District



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

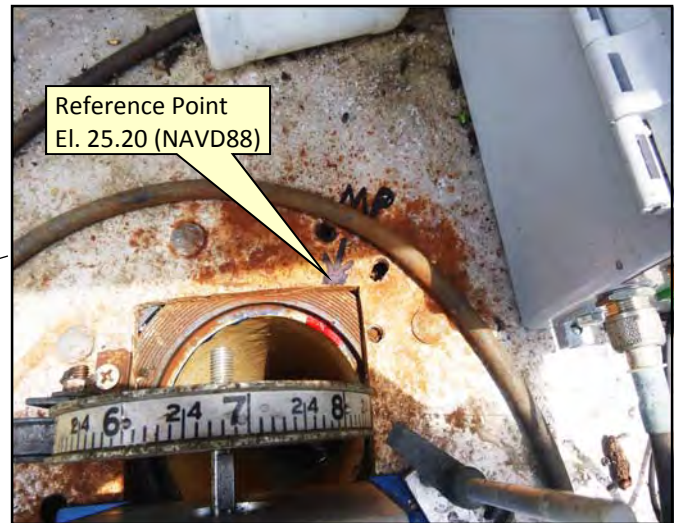
Rev. 1/16

| | | | |
|--|--|--|--|
| Site Name: C-687 | | Date of Field Work: 24-aug-16 | |
| Party Chief: Giammarco | Field Book: Misc 6Z | Page 44 | |
| Site Benchmark: C687 | Benchmark Elevation (NAVD88) 23.267 | Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) +1.286 | |
| Reference Elevation(s) (NAVD88): 25.20 | Existing Tag Elevation (Datum): None | Calibration Port Elevation(s) (NAVD88): Not Applicable | |
| Ground Elevation (NAVD88): 22.2 | | Pad Elevation (NAVD88): Not Applicable | |
| Latitude: 26° 25' 55.86" | | Longitude: 81° 28' 37.56" taken from Google Earth | |

Notes:
NAVD88 – North American Vertical Datum of 1988
NGVD29- National Geodetic Vertical Datum of 1929
Corpscon 6.0.1 - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville Fl.

PICTURES

C-687 Overall Site



(2009 photo from Sara Hammermeister USGS)
Looking Easterly (Not to Scale)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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C-687 Well Site



Looking Southerly from the Site Benchmark (Not to Scale)



Looking Westerly (Not to Scale)



Aluminum cap stamped "C687 BM 2016" El. 23.267 NAVD88



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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| | |
|--|-----------------------------------|
| DESIGNATION: C687 | PROJECT: Lake Trafford USGS Wells |
| ESTABLISHED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT | SURVEYOR: Giammarco |
| RECOVERED BY: N/A | DATE: 16-aug-16 |

GEOGRAPHIC POSITION

| | | |
|---|---|---|
| SECTION 36 | TOWNSHIP 46 SOUTH | RANGE 28 EAST |
| COUNTY Collier | NAME OF QUADRANGLE Immokalee GEOGRAPHIC INDEX OF QUAD 2012 | |
| HORIZONTAL DATUM: 1927 (1983) Other _____ (circle one) ZONE (E) or W (OPUS Session) | | |
| VERTICAL DATUM: MSL 1929 (1988) Other _____ (circle one) | | |
| VERTICAL ACCURACY: 1 2 (3) | | |
| STATE PLANE COORDINATE | X= 499958.80 | Y= 763377.41 |
| | | NAVD 88 EL. 23.267 NGVD 29 EL. 24.569 |
| CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): +1.286 | | |
| LATITUDE: 26°25'58.961" | | LONGITUDE: 81°28'38.464" |

RECOVERY DATA

Stamping: **C687 BM 2016**

To Reach: From the intersection of State Road 29 and Lake Trafford Road, go West on Lake Trafford Road 2.7 miles to Tippins Terrace on the left and station location.

The station is set in the west wing wall of the culvert under Tippins Terrace, 1 foot South of the North end of the wing wall, 28 feet more or less South of the centerline of Lake Trafford Road and 30.7 feet more or less and West of the centerline of Tippins Terrace to the East.

The station is a South Florida Water Management District aluminum disk stamped "C687 BM 2016."

Note: The NAVD88 elevations for GCYA19 (AH7805) and GCYA20 (AJ7806) were established in a 2003 level run by Consul-Tech for the LTRAF well. The NGVD29 elevation is based on the CERP difference at J520 (AJ7289) 0.3969m as part of that level run.

NGS SOURCE BENCHMARK: J520 (AH7289)

FIELD BOOK: **Misc 6Z** PAGES **41,44 & 46**

PICTURES

Overall Site



Looking West (Not to Scale)





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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SKETCH

A portion of Field Book Misc 6Z page 41

41 Misc F.B 6Z

8/18/16

Sections 35 & 36 Township 48 South Range 28 East
Section 31 Township 46 South, Range 29 East

LAKE TRAFFORD WELLS
ESTABLISH VERTICAL CONTROL
RECON REPORT

G.P.S. B.M C 687

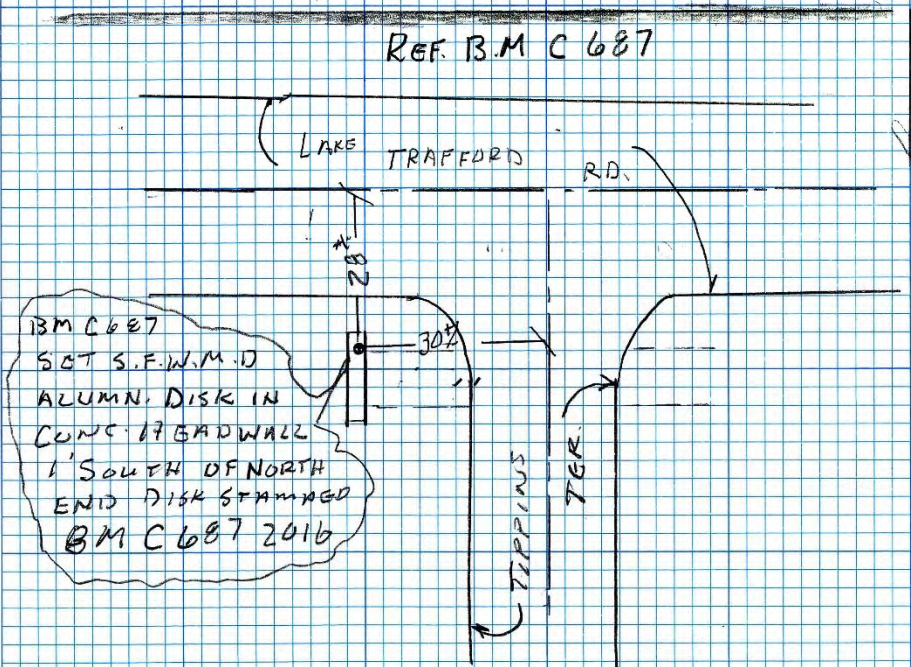
BEGIN TIME 1:40 PM

GPS UNIT 744

END TIME 3:52 PM

HEIGHT 1.5 MT

REF. B.M C 687





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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| | | | |
|--|--|--|--|
| Site Name: C-1078 | | Date of Field Work: 22-aug-16 | |
| Party Chief: Giammarco | Field Book: Misc 6Z | Page 42 | |
| Site Benchmark: GCYA19 | Benchmark Elevation (NAVD88) 29.807 | Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) +1.293 | |
| Reference Elevation(s) (NAVD88): 34.03 | Existing Tag Elevation (Datum): None | Calibration Port Elevation(s) (NAVD88): Not Applicable | |
| Ground Elevation (NAVD88): 30.3 | | Pad Elevation (NAVD88): Not Applicable | |
| Latitude: 26° 25' 58.4" | | Longitude: 81° 27' 04.7" (Handheld GPS unit) | |

Notes:
NAVD88 – North American Vertical Datum of 1988
NGVD29- National Geodetic Vertical Datum of 1929
Corpscon 6.0.1 - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.

PICTURES

Overall Site



Looking Southwesterly (Not to Scale)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT


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| | | | |
|--|---|--|--|
| Site Name: Lake Trafford | | Date of Field Work: 08-sep-16 | |
| Party Chief: Giammarco | Field Book: | Page(s) | |
| Site Benchmark: U.S. | Benchmark Elevation (NAVD88) | Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) +1.283 | |
| Reference Elevation(s) (NAVD88): 24.64 | Existing Tag Elevation (Datum): None - 26.008 written at the site | Calibration Port Elevation(s) (NAVD88): Not Applicable | |
| Ground Elevation (NAVD88): Not Given | | Pad Elevation (NAVD88): Not Applicable | |
| Latitude: 26° 25' 57.4" | | Longitude: 81° 28' 59.5" | |


Notes:
NAVD88 – North American Vertical Datum of 1988
NGVD29 - National Geodetic Vertical Datum of 1929
Corpscon 6.0.1 - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.

PICTURES

Overall Site



Reference Point
El. 24.64 NAVD88



Looking Southerly (Not to Scale)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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| | | | | | |
|--|--|--|---|---|--|
| DESIGNATION: LAKE TRAFFORD | | | PROJECT: LAKE TRAFFORD Well | | |
| ESTABLISHED BY: | | | SURVEYOR: GIAMMARCO | | |
| RECOVERED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT | | | DATE: 8-sep-16 | | |
| GEOGRAPHIC POSITION | | | | | |
| SECTION 35 | | TOWNSHIP 46 SOUTH | | RANGE 28 EAST | |
| COUNTY Collier | | | NAME OF QUADRANGLE Immokalee GEOGRAPHIC INDEX OF QUAD 2012 | | |
| HORIZONTAL DATUM: 1927 (1983) Other _____ (circle one) ZONE E or W | | | | | |
| VERTICAL DATUM: MSL 1929 (1988) Other _____ (circle one) | | | | | |
| VERTICAL ACCURACY: 1 2 (3) | | | | | |
| STATE PLANE COORDINATE | | X= | Y= | NAVD 88 EL. 21.783 NGVD 29 EL. 23.085 | |
| CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): +1.286 | | | | | |
| LATITUDE: 26°25'58.5" | | | LONGITUDE: 81°29'00.3" | | |
| RECOVERY DATA | | | | | |
| Stamping: None | | | | | |
| To Reach: From the intersection of State Road 29 and Lake Trafford Road, go West on Lake Trafford Road 2.9 miles to Pepper Road; thence, continue West along Lake Trafford Road 0.2 of a mile to the station location on the left. | | | | | |
| The station is located on a rectangular concrete slab, south of the road. | | | | | |
| The station is a Department of the Interior (DOI), U.S. Geological Survey (USGS) disk, no station stamping. | | | | | |
| Note: The NAVD88 elevations for GCYA19 (AH7805) and GCYA20 (AJ7806) were established in a 2003 level run by Consul-Tech for the LTRAF well. The NGVD29 elevation is based on the CERP difference at J520 (AJ7289) 0.3969m as part of that level run. | | | | | |
| NOTABLE LAND MARKS: | | | | | |
| NGS SOURCE BENCHMARK: | | | | | |
| FIELD BOOK: Misc 6Z PAGES 41,44 & 46 | | | | | |
| PICTURES | | | | | |
| Box Cut El. 21.803 NAVD88 | | Overall Site | | | |
| <p>120 feet +/- to Lake Trafford Well</p> | | | | | |
| Looking Westerly (Not to Scale) | | <p>DOI - USGS Disk (Not stamped) El. 21.783 (NAVD88)</p> | | | |



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

SKETCH


Field Notes
Misc FB6Z page 47

47 Misc FB 6Z 6/8/10 9/8/16 Section 35 Township 48 South Range 28 East

LINE 4
ESTABLISH ELEV
FOR RECORDER LAKE TRAFFORD

| PT | ELEV | ADJ ELEV |
|-------|--------|-------------|
| 27 | 21.787 | 21.80 |
| 30 | 21.767 | 21.78 |
| 31 | 24.625 | 24.64 |
| 32/27 | 21.787 | 21.80 |

RK




T.B.M. Box Cut on Conc. Pad N 26° 25' 58.5" W 081° 29' 00.3"

US DEP OF ENT BRASS DISK NO STAMPING

RECORDER PLATFORM N 26° 25' 57.4" W 081° 28' 57.5"

T.B.M.



U.S. DEPARTMENT OF THE INTERIOR
UNLAWFUL TO DISTURB
ELEV. FT
ABOVE SEA
FOR INFORMATION WRITE WASHINGTON D.C.
GEOLOGICAL SURVEY

47 A GIAMMARCO
R HUDSON
N STRICKLAND

Office

Project

20 September 2016

INPUT

Geographic, flhpgn - Florida HPGN
Vertical - NAVD88, U.S. Feet

OUTPUT

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

C687

1/2

Latitude: 26 25 55.86
Longitude: 81 28 37.56
Elevation/Z: 0

Northing/Y: 763064.049
Easting/X: 500039.806
Elevation/Z: 1.286
Convergence: -0 12 44.56603
Scale Factor: 0.999969125
Combined Factor: 0.999972884

C1078

2/2

Latitude: 26 25 58.4
Longitude: 81 27 04.7
Elevation/Z: 0

Northing/Y: 763290.064
Easting/X: 508481.824
Elevation/Z: 1.293
Convergence: -0 12 03.24619
Scale Factor: 0.999966184
Combined Factor: 0.999969946

Lake Trafford

1/1

Latitude: 26 25 57.4
Longitude: 81 28 59.5
Elevation/Z: 0

Northing/Y: 763356.304
Easting/X: 498112.972
Elevation/Z: 1.283
Convergence: -0 12 54.02867
Scale Factor: 0.999969819
Combined Factor: 0.999973578

Datum Shift (m.): Delta Lat. = 39.496, Delta Lon = -20.264

Remark:

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