

PREPARED FOR



SPECIFIC PURPOSE SURVEY
SURVEYOR'S REPORT
VERTICAL DATUM UPGRADE PROJECT

WO# 4600002187-WO08

SAP PO# 9500006234

W WGI™

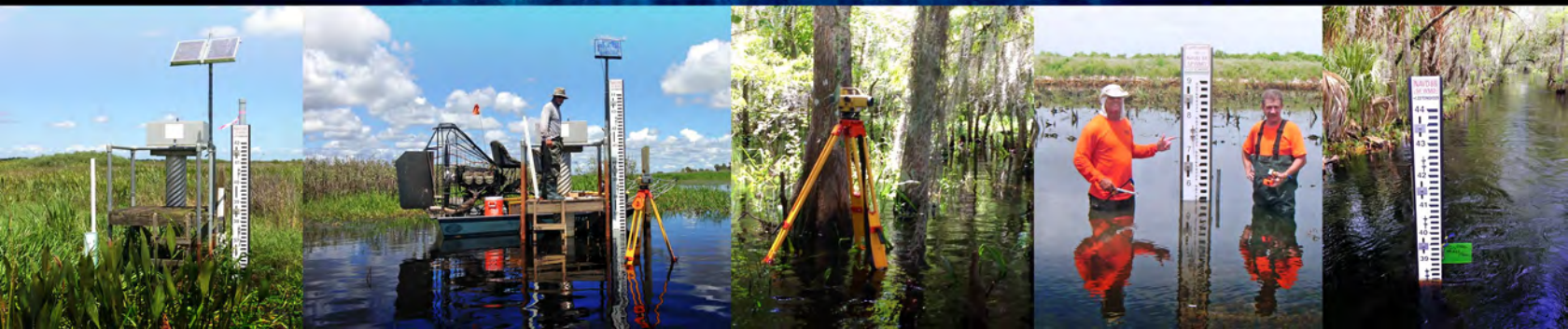


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Purpose of Project:

Procure all materials to construct and install 108 staff gauges calibrated to the North American Vertical Datum of 1988 (NAVD88) at various sites identified by the Vertical Datum Project Manager. Establish a NAVD88 Reference Elevation on the inside deck of existing Telemetry Stations and stamp site specific data onto a brass tag, using a steel stamp die set. The brass tags were delivered to SFWMD and would be installed by SFWMD Field Personnel during site inspections.

Accuracy:

Staff gauges have been set (adjusted) to the nearest two hundredth (.02') of a foot, and reference elevations established to the nearest hundredth (.01') of a foot. Elevations have been transferred from provided bench mark using a digital level, steel tape, and redundant measurements.

Bench Marks:

A bench mark was provided by SFWMD at each location, unless otherwise noted, and used to establish the reference elevation and calibrate each staff gauge.

Survey Equipment Used:

Topcon DL-502 (Digital Level)
Fiberglass Digital Level Rods
Conventional Level Rod
GPS Equipment - Topcon GR3

Vertical Datum Factor:

The reference elevations and staff gauges, in this report, have been correctly calibrated to the North American Vertical Datum of 1988. The datum conversion to the National Geodetic Vertical Datum of 1929 (NGVD 29), as shown herein and engraved on each gauge, were provided by the SFWMD VDUP Project Manager.

Completion Date:

Staff Gauge installation, calibration, and the establishment of telemetry station reference elevation was completed on July 30, 2015.

Construction:

Each Staff Gauge is attached to a 4" O.D. galvanized steel pipe with stainless steel hardware. The pipes were driven to a depth to achieve required stability, to a minimum of 10', unless otherwise noted. Sections of pipes were driven by jack hammer, and attached together with a galvanized threaded coupling.

Stage Recorder Site: BBCW10

Page 1 of 2

| | | |
|---|---|--|
| Party Chief: Jose Mendoza | Field Book Number: 602/ BK 9 | Page Number: 5 & 6 |
| Benchmark Elevation (NAVD 88): 5.26 | Date of Field Work: June 24, 2015 | Datum Offset to NGVD 29: +1.53 |
| Benchmark Agency: Dade Co. | Benchmark Type: Brass Disk | Benchmark Stamp: DCBM R725 |
| Reference Elevation (NAVD88): | | Existing Tag Elevation (Datum): |
| Latitude: 25.472151 | | Longitude: 80.332113 |
| Notes: See page 2 for ground elevations at platform. | | |
| Removed Old Board: Existing gauge removed. | | |

Photographs:

Overall Site:



Benchmark Location:



Benchmark Close Up:



New Staff Gauge:
Front View:



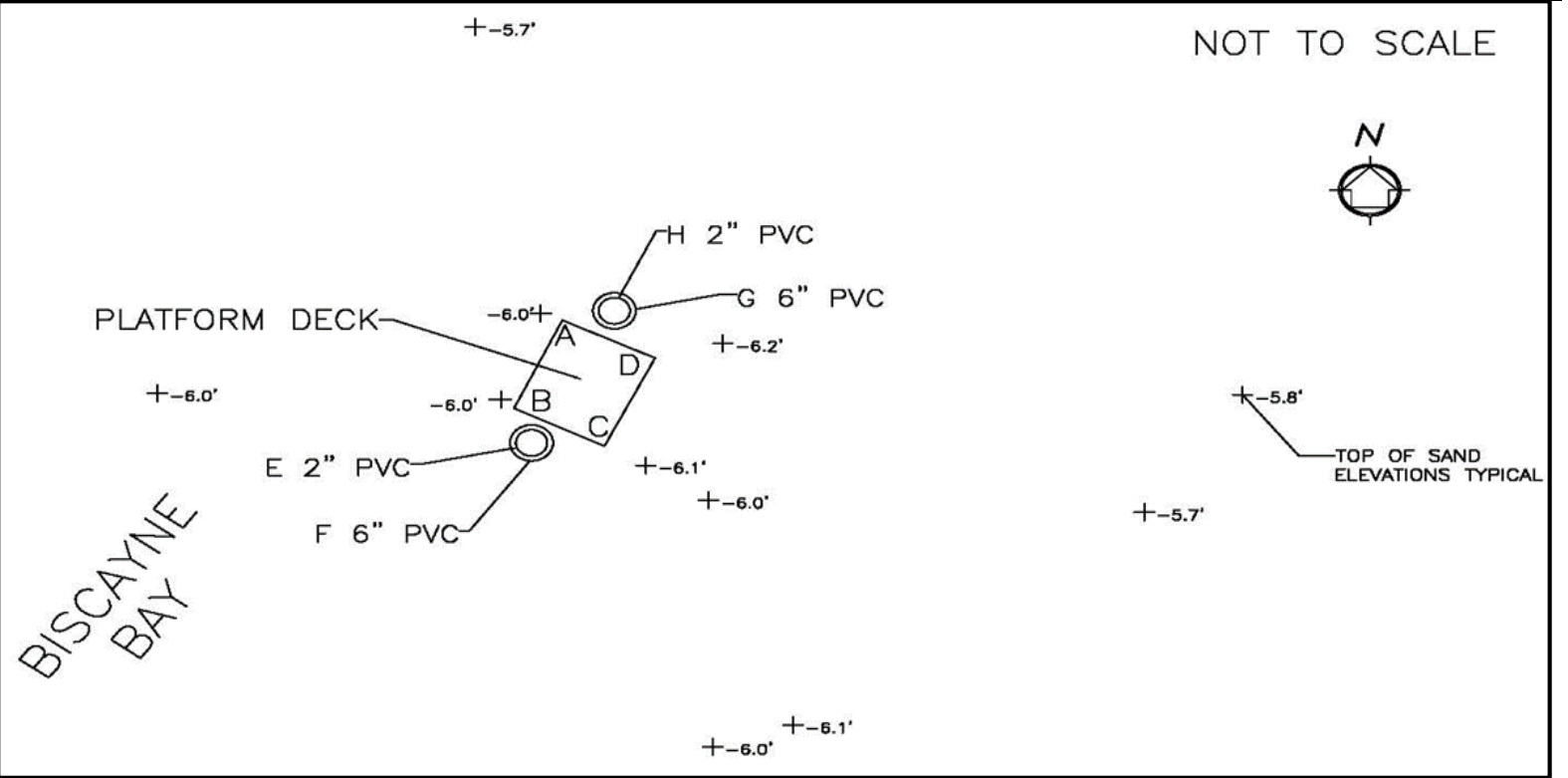
Side View:



Stage Recorder Site: BBCW10



Page 2 of 2

| LOCATION | NAVD88 ELEV. | NORTHING | EASTING | LAT. | LONG. | DESCRIPTION |
|----------|--------------|-----------|-----------|-------------|--------------|------------------|
| A | 4.9 | 414396.34 | 876506.26 | 25°28'19.7" | -80°19'55.6" | WOOD DECK CORNER |
| B | 4.7 | 414394.04 | 876510.88 | 25°28'19.7" | -80°19'55.6" | WOOD DECK CORNER |
| C | 4.9 | 414399.41 | 876513.46 | 25°28'19.7" | -80°19'55.5" | WOOD DECK CORNER |
| D | 4.9 | 414401.71 | 876508.74 | 25°28'19.8" | -80°19'55.6" | WOOD DECK CORNER |
| E | 5.32 | 414394.94 | 876507.73 | 25°28'19.7" | -80°19'55.6" | GW1 2" PVC |
| F | 5.94 | 414395.19 | 876507.98 | 25°28'19.7" | -80°19'55.6" | GW1 6" PVC |
| G | 5.79 | 414401.65 | 876511.25 | 25°28'19.8" | -80°19'55.6" | GW2 6" PVC |
| H | 5.34 | 414401.48 | 876511.23 | 25°28'19.8" | -80°19'55.6" | GW2 2" PVC |





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

| | | | |
|--|---------------------|--|--|
| DESIGNATION BBCW10 | | PROJECT VDUP | |
| ESTABLISHED BY WANTMAN GROUP | | SURVEYOR DEREK ZEMAN | |
| RECOVERED BY | | DATE JUNE 23, 2015 | |
| GEOGRAPHIC POSITION | | | |
| SECTION 16 | TOWNSHIP 57S | RANGE 40E | |
| COUNTY MIAMI-DADE | | NAME OF QUADRANGLE ARSENICKER KEYS | |
| HORIZONTAL DATUM: 1927 (1983) Other _____ (circle one) ZONE (E) or W | | | |
| VERTICAL DATUM: MSL 1929 (1988) Other _____ (circle one) | | | |
| CONTROL ACCURACY: HORIZONTAL 1 2 (3) _____ (circle one) VERTICAL 1 2 3 <u>GPS</u> | | | |
| STATE PLANE COORDINATES | X 876507.54 | Y 414398.97 | NAVD 88 ELEV. <u>4.88</u> NGVD 29 ELEV. _____ |
| LATITUDE | | LONGITUDE | |
| RECOVERY DESCRIPTION | | | |
| Stamping: LB7055 | | | |
| To Reach: FROM STRUCTURE S-20 AT THE INTERSECTION OF L-31E(BISCAYNE TRAIL) AND SW 97 th AVE. GO EAST 0.4 MILES TO BOAT RAMP THEN BY BOAT FOR 0.5 MILES TO PLATFORM BENCH MARK IS A MAG NAIL AND DISK SET IN THE WOOD FRAME OVER THE LADDER | | | |
| NOTE: BENCH MARK ELEVATION DERIVED FROM DOUBLE GPS RTK OBSERVATIONS. HOLDING BENCH MARKS F 61 1(PID#AC1178) & R725(PID#AC1180) | | | |
| | | | |
| Notable Land marks: PLATFORM FOR BBCW10 | | | |
| FIELD BOOK 602 #9 | | PAGE 5-6 | |
| SKETCH | | | |
|  | |  | |

Stage Recorder Site: BBCW10 GW1

| | | |
|---|---|--|
| Party Chief: Jose Mendoza | Field Book Number: 602/ BK 9 | Page Number: 5 & 6 |
| Benchmark Elevation (NAVD 88): 5.26 | Date of Field Work: June 24, 2015 | Datum Offset to NGVD 29: +1.53 |
| Benchmark Agency: Dade Co. | Benchmark Type: Brass Disk | Benchmark Stamp: DCBM R725 |
| Reference Elevation (NAVD88): 5.32 | Existing Tag Elevation (Datum): 6.90 NGVD29 | |
| Latitude: 25.472151 | Longitude: 80.332113 | |
| Notes: Datum difference SFWMD +1.53 Field 1.58 Well Elevation RTK (multiple observations and base setups) derived. | | |
| Removed Old Board: | | |

Photographs:

Overall Site:



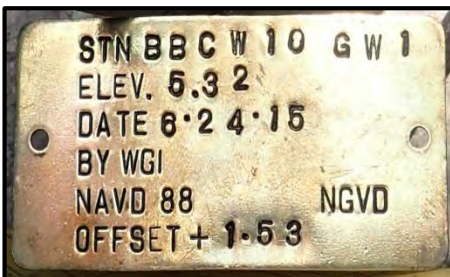
Benchmark Location:



Benchmark Close Up:



Brass Tag Close Up:



Reference Mark:



Brass Tag & Reference:



Stage Recorder Site: BBCW10 GW2

| | | |
|---|---|--|
| Party Chief: Jose Mendoza | Field Book Number: 602/ BK 9 | Page Number: 5 & 6 |
| Benchmark Elevation (NAVD 88): 5.26 | Date of Field Work: June 24, 2015 | Datum Offset to NGVD 29: +1.53 |
| Benchmark Agency: Dade Co. | Benchmark Type: Brass Disk | Benchmark Stamp: DCBM R725 |
| Reference Elevation (NAVD88): 5.34 | Existing Tag Elevation (Datum): 6.90 NGVD29 | |
| Latitude: 25.472151 | Longitude: 80.332113 | |
| Notes: Datum difference SFWMD +1.53 Field 1.56 Well Elevation RTK (multiple observations and base setups) derived. | | |
| Removed Old Board: | | |

Photographs:

Overall Site:



Benchmark Location:



Benchmark Close Up:



Brass Tag Close Up:



Reference Mark:



Brass Tag & Reference:



Stage Recorder Site: BBCW10 WQ1S

| | | |
|---|---|--|
| Party Chief: Jose Mendoza | Field Book Number: 602/ BK 9 | Page Number: 5 & 6 |
| Benchmark Elevation (NAVD 88): 5.26 | Date of Field Work: September 28, 2015 | Datum Offset to NGVD 29: +1.53 |
| Benchmark Agency: Dade Co. | Benchmark Type: Brass Disk | Benchmark Stamp: DCBM R725 |
| Reference Elevation (NAVD88): 8.06 | Existing Tag Elevation (Datum): 9.63 NGVD29 | |
| Latitude: 25.472151 | Longitude: 80.332113 | |
| Notes: Datum difference SFWMD +1.53 Field 1.57 Well Elevation RTK (multiple observations and base setups) derived. | | |
| Removed Old Board: | | |

Photographs:

Overall Site:



Benchmark Location:



Benchmark Close Up:



Brass Tag Close Up:



Reference Mark:



Brass Tag & Reference:

