

							Rev. 1/16				
SCADA RTU Station Name:	DB Hydro S	Station Name:	DB Hydro Site Name:		Age	ency:	Date of Field Work:				
	POF-8		POF-8		US	GS	12-apr-16				
Party Chief: Strickland	Field Book	MISC 6Y	Page(s)	27-29			Prepared by: <b>H. Ehmke</b>				
SITE SPECIFIC DATA											
Site Benchmark:	Site Benchmark: Benchmark Elevation (I				AVD88) Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29)						
LAKWEO BM 2016	63.69	63.69 1.089									
Reference Elevation(s) (NAVD88)	:	Existing Bras	ss Tag Elevation (Datum): Calibrat			Calibration P	on Port Elevation(s) (NAVD88):				
65.48		Not applical	ole	le Not appli			ble				
Ground Elevation (NAVD88): 64.0	)3		Pad Elev	ation (NAVD88):	Not	applicable					
		GEO	OGRAPHIC	DATA							
Section <b>5</b>		Township 31	L South			Range 29 Eas	2 <b>9</b> East				
	Latitude: 2	27°48'48.87″	Longitu	ide: 81°26'19.59″	Sc	ource: Scaled	pick point aerial esri product				
Well	State Plane	Coordinates	Northing	Northing (Y) =		Easting (X) =					

Notes:

NAVD88 – North American Vertical Datum of 1988

NGVD29- National Geodetic Vertical Datum of 1929

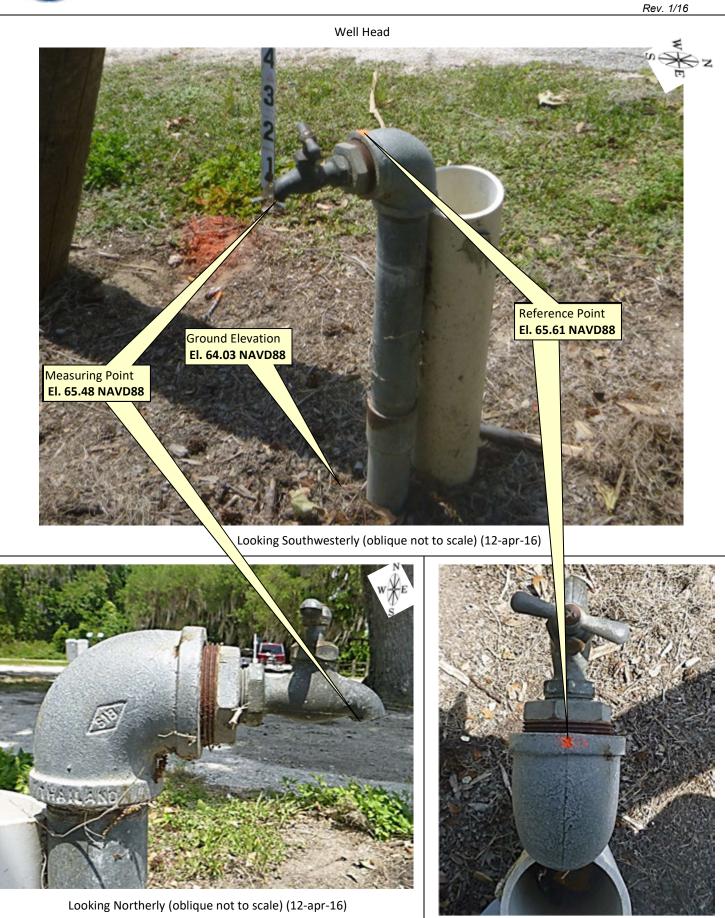
**Corpscon 6.0.1** - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windowsbased program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville Fl.













Rev. 1/16



		Rev. 1/16
DESIGNATION: LAKWEO		PROJECT: LAKWEO Well Site
ESTABLISHED BY: SOUTH FLORIDA WATER M RECOVERED BY: NOT APPLICABLE	ANAGEMENT DISTRICT	SURVEYOR: Ned Strickland DATE: 12-apr-16
RECOVERED BT: NOT APPLICABLE	GEOGRAPHIC POSITIO	
SECTION 5	TOWNSHIP 31 SOUTH	RANGE 29 EAST
SECTION 5		DRANGLE: Lake Weohyakapka
COUNTY: Polk		INDEX OF QUAD: 3112
	ther (circle one)	/
VERTICAL DATUM: MSL 1929 1988 VERTICAL ACCURACY: 1 2 (3)	) Other	(circle one)
STATE PLANE COORDINATE X	Y	NAVD 88 EL. <b>63.692</b>
CORPSCON 6.0.1 CONVERSION FACTOR		NGVD 29 EL.
LATITUDE: 27°48'50.53"N		JDE: 81°26'19.76"W
	RECOVERY DATA	
Stamping: LAKWEO BM 2013		
	vay 27 (LIS27) and State Road 60	(SR60) in Lake Wales, go East on State Road 60 for 9.4
	,	on the right; turn right onto Walk-in-Water Road
		ad); turn left, proceed East on Boat Landing
Road, 0.32 of a mile to a boat parking area a		
117.5 feet to station location on the right at th		
		oad, 64 feet North of the Northwest corner of the
		yakapka shore line and 173 feet North of (POF 8 minus West of the boat ramp and 20 feet plus or
	spigot located ao leet plus of	minus west of the boat ramp and 20 feet plus of
minus South of a 36 inch oak tree).	TI AKANEO site in the extreme	Coutburget correct of the concrete red. The
		e Southwest corner of the concrete pad. The
		ation when found (plain 3-inch brass disk). The
station is now stamped "LAKEWEO BM 2010 NOTABLE LAND MARKS:	Э.	
NGS SOURCE BENCHMARK: 26345A (DO	8957) and 26345B (DO8958)	
FIELD BOOK: MISC6Y PAGE 27 thru 29	(,	
	PICTURES	
	Aerial Overall Site	
	A central of vertain site	Benchmark LAKWEO
	Constant of the Second Western	Lat: 27°48'50.53"
	and the second sec	Long: 81°26'19.76"
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	El. 6 <b>3.692</b> NAVD88
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the state of the set of the set	N. C. S. M. C. Martin	
Lake Walk-in-Waler		
many mon when the Dame on which - 122		Nation Costs
		Not to Scale
States and the second states and the second	The state of the s	
	MAN - PARTY - EL	
		Benchmark POLK13
and the state and the second state of the seco		Lat: 27°48'49.7"
A AND A REAL PROPERTY AND		Long: 81°26′19.1″
	A CONTRACT OF CONTRACT	El. 65.03 NGVD29
		13
	BL STAR	and the second s
		No. of the second se
		A MARTIN D







Rev. 1/16

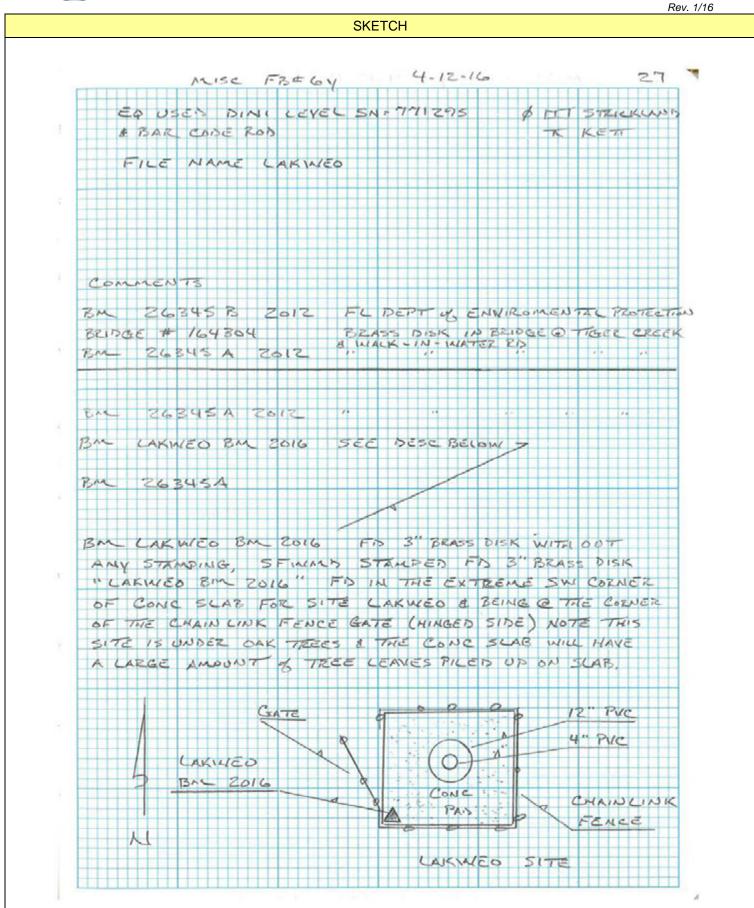


Tag Not Shown



Tagged after the picture was taken



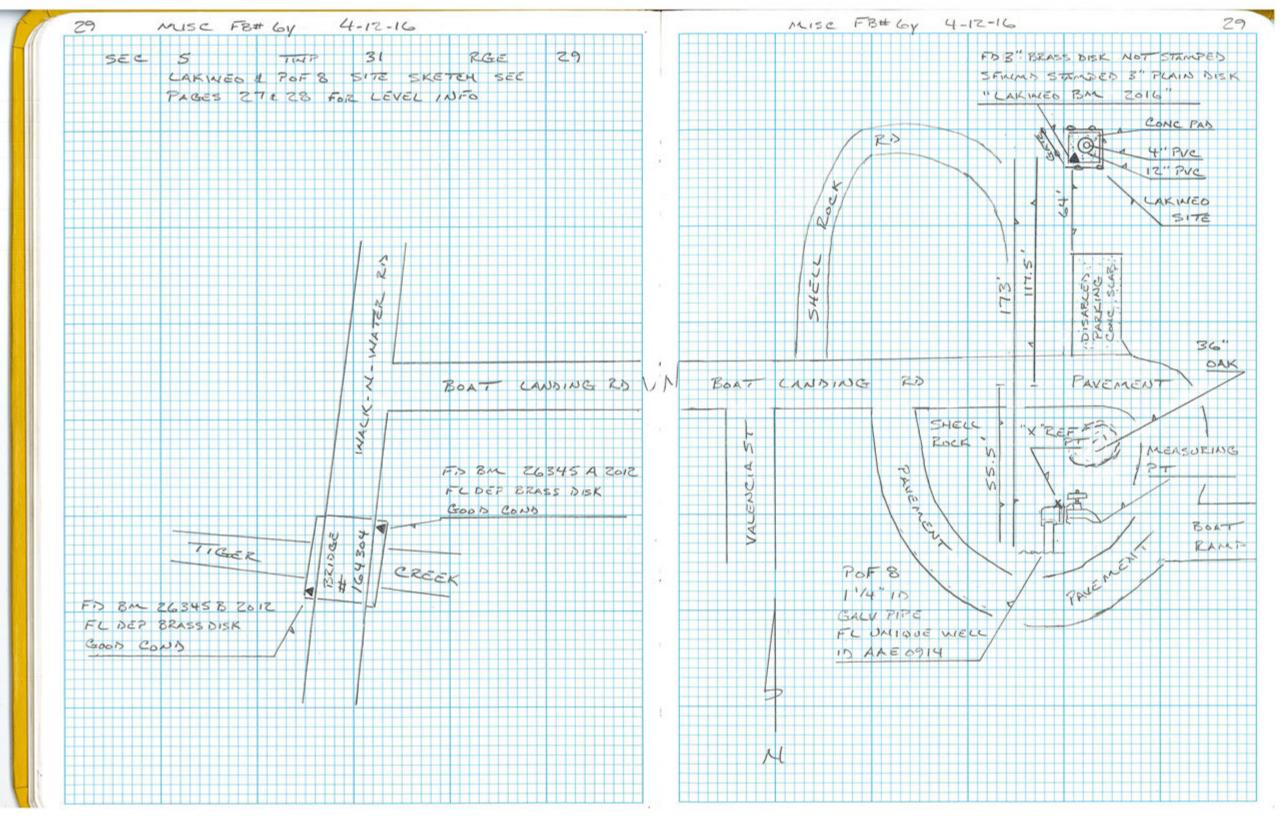




Rev. 1/16

27 MIS	C FB#64 4-1			Mise FB=64 4-12-16 2
See 9	71461-	31 R.G.E	29	EQUSED DING LEVEL SN+771295 \$ FT STRICKW
	TABLISH NAVD 88			& BAR CODE ROD KKET
	- & REF EL			
				FILE NAME LAKINED
STA PTE	ćζ	ADJEL	BACEL	COMMENTS
,				
m/1			69.64	BM 26345 B 2012 FL DEPT of ENVIRONENTAL PROTEC
			MAND 88	BRIDGE # 164304 BRASS DISK IN BRIDGE @ TIGER CRE & WALK-IN-WATER RD
alz .	69.649		69.65	BM 26345 A 2012 "
INE 2				
m15			69.65	En 26345A 2012 " "
~ 18	63.691	63.69		BM LAKWED BM 2016 SEE DESC BELOW >
- 10	63.67(	52.61		IPT CARINEO DAL GOIG DEC DECOM
~ 121	10 110		1010	
m ICI	69.647		67.65	BM 26345A
DIF	F = -0,003 DIS	T- 2275.85 Z	281.33	
				BM LAKWIED BM 2016 Fis 3" BRASS DISK WITH OUT
				ANY STAMPING, SFINAND STANPED FD 3" BRASS DISK
				"LAKWED BM ZOIG" FD IN THE EXTREME SWI CORNER
				OF CONC SLAB FOR SITE LAKWED & BEING @ THE CORNER
				OF THE CHAIN LINK FENCE GATE (HINGED SIDE) NOTE THIS
				SITE IS UNDER OAK TREES & THE CONC SLAB WILL HAVE
				A LARGE AMOUNT of TREE LEAVES PILED UP ON SLAB.
				CATE OF PROP 12" PVC
				8 4" Pre
				LAKINED A COTAT
				2 BAL 2016
				CONC CHAINLIN
				A PASSING CANACIN
				N FEALE
				LAKWED SITE

			1-12-16			MISC FB#64 4-12-16 2
	-		21	205	20	
SEC	P	TWP	31	RGE	29	TT LTT STEICKLAN
	A CTTT DI LO		EL O FIT	E LAKINED		Ø KETT
			ce e pu	e carmed		
	REF & P					
574	+	HI		EL	BMEL	COMMENTS
BM	11 0 0	105			63.69	BAL LAKINED ZOIG FO BRASS DISK; SFINALD STANFED
	4,87	68.56			NANDSE	FID DUSK "LAKINED BM ZOIG"
EF			2.30	66.26		REF RE ATOP & 4" PVC PIPE LOCATES INSIDE 12" PNC PIPE
			4.20	66.46		And And & HINCHIC COONICIS IMAINE IS THE THE
DNC						
DNC SLAB			4.85	63.71		CONC SLAD W. SIDE of 12" PVC PIPE
P. C. N.						
22ND			5.1	63.46		GRADS 3' INC. & CONC SLAB
m			4 0-4	1210	1210	
			4.87	63.69	43.69	EM CAKINED ZOIG
		K POF- 8	SITE X			
sna			Sile A		63.69	BM LAKNIED ZOIG
					NAV5 38	
	5.26	68.95			144612 00	
X			3.34	65.61		"X" A TOP of 11/4" 90" THEEADED GALY ELBONN "REF PT"
5,21007			3.47	65.48		MEAS PT & SPIGOT
				33,10		
TRNS			4.92	64.03		GROODS & 1 4" GALY PIPE "POF S" FL UNIQUE WELL ID AAEO9
~			5.26	63.69	63.69	BM LAKWED ZOLG AS ABOVE



# The NGS Data Sheet

See file <u>dsdata.txt</u> for more information about the datasheet.

PROGRAM = datasheet95, VERSION = 8.8 1 National Geodetic Survey, Retrieval Date = DECEMBER DO8957 DESIGNATION - 26345 A D08957 PID - DO8957 DO8957 STATE/COUNTY- FL/POLK DO8957 COUNTRY - US DO8957 USGS QUAD - LAKE WEOHYAKAPKA (1972) DO8957 DO8957 \*CURRENT SURVEY CONTROL DO8957 DO8957\* NAD 83(1986) POSITION- 27 48 43.8 (N) 081 26 39.2 (W) HD HELD2 D08957\* NAVD 88 ORTHO HEIGHT - 21.229 (meters) 69.65 (feet) ADJUSTED DO8957 DO8957 GEOID HEIGHT \_ -26.682 (meters) GEOID12B DO8957 DYNAMIC HEIGHT -21.197 (meters) 69.54 (feet) COMP DO8957 MODELED GRAVITY - 979,139.8 (mgal) NAVD 88 DO8957 DO8957 VERT ORDER - FIRST CLASS II DO8957 D08957. The horizontal coordinates were established by autonomous hand held GPS D08957.observations and have an estimated accuracy of +/-10 meters. DO8957. D08957. The orthometric height was determined by differential leveling and DO8957.adjusted by the NATIONAL GEODETIC SURVEY DO8957.in January 2015. DO8957 D08957.Significant digits in the geoid height do not necessarily reflect accuracy. D08957.GEOID12B height accuracy estimate available here. DO8957 D08957.Photographs are available for this station. DO8957 DO8957. The dynamic height is computed by dividing the NAVD 88 D08957.geopotential number by the normal gravity value computed on the DO8957.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45 DO8957.degrees latitude (g = 980.6199 gals.). DO8957 D08957. The modeled gravity was interpolated from observed gravity values. DO8957 Units Estimated Accuracy DO8957; North East DO8957;SPC FL W - 385,519. 254,759. MT (+/- 10 meters HH2 GPS) DO8957 DO8957 SUPERSEDED SURVEY CONTROL DO8957 DO8957 NAVD 88 (12/11/13) 21.227 (m) 69.64 (f) SUPERSEDED 1 2 DO8957 D08957.Superseded values are not recommended for survey control. DO8957 DO8957.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums. D08957.See file dsdata.txt to determine how the superseded data were derived. DO8957 D08957 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML5624776474 (NAD 83) DO8957 DO8957 MARKER: DD = SURVEY DISK DO8957 SETTING: 31 = SET IN A PAVEMENT SUCH AS STREET, SIDEWALK, CURB, ETC. DO8957 SP SET: BRIDGE CURB DO8957 STAMPING: 26345 A 2012



#### DATASHEETS

DO8957 MARK LOGO: FLDEP D08957 MAGNETIC: N = NO MAGNETIC MATERIAL D08957 STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY DO8957 SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR DO8957+SATELLITE: SATELLITE OBSERVATIONS - August 19, 2012 DO8957 DO8957 HISTORY - Date Condition Report By DO8957 HISTORY - 20120819 MONUMENTED FLDEP DO8957 DO8957 STATION DESCRIPTION DO8957 DO8957'DESCRIBED BY FL DEPT OF ENV PRO 2012 (BPJ) D08957'THE MARK IS ABOUT 7.0 MI (11.3 KM) NORTHEAST OF FROSTPROOF, 5.0 MI D08957'(8.0 KM) SOUTH OF HESPERIDES, 5.0 MI (8.0 KM) EAST-SOUTHEAST OF BABSON D08957'PARK, IN SECTION 5, TOWNSHIP 31 SOUTH, RANGE 29 EAST. DO8957' DO8957'TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY 27 AND STATE D08957'ROAD 60 IN LAKE WALES, GO EAST ON STATE ROAD 60 FOR 9.4 MI (15.1 KM) D08957'TO THE INTERSECTION OF BOY SCOUT ROAD ON THE LEFT AND WALK-IN-WATER D08957'ROAD ON THE RIGHT. TURN RIGHT ON WALK-IN-WATER ROAD AND GO SOUTH FOR DO8957'5.2 MI (8.4 KM) TO THE TIGER CREEK BRIDGE AND THE MARK ON THE LEFT, D08957'SET IN THE TOP OF THE NORTHEAST CONCRETE BRIDGE CURB ABOUT 0.5 FT (15 DO8957'CM) ABOVE THE LEVEL OF WALK-IN-WATER ROAD. DO8957' D08957'LOCATED 53.2 FT (16.2 M) NORTH-NORTHEAST OF SURVEY MARK 26345 B, 45.2 D08957'FT (13.8 M) NORTHEAST OF A U.S.G.S. STREAM GAUGE, 35.9 FT (10.9 M) D08957'NORTHEAST OF A STAFF GAUGE, 12.4 FT (3.8 M) SOUTHWEST OF THE NORTHEAST DO8957'END OF A CONCRETE WING WALL AND 11.1 FT (3.4 M) EAST OF THE DO8957'APPROXIMATE CENTERLINE OF WALK-IN-WATER ROAD.

\*\*\* retrieval complete. Elapsed Time = 00:00:03



# The NGS Data Sheet

See file <u>dsdata.txt</u> for more information about the datasheet.

PROGRAM = datasheet95, VERSION = 8.8 1 National Geodetic Survey, Retrieval Date = DECEMBER DO8958 DESIGNATION - 26345 B D08958 PID - DO8958 DO8958 STATE/COUNTY- FL/POLK DO8958 COUNTRY - US DO8958 USGS QUAD - LAKE WEOHYAKAPKA (1972) DO8958 DO8958 \*CURRENT SURVEY CONTROL DO8958 DO8958\* NAD 83(1986) POSITION- 27 48 43.7 (N) 081 26 40.4 (W) HD HELD2 DO8958\* NAVD 88 ORTHO HEIGHT - 21.227 (meters) 69.64 (feet) ADJUSTED DO8958 DO8958 GEOID HEIGHT \_ -26.681 (meters) GEOID12B DO8958 DYNAMIC HEIGHT -21.195 (meters) 69.54 (feet) COMP 979,139.8 (mgal) DO8958 MODELED GRAVITY -NAVD 88 DO8958 DO8958 VERT ORDER - FIRST CLASS II DO8958 D08958. The horizontal coordinates were established by autonomous hand held GPS D08958.observations and have an estimated accuracy of +/-10 meters. DO8958. D08958. The orthometric height was determined by differential leveling and DO8958.adjusted by the NATIONAL GEODETIC SURVEY DO8958.in January 2015. DO8958 D08958.Significant digits in the geoid height do not necessarily reflect accuracy. D08958.GEOID12B height accuracy estimate available here. DO8958 D08958.Photographs are available for this station. DO8958 DO8958. The dynamic height is computed by dividing the NAVD 88 D08958.geopotential number by the normal gravity value computed on the DO8958.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45 DO8958.degrees latitude (g = 980.6199 gals.). DO8958 D08958. The modeled gravity was interpolated from observed gravity values. DO8958 Units Estimated Accuracy DO8958; North East DO8958;SPC FL W - 385,516. 254,726. MT (+/- 10 meters HH2 GPS) DO8958 DO8958 SUPERSEDED SURVEY CONTROL DO8958 DO8958 NAVD 88 (12/11/13) 21.225 (m) 69.64 (f) SUPERSEDED 1 2 DO8958 D08958.Superseded values are not recommended for survey control. DO8958 D08958.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums. D08958.See file dsdata.txt to determine how the superseded data were derived. DO8958 D08958 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML5621476471 (NAD 83) DO8958 DO8958 MARKER: DD = SURVEY DISK DO8958 SETTING: 31 = SET IN A PAVEMENT SUCH AS STREET, SIDEWALK, CURB, ETC. DO8958 SP SET: BRIDGE CURB DO8958 STAMPING: 26345 B 2012

#### DATASHEETS

DO8958 MARK LOGO: FLDEP DO8958 MAGNETIC: N = NO MAGNETIC MATERIAL D08958 STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY DO8958 SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR DO8958+SATELLITE: SATELLITE OBSERVATIONS - August 19, 2012 DO8958 DO8958 HISTORY - Date Condition Report By DO8958 HISTORY - 20120819 MONUMENTED FLDEP DO8958 DO8958 STATION DESCRIPTION DO8958 DO8958'DESCRIBED BY FL DEPT OF ENV PRO 2012 (BPJ) D08958'THE MARK IS ABOUT 7.0 MI (11.3 KM) NORTHEAST OF FROSTPROOF, 5.0 MI D08958'(8.0 KM) SOUTH OF HESPERIDES, 5.0 MI (8.0 KM) EAST-SOUTHEAST OF BABSON DO8958'PARK, IN SECTION 5, TOWNSHIP 31 SOUTH, RANGE 29 EAST. DO8958' DO8958'TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY 27 AND STATE D08958'ROAD 60 IN LAKE WALES, GO EAST ON STATE ROAD 60 FOR 9.4 MI (15.1 KM) D08958'TO THE INTERSECTION OF BOY SCOUT ROAD ON THE LEFT AND WALK-IN-WATER D08958'ROAD ON THE RIGHT. TURN RIGHT ON WALK-IN-WATER ROAD AND GO SOUTH FOR D08958'5.2 MI (8.4 KM) TO THE TIGER CREEK BRIDGE AND THE MARK ON THE RIGHT, D08958'SET IN THE TOP OF THE SOUTHWEST CONCRETE BRIDGE CURB ABOUT 0.5 FT (15 DO8958'CM) ABOVE THE LEVEL OF WALK-IN-WATER ROAD. DO8958' DO8958'LOCATED 53.2 FT (16.2 M) SOUTH-SOUTHWEST OF SURVEY MARK 26345 A, 21.6 D08958'FT (6.6 M) SOUTH OF A STAFF GAUGE, 11.4 FT (3.5 M) WEST OF THE D08958'APPROXIMATE CENTERLINE OF WALK-IN-WATER ROAD, 11.0 FT (3.4 M) DO8958'NORTHEAST OF THE SOUTHWEST END OF A CONCRETE WING WALL AND 10.0 FT DO8958'(3.0 M) SOUTH OF A U.S.G.S. STREAM GAUGE.

\*\*\* retrieval complete. Elapsed Time = 00:00:02



<b>Project Informat</b>	tion	Coordinate Syste	m
Name:		Name:	Default
Size:		Datum:	WGS 1984
Modified:	2/15/2012 8:48:57 AM (UTC:-7)	Zone:	Default
Time zone:	Mountain Standard Time	Geoid:	
Reference number	r:	Vertical datum:	
Description:			

## **Level Report**

Imported file:	LAKWEO.DAT
Instrument:	DiNi
Standard error per kilometer of double leveling:	0.00230 ft
Standard error per turn/station setup:	0.00000 ft
Creation option:	Delta elevations
Description usage:	Feature codes

#### **Run - 1 Raw Observations**

 Raw Misclosure:
 -0.00100 ft

 Σ BS Distances:
 66.170 ft

 Σ FS Distances:
 32.710 ft

 Run Length:
 98.880 ft

 Reduction:
 Adjusted Values

Create	Point ID	BS	IS	FS	Δ Elevation	Raw Elevation	Correction	Adj. Elevation	Туре	Distance	Description
	1	✓ 4.69200 ft			0.00000 ft	69.640 ft	0.00000 ft	69.640 ft	Benchmark	66.170 ft	345B 3
	2			✓ 4.68300 ft	0.00900 ft	69.649 ft	0.00100 ft	69.650 ft	Benchmark	32.710 ft	345A 3

<u>Run - 1 (N1)</u> R	educed Observations
-----------------------	---------------------

Observation	Status	Raw Δ Elevation	Correction	Final Δ Elevation	Setups	Length	Σ BS Readings	ΣFS Readings	Std. Error
₽ <u>1-2 (E1)</u>	Enabled	0.00900 ft	0.00100 ft	0.01000 ft	1	98.880 ft	4.69200 ft	4.68300 ft	0.00258 ft

#### **<u>Run - 1 (N1)</u>** Reduced Coordinates

Point ID	Status	Elevation
	Enabled	69.64000 ft
₫ <u>2</u>	Enabled	69.65000 ft

Run - 2 Raw Observa	itions
---------------------	--------

Raw Misclosure: -0.00200 ft **Σ BS Distances:** 2275.840 ft 2281.330 ft **Σ FS Distances:** 4557.170 ft **Run Length: Reduction:** Adjusted Values Point Raw Adj. Δ Create BS IS FS Correction Distance Description Туре ID Elevation Elevation Elevation 6.16500 0.00000 69.650 ft 266.960 2 69.650 ft 0.00000 ft 345A 3 Benchmark ft ft ft 3.53100 279.920 2.63400 3 72.284 ft 0.00028 ft 72.284 ft Computed ft ft ft 3.29400 231.360 3 ft ft 7.41300 -4.11900 249.050 68.165 ft 0.00049 ft 68.165 ft 4 Computed ft ft ft 2.20400 248.690 4 ft ft 5.41900 -3.21500 252.000 5 64.950 ft 0.00072 ft 64.951 ft Computed ft ft ft 4.26300 247.210 5 ft ft 6.09800 -1.83500 255.970 63.115 ft 0.00096 ft 63.116 ft 6 Computed ft ft ft 5.43000 107.840 6 ft ft 4.85600 0.57400 0.00100 ft 1. P. 1 7 63.689 ft 63.690 ft Computed 95.670 ft 3 ft ft 🛃 4.69500 7 22.080 ft 3 ft 4.69300 0.00200 Computed 22.210 ft LKWEO 3 · · · · · 8 63.691 ft 0.00100 ft 63.692 ft ft ft 4.43000 22.440 ft LKWEO 3 8 ft 4.43200 -0.00200 Computed 21.750 ft 3 9 63.689 ft 0.00100 ft 63.690 ft 1.1 ft ft 4.78200 9 99.080 ft 3 ft 5.38600 -0.60400104.490 0.00104 ft 10 63.085 ft 63.086 ft Computed ft ft ft 6.03600 255.150 10 ft ft 🛃 4.20900 1.82700 249.280 . . . . 11 64.912 ft 0.00128 ft 64.913 ft Computed ft ft ft 5.35700 249.970 11 3 ft ft 3 12 68.081 ft 0.00151 ft 68.083 ft Computed

		✓ 2.18800 ft	3.16900 ft					249.150 ft	
12	₹ 7.51800 ft							245.240 ft	3
13		✓ 3.30900 ft	4.20900 ft	72.290 ft	0.00172 ft	72.292 ft	Computed	235.860 ft	3
13	<b>2</b> 3.34900 ft							279.820 ft	3
2		✓ 5.99100 ft	-2.64200 ft	69.648 ft	0.00200 ft	69.650 ft	Benchmark	265.980 ft	345A 3

Run - 2 (N2) Reduced Observations

Observation	Status	Raw ∆ Elevation	Correction	Final ∆ Elevation	Setups	Length	Σ BS Readings	Σ FS Readings	Std. Error
₽ <u>2-2 (E2)</u>	Enabled	-0.00200 ft	0.00200 ft	0.00000 ft	12	4557.170 ft	57.52300 ft	57.52500 ft	0.03828 ft

Date: 4/13/2016 7:13:42 AM	Project:	Trimble Business Center