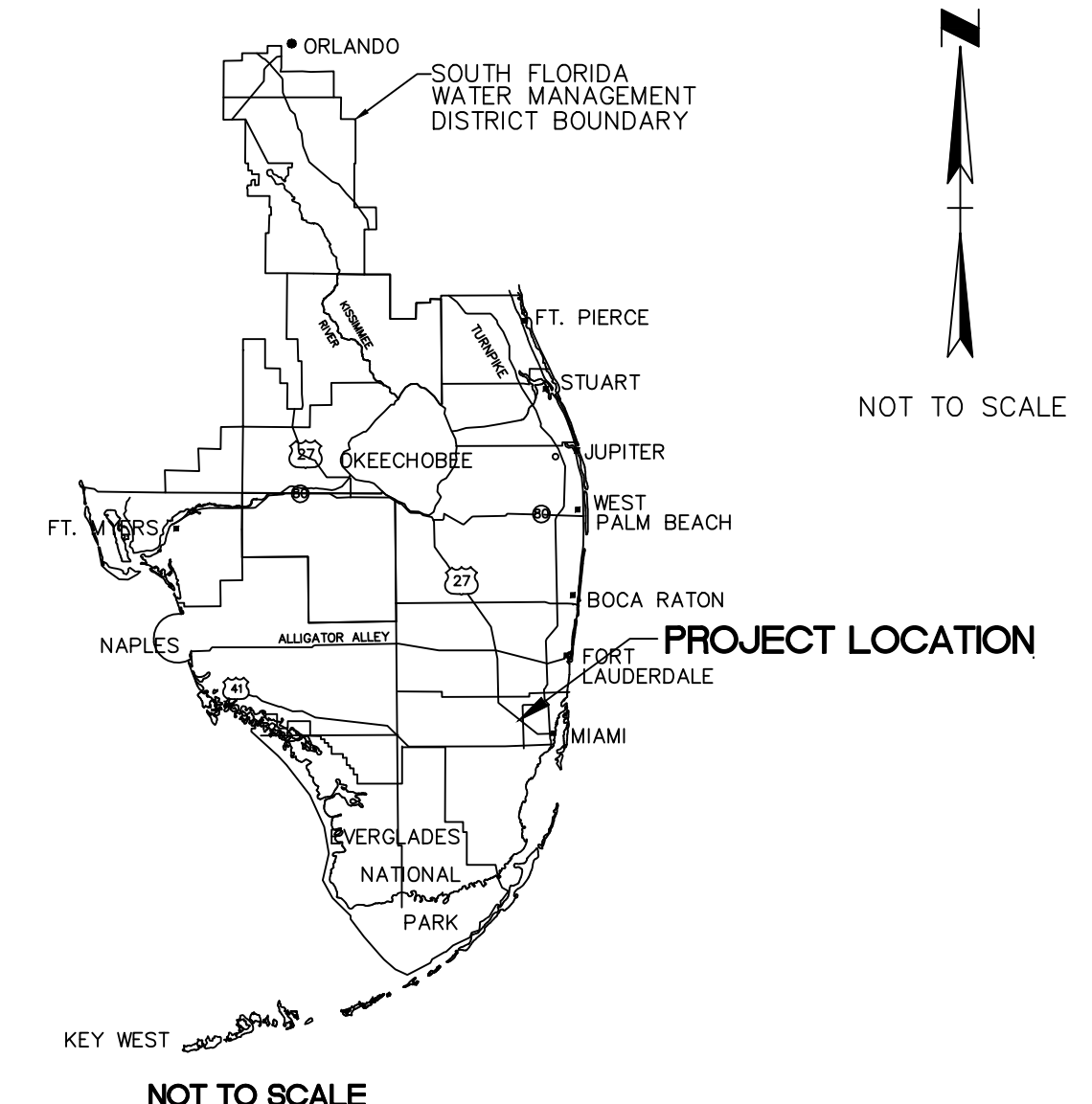




# SOUTH FLORIDA WATER MANAGEMENT DISTRICT ENGINEERING AND PROJECT IMPLEMENTATION SPECIFIC PURPOSE SURVEY CANAL C-2 STUDY WELLS MIAMI-DADE COUNTY, FLORIDA



## SURVEYOR'S NOTES

1. THE ELEVATIONS SHOWN HEREON REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, (NGVD29) AND ARE BASED ON THE FOLLOWING BENCHMARK.
  - a. BENCHMARK "P578" STATION IS A PK NAIL AND BRASS WASHER. STATION IS LOCATED AT THE PIPE CROSSING OF C-2 CANAL AT THE INTERSECTION OF S.W. 56TH STREET (MILLER ROAD) AND S.W. 117TH AVE. STATION IS 95 FEET NORTH OF THE CENTERLINE PROJECTED FROM THE EAST OF S.W. 56TH STREET, 142 FEET WEST OF THE CENTERLINE PROJECTED FROM THE NORTH OF S.W. 117TH AVE. AND 30' FEET WEST OF THE CENTERLINE OF THE BIKE PATH ELEVATION = 10.38'
  - b. BENCHMARK "J489-2" STATION IS A DADE COUNTY BRASS DISK SET IN CONCRETE STAMPED "J489-2 DADE" STATION IS LOCATED AT THE SOUTHEAST CORNER AT THE BRIDGE OVER C-2 CANAL AND SUNSET ROAD ELEVATION = 12.40'
  - c. BENCHMARK "FCE 1471 RESET" STATION IS A STANDARD U.S. ARMY CORPS OF ENGINEERS BRASS CAP SET IN CONCRETE STAMPED "FCE 1471 1956". STATION IS 1.65 MILES SOUTHWESTERLY ALONG U.S. HIGHWAY 1 FROM THE JUNCTION OF STATE HIGHWAY 959 (S.W. 57TH AVE.) IN SOUTH MIAMI, IN TOP OF AND 0.7 FEET SOUTHEAST OF THE IN TOP OF AND 0.7 FEET SOUTHEAST OF THE NORTHWEST CONCRETE ABUTMENT OF THE SOUTHBOUND HIGHWAY BRIDGE SPANNING SNAPPER CREEK CANAL NUMBER C-2. STATION IS LOCATED 24.6 FEET NORTHWEST OF THE CENTERLINE OF THE SOUTHBOUND LANES OF THE HIGHWAY, AND 3.3 FEET ABOVE THE LEVEL OF THE HIGHWAY, ELEVATION = 16.19'
  - d. BENCHMARK "BM C25W 1", STATION IS 1 1/2" GALVANIZED PIPE SET IN CONCRETE WITH S.F.W.M.D. ALUMINUM DISK, TO REACH STATION FROM THE INTERSECTION OF S.W. 116TH AVE. AND NORTH SNAPPER CREEK ROAD, STATION IS 22.7 FEET SOUTH OF THE SOUTH OF THE EDGE OF PAVEMENT OF NORTH SNAPPER CREEK ROAD AND 16.2' FEET WEST OF THE CENTERLINE OF S.W. 116TH AVE EXTENDED, STAMPED "C25W 1", ELEVATION = 8.31'
  - e. BENCHMARK "BM C25W 2", STATION IS 1 1/2" GALVANIZED PIPE SET IN CONCRETE WITH S.F.W.M.D. ALUMINUM DISK, TO REACH STATION FROM THE INTERSECTION OF S.W. 67TH AVE. (LUDLUM ROAD) AND U.S. HIGHWAY 1, CONTINUE SOUTHERLY ALONG S.W. 67TH AVE 0.2 MILE MORE OR LESS TO A BRIDGE OVER C-2 CANAL, TURN RIGHT (WESTERLY) AT NORTHERLY SIDE OF BRIDGE, GO THROUGH GATE AND CONTINUE CANAL, TURN RIGHT (WESTERLY) AT NORTHERLY SIDE OF BRIDGE, GO THROUGH GATE AND CONTINUE WESTERLY 573 FEET MORE OR LESS TO STATION, STAMPED "BM C25W2-2002" ELEVATION = 6.68'
2. THE BEARINGS AND DISTANCES SHOWN IN THE DIGITAL FILES REFER TO THE FLORIDA STATE PLANE COORDINATE SYSTEM TRANSVERSE MERCATOR PROJECTION, EAST ZONE, NORTH AMERICAN DATUM 1983 (NAD83), AND ARE BASED ON SOUTH FLORIDA WATER MANAGEMENT DISTRICT GPS CONTROL POINTS ESTABLISHED AT EACH INDIVIDUAL SITE USING THE TRIMBLE PATHFINDER PRO-XR REAL TIME GPS UNIT, THE EXPECTED HORIZONTAL ACCURACY IS (±) 5.0 FEET. **CAUTION SHOULD BE TAKEN** IF COORDINATES ARE USED FOR ANYTHING OTHER THAN THESE SPECIFIC SITES.
3. THE PICTORIAL REPRESENTATION SHOWN HEREON IS A DIGITAL ORTHO QUARTER QUAD, 1 METER PIXEL RESOLUTION. OBTAINED FROM THE UNITED STATES GEOLOGICAL SURVEY, MAP NAMED SOUTH MIAMI, NUMBER 281 AND SOUTH MIAMI NORTHWEST NUMBER 280 **AND IS NOT PART OF THIS SURVEY**
4. THE SECTION CORNERS AND LINES SHOWN HEREON ARE APPROXIMATE, THEY WERE TAKEN FROM THE S.F.W.M.D. GEOGRAPHIC INFORMATION SYSTEM (GIS) SECTIONAL COVERAGE OF DADE COUNTY WHICH WERE DIGITIZED FROM THE UNITED STATES GEOLOGICAL SURVEY QUADRANGLE MAPS **AND IS NOT PART OF THIS SURVEY**
5. **NO RIGHT OF WAY OR BOUNDARY SURVEY WAS PERFORMED AS A PART OF THIS SURVEY.**
6. CROSS SECTIONS SHOWN HEREON WERE TAKEN PERPENDICULAR, AT 90° TO THE EXISTING CANAL UNLESS OTHERWISE STATED.
7. THERE WAS NO CLOSED TRAVERSE ESTABLISHED AS A PART OF THIS SURVEY.
8. THE GROUND ELEVATIONS AND LOCATIONS FOR THIS SURVEY WERE ESTABLISHED BY TRIGONOMETRIC MEANS, USING THE TOPCON GTS-710 TOTAL STATION AND MCS DATA COLLECTOR WITH C & G FIELD AND OFFICE SOFTWARE.
9. THE BENCHMARKS SHOWN HEREON WERE ESTABLISHED USING CONVENTIONAL THIRD ORDER SURVEYING PROCEDURES, AND ARE BASED ON A CLOSED LEVEL LOOP.
10. ALL COORDINATES SHOWN HEREON ARE APPROXIMATE AND WERE ESTABLISHED USING THE TRIMBLE PRO-XL REAL TIME GPS UNIT.
11. UNLESS IT BEARS THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER, THIS DRAWING, SKETCH, PLAT, OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.

## LEGEND

- DIA. = DIAMETER
- BM = BENCHMARK
- CMP = CORRUGATED METAL PIPE
- ELEV. = ELEVATION
- FCE = FLOOD CONTROL EVERGLADES
- GPS = GLOBAL POSITIONING SYSTEM
- INV. = INVERT
- NGS = NATIONAL GEODETIC SURVEY
- NGVD = NATIONAL GEODETIC VERTICAL DATUM
- P.O.L. = POINT ON LINE
- R/W = RIGHT OF WAY
- SFWM = SOUTH FLORIDA WATER MANAGEMENT DISTRICT
- USGS = UNITED STATES GEOLOGICAL SURVEY
- ⬢ = BENCHMARK
- × 20.3 = SPOT ELEVATION
- ⊠ = APPROXIMATE SECTION CORNER LOCATION
- = APPROXIMATE CANAL RIGHT OF WAY

## INDEX OF SHEETS

1. COVER SHEET AND LOCATION MAP
2. CROSS SECTIONS 1-3
3. CROSS SECTIONS 4-6

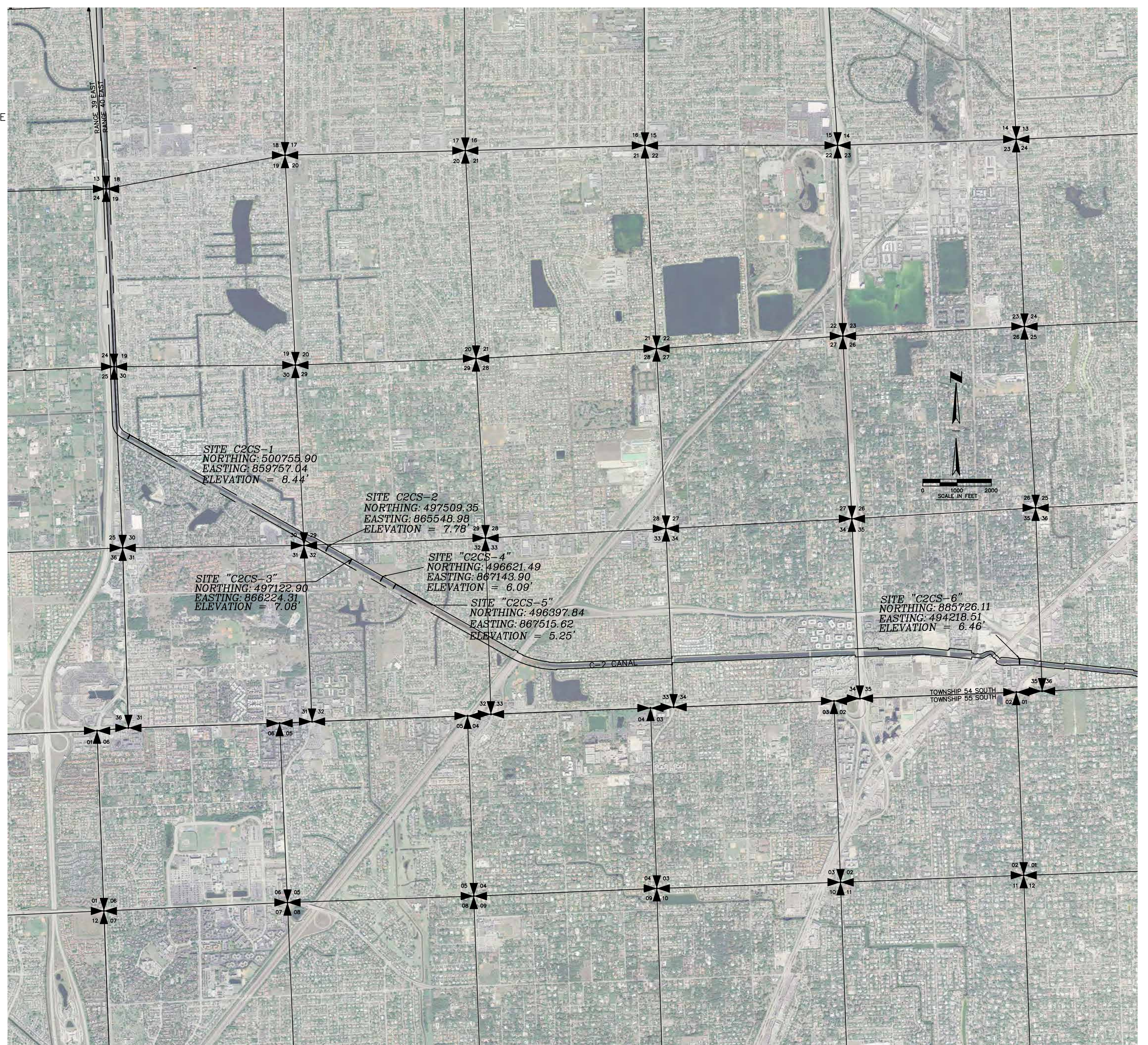
THIS CERTIFICATION IS MADE TO THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT FOR THE SPECIFIC PURPOSE OF GATHERING CROSS SECTIONAL INFORMATION AT SIX SITES AS REQUESTED BY STEVE KRUPA, SENIOR HYDRO GEOLOGIST WATER RESOURCE EVALUATION DEPARTMENT, SOUTH FLORIDA WATER MANAGEMENT DISTRICT.

NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY THE UNDERSIGNED SURVEYOR AND MAPPER FOR USE OF THIS SURVEY FOR ANY PURPOSE OTHER THAN STATED ABOVE OR FOR ANY USE BY ANY PERSON OR ENTITY OTHER THAN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT.

## CERTIFICATION

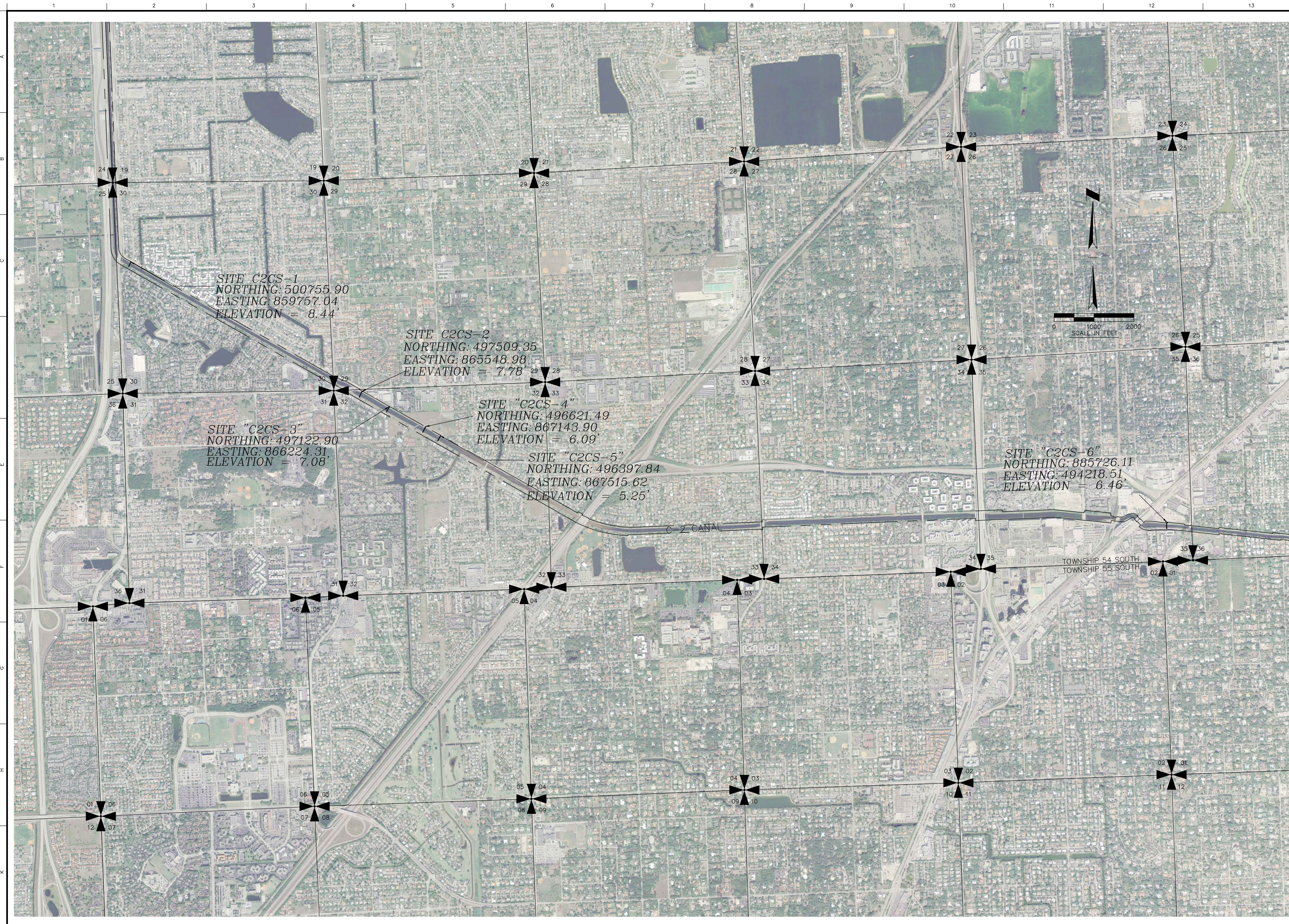
I HEREBY CERTIFY THAT THIS SPECIFIC PURPOSE SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE APPLICABLE MINIMUM TECHNICAL STANDARDS FOR SURVEYS AS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATE STATUTES

RICHARD E. BARNES Jr.  
PROFESSIONAL LAND SURVEYOR  
FLORIDA CERTIFICATION NUMBER 5173



<p style="text-align: center;"><b>SOUTH FLORIDA WATER MANAGEMENT DISTRICT</b></p> <p style="text-align: center;">3301 GUN CLUB ROAD WEST PALM BEACH, FL 33416-4680</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">DRAWN: DIMI</td> <td style="font-size: 8px;">CHECKED: [ ]</td> </tr> <tr> <td style="font-size: 8px;">SCALE AS SHOWN DATE: DDMMYY</td> <td style="font-size: 8px;">22MAY02</td> </tr> <tr> <td style="font-size: 8px;">FIELD BOOK(S): C-2, 19M</td> <td style="font-size: 8px;">PAGES: 47 - 55</td> </tr> <tr> <td style="font-size: 8px;">DATA/COLL: C-2 WELLS</td> <td style="font-size: 8px;">DATE: [ ]</td> </tr> <tr> <td style="font-size: 8px;">DRAWN: REV#</td> <td style="font-size: 8px;">REVISION DESCRIPTION</td> </tr> </table>	DRAWN: DIMI	CHECKED: [ ]	SCALE AS SHOWN DATE: DDMMYY	22MAY02	FIELD BOOK(S): C-2, 19M	PAGES: 47 - 55	DATA/COLL: C-2 WELLS	DATE: [ ]	DRAWN: REV#	REVISION DESCRIPTION
DRAWN: DIMI	CHECKED: [ ]										
SCALE AS SHOWN DATE: DDMMYY	22MAY02										
FIELD BOOK(S): C-2, 19M	PAGES: 47 - 55										
DATA/COLL: C-2 WELLS	DATE: [ ]										
DRAWN: REV#	REVISION DESCRIPTION										
<p><b>C-2 CANAL</b></p> <p><b>SPECIFIC PURPOSE SURVEY</b></p> <p><b>STUDY WELLS AND CROSS SECTIONS</b></p> <p><b>COVER SHEET</b></p>	<p style="font-size: 8px;">DRAWING NO. 0000</p> <p style="font-size: 8px;">CAD FILE NO. 0000.dwg</p> <p style="font-size: 8px;">SHEET</p> <p style="text-align: center; font-weight: bold; font-size: 12px;">1 OF 4</p>										

PLOT SCALE: 1" = 1" (PAPER SPACE)



SITE C2CS-1  
 NORTHING: 500755.90  
 EASTING: 859757.04  
 ELEVATION = 8.44'

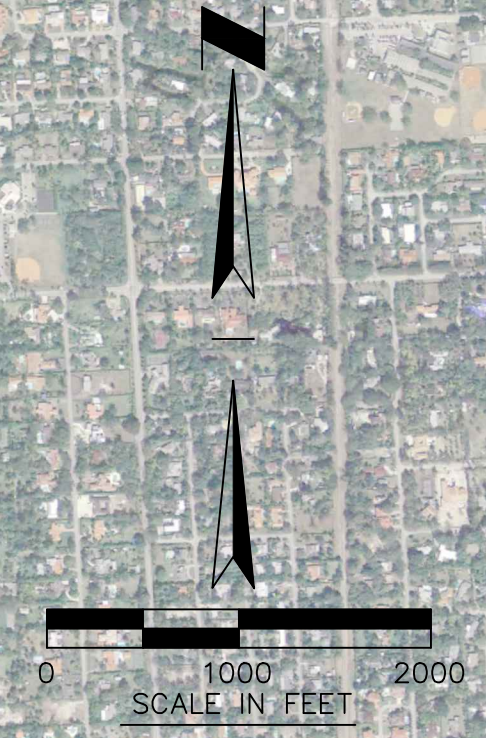
SITE C2CS-2  
 NORTHING: 497509.35  
 EASTING: 865548.98  
 ELEVATION = 7.78'

SITE "C2CS-3"  
 NORTHING: 497122.90  
 EASTING: 866224.31  
 ELEVATION = 7.08'

SITE "C2CS-4"  
 NORTHING: 496621.49  
 EASTING: 867143.90  
 ELEVATION = 6.09'

SITE "C2CS-5"  
 NORTHING: 496397.84  
 EASTING: 867515.62  
 ELEVATION = 5.25'

SITE "C2CS-6"  
 NORTHING: 885726.11  
 EASTING: 494218.51  
 ELEVATION = 6.46'



DRAWN: DIM		CHECKED: DDMMYY
SCALE AS SHOWN DATE: 22MAY02		FIELD BOOK(S): C-2, 19M
PAGES: 47 - 55		DATA/COLL: C-2 WELLS
DATE: 11/6/2003	DRAWN: REV.#	REVISION DESCRIPTION

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FL 33416-4680

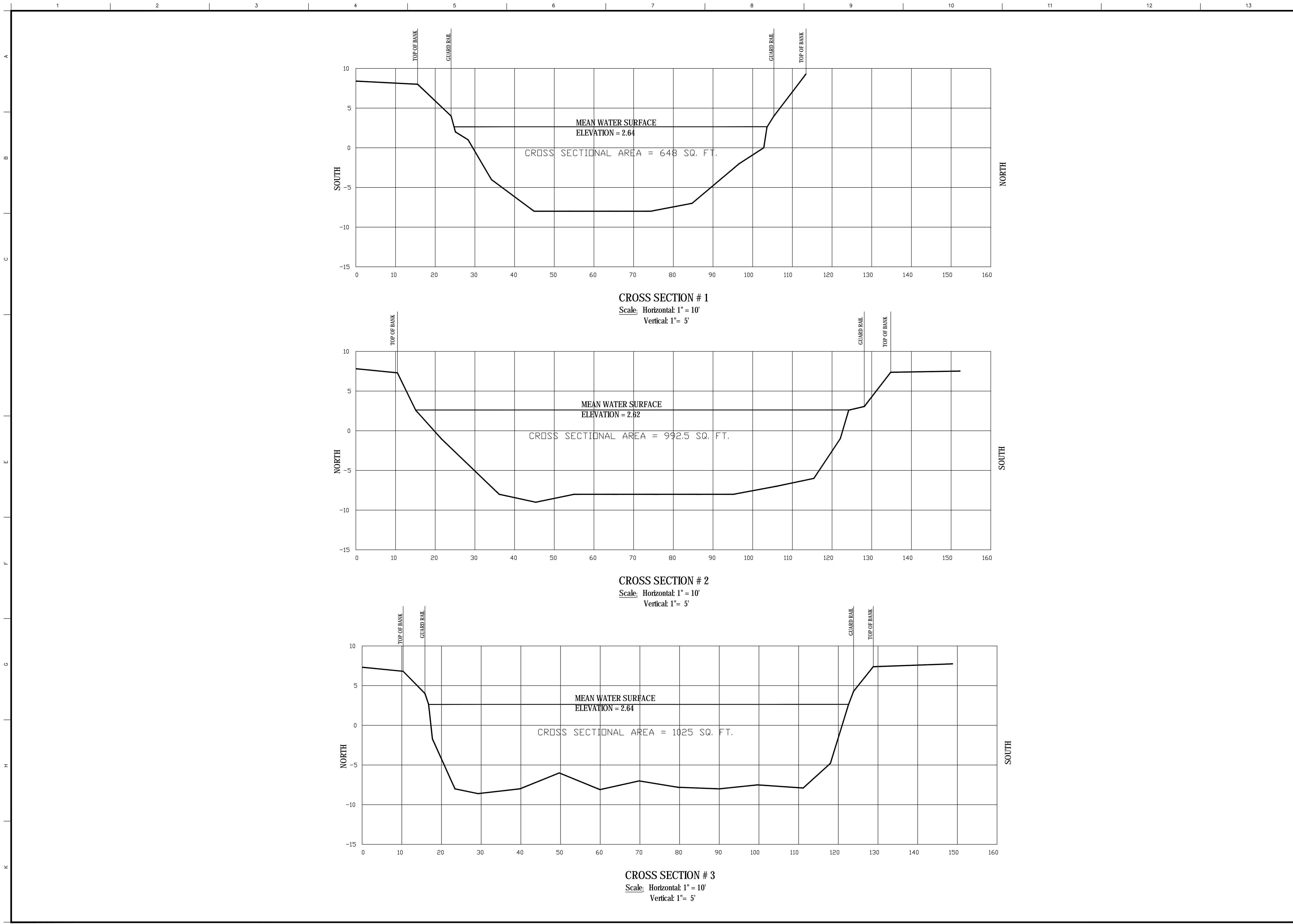
**C-2 CANAL**  
 SPECIFIC PURPOSE SURVEY  
 STUDY WELLS AND CROSS SECTIONS  
 PLAN VIEW

DRAWING NO. 0000  
 CAD FILE NO. 0000.dwg  
 SHEET

**2 OF 4**

PLOT SCALE: 1" = 1" (PAPER SPACE)

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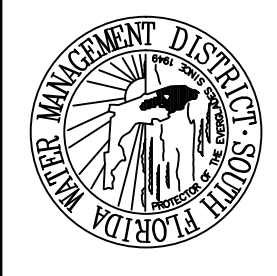
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 Vertical: 1" = 5'

**CROSS SECTION # 2**  
 Scale: Horizontal: 1" = 10'  
 Vertical: 1" = 5'

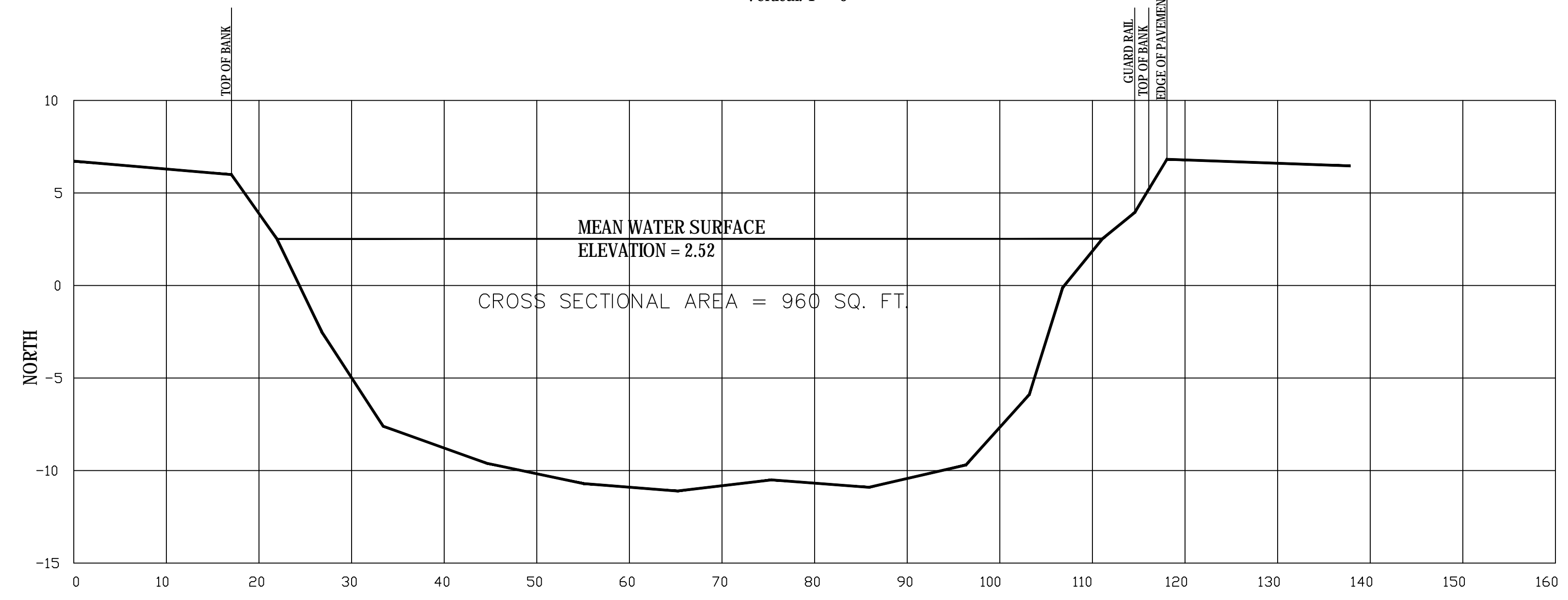
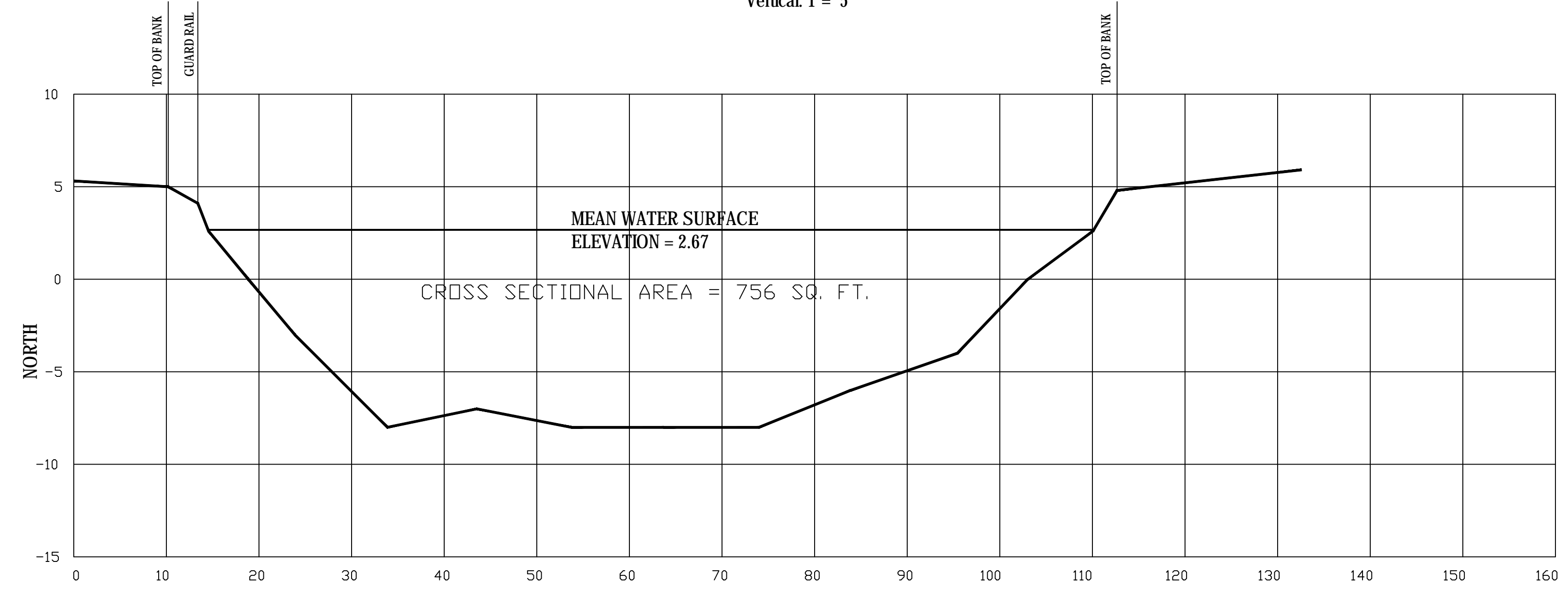
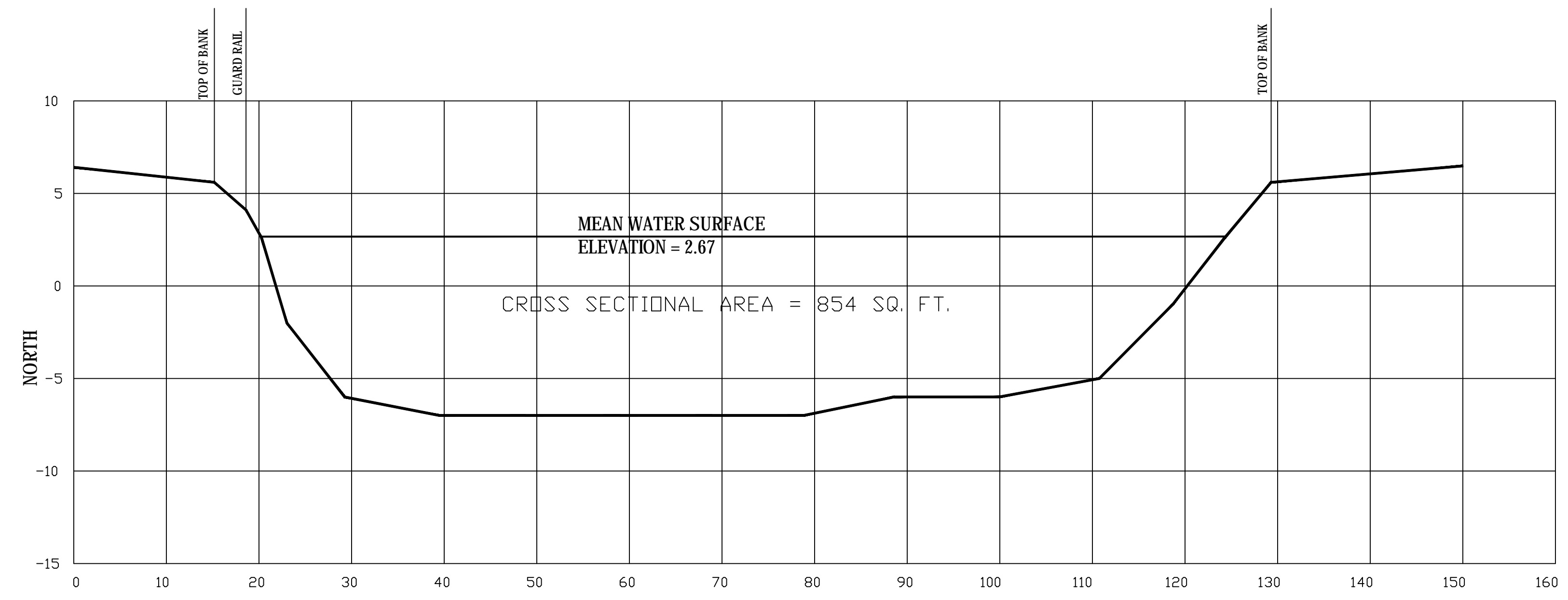
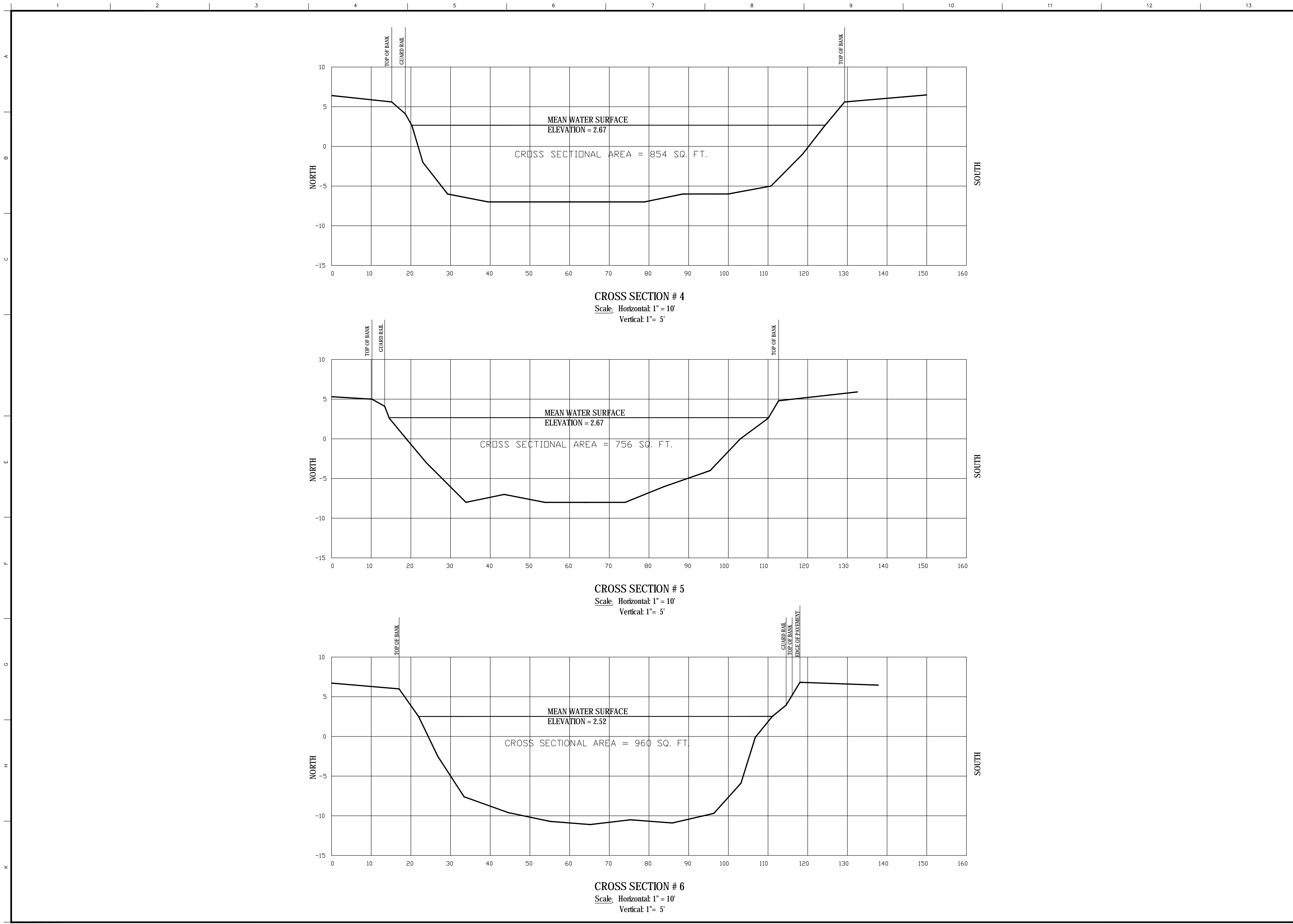
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 Vertical: 1" = 5'

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SCALE AS SHOWN	DATE	DDMMYY	
FIELD BOOK(S)	C-2	19M	
PAGES	47	-	55
DATA COLL.	C-2	WELLS	
DATE	DRAWN	REV.#	REVISION DESCRIPTION

**SOUTH FLORIDA  
 WATER MANAGEMENT DISTRICT**  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FL 33416-4680



**C-2 CANAL  
 SPECIFIC PURPOSE SURVEY  
 STUDY WELLS AND CROSS SECTIONS**



DRAWN: DMW		CHECKED:	
SCALE AS SHOWN		DATE DDMMYY	
FIELD BOOK(S) C-2, 19M		DATE 22MAY02	
PAGES 47 - 55		C-2 WELLS	
DATA/OLL		C-2 WELLS	
DATE	DRAWN	REV.#	REVISION DESCRIPTION

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
 3301 GUN CLUB ROAD  
 WEST PALM BEACH, FL 33416-4680

**C-2 CANAL**  
 SPECIFIC PURPOSE SURVEY  
 STUDY WELLS AND CROSS SECTIONS

DRAWING NO. 0000  
 CAD FILE NO. CROSSSECTIONS.DWG  
 SHEET

**4 OF 4**

Plot Scale: 1" = 1' (PAPER SPACE)

S:\carr\c002\wells\studywells\dwg\CROSSSECTIONS.DWG 11/6/2003 8:26:58 AM EST

47  
 Sec 30  
 TWP 54S  
 RNG 40E

C-2 FCD BK No 19 M  
 WELL SITE C-25 W1  
 Run BENCH TO FUTURE WELL SITE

5/16/02  
 ZEISS N.2  
 PHILLY ROD

BM	+	HI	-	ELEV	
P578				10.38	FD □ BRASS
	4.18 9.47	14.56			
			5.08 8.57	9.48	✓
	4.99 8.66	14.47			
			5.67 7.98	8.80	✓
	4.68 8.97	13.48			
			4.42 9.23	9.06	✓
	5.02 8.63	14.08			
			5.26 8.39	8.82	✓
	4.79 8.86	13.61			
BM C25 W1			5.30 8.35	8.31	✓ SET 1/2 GAL
		RETURN Run			
	4.95 8.70	13.26			
			4.43 9.22	8.83	✓

C-2 FCD BK No 19 M 5/16/02

47  
 A. GIAMMARCO  
 C. BURNSED

DISK IN CONC. BASE FOR PIPE CROSSING C-2 CANAL @ THE INTERSECTION  
 OF S.W. 56 ST (MILLER RD) & S.W. 117 AVE STAMPED P578 DADS  
 SEE PG 148 LOC # 4904 DADS Co BENCH BOOK

PIPE IN CONC. WITH S.F.W.M.D ALUMN DISK STAMPED BM C25W12002  
 22.7' FT SOUTH OF SOUTH E. U.P.N. SNAPPER CREEK, 16.2 FT WEST  
 OF E S.W. 116 AV EXTENDED

YAB

48

Sec 30  
TWD 545  
RNG 406

C-2 FCD BK NO 19 M 5/16/02

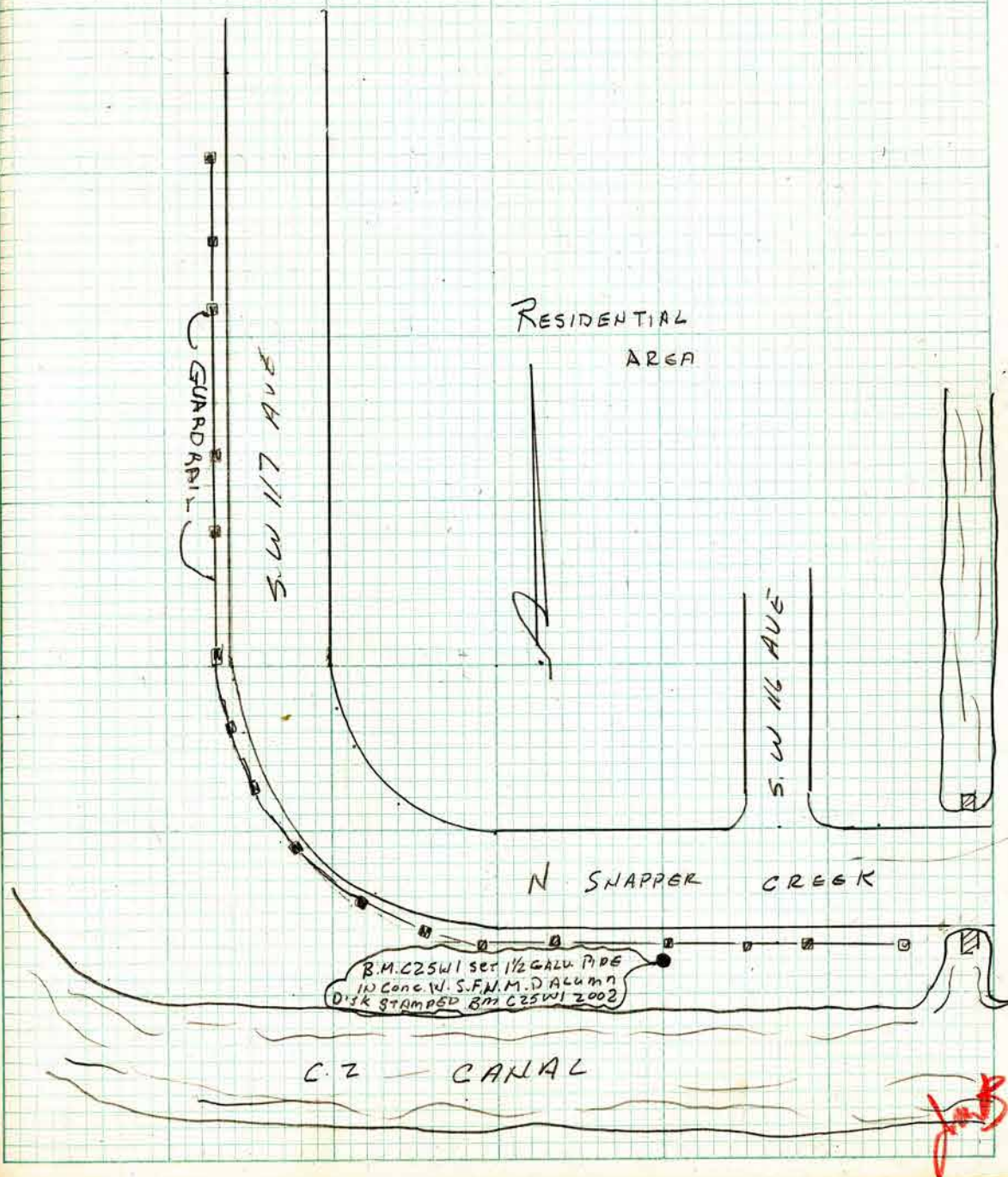
WELL SITE C25W1  
ESTABLISH ELEV. AT WELL SITE

BM	+	HI	-	ELEV.
				8.83
	5.14 8.51	13.97		
			4.94 8.71	9.63 ✓
	4.30 9.35	13.33		
			4.44 9.21	8.89 ✓
	5.53 8.12	14.42		
			4.79 8.66	9.43 ✓
	5.17 <del>5.47</del> 8.42	14.60		
BM P578			4.22 9.43	10.32 ✓

C-2 F.C.D BK NO. 19 M 5/16/02

A. GIAMMARCO  
C. BURNSIDE

48



89

Sec 32 Well Site East of Sunset Rd, NWS Side C-2 Canal  
 TWP 54S Rn Bench to exist wells  
 RNC 406

Bm	+	HI	-	ELEV	
J-489-2	3.78 7.87	16.18		12.40	BRASS DISK
PT#3			8.40 11.25	7.78	✓ SET 5/8
	5.12 8.53	12.90			
			5.62 8.03	7.28	✓
	5.02 3.63	12.30			
			5.05 8.60	7.25	✓
	5.79 7.86	13.04			
			5.18 8.47	7.86	✓
	5.22 8.43	13.08			
N.W. Well			5.24 8.41	7.84	✓ TOP OF
	5.87 7.78	13.71			
PT#5			7.62 12.03	6.09	✓ SET 5/8

CONT PG 50

49

A. GIAMMARCO  
 C. BURNSED

PD IN S.E. COR BRIDGE OVER C-2 CANAL & SUNSET RD  
 SEE PG 123 DADE COUNTY B.M.'S LOC. # 4055 E FOR MORE  
 DETAILS "FLORIDA 489-2 BM DADA" STAMPED

S.F.W.M.D I Rod & Red CAP, FUTURE X-SECTION SITE, SET ALONG NORTH  
 T.O.B. C-2 CANAL WELL OF WELL SITE

2" PVC. INSIDE CONC. COLLAR

S.F.W.M.D I Rod & Red CAP, FUTURE X-SECTION SITE, EAST OF WELL SITE

Sec 32  
TWP 54 S  
RNG 40 E

WELL SITE EAST OF SUNSET RD  
BENCH RUN CONT.

BM PT#		HI		GLAV.	
				6.09	
	5.44 8.21	11.53			
PT#6			6.28 7.37	5.25	Set 5/6 ✓
	5.95 7.70	11.20 ✓	Return Run		
			4.66 8.99	6.54 ✓	
	6.46 7.19	13.00 ✓			
N.E. WELL			5.08 8.57	7.92 ✓	TOP OF 2" ✓
	4.68 8.97	12.60 ✓			
PT#4			5.52 8.13	7.08 ✓	Set 5/6 ✓
	5.26 8.39	12.34			
			4.58 9.07	7.76 ✓	
	7.11 6.54	14.87			
J 489-2			2.47 11.18	12.40 ✓	

A. GIAMMARCO  
C. BURNSED

S.F.W.M.D I. Rod & Red CAP, FUTURE X-SECTION SITE, EAST OF WELL SITE

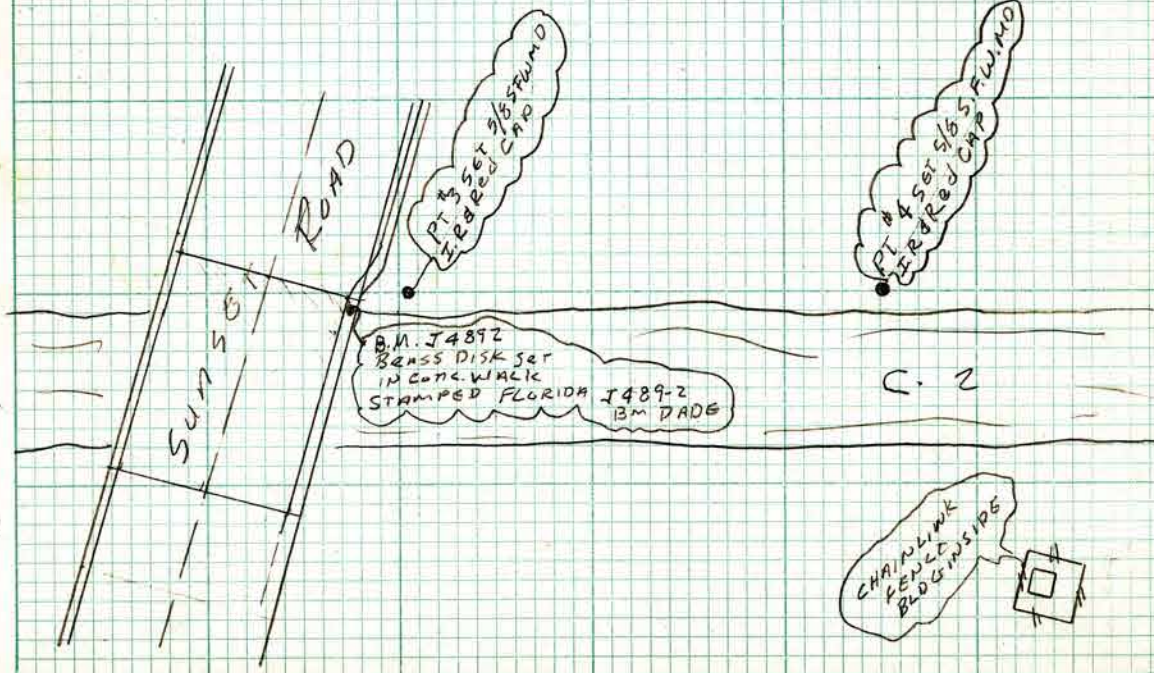
P.V.C. PIPE IN CONC. COLLAR

S.F.W.M.D I. Rod & Red CAP, FUTURE X-SECTION SITE, WEST OF WELL SITE



51 C-2 FCD BK NO 19 M 5/21/02  
 SEC 32 SET ELEV. on WELLS  
 TWP 54 S SOUTH SIDE OF C-2 CANAL  
 RING 40 E

BM	+	HI	-	ELEV	
N. W Well	5.19 8.46	13.03		7.84	TOP OF 2"
S. W. Well			5.21 8.44	7.82	TOP OF 2"
	4.83 8.82	12.65			
S. E. Well			4.81 8.84	7.84	TOP OF 2"
			4.8	7.85	GROUND
	5.29 8.36	13.13			
N. E. Well			5.21 8.44	7.92	TOP OF 2"
			5.30	7.83	GROUND



C-2 FB FCD BK NO 19 M  
 A. G. AMMAR  
 C. BURNESS

P.V.C. INSIDE CONC. COLLAR SEE PG 49 F.B. C-2 FCD BK NO. 19 M.  
 PIPE

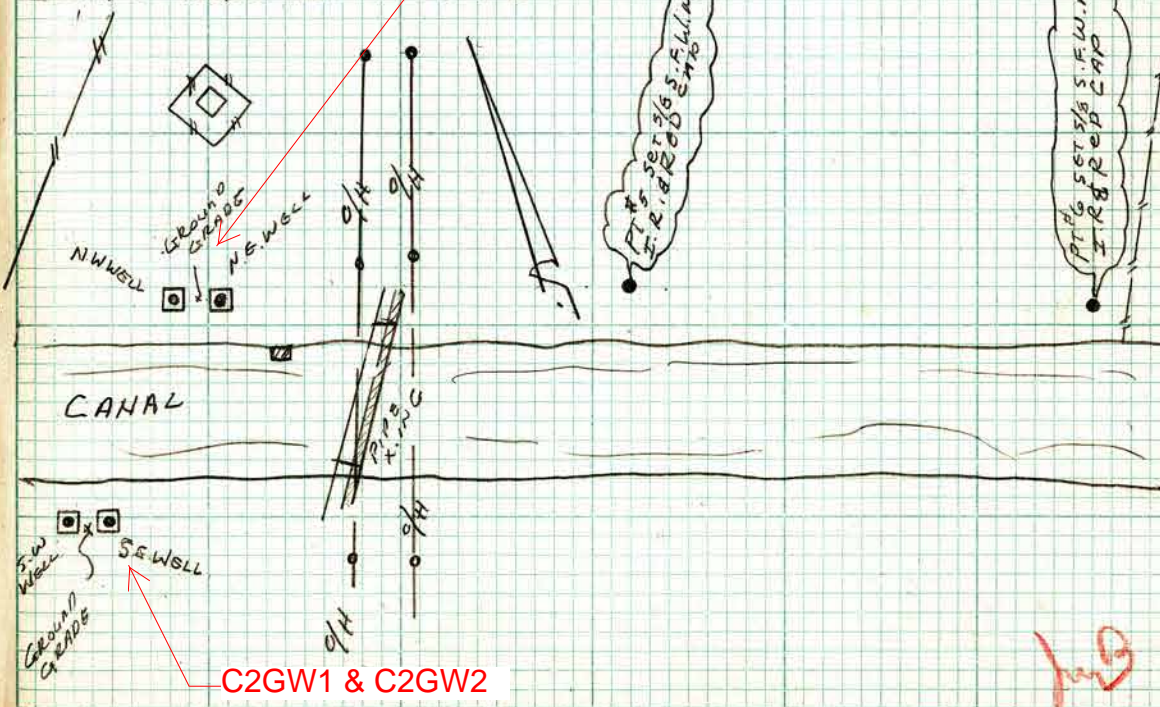
P.V.C. PIPE, INSIDE CONC COLLAR

P.V.C. PIPE, INSIDE CONC COLLAR

GRADE BETWEEN S.W & S.E

P.V.C. PIPE SEE PG 50 F.B. C-2 FCD BK. No 19.M

GRADE BETWEEN NW & NE



C2GW1 & C2GW2

109

52

C-2 FCD BK NO 19M 5/21/02  
 SET ELEV. @ WELL SITE  
 TWP 54S C-2 CANAL NORTH SIDE CANAL  
 RND 40 E BETWEEN US-1 & LUDLUM RD

BM	+	HI	ELEV	
FCE 1471 1956	1.92 11.73	18.11	10.19	Fd BRASS FLORIDA S.R.D.
			6.87 6.78	11.24 ✓
	1.68 11.97	12.92		
BM C25W2			6.24 7.41	6.68 ✓ SET 1 1/2 GALV
	5.92 7.73	RETURN Run 12.60		
			1.68 11.97	10.92 ✓
	6.79 6.86	17.71		
FCE 1471 1956			1.52 12.13	16.19 ✓

17  
 17

C-2 FCD BK NO 19M

A. GIAMMARCO  
 C. BURNSED

52

DISK IN CONC. HEADWALL BRIDGE @ US-1 & C-2 CANAL  
 DISK STAMPED FCE 1471 1956

PIPE WITH S.F.W.M.D ALUMN CAP SET IN CONC EAPIS STAMPED  
 BM C25W2 2002

7.8

17  
 17

53 sec 30  
TWP 54S  
RNG 40E

C-2 FCD BK No. 19M

C-2 WELL SITE XSECTIONS

5/22/02

GPS FILE C2WLCNT

RAW FILE : C2WELLS

REPT #1 SET 5/85 F.W.M.D IR @ Red CAP MEAS. UP = 5.30  
 BS PT #2 SET PK NAIL @ S.F.W.M.D BRASS WASHBR MEAS. UP = 5.33  
 PT #100 BM C2SW1 see pg 47 FB FCD BK No. 19M  
 101-116 XSECTION HARD BOTTOM

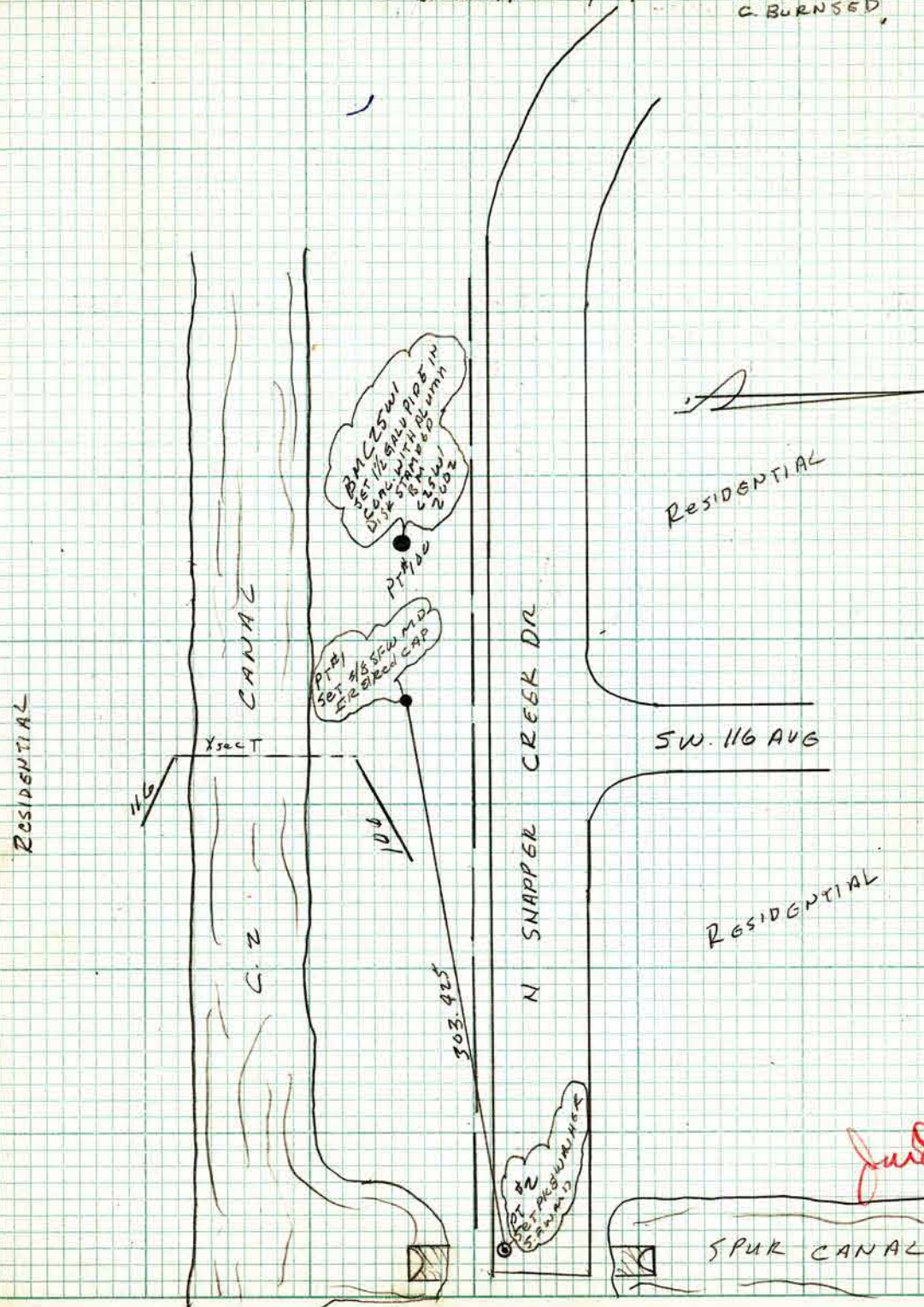
NOTE \* CROSS SECTION LOCATIONS & BENCH MARK LOCATIONS  
 SET PER MY CONVERSATION WITH STEVE RUPPA  
 5/16/02 XSECTION SITES 500' & 1000' FBST  
 UPSTREAM & DOWN STREAM FROM WELL LOCATION  
 BENCH MARK TO BE SET @ NEW WELL LOCATIONS  
 EXISTING WELLS SET ON TOP OF PIPES

C-2 FCD BK No. 19M

5/22/02

A. G. AMARCO  
C. BURNSED

53



54 SEC 32 C-2 Well SITE X SECTIONS  
 TWP 54S RAW FILE: C2WELLS  
 RANG 40E GPS. Horiz Control FILE C2WLCNT

750.115

TR 3 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.32  
 BS 4 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.19  
 FS PT# 117-134 XSECTION HARD BOTTOM

780.05

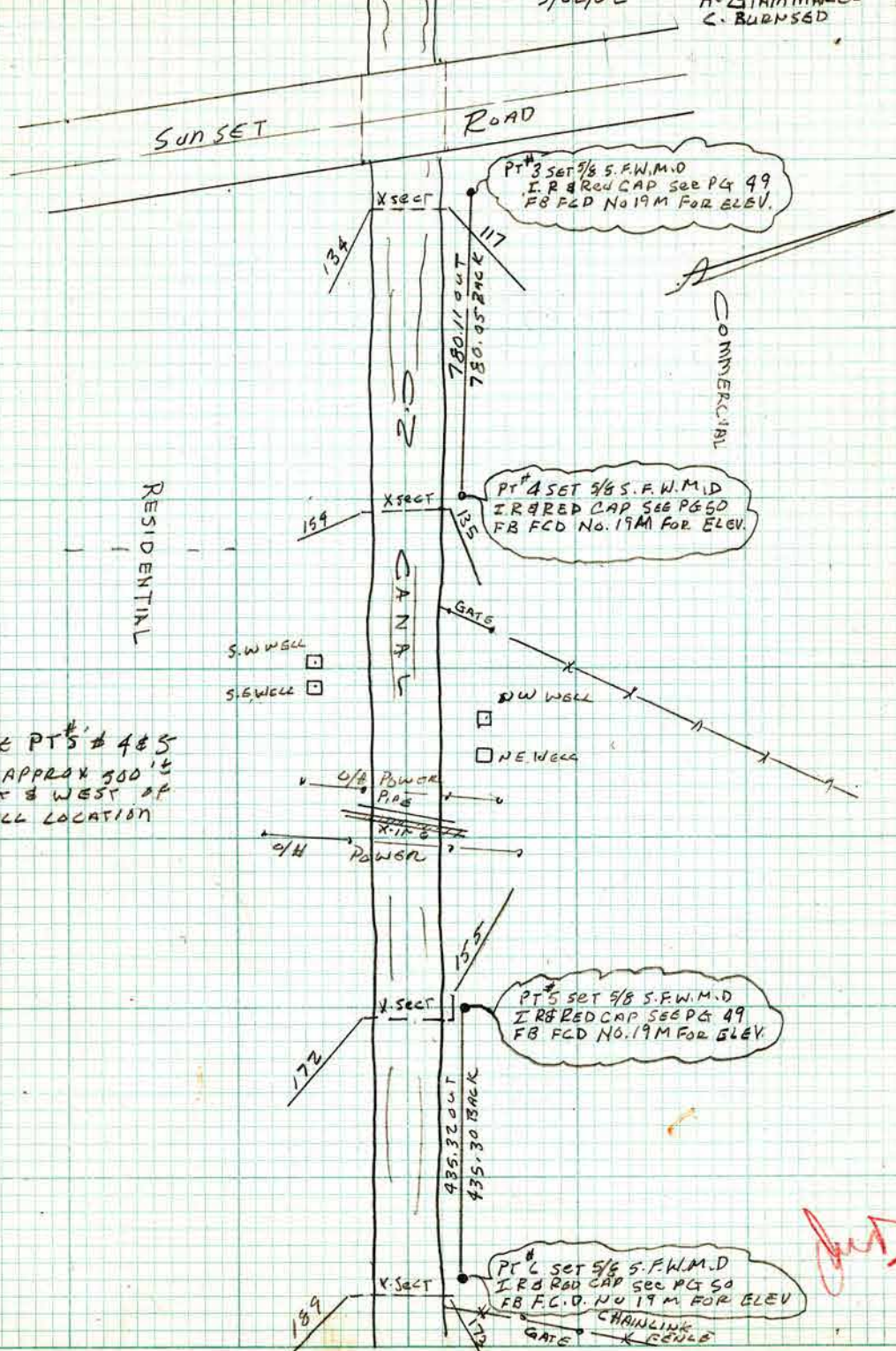
TR PT 4 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.45  
 BS PT# 3 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 6.02  
 FS PT# 135-154 XSECTION HARD BOTTOM

435.32

TR OPT# 5 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.52  
 BS PT# 6 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.09  
 FS PT# 155-172 XSECTION HARD BOTTOM

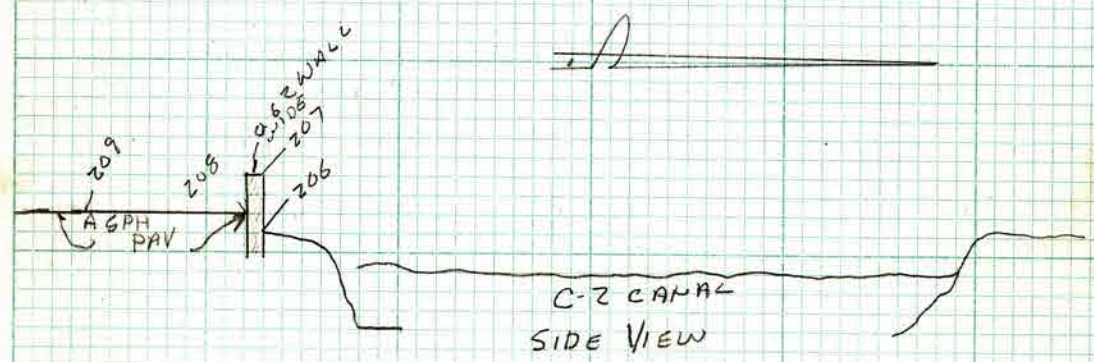
435.30

TR OPT# 6 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.37  
 BS PT# 5 SET 5/8 S.F.W.M.D. I.R. & Red CAP MEAS. UP = 5.25  
 FS PT# 173-189 XSECTION HARD BOTTOM

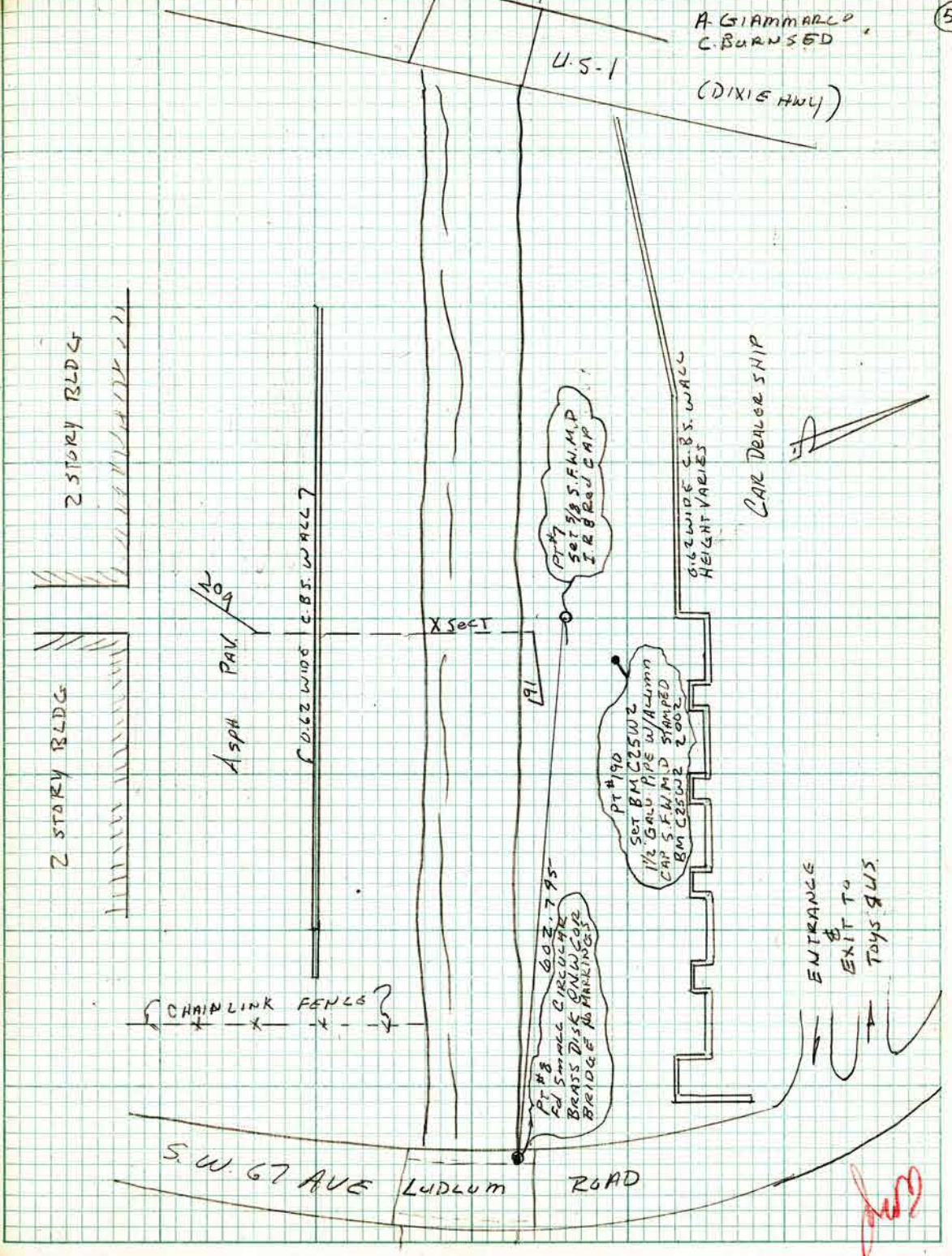


C-2 FCD BK NO 19M 5/22/02  
 (55) SEC 35 C-2 WELL SITE X-SECTIONS  
 TWP 54S RAW FILE C2WELLS  
 RNG 40E GPS HORIZ CONT FILE C2WLCNT

602.745  
 X CPT #7 SET 5/8 S.F.W.M.D T.R. & RED CAP MEAS. H.P. 5.39  
 BS PT #8 Fd Small Circular Brass Disk @ N.W. COR MEAS. U.P. 5.29  
 BRIDGE OVER C-2 CANAL @ LUDLOW RD & ILL. 95 CALLED  
 PT #190 BM C25W1 See PLG 52 FB FCD No 19M  
 FS. PT # 191-209 X SECTION



C-2 FB FCD BK No. 19M 5/22/02 (55)



**P-578**

LOCATOR: 4904

ELEVATION = 10.34

STATUS: C (D=Destroyed, P=Pending)

SW 56 ST --- 95' NORTH OF C/L PROJECTED FROM THE EAST

SW 117 AVE --- 142' WEST OF C/L PROJECTED FROM THE NORTH

30' WEST OF C/L OF BIKE PATH

PK NAIL AND BRASS WASHER IN CONC SUPPORT FOR A WATER MAIN

\* 06/13/88

Directions: [To here](#) - [From here](#)



# South Florida Water Management District Benchmark Database

Report run on: February 17, 2005 6:30 AM

Designation: FCE1471RESET  
County: MIAMI-DADE  
USGS Quad: SOUTH MIAMI  
Project: C-2

Sec: 35 Twp: 54 Rge: 40

Status: GOOD MAY 2002

**NAD 1927 Coordinates:**

N =

E =

Adjustment:

**NAD 1983 Coordinates:**

X =

Y =

Adjustment:

Order:

Class:

Latitude: 254130.000

Longitude: 801818.000

Monument By: UNK

Year: 1956

Type: V

Stamping: FCE 1471 1956

Party Chief:

Field Book

Page:

**NGVD 1929**

Elevation: 16.190

Order: 1

Class: II

**NAVD 1988**

Elevation: 14.640

Order: 1

Class: II

Scaled values only

+/- 700'

Description:

\*\*\*\*\* RECOVERY NOTE \*\*\*\*\*

5/21/2002 ALAN GIAMMARCO, FIELD BOOK C-2 19M, PAGE 52, FOUND DISK IN CONCRETE  
HEADWALL BRIDGE AT US 1 AND C-2 DISK STAMPED FCE 1471 1956"  
EL. 16.19 NGVD 1929

6/14/2000 R. BICKHAM, KEITH & SCHNARS, STRIVE PROGRAM, STRUCTURE 121,  
FIELD BOOK 1021, PAGE 29 FCE 1471 RESET. FOUND AS PER DESCRIPTION  
SUPPLIED EL. 14.64 NAVD 88

\*\*\*\*\*

THE NGS DATA SHEETSEE FILE DSDATA.TXT FOR MORE INFORMATION ABOUT THE  
DATASHEET.DATABASE = SYBASE ,PROGRAM = DATASHEET, VERSION = 7.02

1 NATIONAL GEODETIC SURVEY, RETRIEVAL DATE = MAY 27, 2004

AC2103 \*\*\*\*\*

AC2103 DESIGNATION - FCE 1471 RESET

AC2103 PID - AC2103

AC2103 STATE/COUNTY- FL/DADE

AC2103 USGS QUAD - SOUTH MIAMI (1988)

AC2103

AC2103 \*CURRENT SURVEY CONTROL

AC2103

AC2103\* NAD 83(1986)- 25 41 30. (N) 080 18 18. (W) SCALED

AC2103\* NAVD 88 - 4.462 (METERS) 14.64 (FEET) ADJUSTED

AC2103

AC2103 GEOID HEIGHT- -25.19 (METERS) GEOID03

AC2103 DYNAMIC HT - 4.455 (METERS) 14.62 (FEET) COMP

AC2103 MODELED GRAV- 979,019.5 (MGAL) NAVD 88

AC2103

AC2103 VERT ORDER - FIRST CLASS II

AC2103

AC2103.THE HORIZONTAL COORDINATES WERE SCALED FROM A TOPOGRAPHIC MAP AND HAVE  
AC2103.AN ESTIMATED ACCURACY OF +/- 6 SECONDS.

AC2103

AC2103.THE ORTHOMETRIC HEIGHT WAS DETERMINED BY DIFFERENTIAL LEVELING

AC2103.AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN MAY 1994.

AC2103.WARNING-REPEAT MEASUREMENTS AT THIS CONTROL MONUMENT INDICATE POSSIBLE



# South Florida Water Management District Benchmark Database

Report run on: February 17, 2005 6:30 AM

AC2103.VERTICAL MOVEMENT.  
 AC2103  
 AC2103.THE GEOID HEIGHT WAS DETERMINED BY GEOID03.  
 AC2103  
 AC2103.THE DYNAMIC HEIGHT IS COMPUTED BY DIVIDING THE NAVD 88  
 AC2103.GEOPOTENTIAL NUMBER BY THE NORMAL GRAVITY VALUE COMPUTED ON THE  
 AC2103.GEODETIC REFERENCE SYSTEM OF 1980 (GRS 80) ELLIPSOID AT 45  
 AC2103.DEGREES LATITUDE (G = 980.6199 GALS.).  
 AC2103  
 AC2103.THE MODELED GRAVITY WAS INTERPOLATED FROM OBSERVED GRAVITY VALUES.  
 AC2103  
 AC2103; NORTH EAST UNITS ESTIMATED ACCURACY  
 AC2103;SPC FL E - 150,640. 269,760. MT (+/- 180 METERS SCALED)  
 AC2103  
 AC2103 SUPERSEDED SURVEY CONTROL  
 AC2103  
 AC2103 NAVD 88 (06/15/91) 4.467 (M) 14.66 (F) UNKNOWN 1 2  
 AC2103 NGVD 29 (09/01/92) 4.936 (M) 16.19 (F) ADJUSTED 1 2  
 AC2103  
 AC2103.SUPERSEDED VALUES ARE NOT RECOMMENDED FOR SURVEY CONTROL.  
 AC2103.NGS NO LONGER ADJUSTS PROJECTS TO THE NAD 27 OR NGVD 29 DATUMS.  
 AC2103.SEE FILE DSDATA.TXT TO DETERMINE HOW THE SUPERSEDED DATA WERE DERIVED.  
 AC2103  
 AC2103\_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNJ697417(NAD 83)  
 AC2103\_MARKER: DD = SURVEY DISK  
 AC2103\_SETTING: 38 = ABUTMENT  
 AC2103\_STAMPING: FCE 1471 1956  
 AC2103\_MARK LOGO: FLHD  
 AC2103\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 AC2103\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 AC2103\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 AC2103+SATELLITE: SATELLITE OBSERVATIONS - MAY 20, 1993  
 AC2103  
 AC2103 HISTORY - DATE CONDITION REPORT BY  
 AC2103 HISTORY - UNK MONUMENTED RBNF  
 AC2103 HISTORY - 1978 GOOD NGS  
 AC2103 HISTORY - 1987 GOOD USPSQD  
 AC2103 HISTORY - 1988 GOOD USPSQD  
 AC2103 HISTORY - 1989 GOOD USPSQD  
 AC2103 HISTORY - 19910125 GOOD FLDNR  
 AC2103 HISTORY - 19930520 GOOD NGS  
 AC2103  
 AC2103 STATION DESCRIPTION  
 AC2103  
 AC2103'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978  
 AC2103'1.1 MI SW FROM SOUTH MIAMI.  
 AC2103'ABOUT 1.1 MILES SOUTHWEST ALONG THE FLORIDA EAST COAST RAILROAD  
 AC2103'FROM THE STATION AT SOUTH MIAMI, ABOUT 150 YARDS SOUTHWEST OF  
 AC2103'MILEPOST 375, ABOUT 25 YARDS SOUTHEAST OF THE TRACK, ALONG U.S.  
 AC2103'HIGHWAY 1 WHICH PARALLELS THE TRACK, SET IN THE TOP OF THE  
 AC2103'NORTHWEST END OF THE SOUTHWEST CONCRETE ABUTMENT FOR SOUTH-BOUND  
 AC2103'LANE BRIDGE OVER SNAPPER CREEK CANAL 2, 1 FOOT NORTHWEST OF THE  
 AC2103'NORTHWEST CURB OF BRIDGE. NOTE--ASSUMED RESET BETWEEN 1966 AND 1978  
 AC2103'(1966 DISTANCE ABOVE THE LEVEL OF THE HIGHWAY WAS OMITTED).  
 AC2103  
 AC2103 STATION RECOVERY (1987)  
 AC2103  
 AC2103'RECOVERY NOTE BY US POWER SQUADRON 1987 (TD)  
 AC2103'RECOVERED IN GOOD CONDITION.





# South Florida Water Management District Benchmark Database

Report run on: February 17, 2005 6:30 AM

AC2103  
 AC2103 STATION RECOVERY (1988)  
 AC2103  
 AC2103 RECOVERY NOTE BY US POWER SQUADRON 1988 (TD)  
 AC2103 RECOVERED IN GOOD CONDITION.  
 AC2103  
 AC2103 STATION RECOVERY (1989)  
 AC2103  
 AC2103 RECOVERY NOTE BY US POWER SQUADRON 1989 (TD)  
 AC2103 RECOVERED IN GOOD CONDITION.  
 AC2103  
 AC2103 STATION RECOVERY (1991)  
 AC2103  
 AC2103 RECOVERY NOTE BY FL DEPT OF NAT RES 1991  
 AC2103 RECOVERED IN GOOD CONDITION AND AS DESCRIBED EXCEPT THE RAILROAD HAS  
 AC2103 BEEN REMOVED AND THE MARK IS SET IN THE BRIDGE RAIL 3.3 FT (1.0 M)  
 AC2103 ABOVE THE LEVEL OF THE HIGHWAY NOT 1 FT (0.3 M) .  
 AC2103  
 AC2103 STATION RECOVERY (1993)  
 AC2103  
 AC2103 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993  
 AC2103 2.7 KM (1.65 MI) SOUTHWESTERLY ALONG U.S. HIGHWAY 1 FROM THE  
 AC2103 JUNCTION OF STATE HIGHWAY 959 (SOUTHWEST 57TH AVENUE) IN SOUTH MIAMI,  
 AC2103 IN TOP OF AND 0.2 M (0.7 FT) SOUTHEAST OF THE NORTHWEST END OF THE  
 AC2103 SOUTHWEST CONCRETE ABUTMENT OF THE SOUTHBOUND HIGHWAY BRIDGE SPANNING  
 AC2103 SNAPPER CREEK CANAL NUMBER C-2, 7.5 M (24.6 FT) NORTHWEST OF THE  
 AC2103 CENTERLINE OF THE SOUTHBOUND LANES OF THE HIGHWAY, AND 1.0 M (3.3 FT)  
 AC2103 ABOVE THE LEVEL OF THE HIGHWAY.

\*\*\* RETRIEVAL COMPLETE.  
ELAPSED TIME = 00:00:01

\*\*\*\*\*  
 ABOUT 1.1 MILES SOUTHWEST ALONG THE FLORIDA EAST COAST RAILROAD FROM THE STATION AT  
 SOUTH MIAMI, ABOUT 150 YARDS SOUTHWEST OF MILEPOST 375, ABOUT 25 YARDS SOUTHEAST OF THE  
 TRACK, ALONG US HIGHWAY 1 WHICH PARALLELS THE TRACK, SET IN THE TOP OF THE NORTHWEST END  
 OF THE SOUTHWEST CONCRETE ABUTMENT FOR SOUTHBOUND LANE BRIDGE OVER SNAPPER CREEK  
 CANAL #2, 1 FOOT NORTHWEST OF THE NORTHWEST CURB OF BRIDGE AND ABOUT 1 FOOT ABOVE THE  
 LEVEL OF THE HIGHWAY.

NOTE: ASSUMED RESET BEYWEEN 1966 AND 1978  
 STATION RECOVERY (1993)  
 RECOVERY NOTE BY NGS 1993  
 2.7 KM (1.65 MI) SOUTHWESTERLY ALONG U.S. HIGHWAY 1 FROM THE JUNCTION OF STATE HIGHWAY 959  
 (SW 57TH AVE) IN SOUTH MIAMI, IN TOP OF AND 0.2 M (0.7 FT) SOUTHEAST OF THE NORTHWEST END OF  
 THE SOUTHWEST CONCRETE ABUTMENT OF THE SOUTHBOUND HIGHWAY BRIDGE SPANNING SNAPPER  
 CREEK CANAL NUMBER C-2, 7.5 M (24.6 FT) NORTHWEST OF THE CENTERLINE OF THE SOUTHBOUND  
 LANES OF THE HIGHWAY, AND 1.0 M (3.3 FT) ABOVE THE LEVEL OF THE HIGHWAY.  
 \*\*\*\*\*



# South Florida Water Management District Benchmark Database

Report run on: September 28, 2005 9:07 AM

Designation: C2SW1	Latitude:	Scaled values only
County: MIAMI-DADE	Longitude:	
USGS Quad: SOUTH MIAMI NW	Monument By: SFWMD	
Project: C2SW1 WELL SITE	Year: 2002	
Sec: 30    Twp: 54    Rge: 40	Type: V	
Status: GOOD APR 2005	Stamping: C2SW1	
	Party Chief: GIAMMARCO	
<b>NAD 1927 Coordinates:</b>	Field Book 19M	
N =	Page: 47	
E =	<b>NGVD 1929</b>	
Adjustment:	Elevation: 8.230	
<b>NAD 1983 Coordinates:</b>	Order: 3	
X = 859747.360	Class:	
Y = 500767.900	<b>NAVD 1988</b>	
Adjustment:	Elevation: 6.682	
Order:	Order: 3	
Class:	Class:	

Description:

**OLD SFWMD EL. 8.31 NGVD 1929**

\*\*\*\*\* RECOVERY NOTE \*\*\*\*\*

4/21/2005 KEITH & SCHNARS LEVEL RUN ALONG C-2 FROM NGS BM V-269 THROUGH C2SW2  
(AND OTHERS) TO NGS BM N33  
EL. 6.6820 NAVD 88, EL. 8.2298 NGVD 1929

\*\*\*\*\*

TO REACH: FROM THE TURNPIKE ENTRANCE IN LAKE WORTH TAKE THE TURNPIKE SOUTH BOUND APPROXIMATELY 68 MILES TO EXIT 25 (SW 8TH STREET). TAKE SW 8TH STREET EXIT 0.5 MILES TO LIGHT AT THE INTERSECTION OF S.W. 117TH AVENUE; TURN RIGHT FOLLOW S.W. 117TH AVENUE SOUTHERLY APPROXIMATELY 1.7 MILES TO THE INTERSECTION OF S.W. 32 STREET, CONTINUE SOUTHERLY 0.3 MILES TO SW 3700 TURNPIKE ENTRANCE NORTH BOUND, CONTINUE SOUTHERLY ALONG SW 117TH AVENUE, 0.2 MILES TO \_\_\_; FOLLOW THE ROAD SOUTHERLY AND EASTERLY TO THE INTERSECTION OF SW 116TH AVENUE AND NORTH SNAPPER CREEK  
BENCH MARK IS 22.7 FEET SOUTH OF THE SOUTH EDGE OF PAVEMENT OF NORTH SNAPPER CREEK AND 16.2 FEET WEST OF THE CENTERLINE EXTENDED OF SW 116TH AVENUE.  
STATION IS A 1 1/4 - INCH IRON PIPE WITH A SOUTH FLORIDA WATER MANAGEMENT DISTRICT ALUMINUM CAP IN CONCRETE STAMPED "C2SW1 2002"  
NOTE THE NUMBER 1 IS STAMPED UPSIDE DOWN, ALSO WHEN YOU MAKE A COPY PLEASE INCLUDE BACK AND DIAGRAM.  
THE ELEVATION IS BASED ON A LEVEL RUN FROM DADE COUNTY BENCH MARK P578 EL. 10.38 NGVD 1929. THE COORDINATES TAKEN FROM SFWMD DRAWING "C-2 CANAL SPECIFIC PURPOSE SURVEY, STUDY WELLS AND CROSS SECTIONS, FIELD DATE MAY 22, 2002.



# South Florida Water Management District Benchmark Database

Report run on: September 28, 2005 9:07 AM

Designation: C2SW2	Latitude:	Scaled values only
County: MIAMI-DADE	Longitude:	
USGS Quad: SOUTH MIAMI	Monument By: SFWMD	
Project: C2SW2 WELL SITE	Year: 2002	
Sec: 35    Twp: 54    Rge: 40	Type: V	
Status: GOOD APR 2005	Stamping: C2 SW2 2002	
<b>NAD 1927 Coordinates:</b>	Party Chief: GIAMMARCO	
N =	Field Book 19M	
E =	Page: 52	
Adjustment:	<b>NGVD 1929</b>	
<b>NAD 1983 Coordinates:</b>	Elevation: 6.662	
X = 885726.000	Order: 3	
Y = 494219.150	Class:	
Adjustment:	<b>NAVD 1988</b>	
Order:	Elevation: 5.123	
Class:	Order: 3	
	Class:	

Description:

\*\*\*\*\* RECOVERY NOTE \*\*\*\*\*

4/21/2005 KEITH & SCHNARS LEVEL RUN ALONG C-2 FROM NGS BM V-269 THROUGH C2SW2  
(AND OTHERS) TO NGS BM N33  
EL. 5.1228 NAVD 88, EL. 6.6623 NGVD 1929

\*\*\*\*\*

TO REACH: FROM THE INTERSECTION OF 826 AND SW 72ND STREET, GO EAST ON SW 72ND STREET 1 MILE TO THE INTERSECTION OF SW 72ND STREET (SUNRISE DRIVE) AND SW 67 AVENUE (LUDLIM ROAD), TURN RIGHT (SOUTHERLY) ON SW 67 AVENUE, CONTINUE SOUTHERLY ON SW 67 TH AVENUE APPROXIMATELY 0.55 OF A MILE TO THE INETESECTION OF SW 67TH AVENUE AND US 1; CONTINUE SOUTHERLY ALONG SW67TH AV3ENUE 0.2 OF A MILE TO A BRIDGE OVER SOUTH FLORIDA WATER MANAGEMENT DISTRICTS CANAL 2; TURN RIGHT (WESTERLY) AT THE NORTHERLY SIDE OF THE BRIDGE AND GO THORUGH THE GATE AND CONTINUE WESTERLY 573 FEET MORE OR LESS TO STATION LOCATION.

STATION IS A SOUTH FLORIDA WATER MANAGEMENT DISTRICT ALUMINUM DISK IN A 1 1/2-INCH GALVINIZED IRON PIPE IN CONCRETE STAMPED (BM C3SW2 2002" ELEV.6.68 NGVD 1929 ELEVATION BASED ON CORPS OF ENGINEERS BRASS DISK FCE 1471 1956 EL. 14.64 NAVD 1988 AND EL. 16.19 NGVD 1929