



**AGENDA
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
NOVEMBER 14, 2019
9:00 AM
CITY HALL COMMISSION CHAMBERS
204 ASH STREET
FERNANDINA BEACH, FL 32034**

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. APPROVAL OF MINUTES**
 - 3.1 October 24, 2019 Regular Meeting**
- 4. DISCUSSION ITEMS**
 - 4.1 Pre-Application Discussion: Jose Miranda, Miranda Architects - Construction of a new parking lot for SMCC on North 5th Street, with the relocation of the Liberty Billings House.**
- 5. NEW BUSINESS**
 - 5.1 SPR 2019-07 Utilities Department Water Reservoir & Solar Field - Sign Off**
- 6. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.**
- 7. COMMITTEE BUSINESS**
- 8. ADJOURNMENT**

NEXT REGULAR TRC MEETING IS SCHEDULED FOR NOVEMBER 28, 2019.

Persons with disabilities requiring accommodations in order to participate in this program or activity should contact 310-3115, TTY 711, or through the Florida Relay Services at 1-800-955-8771 (TTY number for all City offices) at least 24 hours in advance to request such accommodations.



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
OCTOBER 24, 2019**

1. CALL TO ORDER – 9:02 am

2. ROLL CALL

MEMBERS PRESENT:

Jacob Platt, Planning
John Mandrick, Utilities
Michelle Forstrom, Code
Stephen Beckman, Building

Rex Lester, Streets
Jason Higginbotham, Fire (arrived at 9:12am)
Terry Cotter, Building

3. APPROVAL OF MINUTES

3.1 September 26, 2019 Regular Meeting

ACTION TAKEN: A motion was made by Member Forstrom, seconded by Member Cotter, to approve the minutes as presented.

Motion passed by unanimous voice vote.

4. DISCUSSION ITEMS

4.1 Change of Use: 201 N 4th Street – Jose Miranda, Miranda Architects to discuss converting the single family residence to SMCC office space. Medium Density Residential R-2 zoning.

Jose Miranda offered information and details specific to the project. Accessibility was discussed. Mr. Platt indicated that maintaining the upstairs as residential for use by visiting church employees would not be permissible. Curb cuts and striping were also topics of discussion.

The applicant was advised to move forward with permitting.

4.2 Pre-Application Discussion: 233 S 14th Street – Nick Gillette, Gillette & Associates to discuss developing six fee simple townhouses with the associated infrastructure. Mixed Use MU-1 zoning.

Nick Gillette described the project. Parking, curb cuts, and buffers were discussed. Mr. Platt indicated that the project will require a subdivision plat.

5. NEW BUSINESS

5.1 SPR 2016-06 Crawford Jewelers, 2149 Sadler Road – 1st Distribution

5.2 SPR 2019-07 COFB Solar Array & 500,000 Gallon Reservoir – 3425 Citation Court

6. OLD BUSINESS

6.1 SPR 2019-02 Canopy Park Subdivision – 420 Citrona Drive – 2nd Distribution

7. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA- DISCUSSION ONLY, NO ACTION TO BE TAKEN.

There were no inquiries from applicants not on the agenda.

8. COMMITTEE BUSINESS

Electronic submission and EnerGov was discussed.

9. ADJOURNMENT – 9:39am

Jacob Platt

BROOME STREET

CALHOUN STREET

ST. MICHAEL CATHOLIC CHURCH

ST. MICHAEL ACADEMY

LIBERTY BILLINGS HOUSE

230 N. 5TH ST. (PRE-K)

510 CALHOUN ST. (PRE-K)

511 BROOME ST. (2-STORY RESIDENCE)

515 BROOME ST. (1-STORY RESIDENCE)

NORTH FIFTH STREET

NEW PARKING LOT
41 SPACES

RETENTION POND

PRE-K PLAY YARD

PARKING COUNT SUMMARY

PARKING SPACES REQUIRED PER CHURCH OCCUPANT LOAD :	60
20% CREDIT FOR SAVING MAGNOLIA TREE :	- 12
10% ON-STREET CREDIT :	- 6
TOTAL PARKING SPACES REQUIRED :	42
NEW TRADITIONAL PARKING LOT SPACES :	41
NEW ADA SPACE LIBERTY-BILLINGS HOUSE :	1
TOTAL PARKING SPACES PROVIDED :	42

This drawing and the design ideas and concepts it represents are the property of the architect and are not to be reproduced or copied in whole or in part without the written consent of the architect. Any other project and is to be returned on request.

ST. MICHAEL CATHOLIC CHURCH PARKING LOT SITE PLAN	PROJECT # 5170522
	DRAWN BY -- JLM
	CHKD BY -- JLM
	DATE -- 06-19-19

MIRANDA ARCHITECTS

308 1/2 CENTRE STREET, SUITE 208
FERNANDINA BEACH, FL 32034
904.261.4586 TEL
FL ARCH. NO. 00000000000000000000

MIRANDA ARCHITECTS

PROPOSED DESIGN FOR

ST. MICHAEL CATHOLIC CHURCH
PARKING LOT

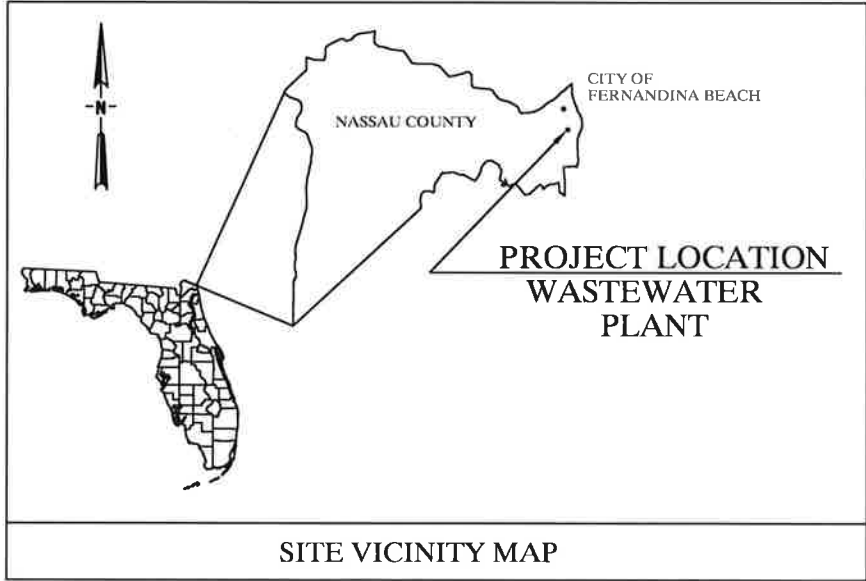
NORTH 5TH STREET
FERNANDINA BEACH, FL 32304

CONCEPTUAL SITE PLAN	REVISIONS	DATE

#3 WATER PLANT

NEW LARGE RESERVOIR

CITY OF FERNANDINA BEACH UTILITIES DEPARTMENT



RECORD DRAWINGS

CONTRACTOR:
CITY OF FERNANDINA BEACH
AMOUNT: \$800,000.00
DATE: 10/4/2019
PROJECT NO: 20005

PREPARED BY:
JOHN MANDRICK, PE, DIRECTOR

DRAWING INDEX

DWG. NO.	DESCRIPTION
1	COVER
2	VICINTY MAP
3	EXISTING SITE PLAN
4	SITE PLAN
5	TANK PROFILE VIEW
6	TANK PLAN VIEW
7	TANK WALL DETAIL
8	TANK PIPING DETAIL
9	AERATOR
10	DETAILS
11	ACCESSARIES
12	SOLAR LAYOUT
13	ELECTRICAL



CITY OF FERNANDINA BEACH
UTILITIES DEPARTMENT WASTEWATER DIVISION
1180 S. 5TH STREET - FERNANDINA BEACH, FL 32034
TELEPHONE: (904) 310-3421 - FAX (904) 310-3464

COVER

DESIGNED	BY	DATE	PROJECT NO.
DRAWN	JM	10/16/2019	20005
CHECKED	BE	10/16/2019	SCALE
	JM	10/16/2019	NOTED
			SHEET
			1
			OF 13

DATE: _____ FILE: FDEP WP#3

UTILITY AND OTHER CONTACTS			
ORGANIZATION	CONTACT AND TITLE	ADDRESS	TELEPHONE NUMBER
CITY OF FERNANDINA BEACH	MR. JOHN MANDRICK, PE DIR. OF UTILITIES	P.O. BOX 668 FERNANDINA BCH., FL.	904-310-3420
FLORIDA PUBLIC UTILITIES	MR. CURTIS BOATRIGHT ELECTRIC SERVICE	780 AMELIA ISLAND PARKWAY FERNANDINA BCH., FL.	904-430-4709
BELL SOUTH	MIKE DUNGAN	301 W. BAY, RM. 18HHI JACKSONVILLE, FL. 32207	877-737-2478
NASSAU COUNTY	MR. J. PE DIRECTOR ENGINEER	96161 NASSAU PLACE YULEE, FL. 32097	904-530-8225
COMCAST	TIM DENISON	1600 S. 14TH ST. FERNANDINA BEACH, FL. 32034	904-261-3824
SUNSHINE STATE ONE CALL			800-432-4770



GENERAL NOTES

- THE EXISTING WASTEWATER TREATMENT PLANT AND OTHER PRIVATE AND PUBLIC UTILITY SERVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION OF THIS WASTEWATER TREATMENT PLANT EXPANSION PROJECT.
- ALL ELEVATIONS SHOWN ARE IN FEET AND ARE BASED ON N.G.V.D. 1988 DATUM. ALL MECHANICAL EQUIPMENT MOTORS AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED ABOVE THE 100 YEAR FLOOD ELEVATION OF 11.00 FEET.
- ALL WORK AFFECTING EXISTING STRUCTURES, UTILITIES OR TREATMENT PLANT OPERATION SHALL BE COORDINATED WITH THE OWNER A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
- EXISTING FACILITIES, PIPING, AND UTILITIES ARE SHOWN BASED UPON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY THEIR ACCURACY, BY FIELD INVESTIGATION, PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE POTENTIAL CONFLICTS BETWEEN UTILITIES AND OTHER UNDERGROUND STRUCTURES. PROVIDE A 6" MINIMUM CLEARANCE BETWEEN ALL EXISTING UTILITIES AND ANY NEW CONSTRUCTION.
- ALL PIPE SHALL BE LAID WITH A MINIMUM OF 30 INCHES OF EARTH COVER UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- DIMENSIONS TAKEN FROM HORIZONTAL AND VERTICAL CONTROL ARE SUBJECT TO ADJUSTMENTS IN THE FIELD AS REQUIRED TO AVOID CONFLICTS. THE ENGINEER'S APPROVAL SHALL BE REQUIRED IN WRITING PRIOR TO CONSTRUCTION FOR ANY NECESSARY ADJUSTMENTS.
- WHERE THE VERTICAL DISTANCE BETWEEN A WATER AND SEWER MINE CROSSING IS LESS THAN 18 INCHES, THE CONTRACTOR SHALL ENCASE THE SEWER MAIN IN CONCRETE FOR A DISTANCE OF 10 FEET ON BOTH SIDES OF THE CROSSING.
- THE FIELD SURVEY INFORMATION WAS FURNISHED BY:

KENNETH N. DRAKE
474319 E. ST. RD. 200
FERNANDINA BEACH, FLORIDA 32034
(904) 277-4078

MANZIE & DRAKE LAND SURVEYING
117 SOUTH NINTH STREET
FERNANDINA BEACH, FL 32034
(904) 491-5700
- THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, TO REFERENCE AND RESTORE PROPERTY CORNERS AND LAND MARKERS WHICH MAY BE DISTURBED BY CONSTRUCTION AND TO ASSURE ACCURATE HORIZONTAL AND VERTICAL CONTROL DURING THE CONSTRUCTION OF THE NEW WORK. UPON COMPLETION OF CONTRACTION, THE CONTRACTOR SHALL PROVIDE A SITE SURVEY DEPICTING AS-BUILT CONDITIONS.
- CONTRACTOR SHALL NOT DISTURB EXISTING UNDERGROUND UTILITIES, UNLESS OTHERWISE SHOWN. UTILITIES WHICH ARE DISTURBED BY THE CONTRACTOR SHALL BE REPLACED IN STRICT ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
- MATCH SURFACE ELEVATIONS WHERE NEW PAVEMENT OR OVERLAY CONNECTS TO EXISTING PAVEMENT.

A. DESIGN CRITERIA:

- ALL DESIGN IS BASED ON THE LATEST EDITION OF THE FLORIDA BUILDING CODES 2014 5TH EDITION FLORIDA BUILDING CODES AS PUBLISHED BY THE SOUTHERN BUILDING CODE COMGRESS INTERNATIONAL.
- LOADS:
 - WIND LOADS: WIND LOADS ARE APPLIED IN ACCORDANCE WITH THE STANDARD BUILDING CODE AND ASCE 7-10. PRESSURES AND EXPOSURE B ARE BASED ON A BASIC WIND VELOCITY OF 120 MPH.

WIND VELOCITY PRESSURE ON GROUND ARRAY (MONOSLOPE FREE ROOF) HEIGHT ABOVE GROUND ADJACENT TO STRUCTURE < 15 FT.
 $qz = 0.00256(0.575)(1)(0.85)(120)(120) = 17.86$ PSF
 $p = 17.86 (0.85)(-2.3) = 34.92$ PSF up lift
 $p = 17.86 (0.85)(1.6) = 24.29$ PSF down
 $p = 17.86 (1.85) (1.3) = 4.55$ PSF side load
 - LIVE LOADS (MINIMUM)

ROOFS	20 PSF
OFFICES	50 PSF
STAIRWAYS AND WALKWAYS	100 PSF
MACHINE (PUMP) ROOMS	300 PSF
 - EQUIPMENT (AS NOTED ON DRAWINGS)
- ALLOWABLE SOIL BEARING PRESSURE 2000 PSF

B. SPECIFICATIONS:

- ACT 318-14 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
- ACI 350-06 CONCRETE SANITARY STRUCTURES
- AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION
- ACI 344R-T&W DESIGN AND CONSTRUCTION OF CIRCULAR PRESTRESSED CONCRETE STRUCTURES (REVISED 1988)
- ACT 530-13 BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES
- AAF - 14 ALUMINUM DESIGN MANUAL 2015 EDITION
- ASCE 24 - 14 FLOOD RESISTANT DESIGN AND CONSTRUCTION
- NEC 2014 NATIONAL ELECTRIC CODE 2014 EDITION

C. CONCRETE:

- DESIGN CONCRETE STRENGTH

PRESTRESSED TANK	_____	Fc' - 5000 psi
STRUCTURES AND FOUNDATIONS	_____	Fc' - 5000 psi
SLABS ON GRADE	_____	Fc' - 4000 psi
SIDEWALKS AND PIPE ENCASEMENTS	_____	Fc' - 3000 psi
- REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL BARS CONFORMING TO ASTM A 615, GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
- UNLESS OTHERWISE SHOWN ON THE DRAWING, MINIMUM COVER FOR REINFORCED STEEL SHALL BE AS FOLLOWS:

#5 AND SMALLER BARS, INCLUDING WIRE	1-1/2"
ALL LARGER BARS	2"
CONCRETE CAST AGAINST EARTH	3"

NOTE: 6 MIL POLYETHYLENE MEMBRANE IS REQUIRED FOR ALL CAST CONCRETE USING EARTH AS A FORM.
- ALL REINFORCING SHALL BE FABRICATED AND HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN ACCORDANCE WITH SP-66 ACI DETAILING MANUAL (1980 EDITION) (SUPERSEDES ACI 315-74) (INCLUDES ACI 315-80)
- SPLICES IN REINFORCING, WERE PERMITTED, SHALL BE NOTED AS FOLLOWS:

WELDED WIRE MESH	ONE MESH LAP +2" (MIN)
TEMPERATURE REINF	12" MIN. LAP
ALL OTHER BARS	CLASS "C" LAP (DEFINED IN SP-66)

SPLICES IN TOP REINF. OF BEAMS SHALL BE MADE AT MID SPAN, BOTTOM REINFORCING AT SUPPORT, OR AS NOTED ON DRAWINGS.
- CONSTRUCTION JOINT LOCATIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INITIATION OF CONSTRUCTION OR FABRICATION AFFECTED BY THE JOINTS' LOCATIONS.
- PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES OF CONCRETE.
- APPLY 10 MIL DFT. OF BITUMINOUS PAINT COATING BETWEEN DISSIMILAR METALS OR BETWEEN METAL AND CONCRETE OR MASONRY TO ISOLATE AGAINST GALVANIC CORROSION.
- CONCRETE SHALL TO BE PLACED IN THE DRY.
- TO PREVENT UPLIFT, THE CONTRACTOR SHALL KEEP THE SITE OF PARTIALLY UNDERGROUND STRUCTURES DEWATERED OR KEEP THE TANK FULL OF WATER UNTIL BACKFILLING IS COMPLETE.
- UNLESS OTHERWISE SHOWN, FLOOR SLABS SHALL BE PLACED IN UNITS NOT MORE THAN 600 SQUARE FEET IN AREA WITH REINFORCEMENT EXTENDING 36 DIAMETERS THROUGH CONSTRUCTION JOINTS. AT LEAST 36 HOURS SHALL ELAPSE BETWEEN ADJACENT POURS.

LEGEND

NOTE : IN GENERAL, LIGHT LINES INDICATE EXISTING OR WORK OF OTHER TRADES, BOLD LINES INDICATE NEW WORK.	
SYMBOL	DESCRIPTION
	SANITARY SEWER, MANHOLE, AND SERVICE
	STORM SEWER
	WATER MAIN, SIZE INDICATED
	TELEPHONE, UNDERGROUND
	GAS, SIZE INDICATED
	VALVE
	REDUCER
	DRAINAGE INLET
	W.M.
	FIRE HYDRANT
	C.M.
	RIGHT-OF-WAY LINE
	I.P.
	I.R.
	N&D
	R&C
	INDICATES DRWG. ON WHICH CONSTRUCTION DETAILS ARE SHOWN
	UTILITY POLE (WOOD)
	UTILITY POLE (CONCRETE)
	GUY ANCHOR
	8' C.L.
	12"
	12"
	12"
	D
	REMOVE OR ABANDON
	OP

D. MASONRY

- CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, GRADE N-1, WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
- MORTAR SHALL CONFORM TO ASTM C91, TYPE S, WITH A MINIMUM COMPRESSION STRENGTH OF 1800 PSI. F'm - 1350 psi
- CONCRETE GROUT FOR FILLED CELLS SHALL BE A CONCRETE MIX DESIGN UTILIZING PEA GRAVEL FOR COARSE AGGREGATE AND SHALL HAVE A SLUMP OF 8" TO 10" MAXIMUM. WITH A MINIMUM COMPRESSION STRENGTH OF 3000 PSI AT 28 DAYS.
- CONCRETE LINTELS SHALL BE REINFORCED WITH 2 #4 BARS TOP AND BOTTOM AS A MINIMUM AND HAVE MASONRY END BEARING EACH END OF 2" PER FOOT OF SPAN WITH A MINIMUM OF 8" HOWEVER, THE CONTRACTOR MAY SUBMIT FOR APPROVAL A STANDARD PRECAST LINTEL DESIGN TO CARRY THE GRAVITY AND WIND LOADS RELATIVE TO ITS SPAN.

E. STRUCTURAL STEEL: (UNLESS OTHERWISE SHOWN OR SPECIFIED, CONFORM TO THE FOLLOWING SPECIFICATIONS).

- STRUCTURAL STEEL _____ ASTM A 36
- STEEL PIPE _____ ASTM A 53, GR. B
- STEEL TUBE _____ ASTM A 500, RG. B
- STRUCTURAL BOLTS _____ ASTM C 276 TYPE 316 SS
- ANCHOR BOLTS _____ ASTM A 36 OR A 307
- WELDS _____ ASTM E60, E70

F. STRUCTURAL ALUMINUM: (THE ALUMINUM ASSOCIATION ALLDY DESIGNATION SYSTEM - AA NUMBER)

- STRUCTURAL SHAPES _____ ALLOW AND TEMPER 6061-T6
- WELDS _____ ER 4043
- STRUCTURAL BOLTS _____ ASTM C276 TYPE 316 SS



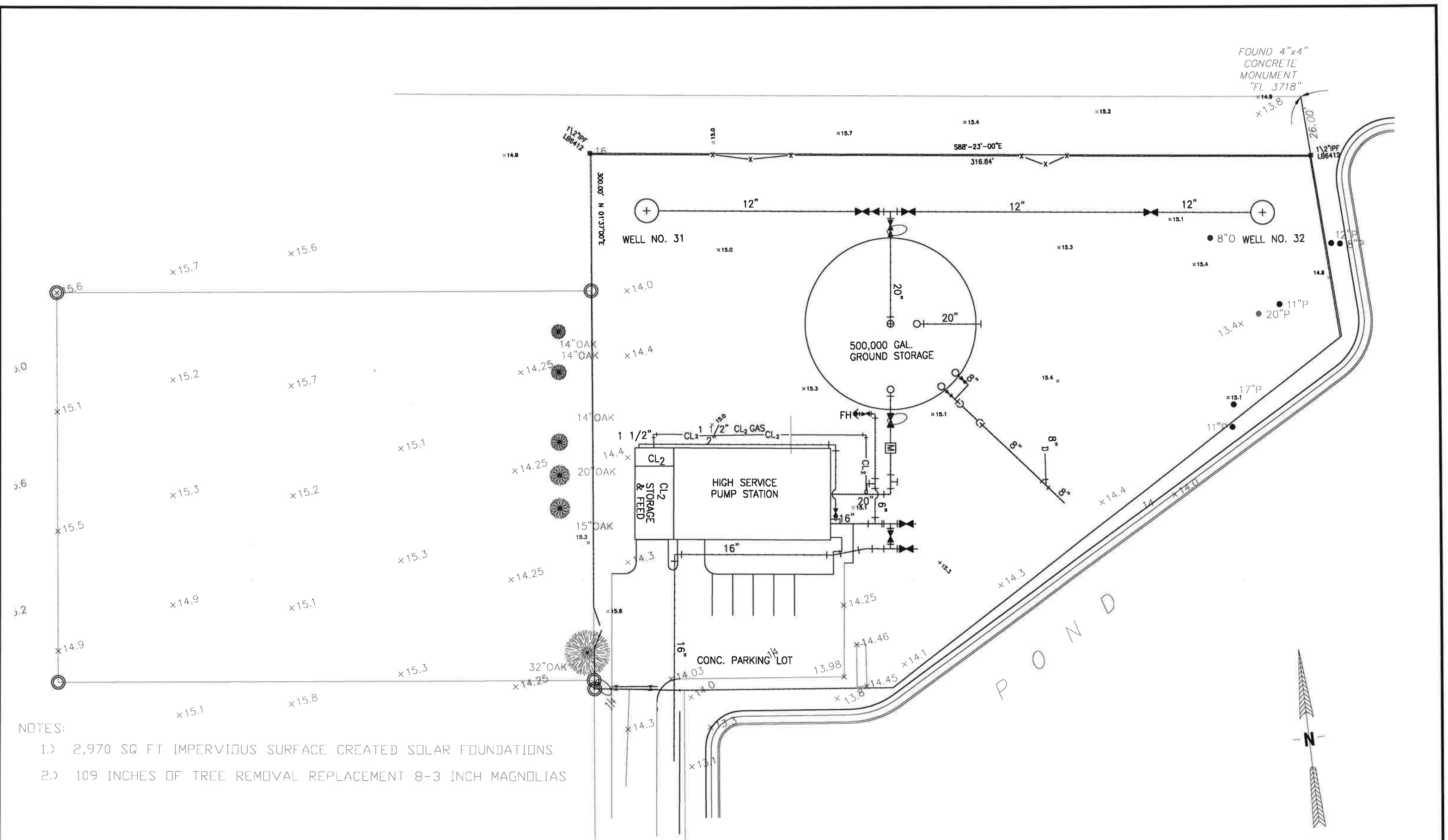
CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTEWATER DIVISION

1180 S. 5TH STREET - FERNANDINA BEACH, FL. 32034
TELEPHONE: (904) 310-3421 - FAX (904) 310-3464

SITE MAP, LEGEND, NOTES AND UTILITY CONTACTS

	BY	DATE	PROJECT NO. 20005
DESIGNED	JM	10/16/2019	SCALE:
DRAWN	BE	10/16/2019	NOTED
CHECKED	JM	10/16/2019	SHEET:
			2 OF 13
DATE:		FILE: SOLAR GROUND ARRAY3	



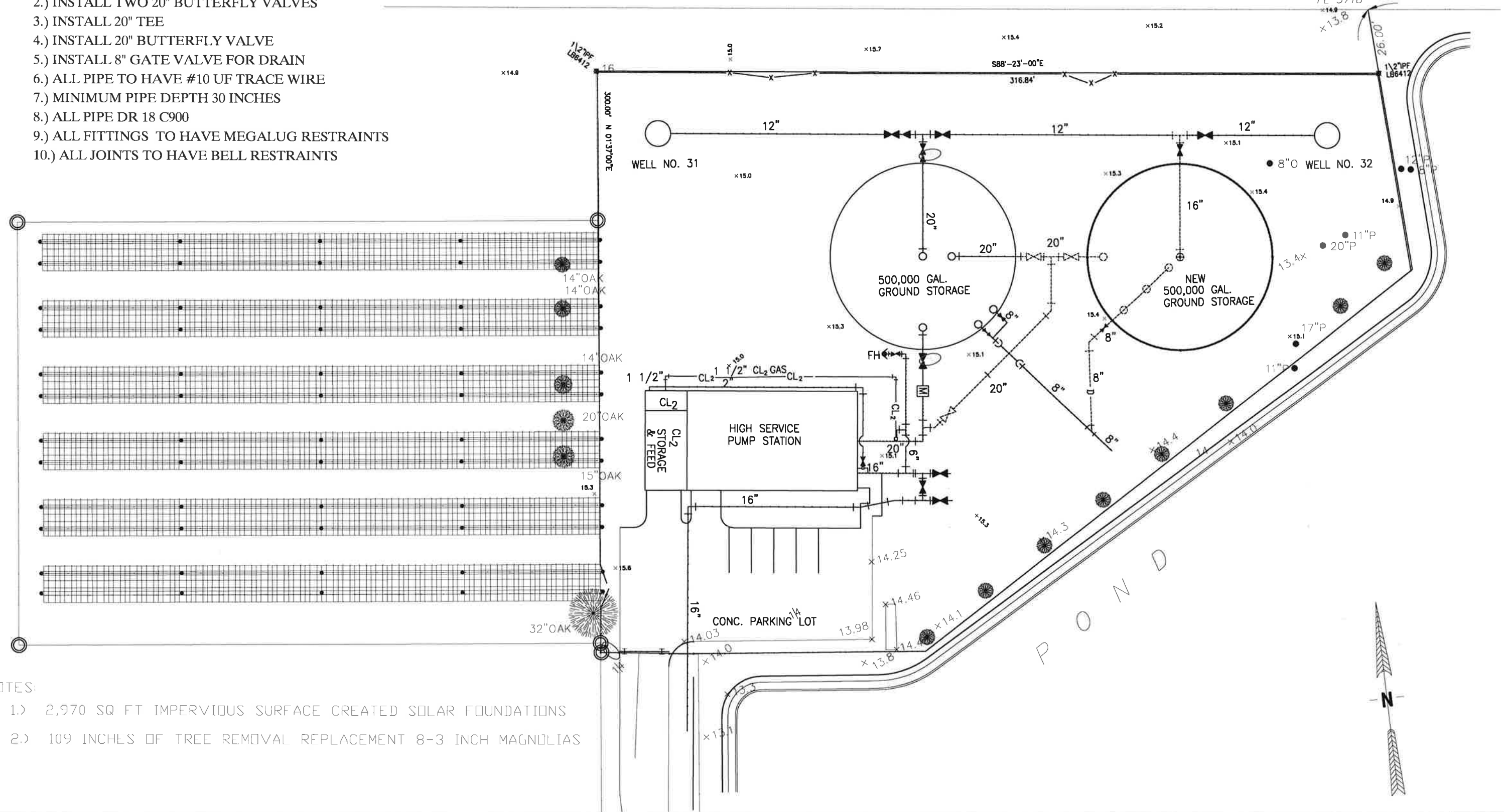
NOTES:

- 1.) 2,970 SQ FT IMPERVIOUS SURFACE CREATED SOLAR FOUNDATIONS
- 2.) 109 INCHES OF TREE REMOVAL REPLACEMENT 8-3 INCH MAGNOLIAS

EXISTING SITE PLAN

DATE: _____	BY	DATE	PROJECT NO.
	DESIGNED	JM 10/16/2019	20005
	DRAWN	HE 10/16/2019	SCALE:
	CHECKED	JM 10/16/2019	NOTED
FILE: PDEP WP#3			SHEET:
			3
			OF 13

- NOTES:
- 1.) INSTALL 12 X 16 TEE WITH 16" GV
 - 2.) INSTALL TWO 20" BUTTERFLY VALVES
 - 3.) INSTALL 20" TEE
 - 4.) INSTALL 20" BUTTERFLY VALVE
 - 5.) INSTALL 8" GATE VALVE FOR DRAIN
 - 6.) ALL PIPE TO HAVE #10 UF TRACE WIRE
 - 7.) MINIMUM PIPE DEPTH 30 INCHES
 - 8.) ALL PIPE DR 18 C900
 - 9.) ALL FITTINGS TO HAVE MEGALUG RESTRAINTS
 - 10.) ALL JOINTS TO HAVE BELL RESTRAINTS



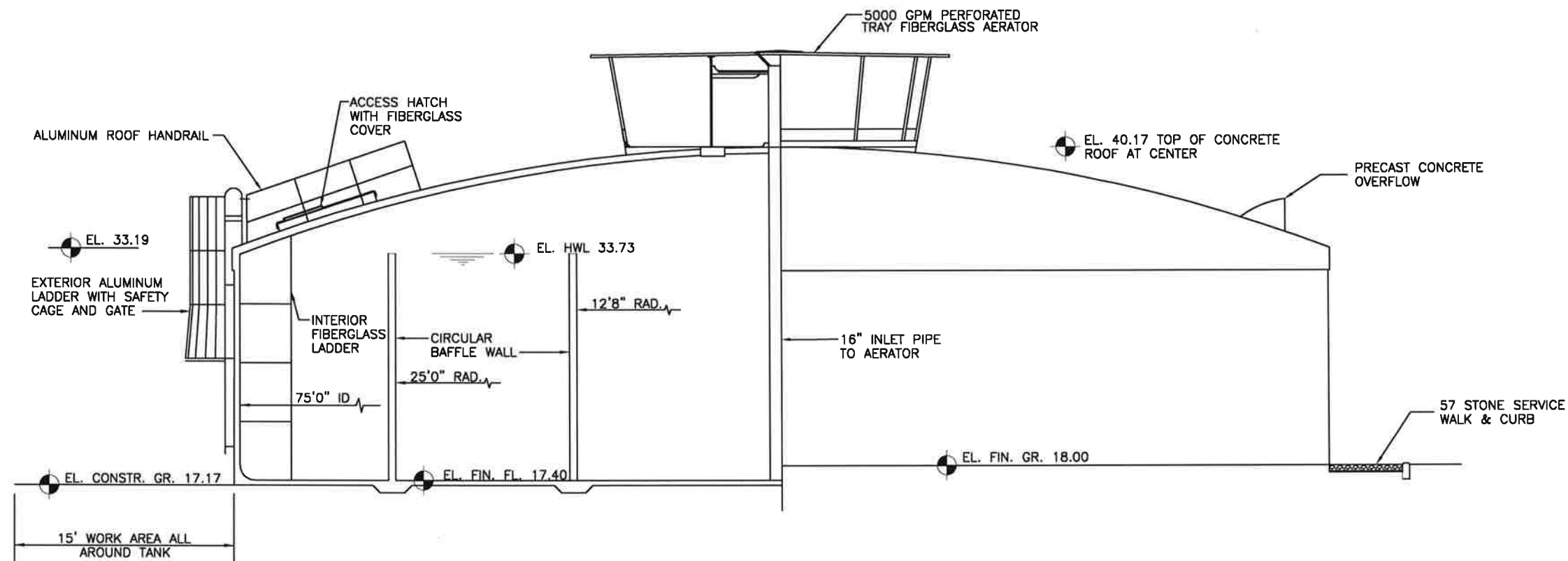
- NOTES:
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 - 2.) 109 INCHES OF TREE REMOVAL REPLACEMENT 8-3 INCH MAGNOLIAS



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 UTILITIES DEPARTMENT WASTEWATER DIVISION
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SITE PLAN

DESIGNED	JM	10/16/2019	PROJECT NO.	20005
DRAWN	BE	10/16/2019	SCALE	NOTED
CHECKED	JM	10/16/2019	SHEET	4
DATE			FILE	FDEP WP#3



SECTION - ELEVATION

NOTE: ALL FIBERGLASS COMPONENTS
IN CONTACT WITH POTABLE WATER
ARE COATED WITH NSF APPROVED EPOXY.

NOTES:

Material & Services By City of Fernandina Beach:

1. Clearing of the site, excavation, fill, compaction to an elevation 4" below top of floor slab on a 104' diameter circle.
2. Dewatering of the 104' diameter work area if required.
3. Furnish adequate working and open storage space for construction equipment and materials.
4. Water and electricity for construction.
5. Building Permit.
6. Testing and disinfection of tank.
7. Final backfill including gravel service walk & curb.
8. All water level controllers and level transmitter on tank roof and all electrical.

Materials & Services Furnished By THE CROM CORPORATION:

- A. Ready-Mixed Shotcrete and Concrete: Use Type II Cement.**
 1. 4000 psi concrete with 3/4" aggregate for floor and roof.
 2. 4000 psi shotcrete grout mix for tank wall and block cells.
- B. Material Testing: (Make 6" X 12" molded cylinders for all samples)**
 1. (3 cylinders per set) Test one at 7 days and two at 28 days.
 - a. 2 sets each for floor, roof, core wall, cover coat, and baffle wall.
- C. Curing:**
 1. Floor, roof and walls to be water-cured during tank construction.
- D. Prestressing Wire: Meets ASTM A821-93 TYPE B**
 1. Aw: 0.0206 square inch
 2. Dia: 0.1620 inch (8 gauge)
 3. Ultimate strength: 231,000 psi
 4. Initial stress: 145,600 psi
 5. Working stress: 115,000 psi-wall
- E. Reinforcing Steel:**
 1. ASTM A-615 grade 60, lap 38 diameters.
 2. Use 2" slab bolsters with plate to support floor resteel.
 3. Use 1 1/2" slab bolsters w/plastic tips to support bottom mat of roof resteel.
- F. Coatings:**
 1. Exterior: single coat of acrylic latex paint.
 2. Interior: two coats of Tenmec Potapox Series 20
- G. Standard Accessories:**
 1. 675 square inch precast overflow
 2. Fiberglass access hatch cover
 3. Interior fiberglass ladder
 4. Exterior aluminum ladder with safety cage and lockable gate
 5. Stainless steel wall manhole.
 6. Fiberglass aerator, 5000 GPM - perforated tray type, with four downcomers, plugs & grates; 4" drain & ball valve.
- H. Special Accessories:**
 1. 2" level control pipe on tank roof.
 2. Liquid level indicator
 3. Aluminum roof handrail
 4. Pipe bracket for 20" DIP overflow.
 5. SS hoist hooks 2 req. Place near aerator curb.
 6. One 1 1/2" thick X 12" wide boss on tank wall for 2" level control conduit.
 7. 3' sq. ss cover at 12'8" radius baffle opening
 8. PIPING:
 - 16" DR 18 C900 inlet to aerator
 - 20" DR 18 C900 outlet
 - 20" DR 18 C900 interconnect
 - 20" DR 18 C900 overflow
 - 8" DR 18 C900 drain
 9. SS Vortex plate for 20" DIP outlet



CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTEWATER DIVISION

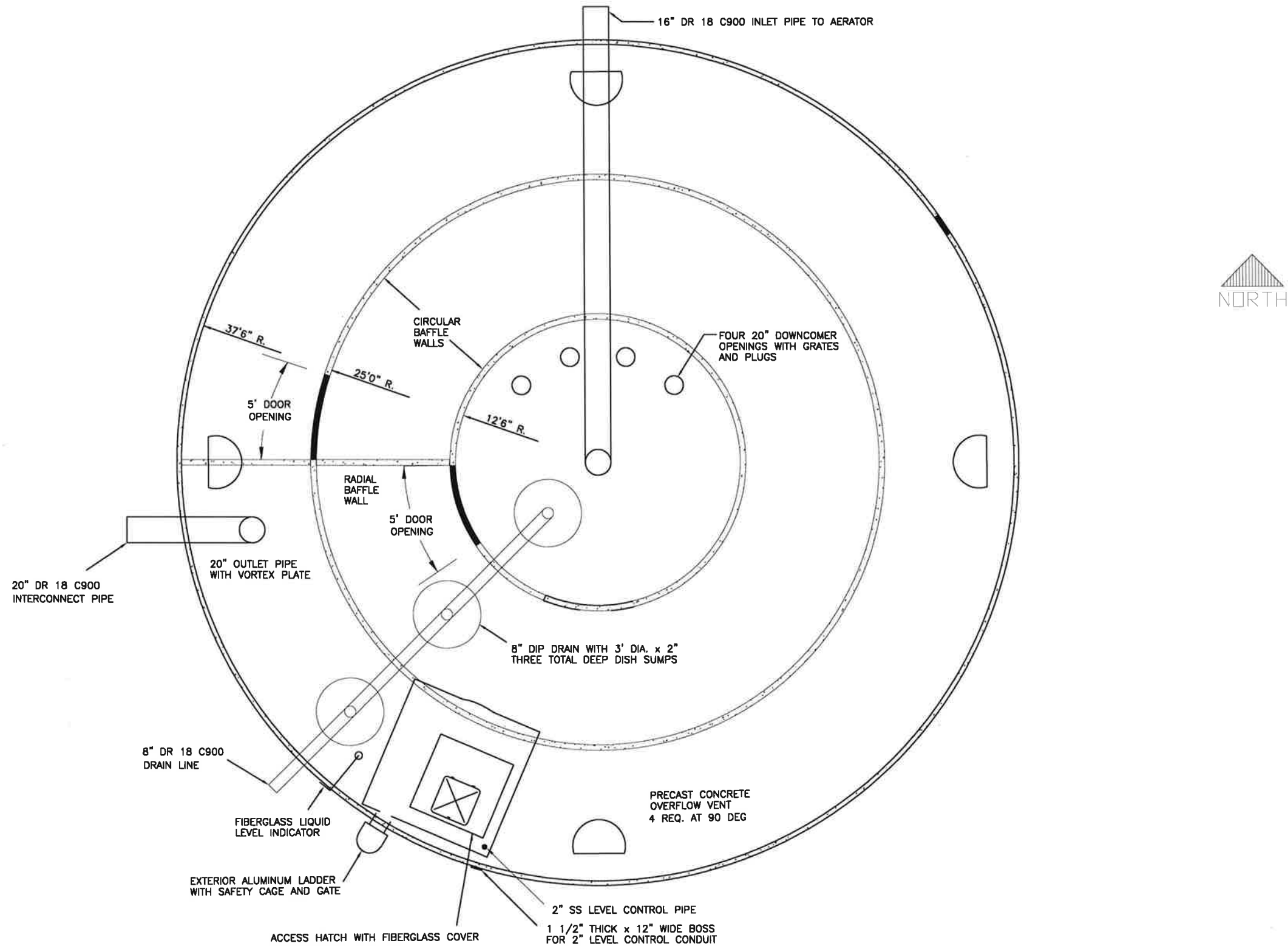
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TANK PROFILE VIEW

	BY	DATE	PROJECT NO.
DESIGNED	JM	10/16/2019	20005
DRAWN	BE	10/16/2019	SCALE:
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			SHEET
			5
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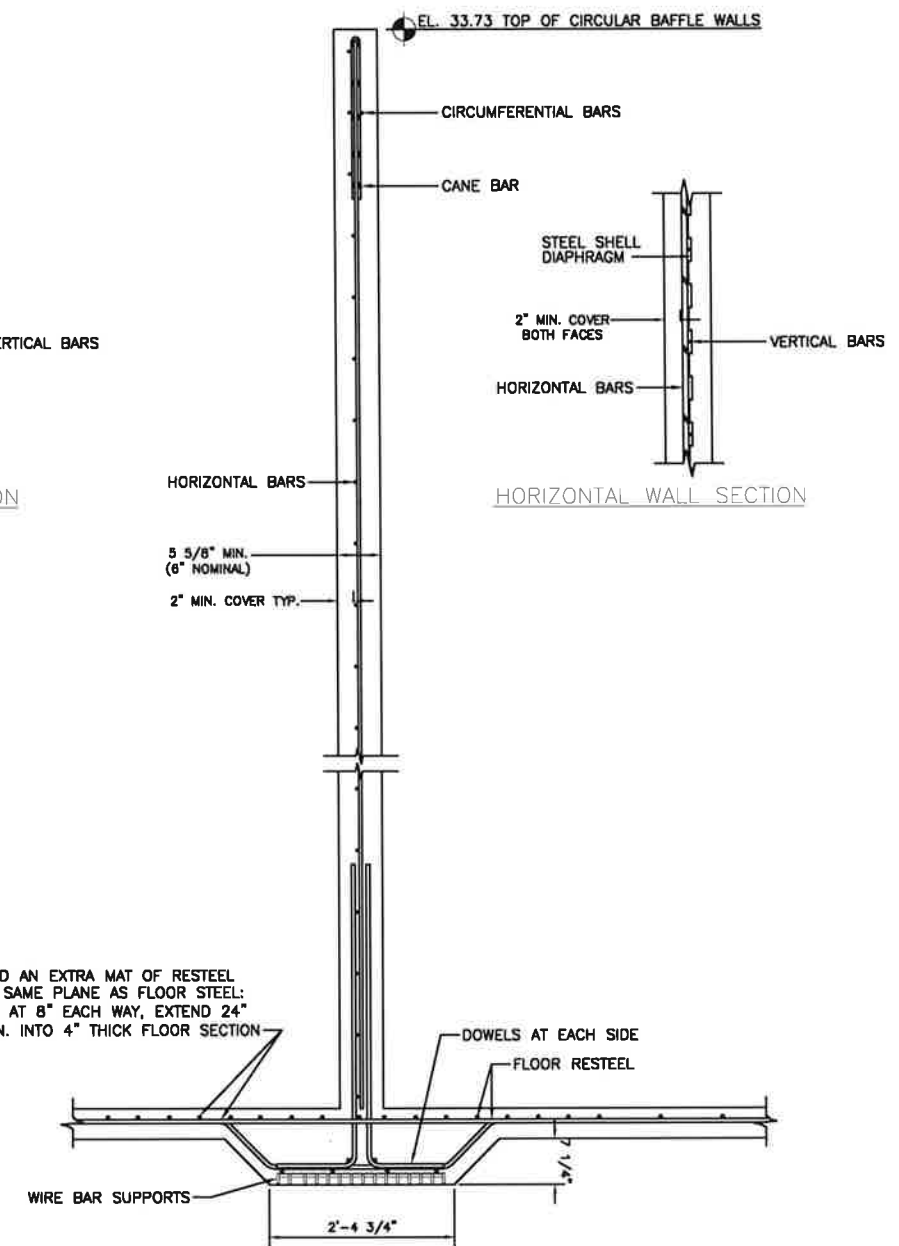
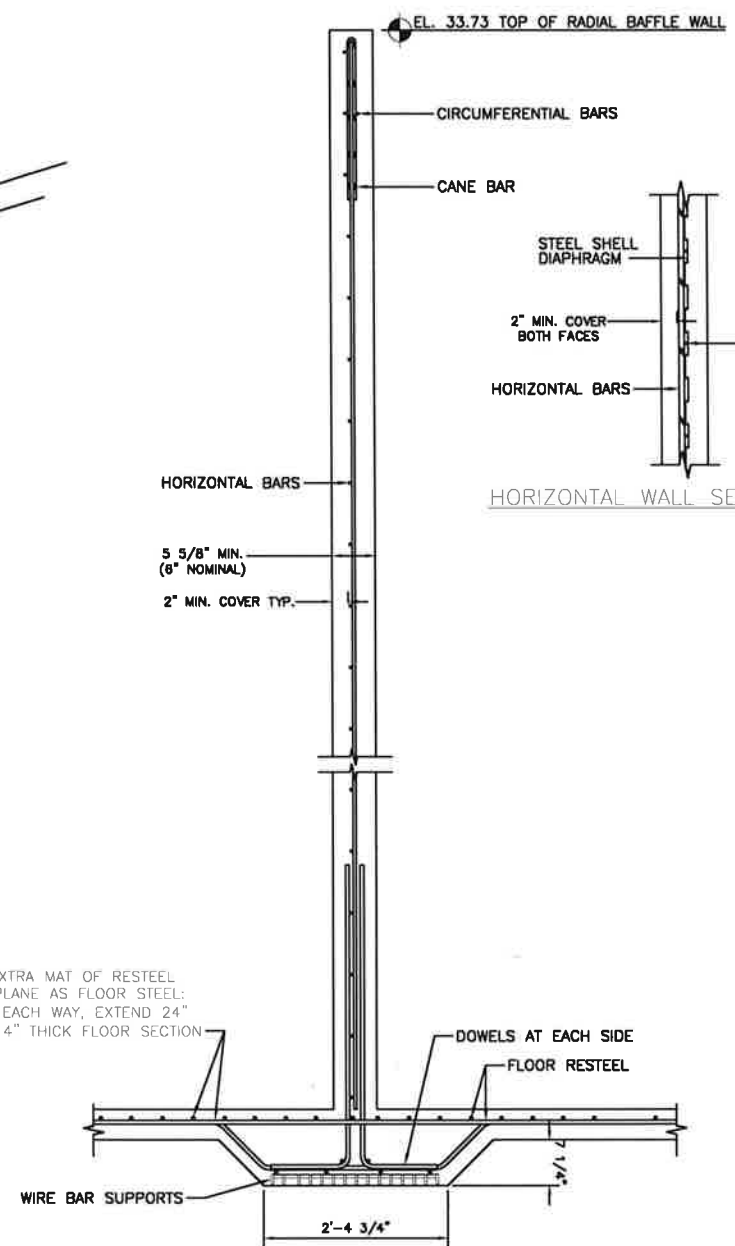
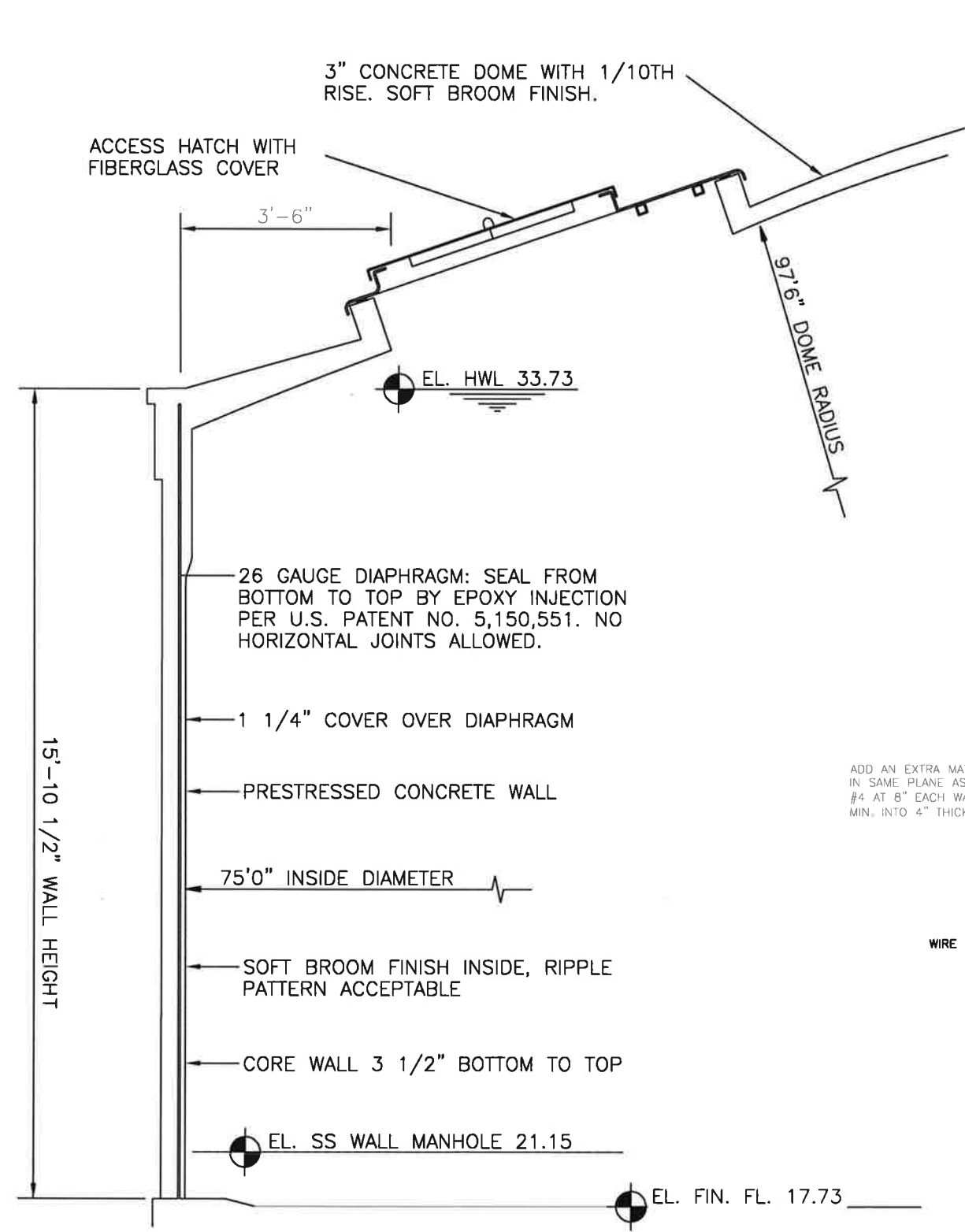
DATE

FILE: FDEP WP#3



TANK PLAN VIEW

		BY	DATE	PROJECT NO. 20005
	DESIGNED	JM	10/16/2019	SCALE: NOTED
	DRAWN	BE	10/16/2019	
	CHECKED	JM	10/16/2019	SHEET:
				6 OF 13
DATE: _____	FILE: SOLAR GROUND ARRAY3			



RADIAL SHOTCRETE BAFFLE WALL

CIRCULAR SHOTCRETE BAFFLE WALL

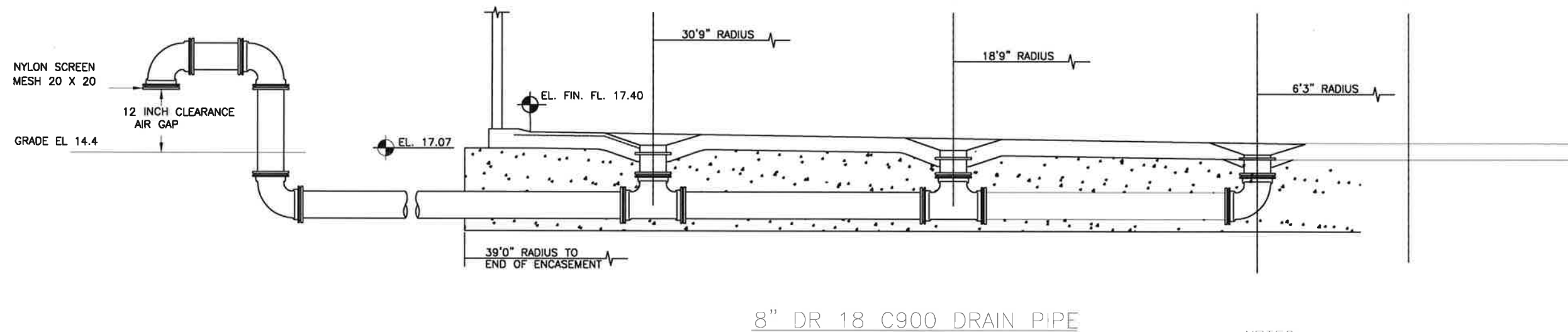
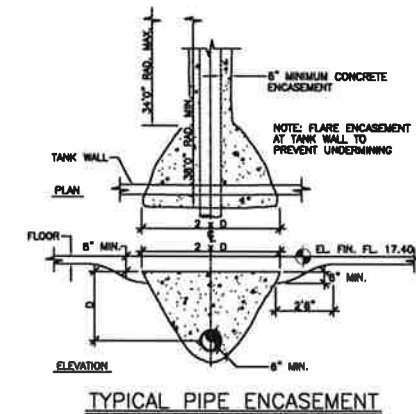
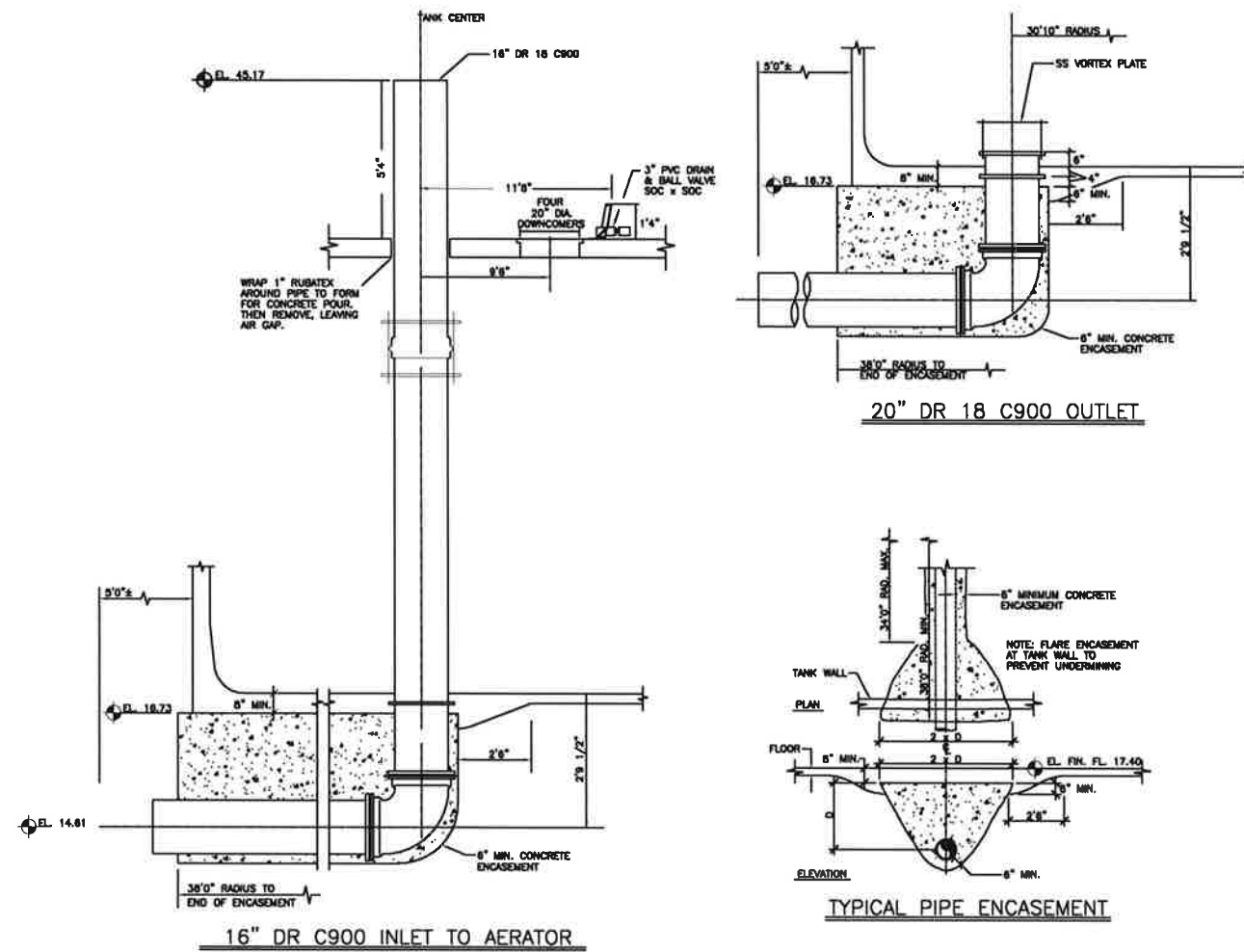
- NOTES:
- SHOTCRETE SHALL BE APPLIED BY OR UNDER DIRECT SUPERVISION OF NOZZLEMEN CERTIFIED BY THE AMERICAN CONCRETE INSTITUTE AS OUTLINED IN ACI CERTIFICATION PUBLICATION CP-60.
 - TENSION IN PRESTRESSING WIRE SHALL BE MEASURED BY AN ELECTRONIC DIRECT-READING STRESSOMETER ACCURATE TO WITHIN 2%.



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TANK WALL DETAIL

DESIGNED	JM	10/16/2019	PROJECT NO.	20005
DRAWN	BE	10/16/2019	SCALE	NOTED
CHECKED	JM	10/16/2019	SHEET	7
DATE			FILE: FDEP WP#3	OF 13



- NOTES:
 1. SUMPS 4 FT. DIA 6 INCH DEPTH
 2. WATER STOPS INSTALL 4\"/>



CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTEWATER DIVISION

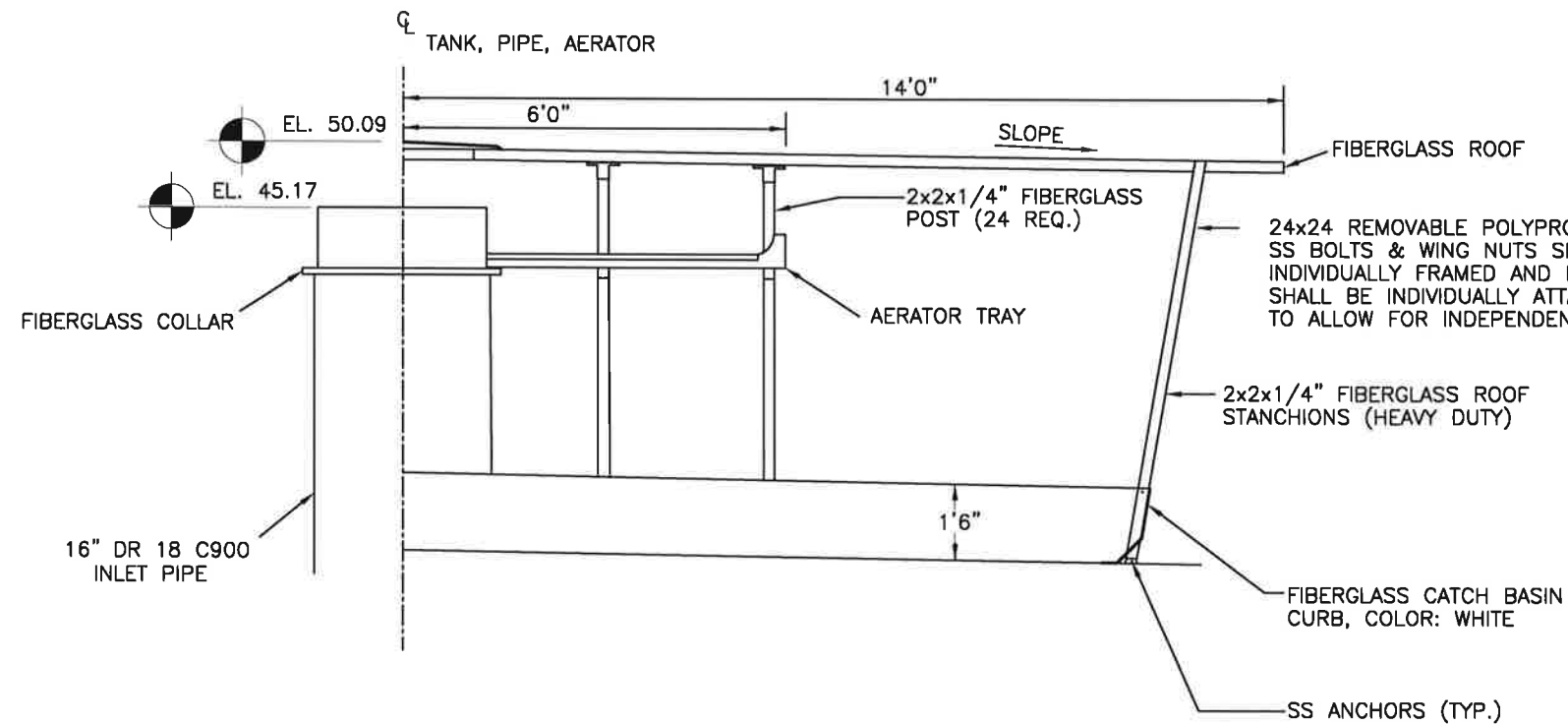
1180 S. 5TH STREET - FERNANDINA BEACH, FL 32034
 TELEPHONE (904) 310-3421 - FAX (904) 310-3461

TANK PIPING DETAIL

DATE: _____

	BY	DATE	PROJECT NO.
DESIGNED	JM	10/16/2019	20005
DRAWN	BE	10/16/2019	SCALE
CHECKED	JM	10/16/2019	NOTED
			SHEET
			8
			OF 13

FILE: FDEP WP#3

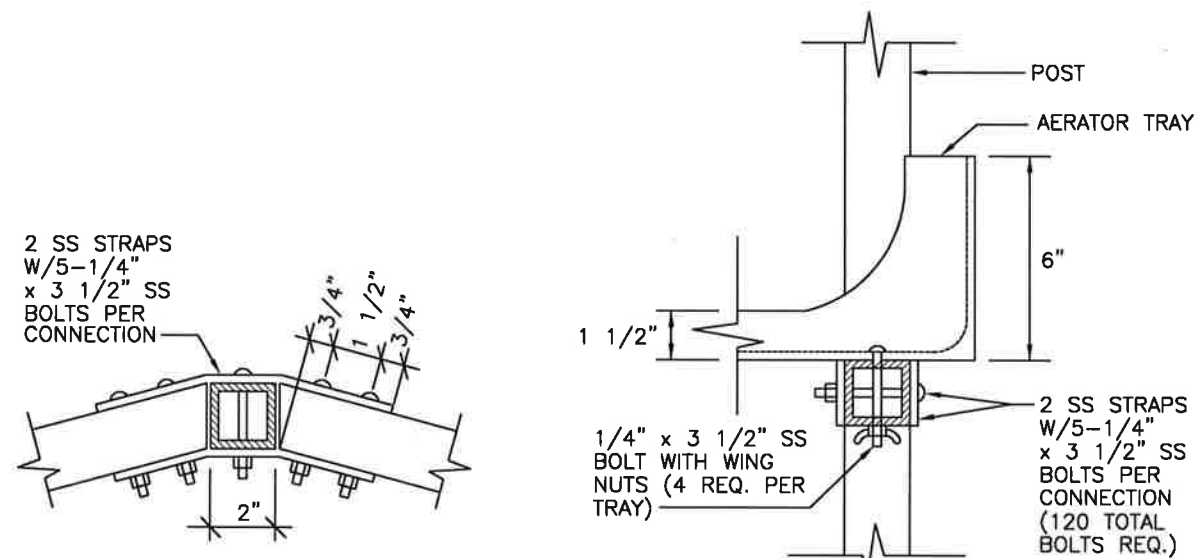


NOTES:

1. ALL WING NUTS MUST BE TIGHT WITH THREAD LOCK.
2. ALL OTHER NUTS ON AERATOR SHALL BE 316 SS LOCK NUTS.
3. ALL FIBERGLASS COMPONENTS IN CONTACT WITH POTABLE WATER TO BE COATED WITH NSF APPROVED EXPOXY.

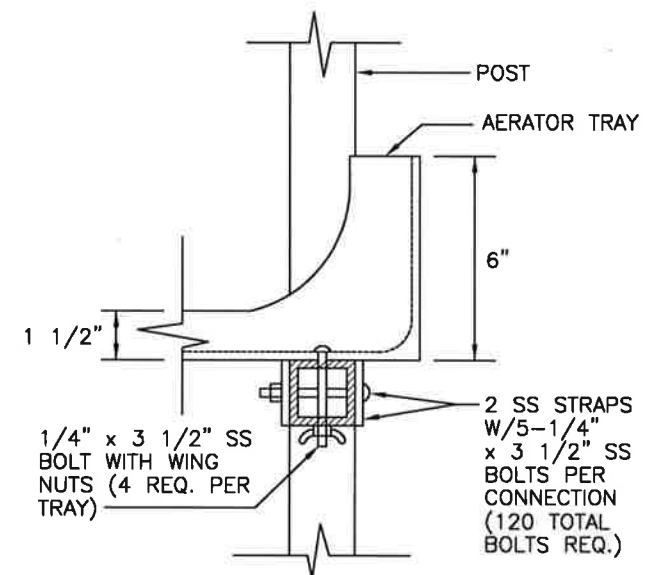
5000 GPM PERFORATED TRAY FIBERGLASS AERATOR

NTS



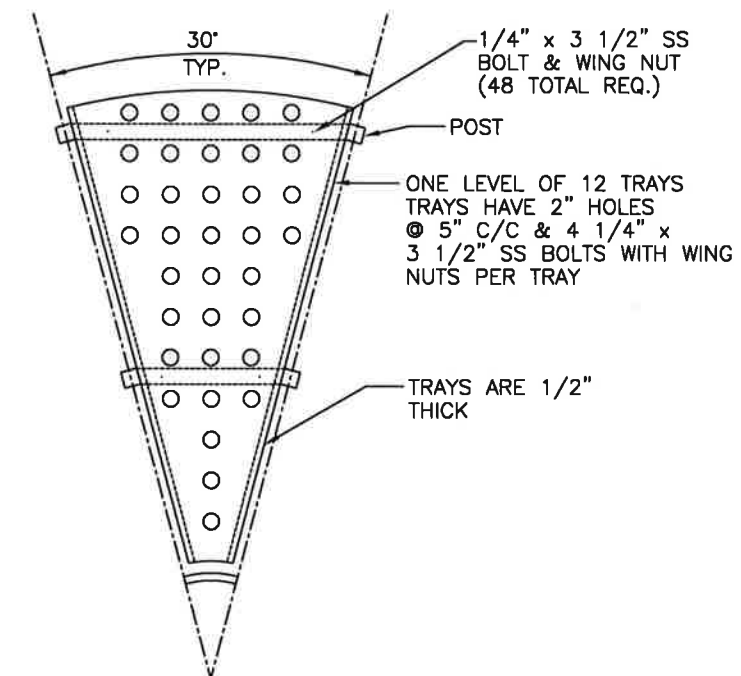
POST PLAN VIEW

NTS



TRAY ATTACHMENT DETAIL

NTS



AERATOR TRAY (12 REQ.)



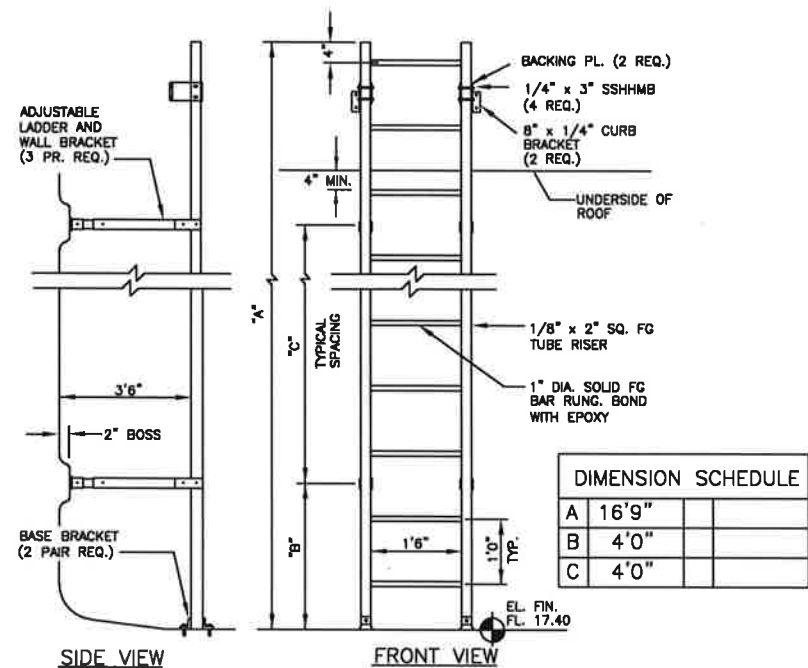
CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTEWATER DIVISION

1180 S. 5TH STREET - FERNANDINA BEACH, FL 32034
TELEPHONE: (904) 310-3421 - FAX (904) 310-3464

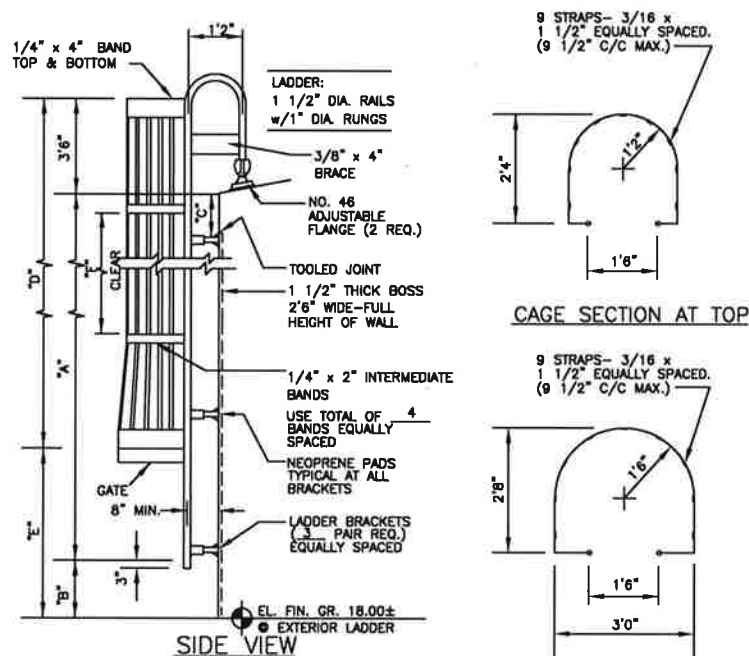
AERATOR

	BY	DATE	PROJECT NO.
DESIGNED	JM	10/16/2019	20005
DRAWN	BE	10/16/2019	SCALE:
CHECKED	JM	10/16/2019	NOTED
			SHEET:
			9
DATE:		FILE: FDEP WP#3	OF 13



NOTE: 1/4" x 2" FLAT BAR FIBERGLASS CROSS-BRACE FOR WALL BRACKET SUPPORTS ON LADDERS OVER 20'0" TALL. INSTALL EVERY OTHER BRACKET

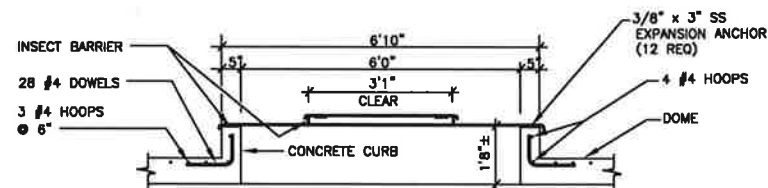
INTERIOR FIBERGLASS LADDER



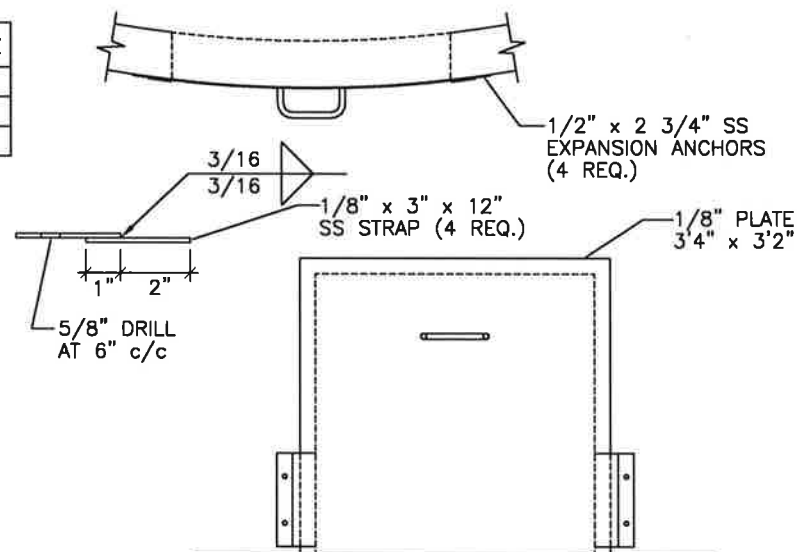
DIMENSION SCHEDULE			
A	14'0"	D	11'0"
B	1'2"±	E	7'8"
C	2'6"	F	3'4"

EXTERIOR ALUMINUM LADDER

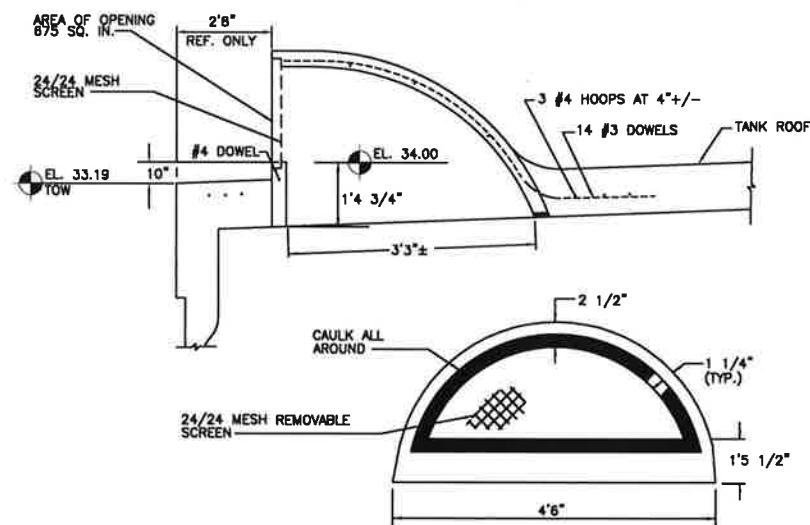
- NOTES: 1. ALL TUBULAR MATERIAL TO BE NOMINAL DIAMETER SCHEDULE 40 ALUMINUM PIPE 6061-T6 OR 6063-T6
2. PLATES AND GUSSETS TO BE STRUCTURAL GRADE ALUMINUM 6061-T6.



FIBERGLASS HATCH SECTION

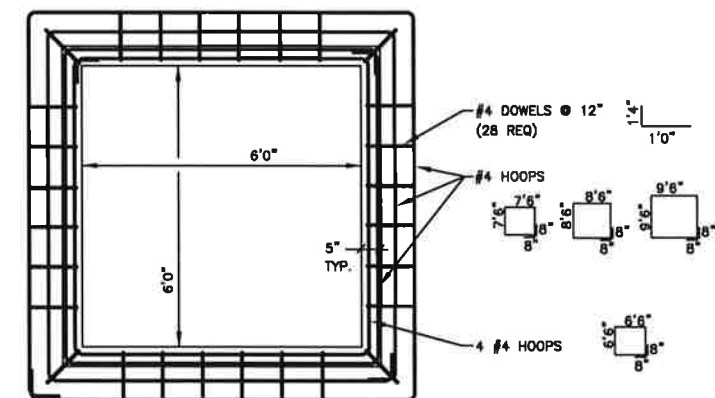
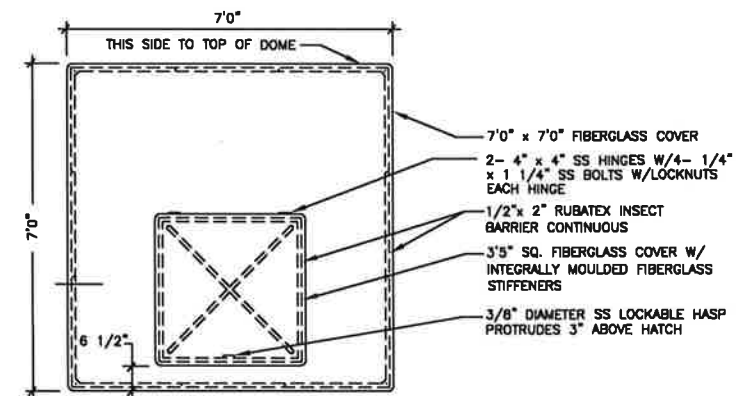


STAINLESS STEEL COVER

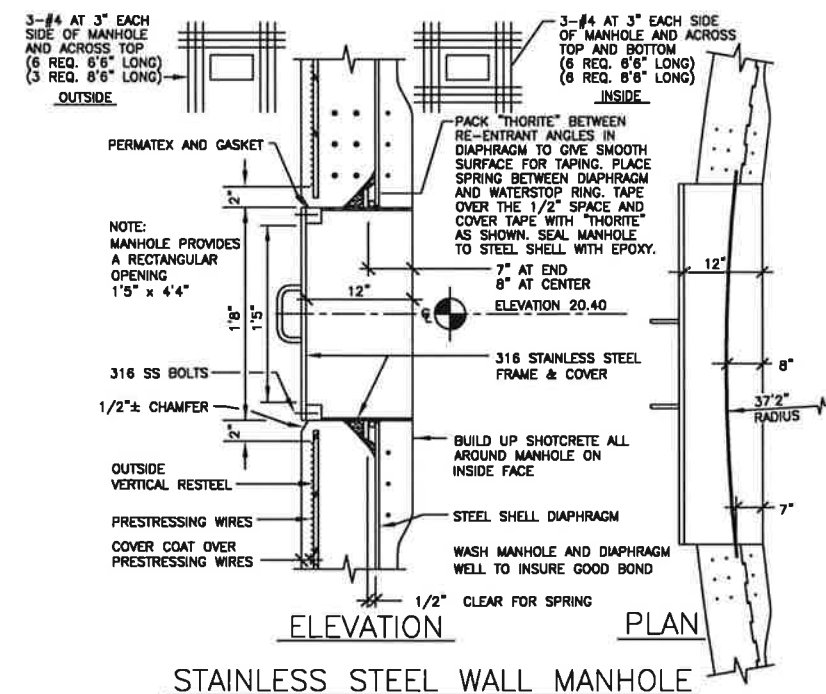


NOTE: KEEP SHOTCRETE REBOUND CLEANED OFF OF OVERFLOW. LEAVE PLYWOOD COVER IN PLACE UNTIL ALL SHOTCRETING IS COMPLETE

#675 PRECAST CONCRETE OVERFLOW



FIBERGLASS HATCH COVER



STAINLESS STEEL WALL MANHOLE



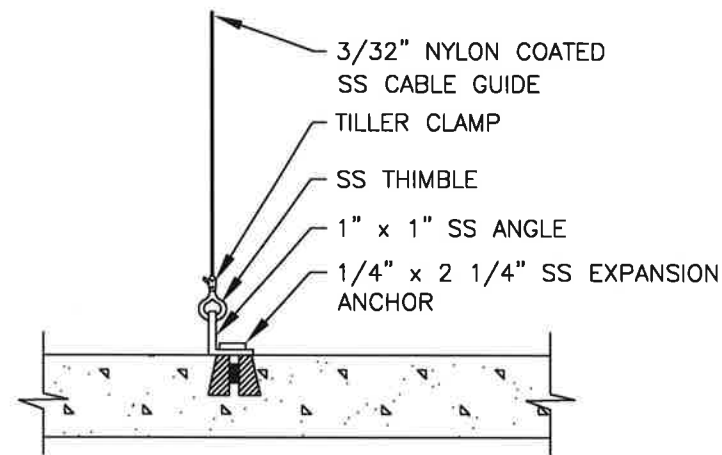
CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTE-WATER DIVISION

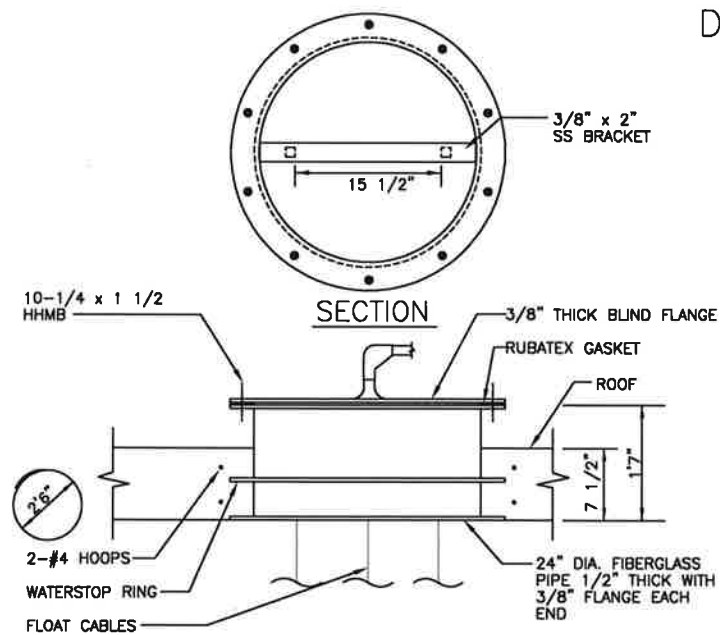
1180 S. 5TH STREET - FERNANDINA BEACH, FL 32034
TELEPHONE: (904) 310-3421 - FAX (904) 310-3464

DETAILS

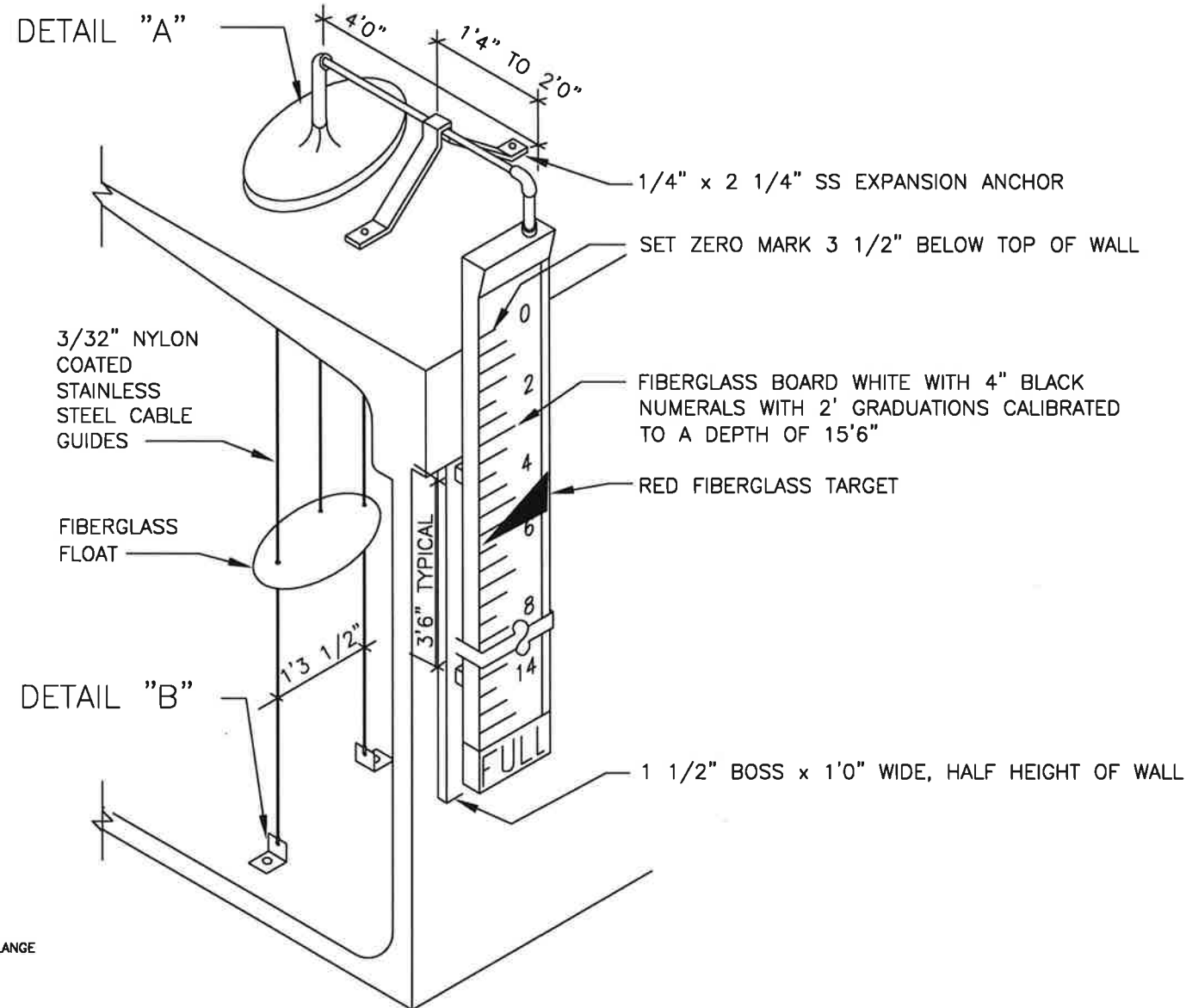
DESIGNED	JM	DATE	10/16/2019	PROJECT NO.	20005
DRAWN	BE	DATE	10/16/2019	SCALE	NOTED
CHECKED	JM	DATE	10/16/2019	SHEET	10 OF 13
DATE					FILE: FDEP WP#3



DETAIL "B"

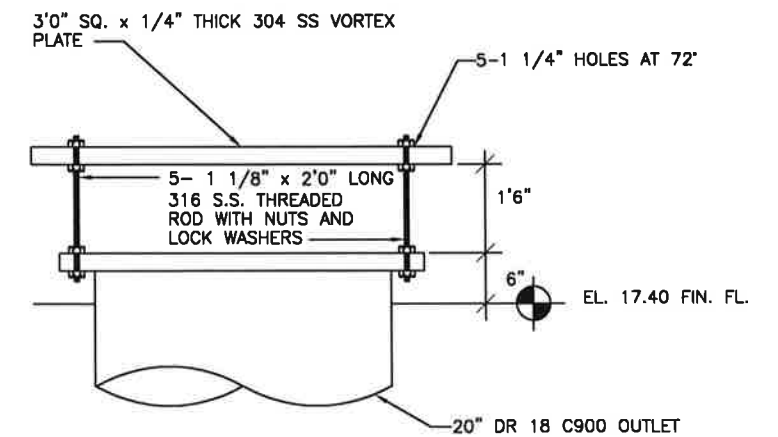


DETAIL "A"

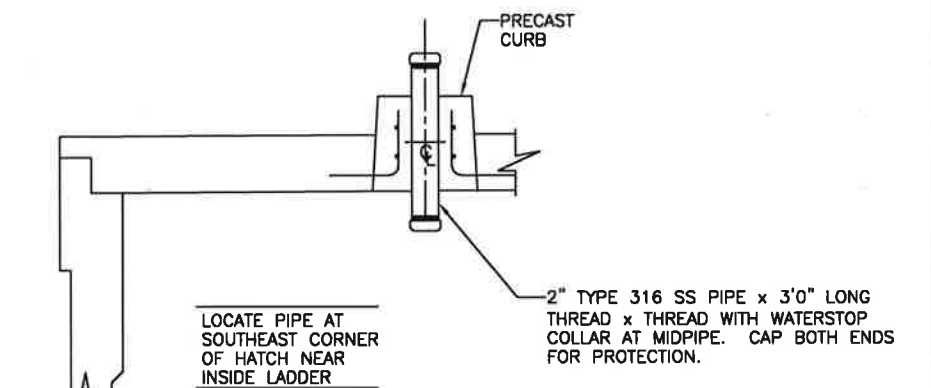


FIBERGLASS LIQUID
LEVEL INDICATOR

NTS



SS VORTEX PLATE
NTS



2" LEVEL CONTROL PIPE
NTS



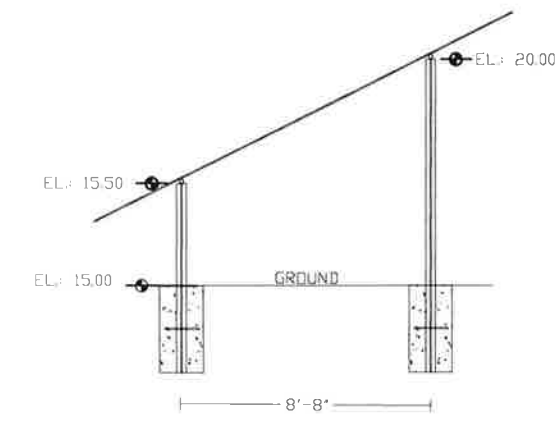
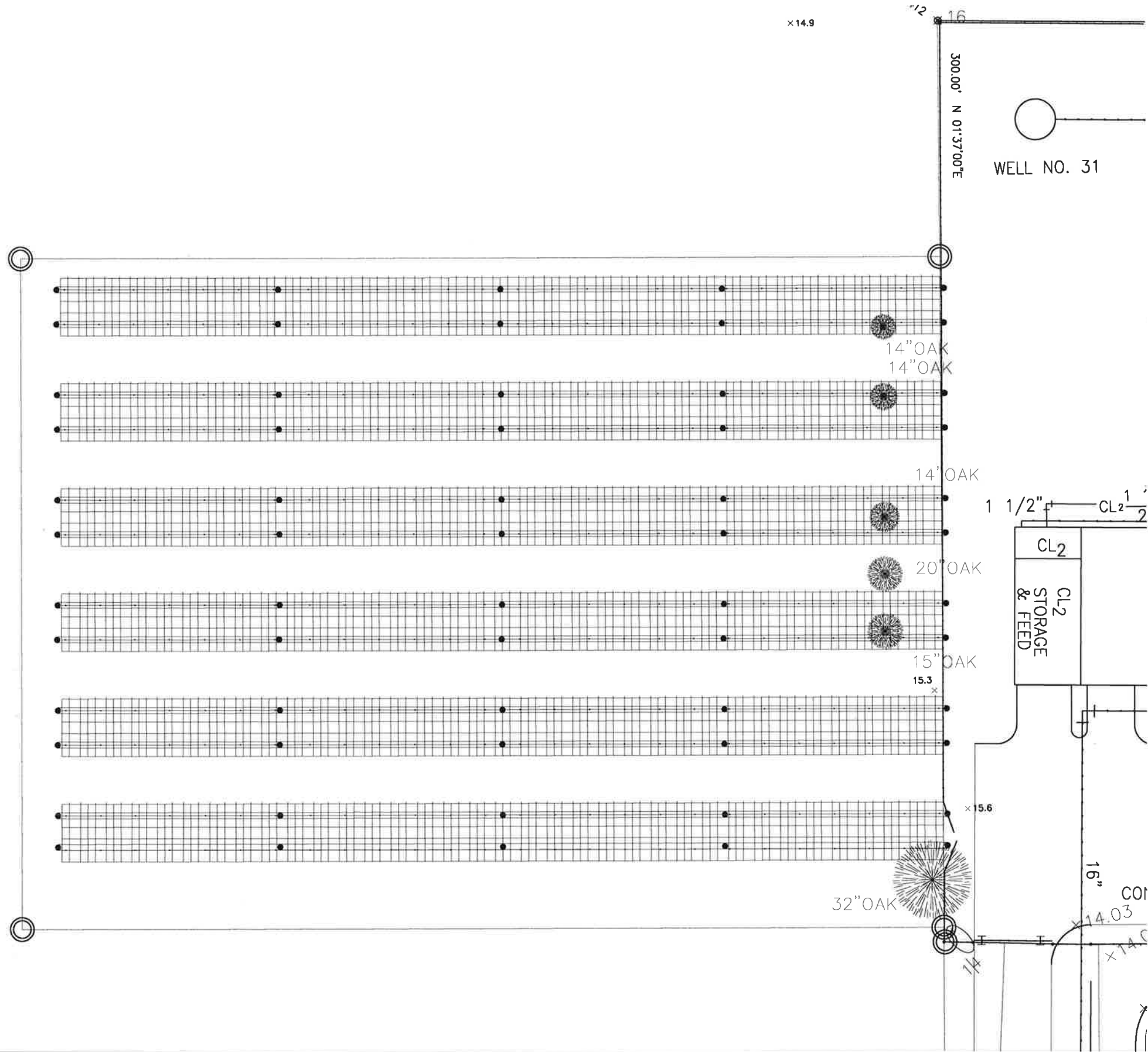
CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTEWATER DIVISION

1180 S. 5TH STREET - FERNANDINA BEACH, FL 32034
TELEPHONE: (904) 310-3421 - FAX (904) 310-3464

ACCESSORIES

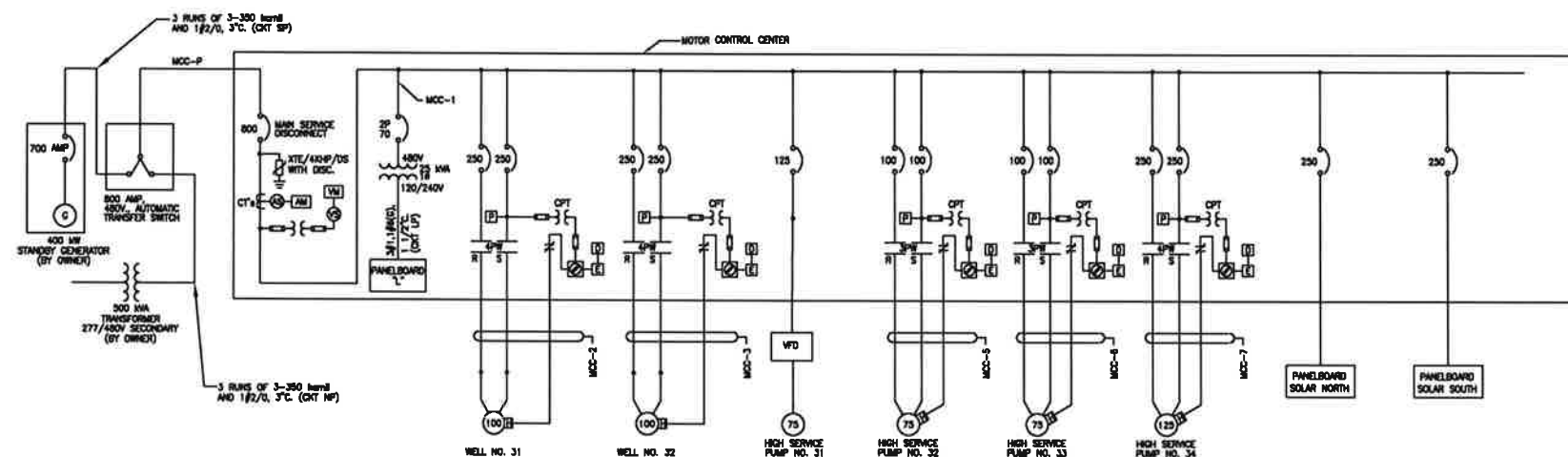
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DRAWN	BE	DATE	10/16/2019	SCALE	NOTED
CHECKED	JM	DATE	10/16/2019	SHEET	11
DATE		FILE	FDRP WP#3	OF 13	



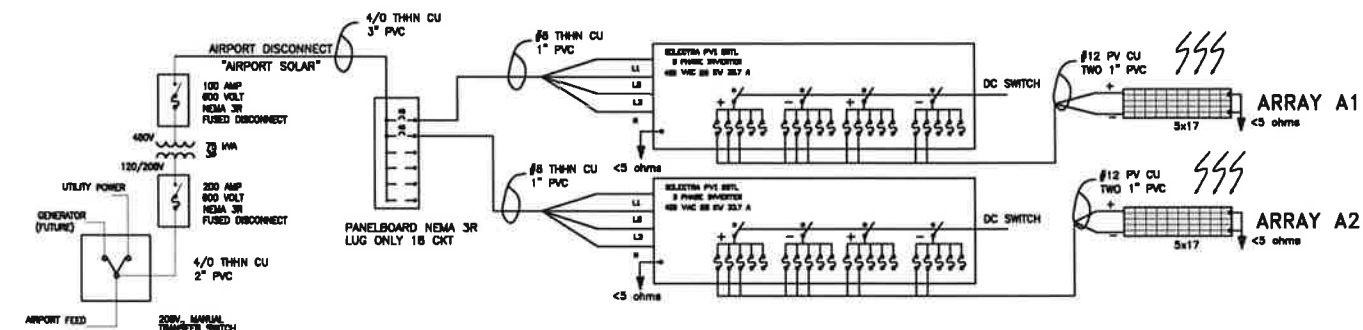
- NOTES:
- 1.) INSTALL SIX 224' X 1.5' X 3' FOOTERS WITH FOUR #5 REBARS
 - 2.) INSTALL 312 FOUR INCH SDR 26 POSTS WITH #5 REBAR CENTERED
 - 3.) INSTALL 1,320 FEET OF SCHEDULE 80 ALUMINUM 6106 PIPE
 - 4.) INSTALL 408 UNIRAC HD 204" RAILS
 - 5.) INSTALL 12 GROUNDS EAST END OF ARRAYS
 - 6.) ALL PIPE TO BE DRILLED TO BOLT ON POSTS
 - 7.) INSTALL 1,020 JINKO 400 WATT PANELS MOUNTED 5/16" SS TO UNIRAC
 - 8.) INSTALL 12 SOLETRICA
 - 9.) INSTALL 10,000# CHANCE SCREW ANCHORS FIVE PER FOOTER
 - 10.) REMOVE SIX OAK TREES TOTAL OF 109 INCHES
 - 11.) WELD 5/8" SS ONTO #5 REBAR CENTER OF POST TO HOLD PIPE
 - 12.) TIGHTEN 5/8 SS LOCK NUT TO HOLD PIPE TO 4 INCH COLUMN
 - 13.) FOOTER 5,000 PSI MIX SLUMP OF 4
 - 14.) POST 5,000 PSI PUMP MIX SLUMP OF 5
 - 15.) POST SPACED 9 FEET CENTER TO CENTER
 - 16.) INSTALL INVERTERS ON EAST END SIDE BY SIDE

SOLAR LAYOUT

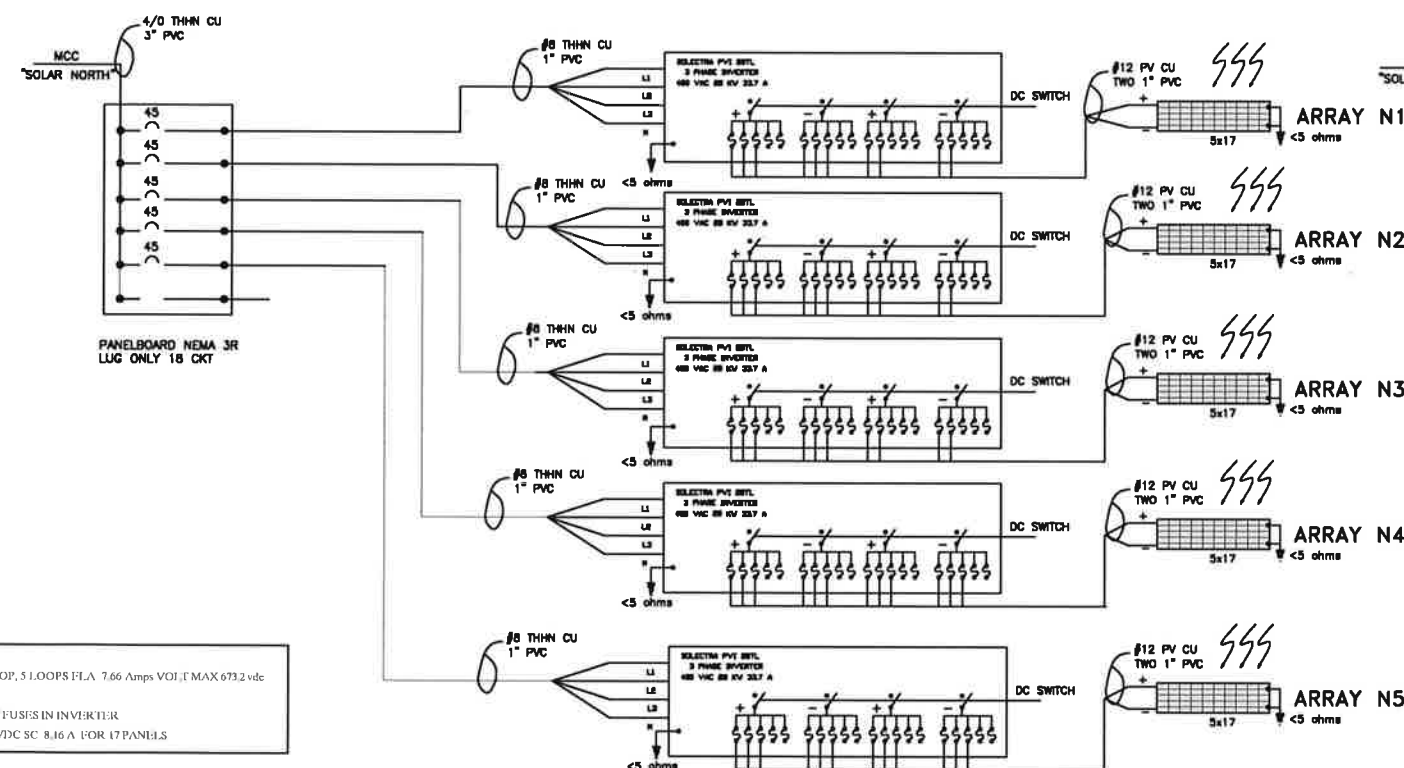
		BY	DATE	PROJECT NO. 201900000
	DESIGNED	JM	10/16/2019	SCALE: NOTED
	DRAWN	BE	10/16/2019	
	CHECKED	JM	10/16/2019	SHEET:
DATE: _____	FILE: SOLAR GROUND ARRAY3			



WATER PLANT 3 ONE LINE DIAGRAM



AIRPORT SOLAR POWER ONE LINE



- NOTES:
- ARRAY 17 PANELS PER LOOP, 5 LOOPS FLA 7.66 Amps VOLTE MAX 673.2 vdc
 - 1000 VOLT PV WIRE #12 CU
 - 15 AMP 1000 VOLT MIDGET FUSES IN INVERTER
 - OPEN CIRCUIT MAX 824.5 VDC SC 8.16 A FOR 17 PANELS



CITY OF FERNANDINA BEACH

UTILITIES DEPARTMENT WASTE/WATER DIVISION

1180 S. 5111 STREET - FERNANDINA BEACH, FL 32034
TELEPHONE (904) 310-3421 - FAX (904) 310-3464

ELECTRICAL

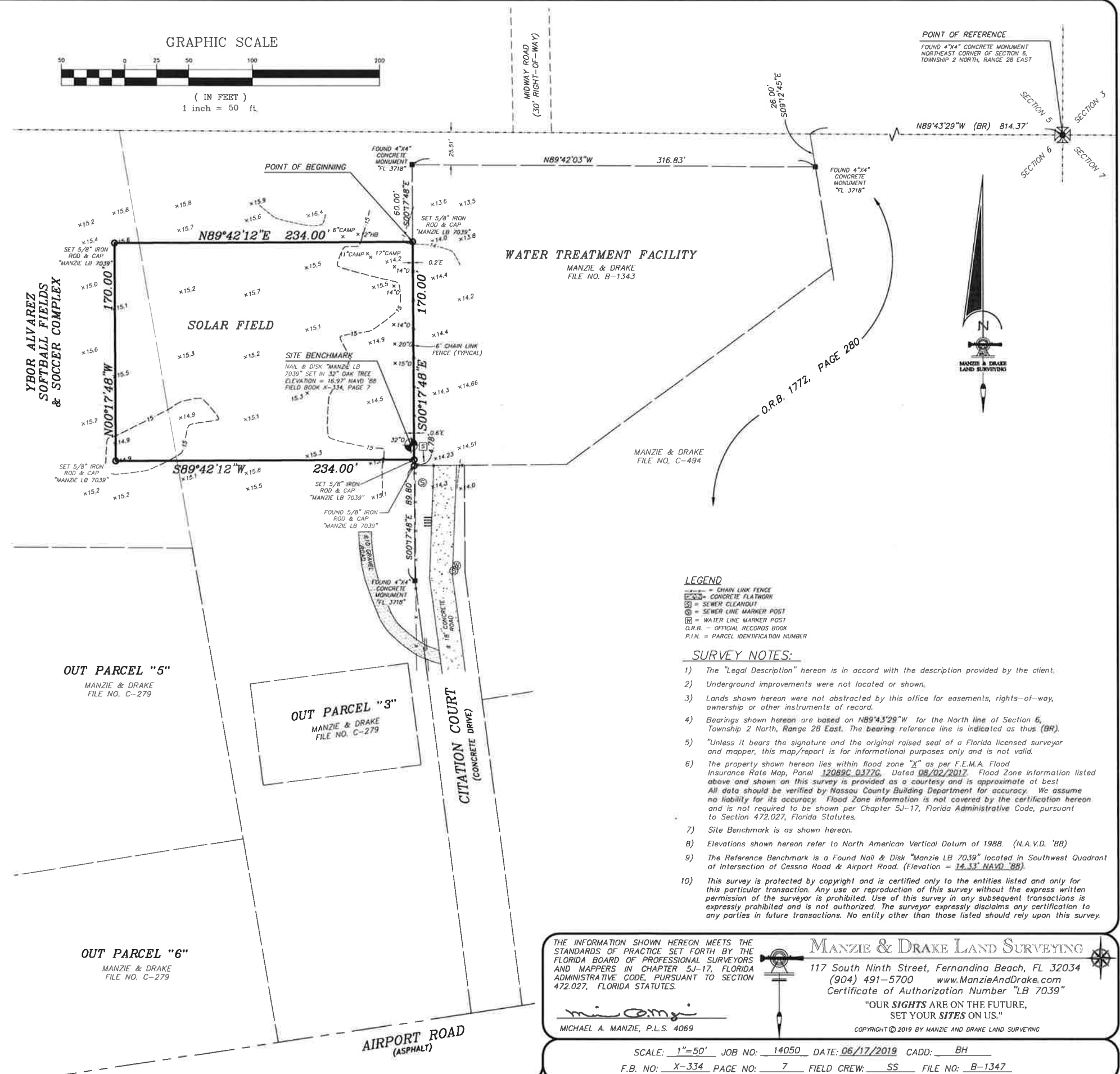
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DRAWN	BE	10/16/2019	SCALE	NOTED
CHECKED	JM	10/16/2019	SHEET	13
DATE			FILE: SOLAR GROUND ARRAY3	OF 13

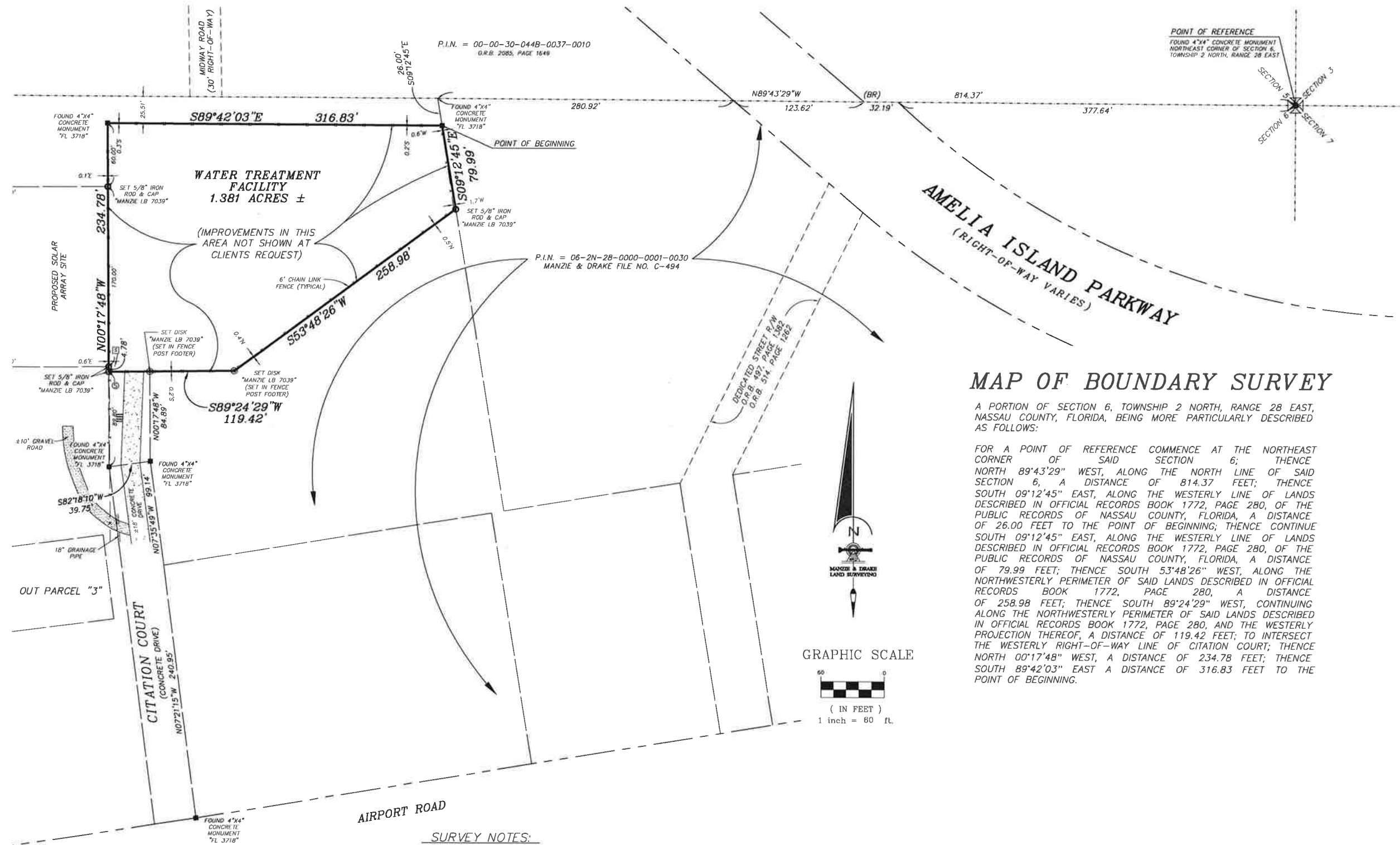
MAP OF BOUNDARY & TOPOGRAPHIC SURVEY

A PORTION OF SECTION 6, TOWNSHIP 2 NORTH, RANGE 28 EAST, NASSAU COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF REFERENCE COMMENCE AT THE NORTHEAST CORNER OF SAID SECTION 6; THENCE NORTH 89°43'29" WEST, ALONG THE NORTH LINE OF SAID SECTION 6, A DISTANCE OF 814.37 FEET; THENCE SOUTH 09°12'45" EAST, ALONG THE WESTERLY LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 1772, PAGE 280, OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA, A DISTANCE OF 26.00 FEET; THENCE NORTH 89°42'03" WEST, A DISTANCE OF 316.83 FEET; THENCE SOUTH 00°17'48" EAST A DISTANCE OF 60.00 FEET TO POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°17'48" EAST A DISTANCE OF 170.00 FEET; THENCE SOUTH 89°42'12" WEST A DISTANCE OF 234.00 FEET; THENCE NORTH 00°17'48" WEST A DISTANCE OF 170.00 FEET; THENCE NORTH 89°42'12" EAST A DISTANCE OF 234.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 0.913 ACRES MORE OR LESS.





SURVEY NOTES:

- 1) The "Legal Description" hereon is in accord with the description provided by the client.
- 2) Underground improvements were not located or shown.
- 3) Lands shown hereon were not abstracted by this office for easements, rights-of-way, ownership or other instruments of record.
- 4) Bearings shown hereon are based on N89°43'29"W for the North line of Section 6, Township 2 North, Range 28 East. The bearing reference line is indicated as thus (BR).
- 5) "Unless it bears the signature and the original raised seal of a Florida licensed surveyor and mapper, this map/report is for informational purposes only and is not valid."
- 6) The property shown hereon lies within flood zone "X" as per F.E.M.A. Flood Insurance Rate Map, Panel 12089C 0372G, Dated 08/02/2012. Flood Zone information listed above and shown on this survey is provided as a courtesy and is approximate at best. All data should be verified by Nassau County Building Department for accuracy. We assume no liability for its accuracy. Flood Zone information is not covered by the certification hereon and is not required to be shown per Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.
- 7) This survey is protected by copyright and is certified only to the entities listed and only for this particular transaction. Any use or reproduction of this survey without the express written permission of the surveyor is prohibited. Use of this survey in any subsequent transactions is expressly prohibited and is not authorized. The surveyor expressly disclaims any certification to any parties in future transactions. No entity other than those listed should rely upon this survey.

LEGEND

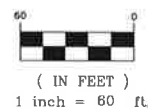
- x— = CHAIN LINK FENCE
- x— = CONCRETE FLATWORK
- x— = SEWER CLEANOUT
- x— = WATER LINE MARKER POST
- x— = OFFICIAL RECORDS BOOK
- P.I.N. = PARCEL IDENTIFICATION NUMBER

MAP OF BOUNDARY SURVEY

A PORTION OF SECTION 6, TOWNSHIP 2 NORTH, RANGE 28 EAST, NASSAU COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF REFERENCE COMMENCE AT THE NORTHEAST CORNER OF SAID SECTION 6; THENCE NORTH 89°43'29" WEST, ALONG THE NORTH LINE OF SAID SECTION 6, A DISTANCE OF 814.37 FEET; THENCE SOUTH 09°12'45" EAST, ALONG THE WESTERLY LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 1772, PAGE 280, OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA, A DISTANCE OF 26.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 09°12'45" EAST, ALONG THE WESTERLY LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 1772, PAGE 280, OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA, A DISTANCE OF 79.99 FEET; THENCE SOUTH 53°48'26" WEST, ALONG THE NORTHWESTERLY PERIMETER OF SAID LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 1772, PAGE 280, A DISTANCE OF 258.98 FEET; THENCE SOUTH 89°24'29" WEST, CONTINUING ALONG THE NORTHWESTERLY PERIMETER OF SAID LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 1772, PAGE 280, AND THE WESTERLY PROJECTION THEREOF, A DISTANCE OF 119.42 FEET; TO INTERSECT THE WESTERLY RIGHT-OF-WAY LINE OF CITATION COURT; THENCE NORTH 00°17'48" WEST, A DISTANCE OF 234.78 FEET; THENCE SOUTH 89°42'03" EAST A DISTANCE OF 316.83 FEET TO THE POINT OF BEGINNING.

GRAPHIC SCALE



THE INFORMATION SHOWN HEREON MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

Michael A. Manzie
MICHAEL A. MANZIE, P.L.S. 4069

MANZIE & DRAKE LAND SURVEYING

117 South Ninth Street, Fernandina Beach, FL 32034
(904) 491-5700 www.ManzieAndDrake.com
Certificate of Authorization Number "LB 7039"

"OUR SIGHTS ARE ON THE FUTURE,
SET YOUR SITES ON US."

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SCALE: 1"=60' JOB NO: 14050 DATE: 06/17/2019 CADD: BH
F.B. NO: X-334 PAGE NO: 7 FIELD CREW: SS FILE NO: B-1343