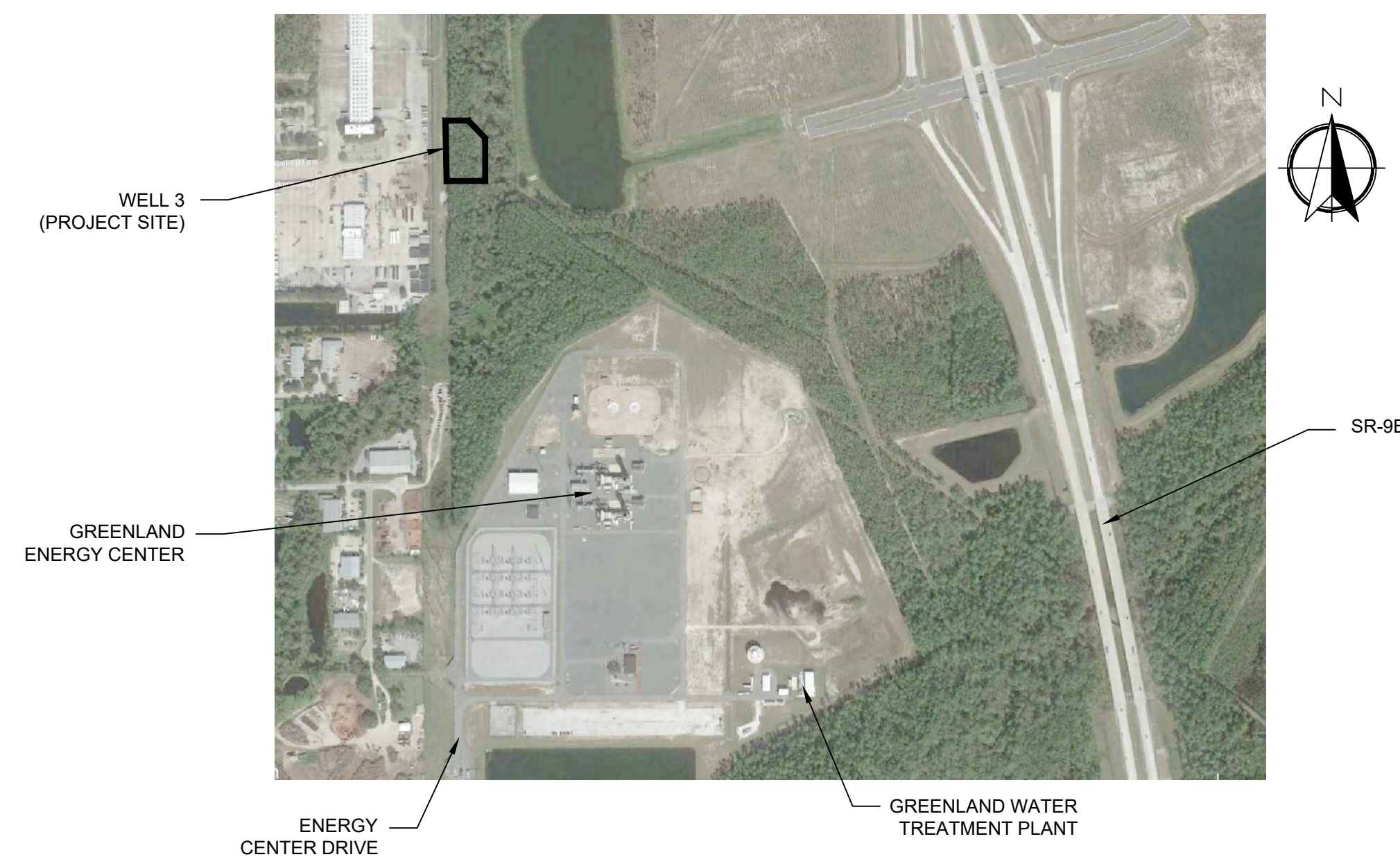


CONSTRUCTION DRAWINGS FOR GREENLAND WATER TREATMENT PLANT - BACKUP WELL (WELL NO. 3) WELL DRILLING

JEA PROJ NO.: 8004372



VICINITY MAP
NOT TO SCALE

PREPARED BY:

**CDM
Smith**

8381 Dix Ellis Trail, Suite 400
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

JEA_{sm}
Building Community_{sm}

ISSUED FOR BID
NOVEMBER 2018

1. CONTRACTOR SHALL CONTACT THE LOCAL PUBLIC UTILITIES LOCATING SERVICE TO LOCATE UTILITIES IN THE AREA PRIOR TO ANY EXCAVATION. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, WHETHER SHOWN OR NOT, AND FOR REPAIRING ALL DAMAGE TO UTILITIES.
2. CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL MOBILIZATION, STORAGE, AND STAGING AREAS, AS WELL AS ACCESS TO THE CONSTRUCTION SITES WITHIN THE JEA ELECTRICAL EASEMENT. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED AT ALL WORK SITES AND STAGING AREAS. CONTRACTOR SHALL FOLLOW ALL LOCAL GUIDELINES AND REGULATIONS REGARDING THE WORK, INCLUDING KEEPING MUD AND DIRT OFF OF PUBLIC ROADS AND PRIVATE ENTRANCES, AND REHABILITATING STAGING, STORAGE, OR STOCKPILING AREAS TO EQUAL OR BETTER THAN EXISTING CONDITION. PROVIDE SUITABLE TEMPORARY INLET PROTECTION FOR STORM WATER PIPE CULVERTS BENEATH ROADWAYS AND DRIVEWAYS AS NEEDED DURING CONSTRUCTION.
3. SOIL EXPLORATION WORK WAS PERFORMED BY MESKEL AND ASSOCIATES ENGINEERING, PLLC. OF JACKSONVILLE FL. SOILS EXPLORATION WORK IS SOLELY TO ASSIST BIDDERS IN ASSESSING THE NATURE AND EXTENT OF TESTING PROCEDURES REQUIRED TO MAKE THEIR OWN DETERMINATION OF ACTUAL SUBSURFACE CONDITIONS THAT WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. NO REPRESENTATION IS MADE OR WILL BE GIVEN BY THE ENGINEER CONCERNING ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED. ALL BIDDERS ARE DIRECTED PRIOR TO BIDDING TO CONDUCT ALL INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING SUCH CONDITIONS.
4. CONTRACTOR SHALL INSTALL THE APPROPRIATE SECURITY FENCING AND BARRIERS ON-SITE TO PREVENT PUBLIC ACCESS TO THE SITE AND ENSURE PUBLIC HEALTH AND SAFETY. REFER TO SPECIFICATION SECTION 01010 SUMMARY OF WORK.
5. ANY PUBLIC LAND CORNER, PROPERTY MONUMENTATION, OR BENCHMARK WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. ANY CORNER MONUMENT DISTURBED OR DESTROYED SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA, AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL CONTACT THE ENGINEER OR OFFICIAL JEA REPRESENTATIVE IMMEDIATELY REGARDING ANY CONFLICTS THAT ARISE DURING CONSTRUCTION OF WORK SHOWN ON THE DRAWINGS.
7. THE CONTRACTOR SHALL ADHERE TO ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS THAT HAVE BEEN OBTAINED.
8. ALL DRIVEWAYS, DRAINAGE PIPES, AND HEADWALLS SHALL BE RESTORED TO EQUAL OR BETTER THAN EXISTING CONDITION, IN BOTH NEW AND EXISTING RIGHTS-OF-WAY AND WITHIN ANY TEMPORARY EASEMENT AREAS. ANY STRUCTURES OR DRIVEWAYS DISTURBED OUTSIDE THE RIGHT-OF-WAY OR EASEMENTS SHALL ALSO BE FULLY RESTORED AT NO COST TO THE OWNER OR PROPERTY OWNER.
9. CONTRACTOR SHALL PROTECT ALL DRAIN STRUCTURES, PIPES, AND CULVERTS. MAINTAIN PROTECTION UNTIL DISTURBED AREAS ARE STABILIZED WITH GROUND COVER SUFFICIENT TO PREVENT EROSION.
10. CONTRACTOR SHALL INSTALL AT ALL DISTURBED DITCH LINES OR OTHER AREAS OF CONCENTRATED FLOW WHERE FLOW IS GREATER THAN 2 FPS OR GRADIENT IS GREATER THAN 2% A PERMANENT DITCH LINING TO AID IN THE ESTABLISHMENT OF A PERMANENT VEGETATIVE GROUND COVER.
11. WHEN EXCAVATED MATERIALS ARE PLACED ON ROADWAY SURFACES, THE CONTRACTOR SHALL PLACE SAND OR STONE SCREENINGS UNDERNEATH THE EXCAVATED MATERIALS AND SHALL REMOVE SAID MATERIALS AND WASH ALL RESIDUALS FROM THE SURFACES DAILY.
12. CONTRACTOR SHALL MAINTAIN AN ACCESS CORRIDOR THROUGH THE WORK AREA FOR EMERGENCY VEHICLES AT ALL TIMES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL STORM WATER SYSTEMS WHILE EXISTING STORM WATER PIPE SECTIONS ARE UTILIZED FOR FLUID MANAGEMENT. THE CONTRACTOR SHALL PROVIDE A SUBMITTAL WHICH PROVIDES DETAILS ON HOW THIS WILL BE ACCOMPLISHED INCLUDING THE USE OF DETENTION BASINS, BYPASS PUMPING, TEMPORARY PIPING, OR SIMILAR. AT ALL TIMES THE CONVEYANCE CAPACITY OF ALL EXISTING STORMWATER INFRASTRUCTURE SHALL BE MAINTAINED TO PREVENT FLOODING.
14. CONTRACTOR SHALL TEMPORARILY RELOCATE AND REPLACE ANY MONUMENTS, SIGNS, FENCES, MAILBOXES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION.
15. WHENEVER WATER SEEPS FROM A SLOPE FACE ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
16. THE CONTRACTOR SHALL INSTALL A STABILIZED CONSTRUCTION ENTRANCE AS DIRECTED BY THE ENGINEER AT LOCATIONS WHERE VEHICULAR TRAFFIC PASSES FROM DISTURBED AREAS ONTO ROADWAYS AS REQUIRED TO PREVENT THE MIGRATION OF SOIL FROM THE PROJECT AREA.
17. CARE SHALL BE EXERCISED AT ALL TIMES TO ENSURE THAT TURBID RUNOFF DOES NOT STAGE UP AND CREST OVER THE SERVICE ROAD CROWN INTO THE LANE MAINTAINED FOR TRAFFIC. CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROLS AT THE DIRECTION OF THE ENGINEER TO PREVENT SUCH OCCURRENCES. THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE CONSIDERED PART OF THE CONTRACT.
18. TOPOGRAPHIC SURVEY WAS PERFORMED BY:

19. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS WHEN HOLDING AND PROTECTING OF EXISTING UTILITIES IS REQUIRED WHETHER NOTED ON DRAWINGS OR NOT.

20. CONTRACTOR SHALL UTILIZE THE NECESSARY MEASURES FOR NOISE ABATEMENT AS REQUIRED BY THE OWNER DURING DRILLING AND CONSTRUCTION OF THE NEW WELL. THE SPECIFIC REQUIREMENTS SHALL BE DISCUSSED DURING THE PROJECT PRE-BID AND PRE-CONSTRUCTION MEETING.

AC - ASBESTOS CEMENT
A.G. - ALLEY GRATE
ARV - AIR RELEASE VALVE
BC - BOTTOM OF CURVE
BL - BASE LINE
B.M. - BENCH MARK
BOC - BACK OF CURB
C - CUT
CB - CHORD BEARING
C.B. - CATCH BASIN
C.E.P. - CITY ELECTRIC POLE
C.I. - CAST IRON
C&G - CURB & GUTTER
CL - CENTER LINE
CLA - CENTERLINE OF ASPHALT
CLDI - CONCRETE LINED DUCTILE IRON
CLF - CHAIN LINK FENCE
CH - CHORD DISTANCE
CMF - CONCRETE MONUMENT FOUND
C.M.P. - CORRUGATED METAL PIPE
C.M.P.A. - CORRUGATED METAL PIPE ARCH
CP - CONCRETE POWER POLE
CPP - CORRUGATED PLASTIC PIPE
CONC. - CONCRETE
CONST. - CONSTRUCTION
CTV - CABLE TV
CULV. - CULVERT
D.B.J. - DITCH BOTTOM INVERT
DB - DIRECT BURY
DI - DUCTILE IRON
Δ - DELTA ANGLE
D.W OR DR - DRIVEWAY
EA - EDGE OF ASPHALT
ECC - ECCENTRIC RDCR-REDUCER
ELEC - ELECTRIC
ELEV - ELEVATION
E.O.P. - EDGE OF PAVEMENT
ERCP - ELLIPTICAL REINFORCED CONC. PIPE
EXP. JT. - EXPANSION JOINT
F - FILL
FH - FIRE HYDRANT
FFE - FINISHED FLOOR ELEVATION
FL - FLOW LINE
FLG - FLANGED
FM - FORCEMAIN
FOC - FIBER OPTIC CABLE
G - GAS
GA - GUY ANCHOR
GALV. GLV - GALVANIZED
GV - GATE VALVE
H.C. - HIGH CURB
HDPE - HIGH DENSITY POLYETHYLENE PIPE
HFAC - HARNESS FLANGE ADAPTOR COUPLIN
H.W. HEAD WALL
ID - IDENTIFICATION
INT. - INTERSECTION
INV - INVERT
IP - IRON PIPE
IPF - IRON PIPE FOUND
IR - IRON

DETAIL
DESIGNATION

DETAIL

1/4" = 1'-0"

A

M-1

SHEET ON WHICH
DETAIL IS LOCATED

DETAIL
1/4" = 1'-0"

A — DETAIL DESIGNATION
M-1 — SHEET ON WHICH DETAIL IS TAKEN

IF SECTION OR DETAIL IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER MAY BE REPLACED WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN SHOULD INDICATE THE FIRST SHEET THE SECTION IS TAKEN FROM.

SECTION REFERENCE

1/4" = 1'-0"

SHEET ON WHICH SECTION IS TAKEN

SECTION SHOWN

PROPOSED

UTILITY SYMBOLS

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392


























































PROJECT NO. 6103-229758
FILE NAME: G002GNAL.DWG

SHEET NO

ISSUED FOR BID

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LEGEND

| | | | | | |
|---|---|------------------------|---|---|-------------------------------|
|  | = | ELECTRIC MANHOLE |  | = | REINFORCED CONCRETE PIPE |
|  | = | SANITARY MANHOLE |  | = | DUCTILE IRON |
|  | = | STORM DRAINAGE MANHOLE |  | = | POLYVINYL CHLORIDE |
|  | = | SIGN |  | = | AIR RELEASE VALVE |
|  | = | GUY ANCHOR |  | = | INVERT |
|  | = | WATER METER |  | = | ELEVATION |
|  | = | VALVE |  | = | WETLAND FLAG |
|  | = | FIRE HYDRANT |  | = | CHAIN LINK FENCE |
|  | = | SPRINKLER HEAD |  | = | REAL ESTATE |
|  | = | UNDERGROUND STORM |  | = | WATER METER |
|  | = | CONCRETE POWER POLE |  | = | WATER VALVE |
|  | = | WOOD POWER POLE |  | = | CONCRETE |
|  | = | CONCRETE LIGHT POLE |  | = | NORTH AMERICAN VERTICAL DATUM |
|  | = | OVERHEAD UTILITY |  | = | SQUARE |
|  | = | UNDERGROUND ELECTRIC |  | = | PAGE |
|  | = | ELECTRICAL CONTROL BOX |  | = | IRON ROD FOUND |
|  | = | TEMPORARY BENCHMARK |  | = | OFFICIAL RECORDS VOLUME |
|  | = | RIGHT OF WAY |  | = | LICENSED BUSINESS |
|  | = | TOP OF BANK |  | = | BORING NUMBER |
|  | = | TOE OF SLOPE |  | = | TEST HOLE NUMBER |
|  | = | BAY TREE |  | = | EDGE OF ASPHALT |
|  | = | MIMOSA TREE |  | = | FLOW LINE |
|  | = | SWEETGUM TREE |  | = | BACK OF CURB |
|  | = | OAK TREE |  | = | METAL POST |
|  | = | PERSIMMON TREE |  | = | FIRE HYDRANT |
|  | = | CHERRY TREE |  | = | METAL |
|  | = | PINE TREE |  | = | SOIL BORING |
| | | |  | = | DOUBLE TREE TRUNK |
| | | |  | = | TREE TRUNK CLUSTER |
| | | |  | = | UNDERGROUND WATER LINE |

SURVEYOR'S NOTES:

- 1) THE UNDERSIGNED SURVEYOR HAS NOT BEEN PROVIDED A CURRENT TITLE OPINION OF MATTERS AFFECTING THE TITLE TO OR BOUNDARY OF THE SUBJECT PROPERTY. IT IS POSSIBLE THAT THERE ARE DEEDS OF RECORD, UNRECORDED DEEDS, EASEMENTS OR OTHER INSTRUMENTS WHICH MAY AFFECT THE BOUNDARIES.
- 2) OWNERSHIP OF FENCES, IF ANY, IS UNDETERMINED.
- 3) THIS IS A SURFACE LOCATION SURVEY ONLY; UNDERGROUND UTILITIES, IF ANY, NOT DETERMINED.
- 4) THIS IS A COPYRIGHTED DOCUMENT; NO PORTION OF IT MAY BE REPRODUCED, WHOLLY OR IN PART, WITHOUT THE EXPRESSED WRITTEN PERMISSION OF R.E. HOLLAND & ASSOCIATES, INC.
- 5) THE STREET ADDRESS, IF SHOWN, IS AS FIELD POSTED ON DATE OF SURVEY.
- 6) THIS SURVEY MAY NOT REFLECT OR DETERMINE OWNERSHIP.
- 7) THE RELATIVE LINEAR DISTANCE ACCURACY FOR THIS SURVEY EXCEEDS 1:10,000.
- 8) ALL MEASUREMENTS ARE IN U.S. STANDARD FEET AND WERE MADE WITH A THEODOLITE AND ELECTRONIC DISTANCE MEASURING DEVICE AND/OR STEEL TAPE.
- 9) THE FIELD WORK WAS COMPLETED ON 10-24-2018.
- 10) TREES NOT LOCATED EXCEPT AS SHOWN HEREON.
- 11) TREES SHOWN HEREON WERE LOCATED IN ACCORDANCE WITH CURRENT CITY OF JACKSONVILLE TREE ORDINANCE.
- 12) MEASUREMENTS SHOWN ON TREES REFER TO DIAMETER DIMENSIONS AT BREAST HEIGHT LEVEL (DBH)
- 13) COORDINATES SHOWN HEREON ARE IN US SURVEY FEET AND ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT, AS DERIVED FROM THE TRIMBLE VIRTUAL REFERENCE STATION NETWORK.
- 14) BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A BOUNDARY SURVEY BY DEGROVE SURVEYORS, INC., CERTIFIED TO JEA AND DATED AUGUST 28, 2007.

Professional Surveyors & Mappers

R. E. Holland
& Associates, Inc.

9770 BAYMEADOWS ROAD, SUITE 125 PH# (904)260-6300
JACKSONVILLE, FLORIDA 32256 FAX (904)646-3272
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6755

GREENLAND ENERGY PARK

THIS SURVEY IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND THE RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

PLAN

JEAN

GREENLAND WATER TREATMENT PLANT
- BACKUP WELL (WELL NO. 3)
WELL DRILLING

EXISTING SITE SURVEY

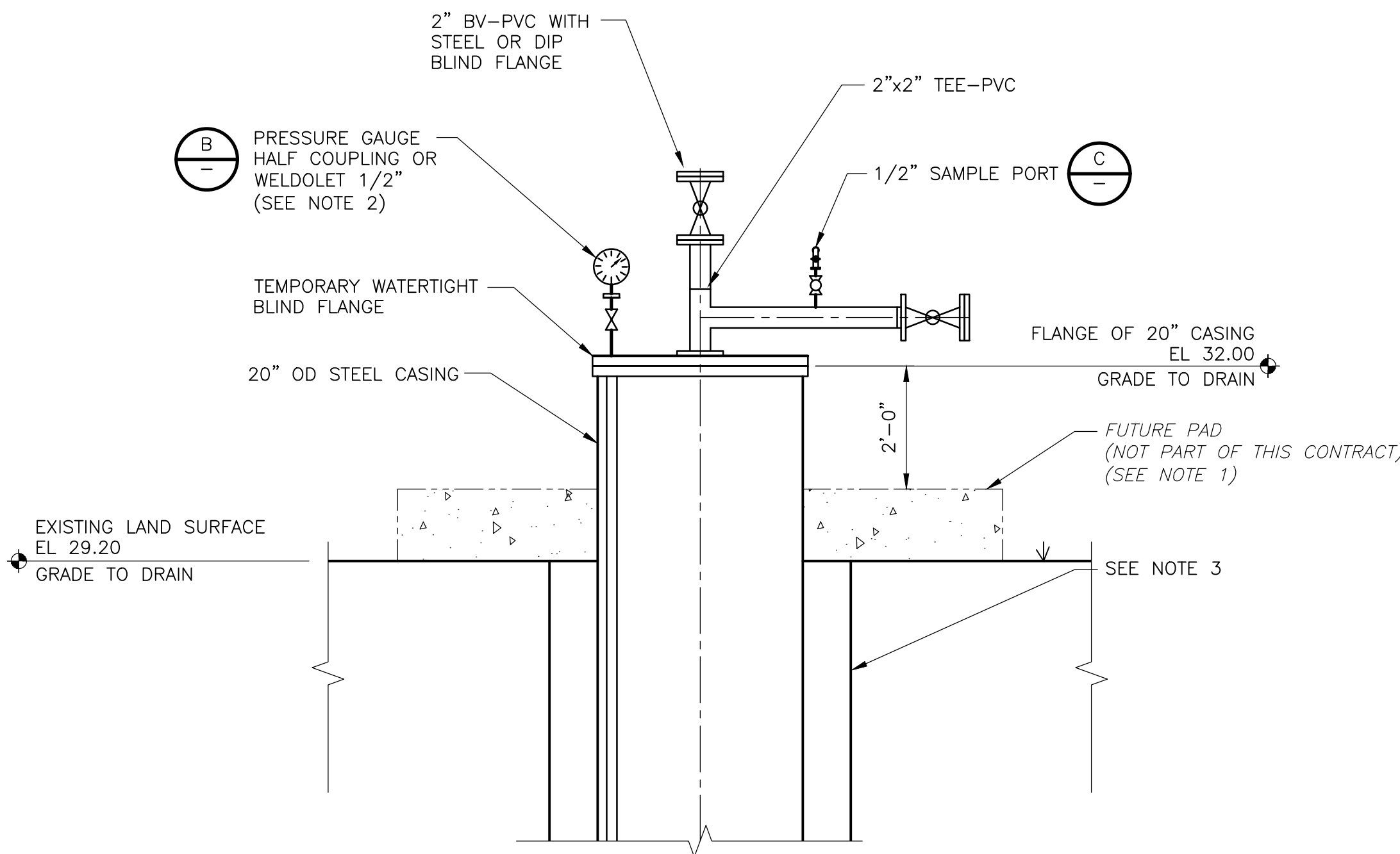
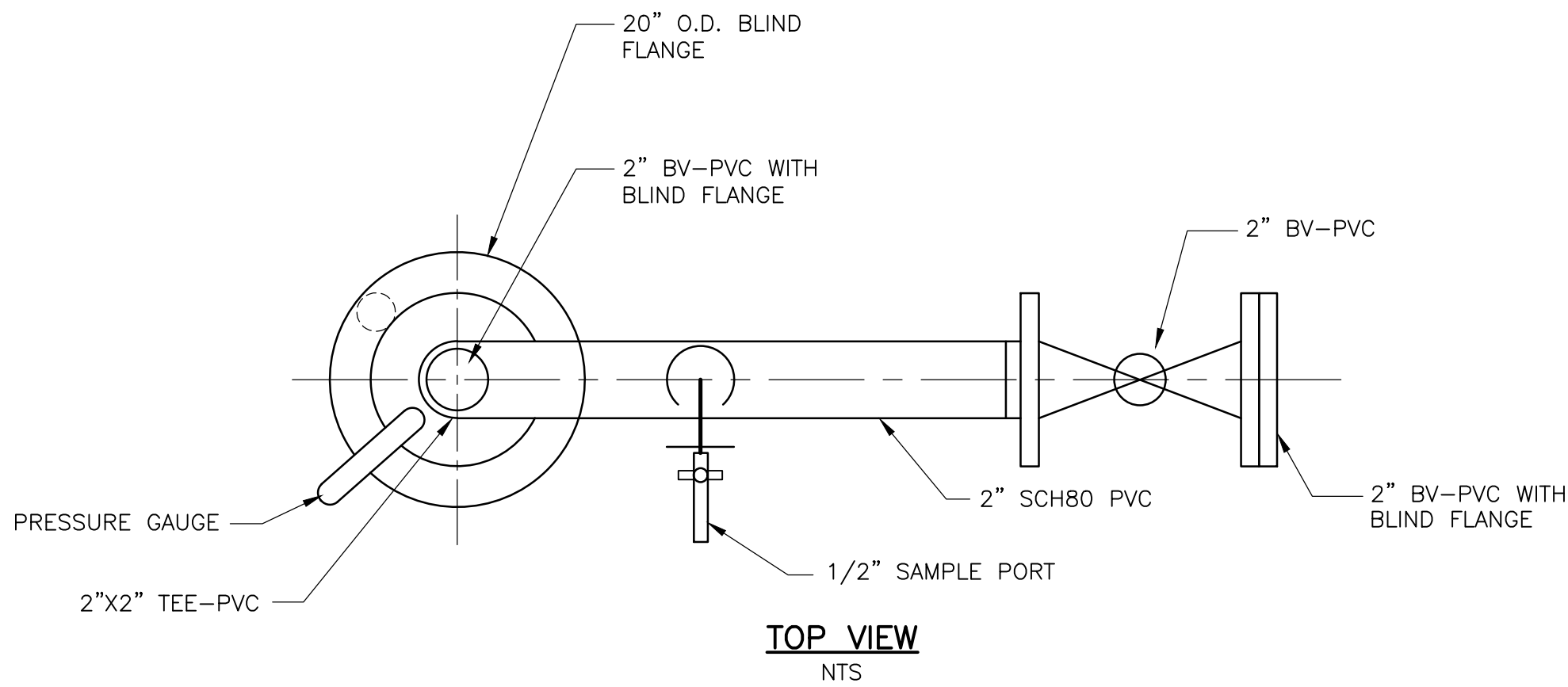
PROJECT NO. 6103-229758
FILE NAME: C001STPL.DWG

SHEET NO

C-1

ISSUED FOR BID

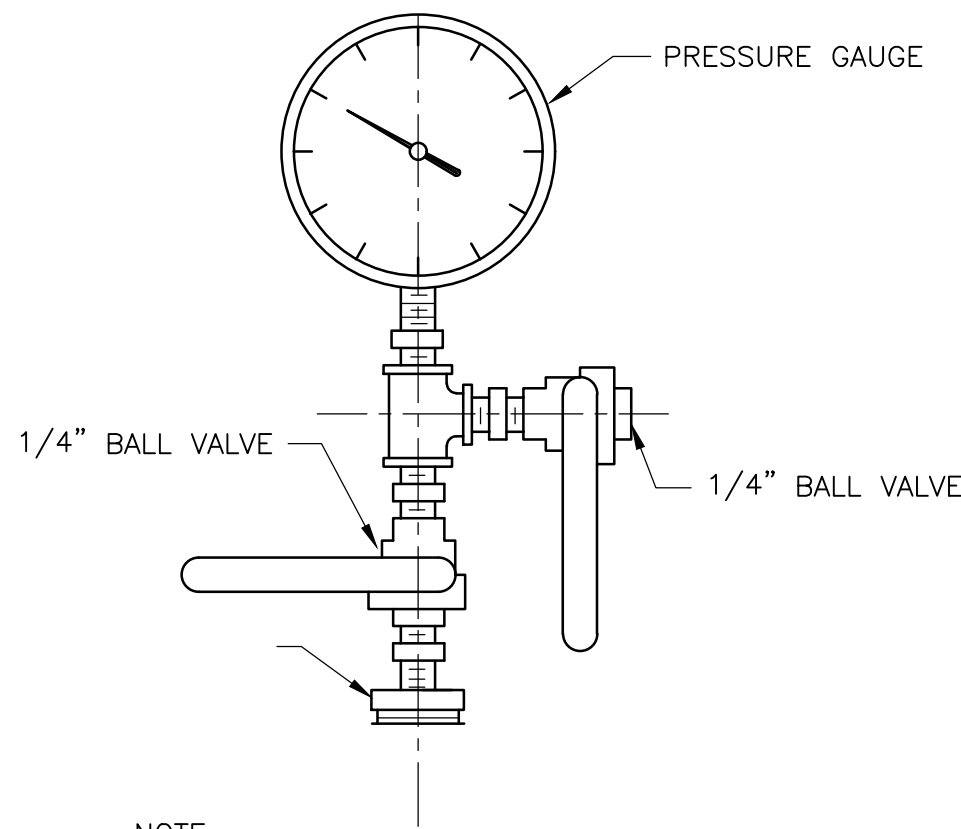
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pw\\vow.edrenibh.com\\PW_PL\\6103\\229758_Port 1\\04 Design Services NM_Bid\\02 Civil\\10 CADD\\CD01STD1.Dwg
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NOTES:

- CONTRACTOR SHALL TERMINATE THE 20" STEEL CASING TO A FLANGE ELEVATION OF 32.00 FT. EXISTING GROUND ELEVATION SHALL BE FINISHED TO ELEVATION 29.20 FEET BY OTHERS.
- CONTRACTOR SHALL TURN OVER ALL TEMPORARY APPURTENANCES (PRESSURE GAUGES, SAMPLE PORTS, VALVES AND FITTINGS) FROM THE TEMPORARY WELLHEAD TO OWNER (JEA) AT THE COMPLETION OF THE PROJECT.
- SEE DETAIL A SHEET C-2 FOR MATERIAL OF CONSTRUCTION, WALL THICKNESS AND DEPTH OF SURFACE CASING AND FINAL CASING.
- CONTRACTOR SHALL ENSURE THAT THE TEMPORARY BASE FLANGE ELEVATION IS SET AT 32.00 FT. AND IS MEASURED IN AT LEAST FOUR LOCATIONS BY A CERTIFIED SURVEYOR. THE FINAL FLANGE SHALL BE CONSTRUCTED TO A LOWER ELEVATION BY OTHERS.

TEMPORARY WELLHEAD DETAIL
DETAIL A
NTS

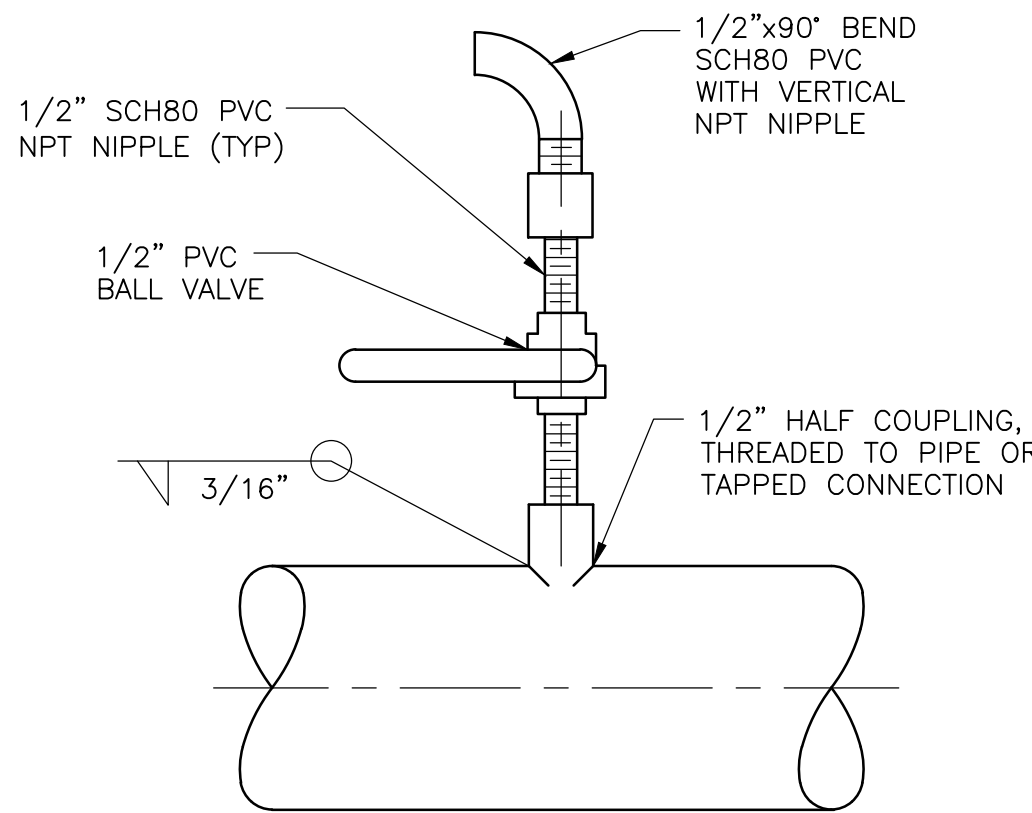


NOTE:

- GAUGE SHALL BE ASHCROFT PLUS MODEL AC 35-1009SW-02L-60# OR APPROVED EQUAL.

NOTE:

- PIPE SHALL BE SCHEDULE 80 PVC WITH NTP (NATIONAL PIPE THREAD) FITTINGS AND FLANGES. 150 POUND CLASS BY SWAGELOK, OR EQUAL. FLANGE GASKETS SHALL BE 1/16-INCH MINIMUM NEOPRENE. FLANGE BOLTS SHALL BE HEX-HEAD ASTM A193 GRADE B&M, AND NUTS SHALL BE HEX-HEAD ASTM A194 GRADE 8M. PIPE THREAD SEALANTS SHALL BE USED IN ACCORDANCE WITH THE FITTINGS MANUFACTURER, BUT SHALL NOT CONTAIN HAZARDOUS SUBSTANCES OR DELETERIOUS COMPOUNDS THAT WOULD CAUSE A VIOLATION OF WATER QUALITY HEALTH-EFFECTS STANDARDS IF SUBSEQUENTLY INTRODUCED DURING OPERATIONS. FIELD WELDING SHALL ONLY BE DONE WITH THE ENGINEER'S APPROVAL BY APPROPRIATELY CERTIFIED WELDERS.



PRESSURE GAUGE
DETAIL B
NTS

SAMPLE PORT
DETAIL C
NTS

| REV. NO. | DATE | DRWN | CHKD | REMARKS |
|----------|------|------|------|---------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| |
|-----------------------------|
| DESIGNED BY: B. SCHNEIDER |
| DRAWN BY: A. NUNES |
| SHEET CHK'D BY: J. HEALY |
| CROSS CHK'D BY: L. WISEMAN |
| APPROVED BY: I. POLEMATIDIS |
| DATE: NOVEMBER 2018 |

CDM Smith
8381 Dix Ellis Trail, Suite 400
Jacksonville, FL 32256
Tel: (904) 731-7109
FL CDA No. EB-0000020

JEA
GREENLAND WATER TREATMENT PLANT
- BACKUP WELL (WELL NO. 3)
WELL DRILLING

WELL NO. 3
TEMPORARY WELLHEAD DETAILS

DATE:
IOANNIS POLEMATIDIS
PE NO. 75392

PROJECT NO. 6103-229758
FILE NAME: CD01STD1.DWG

SHEET NO.

CD-1

ISSUED FOR BID

| LEGEND | | | | | |
|--------|---|------------------------|------|---|-------------------------------|
| | = | ELECTRIC MANHOLE | RCP | = | REINFORCED CONCRETE PIPE |
| | = | SANITARY MANHOLE | DI | = | DUCTILE IRON |
| | = | STORM DRAINAGE MANHOLE | PVC | = | POLYVINYL CHLORIDE |
| | = | SIGN | ARV | = | AIR RELEASE VALVE |
| | = | GUY ANCHOR | INV | = | INVERT |
| | = | WATER METER | ELEV | = | ELEVATION |
| | = | VALVE | WF | = | WETLAND FLAG |
| | = | FIRE HYDRANT | CLF | = | CHAIN LINK FENCE |
| | = | SPRINKLER HEAD | RE | = | REAL ESTATE |
| | = | UNDERGROUND STORM | WM | = | WATER METER |
| | = | CONCRETE POWER POLE | WV | = | WATER VALVE |
| | = | WOOD POWER POLE | CONC | = | CONCRETE |
| | = | CONCRETE LIGHT POLE | NAVD | = | NORTH AMERICAN VERTICAL DATUM |
| | = | OVERHEAD UTILITY | SQ. | = | SQUARE |
| | = | UNDERGROUND ELECTRIC | PG. | = | PAGE |
| | = | ELECTRICAL CONTROL BOX | IRF | = | IRON ROD FOUND |
| | = | TEMPORARY BENCHMARK | ORB | = | OFFICIAL RECORDS VOLUME |
| | = | RIGHT OF WAY | LB | = | LICENSED BUSINESS |
| | = | TOP OF BANK | B#1 | = | BORING NUMBER |
| | = | TOE OF SLOPE | TH#1 | = | TEST HOLE NUMBER |
| | = | BAY TREE | EA | = | EDGE OF ASPHALT |
| | = | MIMOSA TREE | FL | = | FLOW LINE |
| | = | SWEETGUM TREE | BOC | = | BACK OF CURB |
| | = | OAK TREE | MP | = | METAL POST |
| | = | PERSIMMON TREE | FH | = | FIRE HYDRANT |
| | = | CHERRY TREE | MTL | = | METAL |
| | = | PINE TREE | SB | = | SOIL BORING |
| | | | D | = | DOUBLE TREE TRUNK |
| | | | C | = | TREE TRUNK CLUSTER |
| | | | W | = | UNDERGROUND WATER LINE |

| MITIGATION REQUIREMENTS | | | | | |
|-------------------------|--------------|-----------------------|-----------------------|----------------------|--------------------------------|
| TREE INCHES REMOVED | TOTAL INCHES | TREE CREDITS (INCHES) | PLANTED TREE (INCHES) | REQUIRED REPLACEMENT | CONTRIBUTION TO COJ TRUST FUND |
| 11.5–23.5 (3:1) | 36 | 37 | 0 | 0 | 0" @ \$148/INCH |
| > 23.5 (1:1) | 0 | 0 | 0 | 0 | |
| LIVE OAKS (1:1) | 0 | 0 | 0 | 0 | |
| TOTAL | | | | 0 | \$0.00 |

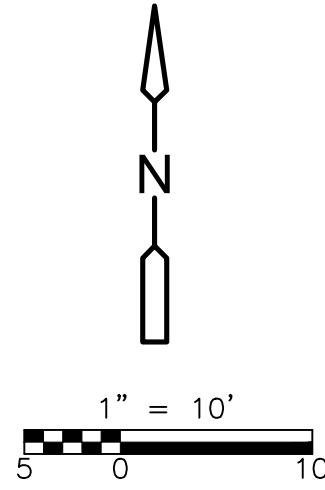
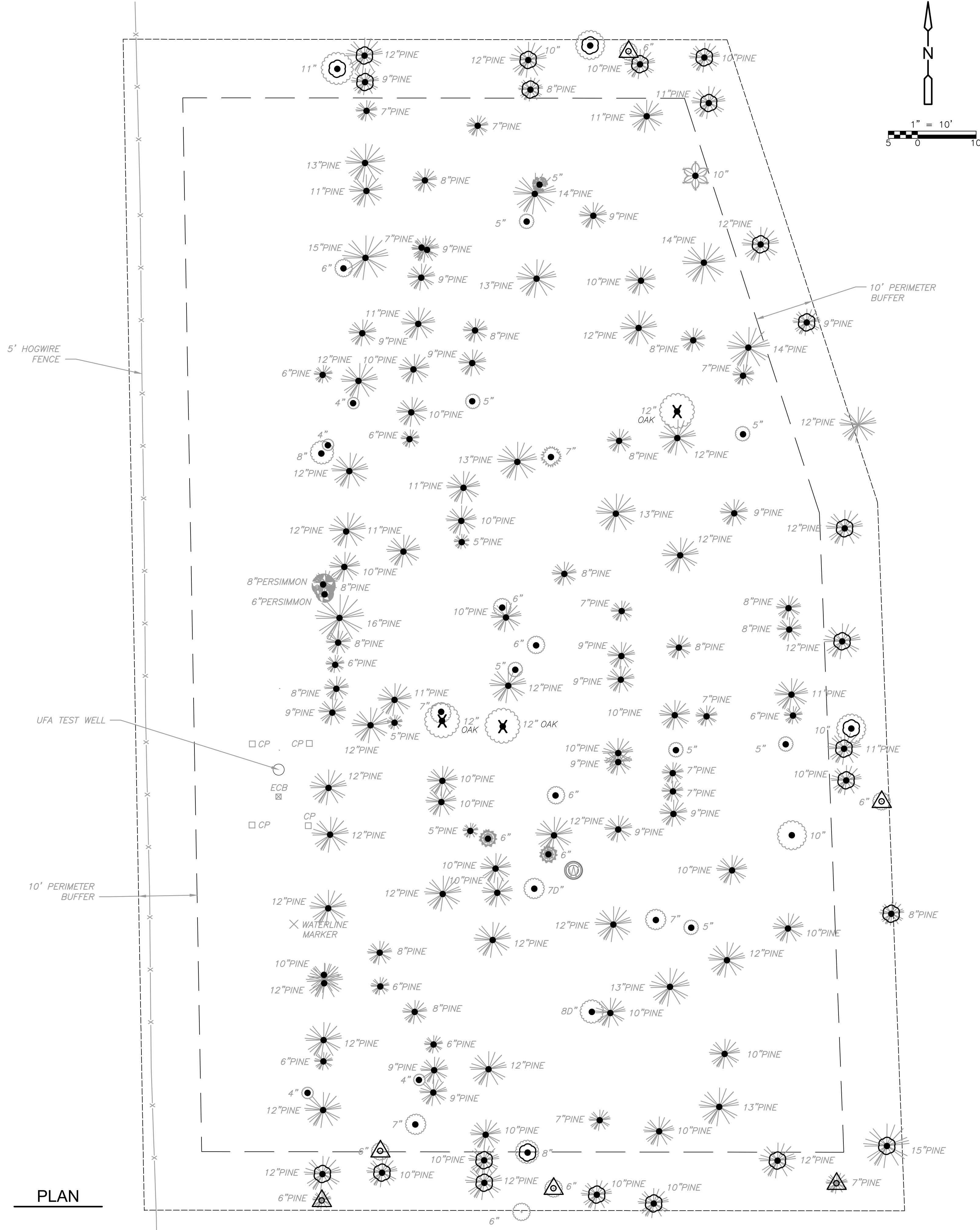
| LEGEND | |
|------------|---|
| 12"PINE ● | NON-PROTECTED TREE TO BE REMOVED |
| 11.5"OAK ✕ | PROTECTED TREE TO BE REMOVED |
| 12"OAK ● | PROTECTED TREE TO BE PRESERVED W/ BARRICADE |
| 8"OAK △ | TREE CREDIT TO BE PRESERVED W/ BARRICADE |

5' HOGWIRE FENCE

UFA TEST WELL

10' PERIMETER BUFFER

PLAN



| | | | | |
|----------|------|------|------|---------|
| REV. NO. | DATE | DRWN | CHKD | REMARKS |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | |
|-----------------------|---------------|
| DESIGNED BY: _____ | S. MANIS |
| DRAWN BY: _____ | T. PACE |
| SHEET CHK'D BY: _____ | F. GREY |
| CROSS CHK'D BY: _____ | C. MAGPANTAY |
| APPROVED BY: _____ | S. MANIS |
| DATE: _____ | NOVEMBER 2018 |

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Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

Construction & Engineering
Services Consultants, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

JEA

GREENLAND WTP WELL NO. 3

WELL DRILLING

TREE MITIGATION PLAN

| |
|--|
| STEPHEN V. MANIS P.E. NO. 43342 |
| PROJECT NO. 6103-229758 FILE NAME: C001STPL.DWG |
| SHEET NO. TM-1 |

ISSUED FOR BID