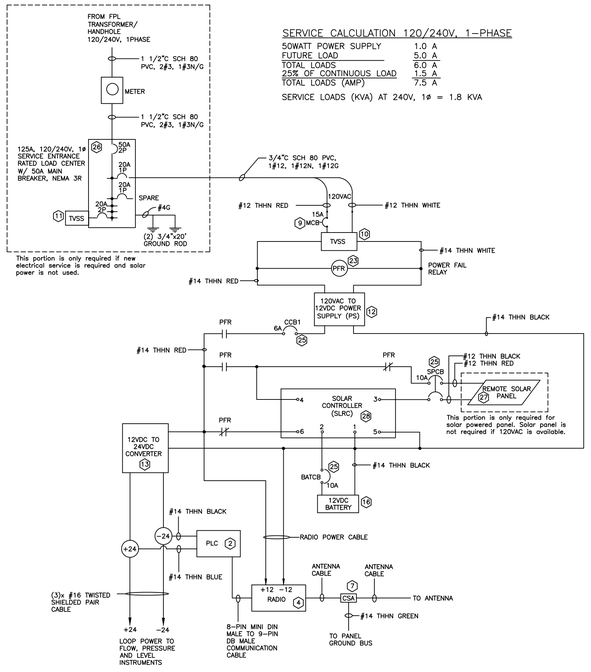


SERVICE CALCULATION 120/240V, 1-PHASE

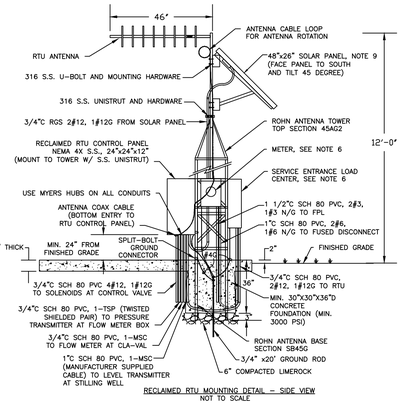
50WATT POWER SUPPLY	1.0 A
FUTURE LOAD	5.0 A
TOTAL LOADS	6.0 A
25% OF CONTINUOUS LOAD	1.5 A
TOTAL LOADS (AMP)	7.5 A

SERVICE LOADS (KVA) AT 240V, 1Ø = 1.8 KVA

NOTES:
1. SEE BILL OF MATERIALS ON PAGE NO. 31R.
2. ALL FIELD WIRING SHALL BE CONNECTED TO THE TERMINALS.

RECLAIMED WATER SYSTEM RTU CONTROL PANEL POWER WIRING DIAGRAM

40R

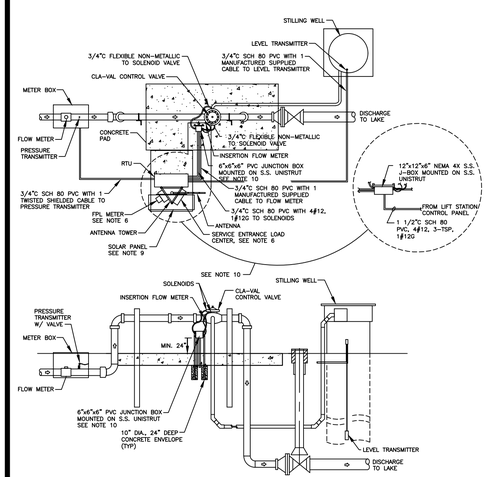


RECLAIMED RTU MOUNTING DETAIL - SIDE VIEW
NOT TO SCALE

NOTES:
1. MAST AND METAL STRUCTURE SHALL BE GROUNDED IN ACCORDANCE WITH NEC SECTION 810-21.
2. ANTENNA INSTALLATION SHALL MEET THE WIND LOADING REQUIREMENT PER FLORIDA BUILDING CODE.
3. MINIMUM ANTENNA HEIGHT SHALL BE 12 FEET. IF ANY OBSTRUCTION IS LOCATED BETWEEN THE RADIO COMMUNICATION PATH, ANTENNA HEIGHT SHALL BE HIGHER THAN THOSE OBSTRUCTIONS.
4. CONDUITS SHALL NOT ENTER THE TOP OF CONTROL PANEL.
5. ALL ELECTRICAL PANELS SHALL BE GROUNDED.
6. METER AND SERVICE ENTRANCE RATED LOAD CENTER ARE NOT REQUIRED IF THE RTU IS SUPPLIED BY SOLAR POWER OR NEARBY LIFT STATION POWER.
7. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
8. MAINTAIN 36" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS.
9. SOLAR PANEL IS NOT REQUIRED IF 120 VAC POWER IS AVAILABLE.
10. ELECTRICAL PANEL SUPPORT STRUCTURE / ANTENNA TOWER HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2010 FOR THE FOLLOWING CRITERIA:
    - *RISK CATEGORY IV
    - *EXPOSURE CATEGORY "C"
    - *WIND VELOCITY, Vult = 181 MPH

RECLAIMED WATER SYSTEM RTU ANTENNA AND PANEL MOUNTING DETAIL

41R



NOTES:
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2. ANTENNA INSTALLATION SHALL MEET THE WIND LOADING REQUIREMENT PER FLORIDA BUILDING CODE.
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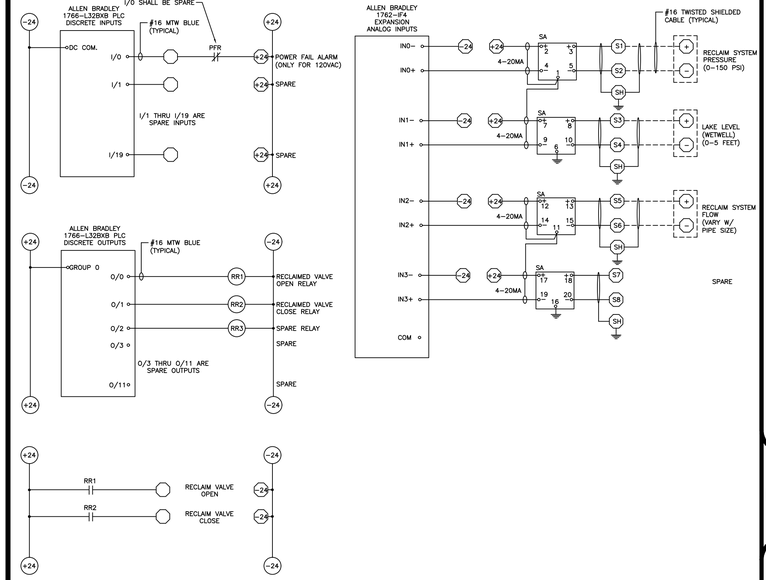
7. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
8. MAINTAIN 36" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS.
9. SOLAR PANEL IS NOT REQUIRED IF 120 VAC POWER IS AVAILABLE.
10. FOR SHARE RTU/POWER CONFIGURATION, TOWER, METER AND LOAD CENTER ARE NOT REQUIRED. A LARGER 12"x12"x6" NEMA 4X S.S. J-BOX IS REQUIRED IN LIEU OF 6"x6"x6" J-BOX. SEE PAGE 44R FOR RTU SHARING BETWEEN LIFT STATION AND RECLAIMED WATER.

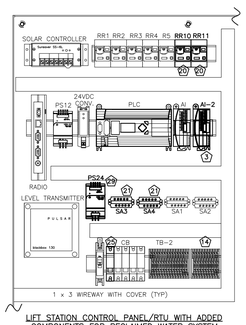
RECLAIMED WATER SYSTEM ELECTRICAL LAYOUT

42R



RECLAIMED WATR SYSTEM PLC INPUT/OUTPUT WIRING

43-44R



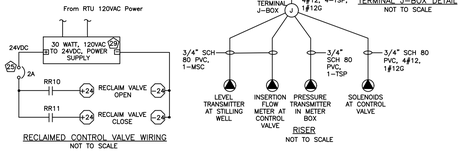
LINE WEIGHT
- COMPONENTS FOR LIFT STATION INSIDE LIFT STATION CONTROL PANEL/RTU (SEE LIFT STATION STANDARDS)
- NEW ADDED COMPONENTS FOR RECLAIMED WATER SYSTEM INSIDE LIFT STATION CONTROL PANEL/RTU

LEGEND
- TSP TWISTED SHIELDED PAIR CABLE (16 AWG, 600V WITH DRAIN WIRE)
- MSC MANUFACTURER SUPPLIED CABLE

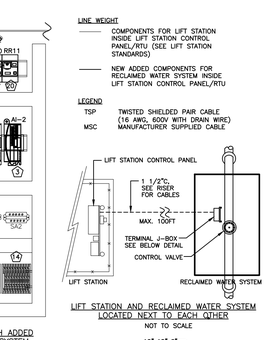
LIFT STATION CONTROL PANEL/RTU WITH ADDED COMPONENTS FOR RECLAIMED WATER SYSTEM
NOT TO SCALE

PLC I/O List:
(See additional I/O on Lift Station Standards)

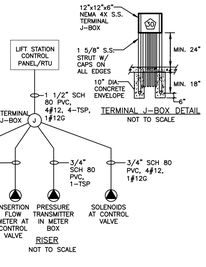
Valve Open Command	digital output O/10
Valve Close Command	digital output O/11
Reclaimed Water Pressure	analog input IV1 (extension module AI-2)
Lake Level	analog input IV2 (extension module AI-2)
Reclaimed Water Flow	analog input IV3 (extension module AI-2)



RECLAIMED CONTROL VALVE WIRING
NOT TO SCALE



LIFT STATION AND RECLAIMED WATER SYSTEM LOCATED NEXT TO EACH OTHER
NOT TO SCALE

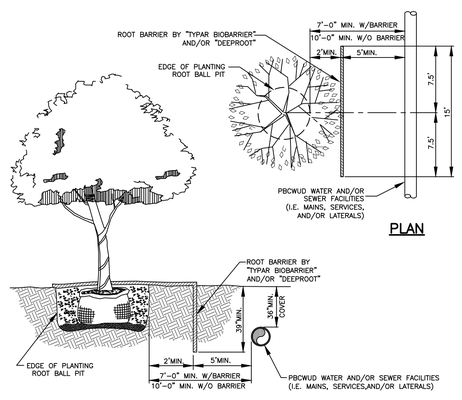


TERMINAL J-BOX DETAIL
NOT TO SCALE

RISER
NOT TO SCALE

RTU SHARING BETWEEN LIFT STATION AND RECLAIMED WATER SYSTEM

45R

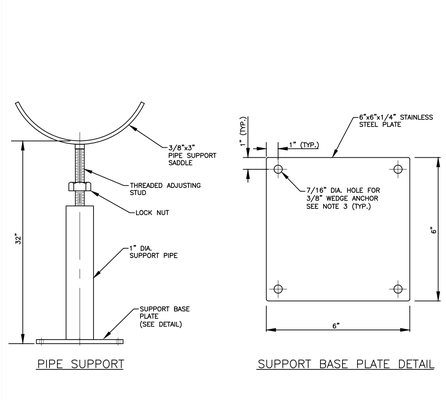


SECTION

NOTES:
1. TREES SHOWN ON THIS PLAN ARE FOR GRAPHIC REPRESENTATION ONLY. TREE SPACING IS BASED ON DESIGN REQUIREMENTS AND THE TREES SHOWN ON THESE PLANS ATTEMPT TO ACCOMPLISH THAT SPACING WHILE MAINTAINING THE REQUIRED SETBACKS FROM UTILITIES. TREES MAY BE FIELD ADJUSTED TO AVOID CONFLICTS WITH DRIVEWAYS AND UNDERGROUND UTILITIES. IN ANY CASE THE TREES SHALL BE LOCATED IN THE FIELD IN ACCORDANCE WITH THE PLANTING DETAILS SHOWN HEREON.
2. TREES ARE TO BE INSTALLED WITH A TEN FOOT (10') SEPARATION FROM ANY WATER OR SEWER MAIN AND/OR SERVICE, HYDRANTS, AND LIFT STATIONS. IF A TEN FOOT (10') SEPARATION CANNOT BE ACHIEVED, THE TREE CAN BE INSTALLED WITH A ROOT BARRIER SYSTEM. HOWEVER, IN NO CASE SHALL A TREE ENCROACH INTO A PBCUE WITHOUT PRIOR DEPARTMENT APPROVAL.
3. ONLY SOD CAN BE INSTALLED WITHIN 7.5' MINIMUM OF A FLUSHING HYDRANT UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL AND THE DEPARTMENT.
4. SOD ONLY SHALL BE INSTALLED WITHIN 5.0' MINIMUM OF ANY DEPARTMENT RECLAIMED WATER METER.
5. WHEN INSTALLING A SOLID ROOT BARRIER PANEL SYSTEM THE PANEL RIBS MUST FACE THE TREE ROOT BALL.*

LANDSCAPE AND ROOT BARRIER DETAIL *

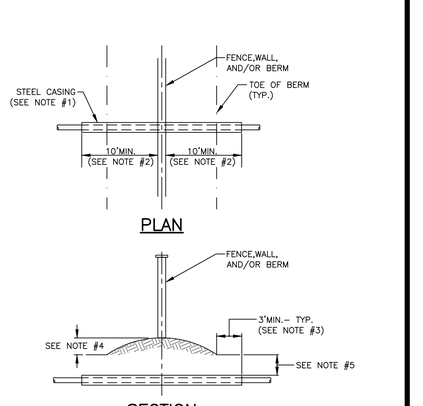
46R



NOTES:
1. SHOP DRAWING FOR THE METER ASSEMBLY PIPE SUPPORT IS REQUIRED TO BE SUBMITTED FOR APPROVAL BY THE DEPARTMENT PRIOR TO THE PIPE SUPPORT BEING CONSTRUCTED AND/OR INSTALLED. ALL PIPE SUPPORTS FOR EACH METER ASSEMBLY INSTALLATION SHALL BE THE SAME.
2. ALL PIPE SUPPORT MATERIALS AND MOUNTING HARDWARE ARE REQUIRED TO BE 304 STAINLESS STEEL.
3. THE REQUIRED WEDGE ANCHORS FOR EACH SUPPORT SHALL BE 3/8" DIAMETER WITH NOMINAL EMBEDMENT OF 2-3/8". EACH ANCHOR SHALL HAVE A WASHER, LOCK WASHER, AND NUT.

ABOVE GROUND WATER METER INSTALATION PIPE SUPPORT

47R



NOTES:
1. STEEL CASING PER WUD STANDARD DETAIL 13R (SOLID CASING) OR WUD STANDARD DETAIL 13AR (SPLIT CASING) AS APPLICABLE.
2. STEEL CASING SHALL EXTEND TEN (10) FEET MINIMUM PAST FENCE OR WALL. FIVE (5) FEET MINIMUM MAY BE ACCEPTABLE ON A CASE-BY-CASE BASIS DUE TO SITE CONDITIONS AND ONLY WITH PRIOR DEPARTMENT APPROVAL.
3. STEEL CASING SHALL EXTEND THREE (3) FEET MINIMUM PAST THE TOE OF THE BERM. IF BERM CASING IS ASSOCIATED WITH A WALL OR FENCE INSTALLATION OF THE CASING SHALL EXTEND THREE (3) FEET MINIMUM PAST THE TOE OF THE BERM OR TEN (10) FEET MINIMUM PAST THE WALL OR FENCE WHICH EVER IS GREATER.
4. STEEL CASING INSTALLATION REQUIRED WHEN A BERM IS TWO (2) FEET OR HIGHER ABOVE SURROUNDING GRADE.
5. TOP OF STEEL CASING SHALL BE THREE (3) FEET MINIMUM BELOW THE TOE OF THE BERM OR BASE OF WALL OR FENCE ELEVATION WHICHEVER IS LOWER.

RECLAIMED WATER MAIN CROSSING FENCE, WALL, OR BERM CASING DETAIL *

48R

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PROJECT NO. 00-000

WUD PROJECT NAME

PALM BEACH COUNTY
WATER UTILITIES DEPARTMENT
P.O. BOX 16097
WEST PALM BEACH, FL 33416
(561)493-6000

NO.	DATE	REVISION / REMARKS	BY
	JUNE 2019	GENERAL REVISION	JJL
	JAN. 2023	GENERAL REVISION	JJL
*			

STD DETAILS

SHEET NUMBER 0 OF 0

RECLAIMED WATER #5 STANDARD DETAILS

SEAL

CONSULTANT:

IT'S THE LAW! CALL 48 HOURS BEFORE YOU DIG 1-800-432-4770 SUNSHINE STATE ONE CALL OF FLORIDA, INC. UTILITIES NOTIFICATION CENTER

DESIGNED BY: WUD
DRAWN BY: M. BUCKNER
CHECKED BY: J. LAMMERT
APPROVED BY: WUD

Palm Beach County
Water Utilities Department
P.O.Box 16097
West Palm Beach, FL 33416-6097

Mar 01, 2023