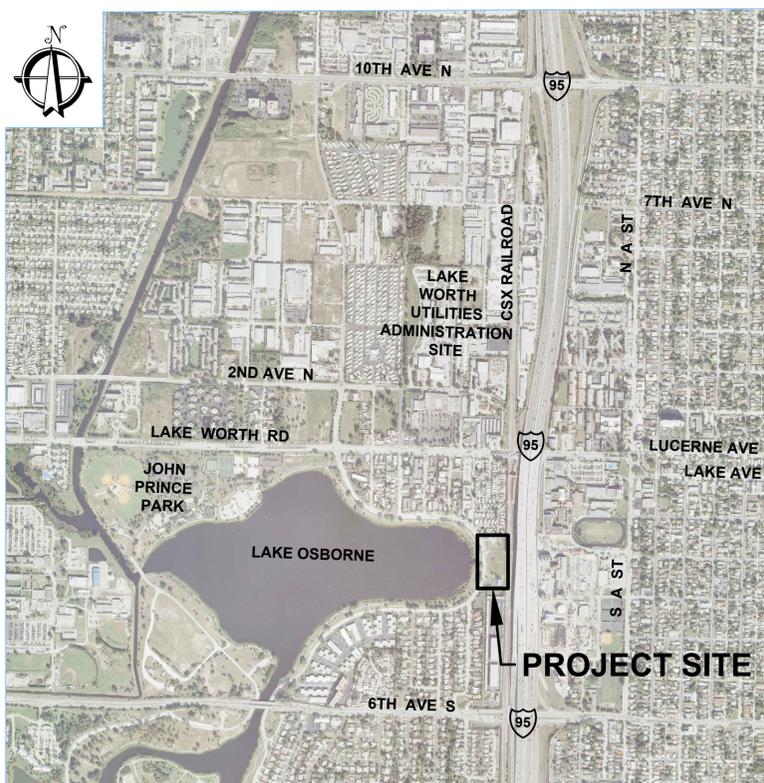


POTABLE WELL NO. 12 RECONSTRUCTION

PREPARED FOR
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA
OCTOBER 2014



VICINITY MAP
N.T.S.

SECTION 28, TOWNSHIP 44 SOUTH, RANGE 43 EAST



CITY COMMISSIONERS
PAM TRIOLO, MAYOR
SCOTT MAXWELL, VICE MAYOR
CHRISTOPHER MCVOY
ANDY AMOROSO
JOHN SZERDI

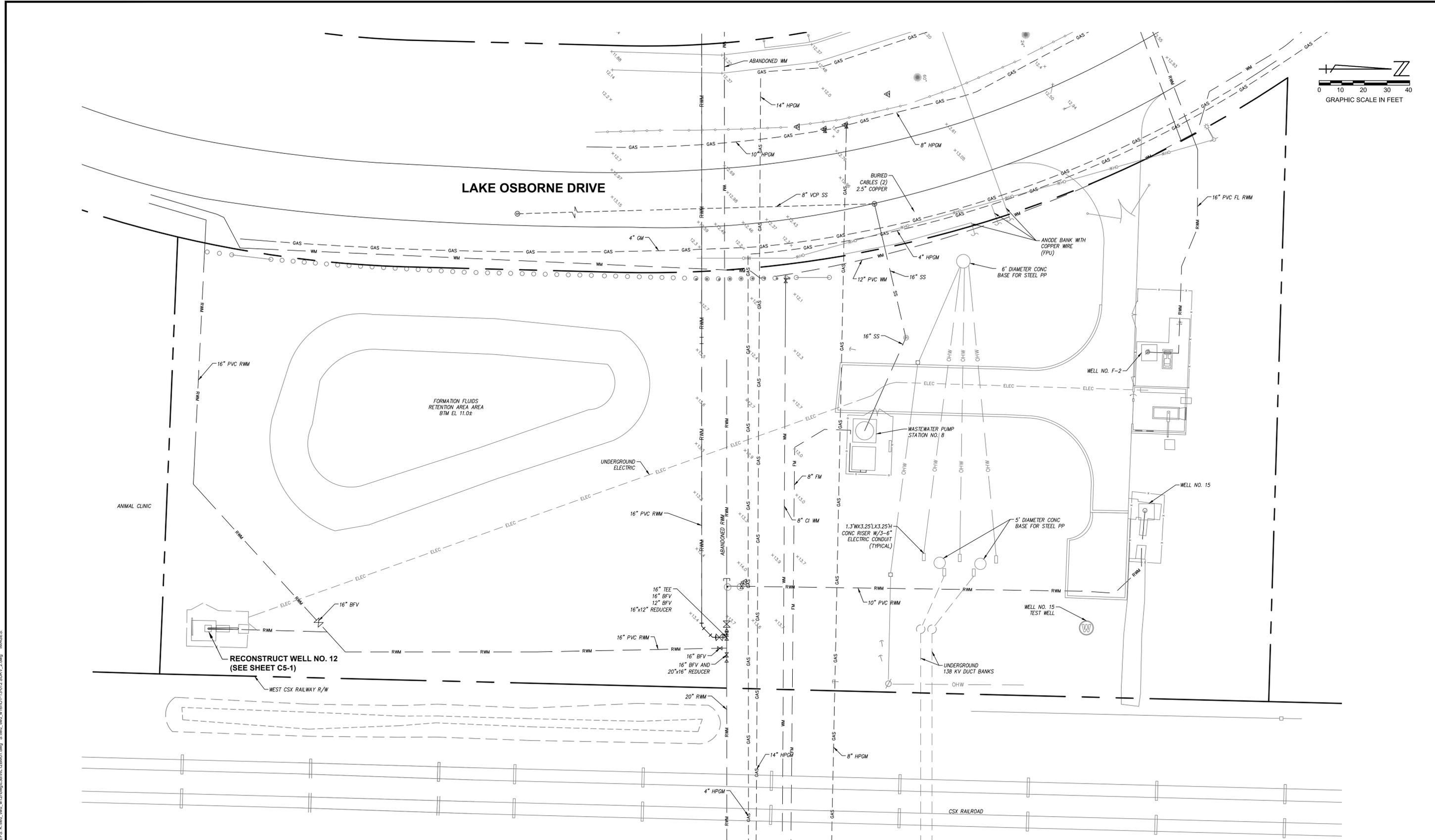
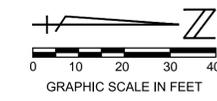
INDEX OF SHEETS

SHEET NO.	SHEET TITLE
C0-1	COVER
C1-1	OVERALL SITE PLAN
C5-1	DETAILS
E-1	ELECTRICAL DETAILS
E-2	ELECTRICAL NOTES
TOTAL NO. OF SHEETS - 5	

PLOT DATE: Nov 11, 2014 - 1:09pm
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ON ORIGINAL DRAWING
ADJUST ALL SCALED
DIMENSIONS ACCORDINGLY

CADD FILE: K:\Wu_\Wu_w12\rdwg W12RCS01_C0-1.dwg			SEAL JOHN R. LEEMON FLORIDA P.E. NO. 41645		FLORIDA E.B. NO. 48 MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248		FLORIDA L.B. NO. 48 FIELD: --- DRAWN: YM DESIGN: JRL APPR: GGG SCALE: AS SHOWN		DATE: OCTOBER 2014 P.A. NO. B4015.00 DWG. NO. 44-43-28-302 SHEET: C0-1	
NO.	DATE	BY	REVISION						POTABLE WELL NO. 12 RECONSTRUCTION CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	



PLOT DATE: Nov 11, 2014 - 1:09pm XREFS: K:\w_u_w12\dwg\c3\w12B401.dwg S:\w_u_w12\w12\DOT-13-012 SURV_2.dwg IMAGES: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY
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OVERALL SITE PLAN

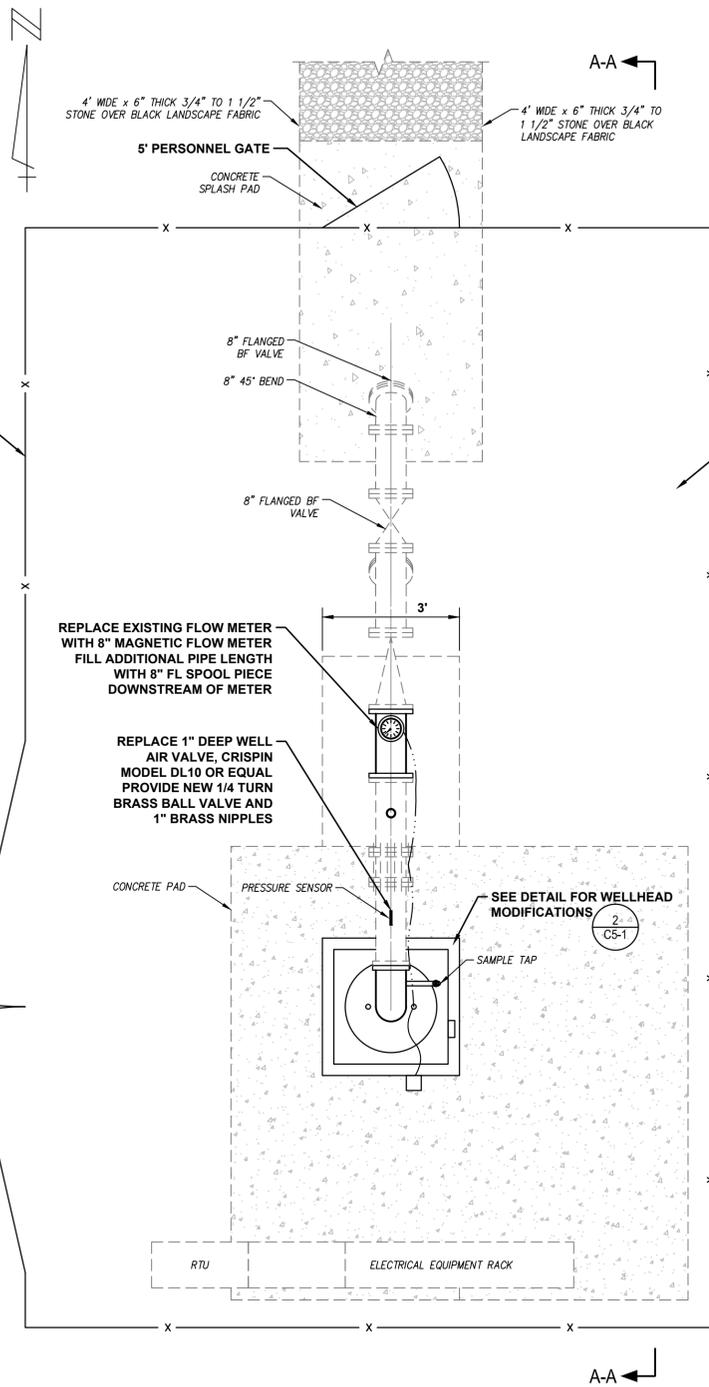
NO.	DATE	BY	REVISION

SEAL	FLORIDA E.B. NO. 48
JOHN R. LEEMON FLORIDA P.E. NO. 41645	FLORIDA L.B. NO. 48
DATE	

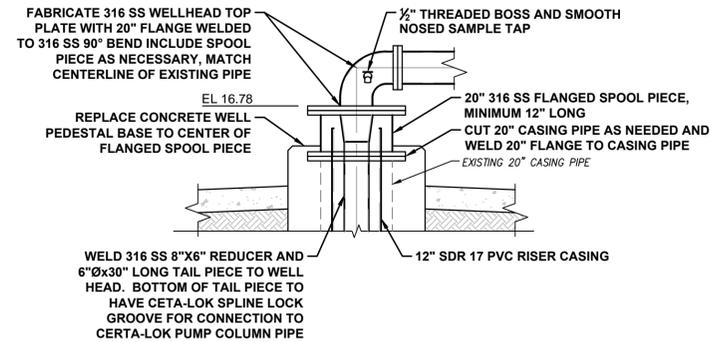
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 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

FIELD: ----
DRAWN: YM
DESIGN: JRL
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SCALE: AS SHOWN

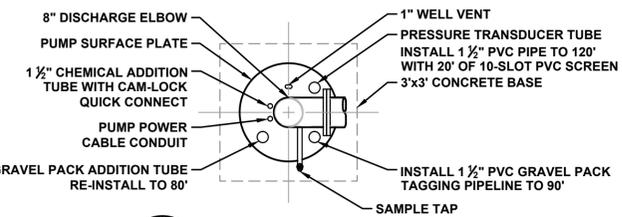
POTABLE WELL NO. 12 RECONSTRUCTION CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	DATE: OCTOBER 2014 P.A. NO. B4015.00 DWG. NO. 44-43-28-302 SHEET: C1-1
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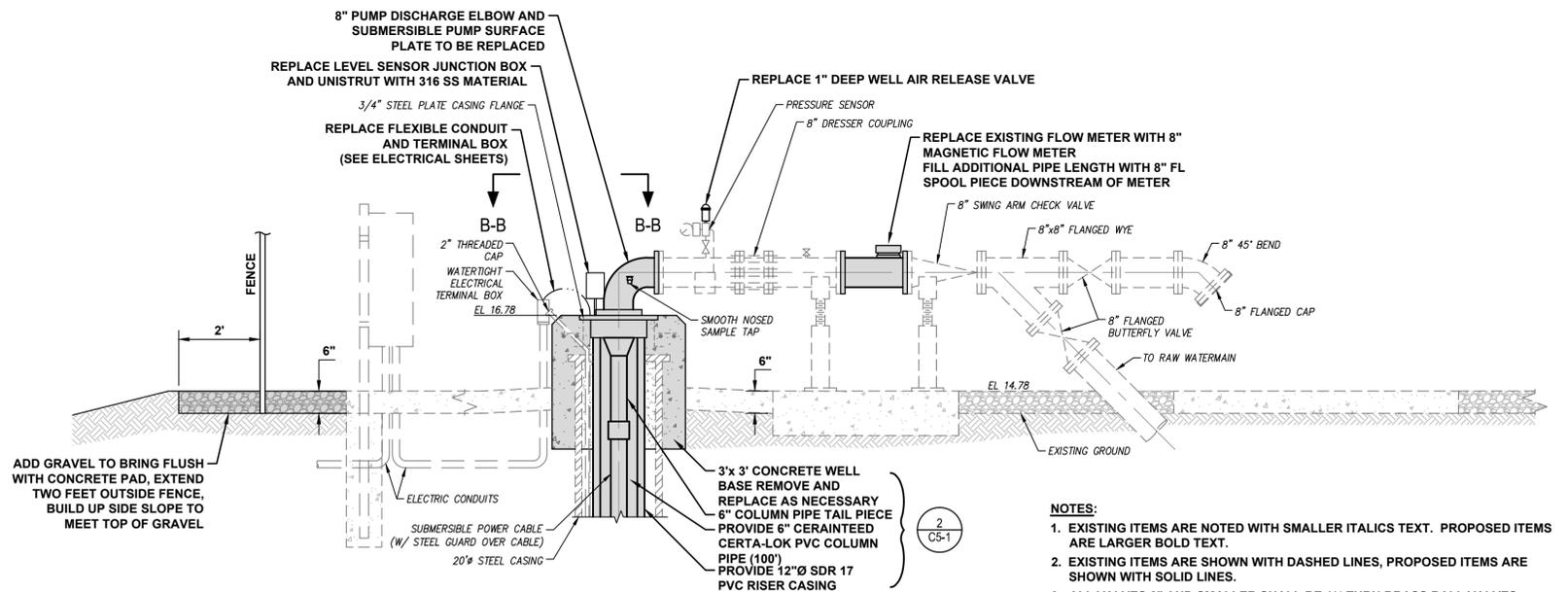
1 WELL NO 12 INSTALLATION - PLAN VIEW
C5-1 N.T.S.



2 WELLHEAD MODIFICATIONS
C5-1 N.T.S.



B-B WELLHEAD BASE DETAIL
C5-1 N.T.S.



A-A SECTION
C5-1 N.T.S.

- NOTES:
1. ALL MATERIALS TO BE 316 SS UNLESS OTHERWISE NOTED.
 2. ALL WELDS TO BE FULL PENETRATION FULL DEPTH WELDS.

- NOTES:
- REINSTALL AND RECONNECT ALL WELLHEAD PENETRATIONS AS SHOWN

- NOTES:
1. EXISTING ITEMS ARE NOTED WITH SMALLER ITALICS TEXT. PROPOSED ITEMS ARE LARGER BOLD TEXT.
 2. EXISTING ITEMS ARE SHOWN WITH DASHED LINES, PROPOSED ITEMS ARE SHOWN WITH SOLID LINES.
 3. ALL VALVES 2" AND SMALLER SHALL BE 1/4 TURN BRASS BALL VALVES.
 4. ALL THREADED NIPPLES 2" AND SMALLER SHALL BE BRONZE NIPPLES.
 5. ALL BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE 316 STAINLESS STEEL.
 6. REPLACE ALL GASKETS WHERE PIPE AND FITTINGS WERE DISASSEMBLED AND RE-ASSEMBLED.
 7. ALL WELLHEAD ACCESS PORTS TO BE REINSTALLED ALONG WITH TUBING, SEE DETAILS.
 8. ADJUST PIPE STANDS TO LEVEL ALL HORIZONTAL PIPING.
 9. CONTRACTOR SHALL PAINT ALL SURFACE PIPING AND APPURTENANCES.

DETAILS

PLOT DATE: Nov 11, 2014 1:08pm XREFS: IMAGES:

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ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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NO.	DATE	BY	REVISION

SEAL	FLORIDA E.B. NO. 48
JOHN R. LEEMON FLORIDA P.E. NO. 41645	
DATE	

FLORIDA L.B. NO. 48

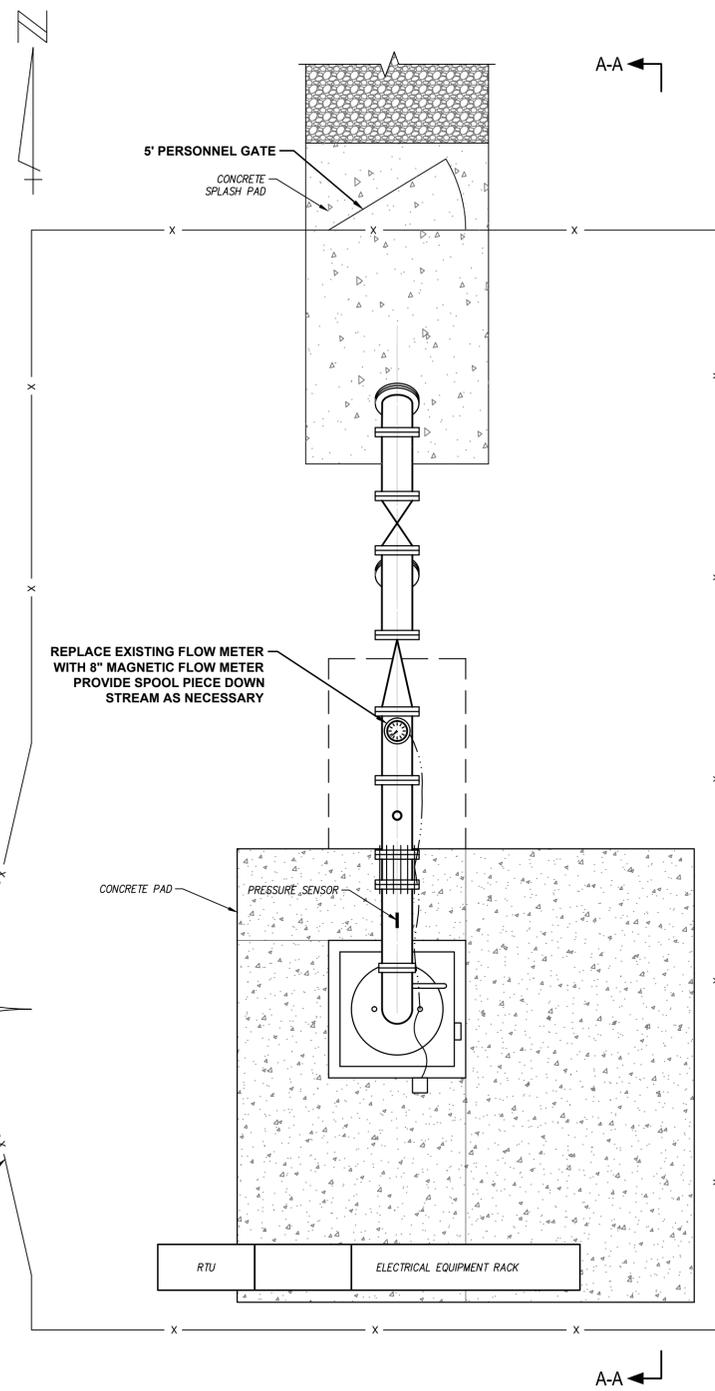
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5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

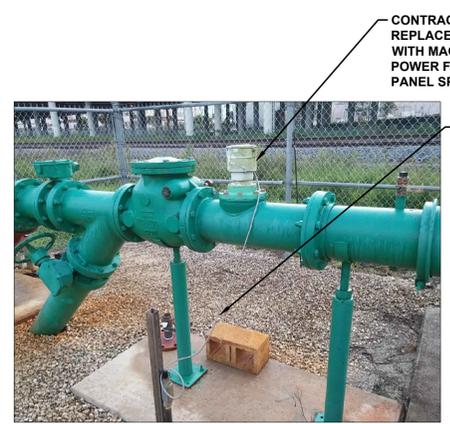
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SCALE: AS SHOWN

POTABLE WELL NO. 12
RECONSTRUCTION
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA

DATE: OCTOBER 2014
P.A. NO. B4015.00
DWG. NO. 44-43-28-302
SHEET: C5-1



1 WELL NO 12 INSTALLATION - PLAN VIEW
E-1 N.T.S.



FLOW METER REPLACEMENT

CONTRACTOR SHALL REMOVE AND REPLACE EXISTING FLOW METER WITH MAG METER. PROVIDE 120V POWER FROM EXISTING CONTROL PANEL SPARE 1P-20A BREAKER.

RECONNECT EXISTING SHIELDED CABLE TO NEW FLOW TRANSMITTER.



EXISTING CONTROL PANEL

EXISTING SPARE BREAKER TO BE USED FOR NEW MAGMETER

- NOTES:
1. CONTRACTOR SHALL PROVIDE AND INSTALL 2/12, 1#12EG IN 3/4" C TO NEW MAGMETER.
 2. RELABEL BREAKER ACCORDINGLY.
 3. REPLACE EXISTING MOTOR STARTER OVERLOAD RELAYS IN ACCORDANCE WITH NEW PUMP MOTOR ACTUAL FULL LOAD AMPS.



ELECTRICAL PULL BOX AND CONDUIT REPLACEMENT

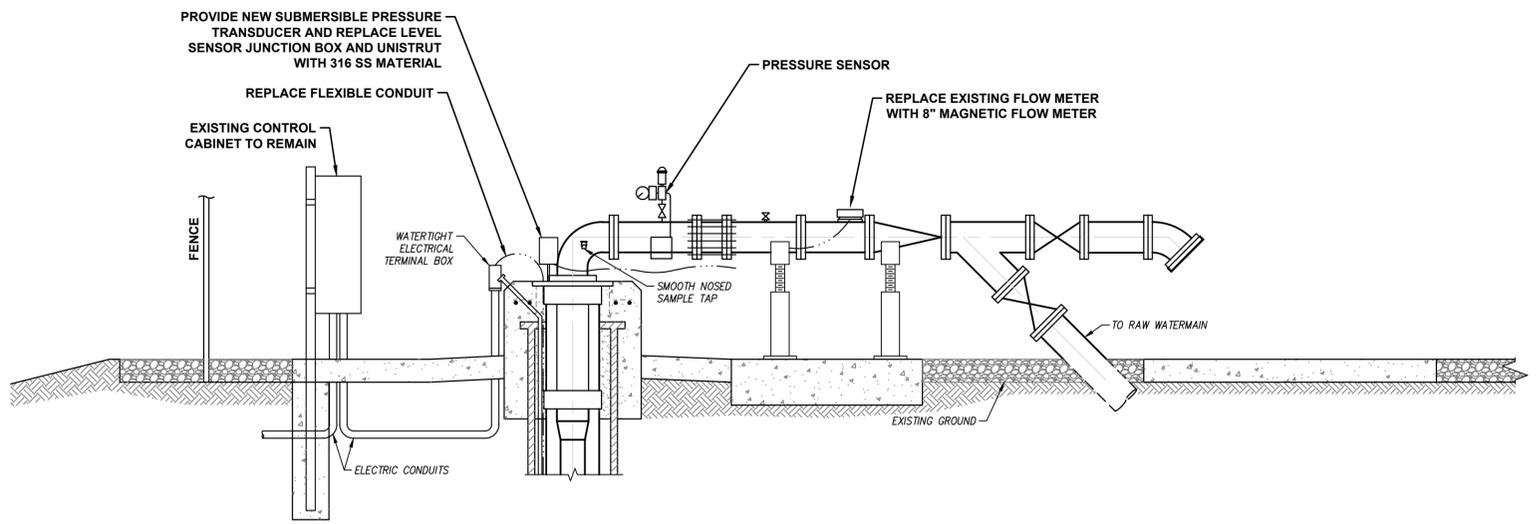
CONDUIT TO PRESSURE SWITCH

CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUIT AND WIRING FOR THE PRESSURE SENSOR.

CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUIT AND WIRING FOR THE LEVEL SENSOR.

CONTRACTOR SHALL REMOVE EXISTING PULL BOX AND UNI-STRUT. PROVIDE AND INSTALL NEW NEMA 4X SS PULL BOX AND STAINLESS STEEL UNI-STRUT. PROVIDE NEW CONDUITS AND WIRING FOR A COMPLETE WORKING SYSTEM IN PLACE.

CONTRACTOR SHALL REMOVE EXISTING PULL BOX AND PROVIDE AND INSTALL NEW NEMA 4X SS PULL BOX. RECONNECT CONDUITS AND WIRING FOR A COMPLETE WORKING SYSTEM IN PLACE.



A-A SECTION
E-1 N.T.S.

PLOT DATE: Nov 07, 2014 - 3:08pm XREFS: IMAGES: M:\SEC 2014\14054 MRA- LWU Well No. 12 Mag. Meter\Photos\20140924_080515.jpg
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ELECTRICAL DETAILS

NO. DATE BY REVISION	<p>2101 Palm Beach Lakes Blvd., Suite 312 West Palm Beach, FL 33409 (561) 616-3911 fax (561) 616-3912</p>	SEAL LARRY M. SMITH FLORIDA P.E. NO. 45997 DATE	FLORIDA E.B. NO. 48 <p>ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248</p>	FLORIDA L.B. NO. 48 FIELD: --- DRAWN: SPH DESIGN: SPH APPR: LMS SCALE: AS SHOWN	POTABLE WELL NO. 12 RECONSTRUCTION THE CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	DATE: OCTOBER 2014
						P.A. NO. B4015.00 DWG. NO. 44-43-28-302 SHEET: E-1

GENERAL ELECTRICAL NOTES AND SPECIFICATIONS:

1. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO INSTALL THE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT OBVIOUSLY NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.
2. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED NATIONAL ELECTRICAL CODE, NATIONAL ELECTRICAL SAFETY CODE, LOCAL CODES, CITY CODES AND THE FLORIDA BUILDING CODE.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS AND APPROVALS AND TO INCLUDE ALL FEES AS PART OF HIS BID IF NOT OTHERWISE NOTED.
4. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE ENGINEER AND OWNER.
5. THE CONTRACTOR SHALL, BEFORE SUBMITTING HIS BID, VISIT THE SITE OF THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM.
6. ALL EQUIPMENT AND MATERIAL SHALL BE UNUSED AND U.L. LISTED. ALL REFERENCES TO A PARTICULAR MANUFACTURER ARE GIVEN ON AN "APPROVED EQUAL" BASIS UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL SYSTEMS INSTALLED OR MODIFIED UNDER THIS PROJECT AND REPAIR OR REPLACE ALL DEFECTIVE WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER.
8. ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE.
9. ALL CONDUCTORS SHALL BE COPPER. NO ALUMINUM ALLOWED UNLESS SPECIFICALLY INDICATED ON DRAWINGS.
10. POWER WIRING SHALL BE 600V THHN/THWN, COPPER.
11. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL ELECTRICAL ENCLOSURES AND MATERIAL.
12. THE DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUIT RUNS. THESE ARE TO BE COORDINATED WITH THE OTHER TRADES SO THAT CONFLICTS ARE AVOIDED PRIOR TO INSTALLATIONS.
13. ALL LOCATIONS OF EQUIPMENT, PANELS ETC. ARE SHOWN FOR ILLUSTRATION PURPOSES. CONTRACTOR SHALL VERIFY AND COORDINATE EXACT LOCATION AND SIZE WITH ALL SUBCONTRACTORS AND EQUIPMENT SUPPLIERS PRIOR TO ANY INSTALLATION AND THEN INSTALL AS SUCH WITH CORRESPONDING CONDUIT STUB-UPS.
14. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
15. GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH NEC, ARTICLE 250. THE GROUNDING SYSTEM TEST SHALL NOT EXCEED A 48 HOUR SPAN DRY RESISTANCE OF 10 OHMS. ADDITIONAL GROUNDING TO MEET THIS REQUIREMENT SHALL BE INSTALLED AT NO EXTRA COST. GROUNDING AND BONDING CONNECTIONS SHALL NOT BE PAINTED. ALL GROUNDING CONNECTIONS SHALL BE EXOTHERMIC UNLESS SPECIFICALLY INDICATED OTHERWISE.
16. AN EQUIPMENT GROUND WIRE SIZED PER NEC SHALL BE PULLED IN ALL ELECTRICAL CONDUITS, POWER AND CONTROL, WHETHER OR NOT INDICATED ON THE PLANS.
17. ALL ENCLOSURES, TJB, WIREWAY, PULL BOXES ETC. SHALL CONTAIN A GROUNDING BUS. CONNECT ALL RACEWAY BONDS TO THIS BUS VIA GROUNDING BUSHING AND EXTEND BONDING JUMPER FROM THIS BUS TO THE ENCLOSURE.
18. PROVIDE CONDUIT DUCT SEAL AT ALL CONDUIT ENDS.
19. CONTRACTOR SHALL, WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, PROVIDE TO THE BUILDING OWNER RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING A SINGLE LINE DIAGRAM OF THE ELECTRICAL DISTRIBUTION SYSTEM AND RELATED FLOOR PLANS INDICATING THE LOCATION AND AREA SERVED FOR THE DISTRIBUTION.
20. CONTRACTOR SHALL PROVIDE TO THE BUILDING OWNER AN OPERATING AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 505.7.4.2 OF THE 2010 FLORIDA BUILDING CODE – ENERGY CONSERVATION, INCLUDING ANY AMENDMENTS THERETO.
21. EXPOSED CONDUIT SHALL BE SCH. 80 PVC CONDUIT THROUGHOUT. FLEX CONDUIT SHALL BE PVC COATED ALUMINUM, LIQUIDTIGHT FLEXIBLE METAL CONDUIT, TYPE AEF/EF OR APPROVED EQUAL.

ELECTRICAL SCOPE OF WORK:

1. THE CONTRACTOR SHALL REPLACE EXISTING PULL BOXES WITH NEW NEMA 4X, 316 STAINLESS STEEL PULL BOXES.
2. CONTRACTOR SHALL REPLACE EXISTING EXPOSED CONDUITS WITH NEW CONDUITS & WIRING COMPLETE.
3. CONTRACTOR SHALL PROVIDE 120V POWER FOR NEW MAG METER COMPLETE.
4. CONTRACTOR SHALL PROVIDE AND INSTALL NEW MAG METER AND LEVEL SENSOR COMPLETE.

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ELECTRICAL NOTES

		 <p> SEC Smith Engineering Consultants, Inc. State Auth. #6228 2101 Palm Beach Lakes Blvd., Suite 312 West Palm Beach, FL 33409 (561) 616-3911 fax (561) 616-3912 </p>	SEAL LARRY M. SMITH FLORIDA P.E. NO. 45997 DATE	FLORIDA E.B. NO. 48  <p> MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248 </p>	FLORIDA L.B. NO. 48 FIELD: --- DRAWN: SPH DESIGN: SPH APPR: LMS SCALE: AS SHOWN	POTABLE WELL NO. 12 RECONSTRUCTION THE CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	DATE: OCTOBER 2014 P.A. NO. B4015.00 DWG. NO. 44-43-28-302 SHEET: E-2
NO.	DATE	BY	REVISION				