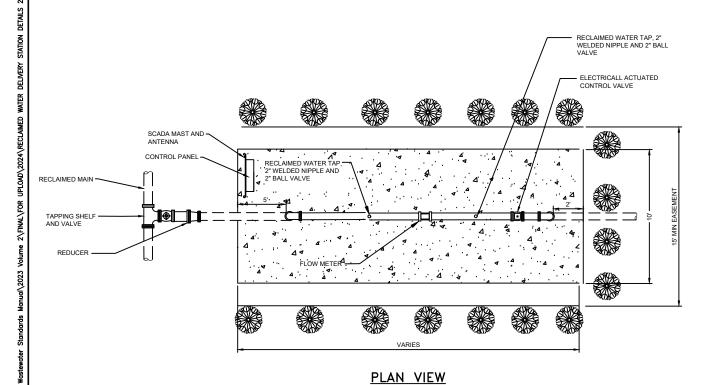


FLOAT STABILIZER BRACKET DETAIL

CONNECTION DETAIL



GENERAL NOTES:

- ALL WORK SHALL COMPLY WITH SPECIFICATIONS, SECTION 703, "RECLAIMED WATER DELIVERY STATIONS" IN JEA WATER AND SEWER STANDARDS MANUAL.
- PRECAST STRUCTURE SHALL MEET A.S.T.M. C-478 STANDARD WITH 4,000 LB. CONCRETE TYPE II
 CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT
 AND COAT WITH BITUMINOUS WATERPROOFING MATERIAL.
- ALL PRECAST STRUCTURE JOINTS BELOW THE TOP SECTION SHALL INCLUDE A 6" WIDE (MIN) EXTERIOR JOINT TAPE (W/PRIMER)
- 4. IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT MIN) AND BACKED FILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT MIN) AND BACK FILL WITH GRANULAR BACK FILL (57 STONE).
- PIPING ABOVE GROUND SHALL BE 316 S.S. AND PIPING BELOW GROUND SHALL BE C-900 DR-25 OR DR-18. FITTING SHALL BE DUCTILE IRON.
- 6. A FLANGED SPOOL PIECE WITH A MINIMUM LENGTH OF FIVE PIPE DIAMETER SHALL BE INSTALLED ENTERING THE FLOW METER AND A FLANGED SPOOL PIECE WITH A MINIMUM LENGTH OF THREE PIPE DIAMETERS SHALL BE INSTALLED EXTING THE FLOW METER AND A FLANGED SPOOL PIECE WITH A MINIMUM LENGTH OF THREE PIPE DIAMETERS SHALL BE INSTALLED EXITING THE CONTROL VALVE.
- 7. FLOW METER, CONTROL VALVE, ORIFICE PLAT AND CONTROL PANEL TO BE PURCHASED FROM JEA APPROVED VENDOR
- 8. DIMENSION "L" TO BE DESIGNED BY ENGINEER.
- 9. JEA TO FURNISH AND INSTALL MAST, ANTENNA AND PRESSURE TRANSDUCERS.
- 10. SUBMIT SHOP DRAWINGS FOR CONTROL PANEL, LAKE LEVEL BOX AND CONTROL VALVE.
- SUBMIT RECORD DRAWINGS SHOWING FINISHED ELEVATIONS, COORDINATES OF CORNERS OF STRUCTURES, AND COORDINATES OF EASEMENT.
- ALL REQUIREMENTS OF JEA "RULES AND REGULATIONS FOR WATER, SEWER AND RECLAIMED WATER SERVICES", LATEST EDITIONS, INCLUDING TAGGING, LABELS, SIGNAGE, PAINTING OF EXPOSED PIPING PANTONE PURPLE NO. 522, ETC. SHALL BE COMPLETED BEFORE DELIVERY STATION IS ACCEPTED.
- 13. PLACE GEOTEXTILE FABRIC AND SAND CEMENT BAGS OVER MAINTENANCE BERM. SIDE SLOPE OF BERM SHALL NOT BE LESS THAN 2:1. EXTEND BAGS TO TOP OF BERM AND T 2-FEET BEYOND POINT WHERE SIDE OF BERM MEETS EXISTING GROUND.
- 14. TYPE "C" PRECAST INLET BOX SHALL BE FURNISHED WITH AN ENVIRONMENT COMPOSITE, INC. MODEL CNFM NON-TRAFFIC RATED FIBERGLASS GRATE, 32LB MAX., IN LIEU OF A C.I. STORM GRATE (USE JEA APPROVED PRECASTERS).
- 15. CONTROL FLOATS SHALL BE SJE RHOMBUS SIGNALMASTER CONTROL SWITCH, 40' CORD LENGTH, MIN. TWO FLOATS SHALL BE NORMALLY CLOSED TYPE, AND ONE SHALL BE NORMALLY OPEN TYPE.

DELIVERY STATION PIPE/VALVE CAPACITY			
NOMINAL SIZE	PEAK DELIVERY RATE (GPM)		
4-INCH	375		
6-INCH	900		
8-INCH	1500		

	ELEVATIONS	
LOCATION	ITEM	ELEVATION
"A"	SLAB	
"B"	LAKE LEVEL BOX-TOP	
"C"	LAKE LEVEL BOX-BOTTOM	
"E"	HIGH LEVEL FLOAT	
"F"	CONTROL FLOAT	
"G"	LOW LEVEL FLOAT	

SHEET NO. DATE: R
DRAWING NO. SCALE: R

- 1. REFER TO "REUSE STATION CONTROLS SPECIFICATION" FOR FURTHER DETAILS THAT MUST BE ADHERED TO.
- 2. THIS DRAWING IS AN EXAMPLE OF HOW OVERALL CABINET IS TO BE DESIGNED.
- 3. REFER TO NOTES AND DETAILS ON ALL DRAWING SHEETS.
- 4. ALL FIELD WIRING SHALL BE #14 AWG STRANDED, TIN-PLATED COPPER.
- 5. ALL PLC I/O WIRING SHALL BE #18 AWG.
- 6. ALL MOUNTING SCREWS SHALL BE DRILLED AND TAPPED (NO SELF-TAPPING SCREWS ARE ALLOWED).
- 7. ALL MOUNTING SCREWS SHALL BE STAINLESS STEEL.

CONTROL WIRE UL508A COLOR:

- 120 VAC - NEUTRAL WHITE WHITE / BLUE STRIPE - 0 VDC

DRAWING LAYER COLOR LEGEND:

120 VAC 1 φ - 60 Hz

FRONT PANEL VIEW

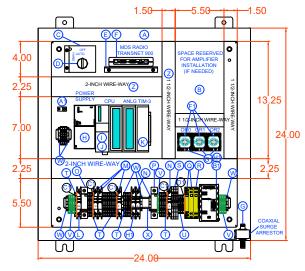
BLACK - ELECTRICAL SCHEMATIC WIRING DIAGRAMS AND DEVICES - PART IDENTIFICATION

PURPLE - WIRE NUMBERS

GREEN - FIELD DEVICES AND WIRING OUTSIDE ENCLOSURE (DASHED)

- FUTURE DEVICES AND WIRING

- DIMENSIONS



ENCLOSURE:
SPH (2AL-242410-1532 (24"H x 24"W x 10"D) NEMA 12/3R RATED, FABRICATED FROM, 125
MARINE GRADE ALUMNUM WITH WHITE POLYESTER POWDER COAT FINISH INSIDE AND OUT.
OUTER DOOR 1463 3-POINT PADLOCKABLE HANDLE ENCLOSURE 14/3 ALUMNUM
SUNSHIELDS MOUNTED ON TOP, FRONT, AND BOTH SIDES, AND INCLUDES A DRIPSHIELD.

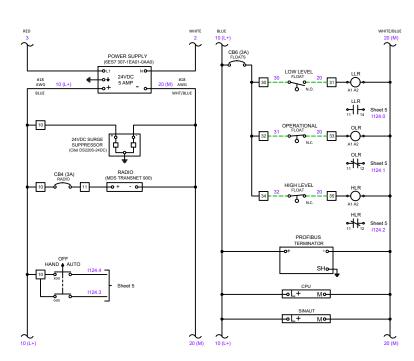
BACK PANEL: SPP-2424 (21"H x 21"W) FABRICATED FROM 12 ga. CARBON STEEL WITH, WHITE INDUSTRIAL GRADE FANMEL FINISH.

REFER TO ENCLOSURE SPECIFICATIONS FOR FURTHER DETAILS.

BILL of MATERIALS

	QTY	MANUFACTURER	PART NUMBER	DESCRIPTION
Α	- 1	SCHAEFER	SPN12AL-242410-1532	ENCLOSURE, NEMA 12/3R, ALUM, WHITE
В	1	SCHAEFER	SPP-2424	BACK PANEL, CARBON STEEL, WHITE
С	1	ECS	-	CUSTOM SWITCH BRACKET
D	1	SQUARE D	9001 SKS43B	3 POSITION SWITCH, 30mm, MAINTAINED
	1	SQUARE D	9001 KA1	CONTACT BLOCK, 1 N.O 1 N.C.
Е	1	ECS	-	CUSTOM RADIO BRACKET
╗	1	MDS	TRANSNET 900	SPREAD-SPECTRUM RADIO
F	1	TIMES MICROWAVE	FPCTTS000026	EZ400NMHD N MALE LMR400
	1	TIMES MICROWAVE	FPCTTS000005	CONNECTOR, TNC, MALE RA LMR400
G	1	POLYPHASER	FPPLTS00002	ANTENNA COAXIAL SURGE ARRESTOR
т	1	SIEMENS	6ES7 307-1EA01-0AA0	24VDC POWER SUPPLY, 5 AMP
_	1	SIEMENS	6ES7 313-6CG04-0AB0	PLC, CPU313C-2 DP 16 DI - 16 DO
	1	SIEMENS	6ES7 953-8LG31-0AA0	MMC MEMORY CARD, 128KB
	1	SIEMENS	6ES7 331-1KF02-0AB0	ANALOG INPUT MODULE, 8 CHANNEL
	2	SIEMENS	6ES7 392-1BM01-0AA0	40-PIN SCREW CONNECTOR
	1	SIEMENS	6ES7 390-1AE80-0AA0	480mm MOUNTING RAIL FOR PLC
٦	1	MOLEX	1201 030 001 (PA9D01-42)	PROFIBUS CONNECTOR, 90-DEGREE
к	1	SIEMENS	6NH7 800-3BA00	SINAUT ST7 MODULE, TIM 3V-IE
	1	TFS, INC (Note 1)	9-PIN / 25-PIN RS232	CABLE SINAUT TO RADIO NULL CABLE
L	1	PHOENIX CONTACT	2907573	CB, 1 POLE, 20A, BRANCH RATED, UL489
М	3	PHOENIX CONTACT	2907562	CB, 1 POLE, 5A, BRANCH RATED, UL489
N	2	PHOENIX CONTACT	2907560	CB, 1 POLE, 3A, BRANCH RATED, UL489
0	1	CITEL	DS41S-120	120VAC SURGE SUPPRESSOR
Ρ	1	CITEL	DS220S-24DC	24VDC SURGE SUPPRESSOR
Q	2	CITEL	DLAW-24D3	ANALOG SURGE SUPPRESSOR
R	1	CITEL	DLA-06D3	PROFIBUS SURGE PROTECTOR
S	3	FINDER	4CP190245050	RELAY, 24VDC, INDICATOR, SCREW
Τ	20	WAGO	2002-1401	TERMINAL, SINGLE, SCREW, BEIGE
С	3	WAGO	2002-2201	TERMINAL, DOUBLE, SCREW, BEIGE
٧	6	WAGO	2002-1207	TERMINAL, GROUND, SCREW, GRN / YEL
W	4	WAGO	249-116	TERMINAL END RETAINER, BEIGE
х	1	WEIDMULLER	0514 50 0000	DIN RAIL, GALVANIZED, SLOTTED
Υ	1	HUBBELL	GFWRST20W	DUPLEX GFCI RECEPTACLE, 20 AMP
Z	1	PANDUIT	H2X2LG6 / H1.5X2LG6	WIRE-WAY, HINGED COVER, WIDE FINGER
Α1	1	PANDUIT	LAMA2-14-QY	GROUND LUG, DUAL RATED, #2-14 AWG
В1	1	PROCENTEC	101-00211A	PROFIBUS TERMINATOR RESISTOR
C1	1	WAGO	2002-1492	TERMINAL END / PARTITION PLATE
D1	1	WAGO	2002-2292	TERMINAL END / PARTITION PLATE
E1	3	SQUARE D	RUMC32BD	RELAY, 24VDC, INDICATOR, SCREW
F1	3	SQUARE D	RUZSC3M	RELAY BASE, PLUG-IN, 11 PIN
G1	3	SQUARE D	RUW241P7	RC CIRCUIT, 110-240VAC
H1	1	PHOENIX CONTACT	2907571	CB, 1 POLE, 15A, BRANCH RATED, UL489

BACK PANEL LAYOUT



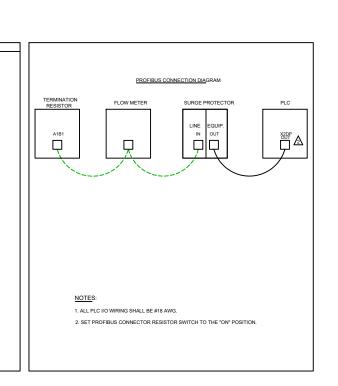
120 VAC VOLTAGE

24 VDC VOLTAGE

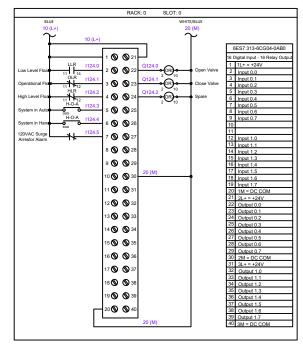


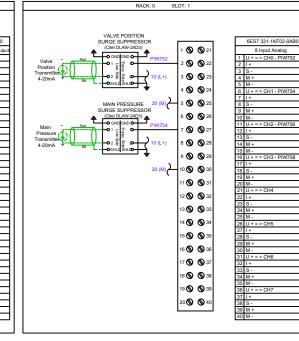
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KBus
TxD
RxD



PLC LAYOUT & CONNECTION





PLC INPUT - OUTPUT

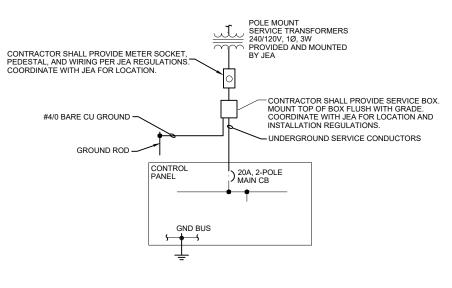


NOTES:

- 1. JEA TO FURNISH POLE MOUNTED SERVICE TRANSFORMERS. CONTRACTOR TO PROVIDE DIRECT BURIAL CONDUIT WITH CONDUCTORS FROM CONTROL PANEL TO SERVICE BOX. CONTRACTOR SHALL COORDINATE CONDUIT ROUTING, SERVICE TRANSFORMER LOCATION, AND SERVICE BOX LOCATION WITH JEA, (REVIEW JEA RULES AND REGULATIONS FOR ELECTRIC SERVICE). PROVIDE A MINIMUM OF 42" COVER FOR CONDUIT AND CONTACT JEA FOR INSPECTION 24 HOURS BEFORE BACKFILLING TRENCH.
- 2. CONTROL PANEL AND FLOW METER TO BE PURCHASED FROM JEA VENDOR AND INSTALLED BY CONTRACTOR.
- 3. ANTENNA, MAST, AND ANTENNA CABLES TO BE FURNISHED AND INSTALLED BY JEA. COORDINATE WITH JEA PRIOR TO SLAB CONSTRUCTION.
- 4. PROVIDE DEDICATED GROUND ROD FOR FLOW METER. FLOW TUBE TO BE GROUNDED TO SAME GROUND ROD
- 5. ALL CONDUIT RUNS SHALL BE WITHIN OR BENEATH THE SLAB.
- 6. CONTRACTOR SHALL INSTALL ALL JEA PROVIDED INSTRUMENTATION/ EQUIPMENT IN ACCORDACE WITH MANUFACTURER RECOMMENDATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT INSTALLATION DOCUMENTATION FROM JEA FOR ALL INSTRUMENTS/ EQUIPMENT AND IMPLEMENT MANUFACTURER'S RECOMMENDATIONS DURING INSTALLATION AND TESTING OF ALL INSTALLED INSTRUMENTS/EQUIPMENT.
- 7. PROVIDE SCHEDULE 80 PVC CONDUIT BELOW AND ABOVE THE SLAB. CONTACTOR SHALL CONTACT JEA 24 HOURS PRIOR TO POURING OF CONCRETE SLAB FOR INSPECTION OF UNDER SLAB CONDUITS.
- 8. PROVIDE GROUND WELLS WITH TRAFFIC RATED ENCLOSURES AND LIDS LABELED "GROUNDING".
- 9. CONTRACTOR SHALL PROVIDE ALL WIRING REQUIRED TO CONNECT OWNER FURNISHED INSTRUMENTS. CONTRACTOR SHALL VERIFY WIRING REQUIREMENTS WITH THE OWNER'S INSTRUMENT SUPPLIER.

CONTROL CONDUIT SCHEDULE				
QUANTITY	SIZE	LOCATION	WIRES	
1	1"	PANEL TO CONTROL VALVE (SOLENOID VALVE)	3 #16 (WHITE, BLUE, RED) + GROUND	
1	1"	PANEL TO CONTROL VALVE (POSITION INDICATOR) & UPSTREAM PSI TRANSMITTER	CONDUIT TO BE TERMINATED WITH AN ACCESS TEE; PULL TWO (2) SEPARATE #18 TWISTED SHIELDED PAIR*	
1	1"	PANEL TO FLOW METER	ONE(1) POWER CABLE + ONE(1) SIGNAL CABLE, FURNISHED WITH ENDRESS HAUSER MAGNETIC FLOWMETER.	
1	1"	PANEL TO JUNCTION BOX	FOUR(4) #16 (WHITE, BLUE, RED, ORANGE)	
1	2"	JUNCTION BOX TO TYPE "C" LAKE INLET BOX	CONTROL CABLES FROM 3 LEVEL FLOATS	

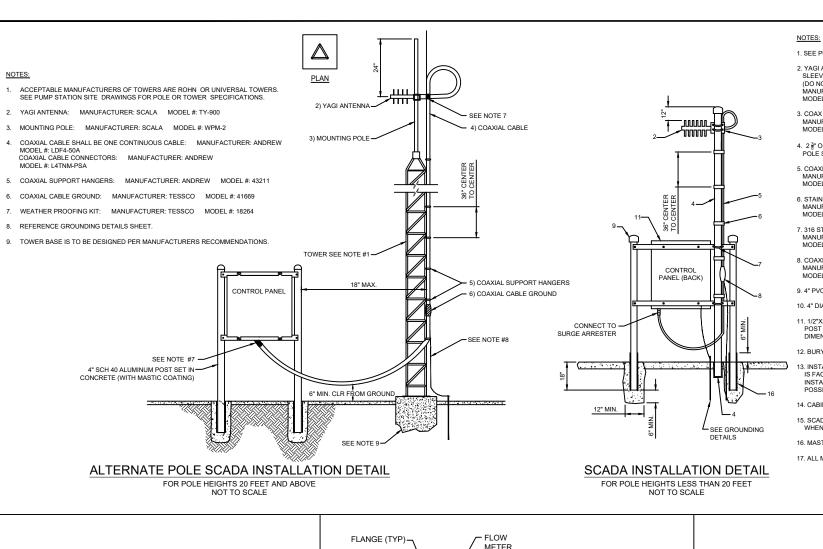
*JEA WILL BE RESPONSIBLE FOR FINAL WIRING TO CONTROL VALVE POSITION TRANSMITTER AND TO JEA-FURNISHED UPSTREAM PRESSURE TRANSMITTER



NOTES:

- 1. PROVIDE SERVICE ENTRANCE RATED MAIN BREAKER WITH TVSS.
- 2. PROVIDE (4) 20A-1 POLE CIRCUIT BREAKERS. (2-SPARE)
- 3. COORDINATE CIRCUIT BREAKER INTERRUPT RATINGS WITH UTILITY BEFORE INSTALLATION.

ONE LINE DIAGRAM



1. SEE PUMP STATION SITE DRAWINGS FOR POLE OR TOWER SPECIFICATIONS 2. YAGI ANTENNA, COMES W/ MOUNTING HARDWARE(MAST SHALL BE

SLEEVED THRU CONCRETE TO ALLOW ROTATION (DO NOT USE WOOD POLE MOUNT) MODEL NUMBER: TY-900

MANUFACTURE: WIRELESS SOLUTIONS MODEL NUMBER: NM50V-1/2

4. 2 3" O.D. SCD. 40 ALUMINUM 20' POLE. POLE SHALL BE SLEEVED THROUGH CONCRETE TO ALLOW FOR ROTATION

5. COAXIAL CABLE SHALL BE ONE CONTINUOUS CABLE

6. STAINLESS STEEL STRAPS 3' O/C MANUFACTURE: WIRELESS SOLUTIONS MODEL NUMBER: RM-A300

7. 316 STAINLESS STEEL U-BOLTS MANUFACTURE: ANY DOMESTIC BRAND MODEL NUMBER: N/A

8. COAXIAL CABLE GROUND MANUFACTURER: TESSCO MODEL #: 41669

9. 4" PVC CAPS

10. 4" DIA. ALUMINUM POST

11. 1/2"X3" SOLID ALUMINUM SUPPORT BARS (2 TOTAL) BOLTED TO POST W/ 5/8" S.S. ANCHOR BOLTS. DRILL 2 HOLES (AS DIMENSIONED ON DETAIL) IN TOP & BOTTOM SUPPORTS ONLY

12. BURY ALUMINUM POST IN CONCRETE AS SHOWN ON DRAWING

13. INSTALL RTU MOUNT SO THAT WHEN CABINET IS ATTACHED DOOR IS FACING NORTH UNLESS DOOR HAS SUN SHIELD. IN ALL INSTANCES JEA PREFERS THE DOOR TO FACE NORTH IF

14. CABINET SHALL HAVE CLEARANCE TO OPEN DOOR COMPLETELY.

15. SCADA SYSTEM WOOD POLE ALTERNATE DETAIL TO BE USED ONLY WHEN ADDITIONAL ANTENNA HEIGHT IS REQUIRED. AND APPROVED

16. MASTIC SEAL ALL POSTS WHICH ARE EMBEDDED IN CONCRETE.

17. ALL MATERIALS MUST MEET OR EXCEED JEA SPECIFICATIONS (501

48" MAX -3/4" RADIUS, TYP /4" ALUMINUM PLATE, ROUND EDGES SIZE PER EQUIPMENT REQUIREMENTS -1/2" ALUMINUM PLATE 1/2" RADIUS, TY SECTION -ALUMINUM CHANNEL LENGTH PER EQUIPMENT REQUIREMENTS PROVIDE FELT SPACER OR BITUMASTIC COATING BETWEEN ALUMINUM AND CONCRETE NON-SHRINK GROUT -CONCRETE PAD, 1/2" STAINLESS STEEL CONCRETE NOTE 2 ANCHORS OR ANCHOR BOLTS WITH LEVELING NUTS, (TYP OF 4 EACH BASE)

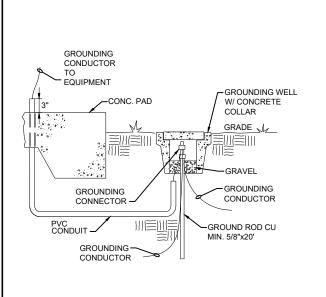
NOTES:

1. USE STAINLESS STEEL MOUNTING HARDWARE. USE WASHER AND SPLIT LOCK WASHER UNDER ALL NUTS.

2. PROVIDE A 4 INCH THICK CONCRETE PAD AT GRADE WITH WELDED WIRE FABRIC. THE PAD SHALL BE 12 INCHES LONGER THAN THE MOUNTING PLATE BY ONE HALF THE HEIGHT OF THE MOUNTING PLATE ABOVE FINISHED GRADE. MINIMUM WIDTH OF 24 INCHES

ELECTRICAL EQUIPMENT SUPPORT

(504)



GROUNDING CONNECTOR

(505)

METER FLOW METER CONDUCTIVE GROUNDING RINGS PIPF (TYP BOTH SIDES) SIZE ALUMINUM ANGLE FOR #6 BARE COPPER CONDUIT (2 1/2" MIN) GROUND WIRE -(TYP FOR MULTIPLE CONDUIT) STAINLESS STEEL 3/16" PROVIDE FELT SPACER OR CONDUIT CLAMP -BITUMASTIC COATING BETWEEN SPACER-AL AND CONCRETE 1/2" STAINLESS STEEL CONCRETE ANCHORS (2) 3/4" SCH 80 PVC CONDUIT -SEE (507) TO GROUND WELL NOTES:

1. GROUNDING SHALL COMPLY WITH NEC ARTICLE 250 AND ANY LOCAL APPLICABLE CODES.

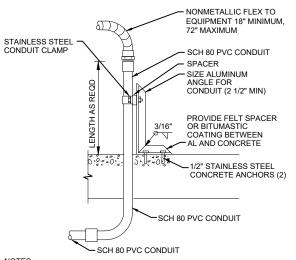
2. INSTALL GROUND WIRE CONTINUOUSLY THROUGH GROUND LUG. TIGHTEN LUG SCREW. GROUND WIRE SHALL EXTEND UP SUPPORT POST, AROUND SUNSHIELD TO BE TERMINATED ON GROUND WIRE TERMINAL STRIP WITHIN INSTRUMENT ENCLOSURE. SECURE GROUND WIRE TO SUPPORT POST VIA STAINLESS STEEL BAND FASTENERS WITH SCREW TYPE TIGHTENING MECHANISM.

3. ALL GROUND FASTENERS, REGARDLESS OF TYPE (SECURING TO POST OR TO CONCRETE), SHALL BE STAINLESS STEEL.

4. FOLLOW FLOW METER MANUFACTURER'S INSTRUCTIONS FOR EXTERNAL GROUNDING. FOR CONDUCTIVE PIPE, CONNECT BETWEEN THE GROUNDING TERMINAL AND BOTH ENDS OF THE GROUNDING RINGS WITH HEAVY

TYPICAL GROUNDING DETAILS



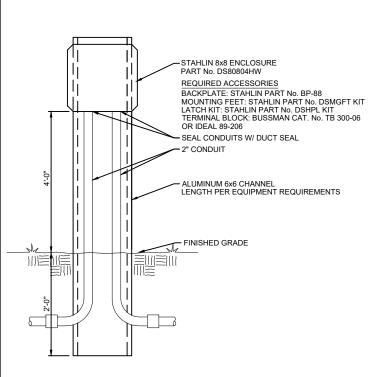


1. PROVIDE SUPPORT FOR ALL PVC CONDUIT WITHIN 3 INCHES OF THE END OF THE CONDUIT.

2. LOCATE CONDUITS IN CLOSE PROXIMITY TO TERMINATION POINT TO MINIMIZE LENGTH OF FLEXIBLE NON-METALLIC CONDUIT: MAXIMUM LENGTH OF 6' PER NEC.

CONDUIT TRANSITION AND SUPPORT DETAIL





1. USE STAINLESS STEEL MOUNTING HARDWARE. USE WASHER AND SPLIT LOCK WASHER UNDER ALL NUTS.

FLOAT CONTROL JUNCTION BOX

