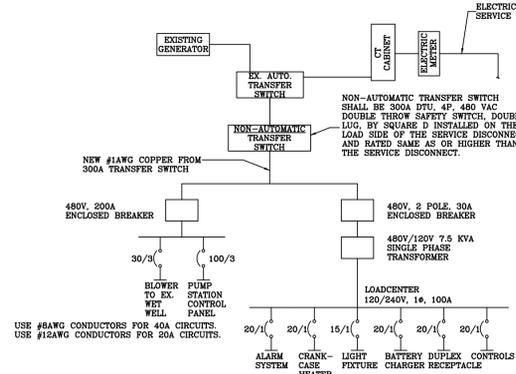


**ELECTRICAL PANEL LAYOUT**  
NO SCALE



**PUMP STATION ONE-LINE DIAGRAM**  
NO SCALE

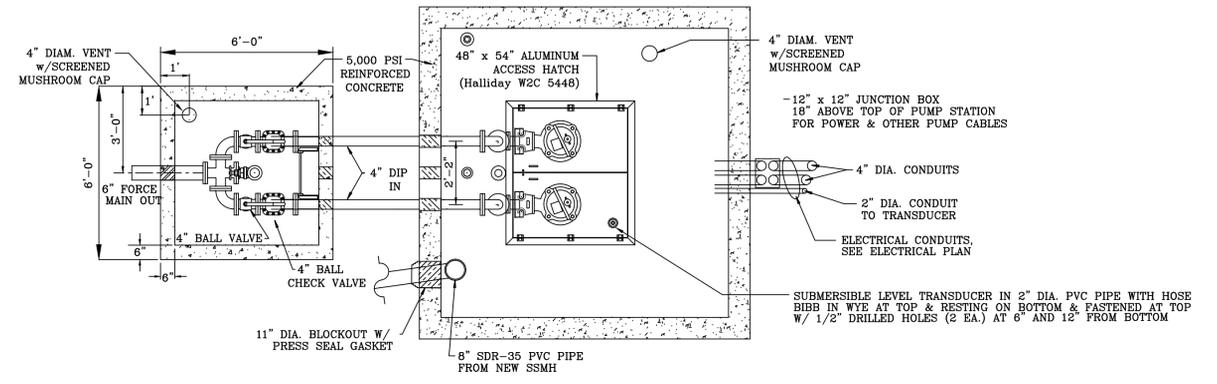
**ELECTRICAL NOTES AND SPECIFICATIONS**

- CONTRACTOR SHALL INSURE ALL ELECTRICAL COMPONENTS MEET THE INTENT AND FUNCTION OF THESE PLANS AND SPECIFICATIONS. ANY DISCREPANCIES SHALL BE IDENTIFIED PRIOR TO SUBMITTING A BID.
- INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE (NEC) AND ALL REQUIREMENTS OF THE LOCAL BUILDING OFFICIAL. ALL AREAS TO BE CONSIDERED WET LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO ACQUIRE ALL REQUIRED TRADE PERMITS.
- MAJOR ITEMS ARE SHOWN ON PROJECT PLANS. CONTRACTOR IS RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
- ALL WIRING SHALL BE IN CONDUITS (4" MIN. UNLESS OTHERWISE NOTED) MEETING ALL APPLICABLE CODE.
- ELECTRIC SERVICE SHALL BE PROVIDED WITH SECONDARY SURGE ARRESTERS.
- WIRING JUNCTION BOXES SHALL NOT BE PLACED INSIDE THE PUMP STATION WET WELL OR UNDERGROUND. JUNCTION BOXES SHALL BE AT LEAST ONE FOOT (1') ABOVE GRADE.
- ALL ELECTRICAL WIRING SHALL BE COPPER AND HAVE MARKERS AT ALL WIRE TERMINATIONS.
- THREE PHASE PUMPS SHALL HAVE PHASE PROTECTION ON INDIVIDUAL PHASES.
- THREE PHASE PUMPS SHALL HAVE AN INDIVIDUAL POLY-PHASE STARTER. STARTERS SHALL BE SIZED ONE SIZE LARGER THAN HORSEPOWER REQUIRED.
- AN HOUR RUN METER SHALL BE PROVIDED FOR EACH PUMP MOTOR.
- ALL CONTROL CIRCUITS SHALL BE A MAXIMUM OF 120 VOLTS.
- HIGH-PRESSURE SODIUM OR APPROVED EQUAL DUSK TO DAWN LIGHT WITH INITIAL MINIMUM LAMP RATING OF 5,000 LUMENS SHALL BE PROVIDED 10 FEET ABOVE GROUND LEVEL AT ELECTRICAL PANEL.
- ELECTRICAL PANEL SHALL HAVE A MINIMUM OF TWELVE (12) CIRCUITS.
- A NON-AUTOMATIC TRANSFER SWITCH SHALL BE INSTALLED ON THE LOAD SIDE OF DISCONNECTION AND RATED SAME OR HIGHER THAN SERVICE DISCONNECT.
- PUMP MOTORS SHALL BE OF "EXPLOSION PROOF" CONSTRUCTION MEETING NEC ARTICLE 500 CLASS 1 DIVISION 1 GROUP D CLASSIFICATION.
- CONTRACTOR SHALL DE-ENERGIZE THE EXISTING ELECTRICAL SERVICE TO THE EXISTING PUMP STATION AFTER START-UP AND ACCEPTANCE OF THE NEW PUMP STATION BY THE OWNER.

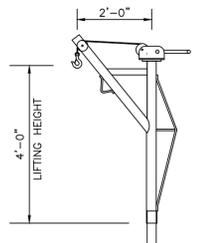
**NOTES:**

- ALL PIPING TO BE CLASS 52 DUCTILE IRON UNLESS OTHERWISE NOTED.
- WET WELL TO BE CAST-IN-PLACE OR PRECAST CONCRETE SECTIONS. VALVE VAULT TO BE PRECAST CONCRETE SECTIONS WITH WALL SLEEVES FOR ALL PRESSURE PIPING AND FLEXIBLE BOOT FOR ALL OTHER PIPING.
- PUMPS SHALL BE EX-PUMPS MODEL PX3-80-2 VORTEX 1 PUMPS, 7 7/8" IMPELLER, 33.5 HP OR APPROVED EQUAL CAPABLE OF SUPPLYING 327 GPM @ 151.5' TDH AND PASSING A 3" DIAMETER SOLID.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATION WITH APCO TO PROVIDE PERMANENT POWER TO THE PUMP STATION.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY TEMPORARY POWER TO THE PUMP STATION SITE.
- ALL ELECTRICAL AND CONTROL EQUIPMENT SHALL BE INSTALLED ACCORDING TO NEC AND ALL OTHER APPLICABLE CODES OR STANDARDS.
- TESTING OF WET WELL TO BE ACCOMPLISHED BY 24 HOUR EXFILTRATION METHOD. NO LEAKAGE IS ALLOWED.
- THE CONTRACTOR SHALL SUPPLY TO THE OWNER A FULLY FUNCTIONING DUPLEX PUMP STATION MEETING THE INTENT OF THE CONTRACT DOCUMENTS INCLUDING ALL ELECTRICAL EQUIPMENT FROM POINT OF CONNECTION TO APCO METER, CONTROLS, MECHANICAL, AND ALL ASSOCIATED APPURTENANCES.

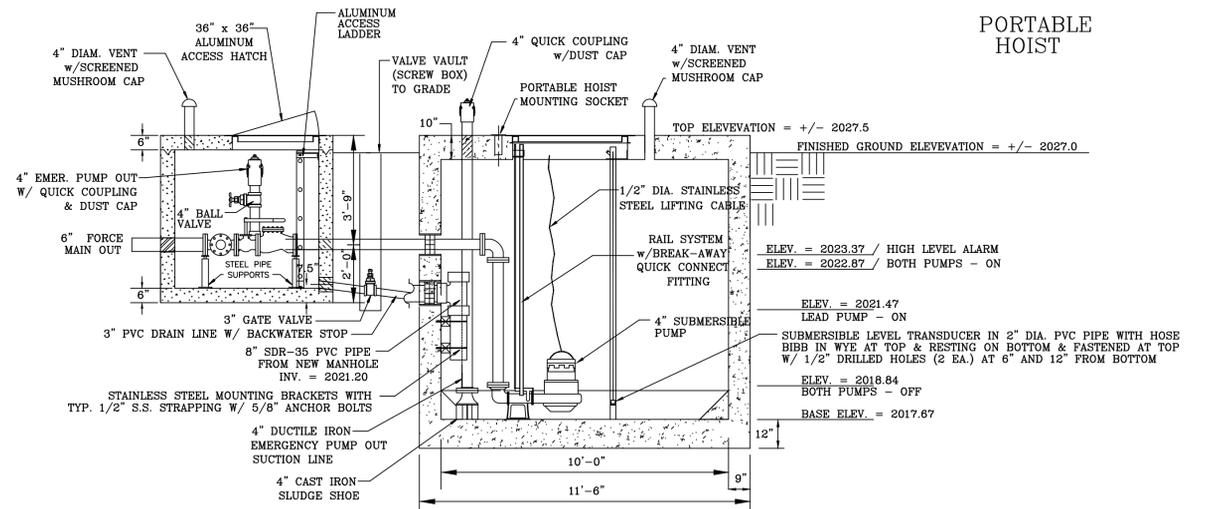
- ALL MATERIALS AND WORK SHALL BE IN ACCORDANCE WITH THE MONTGOMERY COUNTY PUBLIC SERVICE AUTHORITY WATER AND SEWER DESIGN & CONSTRUCTION STANDARDS, THIRD EDITION.
- CONTRACTOR SHALL NOT ALLOW WASTEWATER TO ESCAPE SITE AND ENTER ADJACENT STREAM. ANY WORK REQUIRING EXISTING FORCE MAIN OR GRAVITY SEWER MAIN SHALL BE COORDINATED TO PREVENT RELEASE OF WASTEWATER. ESTIMATED VOLUME OF EXISTING FORCE MAIN (6" DIA @ +/- 1.770') IS +/- 2,600 GALLONS.
- CONTRACTOR SHALL KEEP THE WORKSITE SECURED AT ALL TIMES TO PREVENT ACCESS BY NON-AUTHORIZED PERSONNEL.
- DAMAGED EXISTING FENCING TO BE REMOVED AND REPLACED WITH NEW FENCING AFTER START-UP AND ACCEPTANCE OF NEW SEWER PUMP STATION.
- CONTRACTOR SHALL ENSURE THAT EXISTING PUMP STATION IS MAINTAINED AS FULLY OPERATIONAL DURING WORK.
- ANY REMOVED ITEMS OF EXISTING PUMP STATION SHALL BE PROVIDED TO OWNER, UNLESS DIRECTED OTHERWISE.



- NOTES:**
- ALL PIPE PENETRATIONS THROUGH PRECAST STRUCTURES SHALL BE SEALED BY APPROPRIATELY SIZED STEEL WALL SLEEVE AND "LINK SEAL" UNLESS OTHERWISE NOTED.



**PORTABLE HOIST**



**SEWER PUMP STATION**  
NO SCALE



REVISION	DATE	DESCRIPTION
1	1 JULY 2016	ELECTRICAL PANEL LAYOUT & PUMP STATION ONE-LINE DIAGRAM REVISIONS

DESIGNED BY: RCF  
DRAWN BY: RCF  
CHECKED BY:  
SCALE: AS SHOWN  
DATE: 23 APR 2016



**PUMP STATION PROFILE & ELECTRICAL**  
WALNUT CREEK  
SEWAGE PUMP STATION  
REPLACEMENT PROJECT  
MONTGOMERY COUNTY PUBLIC SERVICE AUTHORITY  
755 ROANOKE STREET, SUITE 2-1  
CHRISTIANSBURG, VIRGINIA 24073