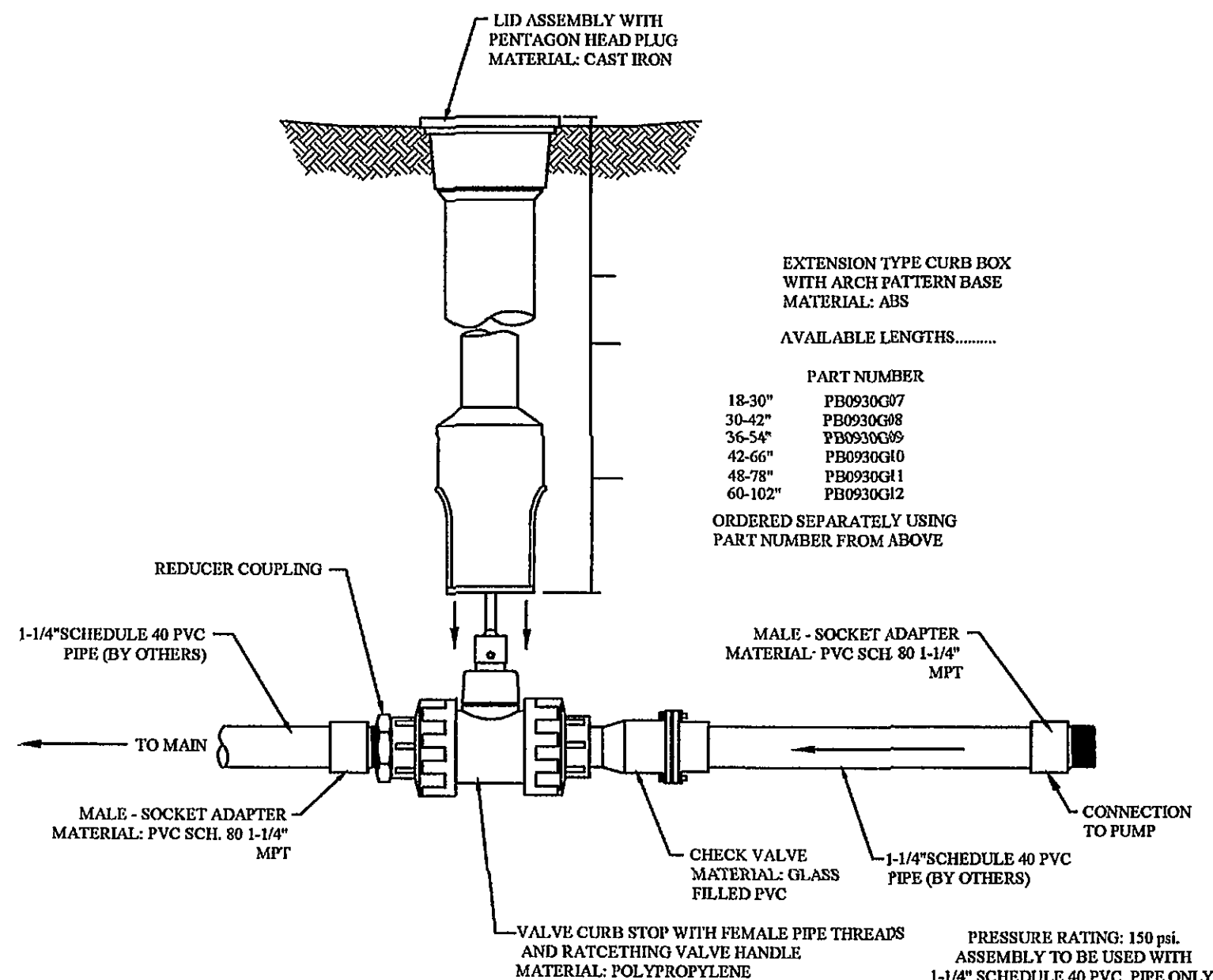


E-ONE GRINDER PUMP STATION, MODEL NO. 1012s-73



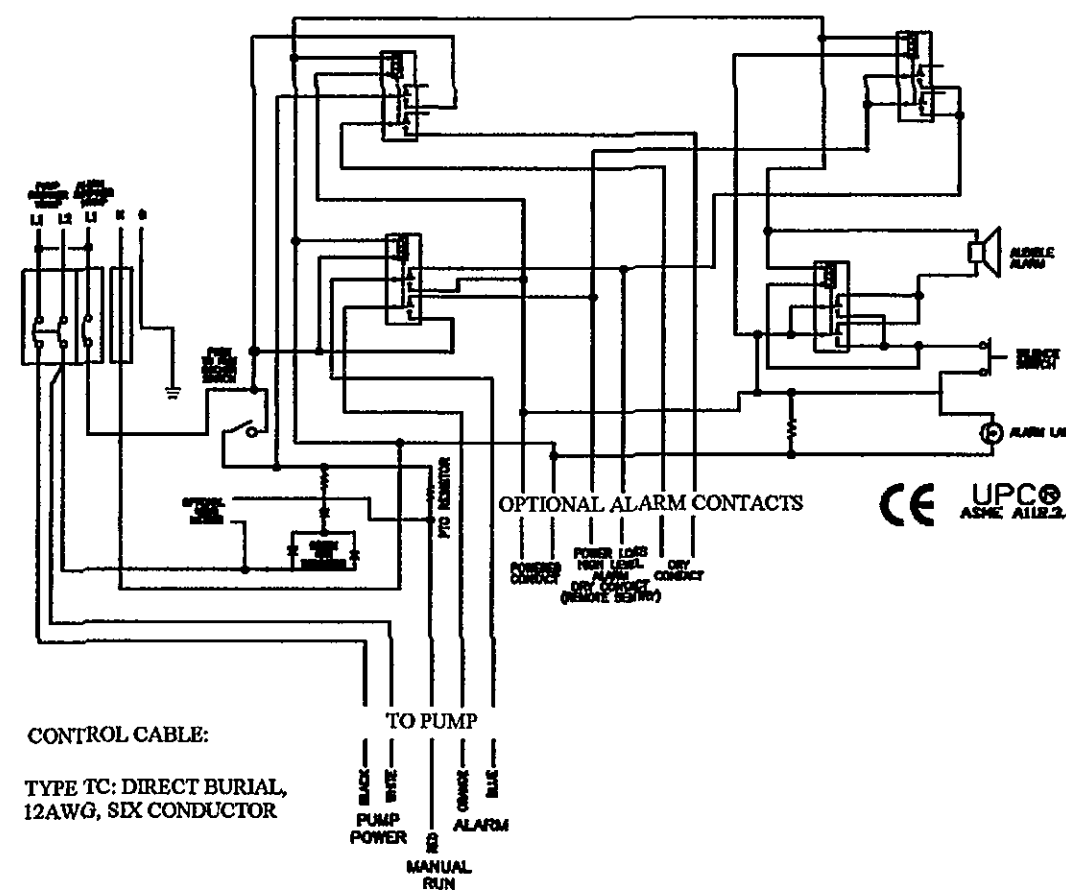
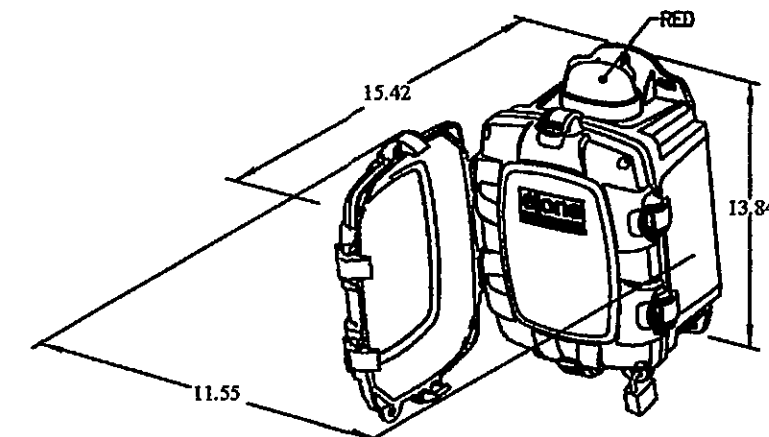
1-1/4" PVC LATERAL ASSEMBLY
SCH. 40 PVC PIPE

SYSTEM COMPONENTS

REDUNDANT RUN (HIGH LEVEL) EXTERNAL VISUAL & AUDIBLE ALARM EXTERNAL LATCHING MANUAL SILENCE MANUAL RUN PUMP RUN INDICATOR CONFORMAL COATED CIRCUIT BOARD PADLOCK NEMA 4X ENCLOSURE ASSEMBLY CORROSION PROOF THERMOPLASTIC POLYESTER APPROVED BY UL FOR ELECTRICAL CONTROL ENCLOSURE

OPTIONAL FEATURE(S)

1. GENERATOR RECEPTACLE AUTO TRANSFER SWITCH (AC MAINS TO PORTABLE GENERATOR)



SIMPLEX SENTRY ELECTRICAL BOX & SCHEMATIC

LOW PRESSURE SYSTEM FORCE MAIN

1. THE LOW PRESSURE COMMON FORCEMAIN SYSTEM FOR LAKEWATCH PLANTATION SANITARY SEWER SYSTEM EXTENSION, IS DESIGNED TO PROVIDE PRESSURIZED SEWER SERVICE FOR THE 16 RESIDENTIAL LOTS LOCATED ALONG THE SHORELINE OF SMITH MOUNTAIN LAKE, IN FRANKLIN COUNTY VIRGINIA. THE SYSTEM HAS BEEN SPECIFICALLY DESIGNED SUCH THAT EACH RESIDENTIAL LOT WILL UTILIZE A STANDARDIZED E-ONE GRINDER PUMP STATION.
2. THE DEVELOPER AND/OR RESIDENTIAL LOT OWNER WILL BE REQUIRED TO OBTAIN A COPY OF THIS SHEET IN ORDER TO PROCURE A SEWER SYSTEM PERMIT FROM FRANKLIN COUNTY HEALTH DEPARTMENT AND BUILDING PERMIT FROM FRANKLIN COUNTY. COPIES OF SHEET AND CONSTRUCTION SPECIFICATIONS SHALL BE OBTAINED FROM ACS DESIGN, PROJECT ENGINEER AND WASTEWATER CONSULTANT.
3. INSTALLATION OF THE E-ONE GRINDER PUMP SYSTEM AND SERVICE CONNECTION SHALL ADHERE TO THE MINIMUM STANDARDS SET FORTH WITHIN THESE CONSTRUCTION DRAWINGS AND AS SPECIFIED BY THE MANUFACTURER. THE DEVELOPER, BUILDER OR LOT OWNER SHALL REFER TO THE CONSTRUCTION DRAWINGS CONTAINED HEREIN FOR SPECIFIC LOCATION AND INSTRUCTIONS FOR CONNECTION TO THE COMMON LOW PRESSURE FORCEMAIN.
4. AUDIO AND VISUAL ALARMS SHALL BE LOCATED WITHIN EACH RESPECTIVE RESIDENCE.
5. INSTALLATION OF THE PACKAGED GRINDER PUMP STATION AND PRESSURE FORCEMAIN SERVICE CONNECTION SHALL BE PERFORMED BY A LICENSED PLUMBER AND ELECTRICIAN AS DICTATED AND ENFORCED BY FRANKLIN COUNTY BUILDING DEPARTMENT.
6. AFTER INSTALLATION, THE BUILDER OR DEVELOPER SHALL CONTACT ACS DESIGN TO SCHEDULE AN ON-SITE INSPECTION OF THE GRINDER PUMP STATION INSTALLATION. PRIOR TO INSTALLATION, THE SYSTEM SHALL BE FULLY COMPLETE AND TESTED BY THE CONTRACTOR. ALL PUMPS, ALARMS, AND CONTROLS SHALL BE VERIFIED AS TO PROPER FUNCTION. AFTER VERIFICATION, THE CONTRACTOR SHALL DEACTIVATE THE PUMP STATION AND FILL IT WITH WATER. THE CONTRACTOR SHALL CONTACT ACS DESIGN TO SCHEDULE AN INSPECTION. INSPECTION SHALL INCLUDE VERIFICATION THAT ALL ALARMS, CONTROLS, AND THE PUMP ARE FUNCTIONING CORRECTLY.
7. THE GRINDER PUMP STATION SHALL NOT BE INSTALLED WITHIN ANY RESIDENTIAL STRUCTURE. THE GRINDER STATION SHALL BE LOCATED SUCH THAT ITS TOP ELEVATION IS LOWER THAN THE LOWEST FINISHED FLOOR ELEVATION WITHIN THE RESIDENCE.
8. THE E-ONE PUMP STATION SHALL BE CONSTRUCTION BY A CERTIFIED E-ONE INSTALLER. THE DEVELOPER/LOT OWNER SHALL CONTACT THE FOLLOWING:

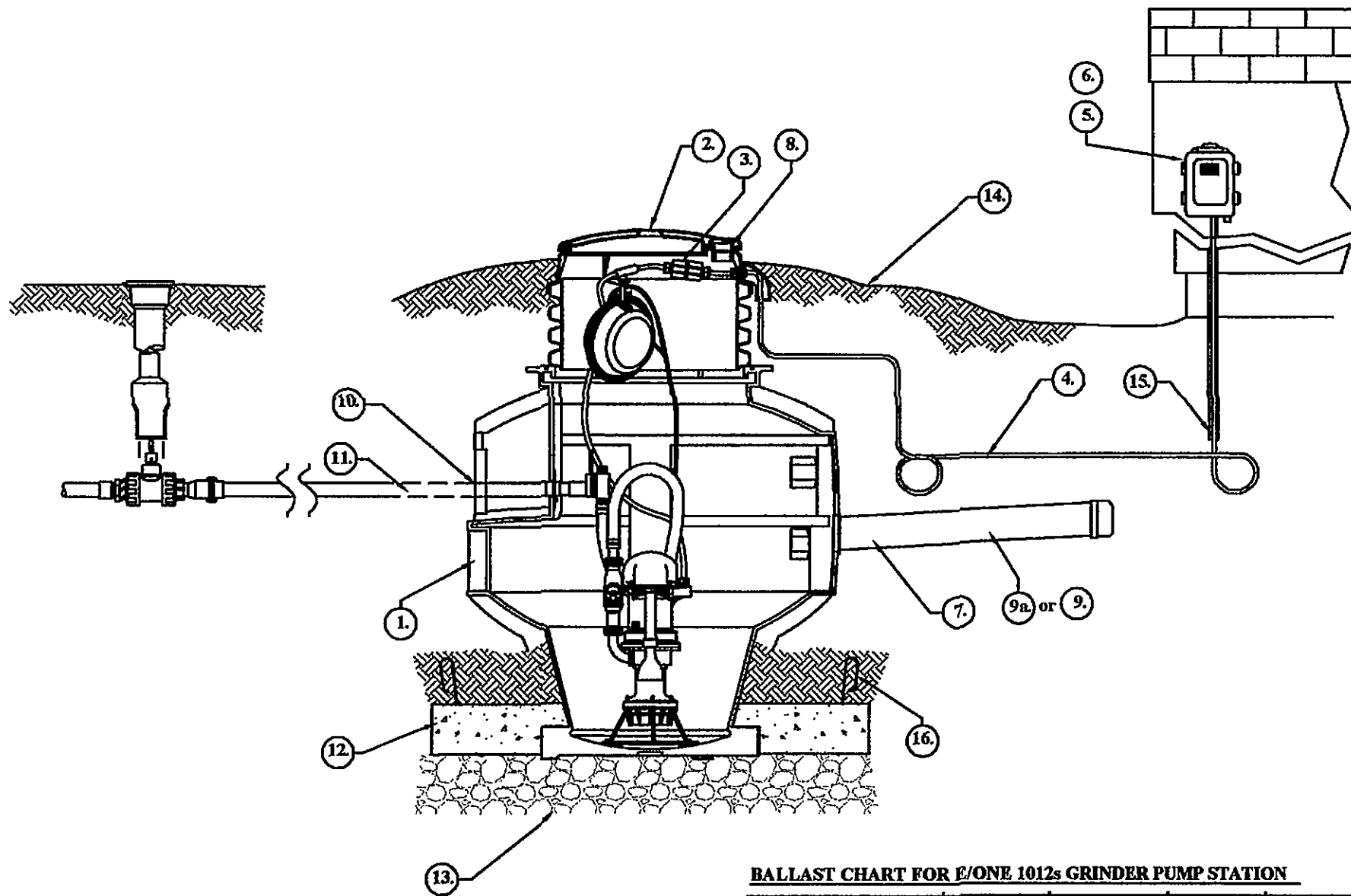
FALWELL CORPORATION
3900 CAMPBELL AVENUE
LYNCHBURG, VIRGINIA 24501
PHONE: 434-846-2737
FAX: 434-846-2740

7. THE GRINDER PUMP STATION SHALL NOT BE INSTALLED WITHIN ANY RESIDENTIAL STRUCTURE. THE GRINDER STATION SHALL BE LOCATED SUCH THAT ITS TOP ELEVATION IS LOWER THAN THE LOWEST FINISHED FLOOR ELEVATION WITHIN THE RESIDENCE.
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LYNCHBURG, VIRGINIA 24501
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9. AFTER COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT PRELIMINARY TESTS TO ENSURE THAT THE PUMP STATION IS FUNCTIONAL AND WILL OPERATE SATISFACTORILY. THE CONTRACTOR SHALL THEN DE-ENERGIZE THE SYSTEM AND FILL THE PUMP TANK FULL OF CLEAN WATER. THE CONTRACTOR SHALL CONTACT ACS DESIGN TO SCHEDULE AN INSPECTION. THE INSPECTION SHALL CONSIST OF A VISUAL INSPECTION OF THE INSTALLATION AND AN OPERATIONAL INSPECTION OF THE EQUIPMENT AT SUCH TIME THAT THE PUMP IS ACTIVATED. FINAL INSPECTION SHALL CERTIFY THAT ALL ALARMS AND CONTROLS PERFORMED AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
10. AFTER FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE ACS DESIGN WITH A CONTRACTOR COMPLETION STATEMENT THAT INCLUDES THE FOLLOWING INFORMATION:

- A. LOT NUMBER AND STREET ADDRESS OF INSTALLATION
- B. DATE OF INSTALLATION
- C. TYPE OF EQUIPMENT INSTALLED
- D. DATE OF FINAL INSPECTION
- E. CONTRACTOR CONTACT INFORMATION FOR WARRANTY AND SERVICE REPAIRS
- F. THE COMPLETION STATEMENT SHALL BE ATTACHED WITH THE ENGINEER'S CERTIFICATION AND SUBMITTED TO VDH AND FRANKLIN COUNTY FOR RECORD KEEPING PURPOSES.
11. THE BUILDER/LOT OWNER SHALL BE RESPONSIBLE FOR PAYMENT FOR PROFESSIONAL SERVICES RELATED TO THE ENGINEER'S FINAL INSPECTION AND CERTIFICATION STATEMENT.



BALLAST CHART FOR E/ONE 1012s GRINDER PUMP STATION

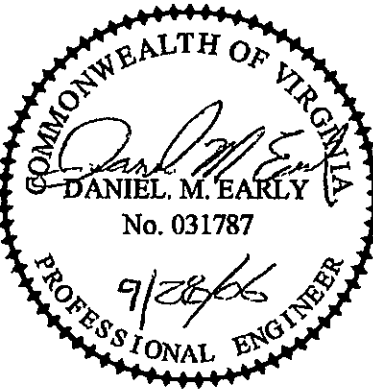
GP MODEL 1012s	STATION VOLUME (in.)	FNET BOUYANT (lbs.)	TANK WEIGHT (lbs.)	FBALLAST (lbs.)	VOLUME CONCRETE (cu. ft.)*	WEIGHT CONCRETE IN AIR (lbs.)*	MINIMUM DIAMETER OF CONCRETE ANCHOR (in.)	MINIMUM THICKNESS OF CONCRETE ANCHOR (in.)
GP MODEL 1012s-55	36.4	2058	213	2264	8.58	1287	60	7

*VOLUME CALCULATED IS FOR MINIMUM DIMENSIONS GIVEN. MINIMUM DIMENSIONS MUST BE MET OR EXCEEDED FOR ACTUAL APPLICATION.

ENVIRONMENT ONE GRINDER PUMP FEATURE IDENTIFICATION

1. GRINDER PUMP BASIN - POLYETHYLENE
2. ACCESSWAY COVER - FIBERGLASS REINFORCED POLYESTER (FRP)
3. ELECTRICAL QUICK DISCONNECT (EQD) - CABLE FROM PUMP CRE TERMINATES HERE
4. POWER AND ALARM CABLE - CIRCUITS TO BE INSTALLED IN ACCORDANCE WITH LOCAL CODE
5. ALARM PANEL - NEMA 4X ENCLOSURE AND EQUIPPED WITH CIRCUIT BREAKERS. LOCATE ACCORDING TO LOCAL CDES
6. ALARM DEVICE - EVERY INSTALLATION IS TO HAVE AN ALARM DEVICE TO ALERT THE HOMEOWNER OF A POTENTIAL MALFUNCTION. VISUAL DEVICE SHOULD BE PLACED IN VERY CONSPICUOUS LOCATIONS
7. INLET - EPDM GROMMET (4.5\"/>

10. DISCHARGE FTG - 1-1/4\"/>
11. DISCHARGE LINE - 1-1/4\"/>
12. CONCRETE ANCHOR - SEE BALLAST CALCULATIONS CHART FOR SPECIFIC WEIGHT FOR YOUR STATION HEIGHT.
13. BEDDING MATERIAL - 6\"/>
14. FINISHED GRADE - GRADE LINE TO BE 1\"/>
15. CONDUIT - 1\"/>
16. REBAR - REQUIRED TO LIFT TANK AFTER BALLAST (CONCRETE ANCHOR) HAS BEEN ATTACHED, 4 PLACES, EVENLY SPACED AROUND TANK.



ACS DESIGN

ENGINEERING - SURVEYING
LANDSCAPE ARCHITECTURE
CONSTRUCTION MANAGEMENT

2203 PETERS CREEK ROAD
ROANOKE, VIRGINIA 24017
P 540.562.2345 F 562.2344
INFO@ACSDSIGNLLC.COM
WWW.ACSDSIGNLLC.COM

**LAKEWATCH PLANTATION
WATER AND SEWER EXTENSION
FRANKLIN, COUNTY**

DRAWN BY: CEK
DESIGNED BY: CEK
CHECKED BY: DME
DATE: 25 SEP 2006
JOB NUMBER: 05285

REVISIONS:

No. 1	
No. 2	
No. 3	
No. 4	

SHEET NO:
C3.2

GRINDER PUMP
DETAILS