

SPECIFICATIONS/INSTALLATION REQUIREMENTS

PUMP OWNER TO CONTACT WEST KNOX UTILITY DISTRICT AT (865) 801-1062 (TYLER JONES) TO COORDINATE:

- PICK UP GRINDER PUMP
- SCHEDULE PRE-CONSTRUCTION MEETINGS PRIOR TO INSTALLATION TO COORDINATE PUMP LOCATION AND INSTALLATION REQUIREMENTS WITH WKUD PERSONNEL.
- INSPECTION OF INSTALLATION PRIOR TO BACKFILL OF PUMP STATION, ELECTRICAL CONDUIT, AND FORCE MAIN. (SCHEDULE 24 HOURS PRIOR TO INSPECTION).
- INSTALLATION OF PUMP AND FINAL INSPECTION (SCHEDULE 24 HOURS PRIOR).

CONTACT WASCOS SALES AND SERVICE (800-952-4236) FOR REPLACEMENT PARTS OR DAMAGED RISERS. WKUD DOES NOT STOCK OR SUPPLY REPLACEMENT PARTS OR RISERS DAMAGED DURING INSTALLATION.

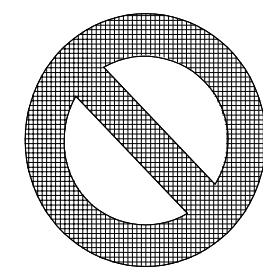
USER INSTRUCTIONS FOR THE ENVIRONMENT ONE GRINDER PUMP

CONGRATULATIONS ON YOUR ENVIRONMENT ONE GRINDER PUMP INVESTMENT. WITH PROPER CARE AND BY FOLLOWING A FEW SIMPLE GUIDELINES YOUR GRINDER PUMP WILL GIVE YOU YEARS OF DEPENDABLE SERVICE.

GENERAL INFORMATION

IN ORDER TO PROVIDE YOU WITH SUITABLE WASTEWATER DISPOSAL, YOUR HOME IS SERVED BY A LOW PRESSURE SEWER SYSTEM. THE KEY ELEMENT IN THE SYSTEM IS AN ENVIRONMENT ONE GRINDER PUMP. THE TANK COLLECTS ALL EFFLUENT FROM THE HOUSE. THE SOLID MATERIALS ARE THEN GRIND TO A SMALL SIZE SUITABLE FOR PUMPING AS A SLURRY WITH THE EFFLUENT WATER. THE GRINDER PUMP GENERATES SUFFICIENT PRESSURE TO PUMP THIS SLURRY FROM YOUR HOME TO THE WASTEWATER TREATMENT RECEIVING LINE AND/OR DISPOSAL PLANT.

CARE AND USE OF YOUR GRINDER PUMP



THE ENVIRONMENT ONE GRINDER PUMP IS CAPABLE OF ACCEPTING AND PUMPING A WIDE RANGE OF MATERIALS. REGULATORY AGENCIES ADVISE FOLLOWING ITEMS SHOULD NOT BE INTRODUCED INTO ANY SEWER EITHER DIRECTLY OR THROUGH A KITCHEN WASTE DISPOSAL UNIT:

GLASS
METAL
SEAFOOD SHELLS

DIAPERS, SOCKS, RAGS, OR CLOTH
PLASTIC OBJECTS (TOYS, UTENSILS, ETC.)
SANITARY NAPKINS OR TAMPONS

IN ADDITION, YOU MUST NEVER INTRODUCE INTO ANY SEWER:

EXPLOSIVES
GASOLINE
STONG CHEMICALS
LUBRICATING OIL AND/OR GREASE

FLAMMABLE MATERIAL

PERIODS OF DISUSE

IF YOUR HOME OR BUILDING IS LEFT UNOCCUPIED FOR LONGER THAN A COUPLE OF WEEKS, USE THE FOLLOWING PROCEDURES:

PURGE THE SYSTEM:
RUN CLEAN WATER INTO THE UNIT UNTIL THE PUMP ACTIVATES. IMMEDIATELY TURN OFF THE WATER AND ALLOW THE GRINDER PUMP TO RUN UNTIL IT SHUTS OFF AUTOMATICALLY.

DEPLEX UNITS:
SPECIAL ATTENTION MUST BE TAKEN TO MAKE CERTAIN THAT BOTH PUMPS TURN ON WHEN CLEAN WATER IS ADDED TO THE TANK

CAUTION: DO NOT DISCONNECT POWER TO THE UNIT

POWER FAILURE

YOUR GRINDER PUMP CANNOT DISPOSE OF WASTEWATER WITHOUT ELECTRICAL POWER. IF ELECTRICAL POWER SERVICE IS INTERRUPTED, KEEP WATER USAGE TO A MINIMUM.

PUMP FAILURE ALARM

YOUR ENVIRONMENT ONE GRINDER PUMP HAS BEEN MANUFACTURED TO PRODUCE AN ALARM SIGNAL (120 VOLT) IN THE EVENT OF A HIGH WATER LEVEL IN THE BASIN. THE INSTALLER MUST SEE THAT THE ALARM SIGNAL PROVIDED IS CONNECTED TO AN AUDIBLE AND/OR VISUAL ALARM IN SUCH A MANNER AS TO PROVIDE ADEQUATE WARNING TO THE USER THAT SERVICE IS REQUIRED. DURING THE INTERIM PRIOR TO THE ARRIVAL OF AN AUTHORIZED SERVICE TECHNICIAN, WATER USAGE MUST BE LIMITED TO THE RESERVE CAPACITY OF THE TANK.

WEST KNOX UTILITY DISTRICT GRAVITY SEWER SERVICE LINE INSTALLATION

CUSTOMERS REMAIN RESPONSIBLE FOR ADHERANCE TO ALL POINTS COVERED IN THE (SEWER USE ORDINANCE), HOWEVER THE INFORMATION LISTED HERE WILL GIVE THE CUSTOMER A SIMPLE GUIDELINE TO FOLLOW WHEN INSTALLING SEWER SERVICE LINES. A COPY OF A COMPLETE SEWER USE ORDINANCE WILL BE FURNISHED UPON REQUEST. MOST RULES ARE COVERED IN THE SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL (SBCCI). RULE NUMBERS LISTED HERE ARE TAKEN FROM 1994 EDITION. WHEN A CONFLICT OCCURS BETWEEN THE WEST KNOX UTILITY DISTRICT RULES AND REGULATION OF SEWER USE AND THE SBCCI OR OTHER MANUAL OF PRACTICE, WEST KNOX UTILITY'S RULES AND REGULATIONS OF SEWER USE SHALL TAKE PRECEDENCE.

1. ACCEPTABLE TYPES OF PIPES

- HDPE (SDR 11)
- MINIMUM PIPE SIZE (SBCCI STANDARD CODES 704.6) 4" I.D.
- MINIMUM SLOPE (UNIFORM) 1/4" FOR 4" PIPE & 1/8" FOR 6" PIPE
- MINIMUM COVER (SBBCCI STANDARDS CODES 304.4) 12"

5. CLEAN-OUTS

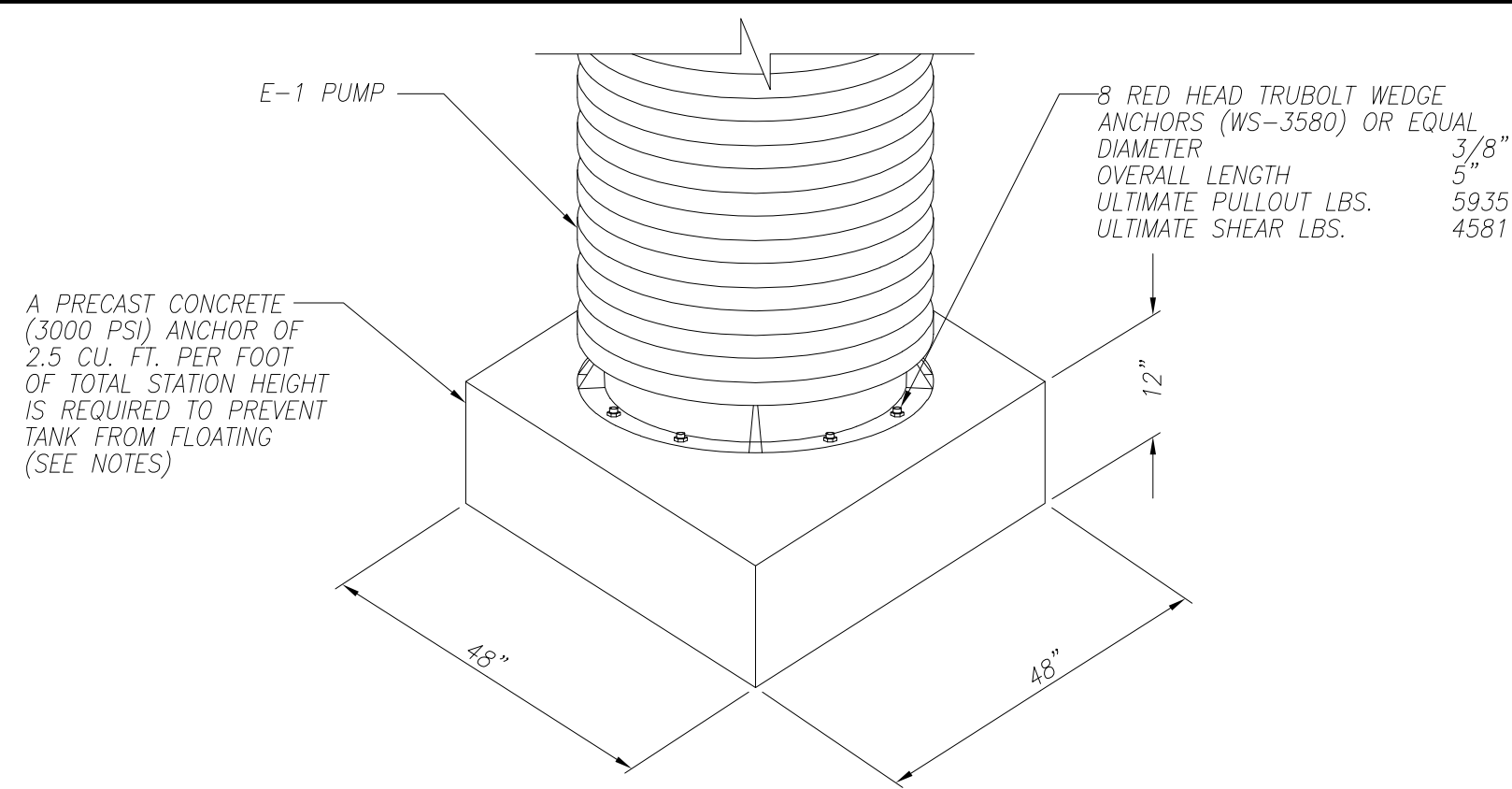
- TYPE REQUIRED FOR PIPE USED. (SBCCI STANDARD CODES 710.01)
- LOCATED AT NOT MORE THAN 75' INTERVALS FOR 4" PIPE & 100' FOR 6" PIPE
- LOCATED 3' OUTSIDE BUILDING WALL (SBCCI STANDARD CODES 202)
- SHALL BE A LONG SWEEP 90 DEGREE TYPE TEE WYE (OR EQUAL)
- INSTALLED IN THE DIRECTION OF FLOW (SBCCI STANDARD CODES 170.4)
- INSTALLED IMMEDIATELY UPSTREAM OF ANY VERTICAL OR HORIZONTAL BEND GREATER THAN 45 DEGREES. BENDS PLACED LESS THAN 2' APART THAT TOTAL GREATER THAN 45 DEGREES REQUIRE A CLEAN-OUT
- INSTALLED TO PERMIT ACCESS AT FINISH GRADE OF PROPERTY.

6. SERVICE LINE

- MUST BE INSTALLED ON HARD, UNDISTURBED TRENCH BOTTOM OR BROUGHT TO GRADE WITH SAND OR FINE GRAVEL FIRMLY TAMPED, TO THE HORIZONTAL DIAMETER OF PIPE. LINE MUST BE INSTALLED SO PIPE INFORMATION CAN BE SEEN.
- SEWER SERVICE LINE SHALL NOT BE LESS THAN 5' APART HORIZONTALLY FROM WATER SERVICE LINE AND SHALL BE SEPARATED BY UNDISTURBED OR COMPACTED EARTH (SBCCI STANDARD CODE 608.3)
- THE WATER AND SEWER SERVICE LINES MAY BE PLACED IN THE SAME TRENCH PROVIDED THE FOLLOWING CONDITIONS ARE MET:
 - THE BOTTOM OF THE WATER SERVICE LINE, AT ALL POINTS, SHALL BE AT LEAST 12" ABOVE THE TOP OF THE SEWER SERVICE LINE AT ITS HIGHEST POINT.
 - THE WATER SERVICE LINE SHALL BE PLACED ON A SOLID SHELF EXCAVATED AT 36" TO ONE SIDE OF THE SEWER SERVICE LINE.
- GUTTER DRAINS, SURFACE WATER DRAINS, ETC. ARE NOT TO BE CONNECTED TO THE SEWER.
- SERVICE LINES SHALL HAVE A NO. 10 SOLID COPPER WIRE ATTACHED TO PIPE FROM FIRST VALVE BOX TO TAP PROVIDED BY WEST KNOX UTILITY DISTRICT. WIRE MUST BE ACCESSIBLE AT THE FIRST VALVE BOX WITH 18-INCHES (MIN.) LEFT INSIDE. NO SPLICES ARE ALLOWED FOR TRACER WIRE. TRACER WIRE SHALL TERMINATE AT THE 4 INCH CLEANOUT.
- DOUGHNUT TYPE ADAPTERS ARE NOT TO BE USED.
- 90° FITTINGS ARE NOT PERMITTED ON DISCHARGE LINE. A MAXIMUM OF THREE 45° FITTINGS WILL BE ALLOWED FOR ENTIRE LENGTH OF DISCHARGE LINE, UNLESS PRIOR APPROVAL FROM WKUD IS OBTAINED (2 FEET MIN. LENGTH BETWEEN 45° FITTINGS).

- THE ELECTRICAL CONDUIT BETWEEN THE CONTROL PANEL AND THE GRINDER PUMP SHALL BE LEFT UNCOVERED UNTIL INSPECTION AND APPROVAL BY WKUD.
- INSPECTION
 - INSPECTION REQUEST MUST BE MADE (1) WORKING DAY IN ADVANCE OF INSPECTION.
 - INSPECTION AND TAP FEES MUST BE PAID BEFORE WORK IS STARTED.
 - AN ADDITIONAL FEE OF \$65 SHALL BE CHARGED FOR EACH REINSPECTION TRIP NECESSITATED BY INCOMPLETE OR UNSATISFACTORY WORK AND MUST BE PAID BEFORE REINSPECTION.
 - NO INSPECTION SHALL BE MADE BEFORE OR AFTER BUSINESS HOURS, WEEKENDS, HOLIDAYS, OR DURING BAD WEATHER CONDITIONS.

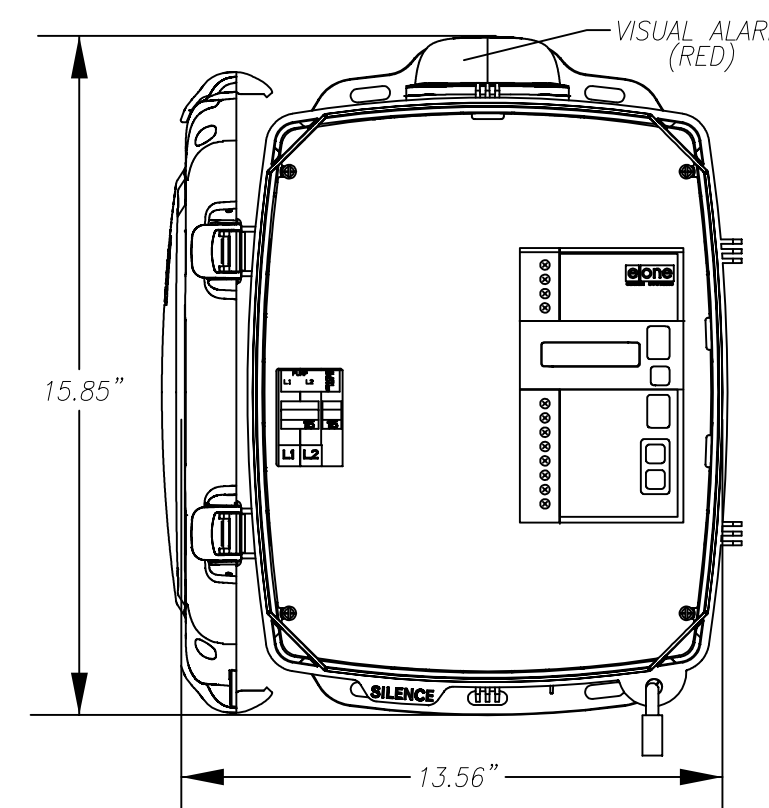
TELEPHONE: (865) 801-1062, TYLER JONES, WKUD



PRECAST ANCHOR BLOCK NOTES:
SIZE SHOWN (48" W x 48" L x 12" H) IS FOR STANDARD 74" HIGH UNIT.
MANUFACTURED BY CR BARGER AND SONS OR APPROVED EQUAL.
DO NOT BACKFILL UNTIL WKUD HAS INSPECTED INSTALLATION.

1 ANCHOR & BOLT REQUIREMENTS

N.T.S.



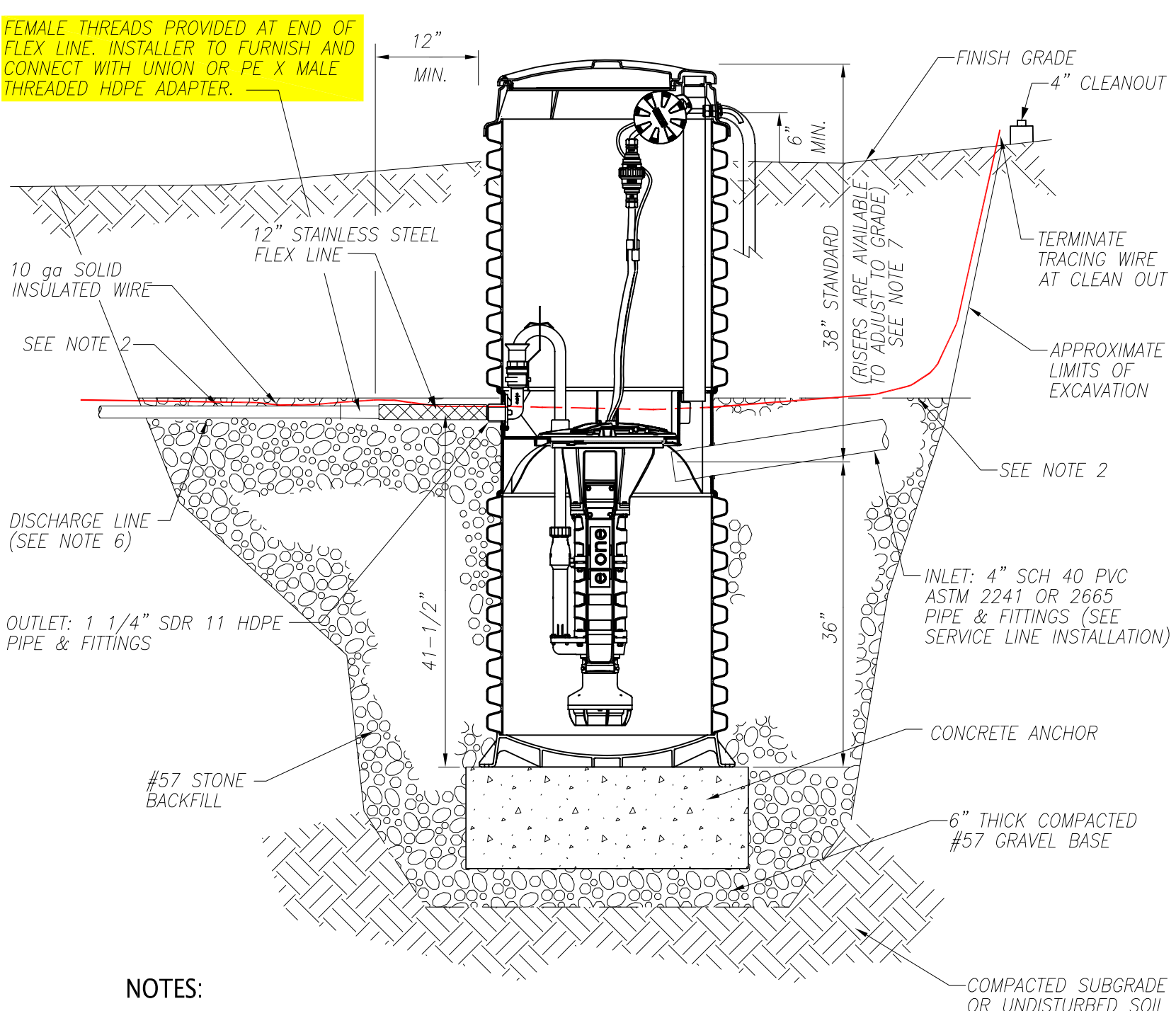
SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL AND AUDIBLE ALARM
REMOTE SENTRY DRY COACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL
ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LEDs: NORMAL PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT,
VOLTAGE EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE:
CORROSION PROOF THERMOPLASTIC
POLYESTER APPROVED BY UL FOR
ELECTRICAL CONTROL ENCLOSURE

2 CONTROL PANEL

N.T.S.

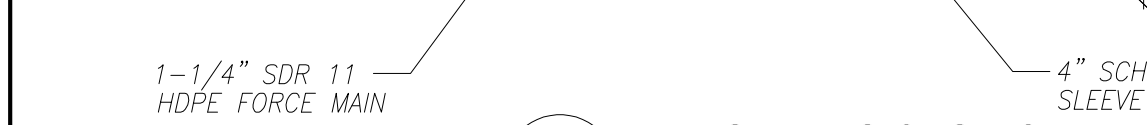
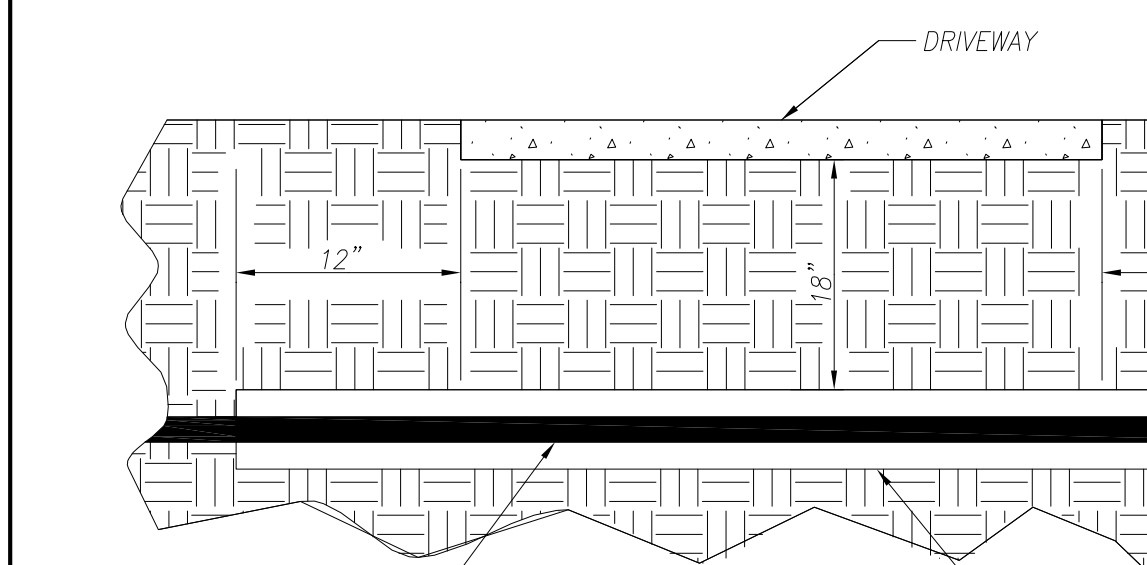
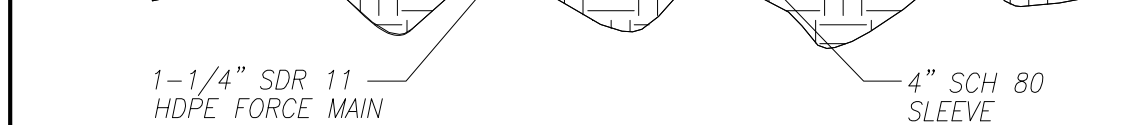
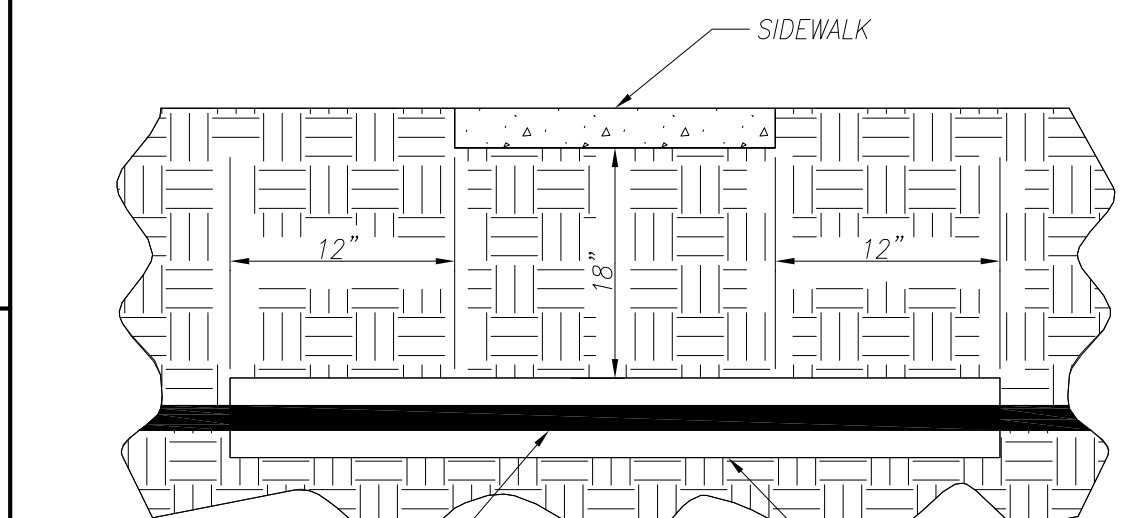
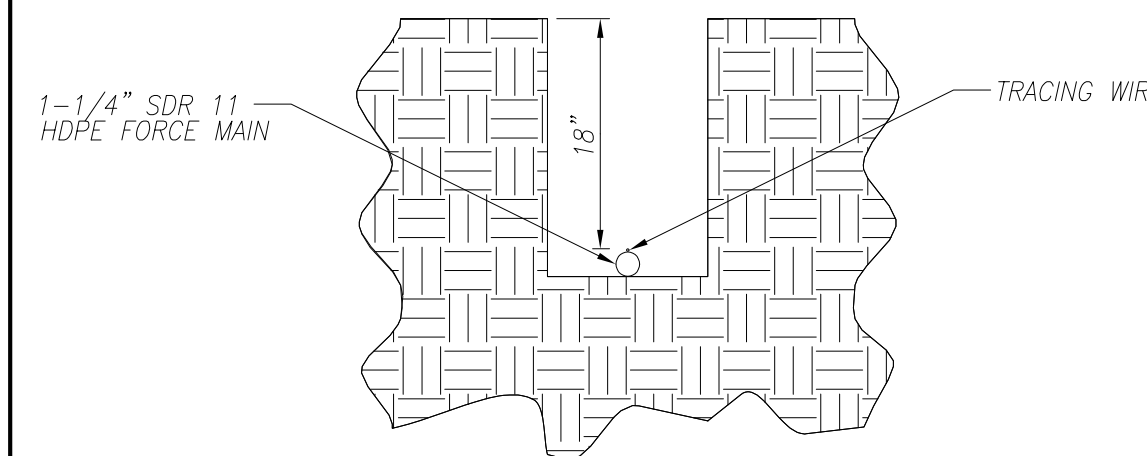


NOTES:

- NO PERMANENT OBSTRUCTIONS WITHIN 6 FEET OF PUMP OR DISCHARGE LINE.
- BACKFILL WITH GRAVEL UP TO DISCHARGE (OUTLET) AND GRAVITY (INLET) LINES.
- CLEANOUT IS TO BE PLACED IMMEDIATELY UPSTREAM OF THE PUMP BASIN. EXACT LOCATION TO DETERMINED BY WKUD PERSONNEL.
- NO PRESSURE ON FLEX LINE RELAX FIT.
- 90° BENDS ARE NOT ALLOWED.
- INSTALL DISCHARGE LINE IN LEVEL OR GENTLY SLOPING TRENCH WITH 3 INCHES (MINIMUM) GRAVEL BEDDING. UP TO A 12 INCH GRADE ADJUSTMENT RISER SECTION (PART #ND0082601) MAY BE INSTALLED TO WET WELL TO MEET GRADE. ALL GRADE ADJUSTMENT RISERS MUST BE APPROVED BY WKUD PERSONNEL BEFORE FINAL INSPECTION. GRADE ADJUSTMENT RISERS GREATER THAN 12 INCHES WILL NOT BE CONSIDERED OR ACCEPTED.

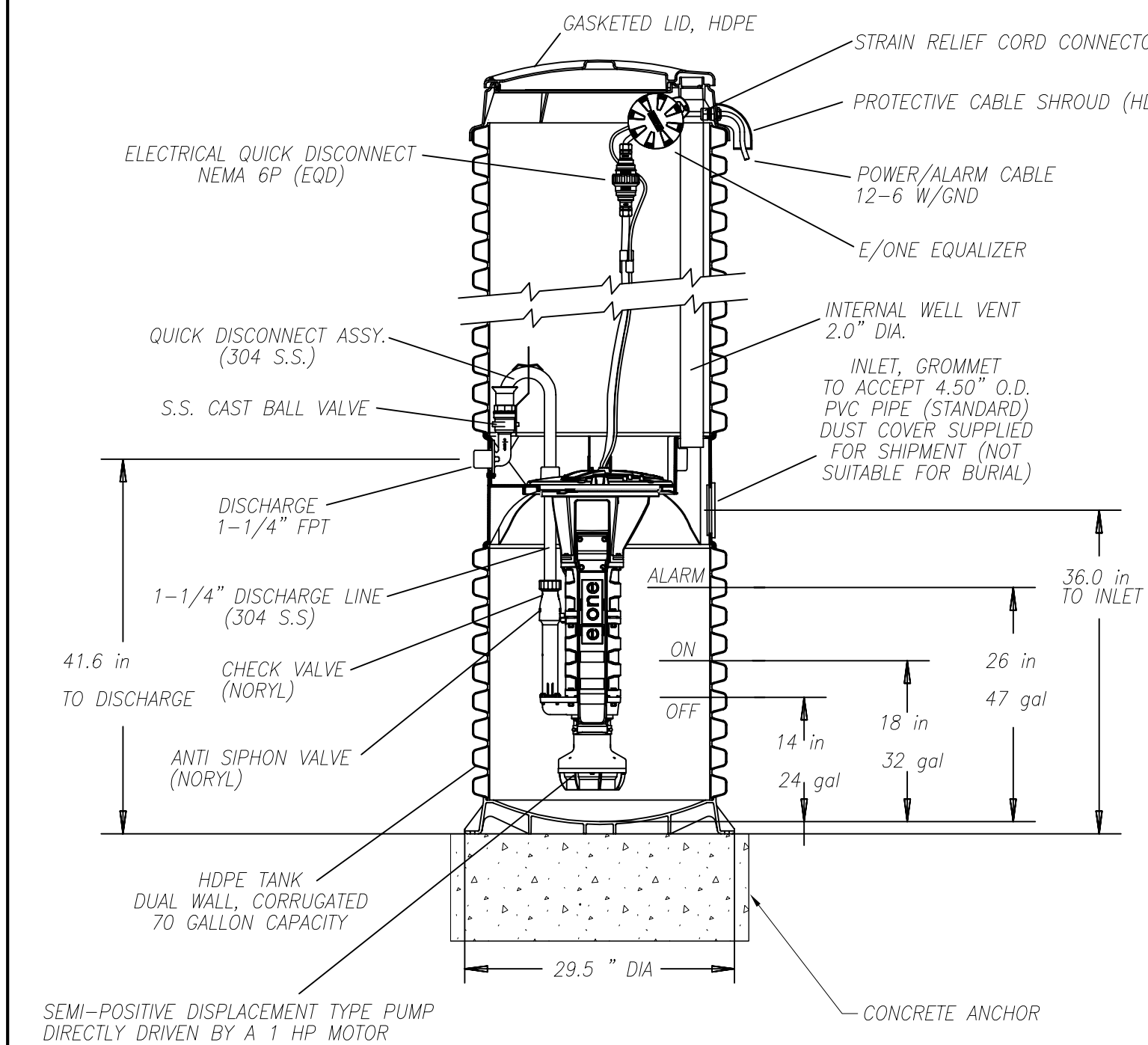
3 PLUMBING REQUIREMENTS

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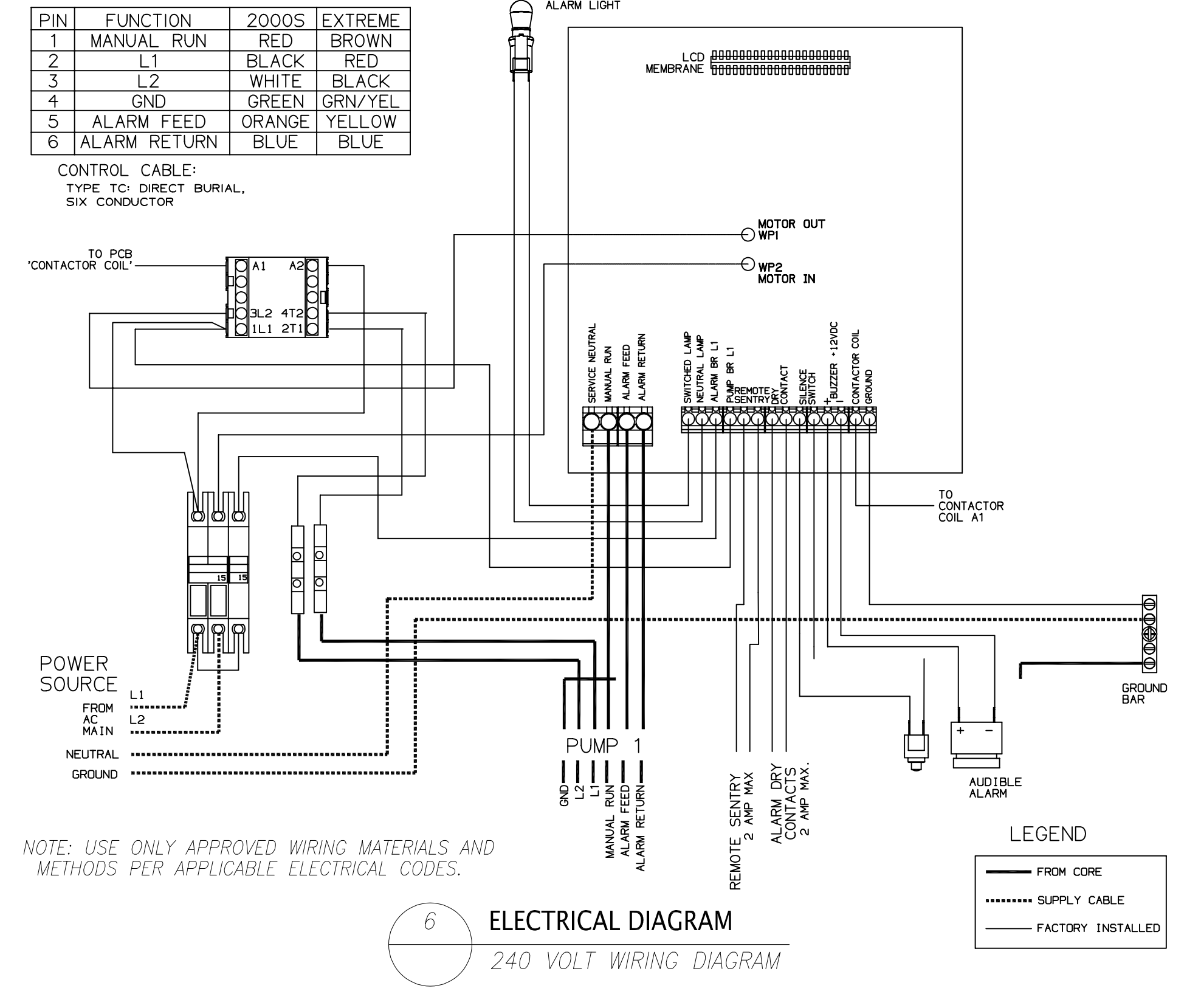
4 TRENCH AND CASING REQUIREMENTS

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5 GENERAL SPECIFICATIONS

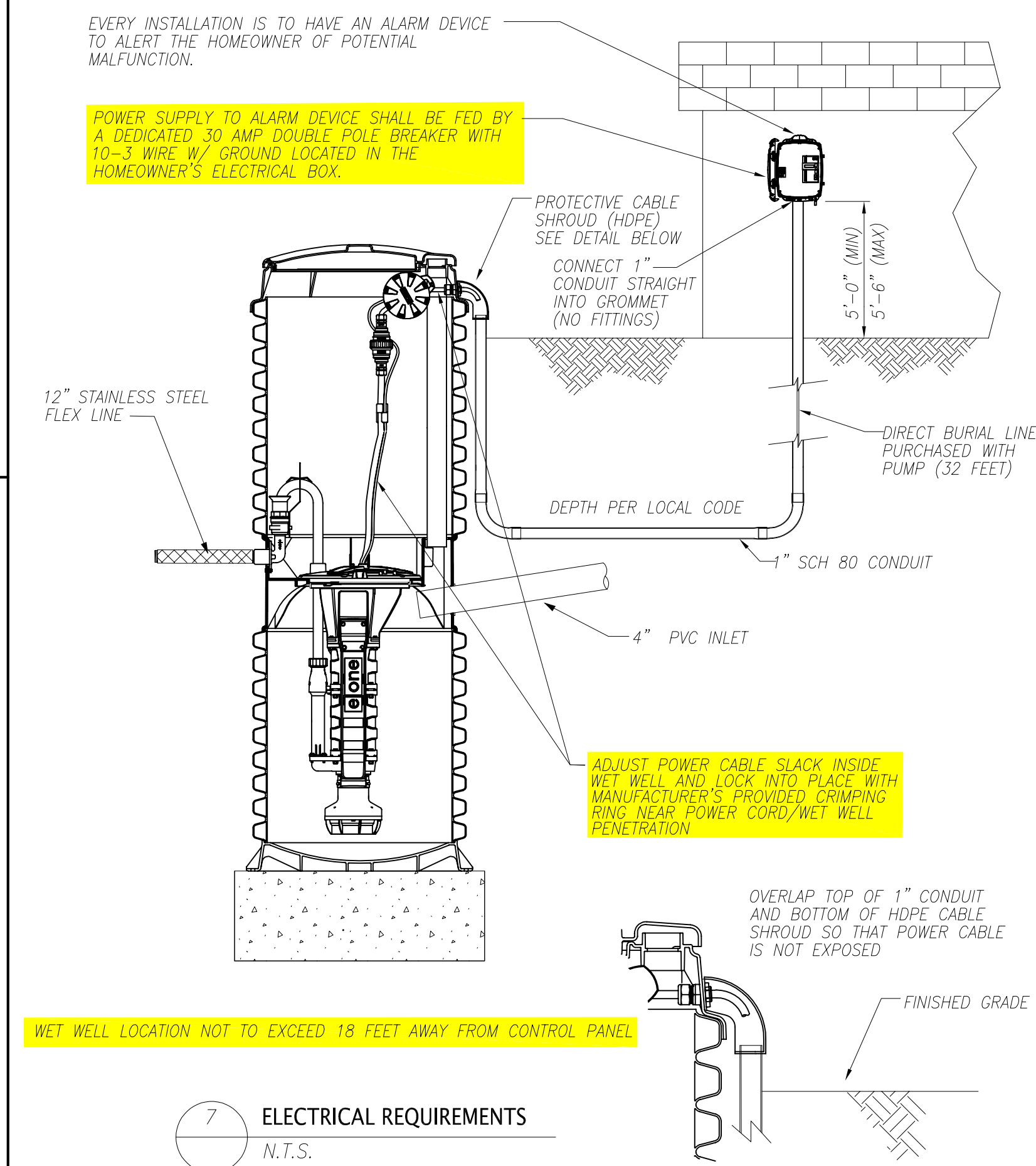
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NOTE: USE ONLY APPROVED WIRING MATERIALS AND METHODS PER APPLICABLE ELECTRICAL CODES.

6 ELECTRICAL DIAGRAM

240 VOLT WIRING DIAGRAM



7 ELECTRICAL REQUIREMENTS

N.T.S.



WEST KNOX UTILITY DISTRICT 2328 LOVELL ROAD, KNOXVILLE, TN 37950

No.	Revision/Issue	Date	APPR.
1	ORIGINAL ISSUE	6/29/12	A. BYARD
2	REVISED DETAILS AND NOTES	08/05/20	J. REESE
3	REVISED DETAILS AND NOTES	06/18/21	J. REESE
4	REVISED DETAILS AND NOTES	07/20/23	C. KIDD
5	REVISED DETAILS AND NOTES	10/24/23	C. KIDD

E/ONE RESIDENTIAL GRINDER PUMP STATION INSTALLATION REQUIREMENTS

Drawn By	FMA
Date	6/29/12
Scale	N.T.S.
Drawing No.	309.006.1