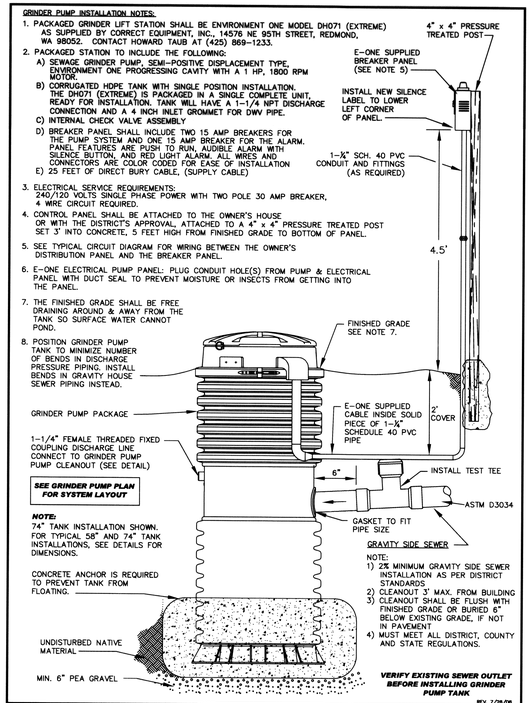
GRINDER PUMP INSTALLATION NOTES:

1. PACKAGED GRINDER LIFT STATION SHALL BE ENVIRONMENT ONE MODEL DH071 (EXTREME) AS SUPPLIED BY CORRECT EQUIPMENT, INC., 14576 NE 95TH STREET, REDMOND, WA 98052. CONTACT HOWARD TAUB AT (425) 869-1233.
2. PACKAGED STATION TO INCLUDE THE FOLLOWING:
   A) SEWAGE GRINDER PUMP, SEMI-POSITIVE DISPLACEMENT TYPE, ENVIRONMENT ONE PROGRESSING CAVITY WITH A 1 HP, 1800 RPM MOTOR.
   B) CORRUGATED HDPE TANK WITH SINGLE POSITION INSTALLATION. THE DH071 (EXTREME) IS PACKAGED IN A SINGLE COMPLETE UNIT, READY FOR INSTALLATION. TANK WILL HAVE A 1-1/4 NPT DISCHARGE CONNECTION AND A 4 INCH INLET GROMMET FOR DWV PIPE.
   C) INTERNAL CHECK VALVE ASSEMBLY
   D) BREAKER PANEL SHALL INCLUDE TWO 15 AMP BREAKERS FOR THE PUMP SYSTEM AND ONE 15 AMP BREAKER FOR THE ALARM. PANEL FEATURES ARE PUSH TO RUN, AUDIBLE ALARM WITH SILENCE BUTTON, AND RED LIGHT ALARM. ALL WIRES AND CONNECTORS ARE COLOR CODED FOR EASE OF INSTALLATION
   E) 25 FEET OF DIRECT BURY CABLE, (SUPPLY CABLE)
3. ELECTRICAL SERVICE REQUIREMENTS: 240/120 VOLTS SINGLE PHASE POWER WITH TWO POLE 30 AMP BREAKER, 4 WIRE CIRCUIT REQUIRED.
4. CONTROL PANEL SHALL BE ATTACHED TO THE OWNER'S HOUSE OR WITH THE DISTRICT'S APPROVAL, ATTACHED TO A 4" x 4" PRESSURE TREATED POST SET 3' INTO CONCRETE, 5 FEET HIGH FROM FINISHED GRADE TO BOTTOM OF PANEL.
5. SEE TYPICAL CIRCUIT DIAGRAM FOR WIRING BETWEEN THE OWNER'S DISTRIBUTION PANEL AND THE BREAKER PANEL.
6. E-ONE ELECTRICAL PUMP PANEL: PLUG CONDUIT HOLE(S) FROM PUMP & ELECTRICAL PANEL WITH DUCT SEAL TO PREVENT MOISTURE OR INSECTS FROM GETTING INTO THE PANEL.
7. THE FINISHED GRADE SHALL BE FREE DRAINING AROUND & AWAY FROM THE TANK SO SURFACE WATER CANNOT POND.
8. POSITION GRINDER PUMP TANK TO MINIMIZE NUMBER OF BENDS IN DISCHARGE PRESSURE PIPING. INSTALL BENDS IN GRAVITY HOUSE SEWER PIPING INSTEAD.



NOTE:
74" TANK INSTALLATION SHOWN. FOR TYPICAL 58" AND 74" TANK INSTALLATIONS, SEE DETAILS FOR DIMENSIONS.

GRAVITY SIDE SEWER

NOTE:
1) 2% MINIMUM GRAVITY SIDE SEWER INSTALLATION AS PER DISTRICT STANDARDS.
2) CLEANOUT 3' MAX. FROM BUILDING
3) CLEANOUT SHALL BE FLUSH WITH FINISHED GRADE OR BURIED 6" BELOW EXISTING GRADE, IF NOT IN PAVEMENT
4) MUST MEET ALL DISTRICT, COUNTY AND STATE REGULATIONS.

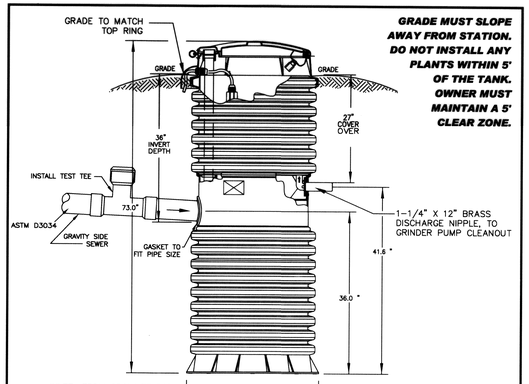
VERIFY EXISTING SEWER OUTLET BEFORE INSTALLING GRINDER PUMP TANK

REV. 7/28/08

GRINDER PUMP INSTALLATION DETAIL

GPUMP.DWG

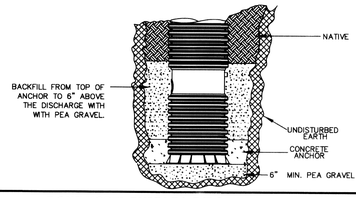
GRADE MUST SLOPE AWAY FROM STATION. DO NOT INSTALL ANY PLANTS WITHIN 5' OF THE TANK. OWNER MUST MAINTAIN A 5' CLEAR ZONE.



**SEE E-ONE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS

NOTE: A CONCRETE ANCHOR IS REQUIRED WITH ALL INSTALLATIONS
SIZE OF ANCHOR IS THE CONTRACTOR'S RESPONSIBILITY
MINIMUM SIZE OF CONCRETE ANCHOR IS 4-6 CU.FT.

FILL TO GRADE WITH CLEAN, COMPACTABLE BACKFILL, SUCH AS NATIVE MATERIAL, OR IMPORTED BACKFILL.
CLAY AND SILTS ARE NOT ACCEPTABLE BACKFILL



REV. 7/28/08

E-ONE MODEL DH071-74: 74" GRINDER PUMP SYSTEM

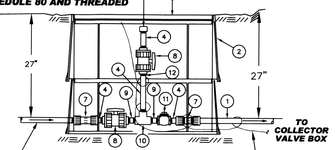
EONE-74.DWG

MATERIAL LIST

1. 1-1/4" HDPE PRESSURE PIPE SDR 11 (LENGTH TO SUIT)
2. * 1 – CARSON JUMBO BOX (PART #1730)
3. * 1 – CARSON LID #1730 ***MARKED "SEWER"***
4. 4 – 1-1/4" MALE THREADED NIPPLE SCH. 80 PVC, (LENGTH TO SUIT)
5. NOT USED
6. NOT USED
7. 2 – 1-1/4" COMPRESSION COUPLING SCH. 80 PVC
8. 2 – 1-1/4" UNION BALL VALVE THREADED SCH. 80 PVC
9. 2 – 1-1/4" X 3" NIPPLE THREADED SCH. 80 PVC
10. 1 – 1-1/4" TEE THREADED SCH. 80 PVC
11. 1 – 1-1/4" BRASS SWING CHECK VALVE
12. 1 – 1-1/4" X 8" NIPPLE THREADED SCH. 80 PVC
13. 1 – 1-1/4" CAP THREADED SCH. 80 PVC

* STREET USE REQUIRES FOGTITE #2 CONCRETE BOX AND TRAFFIC BEARING LID (H-20 LOADING)

ALL PVC WILL BE SCHEDULE 80 AND THREADED



TRACER WIRE INSULATED 12 GAUGE WIRE (SOLID CORE) TO BE WRAPPED AROUND THE PIPE FROM COLLECTOR MAINLINE AND CONTINUE WIRE TO GRINDER PUMP CLEANOUT (AS SHOWN).

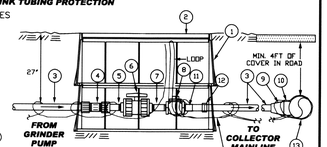
REV. 7/28/08

DH071-74 GRINDER PUMP CLEANOUT DETAIL

NOTE:
1. CUT-IN CONNECTIONS REQUIRE TRACER WIRES TO BE SPLICED TOGETHER USING ***BUTT CONNECTORS AND SHRINK TUBING PROTECTION***
2. FOUR OR MORE STACKED METER BOXES MAY BE REQUIRED FOR DEPTH
3. CARSON BOX SHALL BE MARKED FOR ***"SEWER"***.

MATERIAL LIST
ALL PVC WILL BE SCHEDULE 80 AND THREADED

1. CARSON JUMBO BOX (PART #1730) STACK AS REQUIRED
2. * 1 – CARSON LID ***(MARKED "SEWER")***
3. * 1-1/4" HDPE PRESSURE PIPE SDR 11 (LENGTH TO SUIT)
4. * 1 – 1-1/4" COMPRESSION COUPLING (PVC)
5. 1 – 1-1/4" x 3" NIPPLE (PVC)
6. 1 – 1-1/4" UNION BALL VALVE (PVC)
7. 1 – 1-1/4" x 3" NIPPLE (PVC)
8. 1 – 1-1/4" BRASS SWING CHECK VALVE
9. 1 – REDUCER SDR 11 (SIZE TO SUIT)
10. 1 – TEE SDR 11 (SIZE TO SUIT)
11. 1 – 1-1/4" TRANSITION COUPLING 316SS MPT
12. FUSION WELD



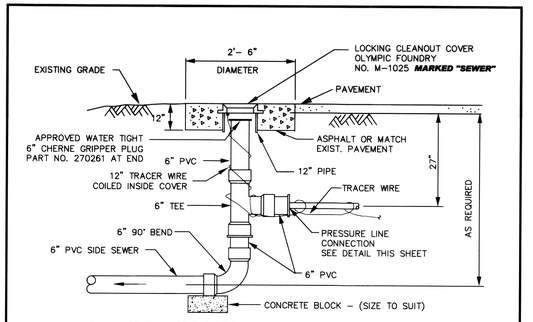
TRACER WIRE INSULATED 12 GAUGE WIRE (SOLID CORE) TO BE WRAPPED AROUND THE PIPE FROM COLLECTOR MAINLINE AND CONTINUE WIRE TO GRINDER PUMP CLEANOUT (AS SHOWN).

* STREET USE REQUIRES FOGTITE #2 CONCRETE BOX AND SOLID TRAFFIC BEARING LID (H-20 LOADING) ***MARKED "SEWER"***

REV. 7/28/08

COLLECTION VALVE BOX

gravbox.DWG

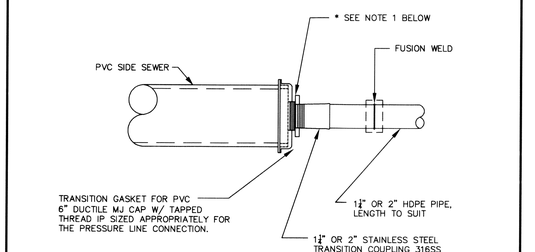


NOTE: 1. ALL PVC FITTINGS SHALL BE GASKETED
2. NO COLLECTION VALVE BOX REQUIRED.

REV. 7/28/08

PRESSURE LINE CONNECTION TO GRAVITY SANITARY SEWER DETAIL

LPSEWCONN.DWG



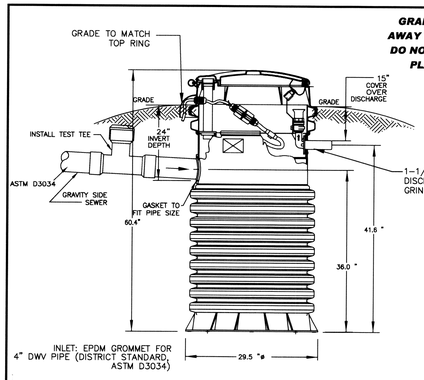
NOTES:
1. FOR 1-1/4" SERVICE USE 2"x1-1/4" BRASS BUSHING FOR 2" TAP.
2. FOR 2" SERVICE, OMIT BUSHING.

REV. 7/28/08

PRESSURE LINE CONNECTION DETAIL

LPSEWCONN.DWG

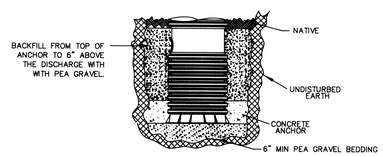
GRADE MUST SLOPE AWAY FROM STATION. DO NOT INSTALL ANY PLANTS WITHIN 5' OF THE TANK. OWNER MUST MAINTAIN A 5' CLEAR ZONE.



**SEE E-ONE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS

NOTE: A CONCRETE ANCHOR IS REQUIRED WITH ALL INSTALLATIONS
SIZE OF ANCHOR IS THE CONTRACTOR'S RESPONSIBILITY
MINIMUM SIZE OF CONCRETE ANCHOR IS 4-6 CU.FT.

FILL TO GRADE WITH CLEAN, COMPACTABLE BACKFILL, SUCH AS NATIVE MATERIAL, OR IMPORTED BACKFILL.
CLAY AND SILTS ARE NOT ACCEPTABLE BACKFILL



REV. 7/28/08

E-ONE MODEL DH071-61: 61" GRINDER PUMP SYSTEM

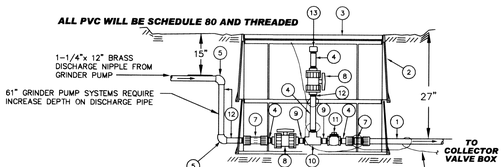
EONE-58.DWG

MATERIAL LIST

1. 1-1/4" HDPE PRESSURE PIPE SDR 11 (LENGTH TO SUIT)
2. * 1 – CARSON JUMBO BOX (PART #1730)
3. * 1 – CARSON LID #1730 ***MARKED "SEWER"***
4. 4 – 1-1/4" MALE THREADED NIPPLE SCH. 80 PVC, (LENGTH TO SUIT)
5. 2 – 1-1/4" X 90° BEND THREADED SCH. 80 PVC
6. NOT USED
7. 2 – 1-1/4" COMPRESSION COUPLING SCH. 80 PVC
8. 2 – 1-1/4" UNION BALL VALVE THREADED SCH. 80 PVC
9. 2 – 1-1/4" X 3" NIPPLE THREADED SCH. 80 PVC
10. 1 – 1-1/4" TEE THREADED SCH. 80 PVC
11. 1 – 1-1/4" BRASS SWING CHECK VALVE
12. 2 – 1-1/4" X 8" NIPPLE THREADED SCH. 80 PVC
13. 1 – 1-1/4" CAP THREADED SCH. 80 PVC

* STREET USE REQUIRES FOGTITE #2 CONCRETE BOX AND TRAFFIC BEARING LID (H-20 LOADING)

ALL PVC WILL BE SCHEDULE 80 AND THREADED



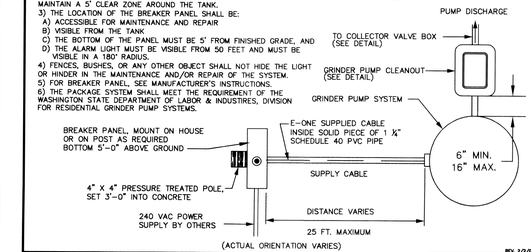
TRACER WIRE INSULATED 12 GAUGE WIRE (SOLID CORE) TO BE WRAPPED AROUND THE PIPE FROM COLLECTOR MAINLINE AND CONTINUE WIRE TO GRINDER PUMP CLEANOUT (AS SHOWN).

REV. 7/28/08

DH071-61 GRINDER PUMP CLEANOUT DETAIL

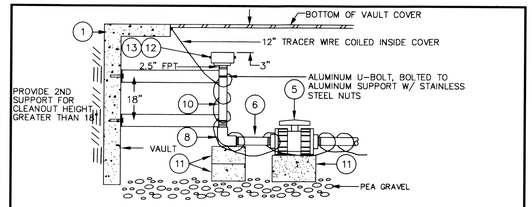
GRINDER PUMP INSTALLATION NOTES:

1) THE TANK LOCATION SHALL BE ACCESSIBLE FOR MAINTENANCE AND REPAIR. TANK COVERS SHALL BE APPROXIMATELY 3" ABOVE FINISHED GRADE. FINISHED GRADE SHALL SLOPE AWAY FROM THE STATION AND ARE NOT TO BE LOCATED WITHIN "POT HOLES".
2) NO PLANTS ARE TO BE LOCATED WITHIN 5 FEET OF THE TANK. THE PROPERTY OWNER SHALL MAINTAIN A 5' CLEAR ZONE AROUND THE TANK.
3) THE LOCATION OF THE BREAKER PANEL SHALL BE:
   A) ACCESSIBLE FOR MAINTENANCE AND REPAIR
   B) VISIBLE FROM THE TANK
   C) THE BOTTOM OF THE PANEL MUST BE 5' FROM FINISHED GRADE, AND
   D) THE ALARM LIGHT MUST BE VISIBLE FROM 50 FEET AND MUST BE VISIBLE IN A 180° RADIUS.
4) FENCES, BUSHES, OR ANY OTHER OBJECT SHALL NOT HIDE THE LIGHT OR HINDER IN THE MAINTENANCE AND/OR REPAIR OF THE SYSTEM.
5) FOR BREAKER PANEL, SEE MANUFACTURER'S INSTRUCTIONS.
6) THE PACKAGE SYSTEM SHALL MEET THE REQUIREMENT OF THE WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES, DIVISION FOR RESIDENTIAL GRINDER PUMP SYSTEMS.

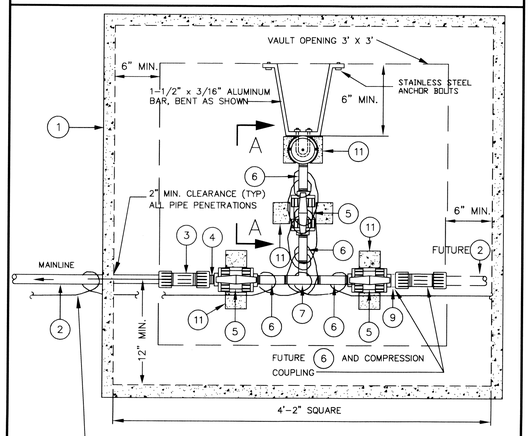


REV. 3/3/04

GRINDER PUMP PLAN



SECTION "A-A"

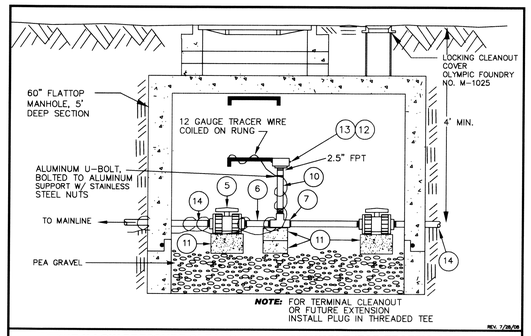


TRACER WIRE INSULATED 12 GAUGE WIRE (SOLID CORE) TO BE WRAPPED AROUND THE PIPE AND LOOPED THRU VALVE BOX FROM COLLECTOR VALVE TO GRINDER CLEANOUT (AS SHOWN).

REV. 3/3/04

TYPE I LOW PRESSURE CLEANOUT DETAIL (FOR NON-TRAFFIC AREAS ONLY)

TYPLPCO1.DWG



NOTE: FOR TERMINAL CLEANOUT OR FUTURE EXTENSION INSTALL PLUG IN THREADED TEE

REV. 7/28/08

TYPE II LOW PRESSURE CLEANOUT WITH MANHOLE (FOR TRAFFIC AREAS)

CLEANOUT NOTES USED ONLY OUTSIDE OF TRAFFIC AREAS

LOCATED EVERY 500' AND AT END OF EACH LINE FOR FUTURE TIE IN AND RR XING'S
ADJUST COVER TO MATCH EXISTING GRADE. VAULT OR MANHOLE CONE SHALL BE PLACED LEVEL.
DRAIN TO DAYLIGHT OR STORM SYSTEM.

MATERIAL LIST
ALL PVC SCHEDULE 80 WILL BE THREADED
EXCEPT AS NOTED

1. 1 – UTILITY VAULT 506-LA W/ (1) DOOR NO. 55-3332P OR (2) GREEN CARSON BOXES #1730 WITH CONCRETE BLOCKS (SIZE TO SUIT) TO SUPPORT BOX FROM RESTING ON POLY PIPE. FOR NON-TRAFFIC AREAS ONLY ALL LIDS ARE TO BE SOLID AND ***MARKED "SEWER".***
2. HDPE PRESSURE PIPE SDR 11 (LENGTH TO SUIT)
3. 1 – COMPRESSION COUPLING PVC
4. 1 – NIPPLE (1/2 THE LENGTH OF COMPRESSION COUPLING)
5. 3 – UNION BALL VALVE PVC
6. 4 – CLOSE NIPPLE PVC. DIAMETER OF PVC OF CLEANOUT SHALL BE SAME DIAMETER AS THE MAINLINE
7. 1 – TEE PVC
8. 1 – 90° ELBOW PVC
9. 1 – PLUG PVC (MIP)
10. 1 – NIPPLE PVC (LENGTH TO SUIT)
11. CONCRETE BLOCK – (SIZE TO SUIT)
12. 1 – MIP X 2 1/2" MNST SWIVEL BRASS HOSE ADAPTOR (PROVIDE REDUCER AS REQUIRED)
13. 1 – 2 1/2" FNST CAP W/CHAIN
14. 1 – FULL BORE STAINLESS STEEL TRANSITION FITTING (FOWLER OR EQUAL) DIAMETER SHALL BE SAME DIAMETER AS THE MAINLINE.

REV. 7/28/08

LOW PRESSURE CLEANOUT NOTES AND MATERIAL LIST

TYPLPCO2.DWG

BY	DATE	REVISIONS

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT

1510 228TH AVE. S.E. SAMMAMISH, WA. 98075
(425) 392-6256 FAX (425) 391-5389

STANDARD DETAILS

GRINDER PUMP - SHT 1 OF 2

DATE: 8/5/2008
DRAWN: DESIGN REVIEW
CHECKED: KDT
JOB NO.

SHEET

OF