

Grinder Pump Stations

The manufacturer shall furnish complete factory-built and tested grinder pump station(s) each consisting of grinder pumps suitably mounted in a tank constructed of fiberglass or high density polyethylene (HDPE), electrical quick disconnect (NEMA 6P), pump removal system, shut-off valve and check valve within the basin, NEMA 4X alarm panel and all necessary wiring and controls. The pump, tank and panel shall be listed with the Underwriters Laboratories (UL) as a complete station. No third party testing to UL Standard will not be allowed.

The pump(s) shall bear the seal of NSF International. Third-party testing to NSF standard is not acceptable. The pump(s) shall be a semi-progressive cavity style pump. It shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of "foreign objects", such as paper, wood, glass, wipes, rubber and the like, to finely-divided particles which will pass freely through the pump and the 1-1/4" diameter stainless steel discharge piping. The pump(s) shall be capable of delivering 15 GPM against a rated TDH of 0 feet. 11 GPM against a rated TDH of 92 feet and 7.8 GPM against a rated TDH of 185 feet. The pumps must be capable of operating at a negative total dynamic head without overloading the motor(s). The pump shall have redundant run features.

The alarm panel shall include a NEMA 4X, UL listed alarm panel suitable for wall or pole mounting. It shall include a generator receptacle w/ auto transfer capability. The supply cable between the pump and alarm panel shall not be spliced. The appropriate length of cable shall be installed w/ ample supply cable for settling loops. The cables conduit shall be sealed in the panel using duct sealant at alarm panel penetration. All alarm panel penetrations shall be through the bottom of the panel. Back or side penetrations are not allowed.

Installation shall have a factor trained / authorized service center provider within 60 miles of Queensbury and 24 hour emergency capabilities. Startup shall be scheduled with manufacturer's certified technician and all paperwork shall be filed with the Town of Queensbury Wastewater Department.

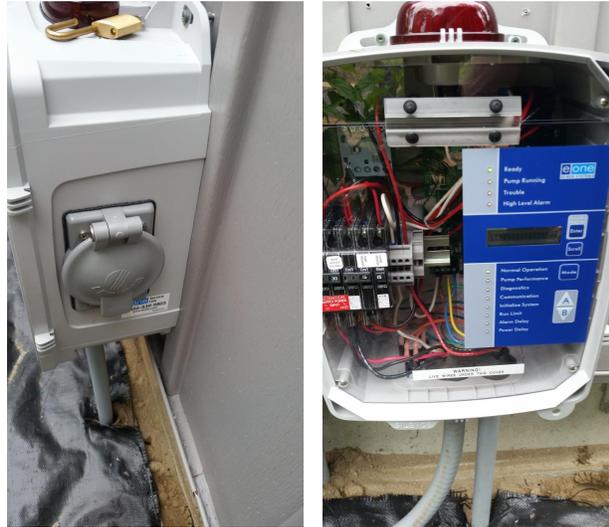
Pressure Lateral Sewer Pipe and Fittings

Discharge piping shall be HDPE SDR 11. Pipe shall have a stainless steel or brass curb stop/check valve/cleanout assembly placed at the approximate Right of Way/Easement line. An arch style cast iron curb box with a stainless steel rod to the curb stop shall be provided. The curb box shall be equipped with a cap labeled "sewer". Transition between pipe and curb stop/check valve/clean out assembly shall be by plastic or brass w/ SS insert compression adapters. Connections between pipes shall be a fusion weld or thermocouplers. Pipe shall be laid with some slack and have 5' of cover. Installation of tracer wire recommended.

New taps into existing HDPE Pipe shall be installed using an electrofusion method. All other methods of tapping shall be submitted to the Director of Wastewater for review.

NOTES:

- HOMEOWNER/PROPERTY OWNER WILL OWN AND MAINTAIN THE GRINDER PUMP SYSTEM TO POINT OF CONNECTION INTO SEWER MAIN.
- THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING FLOW AT THE PROPERTY LINE SHUT OFF AND FINAL START UP OF THE GRINDER PUMP.
- ALL FITTINGS SHALL BE BRASS OR STAINLESS STEEL.
- ALL SANITARY SEWER LINES SHALL BE AT A DEPTH OF 4' OR GREATER. IF LESS THAN 4', LINE SHALL BE INSULATED.
- THE SEWER LATERAL SHALL BE LAID AT A UNIFORM GRADE OF 1/4" PER FOOT (ABOUT 2%).
- CONTROL PANEL WITH VISUAL AND AUDIBLE ALARMS SHALL ONLY HAVE BOTTOM PENETRATIONS.
- CONTROL PANEL SHALL BE AT A MINIMUM OF 36" ABOVE GRADE.



← GRINDER PUMP SHALL BE AT LEAST 10' FROM BUILDING FOUNDATION →

CONTROL PANEL WITH VISUAL AND AUDIBLE ALARMS

CLEAN OUT TO BE INSIDE OR OUTSIDE BUILDING

BASEMENT

1-1/4" SDR 11 WITH HORIZONTAL SLACK

ELECTRIC LINE SHALL BE RUN CONTINUOUSLY THROUGH CONDUIT OR SHALL HAVE FROST LOOPS (AS SHOWN)

4" GRAVITY CONNECTION LINE AND FITTINGS SHALL BE SDR 21 OR 26 WITH 6" STONE BEDDING (6" MAYBE REQUIRED, TO BE DETERMINED BY PROPERTY ENGINEER)

GRINDER PUMP, MAYBE REQUIRED TO BE ENCASED IN CONCRETE, DUE TO GROUND WATER *SEE GRINDER PUMP INSTALLATION MANUAL FOR CORRECT BALLAST

12" CRUSHED STONE

Town Of Queensbury - Department of Wastewater - Specification & Details

REVISION	
04/09/20	

GRINDER PUMP DETAIL

NO SCALE

