

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IA)

DATE: Feb 05, 2016
TO: Pikes Bay Sanitary District #1 (PBSD) Board
FR: Randy M. Lund, PE
RE: PBSD Standard Connection Specifications

The following specification document is intended to be a summary of applicable state, local, and PBSD specifications; to be utilized for making connections to the PBSD Sanitary Sewer System.

There are 2 main types of connections to the PBSD System, (which includes the Greater Bayfield Waste Water Treatment Plant Commission (GBWWTPC) force main (FM)).

- A) Pressure; connections to the GBWWTPC FM (running along STH 13, and Old San Road) and connections to the Orchard Lane FM.
- B) Gravity; connections to the PBSD gravity lines (running along CTH J, Trailer Court Rd, the Brownstone Trail, Chequamegon Road, and Port Superior Road).

Reference shall be made to the following documents: (which shall be incorporated and become part of the PBSD Standard Connections Specification). All reference documents shall include the latest amendments and updates.

- 1) The PBSD Ordinance, as adopted and as amended.
- 2) State of Wisconsin (WI) Plumbing Codes SPS 305, 381-387, & 391.
- 3) WI SPS Private On-Site Wastewater Treatment Systems (P.O.W.T.S.) Component Manuals.
- 4) Standard Specifications for Sewer and Water Construction in Wisconsin, Sixth Edition, with amendments.
- 5) WI Department of Transportation (WI DOT) 2016 Standard Specifications.
- 6) WI State Statutes (SS) Chapter 16, 145, and 443.
- 7) National Fire Protection Association (NFPA) Chapter 13D.
- 8) GBWWTPC original construction specifications (2005-2006) standards & ordinances and City of Bayfield standard specifications and requirements, as applicable.
- 9) Bayfield County Zoning Codes, Section 15.
- 10) Town of Bayfield, roadway and work in R/W permitting requirements.
- 11) Environment One (EONE) pumps and controls, shall be the base specification to reference when evaluating OR EQUAL pumps.

The PBSD Standard Connection Specification shall include the above listed general reference documents; as well as the following specific requirements:

- A) Pressure Connections.

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- 1) A standard curb stop valve shall be set at a 7' depth; adjacent to the R/W or easement for the property to be connected.
- 2) HDPE (minimum 160 psi rating) or Schedule 80 PVC piping shall be utilized. Piping shall be a minimum of 1.5" for grinder pump discharges, or effluent only discharges and 2" for non-grinder sewage pump discharges.
- 3) A shut off valve shall be placed next to, or within the pumping chamber or tank. This valve shall be fixed to the chamber wall, such that it will always be in place, whether the pump is in place or removed from the system, for maintenance.
- 4) All building gravity lines shall incorporate a mechanical back flow check valve, placed prior to the pumping chamber or tank.
- 5) All pump chambers or tanks shall have guide rails and / or a quick disconnect mechanism to allow the pump to be removed for maintenance or inspection; WITHOUT confined space entry (per OSHA requirements).
- 6) All pumps shall be secured with stainless steel (SS) chains and have a positive method to keep the pump in place, if guiderails are NOT utilized.
- 7) All pumps shall have control panels to operate the system automatically.
- 8) All grinder pumps shall be EONE grinder pumps, or EQUAL as determined by PBSB.
- 9) Non-grinder pumps are NOT recommended, but will be evaluated for special circumstances.
- 10) All pumps shall have a check valve and vacuum valve, as part of the pump system, OR mounted to the pump chamber or tank.
- 11) Pump sizing calculations shall be submitted for review and shall take into account the City of Bayfield pump station, with pumps on and with pumps off.
- 12) Live taps of the GBWWTPC FM are possible under special review. There are existing connections points along the GBWWTPC FM where stubs and valves are in place, to allow connections which are NOT under pressure.
- 13) All pump chamber or tank fittings and valves shall be Brass or Stainless Steel.

B) Gravity

- 1) All gravity lines shall be PVC (SDR 35 minimum), or HDPE.
- 2) Manholes (MH's) and cleanouts (CO's) shall be placed per code.
- 3) All connections to gravity lines shall utilize in line wyes / tees or by utilizing full pipe saddles with SS bands.
- 4) Service Connections directly to MH's will NOT be permitted.
- 5) Proper bury depth or insulation will be required per codes and specifications.

C) General

- 1) All connections will be reviewed by PBSB, as part of the service connection application process.
- 2) All connections will be inspected by PBSB, during installation
- 3) All roadways shall be repaired in kind.
- 4) All permits (State, County, Local Gov.) must be in place and provided to PBSB, prior to commencing any work.