

# BayFilter<sup>®</sup> Installation Guide

Note: BayFilters are not recommended to be used as erosion control during site construction operations. BayFilters should remain offline or uninstalled until site stabilization has occurred. Please contact your local ADS or BaySaver representative if you should have any questions.

## Tool List

- PVC glue and primer
- Crane/lifting mechanism to lower the cartridges in the vault (each cartridge weighs 230-350 lbs (104-159))
- Screwdriver or nut driver for Fernco<sup>®</sup> couplers
- Hammer and soft blow hammer
- Saw (in case PVC Sch 40 piping length needs to be adjusted)
- Hammer drill
- ¼" (6 mm) and concrete drill bit for the trolley
- 7/16" (11 mm) wrench or deep socket ratchet for the trolley rail anchors
- 1/2" (13 mm) concrete drill bit for hold down bars
- 3/4" (19 mm) wrench or deep socket ratchet for the hold down bar anchors

## Instructions

1. Contact utility locator to mark any nearby underground utilities and make sure it is safe to excavate.
2. Reference the site plan and stake out the location of the BayFilter manhole/vault.
3. Excavate the hole, providing any sheeting and shoring necessary to comply with all federal, state and local safety regulations.
4. Level the subgrade to the proper elevation. Verify the elevation against the manhole/vault dimensions, the invert elevations, and the site plans. Adjust the base aggregate, if necessary.
5. Have the soil bearing capacity verified by a licensed engineer for the required load bearing capacity. On solid subgrade, set the first section of the BayFilter manhole/vault.
6. Check the level and elevation of the first section to ensure it is correct before adding any riser sections.
7. If additional section(s) are required, add a watertight seal to the first section of the BayFilter manhole/vault. Set additional section(s) of the manhole/vault, adding a watertight seal to each joint.
8. Install the outlet pipe in BayFilter manhole/vault.
9. Install the inlet pipe to the BayFilter manhole/vault.
10. Install the trolley system (if applicable).
  - a. Attach the mounting brackets to the track.



Modular Vault Assembly



Vault End Section

- b. Each track is split in sections. The length and number of sections vary depending on the vault. It is generally better to start installing longer track sections first. Hold a section in place and align the top of the brackets with the ceiling of the vault. Mark the center of the hole in each bracket and remove the track.
  - c. Using a hammer drill and  $\frac{1}{4}$ " (6 mm) bit, drill a hole approximately 3" (75 mm) deep at each mark.
  - d. Hold the track back in place and realign the brackets with the holes. Place a plastic spacer block behind each bracket and using the supplied  $\frac{1}{4}$ " (6 mm) x  $3\frac{1}{4}$ " (83 mm) anchor bolts mount the track in place. Only install one section of track at this stage.
  - e. Repeat this procedure on the opposite wall of the vault directly across from the first section.
  - f. Bolt the 4 trolleys to the aluminum I-beam as shown in the attached diagram. Make sure that the wheels for each trolley are mounted an equal distance from the top of the I-beam.
  - g. Lift the I-beam in to place and insert the trolleys in to the track.
  - h. Using the supplied couplers, install the second sections of track via the same procedure. Continue until the track runs the length of the vault or as designed.
11. Install the PVC manifold. Glue all PVC joints with the exception of the BayFilter cartridge coupling. See parts list.
  12. After the site has stabilized, remove any accumulated sediment or debris from the vault.
  13. Install the Bayfilter Vertical Drain Down Modules (VDDM) to the manifold system (if applicable).
  14. Install a row of BayFilter cartridges. Place each cartridge so the handle or "top eye hook" points across the vault. Make sure the air valve is on the side closer to the outlet.
  15. Place one (1) full set of hold down bar and two retainer brackets across the top plate of a row of aligned BayFilters. Mark and drill (using a hammer drill and a  $\frac{1}{2}$ " (13 mm) concrete bit) two  $\frac{1}{2}$ " (13 mm) holes per retainer bracket approximately 1.5" (25.5 mm) into the wall. Each retainer bracket has 4 possible holes, use only two, and preferably in a diagonal position per retainer bracket. Insert the anchor bolts into the wall, slide the retainer bracket over the bolts and use either a  $\frac{3}{4}$ " (18.75 mm) wrench or deep ratchet socket to attach the anchor bolts and retainer bracket to the wall, creating a strong positive connection.
  16. After fully anchoring the retainer brackets, place the left end of the hold down bar into position and lock into place using the quick release restraining pin attached to the retainer bracket. Do the same for the right end of the bar.
  17. Repeat steps 14, 15 and 16 for each set (or row) of BayFilter Cartridges and hold down bar sets until the whole system is installed. See parts list drawing for the hold down bar placement.



Trolley System



Hold Down Bar Bracket



Bar and Bracket



Filter Tee



Drain Down Module



Chain Hoist System



Vault Internal Assembly



BayFilter Vault Overview