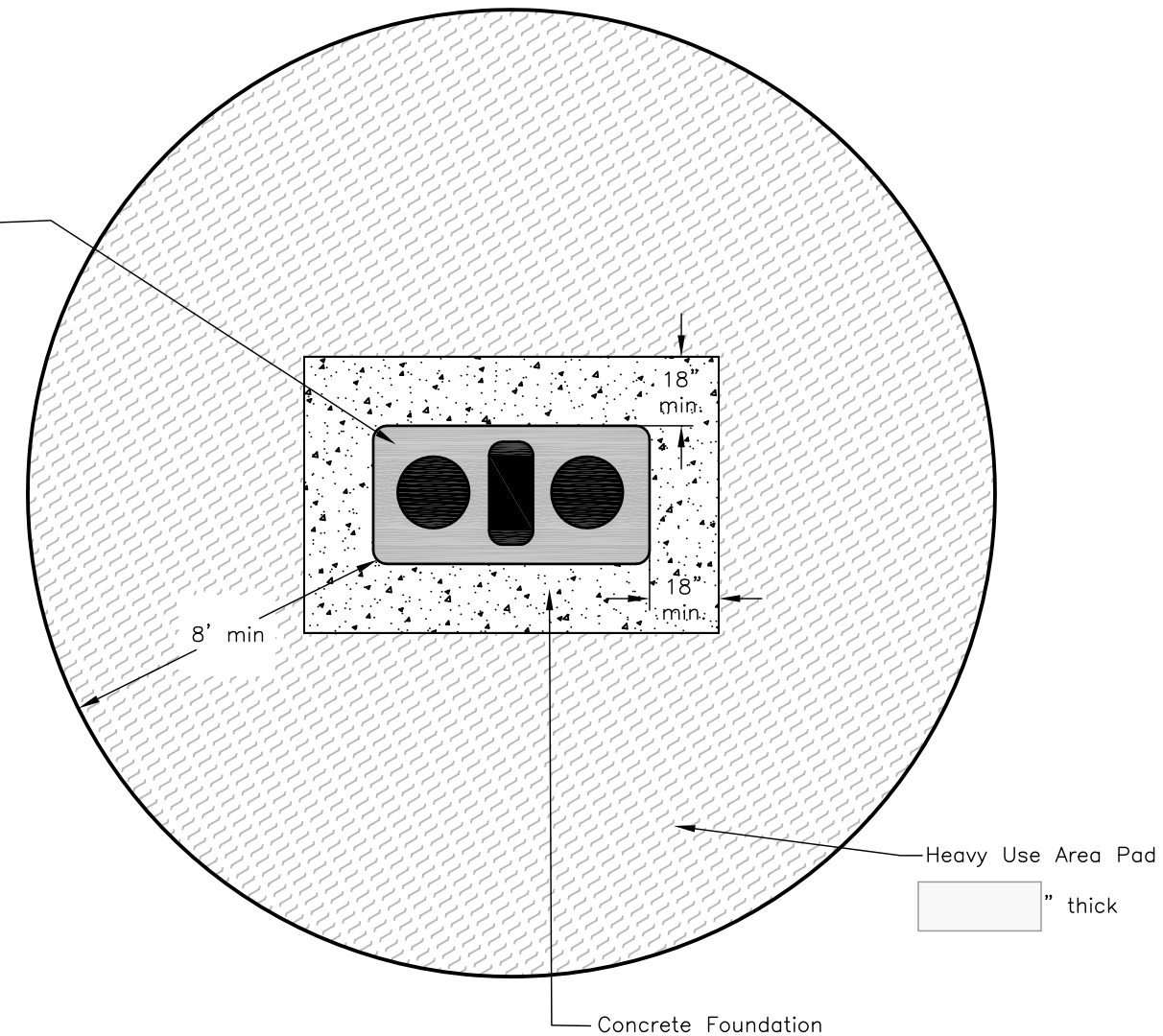
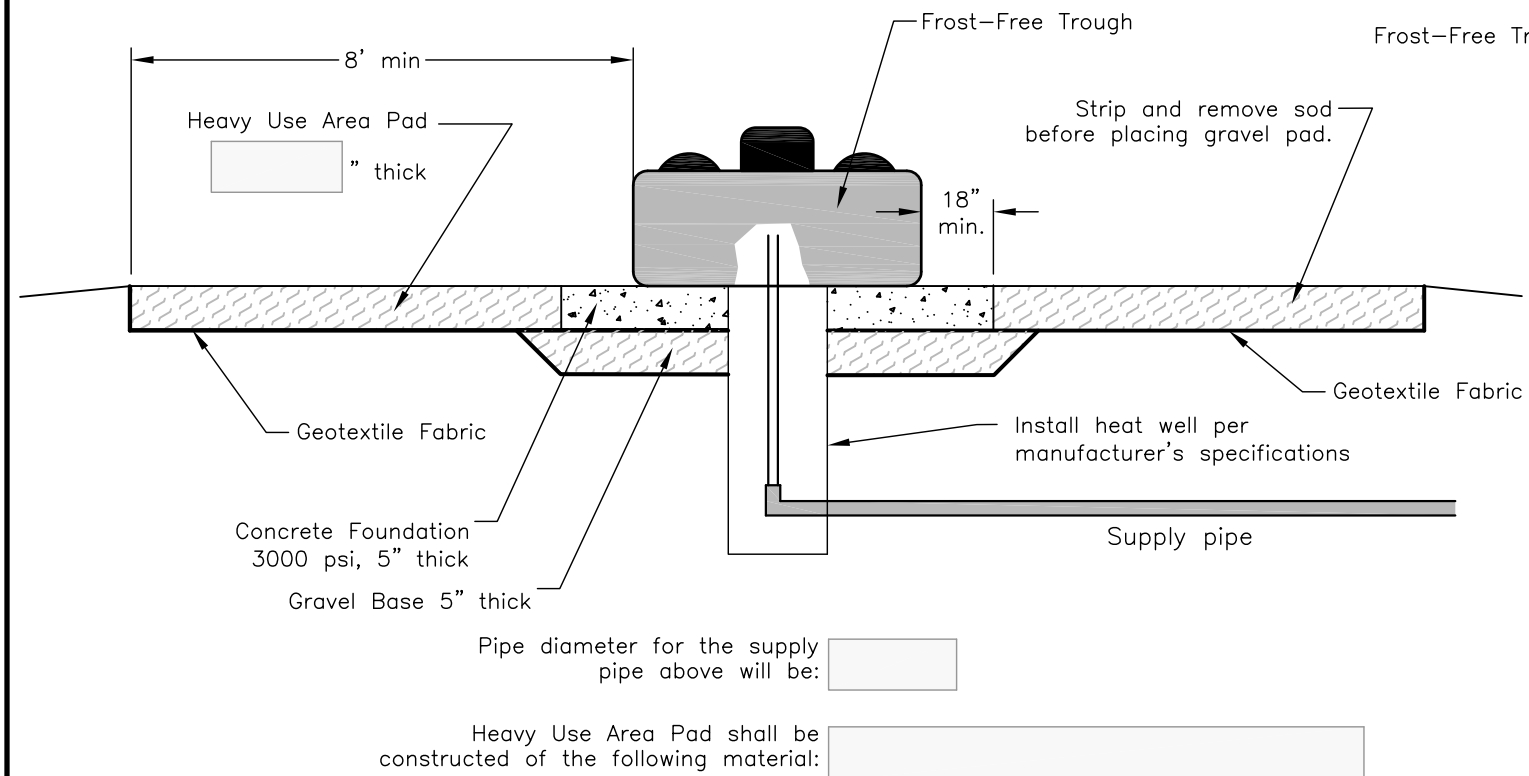


Frost-Free Trough Installation – Top View



Frost-Free Trough Installation – Side View



Construction Notes

1. The ground under and around the trough location shall be cleared of all material not suited for the subgrade, including sod. All loose surface soil shall be removed to undisturbed material.
 2. The concrete foundation for the trough shall extend a minimum of 18" past the edges of the trough. Concrete shall be 3000 psi, and installed a minimum of 5" thick. 6"x6" 6/6 gage welded wire mesh reinforcing shall be used in the 5" slab.
 3. Position the heat well and pipelines per manufacturer's recommendations. The concrete foundation dimensions recommended by the manufacturer will be used if the dimensions are larger than those in note 2. The trough must be attached to the concrete foundation per manufacturer's recommendations.
 4. A valve shall be installed in the supply pipeline to regulate flow to the trough. The valve should be installed in a housing that is frost proof, well drained, readily accessible and protected from livestock. A means of draining the supply pipeline between the valve and the trough shall be provided.
 5. All backfill for pipelines under the trough shall be compacted to the degree required to prevent caving after construction. Backfill under the trough may be select compacted earthfill or granular fill such as VDOT #21 or crusher run.
 6. The trough site shall be free draining.
 7. A protective surface shall be placed around the trough. At the minimum, install geotextile fabric around the trough and then place VDOT #57, VDOT #21A or crusher run around the trough six inches deep. Other types of materials may be installed with approval of the designer. The protective surface shall extend at least 8 feet from each side of the trough.
 8. Geotextile shall meet the Class I requirements for nonwoven geotextile in Virginia Construction Specification Geotextiles (VA-795). Class II may be used with engineers approval.
 9. Seed all disturbed areas at the rates given in Virginia Construction Specification Seeding (VA-706).
- * If seeding is done outside recommended seeding dates, a nurse crop is to be used.

Revisions			
Version	Date	Approved by	Title