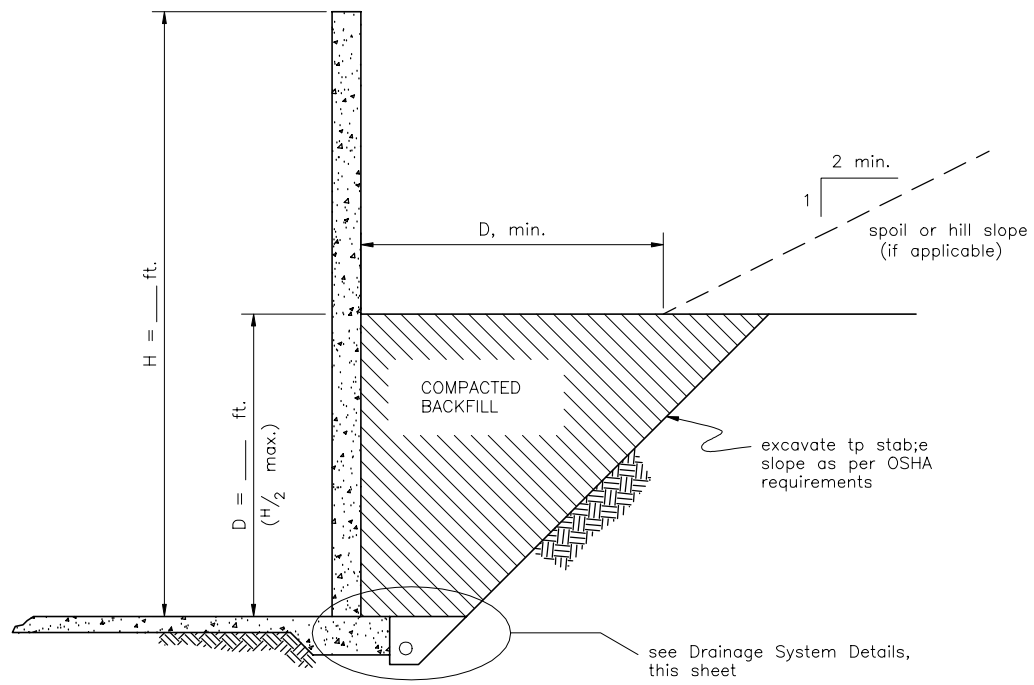
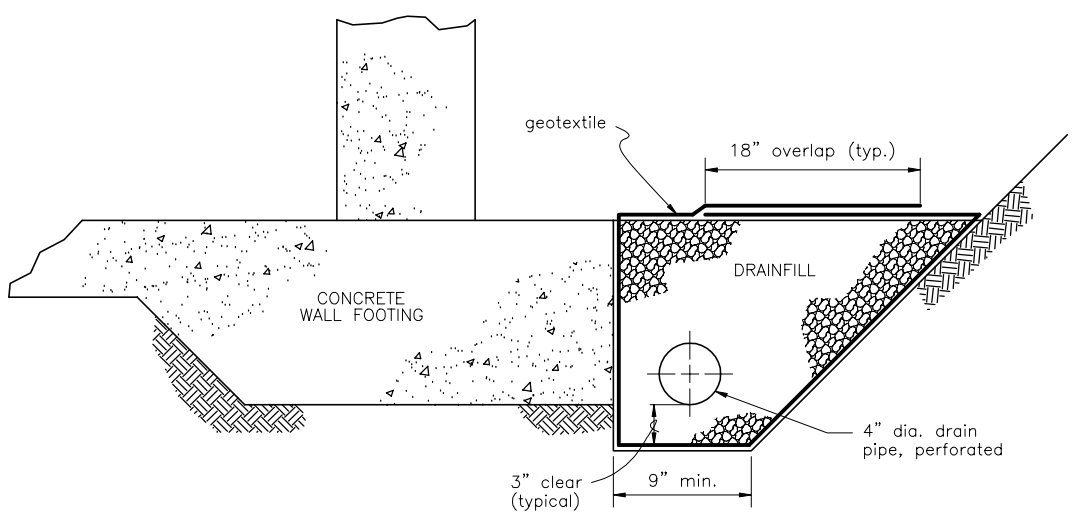


BACKFILL DETAILS

(Not to Scale)



DRAINAGE SYSTEM DETAILS

(Not to Scale)

(Required _____ Not Required _____)

DESIGN NOTES:

1. The tank may be backfilled to one half of the tank depth if one or more of the following conditions applies:

   a. The seasonal high water table elevation at the tank site does not exceed the elevation of the base of the floor slab.

   b. A drainage system is provided at the base of the wall footing to prevent uplift on the bottom of the floor slab.

   c. The liquid level in the tank is maintained at least as high as the water table elevation adjacent to the tank.

Construction Notes:

1. Excavation and backfill shall conform to the following requirements:

   a. The backfill shall be material free of roots, organics, and other unsuitable materials obtained from the structure excavation or other offsite sources, as approved by the Engineer. Highly plastic clays and silts (CH or MH) shall not be used.

   b. The moisture content of the backfill shall be maintained within the limits required to: (1) prevent bulking of the material under the action of the hauling or compacting equipment; (2) prevent adherence of the fill materials to the treads and tracks; and (3) insure the blending of the soil and rock into a reasonably homogeneous mass.

   c. The maximum size of rock fragments incorporated into the fill shall be 6 inches, except hand compacted backfill shall have no rock fragments larger than 3 inches.

   d. The backfill shall be placed and compacted uniformly around the perimeter of the tank in level lifts not exceeding 9 inches in thickness prior to compaction.

   e. The backfill shall be compacted to the density of the surrounding in place soil. Hand directed mechanical tampers shall be used within 2 feet of the concrete structures or pipes.

   f. The excavation shall be dewatered so that all work can be performed "in the dry". Fill may not be placed in standing or flowing water.

   g. Backfill may not be placed until 14 days after placement of the concrete walls.

2. The drainage system shall conform to the following requirements:

   a. The drain pipe shall be 4 inch diameter heavy duty corrugated plastic drain tubing and fittings meeting the requirements of ASTM F405 (PE pipe).

   b. The geotextile shall be a non-woven geotextile recommended by the manufacturer for subsurface drainage applications, such as LINQ 125EX, as manufactured by LINQ Industrial Fabrics, Inc., or approved equal.

   c. The drainfill shall be clean (washed), hard, durable rock with a maximum particle size of of 1.5 inches and a minimum particle size of 0.25 inches. The rock may be round or angular.

   d. The drain pipe shall have a free outlet. The exposed portion of the drain at the outlet shall be of galvanized corrugated steel pipe, 0.064 inches thick, and shall be equipped with a commercially manufactured rodent guard. The plastic drain tubing shall be inserted into the corrugated steel pipe a minimum of 2 feet.

STANDARDIZED DESIGNS

Must Be Adapted To The Specific Site

Practice Code _____ Job Class _____

		DATE
Designed	Ben Doerge	12/98
Drawn	L. Kamna	12/98
Checked	Ben Doerge	12/98
Approved	Dave Dishman	12/98
Title	State Conservation Engineer	

WASTE STORAGE TANK
ABOVE GROUND CIRCULAR CONCRETE
BACKFILL DETAILS

USDA NRCS
Natural Resources Conservation Service

File Name
AWM313001.dwg

Oregon Standard Number
AWM-313001

Sheet No. 1 of 1