



**MATERIALS**

1. Drainage Sand should meet the following gradation (Modified City of Seattle Mineral Aggregate Type 26):

Sieve Size	% Passing by Weight
1-inch	100
3/4-inch	85 to 95
1/4-inch	30 to 60
No. 8	20 to 50
No. 50	3 to 12
No. 200	0 to 1
(by wet sieving)	(non-plastic fines)

An alternative to drainage sand and gravel is a 50-50 mixture of washed pea gravel and washed sand (Mineral Aggregate Type 6).

2. Washed 3/8" Pea Gravel to Meet City of Seattle Mineral Aggregate Type 9.
3. Granular backfill to consist of suitable on-site soil or imported, clean, well-graded sand and gravel or crushed rock; material must meet the following gradation criteria (City of Seattle Mineral Aggregate Type No. 17);

Sieve Size	% Passing by Weight
3-inch	95-100
1/4-inch	25 -75
No. 200	0 to 5
(by wet sieving)	(non-plastic fines)

NOT TO SCALE

Subdrain Pipe (Tightline through wall and daylight at selected locations)

**4. SUBDRAIN PIPE**

- a Perforated or slotted pipe; tight joints; sloped to drain (6"/100' min. slope); provide clean-outs; min. diameter: 4 inches.
- b Perforated pipe holes (1/8-in. to 3/8-in. dia.) to be in lower half of pipe with lower quarter segment unperforated for water flow.
- c Slotted pipe to have 1/8-in. max. width slots.
- d Surround Subdrain Pipe with a minimum of 6 inches of washed 3/8" pea gravel.

3. Keep the excavation free of water. A geotechnical engineer should evaluate the prepared subgrade before placing fill.
4. If soft or loose materials are present in the subgrade, they should be removed and replaced with compacted granular backfill.
5. Wall system to be designed by a professional engineer.

**NOTES**

1. This figure is not for construction. It should only be used for information pertaining to potential design concepts. Final design should be based on site-specific conditions and accomplished by a geotechnical engineer licensed as a professional engineer.
2. Compact backfill in 6-in. maximum loose lifts to at least 95% of Modified Proctor maximum dry density (ASTM D-1557). Backfill, drainage sand and gravel, and geotextile placement should be built up together.

Seattle Landslide Study  
Seattle Public Utilities  
Seattle, Washington

**TYPICAL GEOTEXTILE  
SOIL WALL SECTION**

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**FIG. 2-15**