east lake sammamish trail

King County Parks Your Big Backyard

King County

Fact Sheet

November 2014

Understanding Retaining Walls

Trail safety and accessibility for multiple trail users are King County's primary goals. The East Lake Sammamish Trail features a 12-foot wide asphalt surface with two-foot gravel shoulders and a one-foot clear zone on each side of the trail. Some sections of the trail require construction of retaining walls to stabilize slopes, avoid impacts to environmentally sensitive areas, and minimize the project footprint. Trail construction includes three types of retaining walls: gravity block walls, structural earth walls, and soldier pile walls.

Gravity Block Wall

- Gravity block walls use their own weight to retrain cut slopes and require no tiebacks.
- The solid concrete block design provides structural support.
- These walls are primarily used in cut wall situations where space for excavation is limited, and when the required wall height exceeds four feet.
- Gravity block walls have a compact footprint, resulting in less impact to the surrounding environment.
- Six gravity block walls will be constructed in the North Sammamish Segment of the ELST.

Completed Gravity Block Wall

Construction of a gravity block wall

For questions or more information about construction:

- Call the 24/7 project hotline: **1-888-668-4886**
- Email **ELST@kingcounty.gov**. King County will respond within one business day.
- Visit the website **www.kingcounty.gov/eastlakesammamishtrail** for project information and weekly construction updates.
- Look for upcoming project newsletters to stay informed of current construction activity.

Structural Earth Wall

- Structural earth walls are the most common type of retaining wall and are composed of precast concrete blocks and reinforced fill.
- Thick mesh or geogrids are placed in horizontal layers to reinforce the wall.
- Structural earth walls have a shorter construction duration, they are easy to install and less expensive.
- Structural earth walls provide needed flexibility to withstand deformations or settlements.
- 37 structural earth walls will be constructed in the North Sammamish Segment of the ELST.

Completed Structural Earth Wall

Construction of a Structural Earth Wall

Soldier Pile Wall

- A soldier pile wall is an earth retention technique that retains soil, using vertical steel piles with horizontal timber lagging
- One soldier pile wall will be constructed on the North Sammamish segment
- The steep slope, poor soil conditions and close proximity to East Lake Sammamish Parkway required soldier pile wall construction at this location to minimize excavation impacts

Completed soldier pile wall

Construction of a soldier pile wall