



## Transportation

### Client

Sound Transit

### Location

Seattle, Washington

## University Link (U-Link) Construction Management Services

### Project Highlights

- ◆ Light rail extension involving twin-bored tunnels from downtown Seattle to the University of Washington and two subway stations
- ◆ Complete construction management services for a vital element of the Sound Transit Link light rail program

Sound Transit's University Link (U-Link) project is a 3.15-mile light rail extension that will run in twin-bored tunnels from downtown Seattle north to the University of Washington, with stations at Capitol Hill and on the University of Washington campus near the Husky Stadium.

CH2M HILL is the lead in a joint venture to perform construction management services for this transit project. The U-Link Project is a critical element of the Sound Transit Link light rail program. When completed, U-Link will be the most important single segment in terms of ridership, connectivity, and complexity. When complete, U-Link will connect with the Central Link light rail system to create a direct connection to Sea-Tac Airport.

U-Link will serve the three largest urban centers in the State of Washington – Downtown Seattle, Capitol Hill and the University District. By 2030, U-Link is projected to add 70,000 daily boardings to the light rail system.

U-Link is a critical extension of Central Link. This project involves many complexities, including multiple contract packages for stations and deep tunneling in a dense urban environment, in soft soils, under two major freeways and a canal, sandwiched between other significant infrastructure projects planned to be in construction during the U-Link Project.

### Contracts include:

**U210 – Advanced Utility Relocation—UW Station:** This contract involved the removal and relocation of utilities and site restoration in preparation for the major tunnel contract at University of Washington Husky Stadium. Due to the proximity of a major university's athletic facility, this work required close coordination by the construction management staff with University of Washington, City of Seattle, and other project stakeholders. The Contract was completed on-time with no disruption to the Athletics Program.

**U211 – Demolition and Environmental Remediation—Capitol Hill Station:** This contract included the abatement of hazardous materials, demolition of existing structures, and disposal of materials within a highly dense urban environment. This work was in preparation for the major tunnel contract and subsequent construction of a light rail station at this site. The contract was completed on time with minimal impacts to the local community.

**U215 – I-5 Undercrossing Construction Pits:** This contract included closing a major interstate off-ramp for 1 year to accommodate the construction of four shafts along I-5 which facilitated the removal of existing cylinder piles from the future U-Link tunnel alignment. The construction management team provided extensive coordination with WSDOT to minimize impacts and maintain safety to the traveling public and protect existing retaining structures

at the Olive Way and the Pike/Pine Reversible ramps. The contract was completed early.

**U220 – Bored Tunnels:** This contract includes two 11,400-foot-long bored tunnels from University of Washington Station to Capitol Hill Station, to be excavated using earth pressure balance tunnel bore machines (TBMs). There will be 16 cross passages excavated using sequential excavation methods. The contract includes civil and structural work at the University of Washington Station site consisting of access roads, underground utilities, ground improvement by jet grouting, and a large slurry wall for both the station and rail crossover. The construction management staff provides contract management, safety oversight, inspection, quality assurance, change management and project controls services.

**U230 – Capitol Hill Tunnels and Station:** This contract includes the construction of a large open excavation for the Capitol Hill Station and two 3,800 foot long TBM driven tunnels from Capitol Hill to Downtown Seattle. The contract combines a very complex tunnel alignment blended with the challenges of tunneling in a highly urbanized metropolitan center. The construction management staff provides contract management, safety oversight, inspection, quality assurance, change management and project controls services.

**U820 – Light Rail Vehicle (LRV) Storage Yard Expansion:** The construction contract included adding nine storage tracks and 17 turnouts to the existing LRV Operations and Maintenance Storage Yard for storage of the new LRVs for University Link. Construction work included under drains, underground electrical concrete ductbanks, grading, continuous welded rails, ballasted concrete ties, track and special track work, traction power switchgear, DC power distribution, overhead contact wire system foundations, OCS (catenary) system, automatic switch machines, signaling, rail bonding, switch heaters, sanding system and asphalt paving. The construction management staff provided contract management, quality inspection services, document control and yard outage coordination to ensure no impact to 24/7 yard operations.

## About CH2M HILL

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