

Sound Transit

North Link First Hill Rail Spur Work Plan August 9, 2005

Analyze the potential feasibility, benefits, and costs associated with a potential future rail spur connection from the Capitol Hill Station to First Hill, for which funding would be considered later.

The above task to analyze the feasibility of a potential future rail spur was presented to the Board, although staff did not receive direction to develop a work plan for this task. Should the Board direct staff to pursue this analysis within the First Hill work plan, then staff would complete a number of tasks to assess the feasibility of this alternative.

The information will be provided in two phases. Phase I will define the technology and operations concept for a potential rail spur between Capitol Hill and First Hill. Phase II would be initiated at the discretion of the Board after review of Phase I and would develop conceptual engineering designs and cost estimates.

Phase I task will include:

- *Vehicle Technology*: this task includes a comparative assessment of the various rail transit technologies to provide safe, efficient and reliable service between Capitol Hill and First Hill and a matrix that summarizes the findings from this assessment;
- *Operations & Maintenance Concepts*: this task includes a review and reporting on system requirements (including constraints) that influence both operations and maintenance for various transit vehicles;
- *Potential routes*: this involves definition of potential route and station locations for a rail spur

If directed by the Board to proceed with Phase II, some of the major conceptual engineering tasks will include:

- *Alignment/Civil*: this task includes developing the alignment and profile that is compatible with the vehicle operations recommended for this alternative;
- *Geotechnical Investigations*: this task is to conduct a limited exploration program (including field and laboratory testing) to evaluate subsurface soil and groundwater conditions at selected locations along the alignment;
- *Structures Design*: this task is to determine the structural configurations which may include a bored or mined tunnel, cut-and-cover tunnel, a cut-and-cover station at First Hill, connection into the Capitol Hill station, and other miscellaneous structures to address emergency access/egress, ventilation requirements, maintenance requirements, and system-wide elements such as power, signals and communications;

- *Utility Impact Analysis:* this task is to identify the major utilities that exist within or adjacent to the alignment and develop a matrix assessing the impacts on these utilities and the preferred mitigation to address the impacts;
- *Right of Way Identification:* this task is to identify properties directly affected by the alignment and support facilities;
- *Support for Ridership and Traffic Forecasts:* this task is to provide support and coordination for the development of initial information addressing transit ridership, mode of access, pedestrian and traffic forecasts; and
- *EIS Support:* this task is to provide initial technical environmental analysis on various impacts related to construction and operations of this alternative.

Deliverables:

- *Phase 1: Definition of a potential rail spur from Capitol Hill to First Hill, including technology, operation and maintenance, and route concepts.*
- *Phase 2: Conceptual engineering design and cost estimates.*