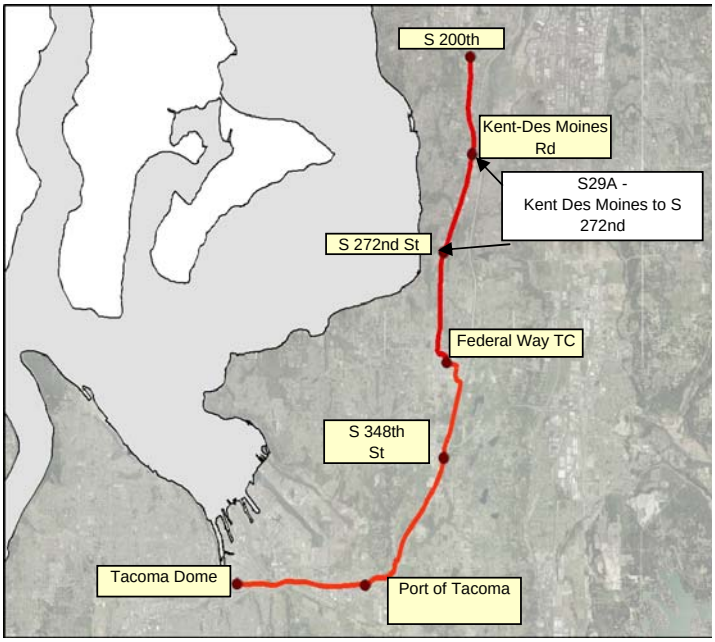
Link LRT: Extension from Kent-Des Moines Road to S 272nd Street via SR 99

Project Number	S29A
Subarea	South King
Primary Mode Impacted	Link
Facility Type	Link Service
Version Number	3.0
Date Last Modified	4/24/2008

Project Locator Map



Short Project Description

Continue extension of the Central Link light rail system for 2.5 miles (approx) from Kent-Des Moines Station (S. 240th St) to S. 272nd Street (at existing Redondo Heights Park-and-Ride lot), including a new station at S. 272nd Street. The project will include all necessary components such as infrastructure, systems, and stations. For prototypical costing purposes, the alignment is assumed to be aerial along SR 99. The S. 272nd St Station will include a new 500 stall garage (within Redondo Heights Park-and-Ride). The final alignment and station locations will be determined through project level design and environmental review. Prototypical cost estimates for the alignment are presented here.

Project Purpose: To extend reliable high capacity transit service farther south from S 240th St to S 272nd Street.

Cost

In Millions of 2007$ conceptual estimate only

	Low	High
Agency Admin	$20.0	$23.0
Environmental Clearance and PE	$11.4	$13.1
Final Design, Specs, and	$28.6	$32.8
ROW Acquisition	$45.4	$52.2
Construction	$247.8	$285.0
Vehicles	$0.0	$0.0
Contingency	$22.8	$26.3
Total	**$376.0**	**$432.4**

Design Basis	Conceptual

Environmental Documentation Required

- [x] Environmental Impact Statement Required
- [ ] Environmental Assessment Required
- [ ] Environmental Checklist Required

Relationships to Other Projects

Relationship	***Project***
Dependent on	Project S28: *Link LRT: Extension from South 200th to Kent-Des Moines Road via SR 99* and all associated projects that this project is dependent on or impacted by.
Dependent on	Construction of maintenance facility and vehicle purchase (separate project)

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Project Partners

Agency

KC Metro	
WSDOT	
City of Kent	
City of Des Moines	
Highline Community College	
City of Federal Way	

Long Description:

This capital project scope and the companion capital cost estimate, are intended to include the entire project development cycle cost (agency and project administration, design, all aspects of property acquisitions, permits, agreements, construction, testing, commissioning, and contingencies) from project initiation through the start-up of revenue operations.

At this stage of project development, a representative alignment was used to develop a cost estimate. The final alignment and station locations would be determined through project level design and environmental review. The base cost estimate includes design allowance contingency, construction change order contingency, and unallocated contingency.

Project Description:

Construct an extension of Link light rail transit from the Kent-Des Moines area/Highline Community College (see Project S28) to S. 272nd Street (vicinity of existing Redondo Heights Park-and-Ride). For cost estimation purposes, the line is assumed to be elevated, primarily following an SR 99 alignment, and would include one new light rail station in Federal Way at S. 272nd Street and SR 99.

Assumptions

- 10-minute headways in peaks; 15 minutes in base period
- 4-car trains in peak; 3-car trains in base

Representative Alignment - Project Elements Included:

- Link LRT service extended approximately 2.5 miles south from Kent-Des Moines Station to S. 272nd Street at the existing Redondo Heights Park-and-Ride lot (an extension of Link light rail from S. 200th Station to Kent-Des Moines Station has been defined and costed separately; Project S28).
- Alignment is assumed to be aerial.
- After leaving Kent-Des Moines Station, the representative alignment would continue along the west side of SR 99/Pacific Highway with an aerial profile.
- Column placement in the west side of the SR 99 100-foot right-of-way is assumed to require realigning the sidewalks to the west of the column. Modification to driveway access will also be required
- A station would be provided on Pacific Highway south of S 272nd Street to serve the existing Redondo Heights Park-and-Ride facility. The aerial station is assumed to be center platform with ground level plaza.
- New 500-space parking structure for use by light rail patrons using the S. 272nd Street Station. It is proposed that the new parking structure will be constructed within the existing Redondo Heights Park-and-Ride right-of-way. (The existing surface park-and-ride lot has 697 stalls)
- New pedestrian bridge across SR 99, connecting the S. 272nd Street Station with the parking structure
- 1 percent for art per ST policy
- Passenger Drop Off facilities at station (20 bays)

Other design features assumed in the cost estimate include:

- One track crossover in the vicinity of the S. 272nd Station

Utilities

- Utility investigations have not been carried out. Relocation of standard utilities along the alignment has been assumed as part of the scope and has been estimated using an average per route-foot allowance.

Right-of-Way

Property interests required for the prototypical alignment include fee acquisitions, partial takes, easements and interagency agreements. Right-of-way requirements include construction staging and contractor laydown areas. No specific provisions are made for contractor parking. Cost estimates include associated relocation, administration and legal costs, and contingency.

Mitigation

• The final project scope will include all mitigation(s) committed to by ST in pertinent, future project-level environmental documents.

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Exclusions

• Major roadway reconstruction to accommodate support columns for the aerial track (only minor pavement reconstruction has been costed - up to 6 feet wide including striping and sidewalk replacement on one side of the street)
• LRT vehicles, maintenance base, and operations have been costed separately (refer to Project SYS-LRT description for systemwide elements)
• Non-structural architectural and aesthetic elements in excess of the ST art program
• Public restrooms
• Track improvements
• Undergrounding of overhead utilities
• Community development funding
• Central command and control for operations

Permits Required

- Building, electrical, mechanical, utility, construction-related

Agreements Required

City of Kent agreements:
• Transitway agreement to operate within city streets
City of Federal Way
• Station Permits
• Transitway agreement to operate within city streets
King County Metro
Parking Structure within the existing Redondo Heights Park-and-Ride right-of-way

Flexible Access to ST Facilities:

The goal of this project is to accommodate the future demand for ridership on transit services available at the station/center, by improving access/egress for this location. The scope of the transit parking components included in this project could be revised to include a range of strategies for providing rider access to the transit facility. Along with, or instead of parking for private vehicles or van pools, a mix of other investments could be accomplished through the budget for this project. These other strategies include:

• Pedestrian improvements within one-quarter mile of the S. 272nd Street Station,
• Additional bus/transfer facilities at S. 272nd Street Station,
• Bicycle improvements within one-half mile,
• Transit speed and reliability improvements on routes connecting to the facility,
• Expanded or new kiss-&-ride areas at S. 272nd Street Station and/or
• Off-site parking along an existing bus route that connects frequently (20-minute or shorter headway) to S. 272nd Street Station during the peak periods.

This flexible approach would permit ST staff to examine alternatives to expanded parking and could lead to even lower GHG emissions and less land consumed by parking. ST's highest priority for this project budget would remain meeting demand and riders' needs. The budget for flexible access will not exceed the Board-adopted budget for this project. Access and demand studies would be required prior to changing this project's scope. Determination of what level and mixture of investments would be most effective and affordable within the project's budget would be done through a planning effort that includes a more-detailed examination of demand and use, as well as coordination with affected jurisdictions and partner agencies, the community surrounding the station/center, and the users of the transit services available at the location. ST Board action is required to change a project's scope in this manner.

ST has developed scope definitions for ST2 project proposals for the purposes of developing cost estimates, phasing of investments, a financial plan, and the estimation of project benefits. This scope definition should not be construed as a commitment that all defined features will be included in the final developed project.

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Evaluation Measures

Measure	*Measurement/ Rating*	*Notes*
Average Weekday Ridership	N/A	See light rail system ridership forecasts
Capital Cost	$376.0 - $432.4	in Millions of 2007$
Annual Operating Cost	N/A	See LRT maintenance base, vehicles and operations project (SYS-LRT)
Travel Time & Reliability	High	
Connectivity & Integration	High	# of transit routes: 5 Metro
Land Use & Development	High	
Customer Experience	High	
Risk Avoidance	Low	

Key Issues and Benefits

Issues:
- An aerial alignment along SR 99 was selected as the representative alignment for estimation purposes in order to account for the potentially greater impacts and costs of constructing a light rail system along a highly developed and urbanized traffic corridor.
- Due to column placement, aerial alignment along SR 99/Pacific Highway would impact property access and parking.
- Alternative alignment following I-5 would reduce impacts to SR 99 but would make serving communities along SR 99 more difficult.
- Some costs associated with rebuilding sidewalks and curbs to shift the street centerline to the east are included; costs associated with major street reconstruction are not included.
- ROW along the alignment

Benefits:
- Extends light rail service farther south; consistent with Sound Transit's Long-Range Plan.
- Serves the north area of Federal Way.
- New light rail station at S. 272nd St
- Increases job accessibility