

History of research, actions back I-90 high capacity transit

Summary

A forty-year body of research and decision-making informs and supports the provision of high capacity transit (HCT) along the I-90 corridor connecting Seattle to Bellevue and the Eastside. Much of this history further identifies light rail specifically as the preferred mode choice for this corridor.

As the Sound Transit Board continues to consider future provision of high capacity transit from Seattle to the Eastside along the I-90 corridor, including a determination of the preferred mode choice, this body of research and history will help to inform the Board's decisions.

Findings and actions

Since 1965, the Central Puget Sound region has studied how best to provide for reliable transportation as the population grows. Leaders at the city, county and state levels have worked with other regional entities and civic leaders to determine the feasibility of high capacity transit (and, often more specifically, rail transit) in the region. A primary corridor studied through the years has been the I-90 corridor between Seattle and Bellevue to the Eastside.

With studies often commissioned by different agencies or entities, some addressing a very specific component or issue, each stands alone. Considered together as a body of research, however, they illustrate the region's commitment to acting proactively to provide for future needs. The collective research also shows progression and refinement toward a corridor and mode choice through the years:

- 1960s: Construction of rail was recommended from Seattle to Bellevue.¹
- 1970s: The I-90 corridor was specified and two lanes of the I-90 bridge were designed for and permanently committed for future transit use, including the potential to convert all or part of the transit roadway to fixed guideway.⁴
- 1980s: Rail was found feasible, especially for peak-period travel.⁶ Preparations for a regional rail system and I-90 rail service gained more steam.⁷
- 1990s: Transportation priorities emphasized transit tied to land use patterns.¹⁰ Regional Transit Authority (Sound Transit) formed.¹¹ Long-range planning began for development of HCT system across I-90 with future rail.¹³ Analysis of HCT across I-90 found rail viable.¹⁴
- 2000-present: I-90 Two Way Transit/HOV Project's preferred alternative is adopted as R-8A (HOV lanes in the outer roadway) with HCT deployed in the center lanes as the ultimate configuration for I-90. "HCT" is defined as a transit

system operating in dedicated right-of-way such as light rail, monorail, or a substantially equivalent system.¹⁵ Light rail was found an appropriate technology for cross-Lake Washington. Light rail meets and exceeds near- and long-term needs of the Eastside.¹⁶ Light rail and rail convertible bus rapid transit (BRT) were forwarded for further consideration on I-90 corridor.¹⁷ Studies confirm that the I-90 floating bridge can be retrofitted to carry light rail in addition to general traffic.¹⁸ Existing rail joint technology on other modern suspension bridges carrying light rail is viable for application on the I-90 floating bridge.¹⁹

Foundation for continued action

Two significant public agreements by city, county and state agencies provide the policy foundation for continued work toward implementing HCT across I-90 from Seattle to the Eastside:

1976 Memorandum Agreement (MA): Signed by Cities of Bellevue, Mercer Island and Seattle, King County, Metro and the Washington State Highway Commission, this paved the way for construction of I-90. It describes the facility as three general purpose lanes in each direction and two lanes permanently committed to transit use, designed and constructed for possible future conversion to fixed guideway. It calls for operation of transit lanes at no less than 45 mph average speed with first priority to transit, second to carpools, and third to Mercer Island traffic. It gives the Commission the authority to determine future operation or capacity based on existing needs, conditioned on prior consultation with the MA's other parties; concurrence of the parties is a prerequisite to Commission action to the greatest extent possible under law.

2004 - Amendment to the I-90 Memorandum Agreement: This amendment, signed by the Cities of Bellevue, Mercer Island and Seattle, King County, Sound Transit and the Washington State Transportation Commission, identifies Alternative R8-A (additional HOV lanes on outer roadways) as the first step toward the ultimate configuration for I-90 with High Capacity Transit (HCT) in the center roadway. HCT is defined as light rail, monorail or a substantially equivalent system operating in a dedicated right-of-way. The amendment calls for moving as quickly as possible to implement HCT in the center lanes with a commitment to the earliest conversion of the center roadway to two-way HCT operation based on study results and funding approvals.

ABBREVIATED CHRONOLOGY OF RESEARCH

1. *Feasibility of Rapid Transit Operation within the Seattle Area: Interim Report to the Puget Sound Governmental Conference*, City of Seattle (1965)
2. *Comprehensive Public Transportation Plan for the Seattle Metropolitan Area, 1985 Horizon* (1967)
3. *Ballot Proposals*, Forward Thrust (1968 & 1970)
4. *I-90 Memorandum Agreement*, Cities of Seattle, Mercer Island & Bellevue, King County, Metro & Washington State Highway Commission (1976)
5. *Light Rail Element: A Feasibility Assessment*, Puget Sound Council of Governments (1981)
6. *Regional Transportation Plan Update & Amendment*, PSCOG (1982)
7. *Multi-Corridor Project*, PSCOG & Metro (1986)
8. *Transit Amendment to the Regional Transportation Plan*, PSCOG (1987)
9. *High Capacity Transit 2000: An Amendment to the Regional Transportation Plan*, PSCOG (1989)
10. *Vision 2020 Growth Strategy & Transportation Plan for the Central Puget Sound Region*, PSCOG (1990)
11. *Regional Transit System Plan*, Joint Regional Policy Committee (1993)
12. *Transit Plans*, Regional Transit Authority (1995 & 1996)
13. *Long Range Vision*, Sound Transit (1996)
14. *Trans-Lake Washington Study*, WSDOT & Sound Transit (1998-2002)
15. *I-90 Two-Way Transit & HOV Operations Project*, Cities of Bellevue, Mercer Island & Seattle, King County, Sound Transit & WSDOT (2003-04)
16. *Central Puget Sound High Capacity Transit Corridor Assessment*, Puget Sound Regional Council (2004)
17. *Updated Long Range Plan*, Sound Transit (2005)
18. *I-90 Load Test*, WSDOT (2005)
19. *Bridge Rail Joint Analysis*, Sound Transit (2006)
20. *I-90 Traffic Study*, WSDOT (2006)