

# SE King County DMU Feasibility Study

Presentation to

## The Farmhouse Gang

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September 10th, 2010



**Washington State  
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# Legislative Direction

- The Washington State Department of Transportation (WSDOT) Urban Planning Office has completed a feasibility study of commuter rail service from Maple Valley to the Auburn Station.
- The original 2009 budget proviso stated:

*\$400,000 of the Motor Vehicle Account – State Appropriation is provided solely for a diesel multiple unit feasibility and initial planning study. The study must evaluate potential service on the Stampede Pass line from Maple Valley to Auburn via Covington. The Study must evaluate the potential demand for service, the business model and capital needs for launching and running the line and the need for improvements in switching, signaling and tracking. A report must be submitted to the Legislature by June 30, 2010.*

# Legislative Direction Cont.

- In the 2010 legislative session, the language was revised in ESSB 6381, Section 220 (2) as follows:

*The study must also consider the interconnectivity benefits of, and potential for, future Amtrak Cascades stops in south King county and north Pierce county. As part of its consideration, the department shall conduct a thorough market analysis of the potential for adding or changing stops on the Amtrak Cascades route. The department shall amend the scope, schedule, and budget of the current study process to accommodate the market analysis. A report on the study must be submitted to the legislature by September 30,2010.*

- WSDOT has applied for a Federal Railroad Administration (FRA) grant in partnership with the city of Auburn to fund the additional analysis requested by the legislature. The funding provided by the legislature has been expended for the commuter rail feasibility study summarized here.

# Project Study Area:

Southeast  
King County  
Auburn to  
Maple Valley  
via Covington



# DMU Study Partners and Study Elements

- Study Partners: Auburn, Black Diamond, Covington and Maple Valley.
- Study Stakeholders / Key interests: BNSF Railway, King County Metro, PSRC, the Port of Seattle and Sound Transit
- The study defined an operating scenario for commuter rail service using DMU technology.
- The final report provides operations and capital cost estimates, ridership forecasts and potential revenue sources to build and operate the service.
- The study has also identified the institutional structure and business model required to provide commuter rail service.
- An initial assessment of environmental conditions/issues on the rail corridor has been completed. A formal environmental process was not part of this study.

# DMU Feasibility Study Key Findings

## Future Growth & Ridership:

- There is significant growth occurring in SE King County. The communities of Covington, Maple Valley and Black Diamond have added approximately 20,000 new residents in the past 10 years (>33% growth)
- Southeast King County is projected to grow at a faster rate than King County overall: 18,600 new households, 42,600 new residents and 5,500 new jobs are expected by 2030
- Year 2030 DMU (Rail) ridership forecast: Approximately 1,200 daily riders with service operating at 33 minute headways during peak-period. There are several other factors that might influence future ridership.
- Year 2030 Metro bus ridership forecast: Approximately 3,800 daily riders. The enhanced bus service option includes 30 minute peak headways for the Metro 149/168 routes and 30 minute peak headways on a new SR 18 express route.

# Operational & Environmental Feasibility

## Operational Feasibility

- DMU commuter rail service on the corridor is feasible. This service could operate without precluding BNSF Railway freight service. Extensive track, signal and infrastructure improvements will be required along with new railroad sidings, stations and station amenities.
- The enhancements to the existing Metro 149/168 routes could serve existing near-term transit needs in SE King County. Either the enhanced bus option with an SR 18 express service or the DMU commuter rail service could serve long-term transit needs.

## Environmental Feasibility

- The preliminary environmental screening has identified no fatal flaws. However the BNSF Rail line operates along the Green River and additional required ROW improvements would have impacts on the environment.
- Additional analysis likely will be required to determine if the potential environmental impacts of rail infrastructure would be significant.

# Institutional / Business Model Feasibility

- The DMU Commuter rail service could be implemented under current Washington State law by agencies enabled under current law. DMU rail service in SE King County is not included in the long-range transportation plan (MTP), PSRC *Transportation 2040*.
- The existing agencies that provide public transportation services in King County include: King County METRO, Sound Transit, Amtrak and WSDOT. However these agencies have limited or no ability to provide potential commuter rail services in SE King County.
- The Covington / Maple Valley portion of the rail corridor are not within the Sound Transit district.
- King County METRO does not include commuter rail services within its adopted service plan or budget.
- It appears that the business requirements of the BNSF Railway can be met, however an operating agreement would need to be negotiated with the railway. Railroad negotiations can be a complex and time-consuming effort and were not part of this feasibility study.

# Potential Governance Structures

- Four types of public entity were identified in the study that could manage the operation of DMU commuter rail service under current law:
  1. **Public Transportation Benefit Area Authority (RCW 36.57A):** The PTBA is the most commonly used form of governance structure in Washington State (examples: Kitsap Transit, Community Transit). PTBAs have considerable flexibility in setting boundaries, fares, service policies, etc. PTBAs cannot levy property tax or motor vehicle excise tax. PTBA governing boards consist of elected officials from cities and counties within the boundaries of the Area Authority.
  2. **Cities and Towns Under The Interlocal Cooperation Act (RCW 39.34):** The Interlocal Cooperation Act provides the ability for cities to contract with each other or other agencies to provide public transportation services. Funding sources include B&O and household tax (RCW 35.95.040) or property tax within the city's current authority. No authority for sales and use tax within King County or motor vehicle excise tax. The governing board is determined by the agreement among parties to the Interlocal agreement.

## Potential Governance Structures Cont.

- 3) **Transportation Benefit District** (RCW Chapter 36.73): A Transportation Benefit District (TBD) can be established for the operation of public transit services. Funding sources could include: Property Tax with 1% levy limit (RCW 36.73.060); Sales & Use Tax (RCW 36.73.040(3)(a)); Motor Vehicle Tax (RCW 36.63.040 (3)(b)); and B&O and Household Tax (RCW 35.95.045). The governing board is determined by the agreement among parties to the Interlocal agreement.
  
- 4) **County Rail District** (RCW Chapter 36.60): County Rail Districts were authorized specifically to address rail operations related to the movement of agricultural products. It isn't entirely clear if this statute provides for passenger rail service even though RCW 36.60.010 mentions passenger rail service, so clarification is needed. The taxing sources are limited to property tax (1% limitation) and B&O or Household taxes. No retail sales & use tax or motor vehicle excise tax are permitted under this legislation. The governing board for a county rail district is the County Council.

# Cost Summary

- The estimated project capital costs to fully implement the DMU rail project is in the range of \$170 to \$190 million (2010 dollars). These are planning-level cost estimates based upon limited information and are subject to change.
- The total estimated annual operating and maintenance costs are estimated in the range of \$4.1 to \$4.7 million (2010 dollars). This does not include cost estimates for bus or other connector systems at rail stations.
- The liability insurance coverage for the DMU service (\$200M policy) is a considerable portion of the operating fixed costs (\$2.0M/year). This cost could be reduced substantially if DMU service could be contracted through another agency that operates passenger rail service on the BNSF Railway.
- The average round-trip fare for the DMU service was assumed to be \$5.00. The annual fare-box revenue estimate is \$765,000, which covers approximately 16% of annual operating costs for the full service scenario.

# Funding Sources and Next Steps

## Federal Funding Sources:

- FTA New Starts program typically fund about 50% of the project costs with the remaining 50% coming from local sources.
- FTA Small Starts program funds projects with capital costs under \$250M. Federal share under Small Starts is less than \$75M per year.
- The FTA New Starts and Small Starts programs are highly competitive.

## Next Steps

- Study findings to be presented to the legislature (Fall 2010?).
- Local cities will commence a Phase II study effort in Fall 2010 funded through a federal earmark.
- King County Metro has obtained a State Mobility grant to fund bus service improvements on SR 169 and SR 516. These service improvements are scheduled to commence in Fall 2010

# Closing

- WSDOT has completed the final report and distributed it to study partners and stakeholders.
- The final report will be submitted to the State Legislature in September.
- Project website to download the final report and Executive Summary:  
<http://www.wsdot.wa.gov/planning/Studies/SEKingCommuterRailStudy/>
- **Questions?**