

# SR 520 Project Overview

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**Washington State**  
**Department of Transportation**

# Today's Agenda

## Where we are:

- Project definition
- Alternatives definition
- Alternatives refinement and evaluation

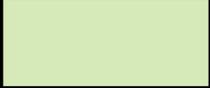
## Where we're going:

- Environmental approval and permits
- Final design and construction



# Setting the Stage: Schedule Orientation

Heading colors correspond to project phases in the schedule handout:

	Project Development
	NEPA EIS Process
	Design/Permits
	Construction & Monitoring
	Maintenance & Operations

## Project Development

### Trans-Lake Washington Study Objective:

Reach agreement on a set of reasonable and feasible solutions to improve mobility across and/or around Lake Washington.



## Project Development

### Trans-Lake Washington Study Process:

- 47-member study committee
- Defined problem and evaluation method
  - Identified interests, developed problem statement, evaluation method, evaluation criteria
- Developed and evaluated concepts
  - Brainstormed concepts, preliminary screening, evaluated concepts
- Combined concepts into solutions and evaluated
  - Rationale for solutions, developed solutions, evaluated solutions, recommended reasonable and feasible solutions
- Established starting point for environmental process

## Developed Purpose and Need

The purpose of the project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating effects on the affected neighborhoods and the environment.

## Developed Initial Project Alternatives

### Process:

- Looked at over 100 concepts
  - Car and passenger ferries
  - New lake crossings – bridges and tubes
  - High capacity transit options
  - Demand management
- Developed and evaluated six solution sets



## Developed Initial Project Alternatives

### Results:

- Focus on improvements in the SR 520 corridor
- Goals include:
  - Improving safety and reliability
  - Increasing mobility for people and goods
  - Avoiding, minimizing, and/or mitigating the effects on neighborhoods and the environment

## Developed Initial Project Alternatives

### Results:

Look at several alternatives

- Include a no build alternative
- Include a minimum footprint (four lanes with minimum shoulders)
- Add one HOV lane in each direction
- Add one HOV lane in each direction and one general purpose lane in each direction
- Add one HOV lane in each direction and high-capacity transit
- Include shoulders, bicycle/pedestrian facilities

## Developed Initial Project Alternatives

### Results:

“Mitigation and enhancement must be integral to and inseparable from the proposed transportation improvements.”



## Discussion

**Comments or questions?**

## NEPA EIS Process

### Trans-Lake Washington Project Objective:

- Initiate the environmental review process
- Define alternatives to be evaluated in the environmental review
  - Project definition
  - Getting feedback

## NEPA EIS Process

### Regulatory Framework:

The National and State Environmental Policy Acts (NEPA and SEPA) require projects with potential for significant adverse environmental effects to be reviewed in an Environmental Impact Statement (EIS).

## NEPA EIS Process

### Process:

- Co-lead agencies: FHWA, WSDOT, and Sound Transit
- New committees formed:
  - Executive
  - Technical
  - Advisory
- Signatory Agency Committee convened



## NEPA EIS Process

### Executive Committee:

- Local and State Elected Officials
- Agency Experts
  - Federal Highway Administration (FHWA)
  - Federal Transit Administration (FTA)
  - Washington State Department of Transportation (WSDOT)
  - Washington Transportation Committee (WTC)
  - Sound Transit
  - Puget Sound Regional Council (PSRC)
  - Local jurisdictions and agencies

## NEPA EIS Process

### Technical Committee:

- Federal Agencies
  - Environmental Protection Agency (EPA), FHWA, FTA, National Marine Fisheries Service (NMFS), U.S. Army Corps of Engineers (Corps), U.S. Coast Guard, U.S. Fish & Wildlife Service (USFWS)
- State Agencies
  - WSDOT, Department of Ecology (Ecology), Department of Archaeology and Historic Preservation, Department of Fish and Wildlife (WDFW)
- Local Jurisdictions, Agencies, and Interests
  - Sound Transit, PSRC, Puget Sound Clean Air Agency (PSCAA), University of Washington

## NEPA EIS Process

### Advisory Committee:

- Local Jurisdictions and Agencies
  - Counties
  - Cities
  - Neighborhood councils and community clubs
- Special Interest Groups - *including but not limited to:*
  - Environment
  - Bike and pedestrian
  - Parks and recreation
  - Business, chambers, and industry
  - Transportation

## NEPA EIS Process

### Signatory Agency Committee:

- Federal Agencies
  - Corps
  - NMFS
  - EPA
  - FHWA
  - USFWS
  
- State Agencies
  - Ecology
  - WDFW
  - WSDOT

# NEPA EIS Process

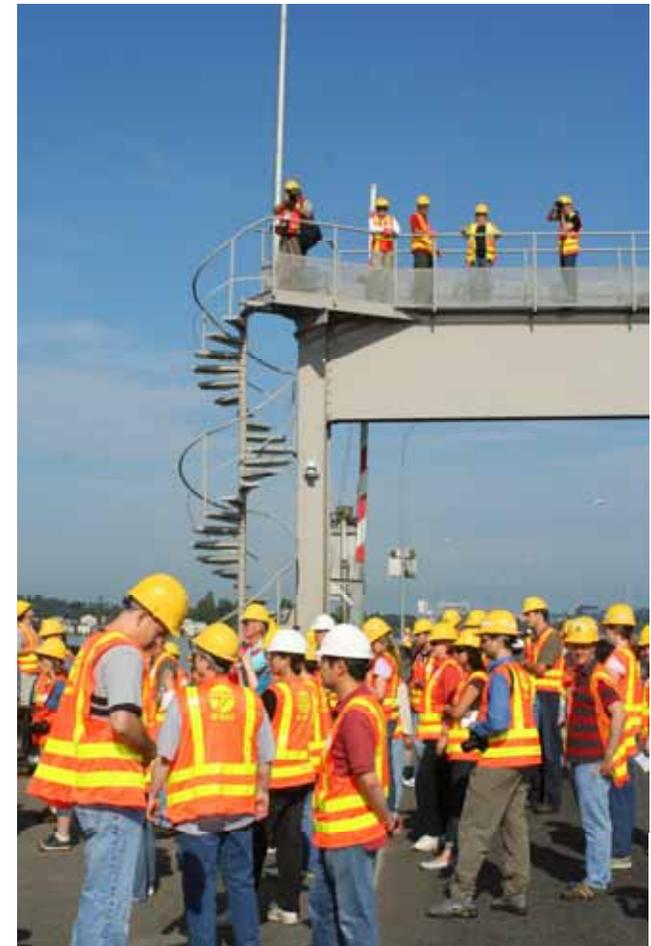
## Process: SAC Concurrence Points

Concurrence Point	Concurrence Reached
#1. Purpose and Need	2001
#2. Alternatives to Evaluate in EIS	Concurrence reached in 2002 and again in 2004 based on current EIS alternatives. Revisited Spring 2006 to include design options—concurrence reached by four agencies (two waived concurrence)
#3. Preferred Alternative	To be determined

## Notice of Intent / Public Scoping

### Process:

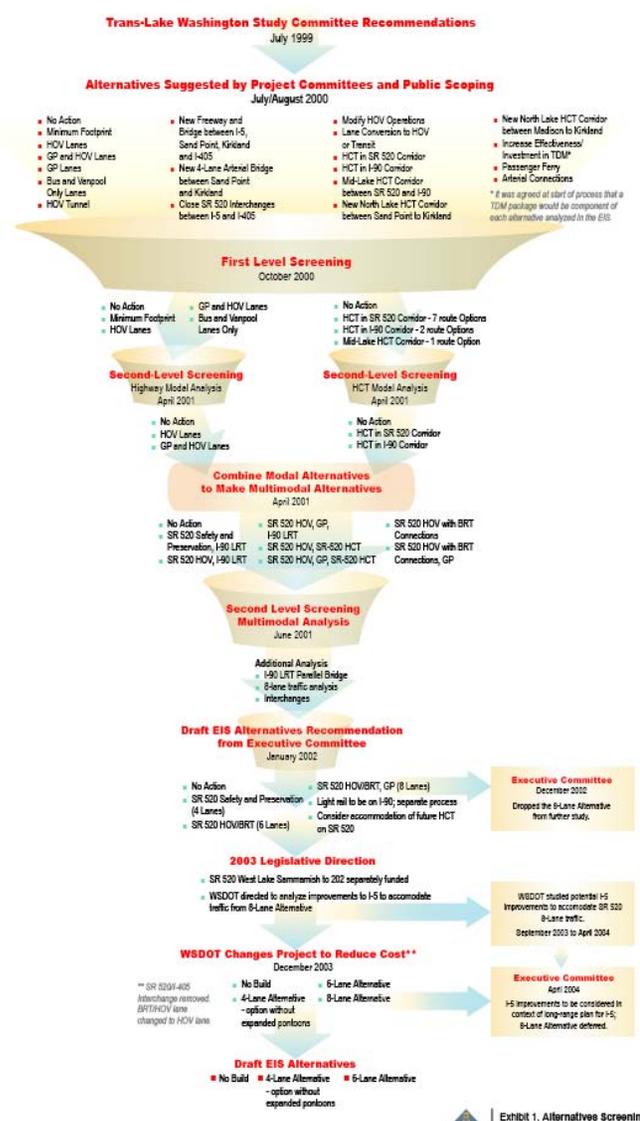
- Notice of intent published in July 2000
- Public scoping meetings held in July 2000
- Scoping Summary Report issued in October 2000
- Input from scoping informed the development and screening of alternatives



## Alternatives Screening Process

- September 2000: First-level screening criteria adopted by Technical and Executive Committees
- October 2000: Second-level screening criteria adopted by Technical and Executive Committees
- Specific ratings in three categories based on purpose and need statement
  - How effectively will the alternative improve mobility for people and goods?
  - Can we reasonably avoid, minimize, or mitigate environmental impacts?
  - How much will it cost?

## Alternatives Screening Process



[See binder for handout.]

Exhibit 1. Alternatives Screening Process  
SR 520 Bridge Replacement and HOV Project

## Screen and Develop Alternatives

### Process:

- Multi-modal alternatives analysis completed
- Concluded that high capacity transit will cross Lake Washington on I-90 first



## Screen and Develop Alternatives

- In 2002, project funding was reduced
- Scope redefined
- 2003 Nickel package reinstates some funding
- Project scope reduced to I-5 to I-405
- Alternatives further developed for consideration in Draft EIS



## Screen and Develop Alternatives

- **No-build alternative**
  - Continued Operation Scenario
  - Catastrophic Failure Scenario
- **4-Lane alternative**
  - Option to build pontoons without capacity to carry future HCT
- **6-Lane alternative**
  - Three options in Seattle
- **8-Lane alternative**



## Screen and Develop Alternatives

All EIS alternatives include:

- Bicycle and pedestrian path\*
- Sound walls\*
- Stormwater treatment
- Drawspan replaced with Eastside navigation channel
- Bridge maintenance facility
- Electronic toll collection
- Flexible Transportation Plan
- Community-focused urban design\*
- HCT consideration



\* Reflects public input

## Screen and Develop Alternatives

### 6-lane Alternative Options:

#### Seattle

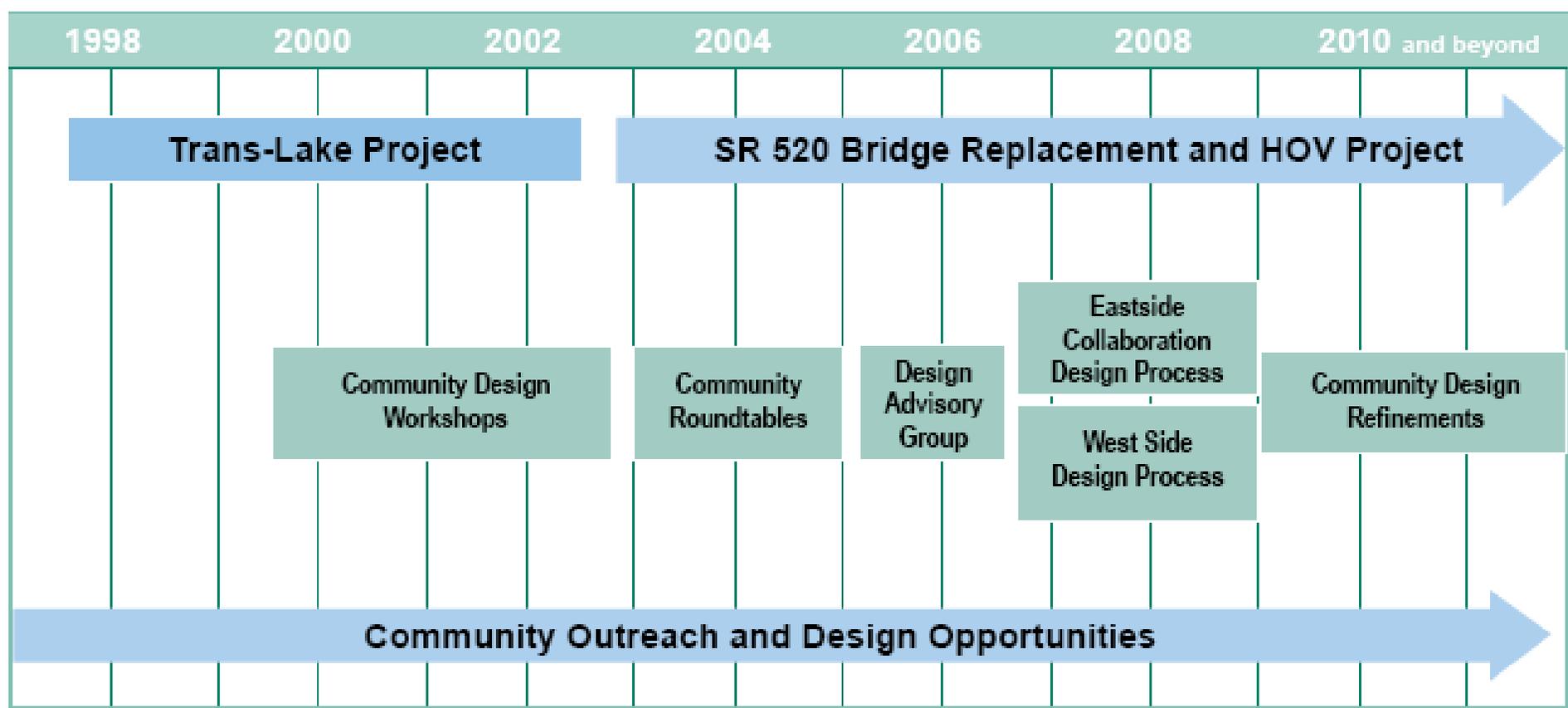
- Pacific Street interchange
- No Montlake freeway transit stop
- Second Montlake Bridge

#### Eastside

- Bicycle/pedestrian path to the north
- No Evergreen Point freeway transit stop
- South Kirkland Park & Ride transit access - Bellevue Way or 108<sup>th</sup> Avenue NE



## Screen and Develop Alternatives



## Discussion

**Comments or questions?**

## Develop Draft EIS

The EIS process evaluates a total of 17 disciplines:

- Transportation
- Geology and soils
- Air quality
- Hazardous materials
- Public services & utilities
- Energy
- Visual Quality and Aesthetics
- Indirect & Cumulative Effects
- Noise
- Social
- Parks and Recreation
- Land Use, Economics and Relocation
- Environmental Justice
- Cultural and Historic Resources
- Ecosystems
- Water Resources
- Navigation

## Develop Draft EIS

The EIS process evaluates a total of 17 disciplines:

- **Transportation**
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- Visual Quality and Aesthetics
- Indirect & Cumulative Effects
- **Noise**
- Social
- **Parks and Recreation**
- Land Use, Economics and Relocation
- Environmental Justice
- **Cultural and Historic Resources**
- **Ecosystems (Endangered Species)**
- **Water Resources (Wetlands)**
- Navigation

## Develop Draft EIS

- Federal Regulations
  - National Environmental Policy Act (NEPA)
  - Clean Water Act (wetlands/water quality)
  - Clean Air Act
  - Section 4(f) (parks and wildlife refuges)
  - Section 6(f) (some parks)
  - Section 106 (historic and cultural resources)
  - Rivers and Harbors Act (navigable waters)
  - Endangered Species Act

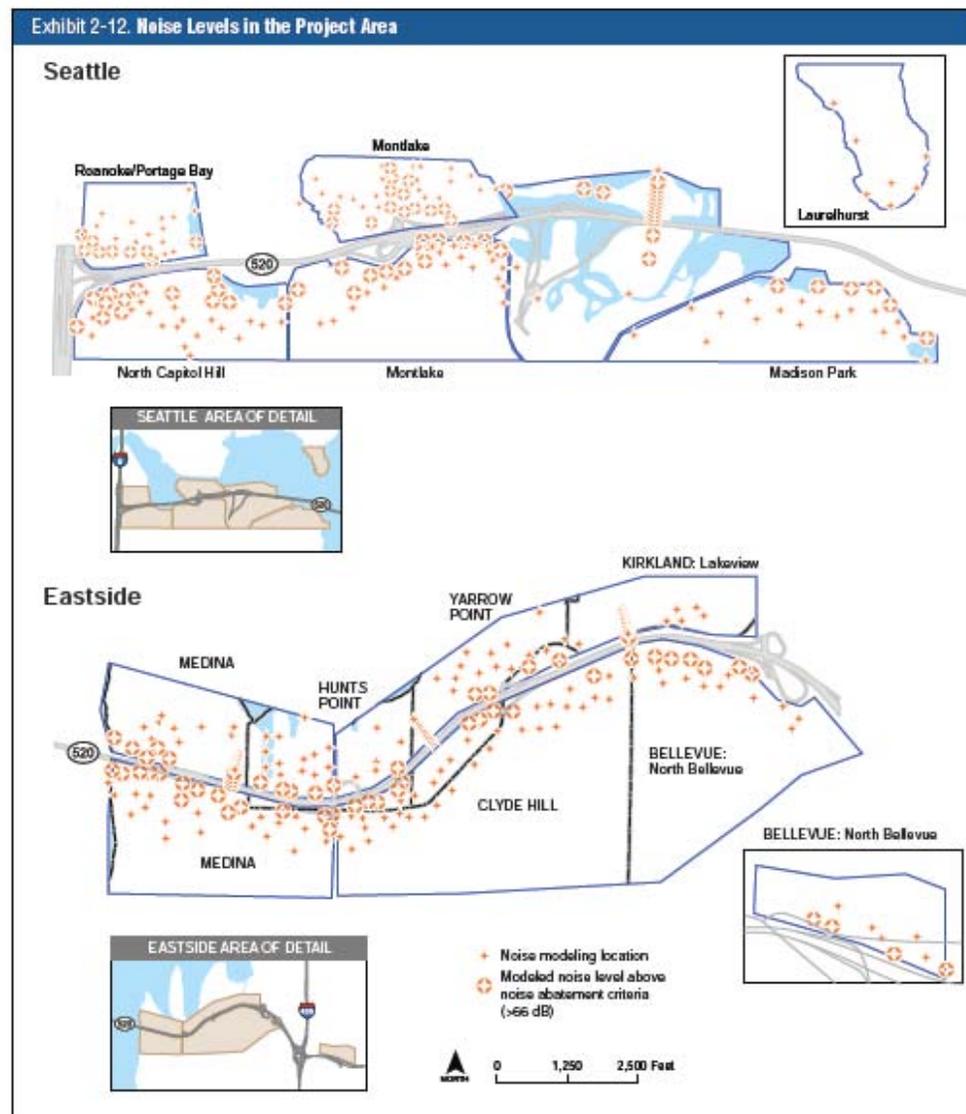
## Develop Draft EIS

- State Regulations
  - State Environmental Policy Act (SEPA)
  - Hydraulic Code (streams and aquatic habitat)
  - Water Pollution Control Act (stormwater and wetlands)
- Local Regulations
  - Shoreline Management Act regulations
  - Critical Areas ordinances

# Draft EIS – Evaluate Environmental Effects

## Noise

- Primary standard governing highway noise: FHWA Noise Abatement Criteria
- Standard: Homes and schools are impacted if levels exceed 66 dB (vacuum cleaner 10' away)
- Today's conditions: 274 Seattle homes along SR 520 corridor exceed the criteria



# Draft EIS – Evaluate Environmental Effects

## How We Evaluated Noise Impacts

- Existing noise levels were measured at residences along the corridor
- FHWA approved noise model was run with existing traffic volumes to calibrate model with actual conditions
- Model was used to predict future noise levels based on 2030 traffic volumes

## Draft EIS – Evaluate Environmental Effects

### How can we respond to noise effects?

- Tools include:
  - Design changes
  - Sound walls
  - Quieter pavement
- WSDOT policy frames reasonable and feasible responses
- Noise barrier considered feasible if 7 dB reduction can be achieved for most ground-floor residences

# Draft EIS – Evaluate Environmental Effects

## Results of Noise Analysis

- Design elements that reduce sound
  - Shifting alignment away from residences
  - Lowering sections of roadway
  - Lids (incidental effect)
- Sound walls included in the project reduce noise below FHWA criteria at well over 50% of residences that now exceed the criteria.

# Draft EIS – Evaluate Environmental Effects

<b>Noise Modeling Results, Seattle Project Area</b>				
	<b>Number of Residences Approaching or Exceeding the FHWA Noise Abatement Criteria</b>			
<b>Neighborhood</b>	<b>Existing</b>	<b>6-Lane Alternative (2030)</b>	<b>Pacific Street Interchange Option (2030)</b>	<b>Second Montlake Bridge Option (2030)</b>
Roanoke/Portage Bay	24	16	16	16
North Capitol Hill	99	49	49	49
Montlake	62	44	38	47
Madison Park	89	0	0	0
Laurelhurst	0	0	0	0
<b>Total</b>	<b>274</b>	<b>109</b>	<b>103</b>	<b>112</b>



# Draft EIS – Evaluate Environmental Effects

## Regulations Governing Wetlands Impacts

- Clean Water Act Section 404, State Water Pollution Control Act, local shoreline/critical areas regs
- Standards – WSDOT must:
  - Avoid, minimize, and/or mitigate impacts to wetlands and their buffers
  - Mitigate impacts through creation, restoration, and/or enhancement of wetlands

# Draft EIS – Evaluate Environmental Effects

## How We Evaluated Wetland Impacts

- Identified wetlands using methods required by regulatory agencies (vegetation, soils, hydrology)
- Identified ways to minimize wetland effects:
  - Use retaining walls instead of standard fill slopes where possible
  - Remove “ramps to nowhere” in Arboretum wetlands
  - Shift Portage Bay alignment to reduce impacts
  - Treat roadway runoff to improve water quality
- Based on alternative footprints, calculated impacts for:
  - Roadway fill in wetlands and buffers
  - Shading created by aerial structures

# Draft EIS – Evaluate Environmental Effects

Wetland and Buffer Effects in Seattle Project Area				
Alternative/Option	Fill		Shading <sup>a</sup>	
	Wetland	Buffer	Wetland	Buffer
6-Lane Alternative	0.2	3.8	6.7	2.2
Pacific Street Interchange Option <sup>b</sup>	0.2	5.3	7.8	1.3

<sup>a</sup> Number represents the maximum area shaded; actual shading may be substantially less

<sup>b</sup> Other Seattle options would not differ from the 6-Lane Alternative

## Draft EIS – Evaluate Environmental Effects

### How can we respond to wetlands effects?

- WSDOT's goal: No net loss of wetland acreage and function
- Mitigation follows regulatory standards and is developed through consultation with resource agencies
- Tools include:
  - Create new wetlands to mitigate for loss (for example, on “WSDOT peninsula”)
  - Restore/enhance existing wetlands within footprint of existing roadway

# Draft EIS – Evaluate Environmental Effects

## Next Steps for Evaluating Wetlands

- Studies underway to refine wetland analysis and identify potential mitigation sites
- WSDOT's Regulatory Agency Coordination process (RACp) will seek input from agencies on ways to minimize and/or mitigate impacts
- Permits issued by agencies will include detailed conditions to protect wetlands

# Draft EIS – Evaluate Environmental Effects

## Endangered Species Act (ESA) Compliance

- ESA protects federally listed threatened and endangered species and their critical habitat
- Project sponsors must prepare Biological Assessment and consult with USFWS and/or NMFS to determine if listed species will be harmed as a result of the project
- ESA listed species in the SR 520 project area
  - Puget Sound chinook salmon
  - Puget Sound steelhead
  - Bull trout



# Draft EIS – Evaluate Environmental Effects

## How WSDOT is Complying with ESA

- Design elements reduce effects on listed species
  - Higher bridges to reduce intensity of shading
  - Fewer columns spaced farther apart
  - Fish passage improvements to Eastside streams
  - Runoff treatment to improve water quality
- Working with USFWS to document how SR 520 affects behavior of juvenile salmon and their predators

## Draft EIS – Evaluate Environmental Effects

### How WSDOT is Complying with ESA

- Coordinating with NMFS and USFWS to develop work plan and methods for Biological Assessment
- Biological Assessment will be prepared to address preferred alternative:
  - Document occurrence of listed species and baseline conditions
  - Identify project effects on listed species
  - Assess likelihood of adverse effects
- NMFS and USFWS will issue a Biological Opinion

## Draft EIS – Evaluate Environmental Effects

### How can we respond to effects on listed species?

- Restore shoreline habitat on Lake Washington and streams to support rearing and migrating juvenile salmon
- Continue working with agencies to ensure bridge design is as “fish-friendly” as possible
- Identify design features that discourage predator species from establishing in vicinity of bridge

# Draft EIS – Evaluate Environmental Effects

## Tribal Fishing Rights and ESA

- Treaty of Point Elliott (1855) affirmed tribes' "right of taking fish at usual and accustomed grounds and stations."
- SR 520 is within "usual and accustomed fishing area" of the Muckleshoot Tribe
- WSDOT and FHWA are working with the Tribe on a government-to-government basis to identify and address effects

# Draft EIS – Evaluate Environmental Effects

## Historic and Cultural Resource Evaluation

- Primary regulation protecting cultural resources: Section 106 of National Historic Protection Act
- Requirements:
  - Determine likelihood of adverse effects on properties eligible for National Register of Historic Places (NHRP)
  - Consult with Department of Archaeological and Historic Preservation (DAHP) and affected Native American Tribes on potential effects and how to avoid, minimize, or mitigate
- Standard for adverse effect: Alteration of characteristics that qualify a property as eligible for NRHP

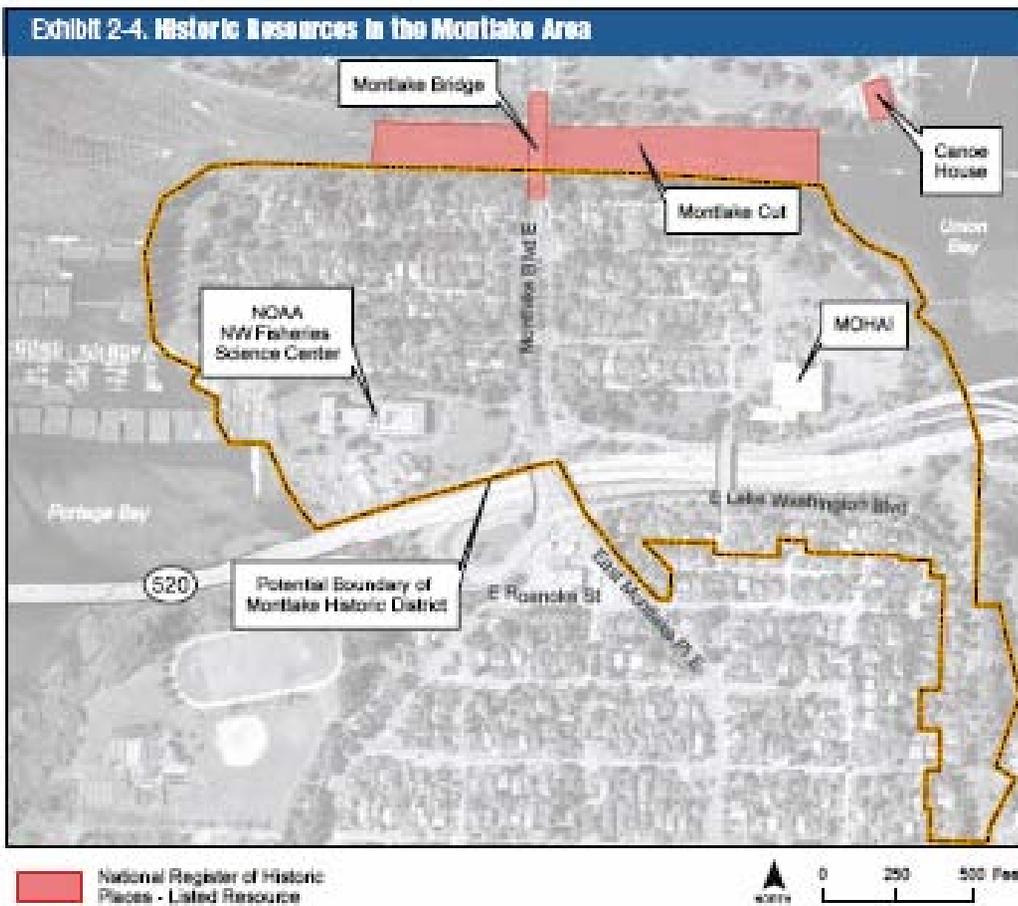
# Draft EIS – Evaluate Environmental Effects

## How We Evaluated Historic and Cultural Resources

- Established an Area of Potential Effect in consultation with DAHP
- Identified all structures over 40 years old (NRHP criterion is 50 years)
- Prepared formal evaluations of potentially eligible structures according to NHPA standards
- Conducted subsurface investigations of archaeological high probability areas
- Coordinated with Tribes on potential cultural resource areas
- Preliminary assessment of adverse effect

# Draft EIS – Evaluate Environmental Effects

## Historic Resources in Seattle



# Draft EIS – Evaluate Environmental Effects

## Results of Historic Resource Evaluation

- No archaeological sites identified
- Project would have both positive and negative effects on historic resources:
  - Sound walls would decrease noise
  - Lids would re-connect historic districts
  - Widened roadway and/or new facilities would change historic setting of some buildings and districts (examples)
  - NRHP-eligible Evergreen Point Bridge would be demolished

## Draft EIS – Evaluate Environmental Effects

### How can we respond to historic and cultural resource effects?

- Buffer historic districts/properties through landscaping and sound walls
- Prepare inadvertent discover plan to address potential for cultural resource findings during construction
- Monitor construction in high-probability areas using both WSDOT archaeologists and tribal monitors
- Where impacts are unavoidable (e.g., SR 520 Bridge demolition), document resources prior to construction

# Draft EIS – Evaluate Environmental Effects

## Historic and Cultural Resources: Next Steps

- Consult with DAHP and Tribes on determination of adverse effects
- Prior to Record of Decision, enter into an Memorandum of understanding agreeing to mitigation for adverse effects



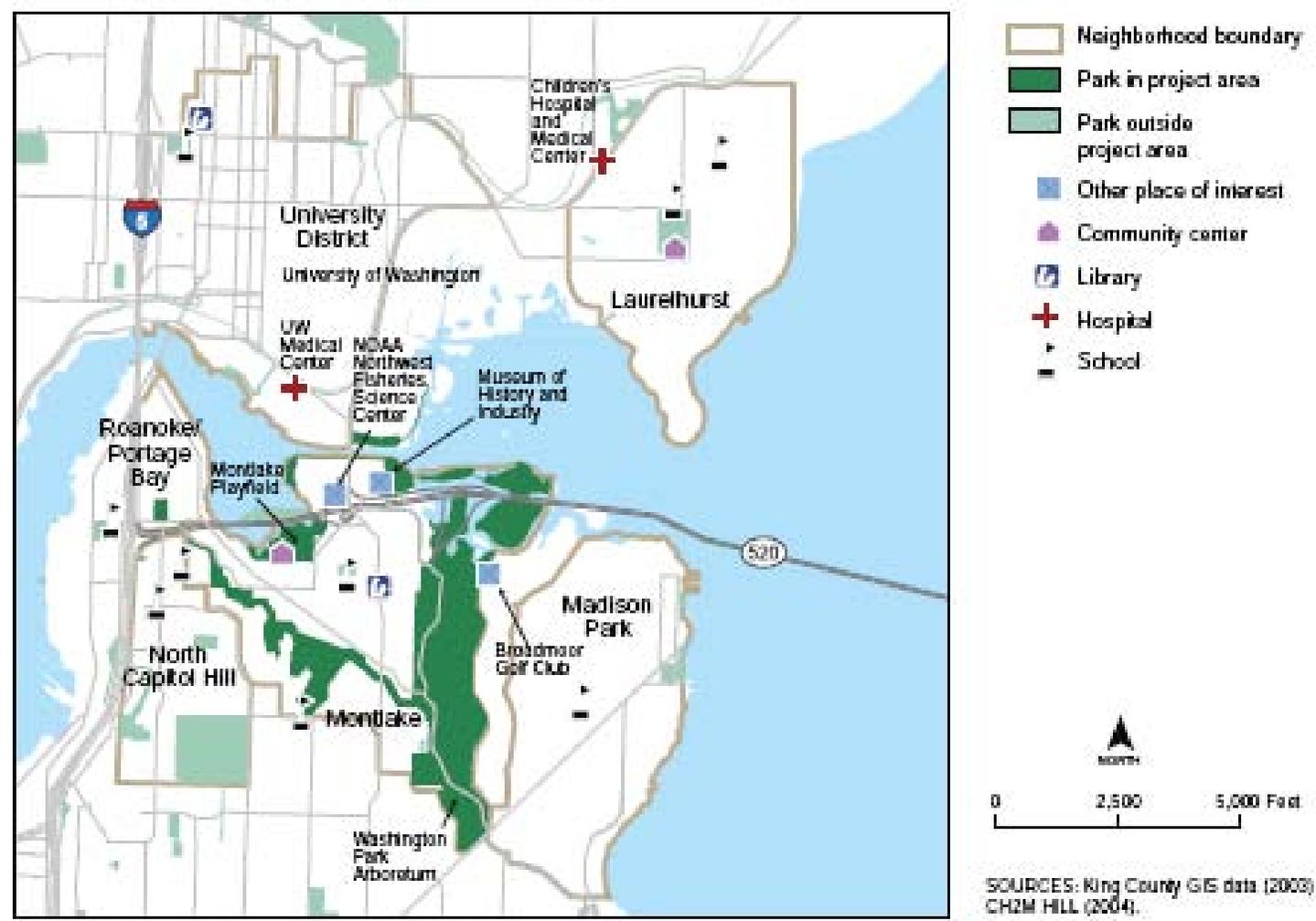
# Draft EIS – Evaluate Environmental Effects

## Parks and Recreation Evaluation

- Key regulation affecting parks: Section 4(f) of the Department of Transportation Act
- Standard:
  - Transportation projects may not use land from a park or wildlife refuge if there is a feasible and prudent alternative that meets the project purpose and need
  - Where no such “avoidance alternative” exists, measures must be taken to minimize harm to the park or refuge

# Draft EIS – Evaluate Environmental Effects

Exhibit 2-8. Neighborhoods and Community Facilities in the Seattle Project Area



SOURCES: King County GIS data (2003), CH2M HILL (2004).

# Draft EIS – Evaluate Environmental Effects

## How we Evaluated Parks and Recreation Effects

- Identified potential avoidance alternatives
- Identified design measures to minimize effects
  - Locate new facilities in WSDOT right-of-way to maximum extent possible
  - Reduce noise effects by using sound walls
  - Keep height of structures in Arboretum as close as possible to existing tree line
- Calculated acreage through GIS overlay of right-of-way limits on park lands

# Draft EIS – Evaluate Environmental Effects

## Results of Parks and Recreation Evaluation

- All build alternatives would require acquisition of park lands
- There are no 4(f) avoidance alternatives that meet the project purpose and need
- Larger structures would be more visible from a distance; ground- and water-level views would be more open
- Noise levels at Seattle parks would be substantially reduced



# Draft EIS – Evaluate Environmental Effects

## Parks and Recreational Area Land Permanently Acquired by Build Alternatives

Alternative/Option	Park Land Permanently Acquired (Acres)		
	Seattle	Eastside	Total Land
6-Lane Alternative	3.67	-	3.67
Pacific Street Interchange Option	3.86	-	3.86
Second Montlake Bridge Option	2.94	-	2.94

## Draft EIS – Evaluate Environmental Effects

### How can we respond to parks and recreation effects?

- Mitigation is developed through consultation with agencies with jurisdiction
  - Seattle Parks and Recreation
  - University of Washington Botanic Gardens
- Tools include:
  - Replacement of park lands
  - Creation of contiguous recreational areas through use of lids
  - Enhancement of existing parks
  - Implementing recommendations from SR 520 Parks Workshop

# Draft EIS – Evaluate Environmental Effects

## Next Steps for Parks and Recreation Evaluation

- Work through mediation process to determine ways to minimize and mitigate park impacts
- Coordinate with agencies to identify replacement properties for park lands under their jurisdiction

## Discussion

**Comments or questions?**

# Draft EIS – Evaluate Environmental Effects

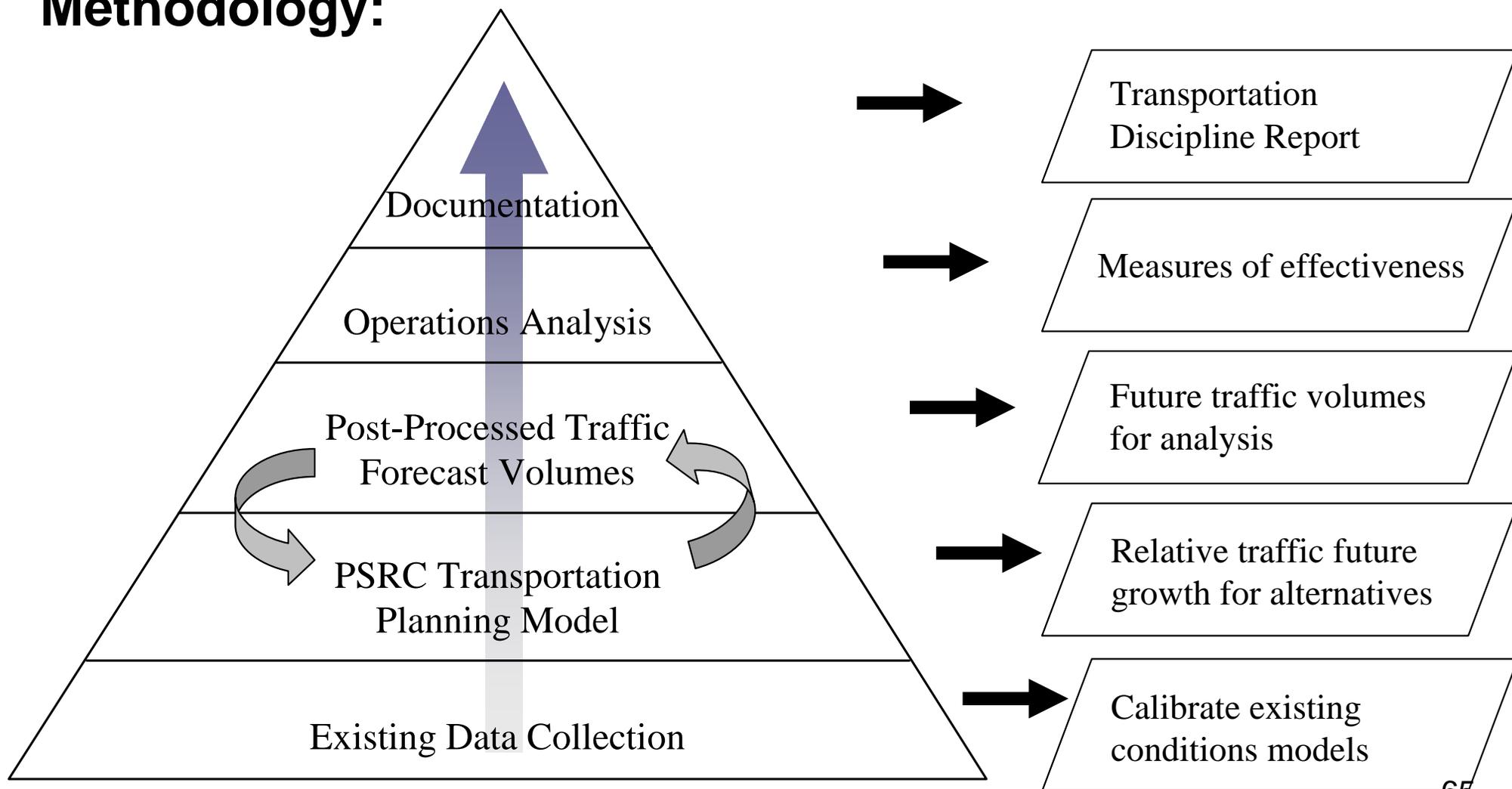
## Transportation Modeling:

- Planning process
- Travel demand model
- Post processing
- Operational analysis
- Results



# Draft EIS – Evaluate Environmental Effects

## Methodology:



## Draft EIS – Evaluate Environmental Effects

### Travel Demand Model Data Input:

- Forecast Year: 2030
- Local, State, County Land Use – Population and Employment
  - Local Comprehensive Plans
  - Puget Sound Regional Council
- Future transportation network includes planned and programmed projects
  - Nickel Projects (WSDOT)
  - Local TIP/CIP projects
  - Regional projects
    - Central LINK SeaTac Airport to Northgate
    - Monorail Green Line
- Tolling assumed for “build alternatives”

# Draft EIS – Evaluate Environmental Effects

## *How does the travel demand model work?*

### **Data Input:**

Land Use – Population  
and Employment

Background Roadway  
Information

Local, State, Regional  
- TIP/CIP

Transit

1. Trip Generation – Estimate # of person trips to/from each zone



2. Trip Distribution – Estimate # of interzonal person trips



3. Mode Choice – Estimates the mode of travel for the person trips



4. Trip Assignment – Assigns traffic to specific routes and assesses planning-level performance



## Draft EIS – Evaluate Environmental Effects

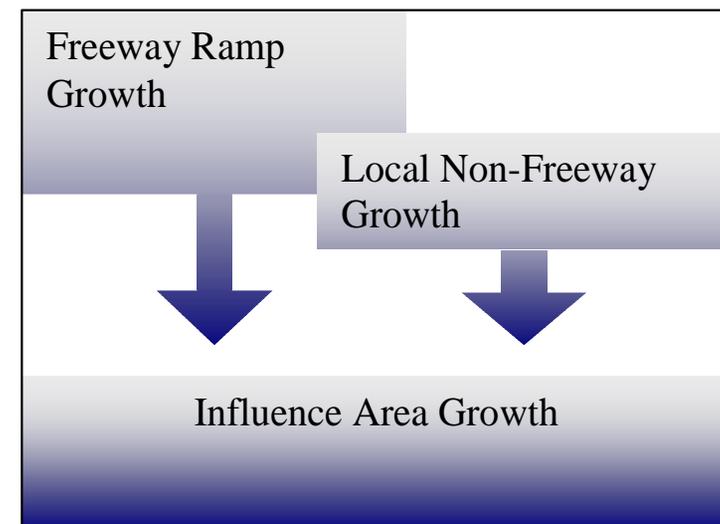
### Travel Demand Model Output:

- Person trips by mode
  - General purpose
  - HOV
  - Transit
- Vehicle trips by mode
- Growth factors by roadway section (existing to future)

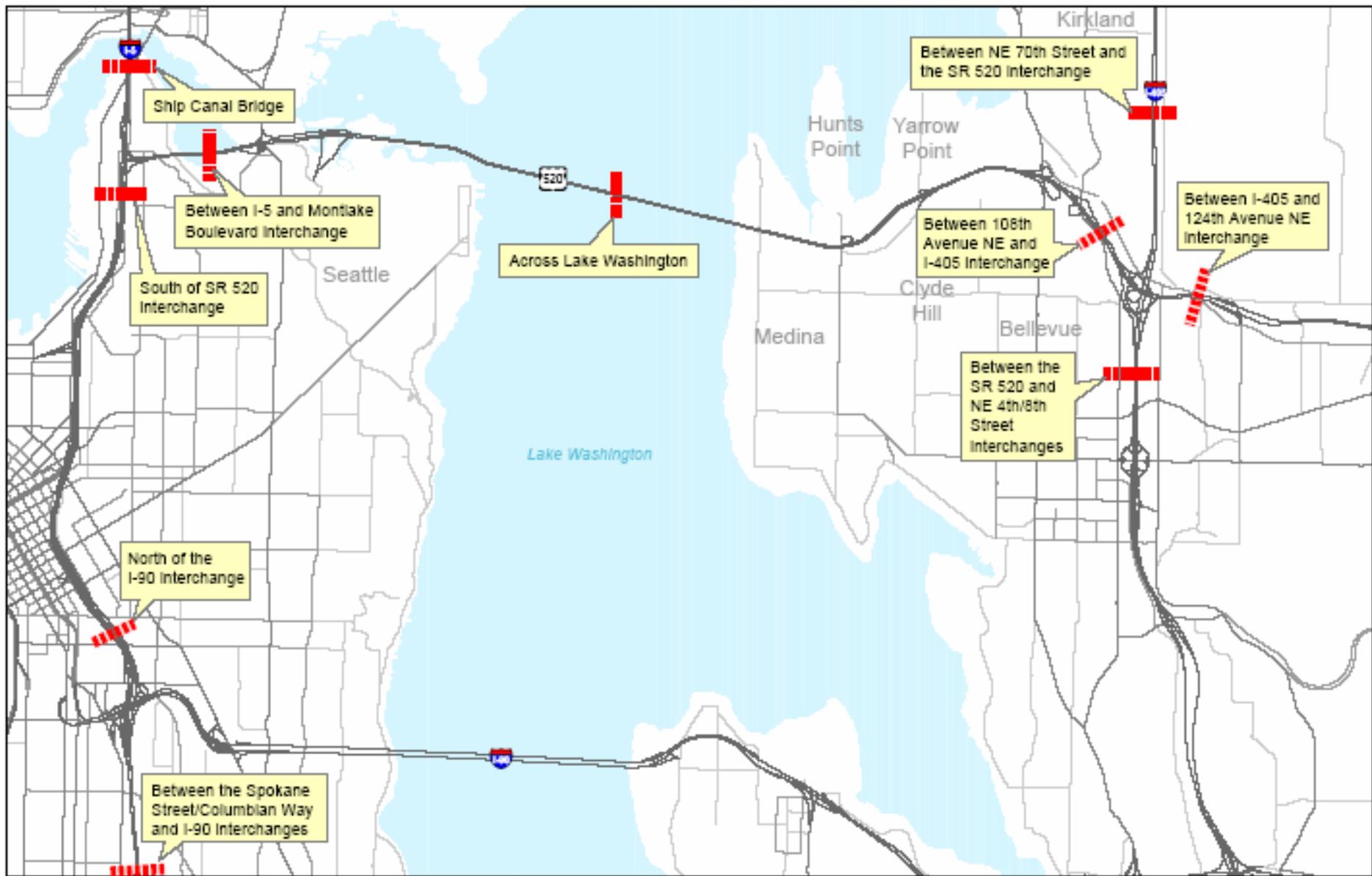
## Draft EIS – Evaluate Environmental Effects

### Traffic Volume Forecasts:

- Develop screenline growth factors at primary control points on the freeway
- Develop local area growth factors for secondary control points
- Apply growth factors to on- and off-ramps to target control points
- Distribute local traffic using existing turning movement ratios



# Draft EIS – Evaluate Environmental Effects



## Draft EIS – Evaluate Environmental Effects

### Operations Model Input Data:

- Roadway geometrics confirmed with design team
- Peak period (5 hrs) freeway data at 15 minute intervals (AM and PM)
- Existing speeds confirmed through State flow data
- Existing congestion confirmed through State congestion data
- Existing and future transit data from transit agencies

## Draft EIS – Evaluate Environmental Effects

### Operations Model Input Data – Local:

- Roadway geometrics confirmed with design team
- Peak hour turning movement data (counts and jurisdictional data)
- Existing signal timing from operating agency
- Existing and future transit data from transit agencies

## Draft EIS – Evaluate Environmental Effects

### Operational Models:

- TSIS version 5.1 used for freeway analysis
- Micro-simulation model
  - Step 1 – Calibrate model to existing conditions (volume throughput, speed)
  - Step 2 – Code roadway Alternative network modifications
  - Step 3 – Run simulation and coordinate between regional freeways
  - Step 4 – Summarize simulation results
- Synchro Version 6.0 used for local analysis

## Discussion

**Comments or questions?**

## Develop Draft EIS

### Public Involvement:

- Public meetings
- Community group briefings
- Committees
- Community design workshops
- Web site



# SR 520 Bridge Replacement and HOV Project

## What We Heard – Design

- |  |  |   |   |  |
|--|--|---|---|--|
| <p><b>1 Portage Bay</b><br/>Narrow the mainline footprint. Consider other construction options that do not require temporary work bridges.</p> | <p><b>2 Arboretum and Union Bay Bridge</b><br/>Evaluate the height and visual impacts of all the interchange options. Reduce the height of the Union Bay Bridge.</p> | <p><b>3 Montlake and Pacific Street Interchange</b><br/>Narrow the footprint of the interchange designs. Consider local street usage and traffic effects.</p> | <p><b>4 Cultural Resources</b><br/>Protect cultural resources and places on the Historic Register</p> | <p><b>5 Medina</b><br/>Design maintenance facility to fit into hillside.</p> |
|--|--|---|---|--|



### Corridor-wide Comments

- |  |   |  |  |
|--|---|--|--|
| <p><b>Lids</b><br/>Design lids to be as long as possible. Provide good community connections across highway. Develop aesthetically pleasing public spaces on lids.</p> | <p><b>Properties</b><br/>Minimize impacts on surrounding properties.</p> <p><b>Alternate designs</b><br/>Consider other options (tube/tunnel) that might be able to minimize effects on the Arboretum</p> | <p><b>Interchanges</b><br/>Minimize footprints of interchanges while optimizing performance<br/>Keep queue lines on the ramps<br/>Keep queue lines on the ramps instead of on local streets.</p> | <p><b>Urban Design</b><br/>Make SR 520 an attractive corridor. Pay attention to details in the walls, lids, bridges, and other elements.</p> |
|--|---|--|--|

# What We Heard – Environmental

- |  |   |   |  |
|--|---|---|--|
| <p><b>1 Arboretum</b><br/>Minimize effects on wetlands, including shading. Minimize effects to Marsh and Foster Islands.</p> | <p><b>2 Parks</b><br/>Minimize effects on Arboretum, Fairweather and Wetherill parks. Consider column placement and minimize number of columns. Maintain access to parks and other public spaces during construction.</p> | <p><b>3 Stormwater run-off</b><br/>Treat stormwater before it enters the lake. Make stormwater treatment ponds be community assets.</p> | <p><b>4 View corridors</b><br/>Protect the Rainier Vista. Consider views from surrounding neighborhoods on both sides of the lake.</p> |
|--|---|---|--|



## Corridor-wide Comments

- |  |   |  |   |
|--|---|--|---|
| <p><b>Noise</b><br/>Reduce noise to the extent possible. Consider quieter pavement as an option. Consider clear noise walls.</p> | <p><b>Construction</b><br/>Minimize noise, vibration, light, and emissions. Narrow the footprint.</p> | <p><b>Air quality</b><br/>Minimize emissions. Provide incentives for transit riders. Find ways to lessen global warming.</p> | <p><b>Mitigation</b><br/>Need more information on mitigation proposals and funding.</p> |
|--|---|--|---|

## What We Heard – Traffic, Transit, and Mobility

- |  |  |  |  |
|--|--|--|--|
| <p><b>1 Transit</b><br/>Make the SR 520 corridor convenient for buses. Provide options for light rail and ensure smooth connections to Sound Transit's light rail station.</p> | <p><b>2 Construction</b><br/>Keep westbound HOV lane on Eastside open during construction.</p> | <p><b>3 I-5 and I-405</b><br/>Improve connections to both corridors.</p> | <p><b>4 Arboretum</b><br/>Concern about increased traffic through the Arboretum.</p> |
|--|--|--|--|



### Corridor-wide Comments

- |  |   |   |  |  |
|--|---|---|--|--|
| <p><b>Bicycle/Pedestrian Access</b><br/>Provide good connections to existing bike trails on both sides of the lake. Consider a bike-only ramp off SR 520 to Madison Park. Evaluate options to connect to regional path system.</p> | <p><b>HOV</b><br/>Make corridor reliable for transit. Include "inside" HOV lanes. Keep transit stops on the corridor. Provide areas for transfers from local to regional buses.</p> | <p><b>Transit stops</b><br/>Improve transit stop waiting environment.<br/><b>Commute</b><br/>Make the corridor more reliable.</p> | <p><b>Access</b><br/>Maintain access for emergency and utility vehicles during construction.</p> | <p><b>Corridor configuration</b><br/>The 4-, 6-, and 8-lane alternatives each received varying levels of support and opposition.</p> |
|--|---|---|--|--|

## Develop Draft EIS

### Results:

- 4+2 alternative endorsed by Governor and Legislature
- Do not carry forward eight-lane alternative or tubes, tunnels, or partial tunnels
- Do more work on:
  - Westside interchange
  - Construction impacts
  - Pontoon construction
  - Mitigation



## Discussion

**Comments or questions?**

## NEPA EIS Process – Next Steps

### Objectives:

- Complete SDEIS
- Complete Final EIS
- Secure Record of Decision



## NEPA EIS Process – Next Steps

### Objectives:

Secure environmental approval of pontoon construction for bridge replacement or recovery in the event of a catastrophic failure

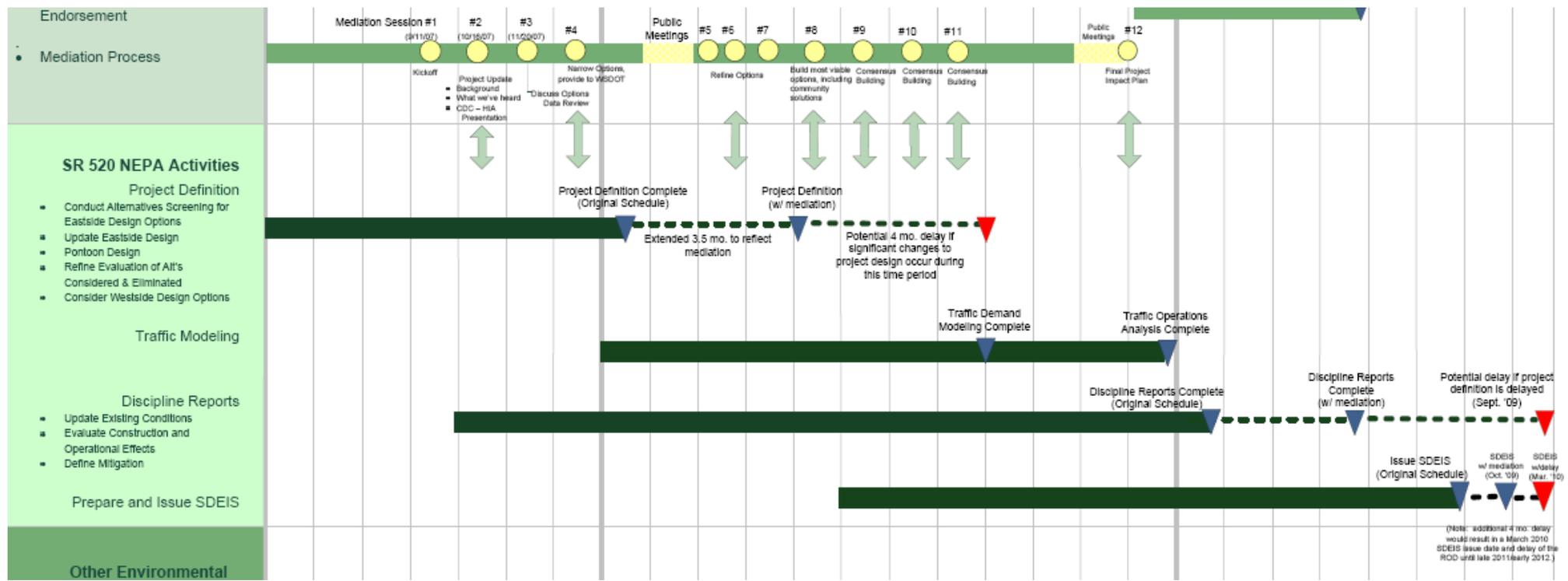


SR 520 Floating Bridge – Open



SR 520 Floating Bridge – February 2006 winter windstorm

## NEPA EIS Process – Next Steps



## NEPA EIS Process – Next Steps

### Immediate Data Needs:

- Eastside and westside design
- Mitigation
- Enhancements
- Tolling



## Design/Permits

### Objectives:

- Complete final design
- Agree on contracting approach
- Prepare construction plans
- Apply for and secure permits



# Construction & Monitoring

Objectives:

Initiate and complete  
construction



# Maintenance and Operations

## Objectives:

- Conduct regular inspections of the bridge
- Maintain and operate the bridge

