Rainier Valley Transportation Improvements Open House

Project Managers:
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July 30, 2015
Our mission, vision, and core values

**Mission:** deliver a high-quality transportation system for Seattle

**Vision:** connected people, places, and products

Committed to **5 core values** to create a city that is:

- Safe
- Interconnected
- Affordable
- Vibrant
- Innovative
Presentation overview

• Vision Zero
• Rainier Valley North-South Neighborhood Greenway
• Accessible Mt. Baker
• Rainier Ave S Road Safety Corridor
• Q&A
• Open house
• Adjourn
Vision Zero

Zero traffic fatalities or serious injuries by 2030

www.seattle.gov/visionzero
Why speed matters

Drivers’ field of vision
15 mph

Drivers’ field of vision
30 mph
Why speed matters

HIT BY A VEHICLE TRAVELING AT:

20 MPH
9 out of 10 pedestrians survive

HIT BY A VEHICLE TRAVELING AT:

30 MPH
5 out of 10 pedestrians survive

HIT BY A VEHICLE TRAVELING AT:

40 MPH
Only 1 out of 10 pedestrians survives

Speed is especially critical for vulnerable travelers like people walking and biking.
Citywide trends

- Seattle’s population is growing rapidly
- Traffic volume dropping
- More people are walking, biking and using transit

[Link to report: seattle.gov/transportation/reports.htm]
Rainier Valley North-South Neighborhood Greenway
What is a neighborhood greenway?

A safer, calm residential street for you and your family
Greenway design elements

Slow Speeds and Stop Signs
- Calm traffic entering and crossing the greenway
- Drivers better able to stop and prevent collisions

Speed Humps
- Slow motorists and people riding bikes
- Reduce cut-through traffic

Placemaking
- Promote the activation of public space

Safer Crossings at Busy Streets
- Easier for seniors and children to cross
- Make motorists aware of people walking and biking

Signs and Markings
- Direct people walking and biking to and along the greenway
- Help motorists know people walking and biking are present

Smooth Sidewalks and Pavement
- Safer for you and your family to walk and ride bikes
- Help people in wheelchairs or with strollers
Potential alternatives

Group 1
I-90 to S Mt Baker Blvd

Group 2
S Mt Baker Blvd to S Holly St

Group 3
S Holly St to S Henderson St
Most promising route
# Next steps

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2015</td>
<td>Open house #2</td>
</tr>
<tr>
<td>2016</td>
<td>Implementation</td>
</tr>
<tr>
<td>2017</td>
<td>Evaluation</td>
</tr>
</tbody>
</table>
Accessible Mt. Baker
Project Purpose

• Identify and implement safety improvements
• Develop a long term, integrated plan to improve access at the Mt. Baker station area
Guiding Principles

• Improve access to neighborhood destinations consistent with the neighborhood plan

• Create a network of streets, paths, and open space

• Respect the existing character and assets

• Establish a neighborhood and regional destination
Guiding Principles (cont)

• Prioritize modes within the station area:
  1. Ped/Bike: Safety and comfort
  2. Transit: Reliable and frequent
  3. Freight: Access and reliability
  4. Auto: Calm and predictable

• Ensure diverse voices and traditionally underrepresented communities are heard and considered
Long-term sketch concept

Key Elements:

• Improve pedestrian crossing of MLK / Rainier
• Eliminate the intersection bottleneck
  – Allow space for sidewalk and bike facilities
  – Predictable through movements for all users
• Improve Bus / Rail connections
• Reconnect the Olmstead Greenbelt
• Integrate open space
• Support neighborhood plan and Town Center
Walk Example – *What it could look like...*

**KEY HIGHLIGHTS**

- Shorter crossing distances
- Direct and easy to navigate routes
- Less wait – fewer signal phases
- Ample space for safe movement and waiting
- Improved and protected sidewalks and cycle lanes
- All at-grade (no pedestrian bridge)
- Tree-lined streetscape
Concept Refinement

- Refining the bike and pedestrian connections
- Metro bus coordination
- Traffic analysis
- Coordination with property owners and Sound Transit
- Coordination with Rainier Ave S Pilot & N/S Greenway
Accessible Mt. Baker Open House

October 1, 2015 - 6 pm to 8 pm

Kings Hall
2929 27th Ave S.
Seattle, WA
(located west of the Mt. Baker light rail station)

• Review the draft implementation plan
• Comment and inform
• Hope to see you there!
Rainier Ave S Road Safety Corridor
Project area

Rainier Avenue S, between Letitia Avenue S and Seward Park Avenue S

Roadway characteristics

• Principal arterial
• 4 to 5 lane street
• 50-54 feet wide
• Served by multiple transit routes
• Emergency response route
Project review

Goals
• Make Rainier safer for everyone
• Reduce speeds
• Improve conditions for pedestrians
• Maintain efficient transit service
• Improve intersection safety
• Reduce injuries

Outreach
• Four public meetings
• Tours
• Community and business briefings
• Design alternatives released March 2015
Speed studies

Posted speed limit on Rainier is 30 miles per hour (mph)

<table>
<thead>
<tr>
<th>Location</th>
<th>85th percentile speed</th>
<th>Average number of high-end speeders (10+ mph over posted speed limit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Hudson Street</td>
<td>35 mph</td>
<td>611/weekday</td>
</tr>
<tr>
<td>42nd Avenue S</td>
<td>38 mph</td>
<td>1812/weekday</td>
</tr>
<tr>
<td>S Holly Street</td>
<td>37 mph</td>
<td>1083/weekday</td>
</tr>
<tr>
<td>S Cloverdale Street</td>
<td>36 mph</td>
<td>1083/weekday</td>
</tr>
</tbody>
</table>
Collision data

Average of 1 crash/day on Rainier

**Last 3 years**
- 1243 total collisions
- 630 injuries
- 2 fatalities

**Last 10 years**
- Nearly 3600 total collisions
- 1700+ injuries
- 11 fatalities
Collision data

Crashes per mile

- **Aurora**: ADT = 37,000 to 74,400
- **Lake City Way**: ADT = 34,600 to 40,400
- **Rainier (project area)**: ADT = 19,700 to 26,600
Collision data

Fatal and serious injury crashes within project area last 10 years

- Fatal collisions
- Serious injury collisions
Collision data

Rainier Incidents Responded to by Traffic Operations Center
Average Incident Duration / Month (6 AM to 10 PM only)

- Average time to clear incidents = 47 minutes
Data collection

- Updated volumes on Rainier and nearby arterials
- Turning movement counts collected at every intersection
  - During AM peak, off-peak, and PM peak hours
  - Includes counts of pedestrians, bicyclists, freight and transit
- Recorded corridor travel times
- Reviewed detailed transit data
Traffic modeling

- Modeled the “peak” period – the hour of the day where recorded traffic volumes were the highest.
Change is coming to Rainier Ave S
2015 implementation plan

- Rainier “Pilot” Rechannelization
  - Option 2 – hybrid design
  - S Alaska Street to S Kenny Street (0.9 miles)
  - One lane in each direction with center turn lane
  - 25 mph speed limit
  - Longer pedestrian crossing time at all signals
  - Leading Pedestrian Interval at Rainier and Ferdinand
  - New parking spaces and more space to park on Rainier

*TYPICAL CROSS SECTION (EXISTING)

*TYPICAL CROSS SECTION (PLANNED)

*Parking available at some locations
2015 implementation plan

- Bus and turn lanes between Edmunds and Alaska
- Southbound transit queue jump at Edmunds
- Southbound left turns to be restricted at Edmunds
- Left turns will be permitted at Angeline and PCC entrance
- Turn restrictions at Safeway

Rainier at S Edmunds Street
Travel times (PM peak)

Rainier Avenue S between Letitia and Seward Park Ave S

<table>
<thead>
<tr>
<th>Direction</th>
<th>Existing</th>
<th>Anticipated</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound</td>
<td>10 mins, 43 secs</td>
<td>11 mins, 6 secs</td>
<td>+33 seconds</td>
</tr>
<tr>
<td>Southbound</td>
<td>12 mins, 36 secs</td>
<td>15 mins, 1 sec</td>
<td>+2 mins, 25 secs</td>
</tr>
</tbody>
</table>

Pilot project limits

SB GP Travel Time on Rainier Ave S

Field Data  Existing VISSIM  Option 1A VISSIM
Transit travel times (PM Peak)

Rainier Avenue S between Letitia and Seward Park Ave S

<table>
<thead>
<tr>
<th>Direction</th>
<th>Existing</th>
<th>Anticipated</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound</td>
<td>22 mins, 9 secs</td>
<td>22 mins, 28 secs</td>
<td>+19 secs</td>
</tr>
<tr>
<td>Southbound</td>
<td>16 mins, 27 secs</td>
<td>17 mins, 27 secs</td>
<td>+1 min</td>
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SB Transit Travel Time on Rainier Ave S

Pilot project limits
Design details

- Efficiency of design and longer signal cycles substantially offset loss of travel lanes

<table>
<thead>
<tr>
<th>Location</th>
<th>AM Existing</th>
<th>AM Proposed</th>
<th>Off Existing</th>
<th>Off Proposed</th>
<th>PM Existing</th>
<th>PM Proposed</th>
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<tr>
<td>S Edmunds St</td>
<td>60</td>
<td>120</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>130</td>
</tr>
<tr>
<td>S Ferdinand St</td>
<td>60</td>
<td>120</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>130</td>
</tr>
<tr>
<td>S Hudson St</td>
<td>60</td>
<td>120</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>130</td>
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<td>39th Ave S</td>
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<td>60</td>
<td>60</td>
<td>60</td>
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<tr>
<td>Brandon St</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>S Orcas St</td>
<td>60</td>
<td>120</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>130</td>
</tr>
<tr>
<td>S Kenny St</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>65</td>
<td>65</td>
</tr>
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Signal cycle lengths
Evaluation

• Evaluation to begin upon project completion
• Fine tune traffic signal timings
• Monitor travel times for vehicles and transit
• Monitor traffic volumes on Rainier and nearby arterials
• Monitor collisions
• Economic analysis review
2015 - 2016

- Continue Vissim analysis of design alternatives
- Community design meetings
- Engineering changes from south to north
- Coordination with Greenway implementation and Accessible Mt. Baker project
- Pedestrian signal design changes at Rainier and Oregon
Enforcement

• Increased enforcement efforts
  – SeaStat-Vision Zero patrols
  – Grant funded pedestrian emphasis patrols
Benefits

- Reduction in crash frequency
- Lower speeds, fewer severe crashes
- Improves parking conditions
- Addresses correctable collision patterns
- Less exposure for pedestrians
- Potential low cost crossing improvements
- Easier turns to and from Rainier
- Transit efficiency treatments
- Minimal impact to traffic
Benefits

• Rechannelization is a FHWA-recognized proven measure to reduce speeds and collisions
• Local results confirm that rechannelization is an effective countermeasure

<table>
<thead>
<tr>
<th>Street</th>
<th>Collisions</th>
<th>85% speed</th>
<th>10+ mph speeders</th>
<th>Volume change</th>
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<tbody>
<tr>
<td>Nickerson St</td>
<td>-23%</td>
<td>-21%</td>
<td>-94%</td>
<td>-1%</td>
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<tr>
<td>Fauntleroy Way SW</td>
<td>-31%</td>
<td>-1%</td>
<td>-13%</td>
<td>+0.3%</td>
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<tr>
<td>NE 125th St</td>
<td>-10%</td>
<td>-8%</td>
<td>-69%</td>
<td>+4%</td>
</tr>
<tr>
<td>NE 75th St</td>
<td>-50%</td>
<td>-13%</td>
<td>-75% to 79%</td>
<td>+3%</td>
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### Next steps

<table>
<thead>
<tr>
<th>August 3 – 14</th>
<th>Phase 1 implementation</th>
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<tr>
<td></td>
<td>Evaluation begins upon completion</td>
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<tr>
<td>Winter 2016</td>
<td>Project information sessions</td>
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<tr>
<td>Summer 2016</td>
<td>Phase 2 implementation begins</td>
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Questions?

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www.seattle.gov/transportation