Building Healthy Communities Through Seattle's Growth Policy

Dongho Chang
City of Seattle

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Our vision, mission, and core values

**Vision:** Seattle is a thriving equitable community powered by dependable transportation

**Mission:** to deliver a transportation system that provides safe and affordable access to places and opportunities

Committed to **6 core values:**
- Equity
- Safety
- Mobility
- Sustainability
- Livability
- Excellence
Presentation Overview

- Background / Trends
- Growth Strategies/Policies
- Street Typologies
- Safety and Project Examples
**Seattle Background**

- **26% of Seattle land area** is in public street right-of-way

- **97.5% of Seattle’s population lives** within ¼ mile of a transit stop

- Ranks 6\textsuperscript{th} of the 50 largest cities for walkability

- **Typical arterial roadway width** is 60-66’
Seattle is growing

5th and Columbia – 48 story tower
528,000 SF Office Space
184 Room Hotel
~300 Parking Garage

Seattle No. 1 for growth this decade
Since 2010, Seattle’s population has increased by 18.7 percent, the fastest growth rate among the 50 largest U.S. cities.

Seattle

<table>
<thead>
<tr>
<th>Percent change since 2010</th>
<th>Population increase since 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.7%</td>
<td>114,412</td>
</tr>
</tbody>
</table>

Denver
16.8%
101,403

Charlotte
16.3%
120,535

Fort Worth
16.8%
125,599

Austin
17.9%
144,252

San Antonio
13.40%
178,533

Atlanta
15.0%
63,441

Denver
16.8%
101,403

Charlotte
16.3%
120,535

Fort Worth
16.8%
125,599

Austin
17.9%
144,252

San Antonio
13.40%
178,533

Atlanta
15.0%
63,441

Sources: U.S. Census
MARK NOWLIN / THE SEATTLE TIMES

City of Seattle
Seattle is growing

4th and Columbia – 100 story tower
1,020 units
750 Parking Garage
Seattle’s land use permits this morning: 17,107
Seattle Background

• Population 23%
• Collisions -21%, ADT -5%
Seattle Background

- Transit Ridership 46%
Seattle Ridership Comparison

Change in bus ridership in U.S. urbanized areas since 2004

- Baltimore, MD
- Boston, MA-NH-RI
- Chicago, IL-IN
- Los Angeles-Long Beach-Anaheim,...
- Miami, FL
- New York-Newark, NY-NJ-CT
- Philadelphia, PA-NJ-DE-MD
- San Francisco-Oakland, CA
- Seattle, WA
- Washington, DC-VA-MD

Created by Yonah Freemark @ The Transport Politic | Source: FTA
Setting the Policy Foundation

“Because Seattle is a fully built city with a mature street system, the City uses a full range of non-single occupant vehicle transportation facilities to support the desired redevelopment pattern within Urban Villages”...

- 2004 Comprehensive Plan Update
Seattle’s Growth Strategy

• Focus growth to more efficiently serve it
  – Urban centers
    Manufacturing & industrial centers
  – Urban villages

• 80% of city growth in centers/villages since 1994

• Future Comprehensive Plan growth targets 2016-2035
  • 70,000 additional housing units
  • 115,000 additional jobs
Comprehensive Plan Transportation Element key themes

Safe, reliable, affordable, equitable, and high-quality travel options

Ensure goods movement

Use right-of-way for multiple purposes
Using Space efficiency

Drive alone: 0%
Moving a trip from drive alone to:
- Carpoools: 55%
- Bicyclists: 93%
- Transit: 97%
- Walking: 99.9%

frees up this much street capacity:
Measure the Right Thing: LOS vs Modeshare

200 people can fit in...

177 cars
3 buses
1 light rail train
on their bikes

2nd Avenue in Seattle

City of Seattle
Employment Density

How Commuters Got Downtown in 2017

- **48%** TRANSIT
- **10%** RIDE SHARE
- **8%** WALK
- **3%** BIKE
- **6%** OTHER
- **25%** DRIVE-ALONE

75% **25%**

Commuters surveyed arrived to work 6-9am
TRANSIT: Includes bus, rail, and walk-on ferry passengers.
RIDESHARE: Includes carpool and vanpool.
OTHER: Includes telecommute, compressed work week, and other as noted by survey participants.

2018 PSRC Estimates

- **301,000** Downtown Seattle
- **235,000** Eastside (Redmond and Bellevue)

Source: Based on Puget Sound Regional Council Covered Employment Estimates, 2011
Jobs Up, Drive-Alone Rate Down 2010 to 2017

Graphic from: Commute Seattle

- **2010**: 202k jobs, 35.2% drive-alone rate
- **2012**: 220k jobs, 34.2% drive-alone rate
- **2014**: 228k jobs, 31.1% drive-alone rate
- **2016**: 247k jobs, 29.7% drive-alone rate
- **2017**: 262k jobs

Drive Alone Rate Reduction Over Time
Seattle’s Safety Trends

• One of safest cities in US

• We experience approx. 20 deaths each year

• 14 deaths in 2018

• People walking and riding bicycles/motorcycles are most at risk

• Urgency in improving conditions people
Safety Trends

- 7% of total crashes involved people walking, biking, and on a motorcycle.
- 89% of total fatalities.
- 90% of all serious and fatal crashes occur on arterial streets.
- 60% of pedestrian fatalities in the last 3 years were people age 55+.
Speed is a Factor in Fatalities and Serious Injuries

- **20 MPH**: 9 out of 10 survive
- **30 MPH**: 5 out of 10 survive
2,400 Miles of Residential Streets are 20 mph
• 1,500 Traffic Circles Reduce injury collision by 97%, all collisions by 90%
• 1,343 Volunteers just for our circles! (1 to 4 volunteers per circle)
• Curb/Planter strip gardening – raised structures requires no-fee permit (sand boxes!)
Seattle Speed Limit Background

Code of Washington (46.61.415)
• Allows local agencies to set speed limits based on an engineering study and MUTCD

Washington Neighborhood Safe Streets Bill
• Speed limits on non-arterials can be set to 20 mph without a speed study

Seattle Code 11.52.060 & 11.52.080
• Except where a different maximum speed is signed no person shall operate any vehicle in excess of twenty (20) miles per hour on any non-arterial street and twenty-five miles per hour on arterial streets.

Default speed limit signs were posted at city limits with SMC change in 2016
Evolving Methodology

Traditional (no longer using this)

- Operating Speed
  - Design Speed
    - Posted Speed

Urban villages

- 50th percentile speeds (USLIMITS2)
- Top operating speed of priority modes

\(~3\) MPH

10-15 MPH

10-25 MPH

Approach

Target Speed

- Design Speed
  - Posted Speed

Influences

Operating Speed
Pilot Implementation Data

CBD signal timing
- Lowered speed limits within CBD to 25 MPH
- Overall crash and severity reduced

Greenwood/Phinney urban village
- All crashes reduced by 47%
- Fatal, serious injury, and injury level crashes reduced by 37%

Green Lake/Roosevelt urban villages
- 26% reduction in top end speeders (+10 mph over speed limit)

CBD Signal Retiming before/after
- 13% total crashes
- 20% fatal, serious, injury, injury crashes
Rainier Ave S

Re-designed one mile of Rainier from four to three lanes and reduced speed limit from 30mph to 25mph.

Results

• Collisions reduced by 15%
• Transit travel times improved by 1 minute in the southbound direction during the PM peak hour
## Results - Speeds

### 50th Percentile Speed

<table>
<thead>
<tr>
<th></th>
<th>2015 (30 MPH speed limit)</th>
<th>2016 (25 MPH speed limit)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound</td>
<td>33.4 MPH</td>
<td>28.0 MPH</td>
<td>-16.2%</td>
</tr>
<tr>
<td>Southbound</td>
<td>33.5 MPH</td>
<td>30.0 MPH</td>
<td>-10.4%</td>
</tr>
</tbody>
</table>

### Speeders (percent speeding)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound</td>
<td>84.1%</td>
<td>40.0%</td>
<td>-52.4%</td>
</tr>
<tr>
<td>Southbound</td>
<td>82.4%</td>
<td>59.3%</td>
<td>-28.0%</td>
</tr>
</tbody>
</table>

### Top End Speeders (drivers exceeding 40 mph)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northbound</td>
<td>4.1%</td>
<td>0.8%</td>
<td>-80.5%</td>
</tr>
<tr>
<td>Southbound</td>
<td>6.2%</td>
<td>1.7%</td>
<td>-72.6%</td>
</tr>
</tbody>
</table>
Street Types

• Supplements functional classification
• Provides street function for support land use and people
• Vision for street

*Except limited access/controlled access streets

25-35* mph
25-30 mph
15-20 mph
2nd Ave

- Principal Arterial
- Downtown Design Standards
- 25 mph
2nd Ave

- Two-way PBL
- Bus Only Lane
- Flex Curb Lane
2nd Ave

- Focus made at Intersection

- Signal separation of turning cars

- Reduced pedestrian left turn crashes by 80%

- Plant/Railing for people comfort
2nd Ave Bike Ridership

• 300% after lanes separated
• 900% after lanes were extended

2nd Avenue Wednesday Bicycle Counts
2nd Ave Vehicle Volumes
• 30% increase (year before/after)
• 15,200 in 2013
• 20,100 in 2015
• 21,400 in 2018
2nd Ave Safety

- 4 years before/after (Pike to Washington)
- 14% reduction in total # crashes
- 21% reduction in injury crashes
- 22% reduction in bike crashes
- 16% reduction in pedestrian crashes
Seattle’s Guidelines for Road Diets

- Daily volume under 10,000: Yes
- Daily volume 10,000 – 16,000
  - < 700 vehicles per hour per direction: Yes
  - > 700 vehicles per hour per direction: Synchro model
    - LOS & Critical Approaches E or better: Yes

US Federal Highway Administration Proven Safety Measure to reduce all collisions by 29%
Seattle’s Guidelines for Road Diets

Every street is different, these are just guidelines

- Daily volume 16,000 – 25,000
  - Synchro model
    - < 30% Increase in travel time
    - Corridor LOS D or better
    - LOS E or better at critical approaches
    - Yes

- Daily volume more than 25,000
  - No
NE 75th Street- 21,300 ADT

- Designed and implemented in 6 months
- 50% reduction in crashes

20 foot lanes (6 m)  10.5 foot lanes (3.2 m) + bike lanes

<table>
<thead>
<tr>
<th></th>
<th>Percent Change in 85th Percentile Speed</th>
<th>Percent Change in Speeders going over the speed limit</th>
<th>Percent Change in Speeders going 10+ mph over the speed limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastbound</td>
<td>-9%</td>
<td>-64%</td>
<td>-75%</td>
</tr>
<tr>
<td>Westbound</td>
<td>-11%</td>
<td>-56%</td>
<td>-79%</td>
</tr>
</tbody>
</table>
Traffic calming

*Speed humps*  
*Speed cushions*
## Speed humps

#### Small investment with high safety yield

<table>
<thead>
<tr>
<th></th>
<th>Graham Hill</th>
<th>Highland Park</th>
<th>Olympic Hills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in speeding</td>
<td>-79%</td>
<td>-73%</td>
<td>-88%</td>
</tr>
<tr>
<td>over 25 mph</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in speeding</td>
<td>-80%</td>
<td>-81%</td>
<td>-91%</td>
</tr>
<tr>
<td>over 35 mph</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above shows the percentage decrease in speeding over 25 mph and 35 mph for three different locations: Graham Hill, Highland Park, and Olympic Hills. The data indicates that speed humps are effective in reducing speeding, particularly over 35 mph, with the highest reduction observed in Olympic Hills.
### Speed humps/cushions/signs/cameras

<table>
<thead>
<tr>
<th>Location</th>
<th>85th Percentile Speed Humps Before</th>
<th>85th Percentile Speed Humps After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham Hill Elementary S Graham Street</td>
<td>28.3</td>
<td>-18%</td>
</tr>
<tr>
<td>Highland Park Elementary</td>
<td>29.7</td>
<td>-19%</td>
</tr>
<tr>
<td>Olympic Hills Elementary NE 130th Street</td>
<td>28.7</td>
<td>-21%</td>
</tr>
<tr>
<td>Emerson Elementary 60th Ave S</td>
<td>33.9</td>
<td>-37%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 104th Speed Humps</td>
<td>32.4</td>
<td>-16%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 106th Speed Cushions</td>
<td>34.3</td>
<td>-17%</td>
</tr>
<tr>
<td>Broadview Thomson K-8 3rd Ave NW and NW 105th Radar Speed Sign</td>
<td>35.2</td>
<td>1%</td>
</tr>
<tr>
<td>Broadview Thomson K-8 3rd Ave NW and NW 137th Radar Speed Sign</td>
<td>35.6</td>
<td>-1%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Automated Enforcement</td>
<td>36.6%</td>
<td>-1%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Speed Cushions</td>
<td>36.0%</td>
<td>-1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>85th Percentile Speed Before</th>
<th>85th Percentile Speed After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham Hill Elementary S Graham Street</td>
<td>23.2</td>
<td>-18%</td>
</tr>
<tr>
<td>Highland Park Elementary</td>
<td>24.2</td>
<td>-19%</td>
</tr>
<tr>
<td>Olympic Hills Elementary NE 130th Street</td>
<td>22.7</td>
<td>-21%</td>
</tr>
<tr>
<td>Emerson Elementary 60th Ave S</td>
<td>21.3</td>
<td>-37%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 104th Speed Humps</td>
<td>27.3</td>
<td>-16%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 106th Speed Cushions</td>
<td>28.5</td>
<td>-17%</td>
</tr>
<tr>
<td>Broadview Thomson K-8 3rd Ave NW and NW 105th Radar Speed Sign</td>
<td>35.4</td>
<td>1%</td>
</tr>
<tr>
<td>Broadview Thomson K-8 3rd Ave NW and NW 137th Radar Speed Sign</td>
<td>35.1</td>
<td>-1%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Automated Enforcement</td>
<td>36.0%</td>
<td>-1%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Speed Cushions</td>
<td>31.2%</td>
<td>-1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent exceeding 25 mph Before</th>
<th>Percent exceeding 25 mph After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham Hill Elementary S Graham Street</td>
<td>36%</td>
<td>8%</td>
</tr>
<tr>
<td>Highland Park Elementary</td>
<td>43%</td>
<td>12%</td>
</tr>
<tr>
<td>Olympic Hills Elementary NE 130th Street</td>
<td>45%</td>
<td>5%</td>
</tr>
<tr>
<td>Emerson Elementary 60th Ave S</td>
<td>79%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 104th Speed Humps</td>
<td>69%</td>
<td>28.2%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 106th Speed Cushions</td>
<td>79%</td>
<td>35.8%</td>
</tr>
<tr>
<td>Broadview Thomson K-8 3rd Ave NW and NW 105th Radar Speed Sign</td>
<td>85%</td>
<td>94.1%</td>
</tr>
<tr>
<td>Broadview Thomson K-8 3rd Ave NW and NW 137th Radar Speed Sign</td>
<td>89%</td>
<td>94.6%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Automated Enforcement</td>
<td>88.5%</td>
<td>79.9%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Speed Cushions</td>
<td>79.5%</td>
<td>53.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Percent exceeding 35 mph Before</th>
<th>Percent exceeding 35 mph After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham Hill Elementary S Graham Street</td>
<td>1.6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Highland Park Elementary</td>
<td>3.2%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Olympic Hills Elementary NE 130th Street</td>
<td>1.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Emerson Elementary 60th Ave S</td>
<td>10.0%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 104th Speed Humps</td>
<td>4.5%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Viewlands Elementary 3rd Ave NW and NW 106th Speed Cushions</td>
<td>10.5%</td>
<td>1.6%</td>
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<td>16.7%</td>
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<tr>
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<td>18.9%</td>
<td>15.4%</td>
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<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Automated Enforcement</td>
<td>24.3%</td>
<td>20.8%</td>
</tr>
<tr>
<td>Rainier View Elementary Beacon Ave S NW/o 57th Ave S Speed Cushions</td>
<td>20.8%</td>
<td>4.7%</td>
</tr>
</tbody>
</table>
Leading Pedestrian Interval

• Also referred to as LPI’s

• Activate pedestrian signal 3-7 seconds prior to vehicular green light

• Pedestrians establish themselves in the crosswalk before vehicle movements

• 60% Reduction in pedestrian/vehicle crashes
Leading Pedestrian Interval

- 9 locations installed between 2009-2018
- 40-60% reduction in pedestrian collisions
- Average cost $10,000 per intersection
- Funded 144 new installations in next 3 years 2019-2021

<table>
<thead>
<tr>
<th>Vehicle Movement</th>
<th>All Ped Crashes 2011-2017</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>736</td>
<td>1435</td>
</tr>
<tr>
<td>Straight</td>
<td>363</td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td>336</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

51% 25% 23%

<table>
<thead>
<tr>
<th>Vehicle Movement</th>
<th>Serious/Fatal Ped Crashes 2011-2017</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>60</td>
<td>143</td>
</tr>
<tr>
<td>Straight</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

42% 45% 13%
Leading Pedestrian Interval

- Evaluate at all signalized intersections
- Prioritized based on:
  - BPSA
  - Urban villages/centers
  - Near schools, parks, community centers
  - Where serious injury pedestrian collision occurred w/in 3 years

SDOT Policy Memorandum

To: Mark Bandy, Transportation Operations Division Director
Thru: Dongho Chang, City Traffic Engineer
From: Bradley Topol, SDOT Vision Zero Program
Date: April 4, 2019
Subject: SDOT Policy for Leading Pedestrian Intervals

Statement of Intent
To establish a policy on pedestrian signal phasing for leading pedestrian intervals. This policy applies to the selection of locations and implementation of leading pedestrian intervals within the public right of way and within the jurisdiction of the City of Seattle.

Background & Purpose
A leading pedestrian interval (LPI) is a tool to reduce conflicts at signalized intersections between vehicular turning traffic and pedestrians crossing the street. A leading pedestrian interval functions by displaying the WALK signal at a crosswalk for 3 to 7 seconds while a red signal continues to be displayed for parallel through and/or turning vehicular traffic. After the initial 3 to 7 seconds of the WALK signal, parallel traffic is shown a green signal. This treatment allows pedestrians to establish themselves in the crosswalk ahead of right or left turning traffic, increasing their visibility and encouraging drivers to yield the right of way.

LPI’s are listed as one of the Federal Highway Administration’s proven safety countermeasures and can reduce pedestrian-vehicle collisions at intersections by up to 60%. At the same time leading pedestrian intervals can be one of the most inexpensive safety treatments that can be implemented to reduce pedestrian-vehicle collisions.

In Seattle, turning crashes account for 75% of all pedestrian crashes at signalized intersections (2010-2017). LPI’s are listed in the Seattle Pedestrian Master Plan (PMP) as an action to reduce turning movement conflicts at intersections (PMP Strategy 2.4). Leading pedestrian intervals have the benefit of increased visibility of crossing pedestrians, increased likelihood of motorists yielding to pedestrians, reduced conflicts between pedestrians and vehicles, and enhanced safety for pedestrians who may be slower to start into the intersection.

Prioritization and Implementation
The recommended implementation of leading pedestrian intervals is as follows:
Automated Red Light Enforcement

• 24 camera locations. 20 with 3 year before/after data
• Angle collisions reduced by 46%
• Pedestrian collisions reduced by 32%
• Rearend collisions reduced by 15%, all collisions reduced by 23%
School Speed Zone Safety Cameras

<table>
<thead>
<tr>
<th>SINCE START OF SCHOOL SPEED ZONE SAFETY CAMERA PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>📅 64%</td>
</tr>
<tr>
<td>The average number of traffic violations per camera per day has decreased by 64%</td>
</tr>
</tbody>
</table>

### Collisions Are Down

| ↓ 50% | ↓ 71% | Ø |
| 50% drop in total collisions, pedestrian, and bicycle collisions, all times of the day | 71% drop in total collisions during the camera activation hours | No pedestrian/bicycle collisions in the after period during camera activation times |

*School Zone Cameras effectively reduce speeding and enhance safety for Seattle students.*
Great Places for People - Westlake Avenue

• Main North-South Transit Arterial in South Lake Union
  • New Transit Lanes
  • Upgraded Transit Stop Facilities
  • Signal Improvements
  • Widened Sidewalks
  • RapidRide C Line Extension
Speed, reliability, and bus stops

Combining innovative signals and transit lanes

• Northbound Westlake Avenue transit lane plan includes:
  – Bus stop extensions to accommodate two-three articulated bus at all stops
  – Curb lane queue jump into center-running transit lane
  – Center lane straight-through signal
  – Center lane queue jump into curb lane
  – Several turn restrictions for GP traffic
Great Places for People- Westlake Avenue

**PROJECT FEATURES**

**More bus service** means there is room for hundreds of more people.

**Benefits:** Increased mobility, affordable transportation options

**Dedicated transit lanes** allow streetcars and buses to bypass traffic, reducing delay and making for a smoother, more predictable ride.

**Benefits:** Faster, more reliable service

**Wider sidewalks and longer bus stops** allow buses to board passengers without having to pull out and back into traffic. They also provide space for more buses and streetcars, shelters and real-time information kiosks.

**Benefits:** Faster, more reliable service, rider comfort, sidewalk space

**BY THE NUMBERS**

**Service**

40 buses and streetcars can move up to 2,800 people between 5 and 6 PM on Westlake alone

**Reliability**

Doubling the number of people using transit along Westlake Ave N between 5 and 6 PM is the equivalent of adding another travel lane

**Growth**

65,000 people live in Center City Seattle and

25 new jobs a day are being added
Two lanes closed on Westlake Avenue ... and nobody noticed

Lots of people figured the city’s plan to kick cars out of two lanes of Westlake Avenue downtown would obviously cause more traffic gridlock. Then two weeks ago the city went ahead and did it.

What would happen if you kicked cars off half the lanes of a big downtown arterial?

Probably gridlock. Right?

That was pretty much the feeling a year ago when the city proposed dropping two car lanes from more than a mile of busy Westlake Avenue North downtown to make way for transit. The Seattle Times story on this in March 2015 was greeted by 488 online comments, most of them lampooning it as a traffic disaster in the making.
Westlake Avenue

Says city traffic engineer Dongho Chang: “We haven’t heard of any operational issues with Westlake so far.” That’s engineer-speak for: “It’s working!”

South Lake Union transit lanes

The city closed two lanes of Westlake Avenue North to cars on March 21, making them transit only.

I drove Westlake four days this week, morning and evening, curious to see what it’s like when a big downtown road is put on a diet.

It’s early, but the cars are flowing about as freely in one lane as they did in two. How is that possible?
Westlake Avenue
Better Transit Stop Environment, Q Jump
Better Transit Stop Environment, Q Jump
Westlake Avenue

• C Line ridership is up 27%, about 2,300 new daily rides
• D Line ridership is up 23%, over 2,600 new daily rides
• Rt 40 ridership is up 23%, over 2,000 new daily rides
Westlake Avenue

- C Line on-time performance increased from 80.7% to 84.9%.
- D Line on-time performance increased from 81.4% to 86.7%.
Westlake Avenue

- Average morning travel times between Westlake Ave N & 8th Ave N and 3rd Ave & Virginia St dropped by 1.23 minutes (1 minute, 14 seconds); a 10% decrease in travel times.
- Average afternoon travel times between Westlake Ave N & 8th Ave N and 3rd Ave & Virginia St dropped by 0.83 minutes (50 seconds); a 5% decrease in travel times.
Vibrant Complete Streets
School and Greenway Crossing Pilot

• Build appropriate crossing treatment necessary for users.
• Count/evaluate afterward for effectiveness. Revise as needed.
Aurora Avenue (SR 99) and N 92<sup>nd</sup> St

- 92<sup>nd</sup> 6 crashes (3yrs prior to project). No crashes (16 month after)
- 88<sup>th</sup>-94<sup>th</sup> (26% drop in all crashes, 47% drop in injury crashes)
Lake City Way (SR 522) and NE 82nd St

PROPOSED NEIGHBORHOOD GREENWAY CONNECTIONS

- Northgate Link Light Rail (2021)
- Olympic View Elementary
- Sacajawea Elementary
- Northwest Community Park
- North Seattle College
- St. Catherine of Siena School
- Maple Leaf Reservoir Park
- Northgate Link Light Rail (2021)
- Lake City Way Greenway - Funded for 2021 Construction
- Proposed Crossing Improvement Lake City Way NE and NE 62nd St

Seattle Department of Transportation
Intersection Control Context

Counts Noon to 1 pm
Wednesday 7/20/2011
3,639 Pedestrian Crossings
571 Vehicle Crossings
Collision = 10 year period

Western Avenue at Virginia Intersection Operations

Pike and 1st Ave
1-2 pm, Thursday 4/24/03
1187 pedestrians (scramble)
1107 Vehicle Crossing
2 Phase signal

Seattle Department of Transportation

Traffic Signal

Pedestrian Service
Pedestrians have the highest service level. No delay when crossing. All vehicles come to a complete stop ensuring safest crossing.

Traffic Speeds
Traffic speeds are low due to the all way stop and the pedestrian crossing activity. Lower speeds encourages bicycle usage to the Market.

Impact to Victor Steinbrueck Park and Pike Place Market
Low traffic speeds and easy crossing on Western makes Pike Place Market and Victor Steinbrueck Park more integrated for pedestrians.

Impact to Street
Little impact.

Flexibility
Operates as all way stop, even when there is little pedestrian traffic during off-peak times.
Questions?

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