35th Avenue SW Road Safety Corridor

Design Alternative Review Meetings

Project Manager Jim Curtin

March 10 and 12, 2015

SDOT

Seattle Department of Transportation

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

- Meeting purpose
- Project background
- Design process and alternatives
- General Q & A
- Feedback session

Background

- Safety improvements requested by local community on several occasions
- Issue Identification Meetings, October 2014

Project goals

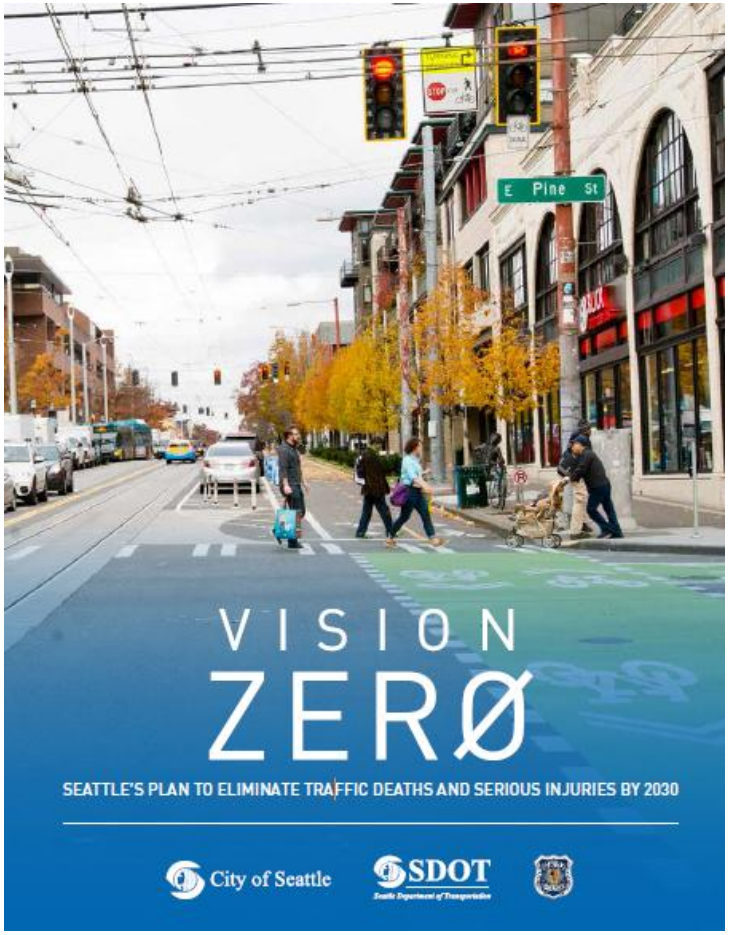
Make 35th Avenue SW safer for everyone

- Reduce speeds
- Reduce collisions and injuries
- Improve conditions for vulnerable users
- Maintain acceptable vehicular travel times

Vision Zero

Seattle's plan to eliminate traffic deaths and serious injuries

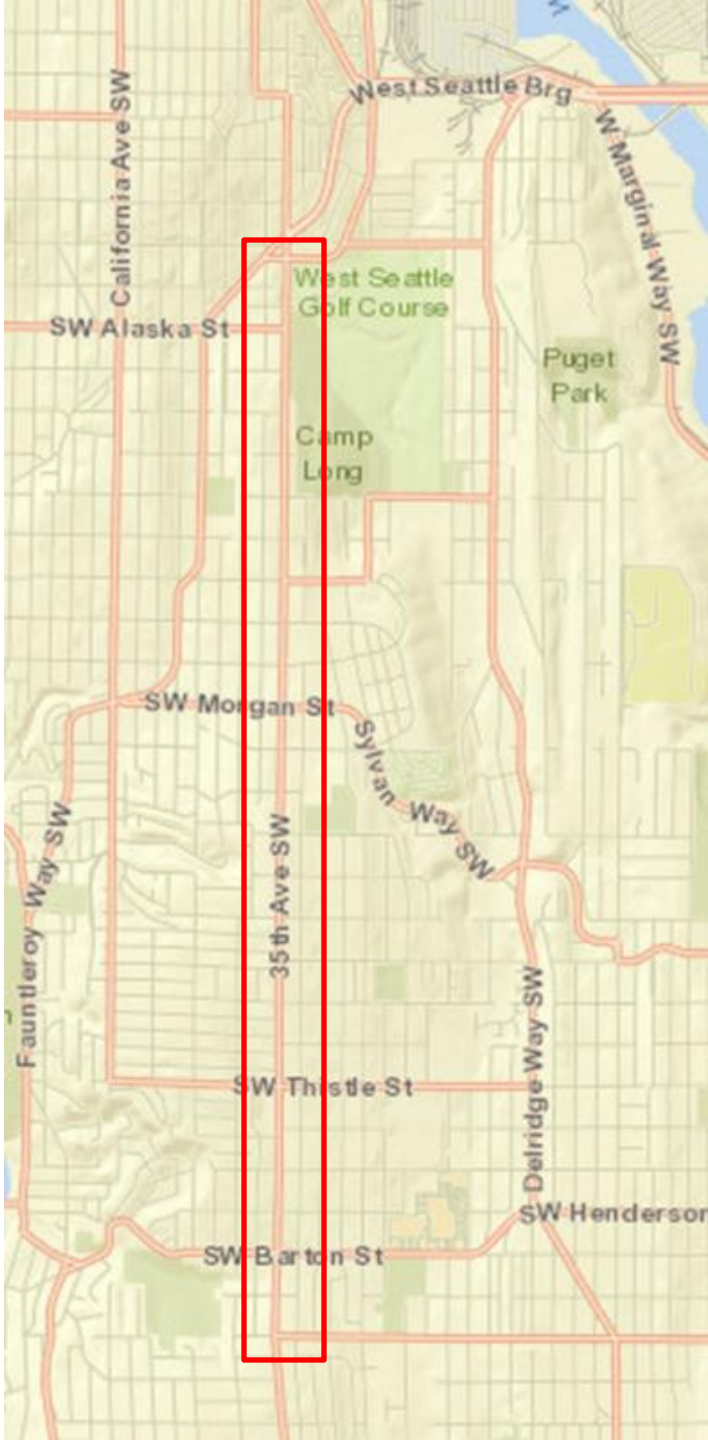
- Street designs that prioritize safety
- Public education and engagement
- Targeted enforcement patrols



www.seattle.gov/visionzero

Project area

35th Avenue SW between
SW Avalon Way and SW Roxbury Street



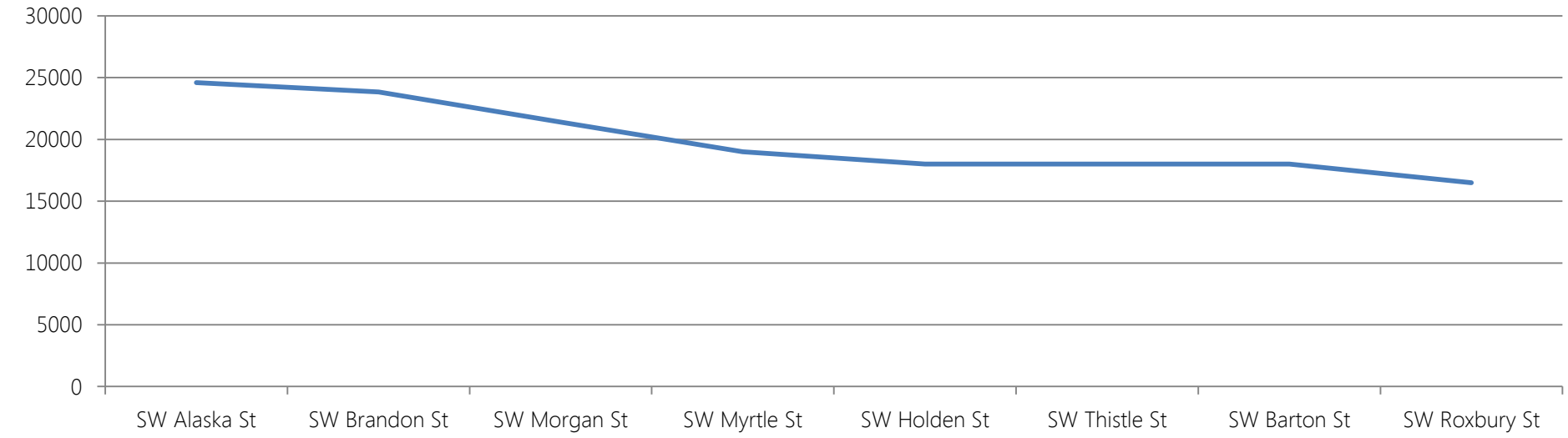
Current street design

35th Avenue SW

- Principal arterial
- 4 to 5 lane street
- 55 feet wide
- Served by multiple transit routes
- Emergency response route

Volumes

- 16,500 AWDT at Roxbury; 24,600 AWDT at Alaska
- Significant pedestrian use
- Transit: 21, 21X, Rapid Ride C Line



Along the corridor

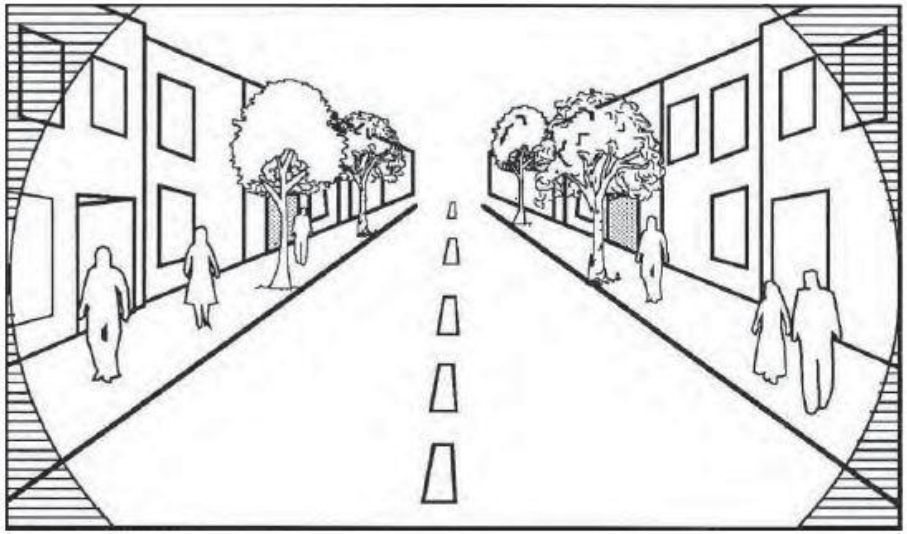
- 488 parcels
  - 73% single family residential (359)
  - 11% apartment, condo, townhouse (55)
  - 10% commercial/industrial (48)
- 4 churches or religious service centers
- 3 schools within two blocks
- 2 libraries, parks and community centers
- 2 daycare centers
- Retirement/nursing homes, medical services

Recent speed studies

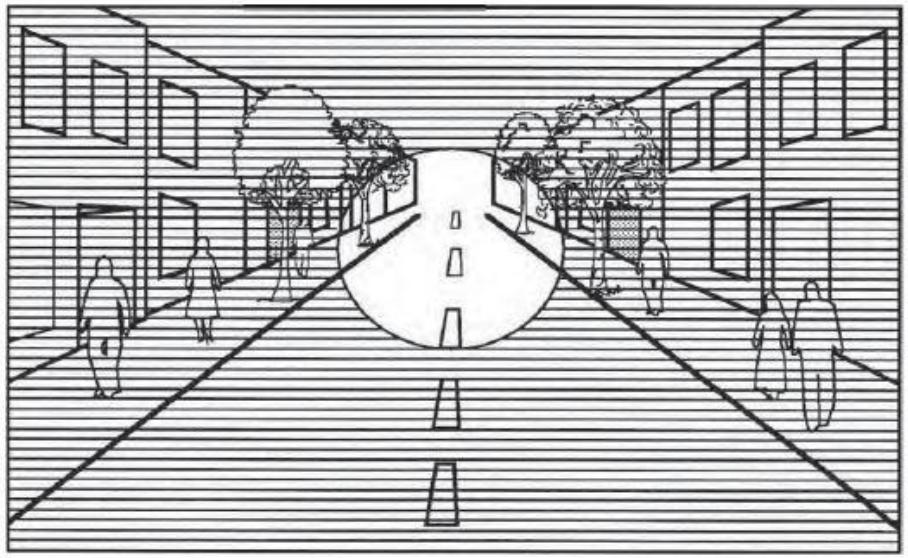
Posted speed limit 35 mph

- 38.5 mph at SW Brandon St
- 40.9 mph at SW Willow St
- 36.5 at SW Roxbury St

Why speed matters

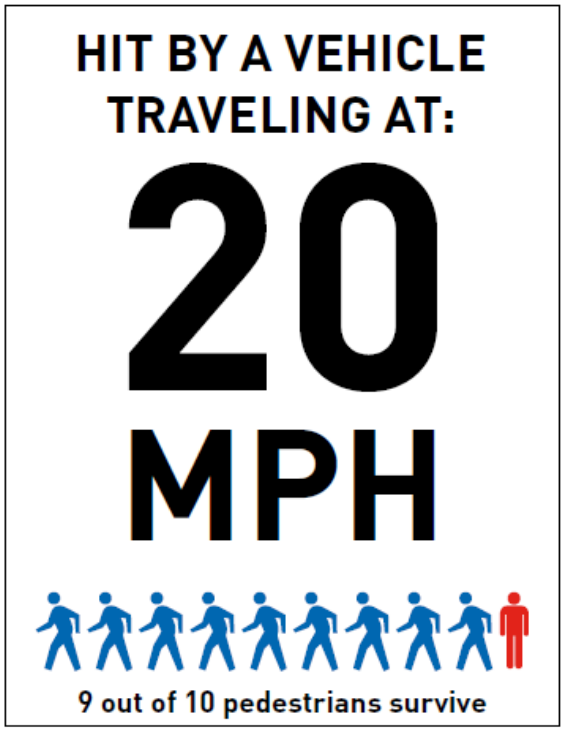


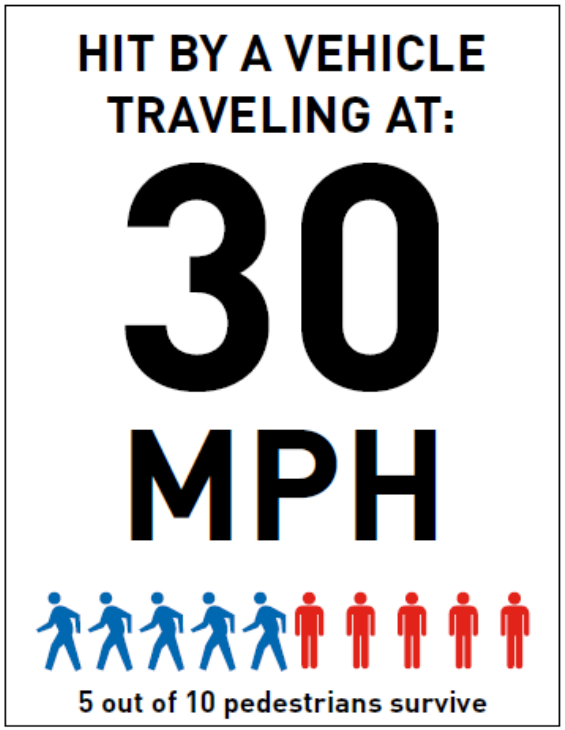
Drivers' field of vision
15 mph

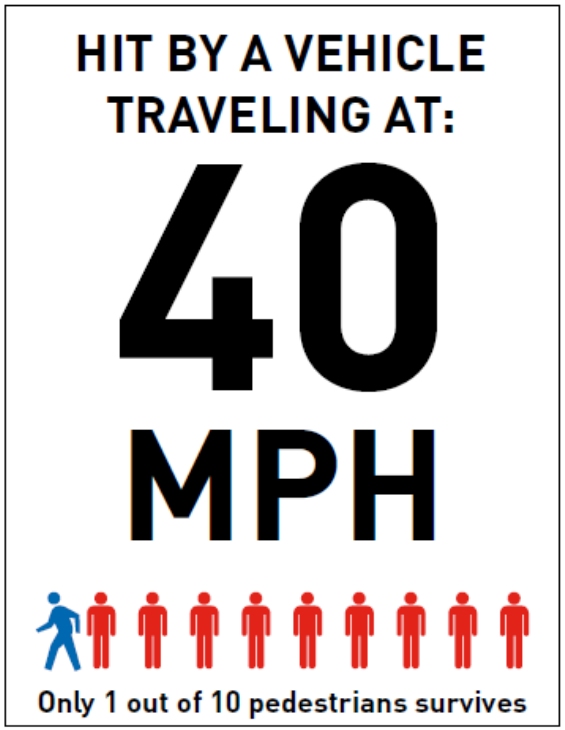


Drivers' field of vision
30 mph – 40 mph

Why speed matters







Note that the chance of injury is nearly 100 percent when pedestrians or people on bicycles are involved in a collision

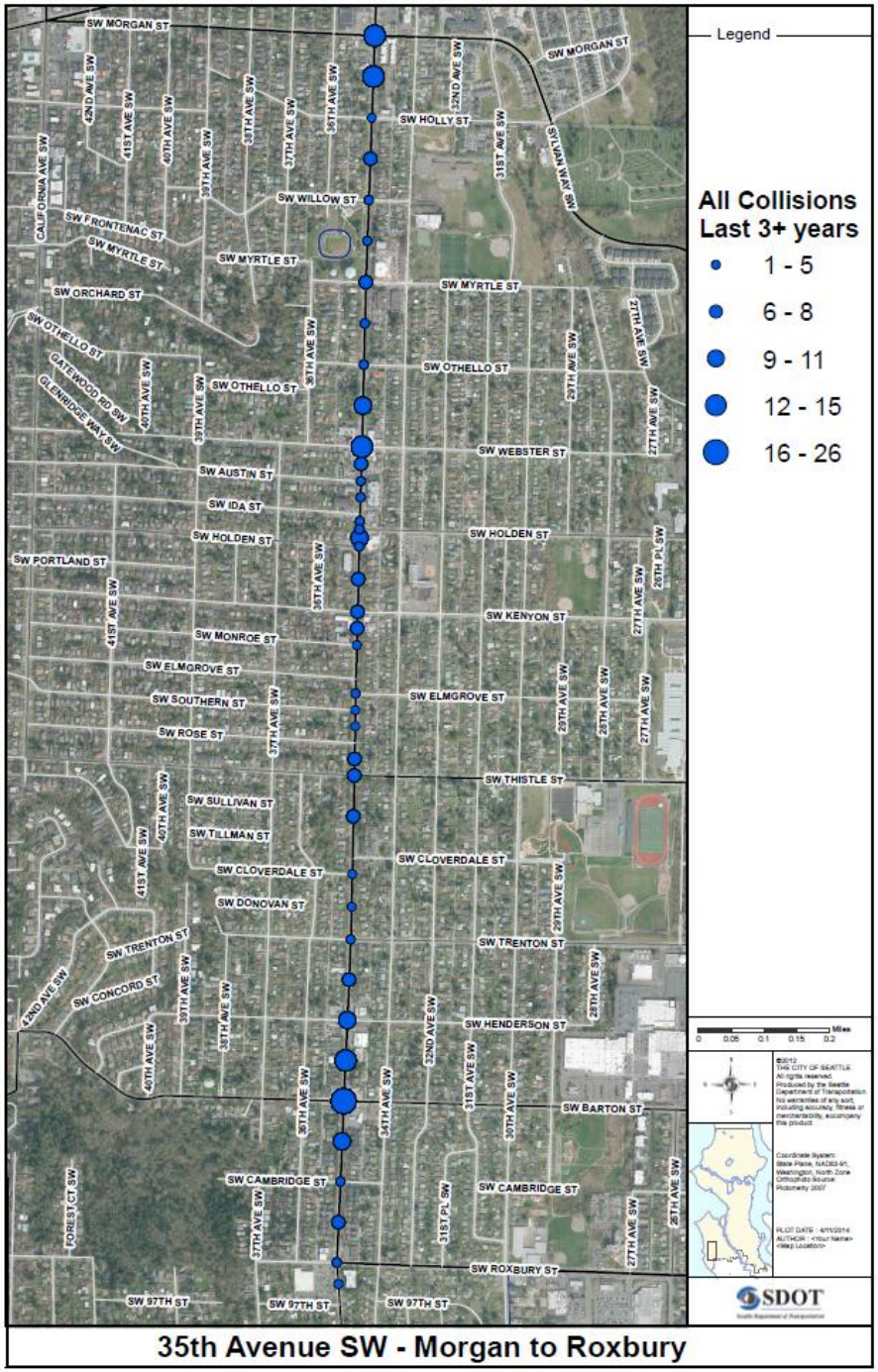
Collision data

Last 3 plus years

- 294 total collisions
- 128 injuries
- 2 fatalities

Last 10 years

- 1065 total collisions
- 412 injuries
- 5 fatalities



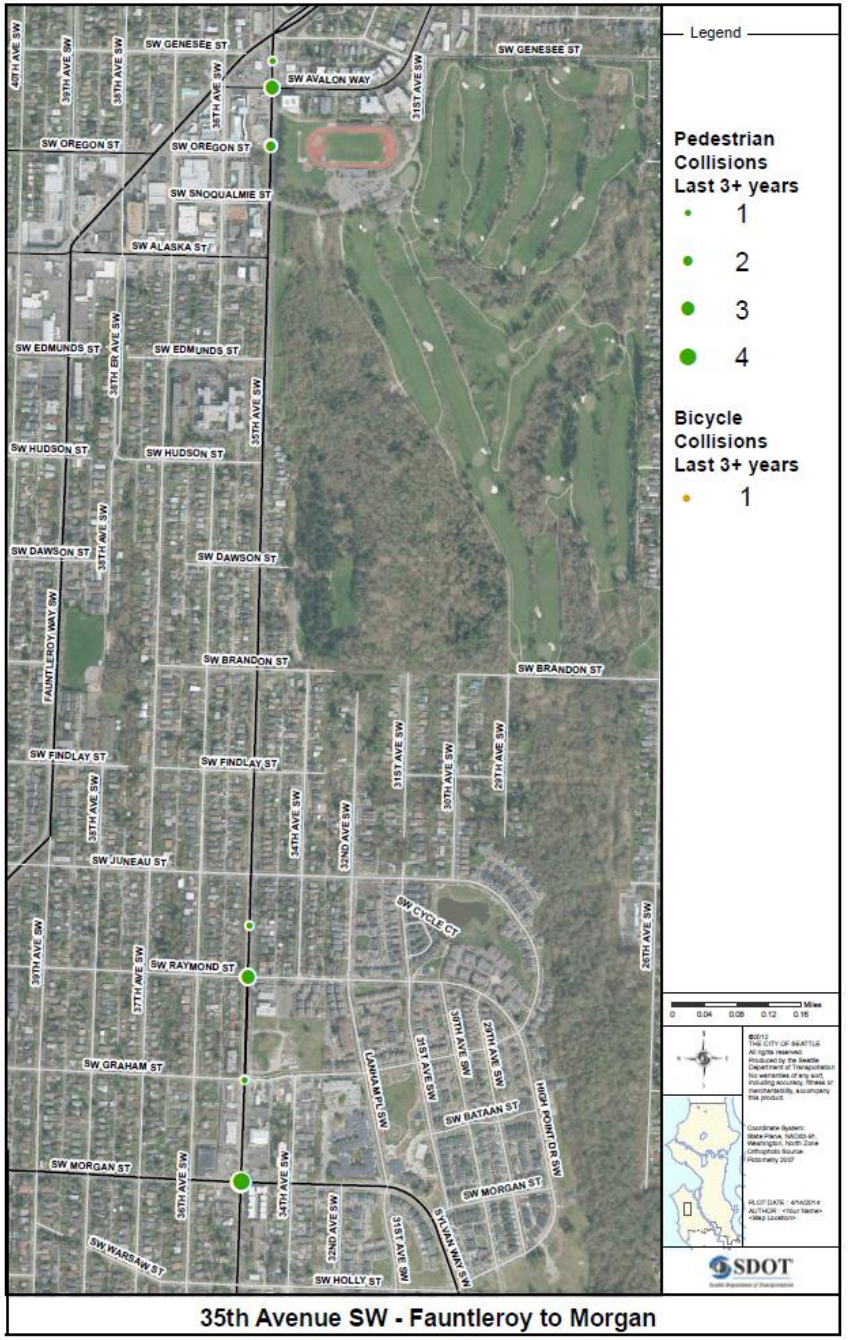
Collision data

Pedestrian and bicycle collisions last 3 plus years

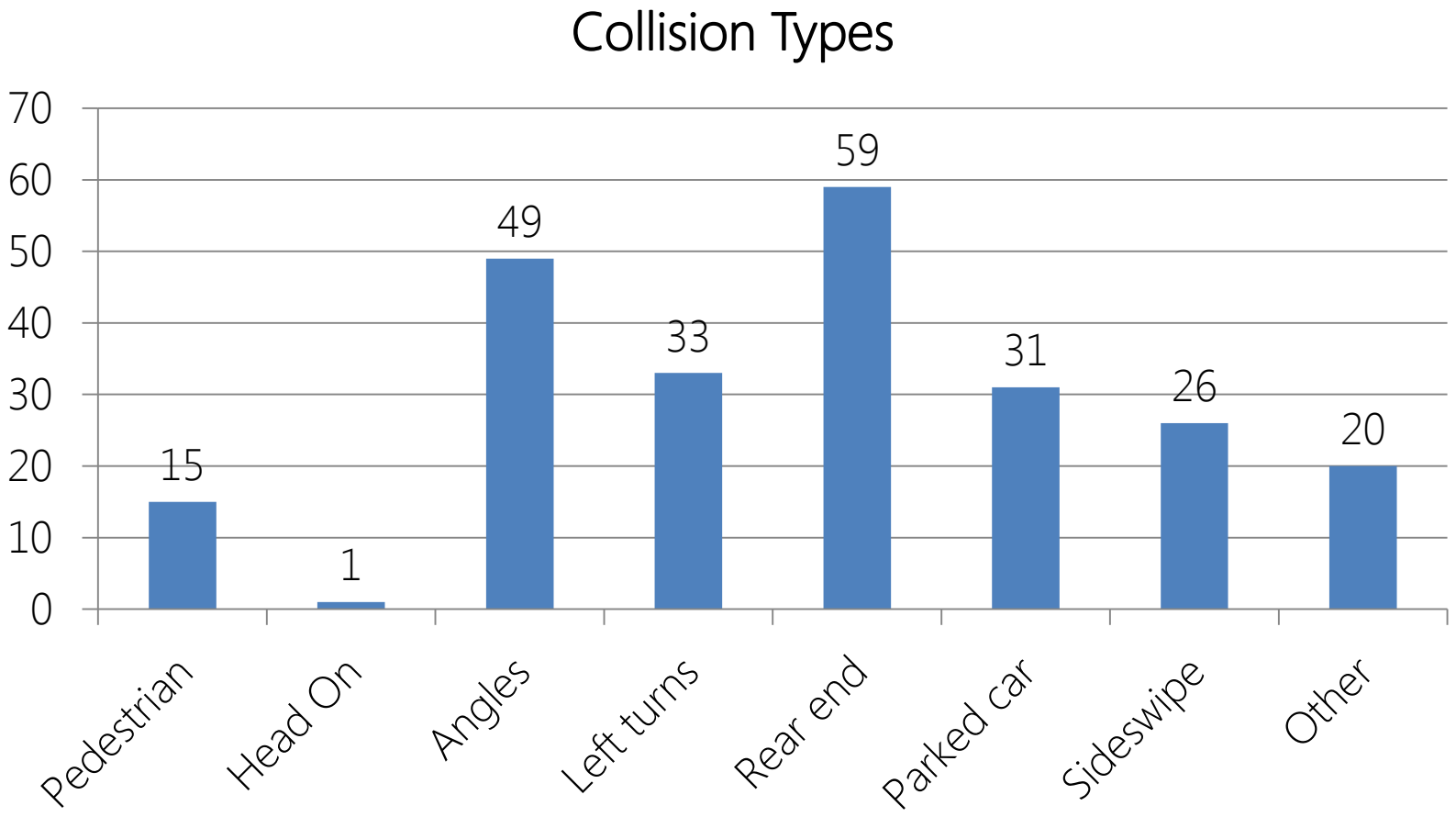
- 15 pedestrian-vehicle
- 1 bicycle-vehicle

Pedestrian and bicycle collisions last 10 years

- 40 pedestrian-vehicle
- 8 bicycle-vehicle
- 4 of 5 fatalities were pedestrians or bicyclists



Collision data



Behavioral issues and enforcement

- Distraction top contributing cause of crashes on 35th
- Other issues
  - Speeding
  - Impairment
  - Failure to grant ROW

Design process

Design options developed to:

- Balance the need to move people and goods with the function of the nearby land uses
- Reduce collisions

Performance monitoring

- Collect baseline data and update traffic data regularly on 35th and nearby streets

Design process

Enforcement

- Grant funds secured for extra patrols
- Data-driven deployment
- Pedestrian safety emphasis

Design process

Modeling

- Synchro 8 and SimTraffic 8
- Full report and traffic analysis at Spring meeting

Design process

Implementation

- Summer 2015 through 2016

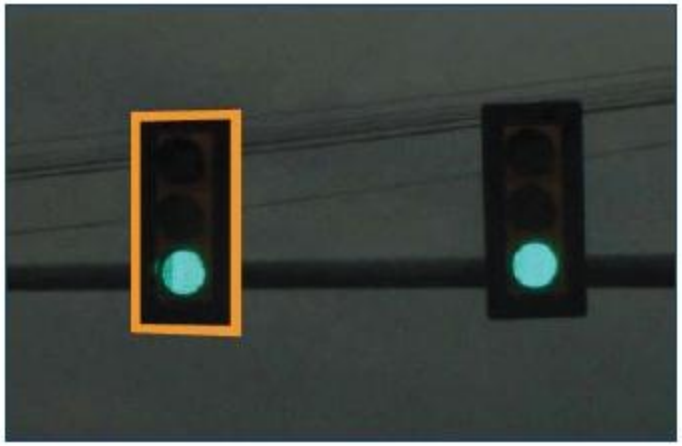
Design alternatives

Lower speed limit

- 35 mph → 30 mph
- New speed limit to be implemented with other roadway modifications

Design alternatives

- Signal improvements
  - Turn signals at some locations
  - Signal optimization
  - Reflective materials for most signals
- Lane line markers (buttons) throughout the corridor



Design alternatives

Bicycle facilities

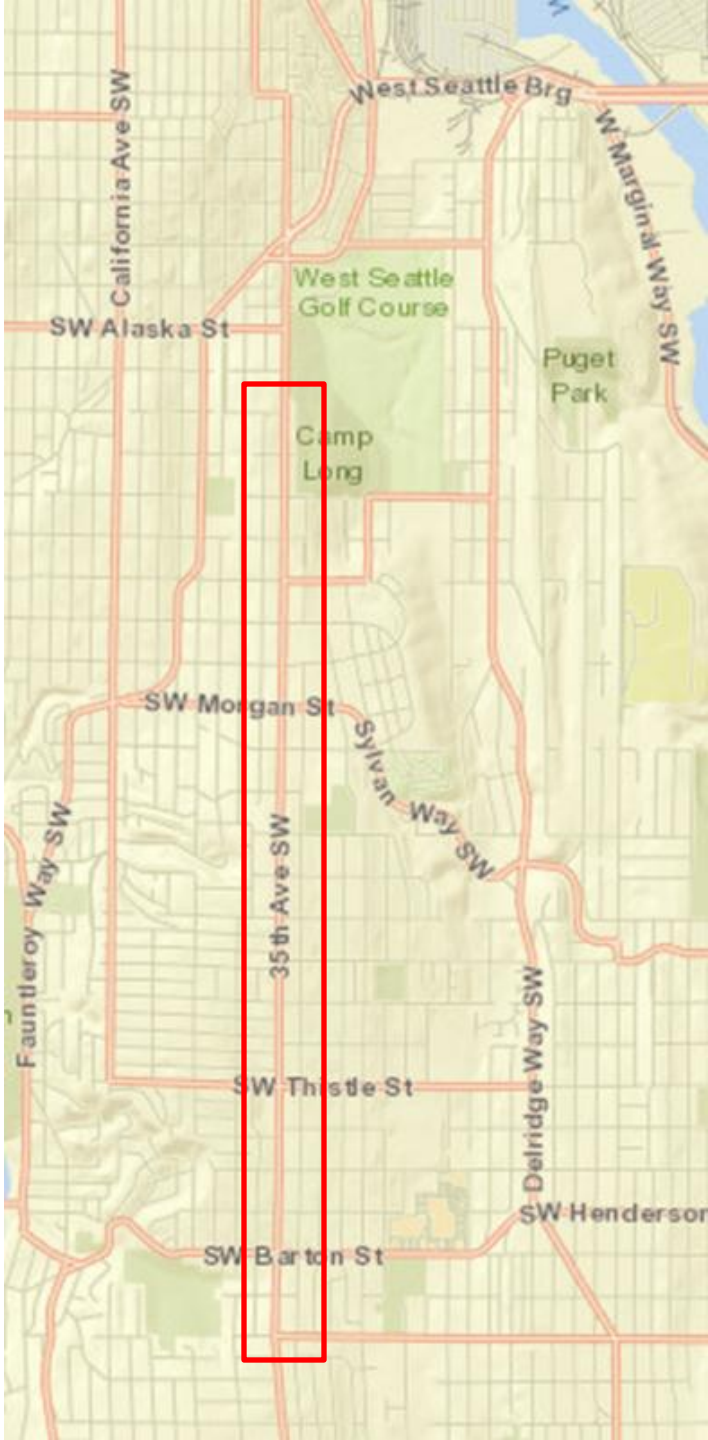
- Protected bicycle lanes envisioned long-term for 35th
  - 2014 Bicycle Master Plan
- Public comment suggested we focus on other routes
- Neighborhood Greenway study
- 2017 implementation

Design alternative A

SW Roxbury St to SW Edmunds St

Rechannelization

- 4 lanes → 3 lanes
  - 2 general purpose lanes
  - Center left turn lane



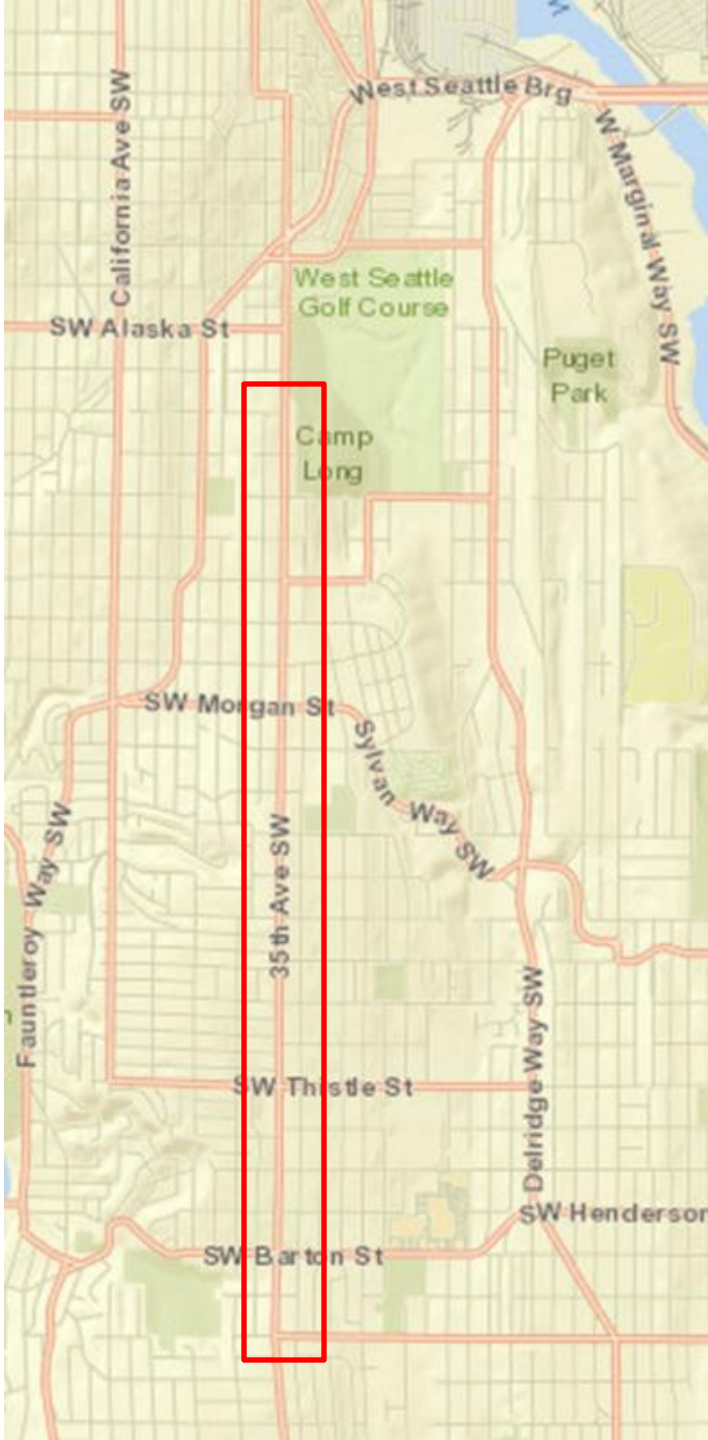
Design alternative A

Key features

- Reduces top collision types
- Lower vehicle speeds
- Better conditions for people walking
- Opportunities for new crossings
- Improved efficiency
- Easier turning movements

Limitations

- Initial modeling shows vehicle delays of 3 to 4 minutes (peak hours only)
- *Additional delays possible*



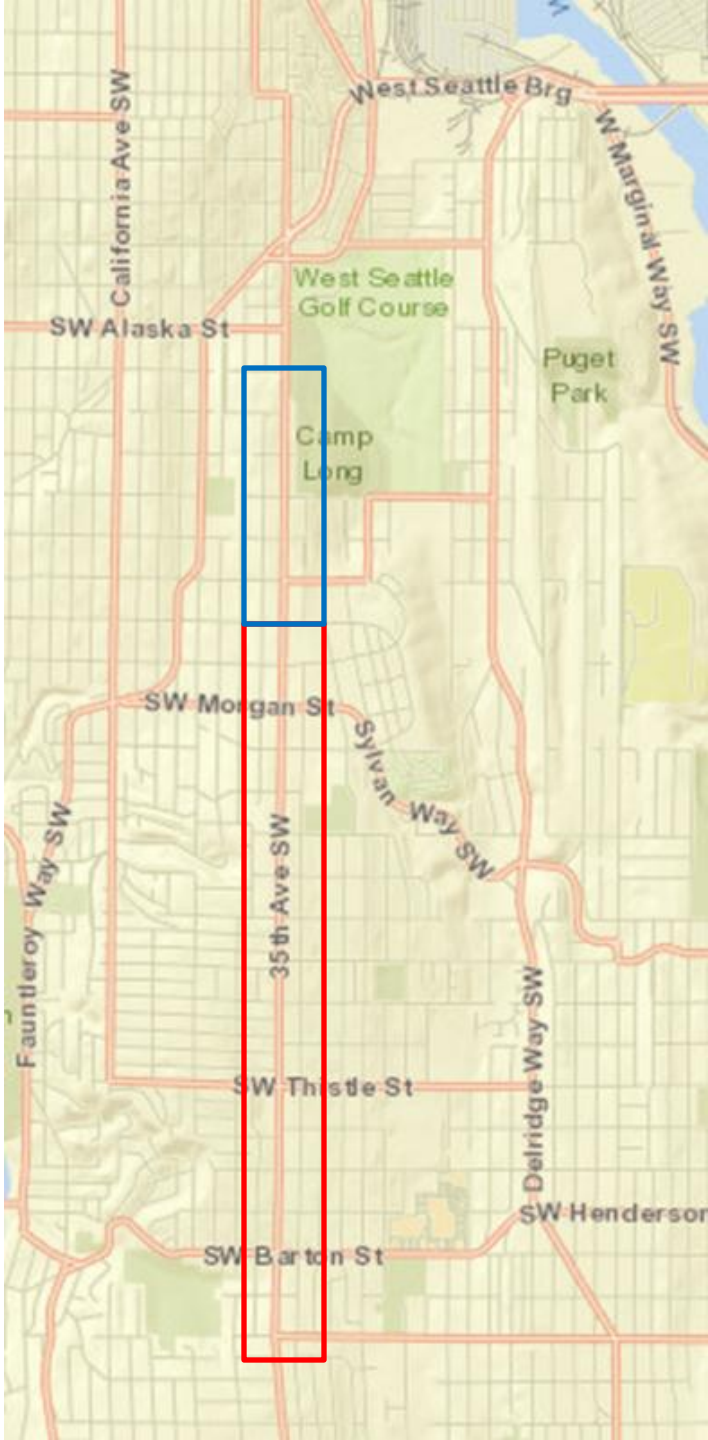
Design alternative B

SW Roxbury St to SW Raymond St

- Rechannelization

SW Raymond St to SW Edmunds St

- Peak hour parking restrictions
  - Allows for one additional lane for vehicular traffic
    - AM – northbound
    - PM - southbound



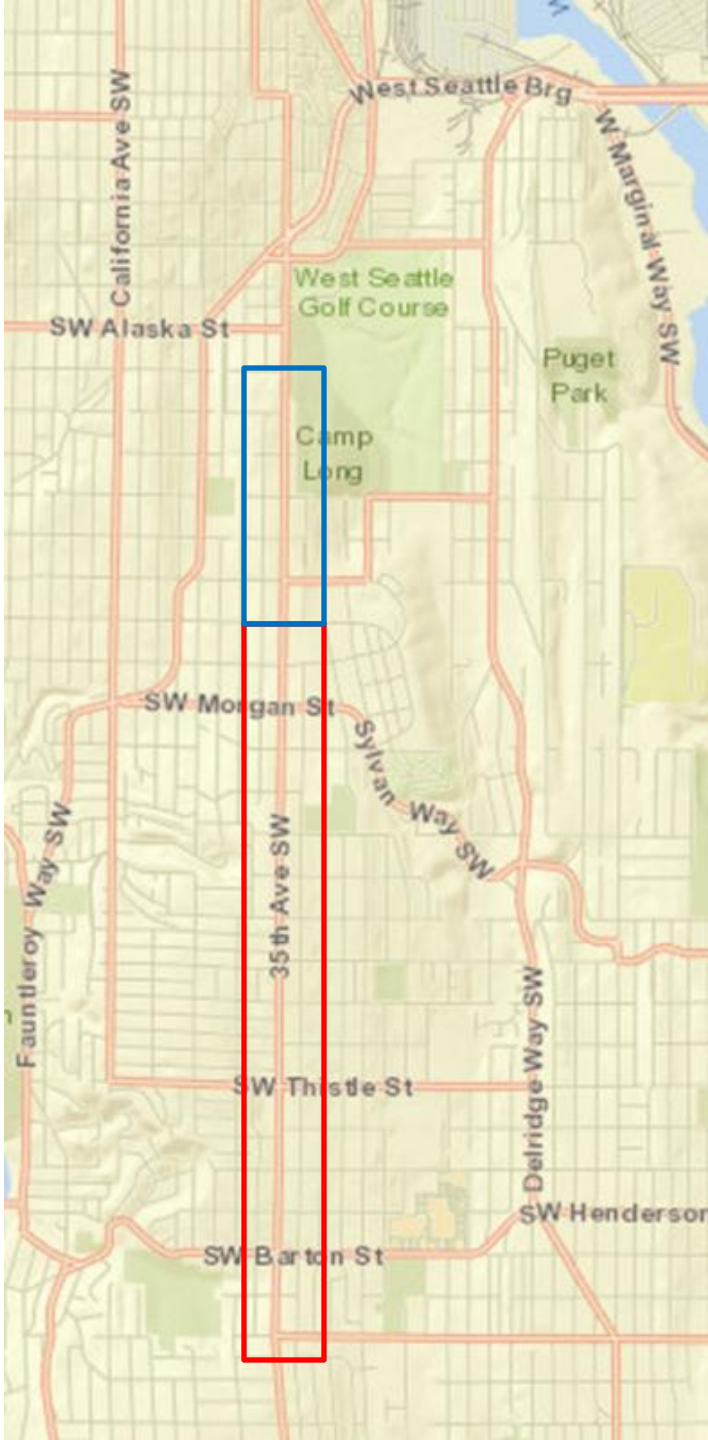
Design alternative B

Key features

- Maintains extra travel lane during peak
- Same benefits as Alternative A south of SW Raymond Street
- May consider extending/reducing rechannelization extents

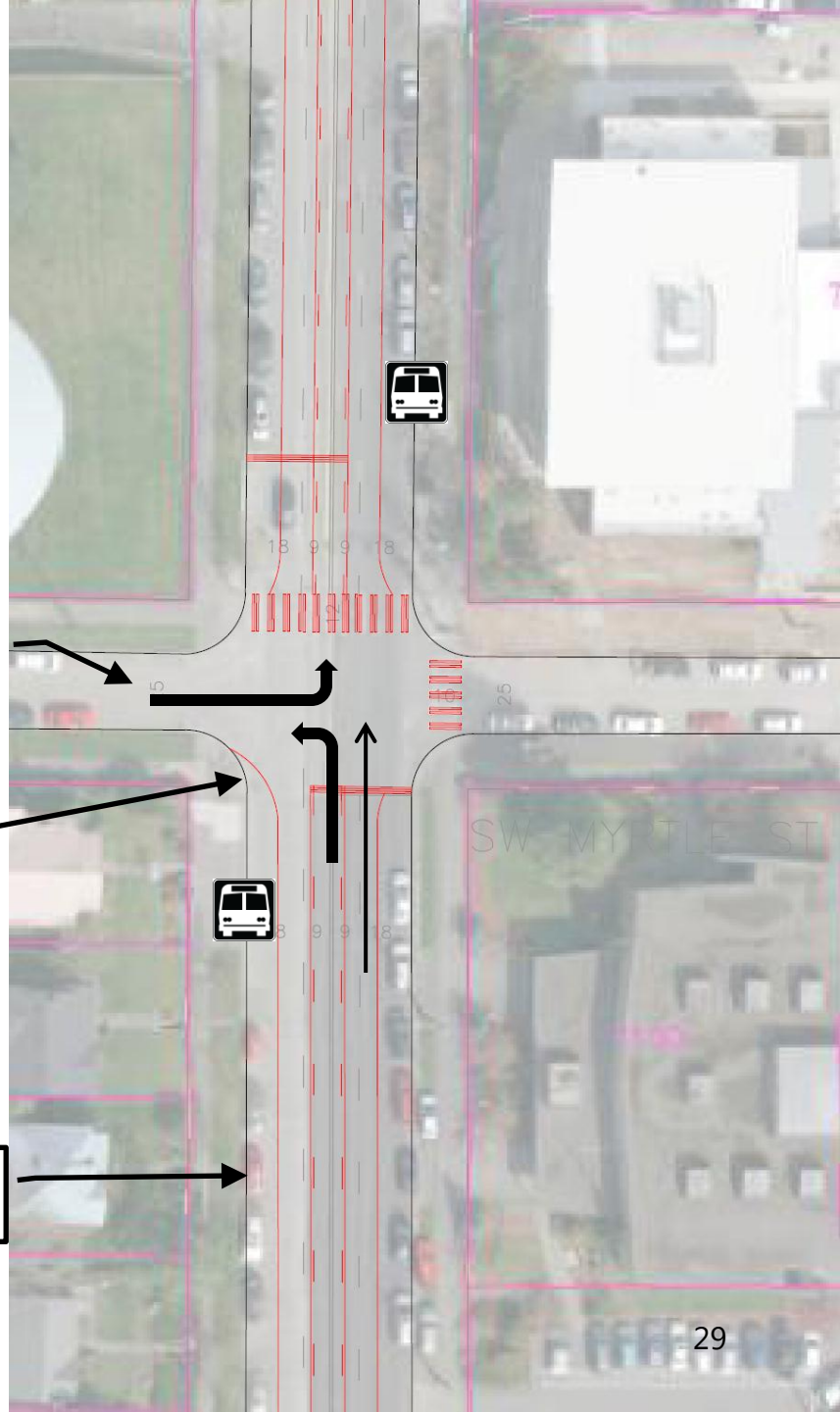
Limitations

- Initial modeling shows vehicle delays of 3 minutes (peak hours only)
- Partial pedestrian safety benefits during peak hours



Design alternatives

- Improves efficiency
- Reduces vehicular speed
- Easier turns
- More space for parking



Design alternatives

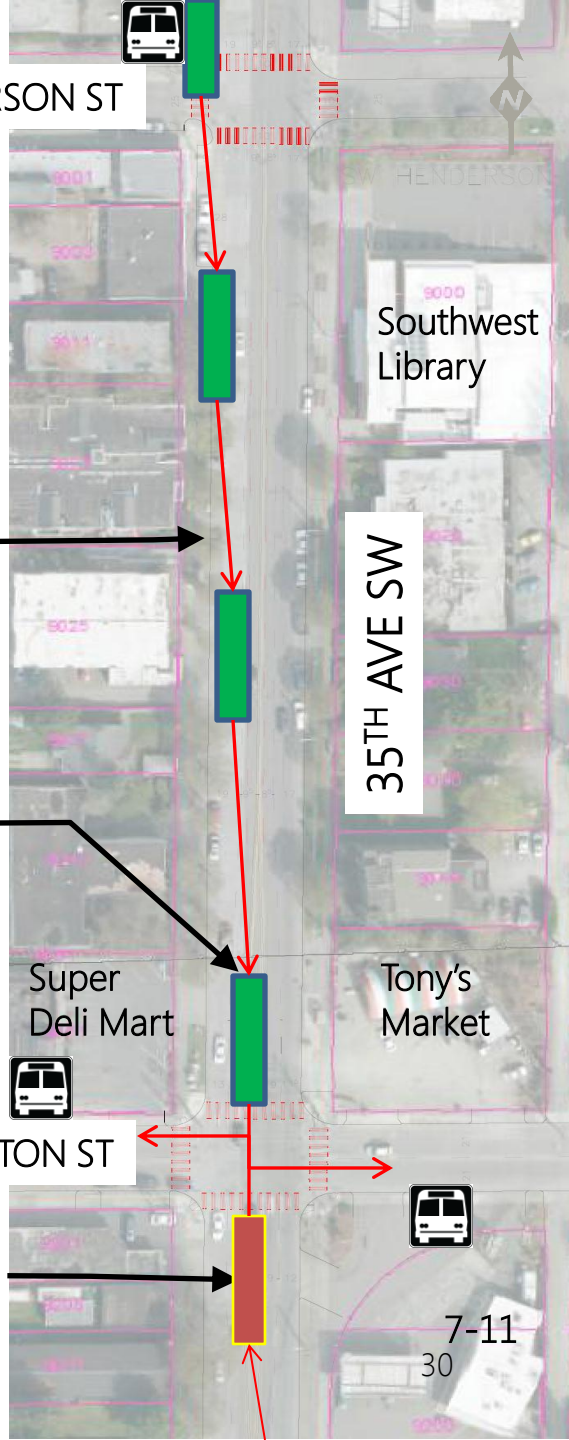
Existing conditions:

35th between Henderson and Barton

Route 21 must make 3 lane changes in one block (350 feet)

Insufficient capacity in turn pockets

Rapid Ride C Line must make 3 lane changes between Roxbury and Barton



Design alternatives

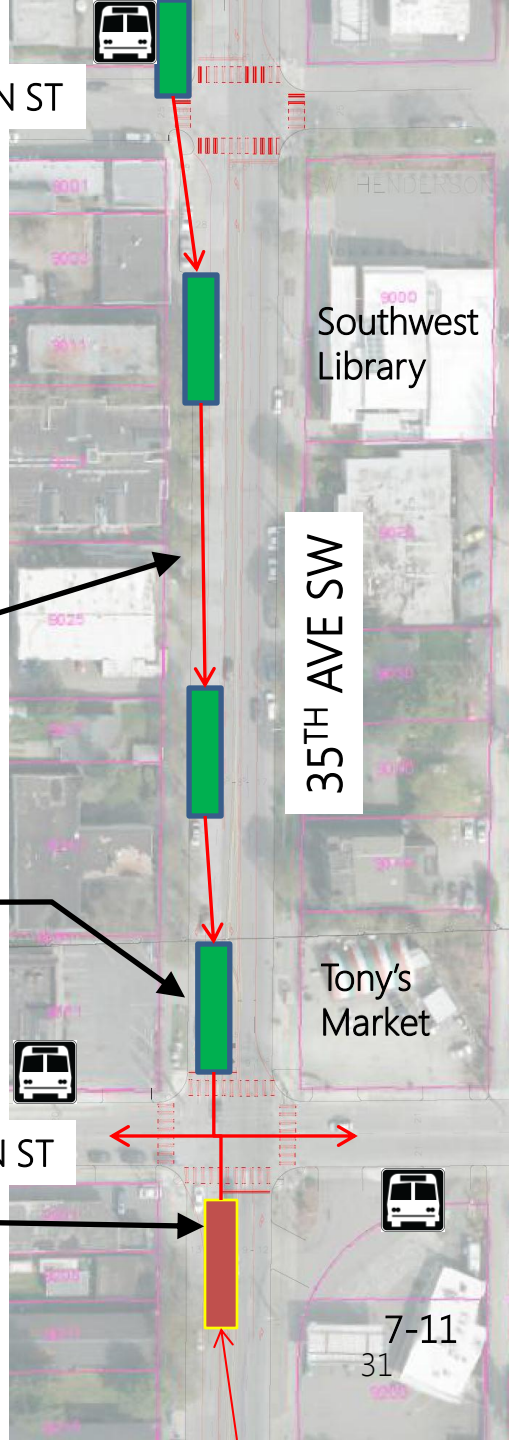
Proposed: 35th between Henderson and Barton

- Improves efficiency

Route 21 makes 2 lane changes in one block (350 feet) between Henderson and Barton

Maximum capacity in turn pockets

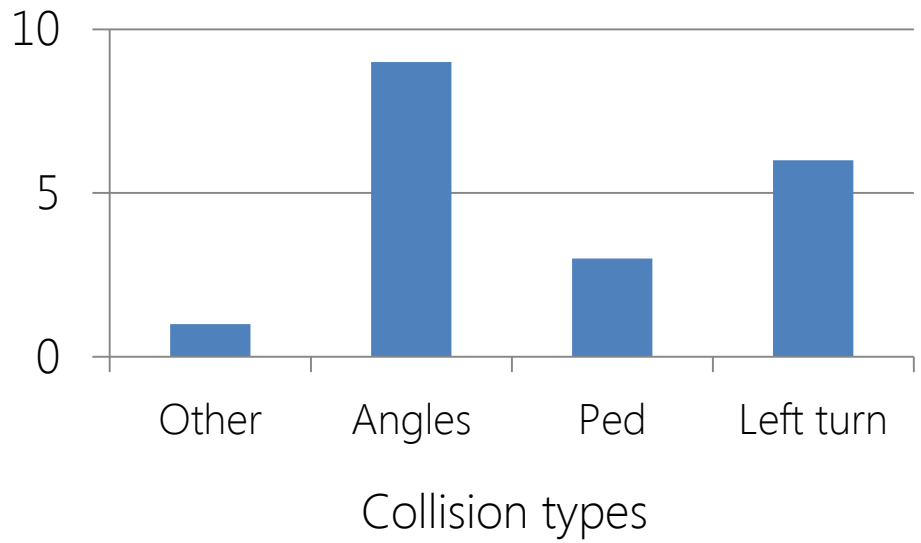
Rapid Ride C Line benefits from this configuration

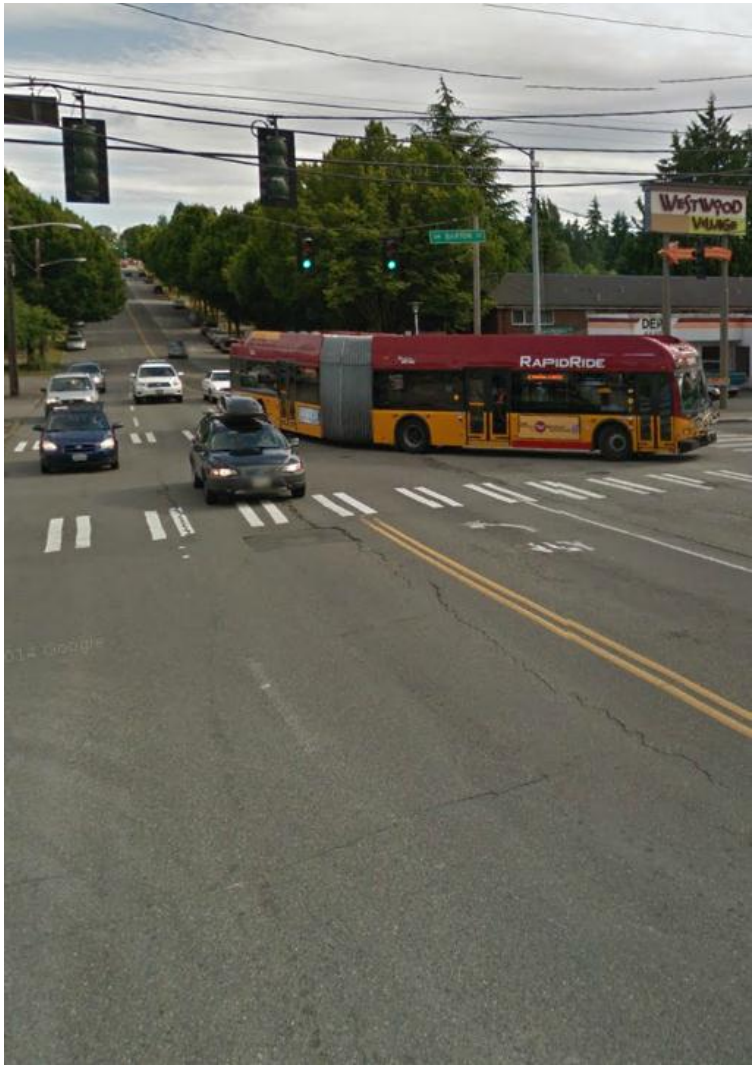


Design alternatives

Existing conditions: 35th and Barton

- 20 total collisions
- 13 injuries
- C line and 21/21X transit stops
- Turn pocket capacity issues





Design alternatives

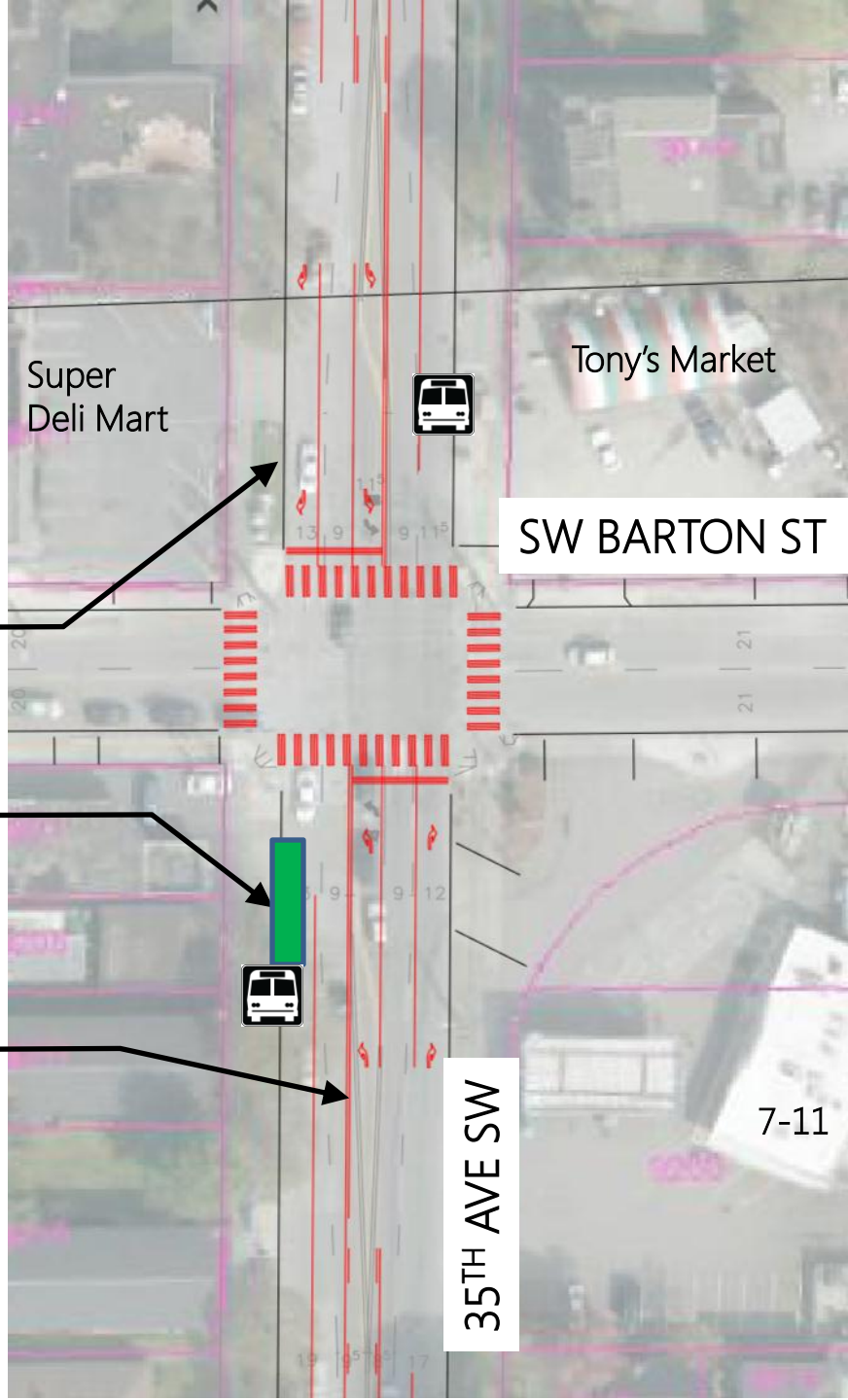
Proposed: 35th and Barton

- Reduces left turn collisions
- May reduce angle collisions
- Improves pedestrian conditions

New right turn pockets
- Possible bus and turn lanes

Buses pull out of the flow of traffic

Longer left turn pockets
- Easier movements for buses



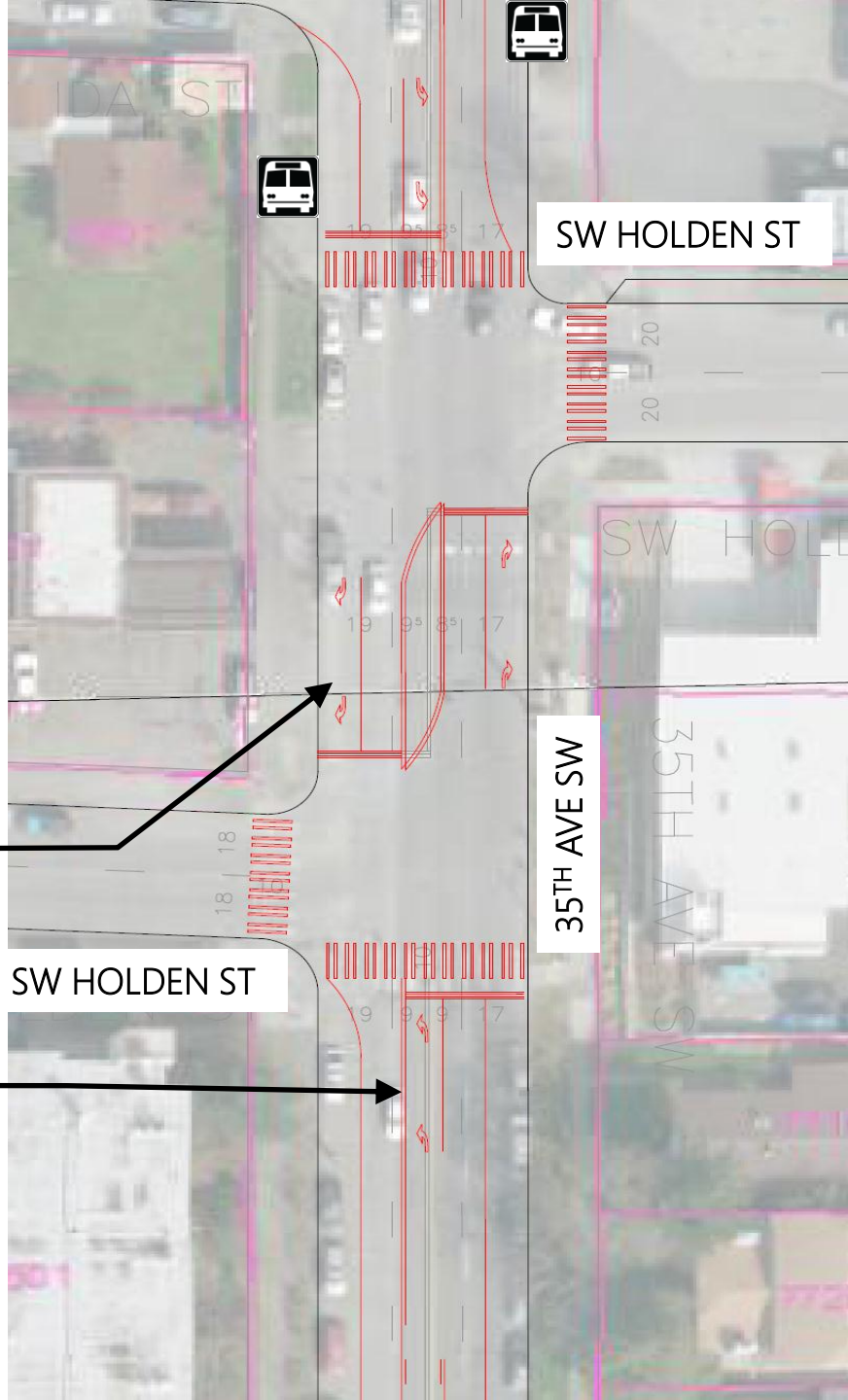
Design alternatives

Proposed: 35th and Holden

- Offset intersection
- Models show peak hour delays with new channelization
- Reduces left turn collisions
  - 7 crashes during study period
  - 5 related to left turns

New right turn pockets
- Possible bus and turn lanes

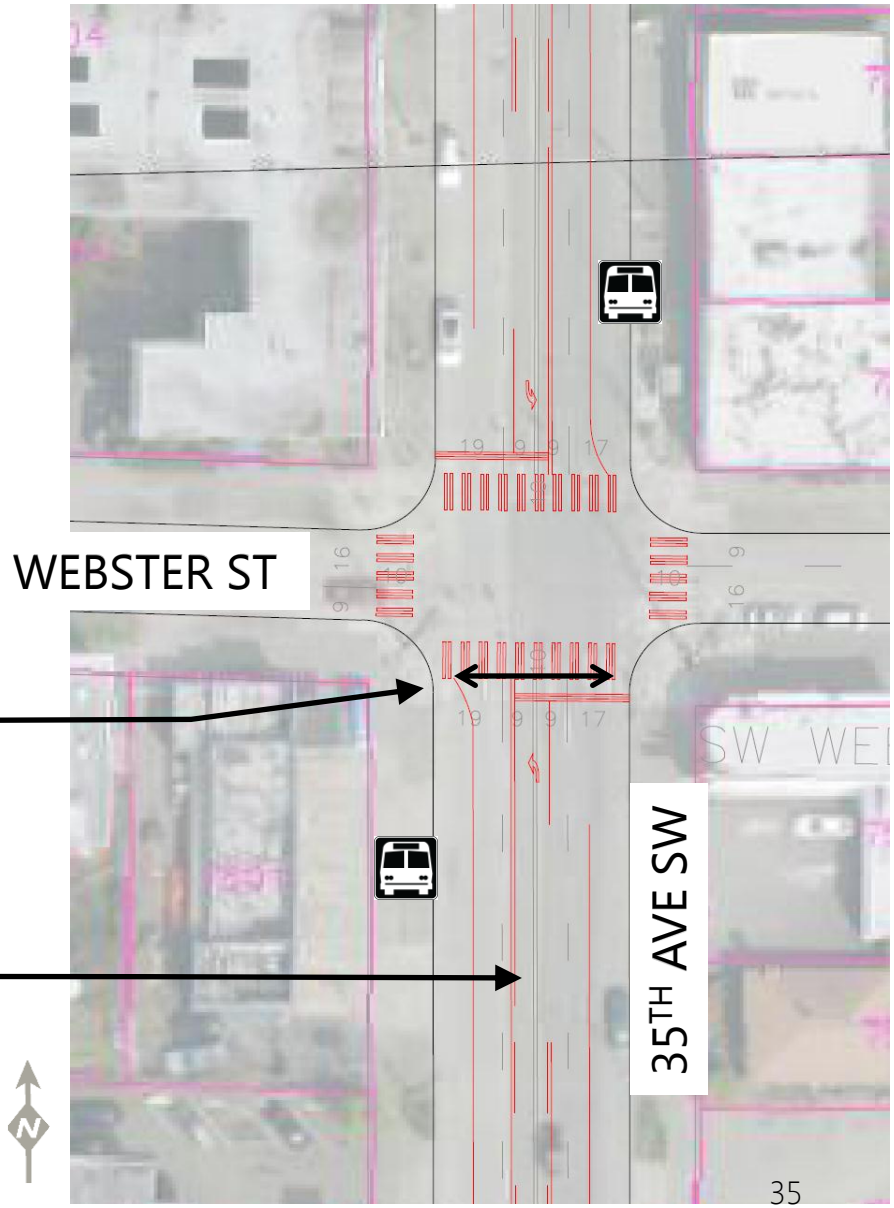
New left turn pockets



Design alternatives

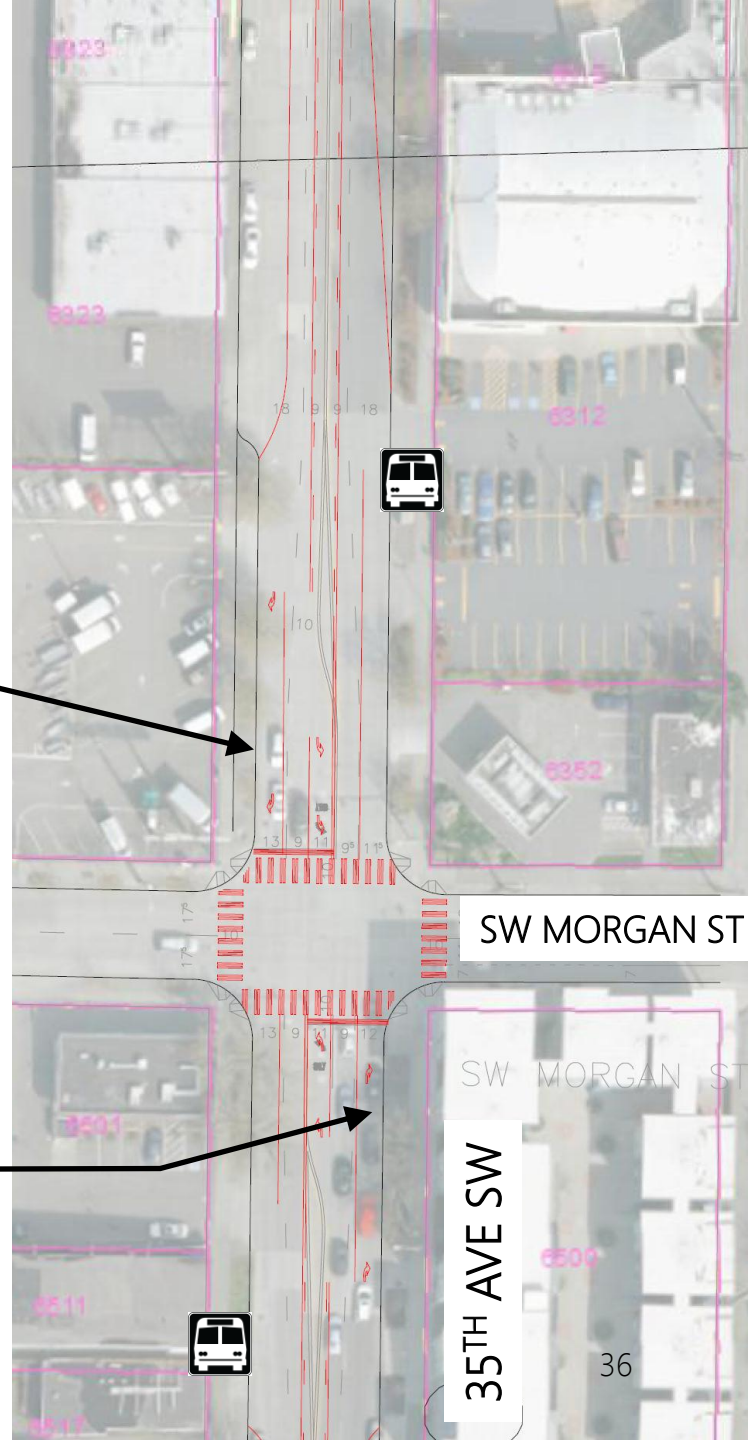
Proposed: 35th and Webster

- Reduces left turn collisions
  - 9 collisions during study period
  - 8 left turn crashes
- Reduces exposure for pedestrians



Design alternatives

- Improves efficiency
- Provides more structured roadway channelization



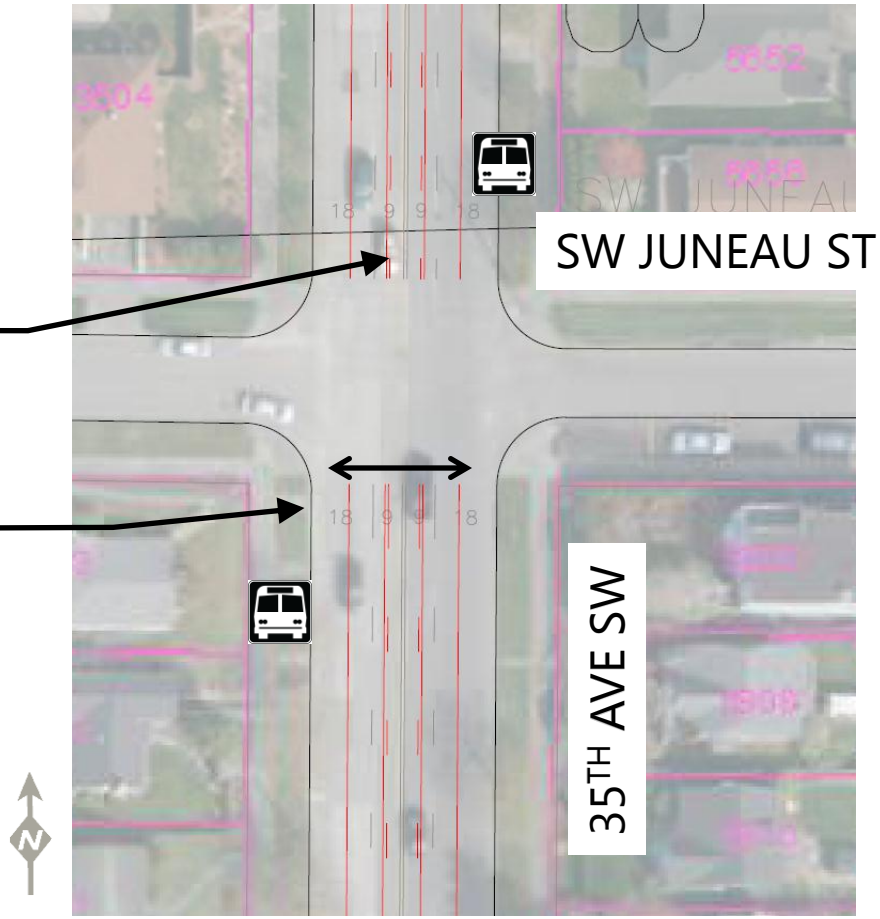
Design alternative A

Proposed: 35th and Juneau

- Reducing left turn collisions
- Reducing pedestrian exposure

Center turn lane

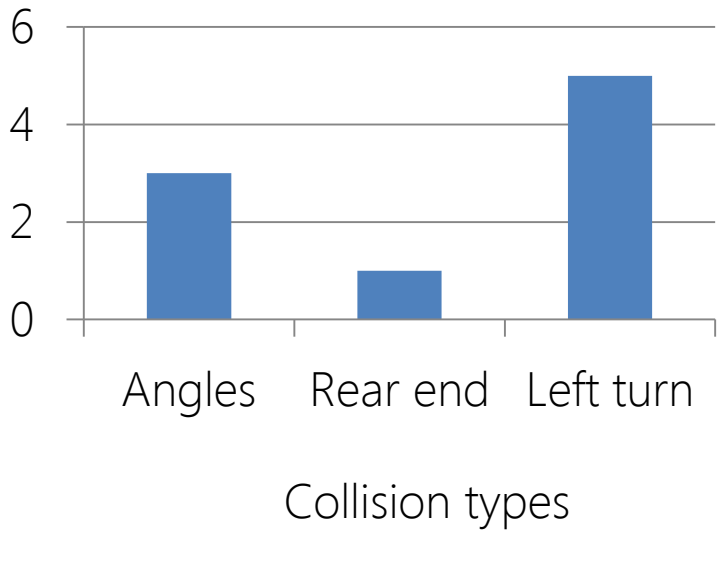
Fewer lanes of traffic to cross

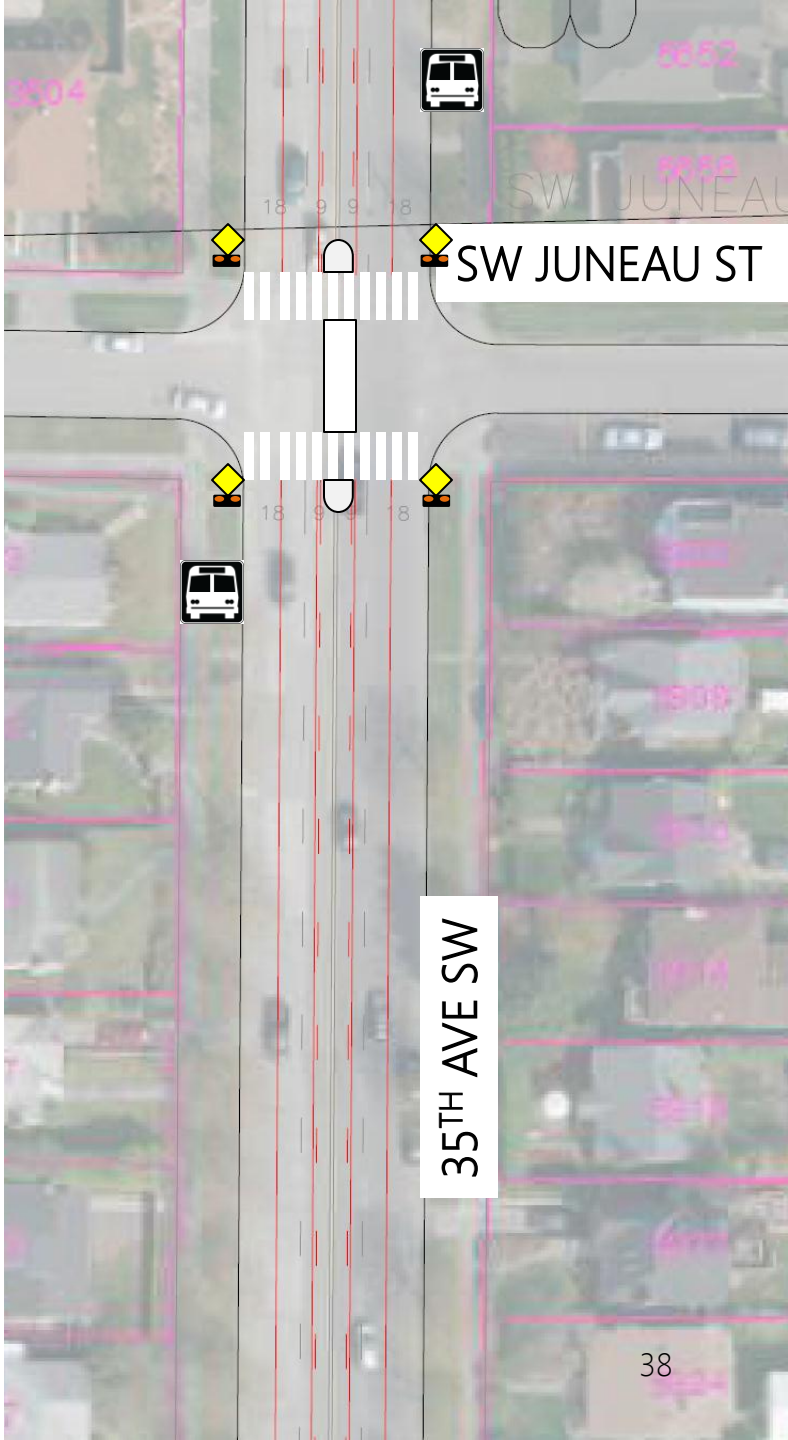


Design alternative A

Longer-term: 35th and Juneau

- Monitor left turn and angle crashes
- Potential crossing with turn restrictions (design for discussion only)
- Similar conditions at SW Graham St

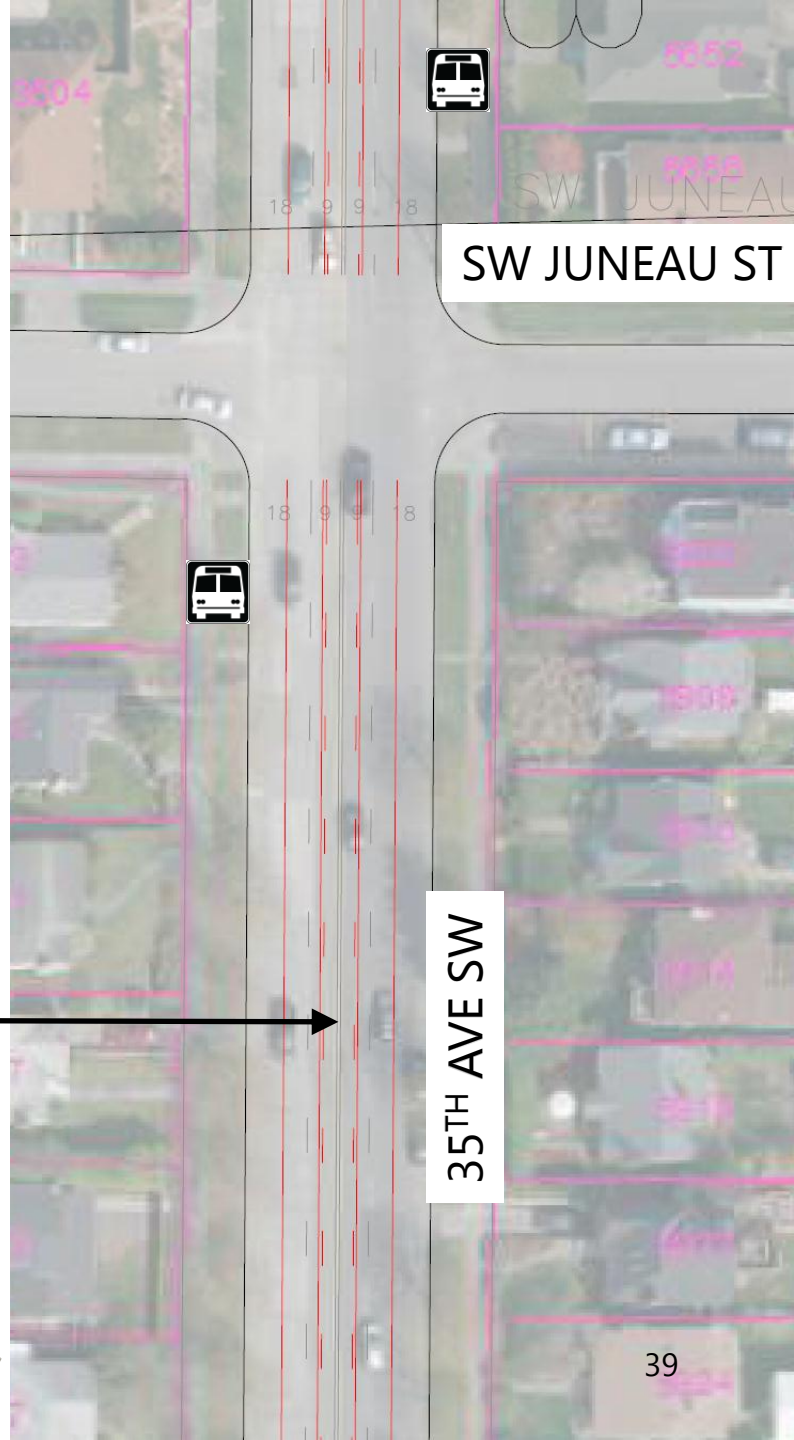




Design alternative B

Proposed: 35th and Juneau

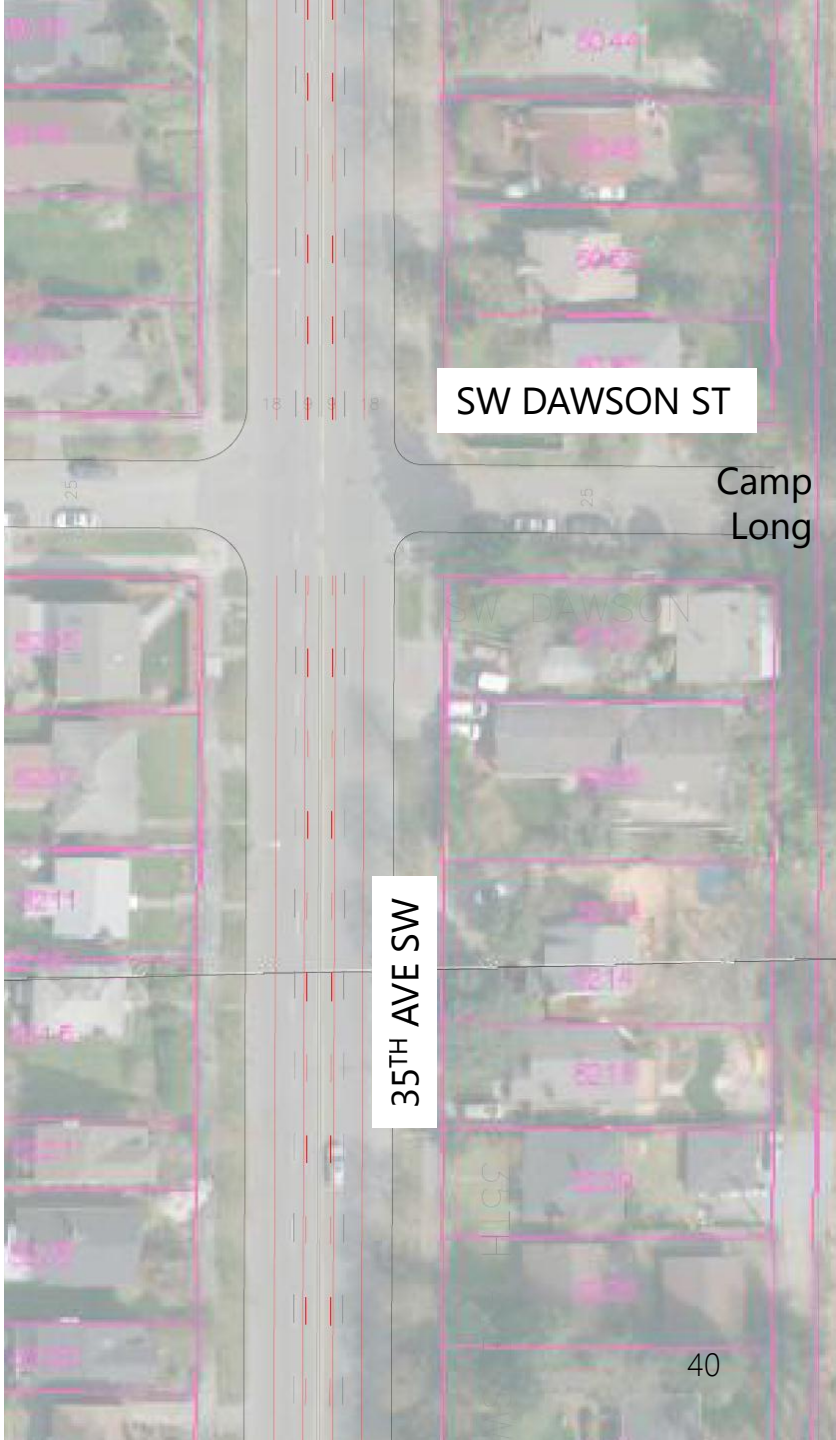
- Reduces left turn collisions
- Does not reduce the number of lanes pedestrian must cross
- Crossing may require traffic signal
- May consider extending rechannelization to Juneau



Design alternative A

Proposed: 35th and Dawson

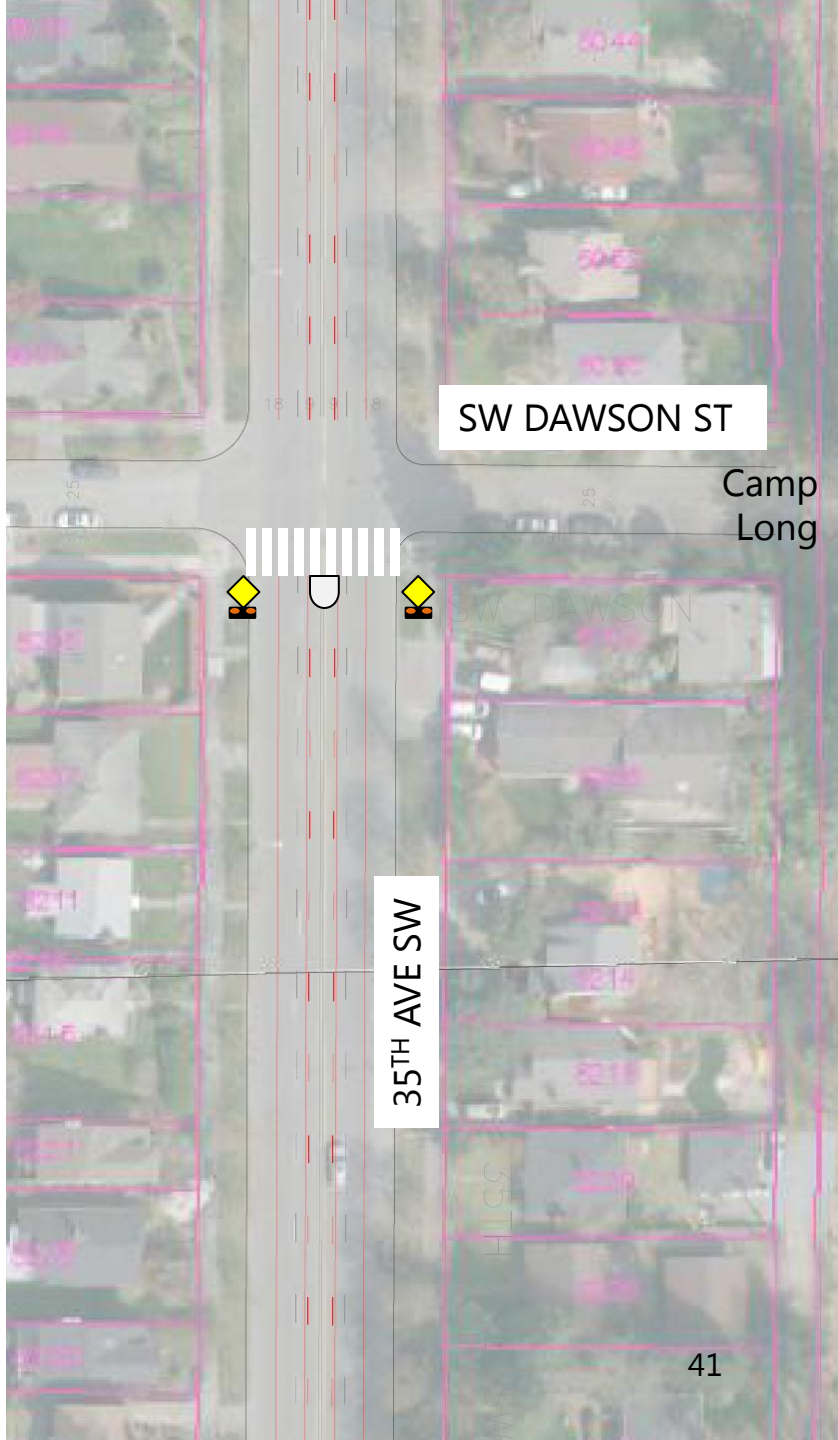
- Entrance to Camp Long
- Long-standing community request for crossing
- Reduces exposure for pedestrians
- Opportunity for new crossing



Design alternative A

Longer-term: 35th and Dawson

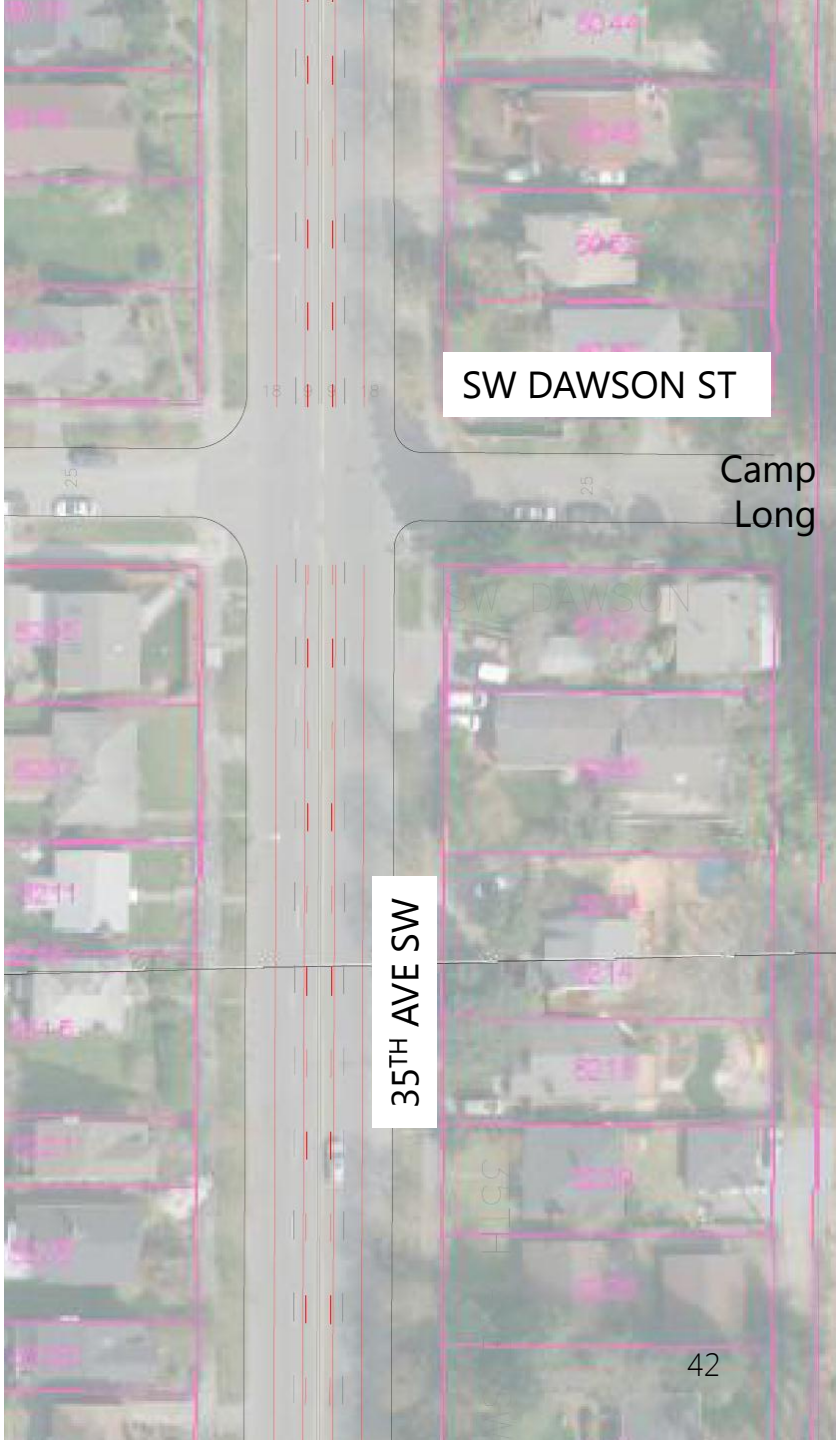
- Low cost treatments
  - Signs
  - Pavement markings
  - Flashing beacons
  - Potential refuge island



Design alternative B

Proposed: 35th and Dawson

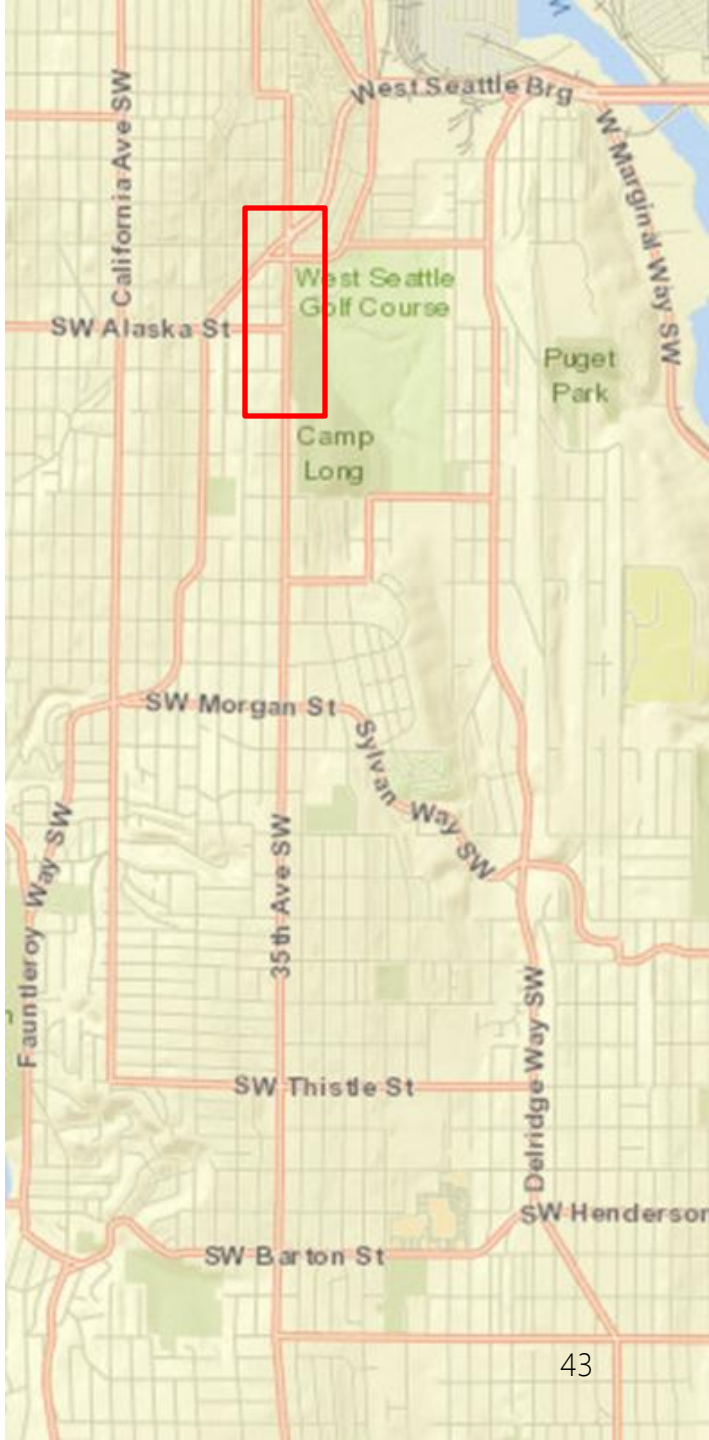
- Peak hour parking restrictions create a 3-lane roadway
- 3-lane configuration in effect for 4 hours on weekdays only
- Signal may be required for new crossing



Design alternatives

North of Edmunds

- Volumes near or above 25,000 ADT
- Existing channelization to remain
- Signal optimization



Design alternatives

Safety benefits of rechannelization

- Lower speeds, less severe crashes
- Less exposure for vulnerable users
- Reduction in crash frequency
- Easier turning movements

Street	Collisions	85% speed	10+ mph speeders	Volume change
Nickerson St	-23%	-21%	-94%	-1%
Fauntleroy Way SW	-31%	-1%	-13%	+0.3%
NE 125th St	-10%	-8%	-69%	+4%
NE 75th St	-50%	-13%	-76% to 90%	+0.3%

Next steps

October 28 3:30 PM to 5 PM	Issue Identification Meeting 2 Southwest Library
November through January	Outreach and conceptual designs
March 2015	Design Alternatives Review Meetings
June 2015	Final determination and outreach meeting
Late Summer 2015	Implementation begins

Questions?

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http://www.seattle.gov/transportation/35thSW.htm

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