

# City of Walla Walla Using Paving Projects for Striping Retrofits Isaacs Avenue Project

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NORTHWEST PAVEMENT  
MANAGEMENT ASSOCIATION

WEDNESDAY

OCTOBER  
24, 2018

*Presented by Monte Puymon, PE  
City of Walla Walla - Transportation Engineer*



























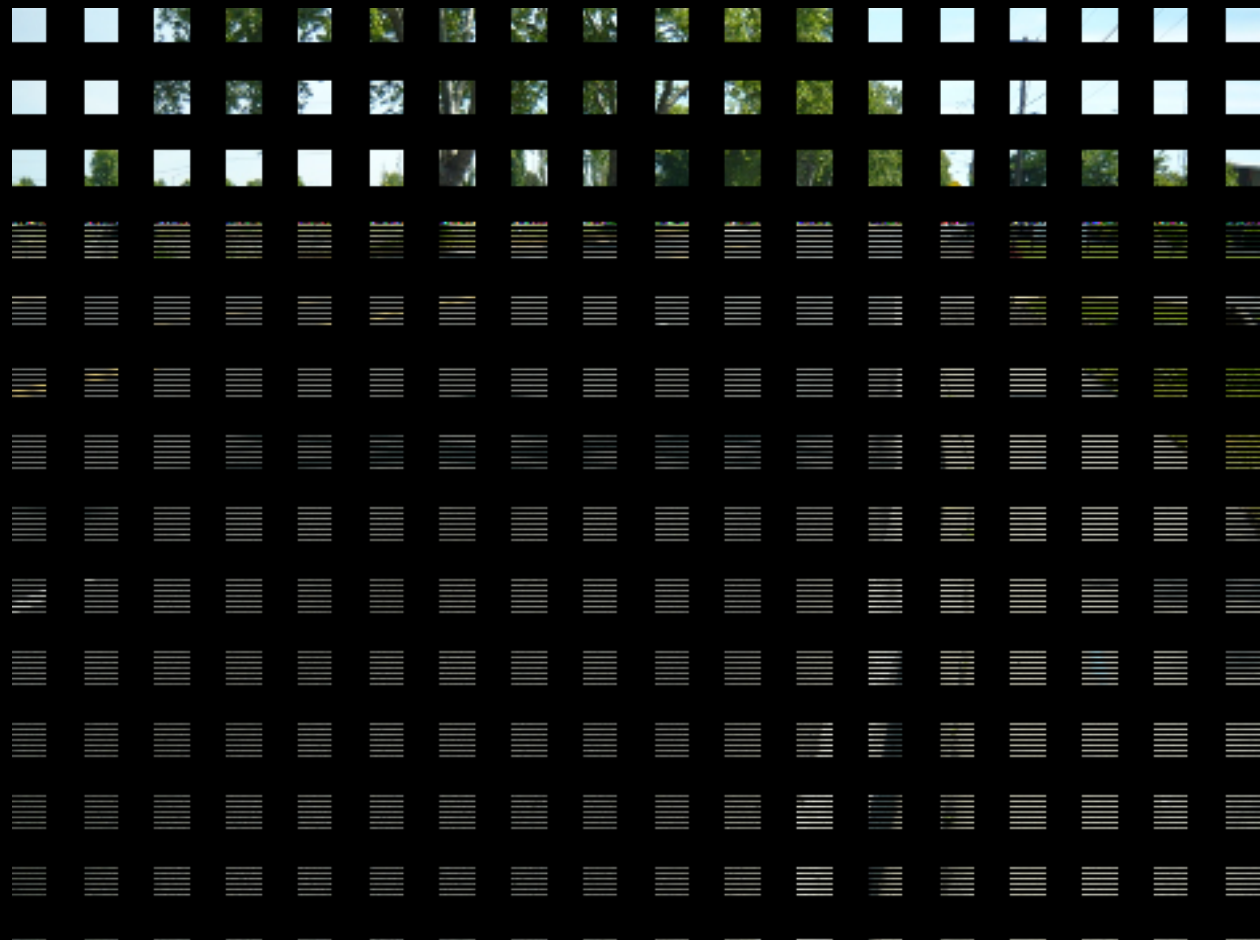


# PRESENTATION

## Why present on the Isaacs Avenue Project?

- *Road Diet or Rite Sizing or Smorgasbord*
  - *Safety*
  - *Efficiency*
  - *Modality*
- *Public Outreach (Rose Street vs. Isaacs Avenue)*
- *Before & After Photos*
- *Grant Success*





# CORRIDOR STUDY PROJECT PURPOSE

Develop recommendations for a safe, efficient, and inclusive roadway configuration by:

- *Accommodating the anticipated future traffic volumes*
- *Addressing safety for all other users of the roadway*
- *Maintaining consistency with National Traffic Standards and the City's Urban Area Comprehensive Plan*
- *Improving pavement and utilities*
- *Identify project improvements that will be used to request federal and state grants for the project to granting agencies such as the Transportation Improvement Board (TIB)*



# CORRIDOR STUDY PROJECT GOALS

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The goal of this project is to identify cost-effective transportation solutions that improve the following corridor characteristics from the City's Comprehensive Plan:

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- *Connects Schools*
- *Safe and Efficient System*
- *Equity*
- *Economic Benefit*
- *Mobility and Growth*
- *Neighborhood Livability*
- *Transportation Choices*

# Corridor Characteristics



# MOTOR VEHICLE: 24-HOUR VOLUME TRENDS



## East of Valencia Street

### Average Daily Traffic

*Existing: 7,900*

*Future: 8,700*

**Heavy Vehicles: 2%**

**85<sup>th</sup> Percentile Speed: 34 mph**

**Posted Speed: 30 mph**

## East of Clinton Street

### Average Daily Traffic

*Existing: 7,300*

*Future: 8,000*

**Heavy Vehicles: 2%**

**85<sup>th</sup> Percentile Speed: 32 mph**

**Posted Speed: 30 mph**

## East of Roosevelt Street

### Average Daily Traffic

*Existing: 9,900*

*Future: 10,900*

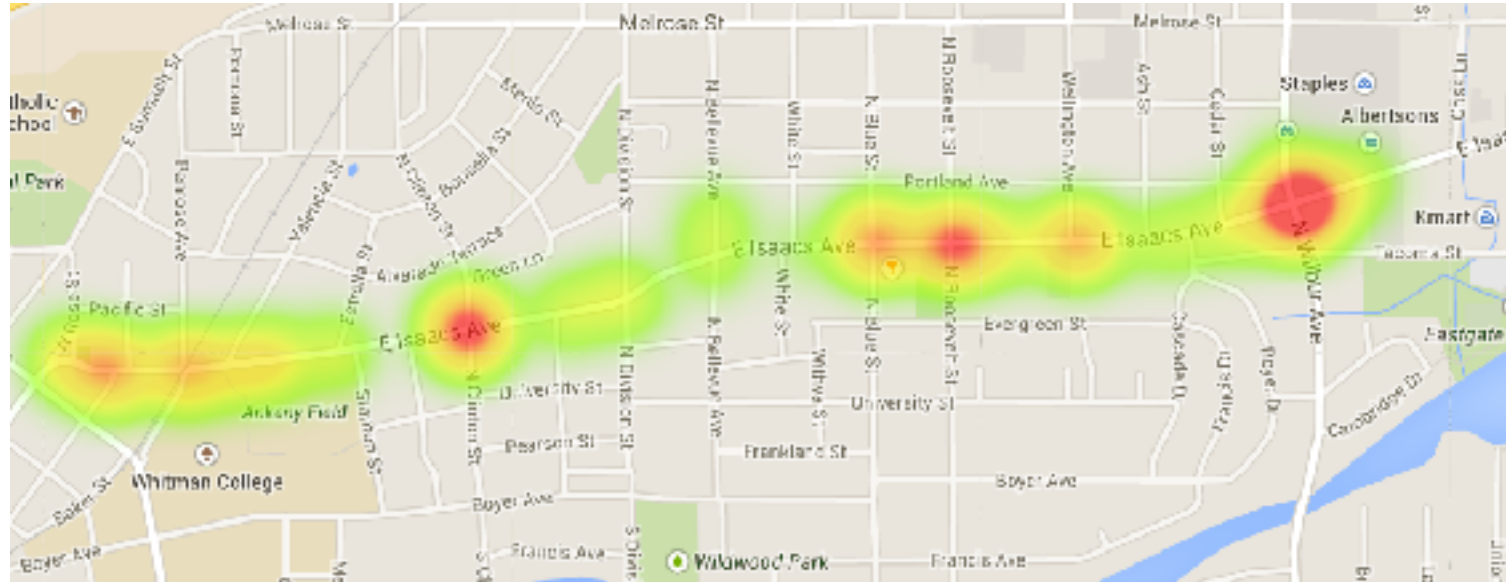
**Heavy Vehicles: 2%**

**85<sup>th</sup> Percentile Speed: 32 mph**

**Posted Speed: 30 mph**

# SAFETY/COLLISION ANALYSIS

*Number and Severity “Heat Map” of Collisions along Isaacs Avenue (2010-2013)*



- *A total of 102 collisions occurred along the study corridor between 2010 and 2013, 26 of these occurred when it was dark.*
- *The Isaacs Avenue Study corridor has a collision rate of 5.59 collisions per million vehicle-miles traveled (VMT)*
- *This collision rate is more than triple the statewide average of 1.72 collisions per million VMT for similarly classified roadways*



# Public Outreach

# 2015 ALTERNATIVES DEVELOPMENT/PUBLIC PROCESS

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## Stakeholder Outreach

- Stakeholder interviews with 15 stakeholder groups were conducted to provide insight (Starting in January)

## Committee Feedback

- Stakeholder Advisory Committee Meetings (March, April & June)

## Door to Door Canvassing

- Blue Mountain Action Council has gone door to door with every property fronting Isaacs Avenue and informed them about both Public Events (April & June)

## Elected/Appointed Official Oversight

- City Council Meetings (March, April, June & July)

## Community Concerns

- Public Event #1 (April)
- Public Event #2 (June)



# STAKEHOLDER GROUPS

## **Stakeholder Groups Include**

- Bicycle and Pedestrian Advisory Committee
- Development Services
- Infrastructure Improvement Committee
- Local Business Owners
- Sustainability Committee
- Transportation Improvement Advisory Committee
- Valley Transit
- Walla Walla Public Schools
- Water and Wastewater Advisory Committee
- Whitman College
- Port of Walla Walla
- Walla Walla Fire Department
- Walla Walla Police Department
- Safe Travels Alliance
- Green Park PTA

# Four- to Three- Lane Conversion (Road Diet or Rite Sizing or Smorgasbord)



# SAFETY

## 4- to 3-Lane Conversion Benefits

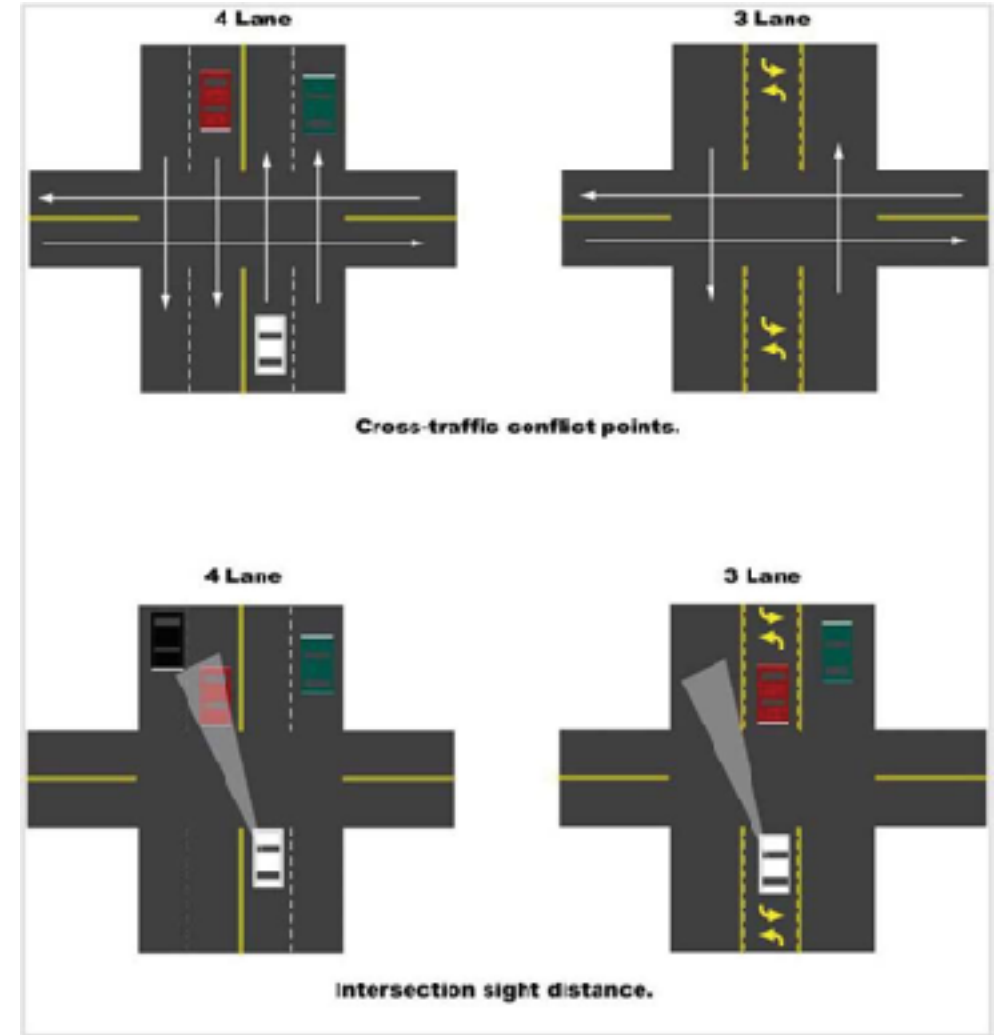
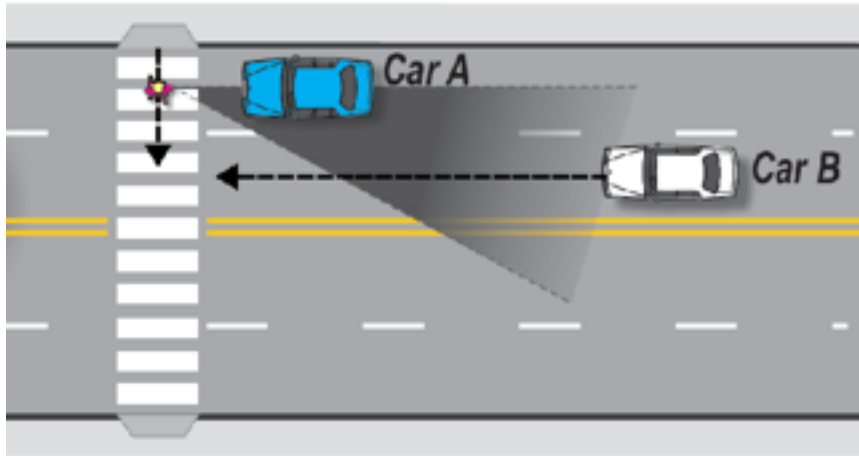
- Reduces travel speeds
- Center two-way left turn lane reduces rear end collisions
- Highway Safety Manual predicts a collision reduction of 29%
- Improves right turning radius for trucks
- Bike lanes provide bicycles with designated roadway space
- Allows for Pedestrian Median Islands



# SAFETY

## Collision Reductions

- Potential crash reduction 20-60%
- Removes conflict points
- Improves sight distance (multiple threat)



Reference: Center for Transportation Research and Education, Guidelines for the Conversion of Urban Four-Lane Undivided Roadways to Three-Lane Two-Way Left-Turn Facilities. (2001)



# CONCEPTUAL ALTERNATIVES REVIEW

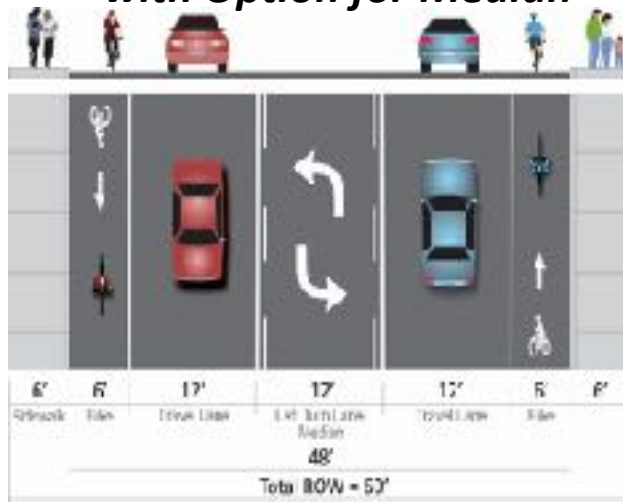
**No-Change**



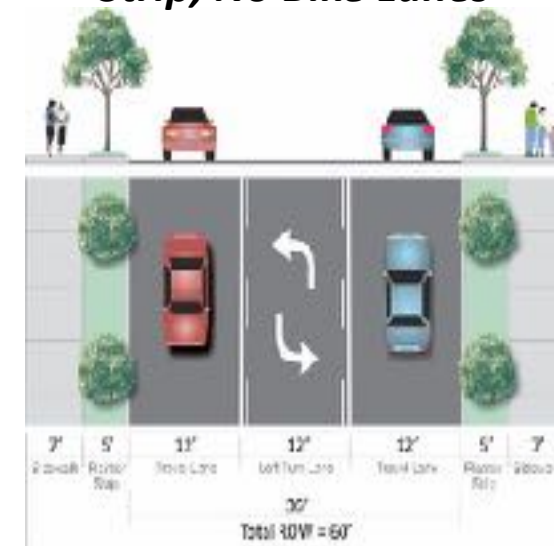
**Alt. 1: Wider Sidewalks with Bike Lanes**



**Alt. 2: Wider Travel and Bike Lanes with Option for Median**



**Alt. 3: Wider Sidewalks with Planter Strip, No Bike Lanes**



# Capacity?





# CORRIDOR OPERATIONS

- The average daily traffic on Isaacs Avenue is currently 8,500 vehicles per day
- Daily traffic is expected to increase to 10,100 vehicles per day in the year 2035
- Corridor travel times are slightly improved under three-lane alternatives (5% improvement) due to the peak hour traffic levels and the improved traffic signal operations (left turn signal phasing)

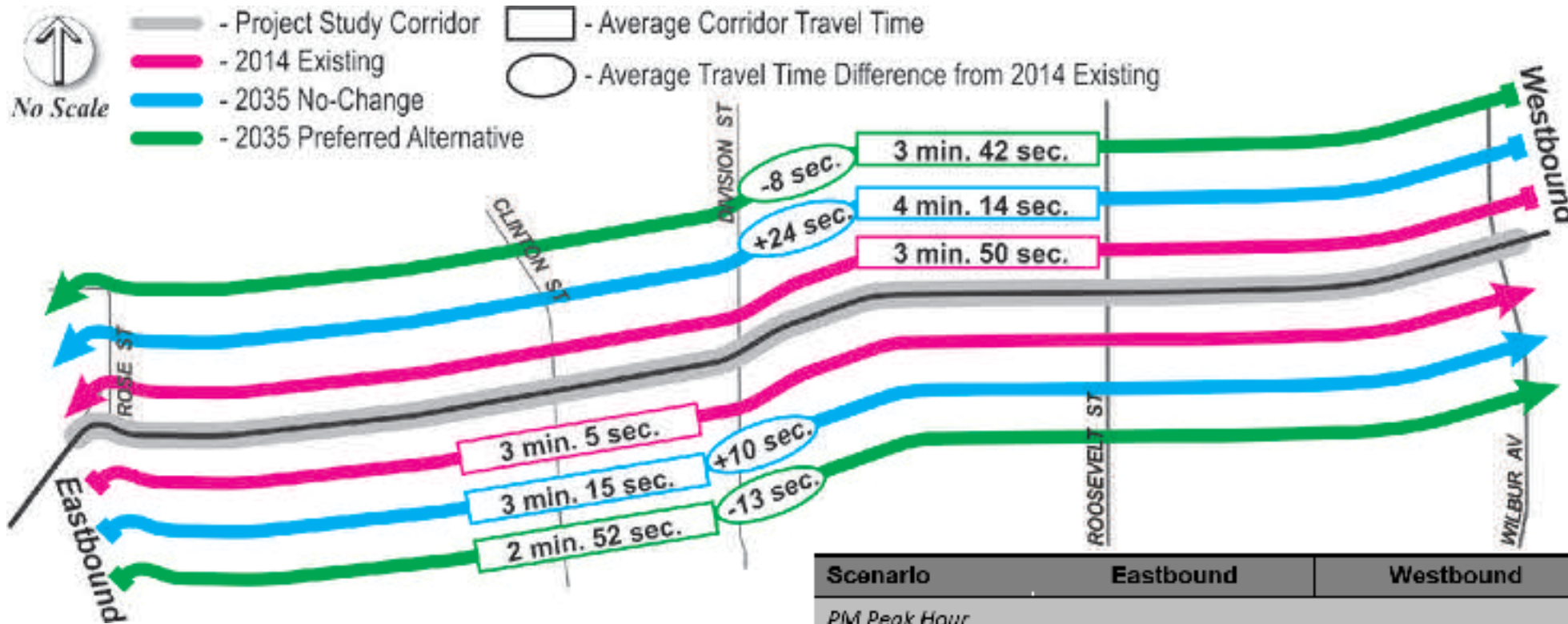
*Arterial Capacity by Cross-Section*

Arterial Cross-Section	Planning Level Capacity (vehicles per day)
Three-lane (1 per direction, 1 center turn)	18,000 – 20,000
Four-Lane (2 per direction)	20,000 – 28,000
Five-Lane (2 per direction, 1 center turn)	36,000 – 42,000

Note: The lower end of the capacity range is for facilities with little to no access control (a significant number of access points), while the higher capacity is for facilities with good access control (limited driveways).



# CORRIDOR TRAVEL TIMES



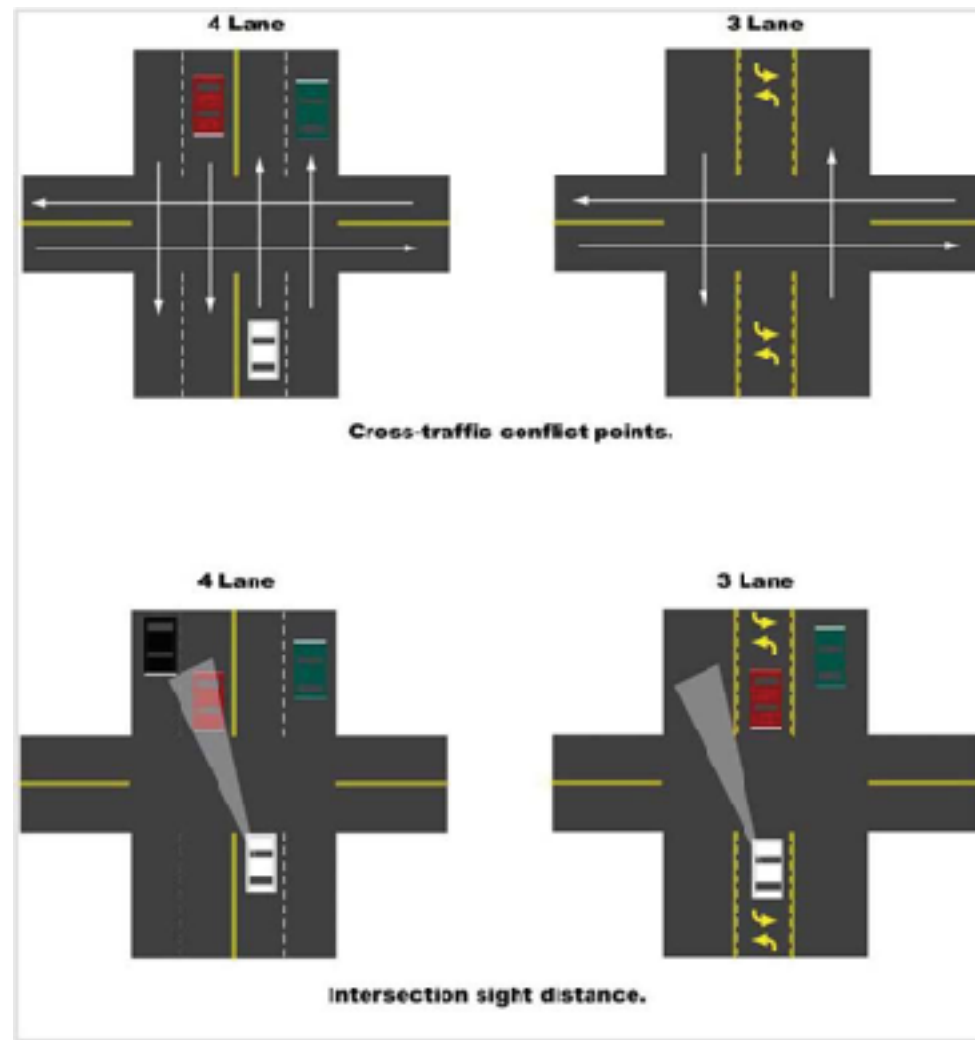
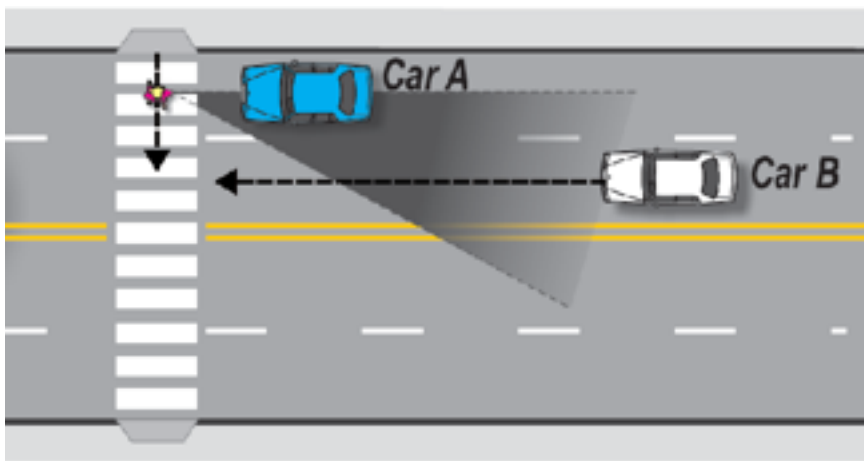
Scenario	Eastbound	Westbound	Net Benefit
<i>PM Peak Hour</i>			
2014 Existing	3 minutes and 50 seconds	3 minutes and 5 seconds	
2035 No-Change	4 minutes and 14 seconds	3 minutes and 15 seconds	+34 seconds from existing travel time
2035 Preferred Alt.	3 minutes and 42 seconds	2 minutes and 52 seconds	21 seconds from existing travel time
<i>Midday Peak Hour</i>			
2014 Existing	3 minutes and 57 seconds	3 minutes and 3 seconds	
2035 No-Change	4 minutes and 20 seconds	3 minutes and 20 seconds	+40 seconds from existing travel time
2035 Preferred Alt.	3 minutes and 51 seconds	2 minutes and 55 seconds	14 seconds from existing travel time



# SAFETY

## Collision Reductions

- Potential crash reduction 20-60%
- Highway Safety Manual predicts 29% reduction
- Removes conflict points
- Improves sight distance (multiple threat)



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# Similar 3-Lane Conversion Projects



Stone Way (Seattle)

Image: Seattle Stone Way Rechannelization  
Before and After Study



E Street (Washougal)



Baxter Street (Athens, GA)



Fourth Plain Blvd  
(Vancouver)



US 18 (Clear Lake, IA)

# SIMILAR PROJECTS SUMMARY

	Isaacs Avenue	Fourth Plain Blvd (Vancouver, Washington)	Baxter Street (Georgia)	Stone Way (Seattle, Washington)	US 18 (Iowa)	E Street (Washougal, Washington)
<b>Functional Classification</b>	Principal Arterial	Principal Arterial	Arterial	Minor Arterial	State Highway	Major Arterial
<b>Average Daily Traffic (ADT)</b>	8,500	17,000	20,000	13,000	12,000	11,000
<b>Posted Speed</b>	30 mph	30 mph	35 mph	30 mph	45 mph	30 mph
<b>Project Length</b>	1.5 mi	1 mi.	1.9 mi.	1.2 mi.	1.1 mi.	1.8 mi
<b>Surrounding Land Use</b>	Residential, University, Commercial	Residential, Commercial	Commercial, Residential	Commercial	Commercial, Residential	Commercial, Residential, Industrial
<b>Collision Reduction</b>	-	-52%	-53%	-14%	-65%	-

\*Most data based on the *Road Diet Handbook: Setting Trends for Livable Streets*; Jennifer Rosales, September 2005.



# Public Feedback

# CONCEPTUAL ALTERNATIVES REVIEW

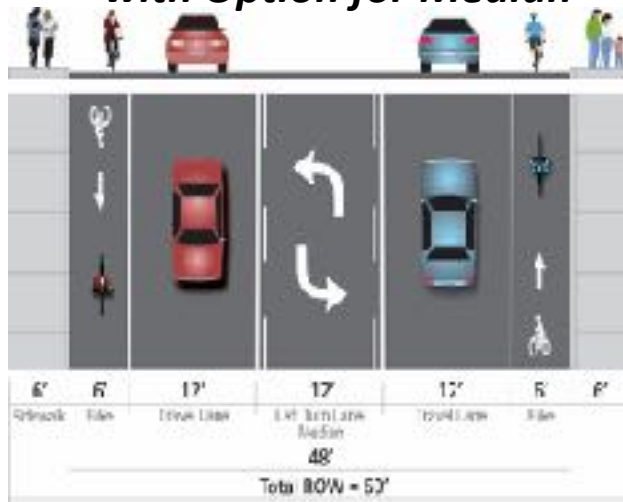
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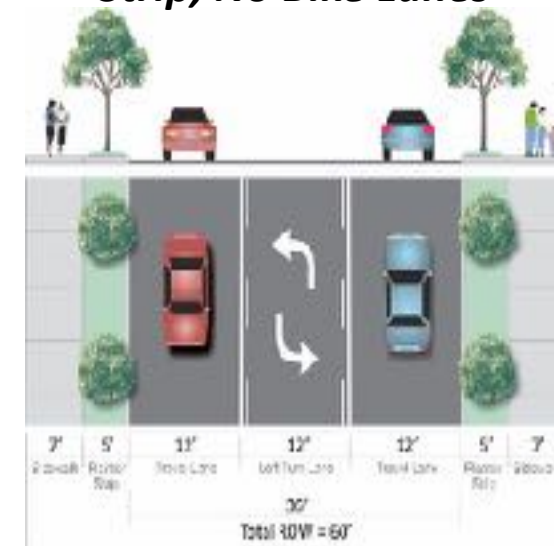
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# PUBLIC FEEDBACK SURVEY RESULTS

Street Design Alternatives	Survey Participant Preference Ranking				Score
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
No-Change	12	2	3	32	1.88
Alt 1: Wide Sidewalks, Bike Lanes	8	28	13	3	2.79
Alt 2: Wide Lanes, Bike Lanes, Median Option	27	11	9	3	<b>3.24</b>
Alt 3: Wide Sidewalk, Planter Strip, No Bike Lanes	16	11	16	2	<b>2.91</b>

- 62 total surveys (not everyone ranked each alternative)
- Score based on a weighted average
- Alternative 2 (3-lane with bike lanes) scored the highest
- No-Change scored the lowest



# TIER 1 SCREENING RESULTS

**No-Change**

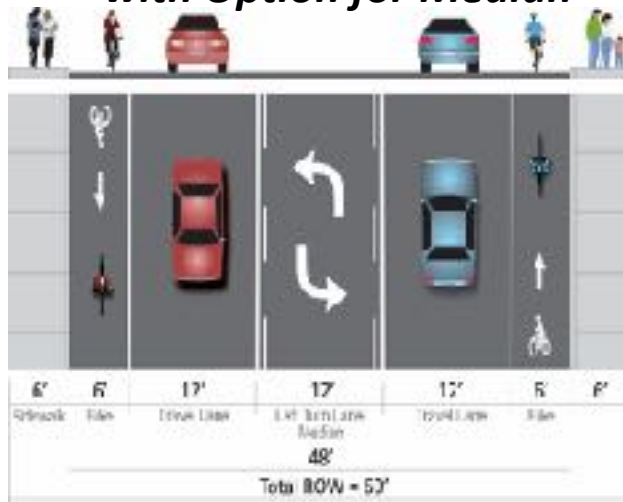


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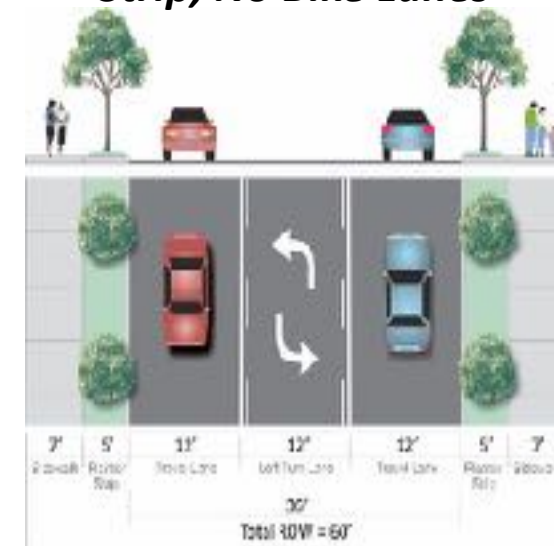


## ADVANCED ALTERNATIVES

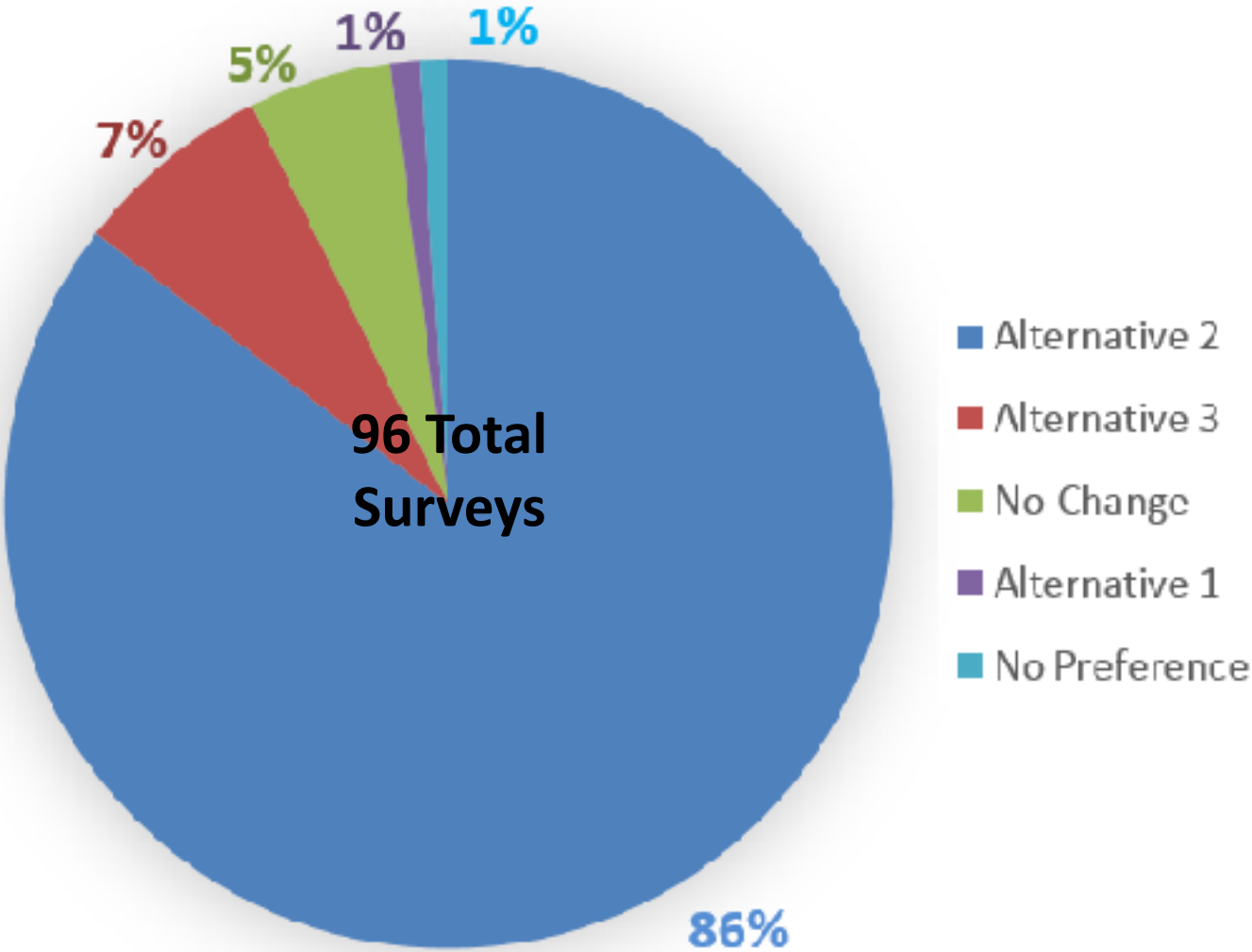
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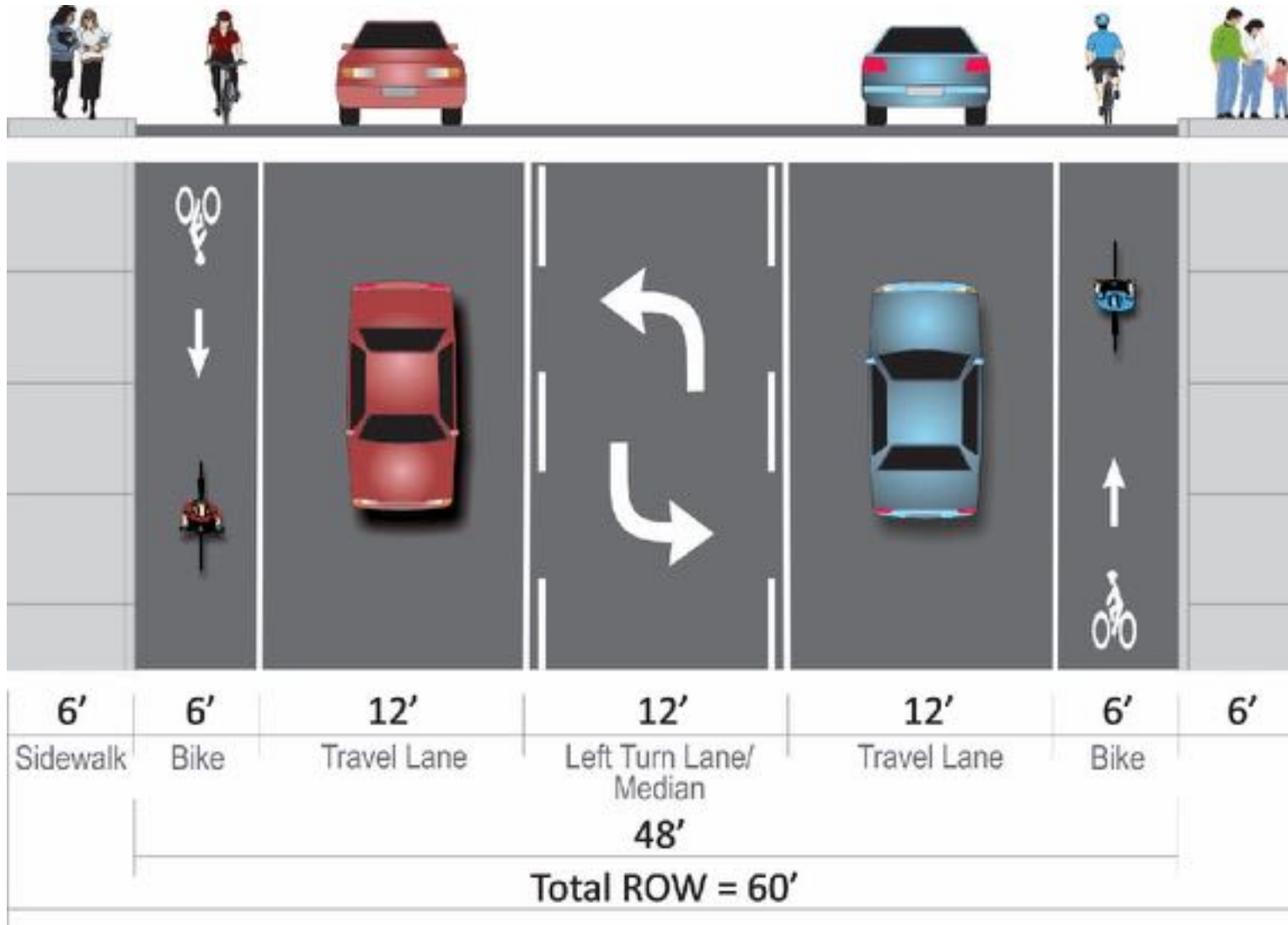
**Alt. 3: Wider Sidewalks with Planter Strip, No Bike Lanes**



# PUBLIC FEEDBACK SURVEY RESULTS (ROUND 2)



# PREFERRED ALTERNATIVE



## Alt. 2: Wider Travel Lanes and Bike Lanes with Option for Median

- *Scored highest on Tier 2 Screening*
- *Scored highest on public surveys*
- *Scored second highest on stakeholder surveys (Alt 3 scored highest)*
- *Scored highest on Tier 1 Screening*

# Before & After Photos



































# Grant Solicitation

# GRANT APPLICATIONS

## **Awarded Applications = \$9.1 Million**

- \$ 466K WS-DOE Stormwater Financial Assistance Program Grant
- \$ 866K WSDOT – Pedestrian & Bicycle Safety Program
- \$ 2.0M Transportation improvement Board – Urban Arterial Program Grant
- \$ 2.2M Walla Walla Valley MPO – Surface Transportation Block Grant
- \$ 3.6M Transportation Improvement Board – Urban Arterial Program Grant

## **Pending or Rejected Applications = \$5 Million**

- \$ 984K WS-DOE Stormwater Financial Assistance Program Grant
- \$ 4M Washington State Public Works Board – Trust Fund Loan

# Questions

