



**BEND MPO**  
Metropolitan Planning Organization

# **Policy Board Meeting**

## **July 21, 2020**

# Agenda Item #1 – Call to Order & Introductions – Justin Livingston, Chair

## Policy Board

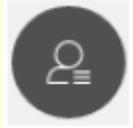
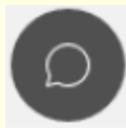
- Justin Livingston, City of Bend, MPO Chair
- Anthony DeBone, Deschutes County, MPO Vice-Chair
- Bob Townsend, ODOT Region 4
- Barb Campbell, City of Bend
- Chris Piper, City of Bend

## Bend Metropolitan Staff

- Tyler Deke, Manager
  - Jovi Anderson, Program Coordinator
  - Andrea Napoli, Senior Planner
  - Cameron Prow (Type-Write II, Recorder)
- 
- Members of the public, guests will be listed by meeting host

# Virtual Meeting Guidelines

- This meeting will be recorded for note taking purposes.
- You will be on mute when you first join the meeting. Please mute yourself when you are not speaking
-  If you are having technical difficulties during the meeting, please use the chat function to send a message to the host.
-  If you have a question or would like to comment, please use the **raise hand** function by clicking on the participants icon; in the participants pane, look at the bottom right corner and click on the hand icon to raise your hand. Please click on the icon again to lower your hand when you are done. (Very Small-Bottom Right)
- Phone-only attendees can press \*3 to raise their hands and are asked to wait until someone calls on them. The host, presenter, or panelist can see which attendees have raised their hands and then unmute each one in turn so they can ask a question. If attendees want to lower their hands after raising them, they can press \*3 again.



- 
- **Agenda Item #2 – Public Comment – Justin Livingston**
  
  - **Agenda Item #3 – Meeting minutes – Justin Livingston**
    - **Recommended Language for Motion: I move approval of the June 16, 2020 draft meeting minutes as presented**

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## **Agenda Item #4 – Andrea Napoli**

### **STBG Funding Application Process**

# Review

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- Jan/Feb PB Meetings
  - Policy Board agrees to multi-year allocation of STBG funds
    - Aligns with our MTIP process
  - 60% of annual STBG to City for maint./pres./ ITS projects and 10-15% to “other” projects
  - Staff and TAC to develop funding process for “other” projects
- May PB Meeting
  - Staff update on process development: TAC workgroup formed, developing project application criteria and ranking
- June TAC Meeting
  - TAC reviews/edits draft application criteria and ranking, recommends approval of application to Policy Board

# STBG Program

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- Flexible funding source, eligible project examples:
  - Roadway projects
  - Capital costs for transit projects, purchased service
  - Signal & technology projects
  - Bicycle and pedestrian improvements, including trails
  - Safety projects
  - Planning projects
  - Travel options programs (including Safe Routes to Schools)

# STBG Federal Requirements

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- Federal requirements state:
  - Competitive project selection process needed for MPO's that obligate STBG dollars to entities seeking funding
  - Project selection process should include development of criteria to assist in funding prioritization

# TAC Role

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- TAC workgroup formed
  - Starting point for criteria topics: MTP goals/policies
  - Criteria language refined by group
  - Criteria ranking/scoring system decided by group
- Full TAC finalized draft criteria and ranking
- Note: *intent of criteria is simply to be used as a tool to evaluate project submittals*

# TAC Recommended Project Application Criteria & Ranking

Final Draft, Criteria Language	Level of Priority & Max. Points
Project addresses a known <b>safety</b> concern, or enhances safety	<p style="text-align: center;"><b>Higher</b> <b>6 Points Max.</b></p>
Project increases system capacity, quality, and/or connectivity for <b>multiple users</b> ( <i>drivers, cyclists, pedestrians, transit users</i> )	
Project increases <b>system efficiency</b> ( <i>without increasing capacity or at lower cost</i> )	
Project improves transportation system or provides transportation-related benefit to <b>those that do not drive</b>	
Project reduces <b>VMT and/or emissions</b>	
Project includes <b>cost sharing</b> beyond match and/or includes investment from <b>other funding sources</b>	<p style="text-align: center;"><b>Lower</b> <b>3 Points Max.</b></p>
Project supports <b>economic development</b>	
Project encourages <b>freight</b> movement on appropriate routes (designated routes/arterials)	

# Overview of Application Process

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1. Announce project solicitation and submittal deadline.
2. Application period closes; staff begins application review.
3. Technical Advisory Committee (TAC) application workshop: Opportunity for applicants to present projects.
4. TAC to review applications, evaluate projects, and make funding recommendation to the Policy Board.
5. Applicant presentations to Policy Board. Policy Board awards funds.
6. Bend MPO prepares Draft Metropolitan Transportation Improvement Program (MTIP) (*or amend existing MTIP*).

# Current Request and Next Steps

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- Policy Board is being asked to consider approval of the STBG Project Application.
- Staff to determine timing of project application solicitation for 2021-2024 funds.

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## **Agenda Item #5 – Andrea Napoli**

**Mobility Hubs Grant Application –  
Letter of Support**

# TGM Grant Application Letter of Support

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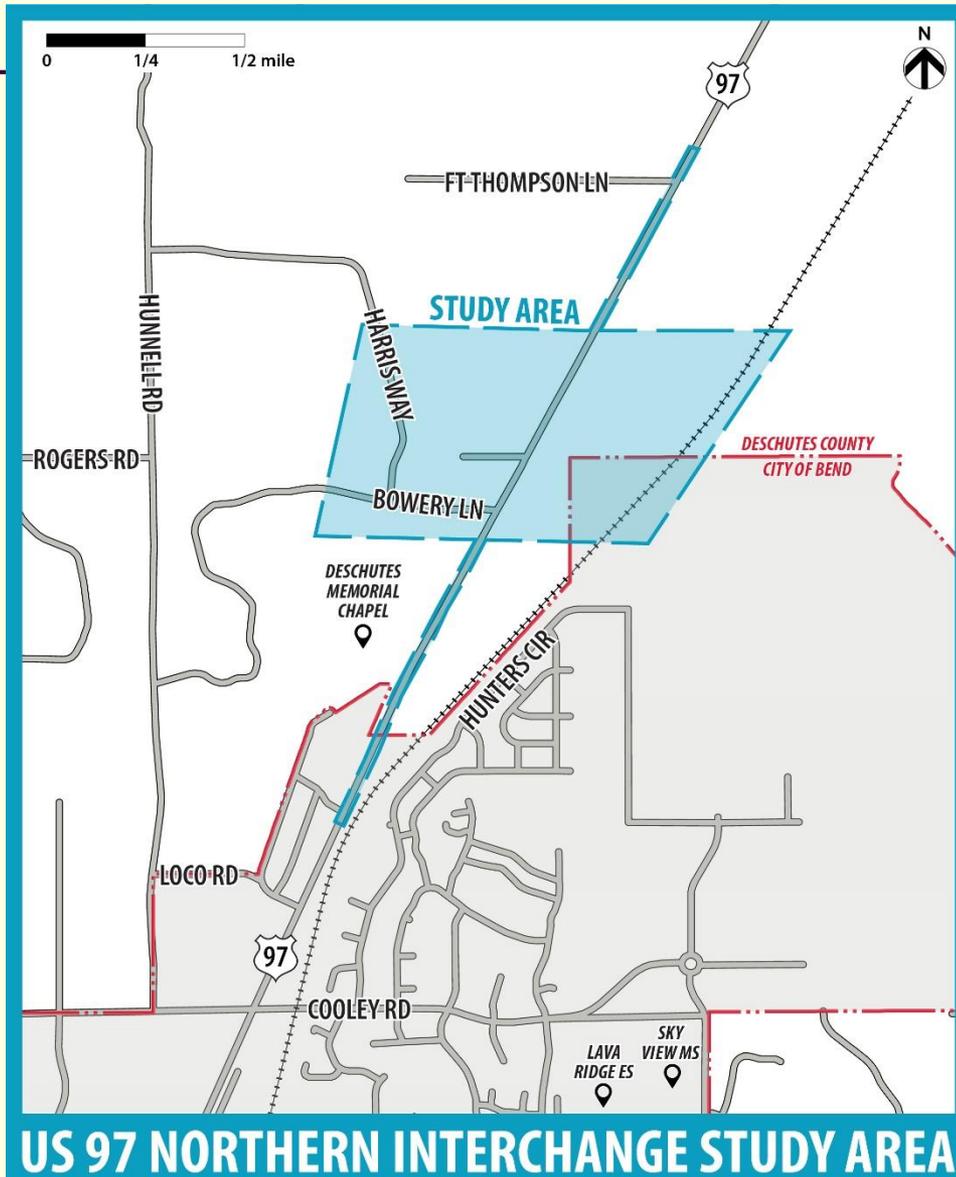
- Transportation & Growth Management (TGM) grant submittal
- *Project:* Mobility Hub Feasibility Study and Pilot Project Development
  - Joint project – City, MPO, CET
  - Intent – To have a logical, step-by-step approach to implementation and management of future mobility hubs
- Requesting Letter of Support for grant application

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# **Agenda Item #6 – Rick Williams, ODOT**

## **US97 North Interchange Study**

# US97 North Interchange Study

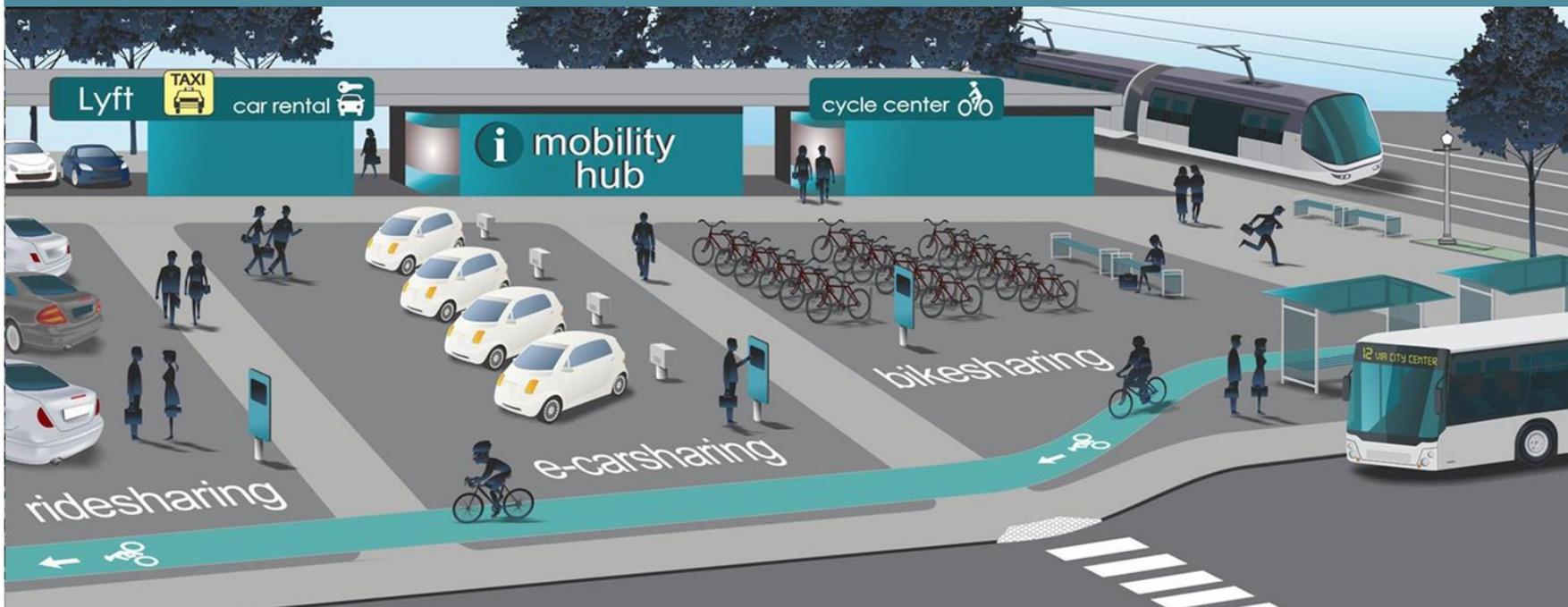


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# **Agenda Item #7 – Tyler Deke and Dave Hirsch, ODOT**

## **Deschutes County ITS Plan**

## 2019 Update Deschutes County ITS Plan



# Presentation Overview

- Benefits of ITS
- Project Types & Costs
- Partnership Opportunities, Implementation Strategy and Next Steps
- Smart Cities Strategy and Next Steps

# ITS Benefits



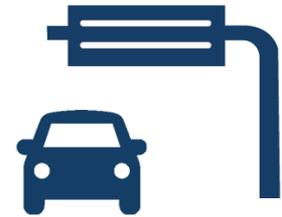
**INCREASED  
SAFETY**



**REDUCED FUEL  
CONSUMPTION  
& EMISSIONS**



**REDUCED  
DELAY**

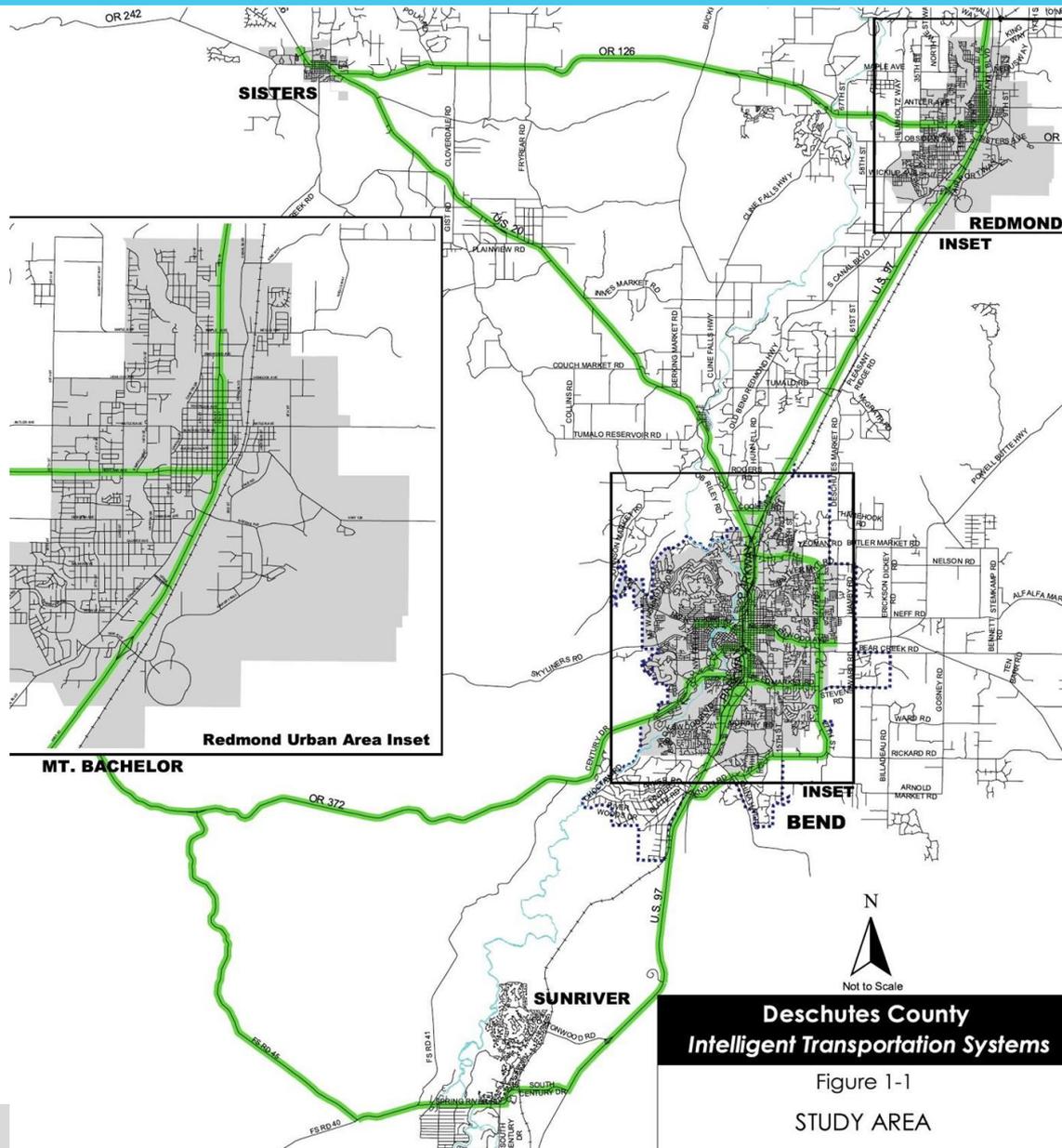


**REAL-TIME  
INFORMATION  
TO TRAVELERS**

# What's Updated: New & Emerging Strategies

- **Connected/Autonomous Vehicle Readiness**
  - Information to vehicles, role of signals, etc.
- **Safety Applications**
  - Multimodal, vision zero, rural safety (curve/speed)
- **Vehicle Electrification**
  - Transit, fleets, autos
- **Shared Mobility/Mobility on Demand**
  - Bikeshare, rideshare, trip planning, first/last mile
- **Emergency Management**
  - Integrated communications and collaboration

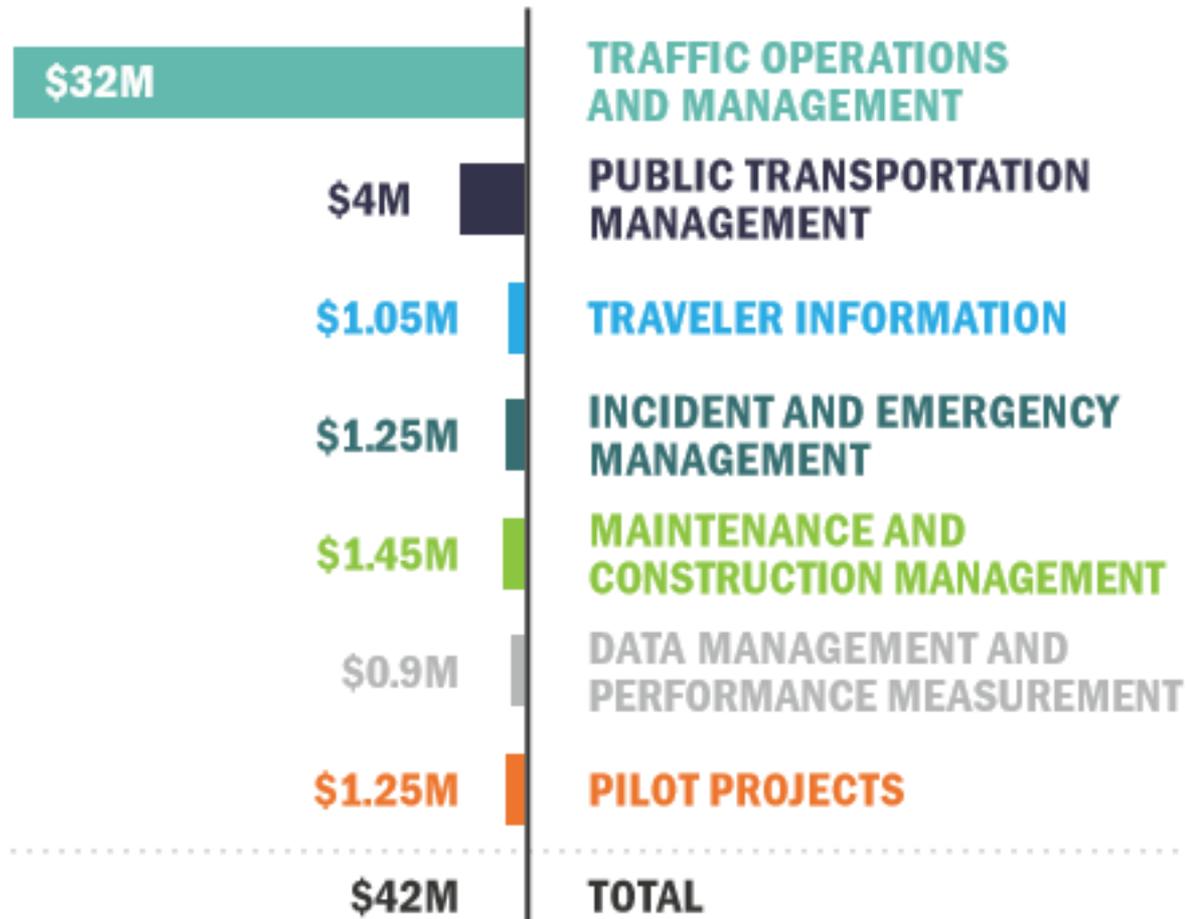
# Geographic Scope for the Plan



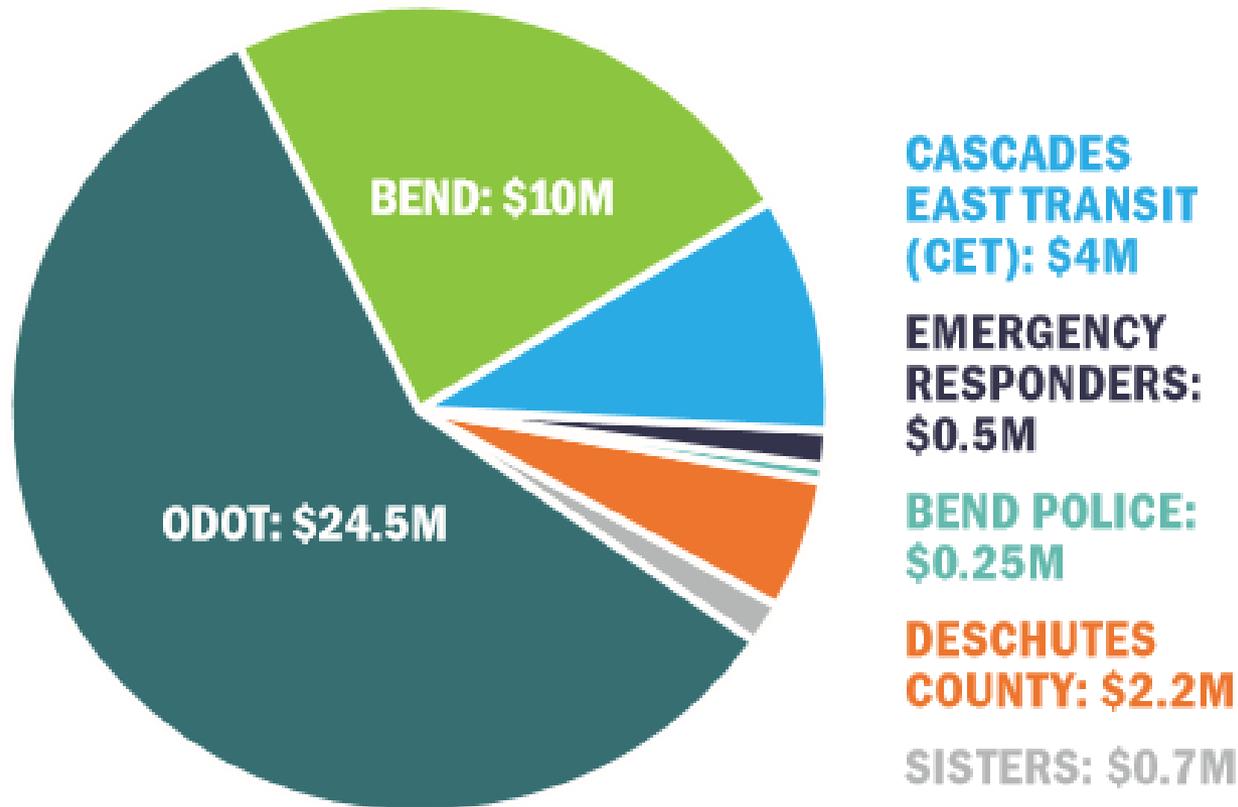
**Deschutes County  
Intelligent Transportation Systems**

Figure 1-1  
STUDY AREA

# Project Cost Estimates by Type



# Project Cost Estimates by Lead Agency



**TOTAL = \$42M**

# ITS Deployment Plan Projects

## PROJECT MAP



**WEST OF SISTERS**  
 ↑ **121** US 20/BLACK BUTTE RANCH  
 US 20/JACK LAKE RD

**SISTERS**  
**120** SISTERS DETOUR ROUTE



REDMOND URBAN AREA INSET

**LA PINE**  
 ↓ **122** US 97/US 31 JUNCTION

**LEGEND**  
 ■ URBAN GROWTH BOUNDARY  
 ■ BEND MPO BOUNDARY  
 ■ RAILROAD

MAP IS NOT TO SCALE



# Project Group Example: Safe & Smart Rural Corridor

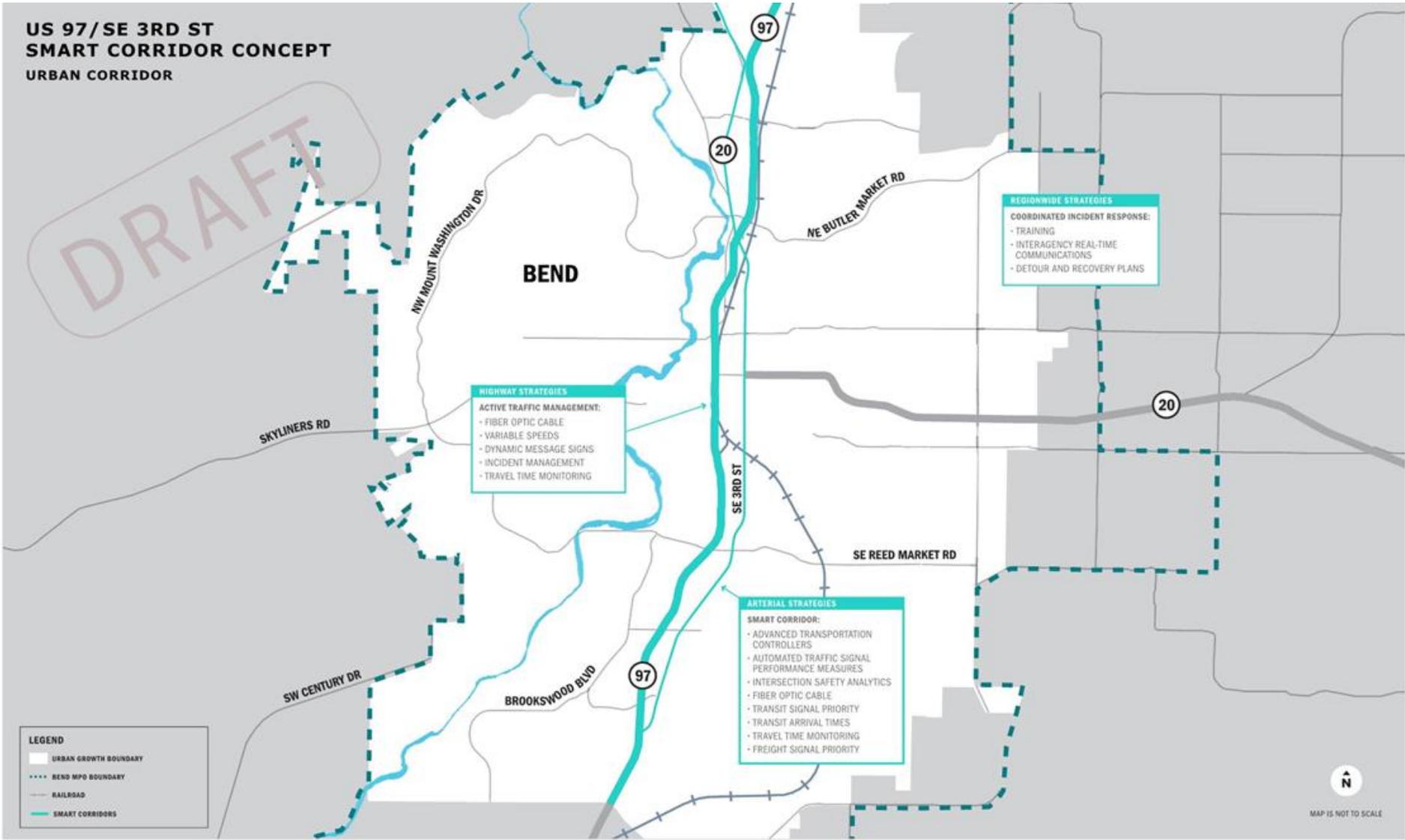
## CENTURY DRIVE SMART CORRIDOR CONCEPT RURAL CORRIDOR



# Project Group Example: Safe & Smart Urban Corridor

## US 97/SE 3RD ST SMART CORRIDOR CONCEPT URBAN CORRIDOR

DRAFT



**HIGHWAY STRATEGIES**  
**ACTIVE TRAFFIC MANAGEMENT:**  
 • FIBER OPTIC CABLE  
 • VARIABLE SPEEDS  
 • DYNAMIC MESSAGE SIGNS  
 • INCIDENT MANAGEMENT  
 • TRAVEL TIME MONITORING

**ARTERIAL STRATEGIES**  
**SMART CORRIDOR:**  
 • ADVANCED TRANSPORTATION CONTROLLERS  
 • AUTOMATED TRAFFIC SIGNAL PERFORMANCE MEASURES  
 • INTERSECTION SAFETY ANALYTICS  
 • FIBER OPTIC CABLE  
 • TRANSIT SIGNAL PRIORITY  
 • TRANSIT ARRIVAL TIMES  
 • TRAVEL TIME MONITORING  
 • FREIGHT SIGNAL PRIORITY

**REGIONWIDE STRATEGIES**  
**COORDINATED INCIDENT RESPONSE:**  
 • TRAINING  
 • INTERAGENCY REAL-TIME COMMUNICATIONS  
 • DETOUR AND RECOVERY PLANS

**LEGEND**  
 ■ URBAN GROWTH BOUNDARY  
 - - - BEND MPO BOUNDARY  
 --- RAILROAD  
 ■ SMART CORRIDORS

MAP IS NOT TO SCALE

# Partnership Opportunities, Implementation Strategy and Next Steps

- Will need partnerships for many projects

## Examples:

- CET Mobility Hubs – City of Bend, CET and Bend MPO
- Century Drive Corridor – ODOT, Mt Bachelor and USFS
- Arizona/Bond/Wall/Colorado signals – City of Bend and ODOT
- ODOT/CIP/Private Developments & Construction Impact Coordination – City of Bend and ODOT
- Forming team to develop implementation strategy
- Region 4 Data Warehouse Consortium regular meetings
- TIM team regular meetings

# Smart Cities



# Smart Cities Strategies & Next Steps

1

## MULTIMODAL AND EMERGING MOBILITY

- Develop Mobility Hubs
- Prepare for Mobility as a Service
- Prepare for changes in Parking

2

## BIG DATA, ANALYTICS, DASHBOARDS, AND WAREHOUSE

- Complete the development a Shared, Centralized Data Warehouse
- Continue to invest in Workforce Development

3

## INCIDENT MANAGEMENT, EMERGENCY RESPONSE, AND RESILIENCY

- Use Real-Time & Historical Data to Optimize Emergency Response
- Redeploy technology for Emergency Communications

4

## CONNECTED AND AUTOMATED VEHICLES

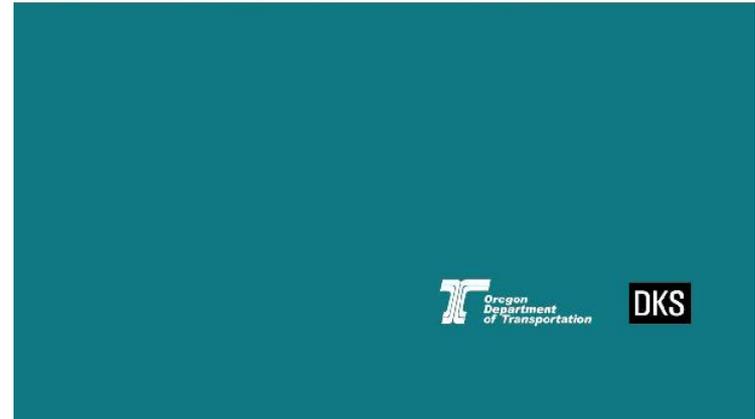
- Prepare for Connected Vehicles
- Monitor policies and Prepare for Autonomous Vehicles

# Questions?

- Dave Hirsch, ODOT  
[David.HIRSCH@odot.state.or.us](mailto:David.HIRSCH@odot.state.or.us)
- Janet Hruby, City of Bend  
[jhruby@bendoregon.gov](mailto:jhruby@bendoregon.gov)
- Tyler Deke, Bend MPO  
[tdeke@bendoregon.gov](mailto:tdeke@bendoregon.gov)

## DESCHUTES COUNTY INTELLIGENT TRANSPORTATION SYSTEM PLAN

APRIL 2020

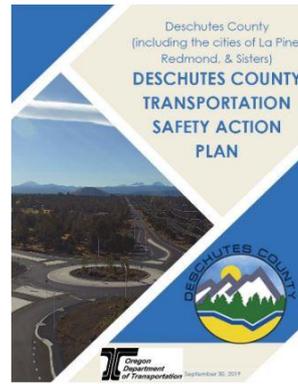
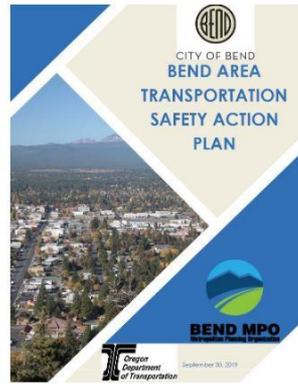


<https://www.oregon.gov/odot/Maintenance/Pages/Plans,-Architectures-%26-Reports.aspx>

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# **Agenda Item #8 – Tyler Deke & Jovi Anderson**

## **Transportation Safety Action Plans**



# DESCHUTES COUNTY & BEND TRANSPORTATION SAFETY ACTION PLANS (TSAP)

Bend MPO Policy Board  
July 21, 2020



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# TRANSPORTATION SAFETY ACTION PLAN (TSAP)

- Project Overview/Purpose
- Study areas
- Approach
- Crash data
- Emphasis areas
- Next Steps



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# PROJECT PURPOSE

- Purpose
  - Develop a comprehensive safety program that systematically identifies and prioritizes safety projects and establishes a proactive approach to reducing crashes on all roadways within the City of Bend and throughout Deschutes County.



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# COMPREHENSIVE APPROACH

- Policy, planning, programming, and projects are multidisciplinary and involve “the 4Es” of safety
  - Engineering
  - Emergency Medical Services (EMS)
  - Enforcement
  - Education
- Input from stakeholders
  - Project Management Team (PMT)
  - MPO Technical Advisory Committee (TAC)
  - Citywide Transportation Advisory Committee (CTAC)
  - Multidisciplinary Stakeholder Groups (County TAC and MPO extended group)



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# WHAT'S IN THE TSAP?



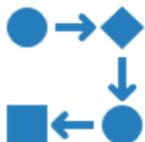
## Section 1

- Introduction
- Policies and Goals



## Section 2

- Crash Data Summary
- Emphasis Areas



## Section 3

- Systemic Solutions



## Section 4

- Speed management  
Toolbox



## Section 5

- Location Specific  
Applications



## Section 6

- Non-Infrastructure  
Measures



## Section 7

- Performance Measures



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# ROLE OF CRASH DATA?

- Data helps you:
  - Understand key issues and factors
  - Understand emphasis areas
- Data leads us towards program aspects of the TSAP
  
- *TSAP is data informed, but not data restricted*



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# CRASH DATA (2012-2016)

- Plan evaluated crashes from 2012 – 2016
- Crash data will be updated every 2-3 years
  - *Data from ODOT received for 2017-2018. Not included in analysis in upcoming slides.*

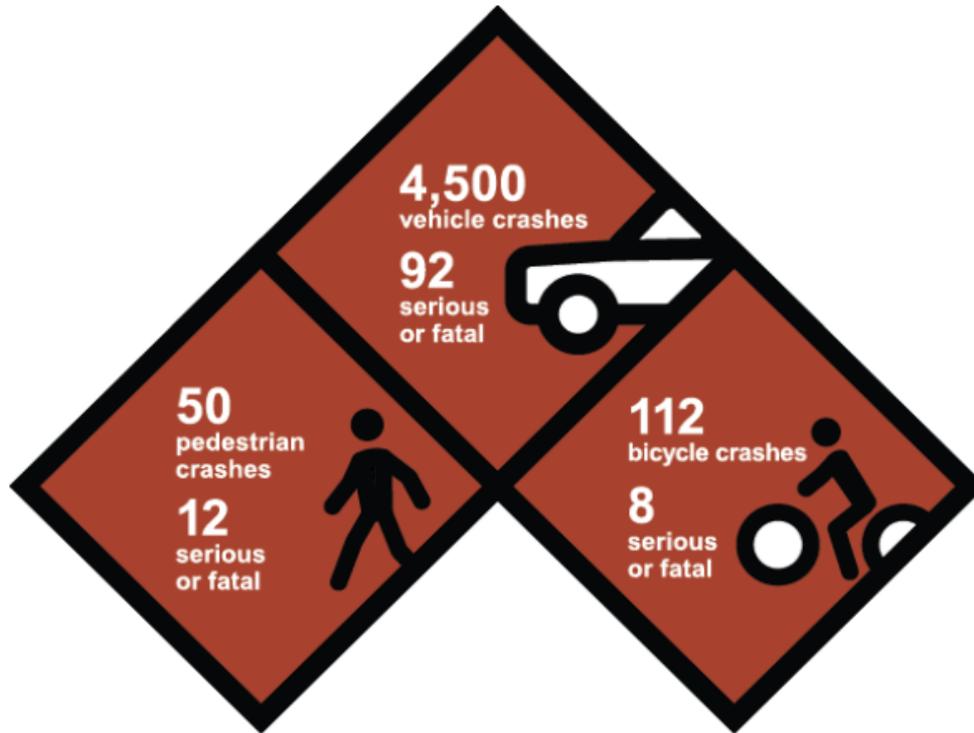


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# BEND CRASH DATA (2012-2016)



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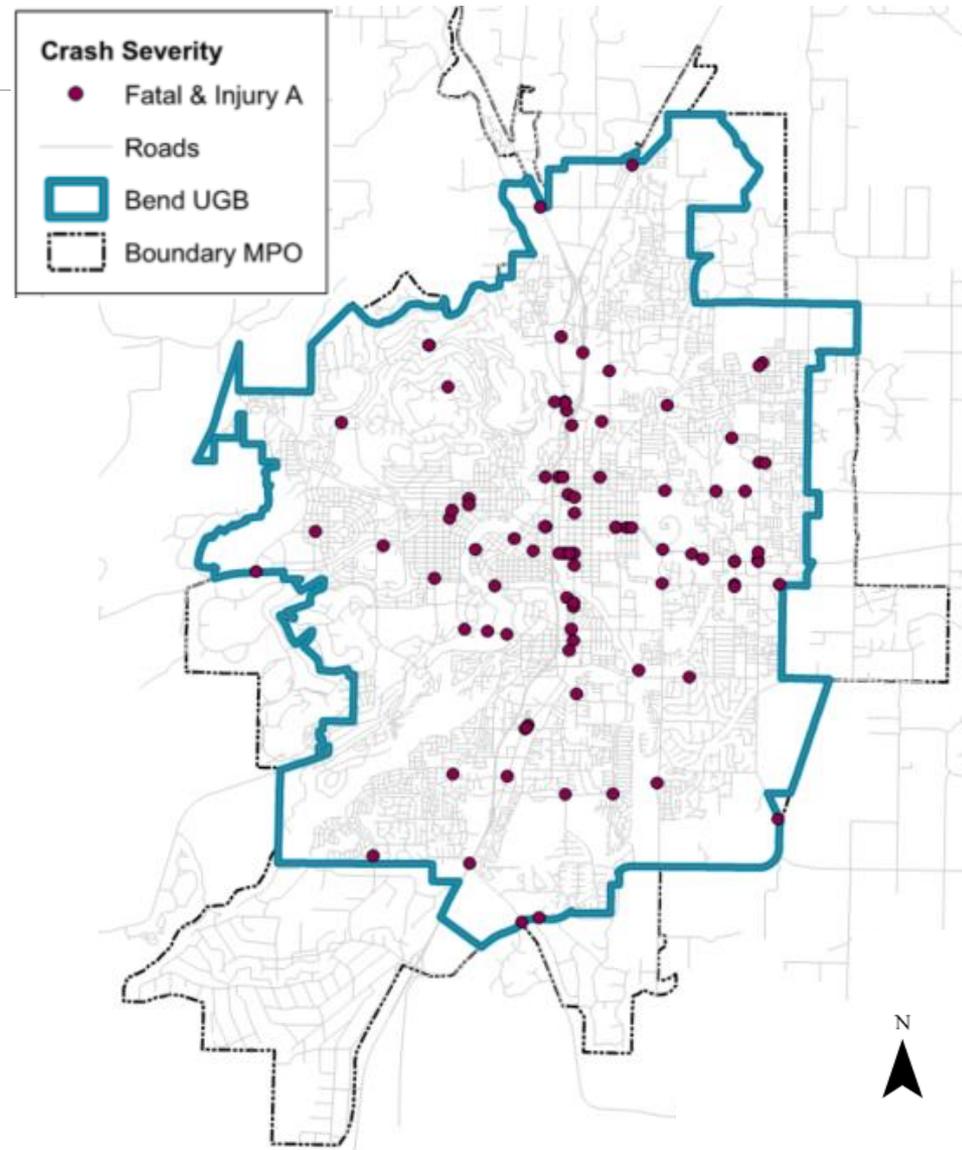
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## BEND CRASH ANALYSIS

# CRASH SEVERITY BY LOCATION (2012-2016)

## FATAL AND SERIOUS INJURY CRASHES (92)

41% of crashes in Bend resulted in an injury or fatality



# DESCHUTES COUNTY CRASH ANALYSIS

## COUNTY ROADWAY CRASH DATA (2012-2016)

### Overall crash analysis (2012-2016)

Total Reported Crashes in  
Unincorporated Deschutes County :



**47%** of crashes  
resulted in injury or fatality

**Injury crashes: 1,401 Non-injury crashes: 1,608**

#### County Roads vs. State Highways

		Total		Fatal/Incapacitating	
	County Roads	<b>1,519</b>	 <b>50%</b>	<b>77</b>	 <b>5%</b>
	State Highways	<b>1,490</b>	 <b>50%</b>	<b>97</b>	 <b>6%</b>



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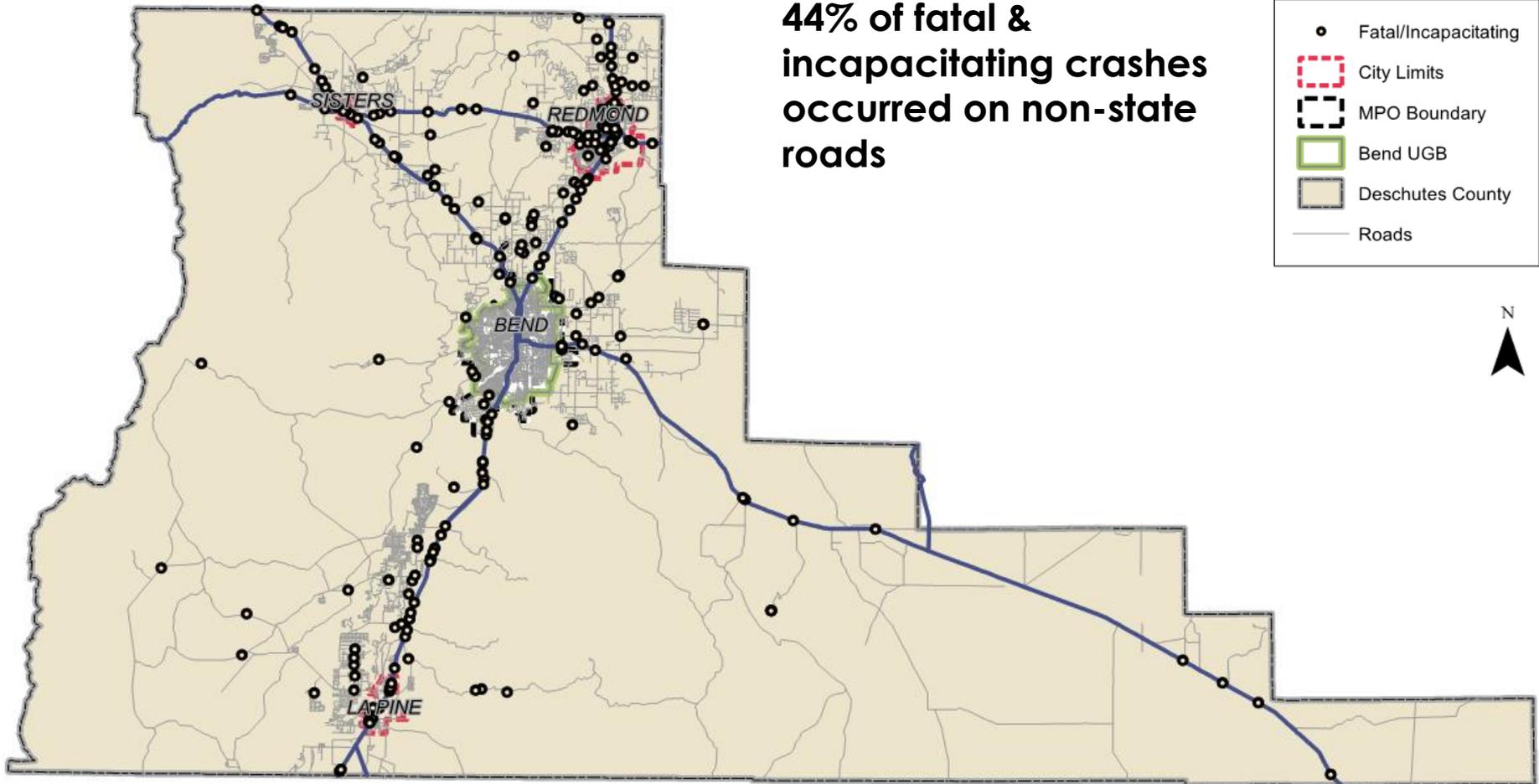


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# DESCHUTES COUNTY CRASH ANALYSIS

## CRASH SEVERITY

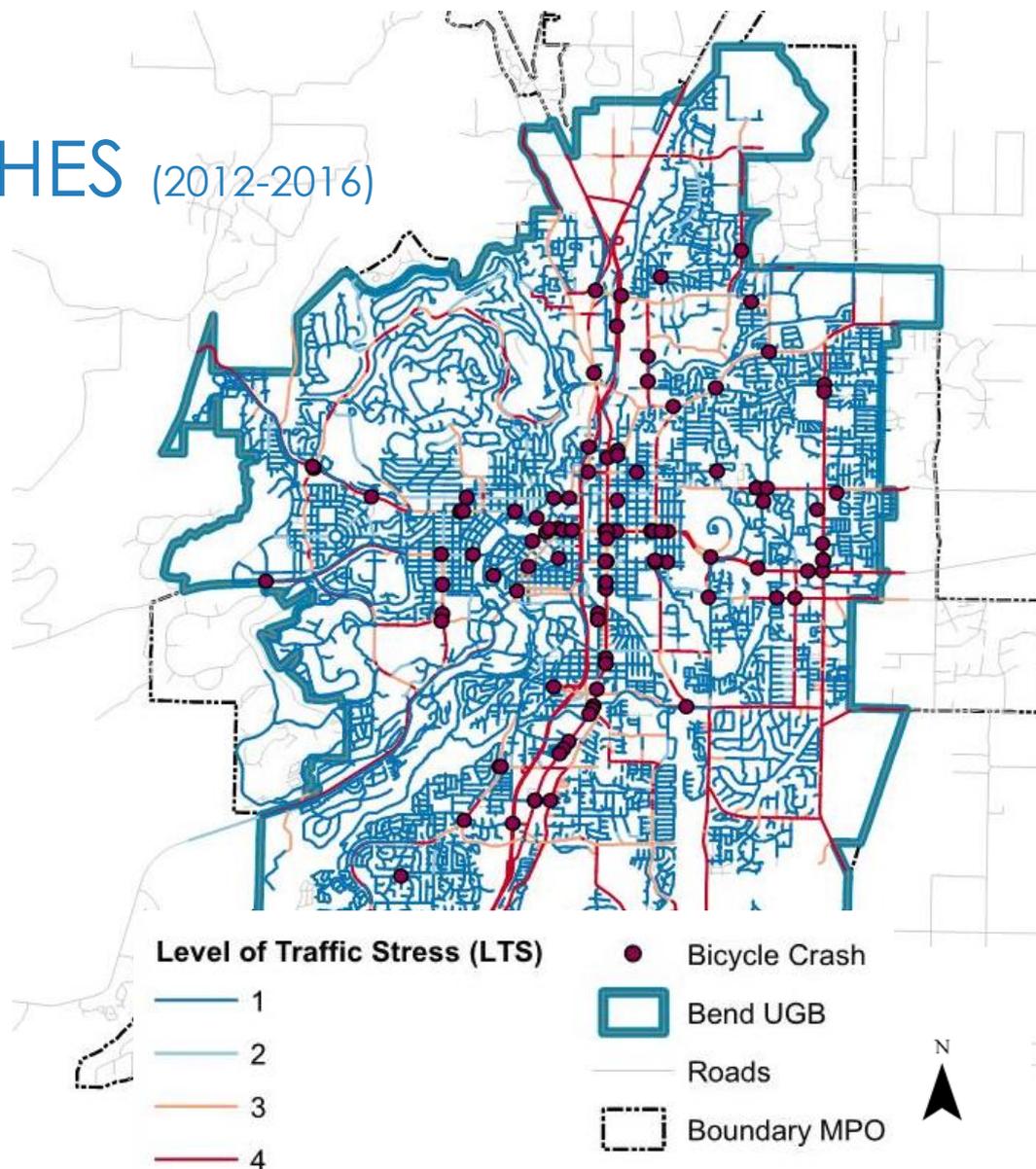
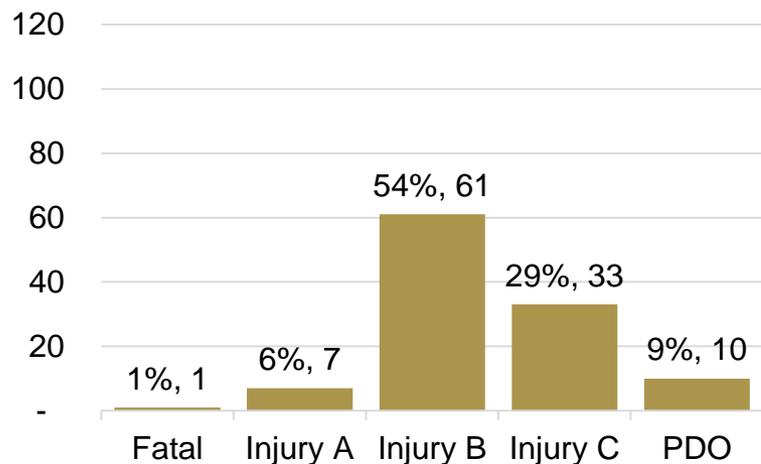
**44% of fatal & incapacitating crashes occurred on non-state roads**



## VULNERABLE USERS

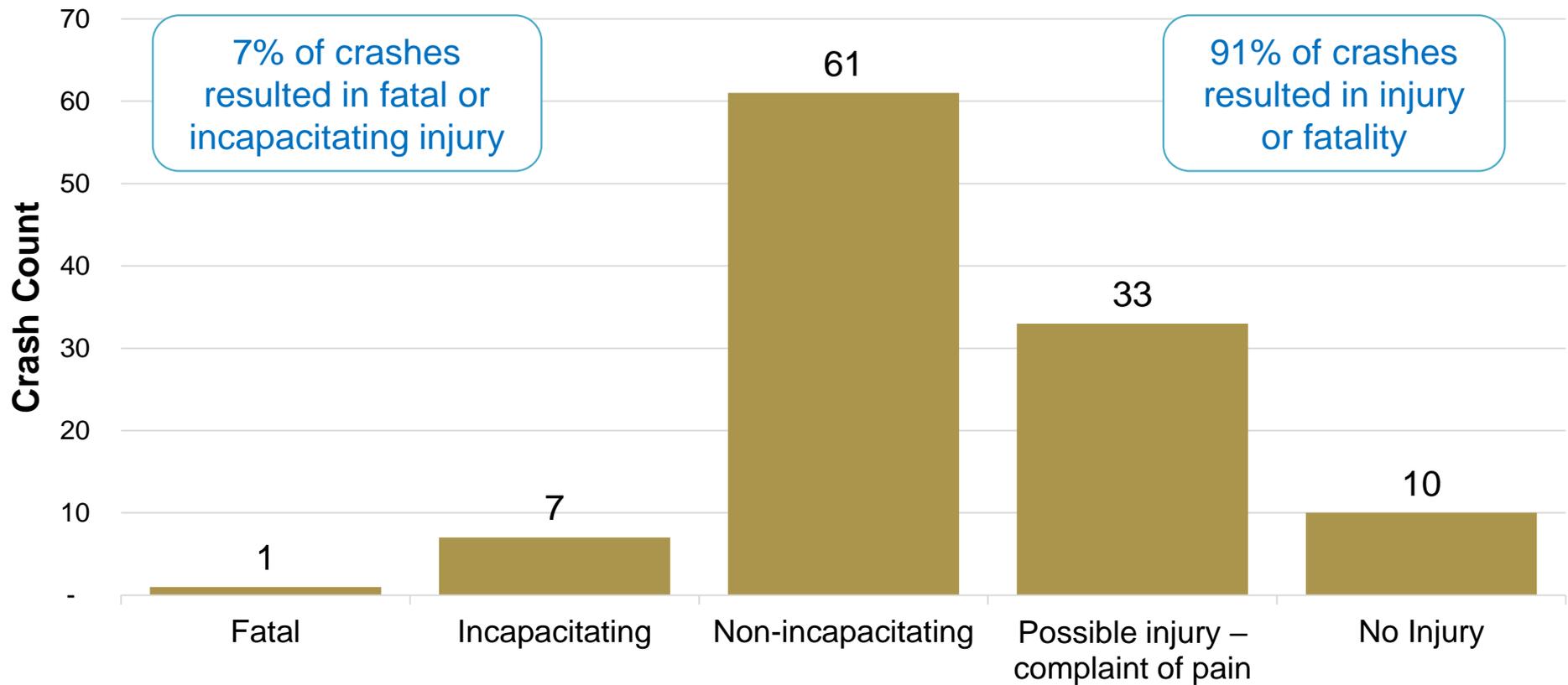
# BEND BICYCLE CRASHES (2012-2016)

**Bicyclist crashes account for 9% of fatal/incapacitating crashes in Bend**



# BICYCLIST CRASH DATA (2012-2016)

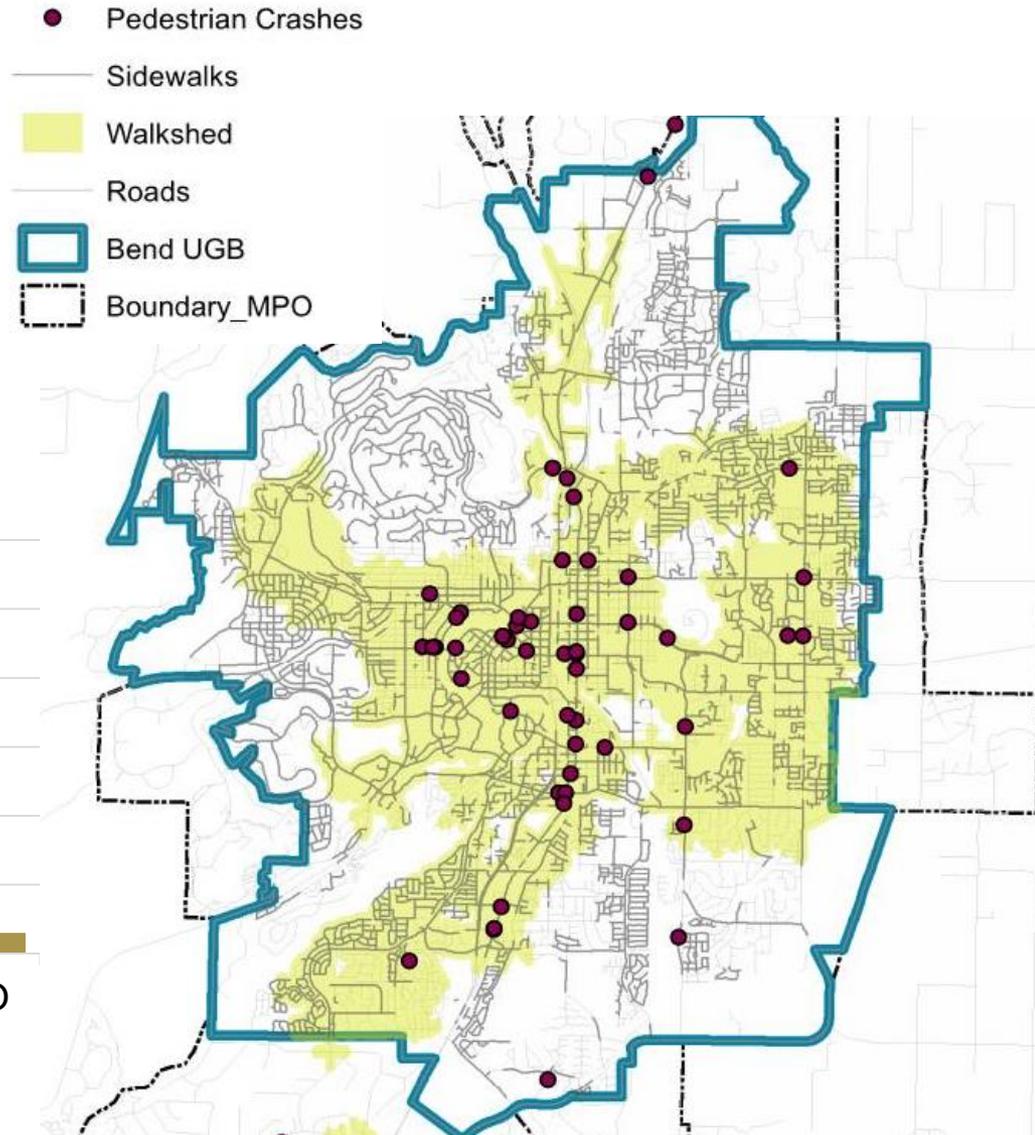
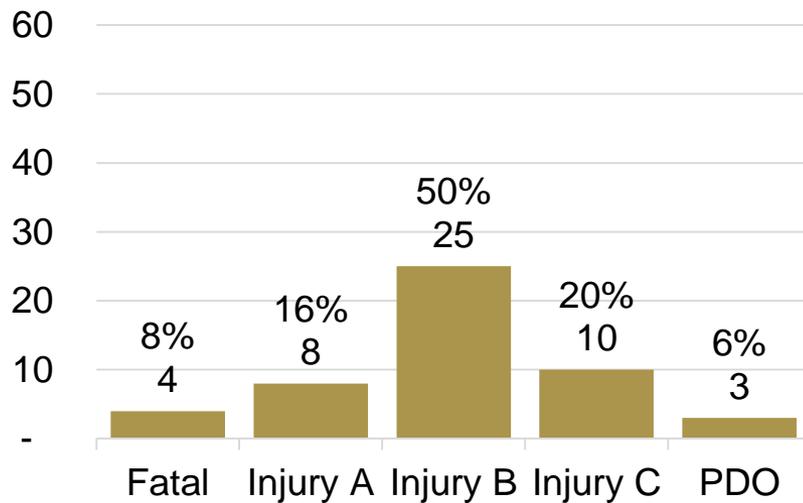
## Bicyclist Crashes by Severity



# VULNERABLE USERS

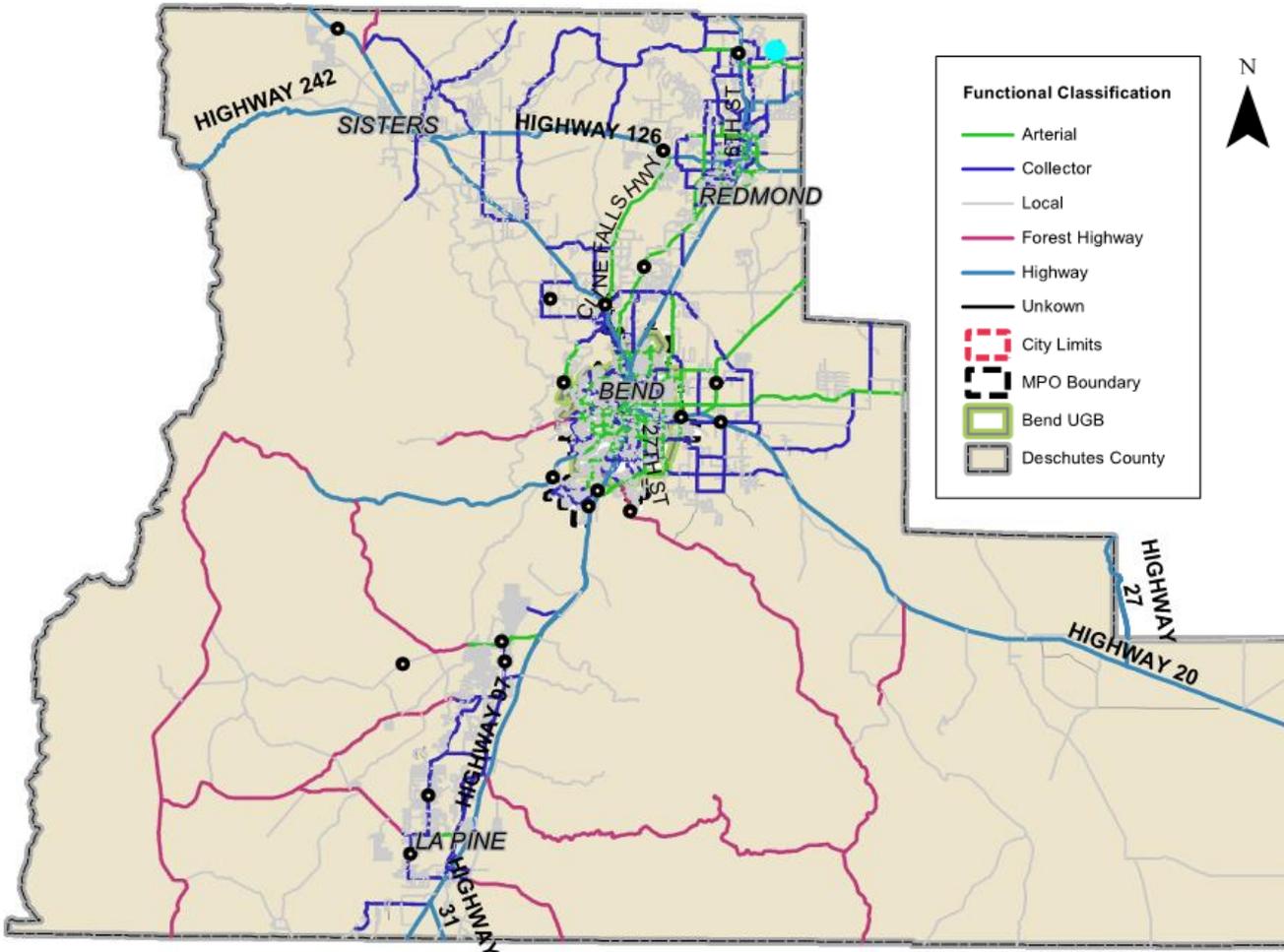
## BEND PEDESTRIAN CRASHES (2012-2016)

**Pedestrian crashes account for 13% of fatal/incapacitating crashes in Bend**



# VULNERABLE USERS – DESCHUTES COUNTY DATA 2012-2016

## PEDESTRIANS AND BICYCLISTS



**Pedestrian: 4 crashes  
(non-state roads)**  
**Bicycle: 15 crashes (non-  
state roads)**  
**All reported  
pedestrian/bicyclist  
crashes resulted in injury**

**75% of bicyclist crashes  
occurred on non-state  
roads**



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## VULNERABLE USERS

# BEND MOTORCYCLE CRASHES (2012-2016)

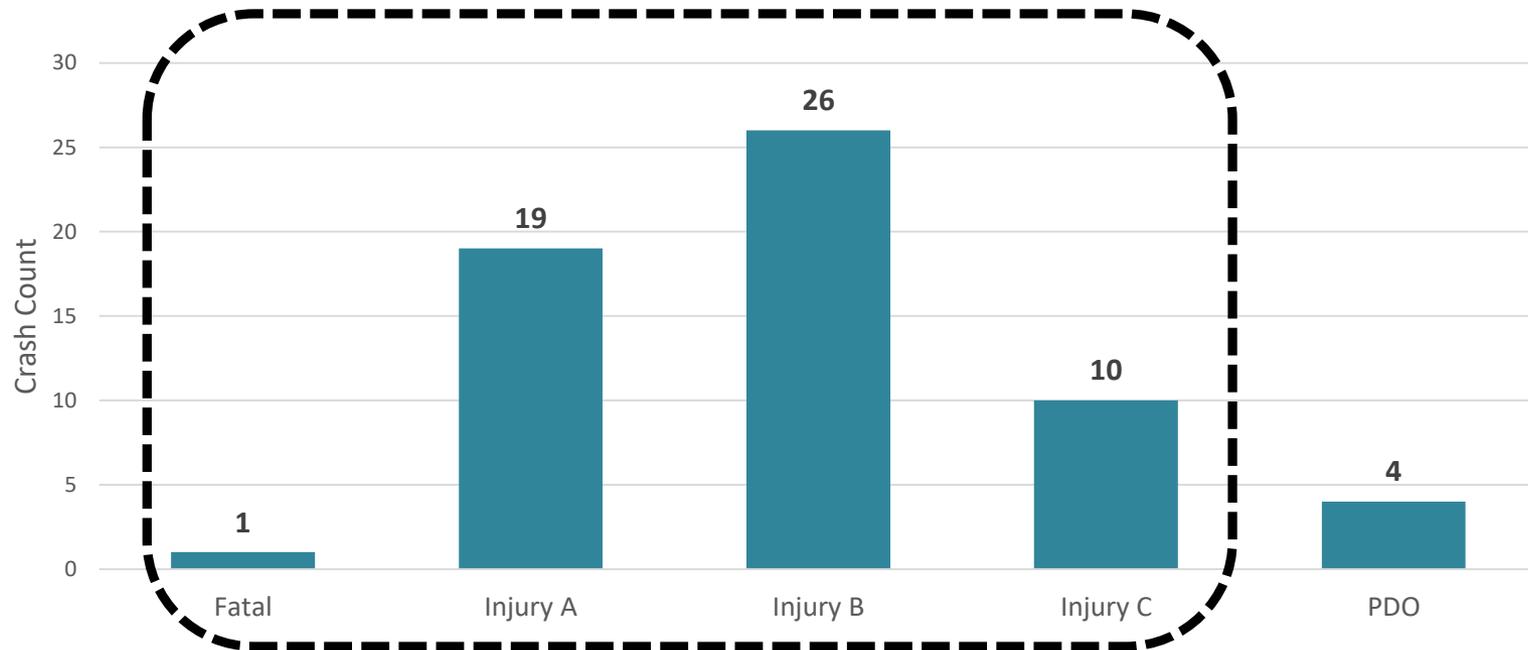
- **16% of fatal/incapacitating crashes** involved motorcycles
- **85% of motorcycle crashes resulted in injury or fatality**
- Most common motorcycle collision types:
  - Turning movement, rear-end, and non-collision crashes



## VULNERABLE USERS

# DESCHUTES COUNTY MOTORCYCLE CRASHES

(2012-2016)



**18% of fatal/incapacitating crashes involved motorcycles**



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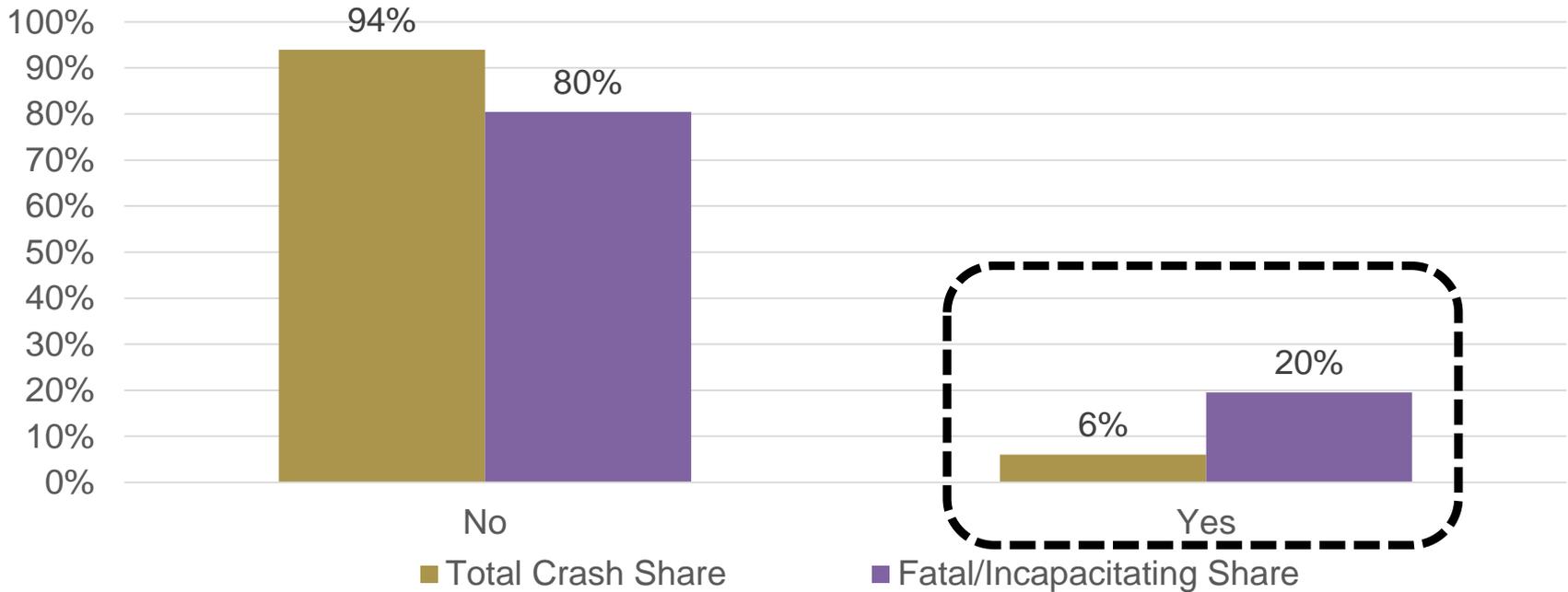


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## BEHAVIORAL CHARACTERISTICS

# BEND ALCOHOL/DRUG INVOLVED CRASHES

(2012-2016)



**20% of fatal/incapacitating crashes in Bend involved alcohol or drugs**



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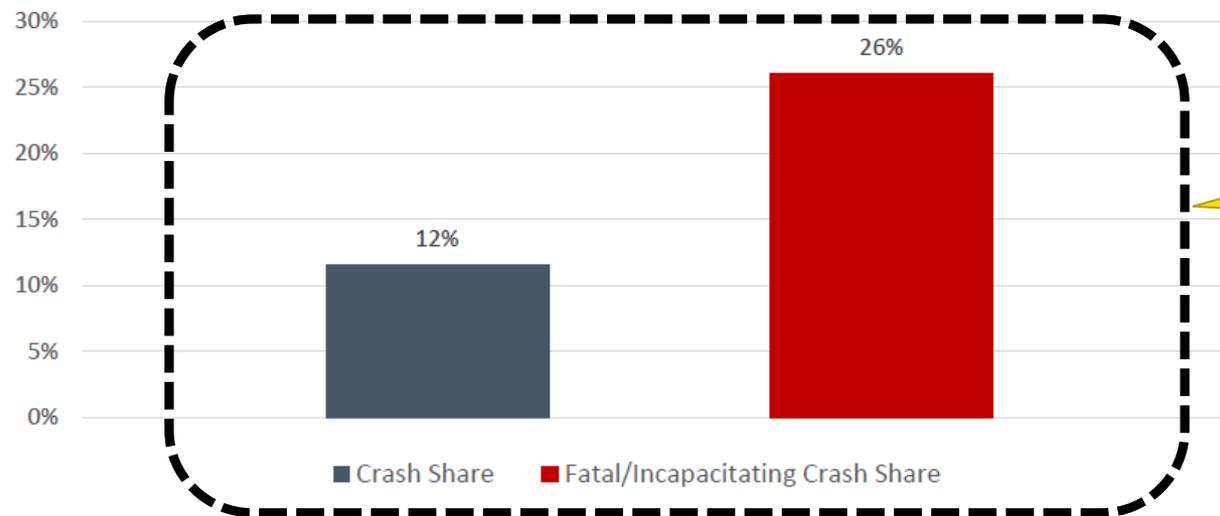
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# BEHAVIORAL CHARACTERISTICS

## DESCHUTES COUNTY

### ALCOHOL/DRUG INVOLVED CRASHES (2012-2016)

Figure 34: County Facility by Alcohol and Drug Crashes, Deschutes County (Unincorporated) 2012 – 2016

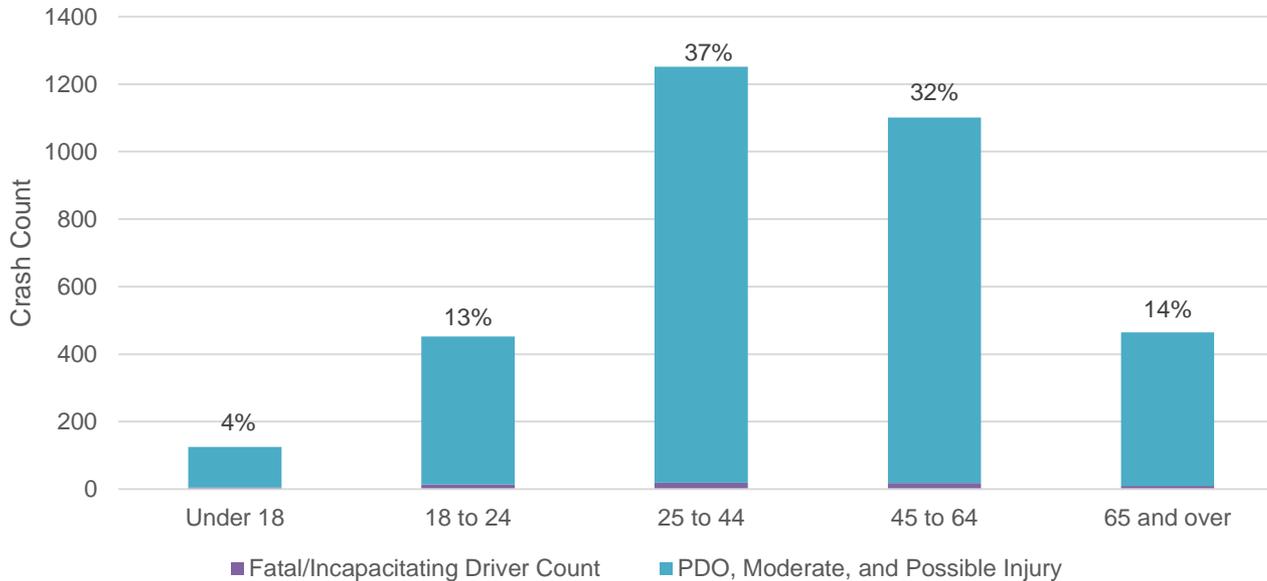


For State facilities in the County, the Alcohol/drug involvement was slightly lower at 6 percent of all crashes and 22 percent of fatal/incapacitating crashes.



## VULNERABLE USERS

# BEND YOUNGER DRIVERS (2012-2016 CRASHES)



**29% of fatal/incapacitating crashes involved drivers under age 25**



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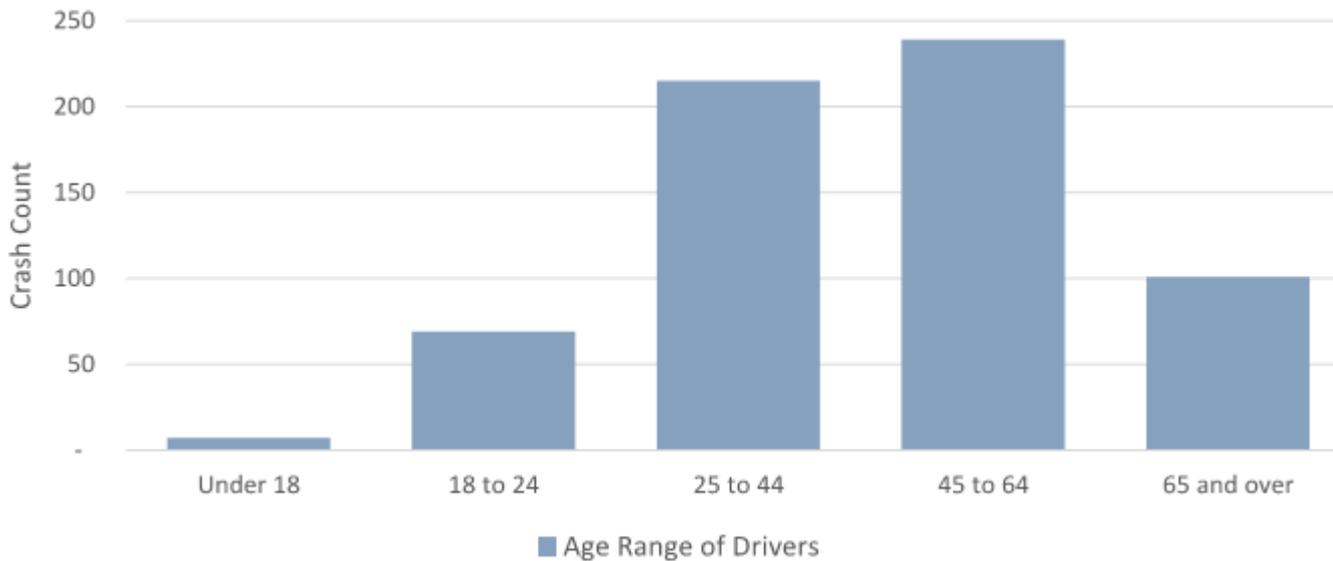


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VULNERABLE USERS

# DESCHUTES COUNTY OLDER DRIVERS

(2012-2016 CRASHES)



**13% of fatal/incapacitating crashes in Deschutes County Study Area involved drivers age 65 and over**



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# SUMMARY OF EMPHASIS AREAS IN BEND

- Roadway Characteristics
  - *Light conditions\**
  - *Snow/ice\**
  - Intersection crashes
- Behavior
  - *Speeding\**
  - *Alcohol/drug use\**
- Vulnerable Users
  - *Motorcycles\**
  - *Pedestrians\**
  - *Bicycles\**
  - Younger Drivers

\* Emphasis area results in both Bend and Deschutes County crash data (2012-2016)



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# SUMMARY OF EMPHASIS AREAS IN DESCHUTES COUNTY

- Roadway Characteristics
  - *Light conditions\**
  - *Snow/ice\**
  - Roadway departure crashes
- Behavior
  - *Speeding\**
  - *Alcohol/drug use\**
  - Roadway departure crashes
- Vulnerable Users
  - *Motorcycles\**
  - *Pedestrians\**
  - *Bicycles\**
  - Older drivers

\* Emphasis area results in both Bend and Deschutes County crash data (2012-2016)



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# DETAILED ANALYSES & IMPACT

- Planning process included detailed evaluations at several locations with specific recommendations
- Example: US97/Powers Rd intersection
- See the full report for more design concepts @ [www.bendoregon.gov/transportationsafety](http://www.bendoregon.gov/transportationsafety)

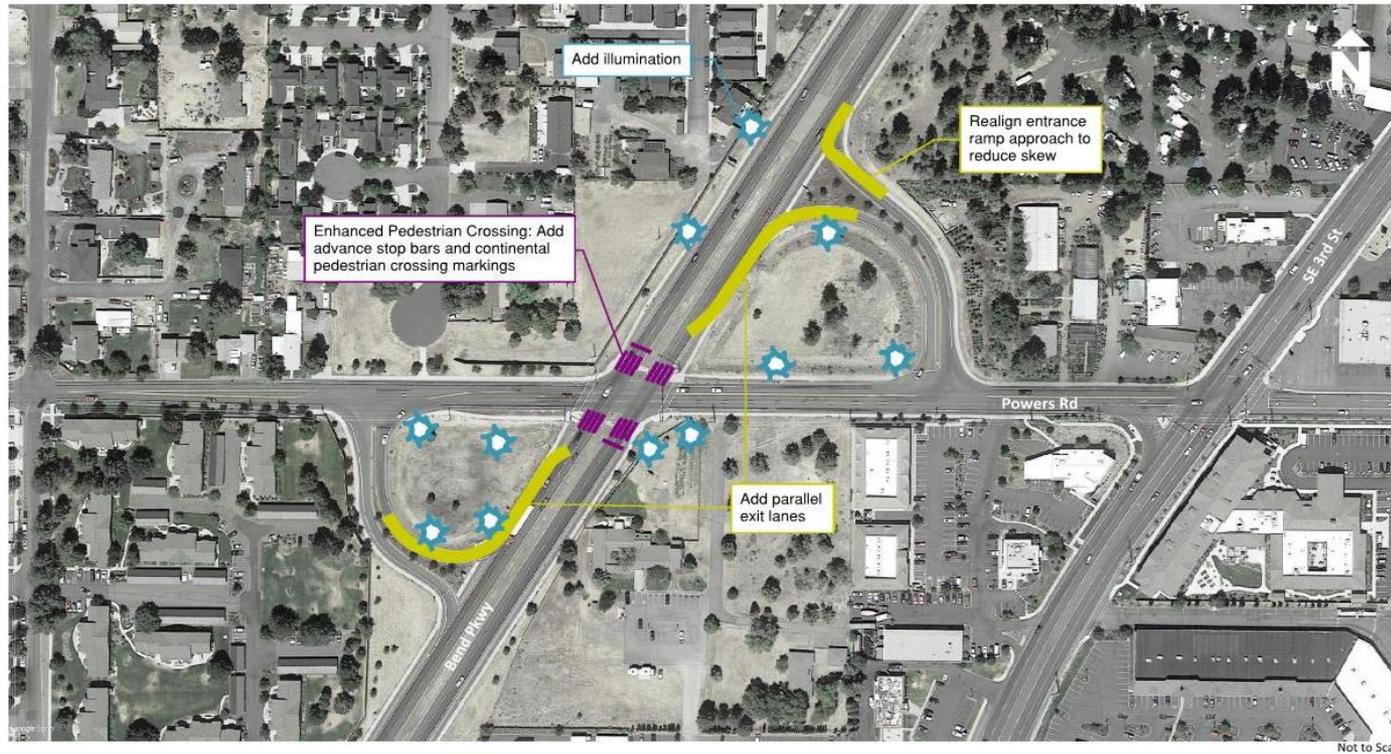


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# Highway 97 & Powers Road Area Concepts



Install a deceleration lane.

Realign the entrance ramp to reduce intersection skew and improve sight distance

Evaluate additional illumination levels.

# NEXT STEPS

- ✓ ODOT funding to begin work on non-infrastructure action items (Summer/Fall 2020)
- ✓ Current CIPs and STIP include many projects to address high crash locations
- ✓ The Bend report is integrated into the MTP and Bend TSP with performance measures and action items
- Deschutes County updates to the TSP and CIP will use the County TSAP details



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# UPDATES TO POLICY BOARD

Are you interested in more MPO Policy Board detailed updates on the TSAP?

- Quarterly, bi-annual or annual updates?
- Only new data updates?
- More topics could include:
  - Crash Types/Trends
  - Action Items
  - Emphasis Areas
  - Updates to Analysis with 2017-2018 data (coming by 2021)



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# DISCUSSION & NEXT STEPS

- Questions?
  - Jovi Anderson ([janderson@bendoregon.gov](mailto:janderson@bendoregon.gov))
  - Tyler Deke ([tdeke@bendoregon.gov](mailto:tdeke@bendoregon.gov))
  - Chris Doty (Deschutes County TSAP)  
([chris.doty@deschutes.org](mailto:chris.doty@deschutes.org))

Access Bend and Deschutes County TSAPs at:  
[www.bendoregon.gov/transportationsafety](http://www.bendoregon.gov/transportationsafety)



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## **Agenda Item #9 – Tyler Deke**

**Technical Advisory Committee –  
Citizen Members**

# TAC – Citizen Members

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- Bylaws update clarified process for citizen appointments
- Application in packet (pages 21-24)
- Posted application July 16
- Application due Aug 15
- Applicant review process – subcommittee of Policy Board (volunteers?)
- Appoint new members Sept 22

- 
- **Agenda Item #10 – Other Business – Justin Livingston**
  - **Agenda Item #11 - Public Comment – Justin Livingston**
  - **Agenda Item #12 – Next Policy Board meeting – Justin Livingston**
  - **Agenda Item #13 – Adjourn – Barb Campbell & Bob Townsend**