600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Agenda*

Meeting: Joint Policy Advisory Committee on Transportation (JPACT)
Date: Thursday, June 14, 2012
Time: 7:30 to 9 a.m.
Place: Metro Regional Center, Council Chamber

7:30 AM	**1.**		**CALL TO ORDER, DECLARATION OF A QUORUM & INTRODUCTIONS**	**Carlotta Collette, Chair**
7:32 AM	**2.**		**CITIZEN COMMUNICATIONS ON JPACT ITEMS**	**Carlotta Collette, Chair**
7:35 AM	**3.**		**UPDATES FROM THE CHAIR & COMMITTEE MEMBERS** • Update on Land Conservation & Development Commission Hearing on Urban Growth Management Decision • Oregon Metropolitan Planning Organization Consortium Meeting Report • Trolley Trail Opening • Boring Trailhead Park • Status of Connect Oregon Project Selection	
7:45 AM	**4.**	*	**CONSIDERATION OF THE JPACT MINUTES FOR MAY 10, 2012**	
	5.		**INFORMATION/DISCUSSION ITEMS**	
7:50 AM	5.1	*	Regional Transportation Safety Plan: Findings and JPACT Direction on Next Steps – INFORMATION / DISCUSSION	**Josh Naramore** **Anthony Butzek**
8:35 AM	5.2	*	Oregon Sustainable Transportation Initiative (OSTI): Statewide Transportation Strategy – OVERVIEW OF STRATEGY & DISCUSSION	**Barbara Fraser, ODOT** **Rex Burkholder**
9 AM	**6.**		**ADJOURN**	**Carlotta Collette, Chair**

* Material available electronically.
# Material will be distributed at the meeting.

For agenda and schedule information, call Kelsey Newell at 503-797-1916, e-mail: kelsey.newell@oregonmetro.gov. To check on closure or cancellations during inclement weather please call 503-797-1700.

2012 JPACT Work Program
6/7/12

May 10, 2012 – Regular Meeting • Proposed amendments to the Regional Transportation Functional Plan – Action • Powell/Division Legislation as Next Corridor – Action • RTO Strategic Plan – Action	**June 14, 2012 – Regular Meeting** • Regional Safety Plan – Findings & Recommendations – Information/Discussion • Oregon Sustainable Transportation Initiative (OSTI): Statewide Transportation Strategy – Overview of Strategy

July 12, 2012 – Regular Meeting
• CII Leadership Council – Information
• Climate Smart Communities Scenarios Phase 2 – Discussion
• East Metro Connections update – Information
• Hole-in-the Air Rulemaking – Review Comment Letter
• Oregon Sustainable Transportation Initiative (OSTI) - Information
  o Statewide Transportation Strategy (STS) – Approval of Comments
  o LCDC Rulemaking on selection of preferred scenario
	August 9, 2012 – Regular Meeting

September 13, 2012 – Regular Meeting • Oregon Sustainable Transportation Initiative (OSTI) - LCDC Rulemaking on selection of preferred scenario – Informational • Climate Smart Communities Scenarios – Discussion	**October 11, 2012 – Regular Meeting** • Oregon Sustainable Transportation Initiative (OSTI) - LCDC Rulemaking on selection of preferred scenario - Discussion
November 8, 2012 – Regular Meeting • Climate Smart Communities Scenarios– Discussion	**December 13, 2012 – Regular Meeting** • Climate Smart Communities Scenarios– Action • Active Transportation Plan Existing Conditions Findings/ Network Concepts – Information

Parking Lot: Regional Indicators briefing

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JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION
May 10, 2012
Metro Regional Center, Council Chamber

MEMBERS PRESENT	AFFILIATION
Jack Burkman	City of Vancouver
Carlotta Collette, Chair	Metro Council
Shirley Craddick	Metro Council
Nina DeConcini	Oregon Department of Environmental Quality
Craig Dirksen	City of Tigard, representing Cities of Washington Co.
Donna Jordan	City of Lake Oswego, representing Cities of Clackamas Co.
Deborah Kafoury	Multnomah County
Ann Lininger	Clackamas County
Neil McFarlane	TriMet
Roy Rogers	Washington County
Jason Tell	Oregon Department of Transportation, Region 1

MEMBERS EXCUSED	AFFILIATION
Sam Adams	City of Portland
Rex Burkholder	Metro Council
Shane Bemis	City of Gresham, representing Cities of Multnomah Co.
Steve Stuart	Clark County
Don Wagner	Washington State Department of Transportation
Bill Wyatt	Port of Portland

ALTERNATES PRESENT	AFFILIATION
Susie Lahsene	Port of Portland
Lisa Barton Mullins	City of Fairview, representing Cities of Multnomah Co.

STAFF: Michelle Bellia, Andy Cotugno , Katie Edlin, Kim Ellis, Elissa Gertler, Tom Kloster, Dan Kaempff, Nuin-Tara Key, Ted Leybold, Robin McArthur, Lake McTighe, John Mermin, Kelsey Newell, Ramona Perrault, Deena Platman, Deborah Redman, Dylan Rivera, Randy Tucker, Patty Unfred, Nikolai Ursin, Marc Week.

1. CALL TO ORDER, DECLARATION OF A QUORUM AND INTRODUCTIONS

Chair Carlotta Collette declared a quorum and called the meeting to order at 7:33 a.m.

2. CITIZEN COMMUNICATIONS ON JPACT ITEMS

There were none.

3. COMMENTS FROM THE CHAIR & COMMITTEE MEMBERS

Chair Collette shared the schedule for the 2012 Summer Zoo concert series. She stated that there are some great shows and that it would behoove everyone to get tickets early.

Ms. Nina DeConcini announced that the Oregon Department of Environmental Quality (DEQ) would begin outreach for Portland Air Toxics. At the end of May, DEQ will hold a series of meetings throughout the Portland area to gain comments for the next steps of implementation. Ms. DeConcini offered to send the report to JPACT Members.

Chair Collette updated the committee on the status of the federal transportation bill. The Senate has passed a bill but the House did not agree with it. A committee has already started to convene. Congressional representatives Peter DeFazio and Earl Blumenauer are both on the committee and Congresswoman Barbra Boxer is the chair of the committee.

Chair Collette provided an update on the Oregon Statewide Transportation Strategy. The Statewide Transportation Strategy looks to the year 2050 and identifies the most effective land use and transportation strategies for reducing transportation-related Greenhouse Gas emissions to help the state meet the 2050 goal. The Oregon Transportation Commission is expected to release the draft strategy for public comment from May 17 to July 20.

Chair Collette provided an update on the Active Transportation Plan. The plan will be developed over an 18-month timeframe and will be finalized by the end of June 2013. It will amend the Regional Transportation Plan and the Regional Transportation Functional Plan. In March, the Stakeholder Advisory Committee and Executive Council for Active Transportation endorsed the project objectives and work plan for the project. The project is in Phase 1, developing an existing conditions report to identify barriers and opportunities for completing a prioritized regional network of Bicycle and Pedestrian Parkways and Districts. In early fall, JPACT will receive a presentation on the project and findings from Phase 1 and a set of Regional Active Transportation Network Concepts.

Chair Collette provided a status on the Oregon Land Conservation and Development Commission (LCDC) urban growth boundary (UGB) decision. The LCDC is reviewing decisions made by the Metro Council in 2010 and 2011 to add capacity to the region's UGB. In April, DLCD staff recommended that the Commission acknowledge the measures took to increase the capacity of the UGB, as it existed in late 2010 and remand the UGB expansion decision the Metro Council made last October for further review. Council President Tom Hughes, Councilor Barbara Roberts, and Metro's land use attorney Dick Benner will go before the Commission to urge the commission to acknowledge the UGB decision.

Chair Collette reviewed the recent Greater Portland Incorporated, Best Practices, trip to Cleveland. Every year leaders from around the Portland area travel to a different city and study how those communities innovating solutions to development. Chair Collette overviewed the developments she saw including; a new high capacity transit system, cooperative workforce development programs and large philanthropic support. Atlanta is under consideration for next year's best practice trip.

Mr. Neil McFarlane of TriMet provided the committee with TriMet's budget recommendation. The budget recommendation will go to the TriMet Board of Directors at a special meeting on June 13. TriMet started the budget process early and set a record public outreach with 16,000 public comments. The key message from the public comments TriMet received was "protect the service". Mr. McFarlane updated the committee on the details of the budget recommendation and the status of the ATU 757 strike of TriMet's contract company First Transit's lift service. On May 22, TriMet is expecting the federal Transit administrator will be in Portland to sign the full funding agreement of the Portland to Milwaukie light rail.

Mr. Jason Tell of the Oregon Department of Transportation announced that there is a webinar on May 14 to prepare for transportation enhancement and bicycle/pedestrian grants. The two applications are being

combined into one application process to try to streamline the process. Notices of interests for applications are due June 6.

Mr. Tell noted that May is Transportation Safety Awareness month. There will be a series of events such as child safety seats installation seminars and reminders of construction season.

4. CONSIDERATION OF THE JPACT MINUTES FOR APRIL 12, 2012

MOTION: Councilor Donna Jordan moved, Mayor Craig Dirksen seconded, to approve the JPACT minutes for April 12, 2012.

ACTION TAKEN: With all in favor, the motion passed.

5. ACTION ITEMS

5.1 Update to Transportation System Plan Adoption Schedule and Process: Ordinance No. 12-1278

Mr. John Mermin of Metro introduced Ordinance No. 12-1278. Mr. Mermin reminded the group of what the Regional Transportation Plan (RTP) and the Regional Transportation Functional (RTFP) are, and that these amendments serve to both streamline the implementation of the RTP and create consistency with the Urban Growth Management Functional Plan (UGMFP). The amendments will make granting exceptions and extensions to jurisdictions easier, and add a provision allowing small cities to seek exemption from regional requirements.

In June of 2010, Metro adopted the RTP and a schedule for jurisdictions to bring their plans into compliance with the RTP. Metro anticipates several jurisdictions may have difficulty meeting the 2012 deadlines; these amendments will help to facilitate this process. The Metro Technical Advisory Committee (MTAC) and Transportation Policy Advisory Committee (TPAC) and Metro Policy Advisory Committee (MPAC) approved the recommendation of the Ordinance unanimously. Mr. Mermin is asking for a recommendation for approval of Ordinance No. 12-1278 from JPACT.

The committee discussed the following items:

- Committee members expressed support for the ordinance and that small communities would appreciate it.

MOTION: Mayor Craig Dirksen moved, Ms. Susie Lahsene seconded, to approve Ordinance No. 12-1278.

ACTION TAKEN: With all in favor, the motion passed.

5.2 Corridor Refinement Planning and Designating the Powell-Division High Capacity Transit Corridor as the Next Regional Priority: Resolution No. 12-4345

Ms. Elissa Gertler of Metro introduced Resolution No. 12-4345. Resolution No. 12-4345 if approved would update the work program for corridor refinement planning and designating the Powell-Division high capacity transit corridor as the next regional priority for completion of corridor refinement and the initiation of an alternatives analysis. The Powell-Division high capacity transit corridor was originally to be included in the Unified Planning Work Program however was separated so that JPACT members could vote on it. Transit in this corridor would connect several low-income areas with major education and

workforce training sites including Portland State University, Portland Community College and Mt. Hood Community College as well as with jobs in Portland and Gresham. Ms. Gertler reviewed that smaller scale of the project and noted that it would not interfere with the timeline of the Southwest corridor.

The committee discussed the following items:

- Committee members expressed support for the corridor but stressed the importance of keeping the SW Corridor timeline in place.
- Members stated the need to convey appropriate expectations to the public and not create expectations that cannot be met.
- Members noted the ripeness of the corridor given the synergistic opportunities such as light rail connections and the ability to make quality improvements without spending a lot of money.

MOTION: Councilor Shirley Craddick moved, Councilor Lisa Barton-Mullins seconded, to approve Resolution No. 12-4345.

ACTION TAKEN: With all in favor, the motion passed.

5.3 Regional Travel Options Strategic Plan: Resolution No. 12-4349

Mr. Daniel Kaempff of Metro introduced Resolution No. 12-4349. Resolution No. 12-4349 if approved would adopt the Regional Travel Options 2012-2017 Strategic Plan and approve the missions, goals, strategies, and actions in that plan. The RTO Program supports implementation of the 2035 Regional Transportation Plan (RTP) and carries out regional policy to increase use of travel options, reduce pollution, and improve mobility. The program focuses on making strategic investments that encourage the use of the alternatives to driving alone – carpooling, vanpooling, riding transit, cycling, walking and telecommuting. The plan calls for; a increased clarity of partners' roles and for reducing duplication of effort, funding and policy recommendation functions be transferred from the existing RTO Subcommittee to a newly formed work group comprised of TPAC members and other interested parties, and the plan recommends that the policy of dedicating a portion of program funds for the use of the region's Transportation Management Associations (TMA) be ended.

The committee discussed the following items:

- Members discussed how to decide funding allocation targets between sub-regions. The allocation target decision will come back to JPACT later. Some members suggested that the process for larger allocations be a part of the MTIP.
- Members supported the sub-regional allocation targets since some sub-regions do not have TMAs.
- The committee discussed changes to reporting requirements for smaller projects. Smaller projects still are required to provide reports but do not need to conduct larger vehicle reduction studies.
- Members discussed criteria for entities to receive grants. The list of accepted entities has not changed.

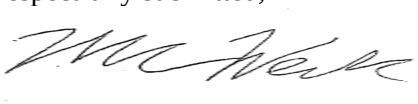
MOTION: Councilor Jordan moved, Mr. McFarlane seconded, to approve Resolution No. 12-4349.

ACTION TAKEN: With all in favor, the motion passed.

6 ADJOURN

Chair Collette adjourned the meeting at 8:30 a.m.

Respectfully submitted,



Marc Week
Recording Secretary
ATTACHMENTS TO THE PUBLIC RECORD FOR MAY 10, 2012
The following have been included as part of the official public record:

ITEM	Document type	Doc Date	Document Description	Document No.
3	Handout	05/2012	Zoo Concerts Schedule	051012j-01
3	Memo	05/07/2012	Upcoming Briefings and Public Comment Period on Draft Oregon Statewide Transportation Strategy	051012j-02
3	Handout	4/10/2012	TriMet Recommended Plan	051012j-03
3	Flyer	05/2012	Enrique Peñalosa speaking event	051012j-04
4	Minutes	05/05/12	041212 JPACT Minutes	051012j-05

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Metro | *Memo*

Date: June 7, 2012

To: JPACT and interested parties

From: Josh Naramore, Senior Transportation Planner

Re: Regional Transportation Safety Plan: Findings & JPACT Direction on Next Steps

BACKGROUND

Since fall 2009, responding to a Federal Highway Administration recommendation, Metro has been working with the Regional Safety Workgroup to better integrate safety into the transportation planning process. The Workgroup is comprised of the Metro region's cities and counties, Metro, TriMet, ODOT, researchers from Portland State University and practitioners specializing in transportation safety. The first task of the Workgroup was developing a performance target for the 2035 Regional Transportation Plan (RTP) for a 50% reduction in fatalities and serious injuries for pedestrians, bicyclists, and motor vehicle occupants by 2035 as compared to 2005.

Metro, in coordination with the Regional Safety Workgroup analyzed crash data provided by ODOT and produced the first State of Safety in the Region report (http://www.oregonmetro.gov/regionalmobility). The ODOT crash data was combined with Metro's mapping database that includes roadway data, such as functional classification, geometry, traffic volumes, traffic congestion, and spatial land use data. The report documents roadway crash data, patterns, and trends in the Portland Metro area and beyond to inform the pursuit of the region's goal of reducing pedestrian, bicyclist, and vehicle occupant fatalities and serious injuries by 50 percent.

Using this report as the data foundation, the Workgroup has recently been working on a Regional Transportation Safety Plan (RTSP), the first of its kind for this region with the goal to help the region meet the RTP target for reducing fatalities and serious injury crashes. This work builds on the efforts of ODOT's recent adoption of the Transportation Safety Action Plan (TSAP). Unlike the TSAP adopted by ODOT that looks at statewide crash trends, the RTSP focuses on the Portland Metro region and is specifically urban-focused. It provides a data-driven framework to identify trends in the region's crashes and recommends short-term and long-term strategies to reduce fatalities and serious injuries for all modes on the region's roadways.

REGIONAL TRANSPORTATION SAFETY PLAN FINDINGS AND RECOMMENDATIONS

The Regional Safety Workgroup identified the most significant findings that are apparent from the crash data. Some of the key findings from the data are:

- Arterials have the highest serious crash rate for all modes.
- Alcohol and drugs are primary contributing factors to fatal crashes.
- Speeding and aggressive driving are the leading contributing factors toward serious crashes.

- Serious pedestrian crashes are disproportionately represented after dark.
- Serious nighttime pedestrian and bicycle crashes occur disproportionately where street lighting is not present.
- Multi-lane roadways have particularly high serious pedestrian crash rates per mile and per VMT.

The Workgroup then used these findings to develop short-term recommendations for the region to pursue in the near future to better address transportation safety and work to reduce fatalities and serious injuries. The key recommendations for improving safety in the Portland Metropolitan region are:

- Continue data collection and analysis of ODOT crash data to support regional and local planning efforts.
- Develop arterial safety program to identify high crash arterials and develop targeted strategies to make these corridors safer.
- Convene targeted workgroup of expanded safety professionals to develop targeted strategies to reduce the prevalence of driving under the influence of alcohol and drugs, speeding and aggressive driving.
- Focus on improved pedestrian crossings including lighting, particularly on multi-lane arterials.
- Focus on providing protected bicycle facilities along high-volume and/or high-speed roadways such as buffered bike lanes, cycle tracks, multi-use paths, or low-traffic alternative routes.
- Further explore bicycle and pedestrian safety as part of the Regional Active Transportation Plan currently underway.

The specific short-term recommendations are in **Table 1**. Longer term recommendations, which are necessary if the region is to achieve the targeted reduction in serious crashes, are also identified for future efforts and policy revisions.

At the June 14 JPACT meeting Metro staff will be presenting these findings from the crash data and short-term recommendations to address them**.** Because implementation of the Regional Safety Workgroup recommendations will require some level of new resources or significant re-allocation of existing resources, the June JPACT discussion will seek to answer the following questions:

1. Would JPACT like to join the Metro Council in directing Metro staff to work with TPAC to develop options for implementing the Regional Safety Work group short-term recommendations?
2. If so, are there any particular considerations that should be addressed as part of one or more of the options?

To submit questions, comments, or request any additional information, contact Josh Naramore at 503-797-1825 or joshua.naramore@oregonmetro.gov.

Table 1 – Findings and Workgroup Short-Term Recommendations

	Finding	Strategy or Strategies	Possible Actions	Resources Currently Available?
All Crashes	***Alcohol and drugs, excessive speed, and aggressive driving are the most common contributing factors in serious crashes.. Crashes involving alcohol and drugs have a much higher likelihood of being fatal than other crashes.***	Policies to reduce the prevalence of speeding and aggressive driving on surface streets and to reduce the prevalence of driving under the influence of intoxicants.	• Convene and/or coordinate targeted workgroup of safety professionals (law enforcement, EMS, etc.) to develop targeted strategies to reduce the prevalence of driving under the influence of alcohol and/or drugs, speeding and aggressive driving.	
Surface Streets	***Arterials roadways have the highest serious crash rate per road mile and per VMT. 59% of the region's serious crashes, 67% of the serious pedestrian crashes, and 52% of the serious bike crashes occur on arterial roadways.***	A regional arterial safety program to focus on corridors with large numbers of serious crashes, pedestrian crashes, and bicycle crashes.	• Develop systemic performance measures for identifying high severity crash arterials across the region. Use strategies including Highway Safety Manual strategies to address arterial safety, such as medians, speed management, access management, roundabouts, and road diets.	
Bicycle & Pedestrian	***Serious pedestrian crashes are disproportionately represented after dark. Serious nighttime pedestrian and bicycle crashes occur disproportionately where street lighting is not present.***	A focus on crosswalk and intersection lighting where pedestrian and bicycle activity is expected, as well as programs to encourage use of reflective equipment by pedestrians and bicyclists.	• Research pedestrian/bicycle facility lighting best practices. • Ensure bike routes and crosswalks – marked and unmarked – are adequately lit. • Safety education campaign around "See and be seen." • Further explore bicycle and pedestrian safety and identify projects as part of the Regional Active Transportation Plan currently underway.	
	Streets with more traffic lanes have higher serious pedestrian crash rates per mile and per VMT.	Policies to improve the quality and frequency of pedestrian crossings on arterials and multi-lane roadways, as well as enforcement of right-of-way at crosswalks.	• Develop safe crosswalks on arterials and multi-lane roads, generally adhering to the region's maximum spacing standard of 530 feet and at all transit stops. • Enforce existing laws through crosswalk enforcement actions.	
	Streets with more traffic lanes have higher serious bicycle crash rates per mile.	Policies to encourage protected bicycle facilities along roadways with high motor vehicle traffic volumes and/or speeds.	• Along high-volume and/or high-speed roadways, where feasible, provide protected bicycle facilities such as buffered bike lanes, cycle tracks, multi-use paths, or low-traffic alternative routes	

Draft Oregon Statewide Transportation Strategy

A 2050 Vision for Greenhouse Gas Emissions Reduction

Executive Summary





Oregon Sustainable Transportation Initiative (OSTI)

May 2012

Oregon Department of Transportation

Dedicated to the legacy of Gail Achterman's leadership for Oregon's natural resources and sustainable transportation.

For more information, contact:

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www.oregon.gov/ODOT/TD/OSTI/STS.shtml

Oregon Department of Transportation

The Oregon Department of Transportation
Transportation Planning Unit
555 13th Street NE, Suite 2
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The Statewide Transportation Strategy

The Statewide Transportation Strategy (STS) for greenhouse gas (GHG) emissions reduction looks out to the year 2050 and explores how transportation and land use choices made over the coming decades might affect Oregon's long-term future. It is part of a larger effort known as the Oregon Sustainable Transportation Initiative[1] (OSTI), an integrated statewide effort to reduce GHG emissions from Oregon's transportation sector.

OSTI is the result of two bills passed by the Oregon Legislature, House Bill 2001[2] (2009) and Senate Bill 1059[3] (2010), which were crafted to help the state meet its 2050 goal of reducing transportation-related GHG emissions.[4] OSTI takes into consideration how the energy landscape is changing, as well as the need to sustain a strong economy while creating healthier, more livable communities and greater economic opportunity.

The STS addresses the following key question:

> *What actions and strategies will be effective in reducing transportation-related GHG emissions in Oregon while supporting other societal goals such as livable communities, economic vitality, and public health?*

The STS is the product of an effort involving extensive research and analysis as well as policy direction and technical input from state agencies, local governments, industry representatives, metropolitan planning organizations (MPOs), and others. It is intended to identify the most effective GHG emissions reduction strategies in transportation systems, vehicle and fuel technologies, and urban land use patterns, which will serve as the best tools available to help meet the state's goals.

The STS is neither directive nor regulatory, but rather points to promising approaches that should be further considered by policymakers at the state, regional, and local levels. It constitutes a framework for future work to reduce transportation-related GHG emissions in three key travel markets: Ground Passenger and Commercial Services, Freight, and Air Passenger.

The movement of people and goods produces emissions that account for a significant portion of all GHGs produced by Oregonians, so reducing emissions from transportation can make a sizeable contribution to overall GHG reduction goals. While the focus of OSTI

STS Policy Committee Chair Ken Williamson

"We are not talking about getting people out of their cars. This is about a clear economic opportunity – creating industry, creating jobs. Leadership will be essential."

— Ken Williamson, Oregon Environmental Quality Commission, Oregon State University

[1] OSTI; http://www.oregon.gov/ODOT/TD/OSTI/General.shtml

[2] Section 37 to 39, Chapter 865, Oregon Laws 2009; http://www.leg.state.or.us/09orlaws/sess0800.dir/0865.htm

[3] Chapter 85, Oregon Laws 2010 Special Session; http://www.leg.state.or.us/10ssorlaws/0085.htm

[4] ORS 468A.205; http://www.leg.state.or.us/ors/468a.html

is on transportation, the Oregon Global Warming Commission and others are addressing GHG from other sources, such as electrical power generation, to help Oregon meet the state's ambitious goal of reducing GHG emissions to 75 percent below 1990 levels by 2050.[5] Achieving this statewide goal will require planning, innovation, and coordination among many sectors and communities across the state.

The findings and recommendations documented in the STS is the first phase in a multi-year process. Following the adoption of the STS by the Oregon Transportation Commission (OTC), the next phase will be the collaborative development of an implementation plan. The third and final phase will consist of monitoring and adjusting the strategy over time.

The Cost of Inaction

Undertaking the recommendations in the STS will not be easy. They will require assuming new responsibilities, such as committing to providing more pedestrian, bicycle, and public transportation options in urban areas, and potentially reallocating and securing additional funds. However, the alternative is likely to be even more costly. On the current path, the results of the STS analysis suggest there will be a multitude of new costs and challenges. One way or another, projected increases in population and travel demand, funding constraints, and the need to repair or replace aging infrastructure will require some significant changes to Oregon's transportation system in the decades ahead. Inaction is neither cheap nor desirable.

What Will It Take to Change Course?

Long-term projections of the "business as usual" approach to transportation show that without decisive and timely action, GHG emission levels will rise steadily into the future. Further progress will result from existing policies, but much additional work is needed to put Oregon on track to meet emissions reduction goals and mitigate future impacts of climate change.

Why Do Greenhouse Gas Emissions Matter?

GHG emissions result in part from the combustion of fossil fuels like oil, coal and natural gas. These gases trap extra heat in the atmosphere. According to scientists, this leads to increases in average global temperatures, extreme weather events, and other changes in the global climate, commonly referred to as climate change. Global climate changes can lead to extended warm spells and drought, as well as more frequent flooding. These changes have consequences for Oregon agriculture, hydropower, public health, watershed and forest health, and infrastructure vulnerability.

Scientists can't say exactly how intense these effects will be, how rapidly they will emerge or what exactly their geographic distribution will be, but there is broad agreement that GHG emissions must be reduced, and societies must prepare to react to some of these effects even if timely reductions are achieved.

If the climate change trend continues, Oregon could experience a range of negative impacts, including:

- Higher sea levels and stronger storm surges that could threaten coastal areas with greater risk of floods and damage to buildings, roads, bridges, and other infrastructure.
- Changes in precipitation patterns such as more severe rain and snowstorms, less and more rapidly melting snowpack, which could threaten supplies of water for drinking, recreation, irrigation, and fisheries.
- Diminished water supply and agricultural productivity that could affect Oregon's crops and livestock.
- Adverse health impacts including increases in heat-related illnesses, chronic disease and fatalities due to more heat waves.
- Suffering ecosystems, including forests, grasslands and watersheds, where native species will suffer as temperatures rise.

[5] ORS 468A.205; http://www.leg.state.or.us/ors/468a.html

Achieving the state's goals will require a multi-faceted approach and significant cooperation between state agencies, regional planning entities, local governments, the private sector, and the public. While Oregon is prepared to be in the forefront in addressing climate change, it cannot face this challenge alone. Limiting the impacts of climate change must ultimately be a global effort, requiring actions from other states, the federal government, other countries, and private industry.

See how to be involved – www.oregon.gov/ODOT/TD/OSTI

What's In It for Oregon?

The benefits of reducing GHG emissions from transportation extend beyond arresting the impacts of climate change. Many actions that can be taken to reduce GHG emissions may also help create new jobs while positioning Oregon to compete in a changing global economy. Over the next forty years – the planning horizon of the STS – Oregon will face a number of challenges that will require creative solutions. Factors such as population growth, a changing economy, and aging transportation infrastructure will all require attention whether or not there is comprehensive action on climate change.

As the STS demonstrates, the same actions that are employed to reduce GHG emissions also will:

- Reduce delay and inefficiency on Oregon's roadways;
- Support clean air and protect natural resources;
- Improve public health;
- Accommodate new state residents;
- Provide for the efficient movement of goods and services;
- Reduce Oregon's dependency on foreign energy sources; and
- Reduce the percentage of income the average Oregon household spends on transportation.

The 2050 Vision

In setting the context for a statewide transportation strategy to address transportation-related GHG emissions reduction, it is necessary to envision a future Oregon that accommodates an expanding population and maximizes the potential for a thriving economy, while maintaining Oregon's quality of life and natural beauty. Planning for a cleaner and more sustainable transportation and land use system also supports a multitude of societal benefits including: more efficient transportation systems that help people and goods travel more quickly and easily; reduced transportation costs for individuals and businesses; and increased travel choices such as bicycling, walking, and public transportation.

The Statewide Transportation Strategy envisions a future Oregon that features:

- **Walkable mixed-use communities**, where a large share of residents live within walking distance of jobs, stores, services, entertainment, and transit stops. Communities across the state are recognized for vibrancy, livability, and safety.

"This is also about protecting Oregon business – how are we as governments responding? Can we facilitate change, or be nimble enough to respond?"

— Onno Husing, Oregon Coastal Zone Management Association

- **Improved public transportation service, bicycling and walking** throughout the state, provide all Oregonians with better access to a range of transportation options. Communities feature well-lit walking paths, bicycle facilities, and more frequent transit service, encouraging physical activity and overall improvements in public health.
- **Fuel-efficient/alternative energy vehicles**, created through great strides in technology, allow widespread adoption of cleaner and more efficient passenger vehicles. Heavy-duty freight vehicles run on liquefied natural gas, and commercial aircraft run largely on biofuels. These changes improve air quality dramatically while reducing dependency on foreign oil.
- **Enhanced information technology** allows Oregonians to easily plan and update their travel routes using multiple modes as needed such as transit, bicycling and walking. Improved communication systems enable individuals and organizations to meet and collaborate virtually, while reducing the need for physical travel. Collision avoidance systems in cars and trucks greatly reduce the number and severity of crashes, and eliminate hundreds of hours of roadway delays each year.
- **More efficient movement of goods** results from reduced congestion on Oregon roadways, shifts to more efficient modes such as rail and water, and lower emissions from new technologies in freight-hauling vehicles.

Benefits of the 2050 Vision

The potential benefits of achieving the Statewide Transportation Strategy 2050 Vision extend far beyond the critical goal of limiting the adverse effects of climate change. In fact, bringing about these advancements could result in a broad array of positive impacts to society when compared to business as usual. The 2050 Vision offers the following potential benefits for Oregonians:

- **Household savings** resulting from fewer vehicle miles traveled, lower household vehicle ownership rates, and improved access to public transportation, bicycling and walking. Savings allow households to spend a lower percentage of their incomes on transportation. Related benefits of more compact development include reduced per capita costs associated with providing electricity, water and other utilities, and lower health care costs as a result of improved public health.

- **A stronger economy** with a shift to more diverse fuel sources, reduced congestion, and improved travel reliability. Employers, employees, and shippers experience cost savings, time savings, and greater travel predictability. Substantial reductions in the amount of fossil fuels consumed per capita result in household cost savings and more investment in the state economy.

- **Safer roads**, through bicycle and pedestrian improvements designed to maximize visibility to motorists. On Oregon's roadways, lower rates of vehicle travel and new intelligent transportation systems significantly reduce crash rates.
- **A healthier public**, as mixed-use communities with transit and more transportation options, lead to more active and healthy communities, lower obesity rates, and lower incidences of asthma and other related diseases.
- **Energy savings** from improved vehicle efficiency, new alternative fuels, and lower vehicle usage.
- **Cleaner air and water** as heavy trucks, aircraft and private vehicles increasingly run on cleaner and more efficient energy, resulting in cleaner air and fewer environmental impacts from the extraction, refining, and transportation of fossil fuels.

Viewed from 2012, the 2050 Vision for transportation may seem ambitious. Indeed, many of its components will require significant advancements in technology and infrastructure. Yet each of the elements in the STS was selected for plausibility based on existing research, development, and practice. In fact, much of the groundwork for the 2050 Vision has already been laid through advances in alternative fuels and electric vehicles, intelligent transportation systems (ITS) applications to passenger and freight travel, modernization of the nation's air traffic control system, and significant improvements in freight vehicle fuel economy.

Fully realizing the benefits of some of these advancements will require investment and innovation by the federal government and private industry. Developing new and ongoing funding sources for infrastructure will remain difficult, as unforeseen circumstances and other societal priorities continue to compete for attention and dollars. Overcoming these obstacles will require a range of actions at state, regional, and local levels, as well as cooperation from public and private entities beyond Oregon's borders. The challenges will be great, but the opportunities are greater. Achieving the 2050 Vision will help continue Oregon's legacy of leadership and yield far-reaching benefits for generations to come.

"We know that as walking goes up, crime goes down."

— Ken Williamson, Oregon Environmental Quality Commission, Oregon State University, STS Policy Committee Chair

Recommendations

The STS explores all aspects of the transportation system including the movement of both people and goods. The transportation sector consists of a diverse variety of modes and markets that for the purposes of the STS analysis were divided into three distinct travel markets: Ground Passenger and Commercial Services, Freight, and Air Passenger.

Although some actions (e.g., advancements in fuel technologies and deployment of intelligent transportation systems technologies) may affect multiple markets, by and large these three travel markets are subject to unique GHG emissions reduction strategies. Therefore, recommendations are presented separately for each travel market.

Ground Passenger and Commercial Services Travel Market Recommendations

Within the transportation sector, currently the largest share of GHG emissions (more than 50 percent) is generated from the Ground Passenger and Commercial Services travel market.[6] This travel market facilitates the movement of people for work, recreation, and personal business and includes all ground passenger travel on roads and rail, as well as ground commercial deliveries and service trips. It includes passenger cars and light trucks (pick-up trucks, SUVs, delivery vehicles, etc.) as well as public transportation vehicles (e.g., bus and train), motorcycles, pedestrians, and bicycles.

In exploring ways to reduce GHG emissions for the Ground Passenger and Commercial Services travel market, efforts were made to look at strategies that:

- Improve fuel economy and shift to lower-carbon fuels;
- Result in lower overall emissions;
- Help reduce delay;
- Provide travelers with transportation choices other than driving alone in a car; and
- Facilitate access to jobs and services closer to home.

[6] Based on GHG inventory methods explained further in Appendix A

Recommendation G1 – Transition to lower emission vehicles, such as plug-in hybrids and electric cars, and encourage the purchase of newer technology vehicles that are more fuel-efficient or are not dependent on higher emission fuels.

Recommendation G2 – Support development of cleaner fuels.

Recommendation G3 – Promote compact, mixed-use development to reduce travel distances, facilitate use of zero- or low-energy modes (e.g., bicycling and walking) and transit, and enhance transportation options.

Recommendation G4 – Encourage communities to accommodate most expected population growth within existing Urban Growth Boundaries (UGB) through infill and redevelopment.

Recommendation G5 – Enhance fuel efficiency by fully optimizing the transportation system through operations and Intelligent Transportation Systems (ITS) deployment.

Recommendation G6 – Promote Pay-As-You-Drive Insurance (PAYD) programs that allow drivers to pay per-mile premiums, encouraging less driving through insurance savings.

"It seems exotic but it's just applying common sense in a really thorough way – looking at all costs and benefits, not only the near-term economic ones."

— Angus Duncan, Chair of the Oregon Global Warming Commission

Recommendation G7 – Move to a more sustainable funding source that covers the revenue needed to maintain and operate the transportation system.

Recommendation G8 – Encourage local trips, totaling six miles or less per round-trip, to shift from single-occupant vehicle (SOV) to bicycling, walking, or other zero-emission modes.

Recommendation G9 – Promote investment in public transportation infrastructure and operations to provide more transportation options and help reduce single-occupancy vehicle travel.

Recommendation G10 – Design road expansions to be consistent with the objectives for reducing future GHG emissions by light duty vehicles.

Recommendation G11 – Reduce the number of single-occupant vehicles on roadways by promoting and encouraging participation in carpool/vanpool (Rideshare) programs.

Recommendation G12 – Reduce the need for households to own multiple vehicles and reduce household vehicle miles traveled by

enhancing the availability of carsharing (short-term self-service vehicle rental and/or peer-to-peer) programs.

Recommendation G13 – Develop and improve information and support programs that make it easier for people to choose transportation options.

Recommendation G14 – Promote better management and use of parking in urban areas to support compact, mixed-use development and use of other modes, including transit, walking and bicycling.

Freight Travel Market Recommendations

Freight transportation represents the second largest source of transportation-related GHG emissions at about 30 percent of all transportation emissions.[7] The Freight travel market analysis considers the GHG emissions of all modes of transportation used to move commodities and finished products for consumption in Oregon, including heavy-duty trucks, trains, ships and barges, cargo aircraft, and pipelines. Freight transportation in this context involves larger, heavier vehicles that usually travel longer distances to serve both regional and national markets.

Of real concern is the finding that vehicle miles traveled (VMT) and GHG emissions in the Freight travel market have been growing faster than in the Ground Passenger and Commercial Services travel market. If steps are not taken to reduce the emissions from this sector of the economy, the freight market share of transportation GHG emissions could represent the majority of all transportation emissions in the future.

As in the Ground Passenger and Commercial Services travel market, strategies were evaluated to reduce Freight travel market GHG emissions in a way that would also produce other benefits, such as reducing fuel costs and encouraging the proliferation of technology to improve freight movement efficiency. Key strategy focus areas include improving the operating efficiency of the freight system, shifting commodity shipments to less carbon-intensive modes, implementing vehicle and fuel technology improvements, and enacting pricing strategies designed to support these other strategies. More than 80 percent of all Freight travel market GHG emissions are produced outside of the state as goods and commodities make their way to Oregon homes and businesses. While outside the scope of the STS, to be successful in GHG reduction, Oregon's consumption of goods and materials should be addressed. Strategies will be needed at multi-state, national, or even international levels.

[7] Based on GHG inventory methods explained further in Appendix A

Recommendation F1 – For the commodities and goods where low-carbon modes are a viable option, encourage a greater proportion of goods to be shipped by rail, water, and pipeline modes.

Recommendation F2 – Encourage a diverse economy with growth in high-value density industries such as electronics, precision manufacturing, and aerospace.

Recommendation F3 – Encourage and incentivize more efficient use of industrial land through closer proximity of shippers and receivers, consolidated distribution centers, and better access to low-carbon freight modes.

Recommendation F4 – Regulate operation of freight vehicles at speeds that optimize GHG emissions reductions and provide incentives for technology improvements that provide drivers and operators with real-time information on fuel consumption and operating costs.

Recommendation F5 – Support industry transition to more efficient engine technologies, vehicle designs, and rail car/truck trailer designs.

Recommendation F6 – Reduce the carbon intensity of freight fuel.

Recommendation F7 – Implement idle reduction technologies at ports, freight terminals, and truck stops.

Recommendation F8 – Impose a fee on carbon and other environmental costs to account for the full costs of freight travel and to encourage the adoption of more carbon-efficient technologies and less impactful freight modes and shipping patterns.

"In a trade dependent state like ours, this strategy focuses on dramatically reducing greenhouse gases while efficiently moving the state's goods and people."

— Marla Harrison, Port of Portland

Air Passenger Travel Market Recommendations

The Air Passenger travel market generates an estimated eight percent of the total GHG emissions in the transportation sector.[8] GHG emissions in this travel market are emitted by aircraft on the ground and during flight, from ground support equipment at airports such as luggage carts and gate equipment, and from all vehicles accessing the airport including private vehicles, taxis, shuttles, transit vehicles, and trucks. Air passenger travel moves at much faster speeds and typically over much longer distances than ground passenger travel. In addition, unique fuels are required to propel aircraft.

[8] Based on GHG inventory methods explained further in Appendix A

In exploring ways to reduce GHG emissions for air passenger travel, strategies were investigated that:

- Reduce overall demand for air passenger trips through improving alternative modes or eliminating entirely the need for some trips through advanced telecommunications;
- Reduce air passenger demand by assigning a fee that manages demand and/or encourages mode shift;
- Improve the efficiency of public transportation and nonmotorized access to the airport;
- Improve the efficiency of all vehicles and equipment operating on airport property;
- Reduce delays and improve overall efficiency of the air transportation system; and
- Reduce the carbon intensity of air passenger travel through improved aircraft and engine technologies and use of low-carbon aviation fuels.

Recommendation A1 – Support sponsored research and partnerships with aircraft and engine manufacturers to help meet NASA's Environmentally Responsible Aviation (ERA) and Ultra Efficient Engine Technology (UEET) program goals.

Recommendation A2 – Reduce the carbon intensity of aviation fuels.

Recommendation A3 – Accelerate and complete implementation of the FAA "Next Generation" Air Transportation System.

Recommendation A4 – Institute a carbon fee for all commercial air passenger services, with scheduled fee increases over the long-term.

Recommendation A5 – Broadly support and deploy technologies for virtual meetings and other communication technologies to decrease business air travel demand.

Recommendation A6 – Increase efficiency in all airport terminal access activities, including shift to low- and zero-emission vehicles and modes for passengers, employees, and vendors.

Recommendation A7 – Deploy efficient operations and maintenance practices and use low- or zero-emission equipment for all airport ground service operations.

Recommendation A8 – Set aviation fuel charges at a level sufficient to pay for non-climate change related externalities associated with fuel consumption. Non-climate change related externalities include energy security, air pollution, and surface environmental impacts.

Recommendation A9 – Prioritize passenger rail improvements in the Eugene to Vancouver, BC corridor, ensuring service that is performance- and cost-competitive with air travel.

Recommendation A10 – Increase passenger fees for air travel with both an origin and destination in the Eugene to Vancouver, BC corridor to encourage mode shift to passenger rail or other lower-carbon modes such as express intercity bus.

The STS: A Path to Oregon's Future

Climate change is a global issue and cannot be addressed by Oregon alone. Still, Oregon's Statewide Transportation Strategy is a critical element in moving Oregon forward on path to a more sustainable future. Many existing and ongoing efforts have helped to inform and compliment the STS, including the Governor's Advisory Group on Global Warming (2004), the Governor's Climate Change Integration Group (2008), the Oregon Global Warming Commission's "Roadmap to 2020" (2010), and the Governor's 10-Year Energy Plan (2012). This document is intended to compliment these efforts.

Within ODOT's planning structure, the STS supports the Oregon Transportation Plan (OTP) and its goal to provide a safe, efficient and sustainable transportation system that enhances Oregon's quality of life and economic vitality. Many of the recommendations in the STS align with other broad policies in the OTP as well as policies identified in other plans, such as the Oregon Freight Plan.

Challenges

Each recommendation presented in the STS has its own opportunities and challenges. The cost, level of effort, and type of actions needed will vary by recommendation and element. Some of the potential challenges are discussed below.

Financing/Funding Sources: There is a need for new and/or more flexible revenue streams in order to build, operate and maintain the transportation infrastructure that is consistent with the 2050 Vision.

"We need to reach for the economic opportunities that will come from improved technologies, products associated with a low carbon economy. This will create new economic sectors."

— Rex Burkholder, Metro

Adoption Rate of Technology: The development and adoption of new technology – for cleaner fuels, more efficient vehicles, intelligent transportation systems, etc. – may require research and development costs, incentives to encourage their use, and significant investment to build and operate appropriate infrastructure. Some actions may have slow implementation and start-up periods.

Land Use: Oregon faces the challenges of accommodating increases in population and supporting economic growth. New development that supports land uses to accommodate more infill and redevelopment, discourages sprawl and preserves industrial lands in areas with access to transportation options will be important. Some of these actions may require consideration of policy and code changes to allow jurisdictions flexibility in changing land uses and providing appropriate infrastructure.

Public Acceptance and Participation: Some of the recommendations may be controversial, especially in the short-term, making it challenging to find public support and acceptance. For example, users may find it difficult to accept the concept of paying the full cost of transportation through user fees or have privacy concerns.

Support of Decision-Makers: Lack of incentives, and the need for regulatory changes and new funding mechanisms to implement some of the STS actions will require legislative action to create regulatory context, establish incentive programs, encourage program exploration and participation, or change standards and policies. Federal legislative action may be essential to implement certain strategies, particularly those targeting the freight and aviation sectors.

Multi-Jurisdiction Coordination and Collaboration: The mix of public and private ownership and multiple jurisdictions responsible for the transportation system makes it a challenge to find shared goals. Transportation-related GHG emissions reduction will require close collaboration between jurisdictions across the national, state, and local levels. It will be necessary to balance these relationships so that Oregon is not at an economic disadvantage, and to find synergies and collaborations that enable progress on recommendations for the greater good.

The process of further defining the STS recommendations and addressing these and other challenges must be inclusive and engage stakeholders from diverse backgrounds to allow a variety of perspectives to be shared and considered. Members of the committees, agencies and other participants in the state's efforts to plan for reductions in transportation-related GHG emissions recognize that there are many unknowns and that there will be a need to monitor and adapt as the work moves forward. This work will require strong partnerships and close collaboration with local, regional, state and federal partners as well as with individuals and businesses. Key to achieving the goals is an agile and iterative process to respond to and take advantage of what is learned along the way.

"Towns of all sizes can reap the benefits of many of these strategies."

— Chris Hagerbaumer, Oregon Environmental Council

Next Steps

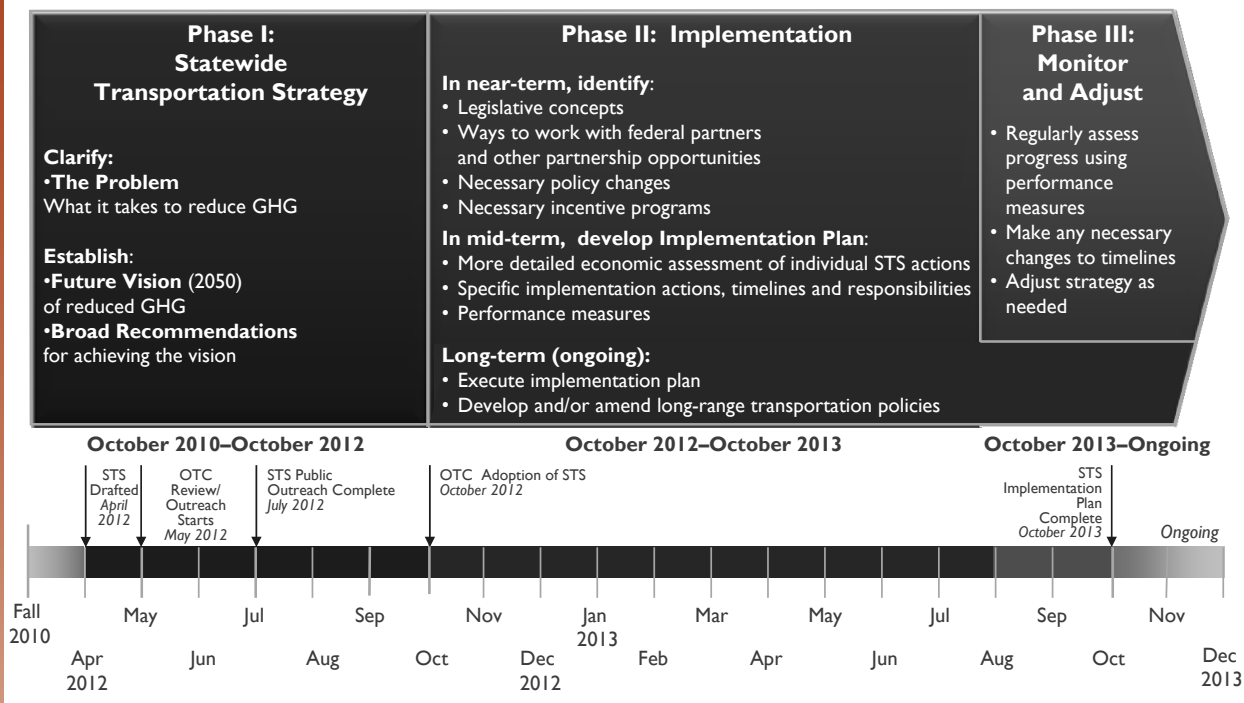
Development of the STS is the first major step in a multi-year planning and implementation process to reduce transportation-related GHG emissions from the transportation sector. Following the adoption of the STS by the OTC, work will begin to develop an implementation plan. During this collaborative process, many of the recommendations will be analyzed in greater detail to understand potential economic impacts and opportunities. Also through development of the implementation plan, the roles and responsibilities of the federal, state, regional, local, and private sectors will be identified. Lastly, the STS will be monitored and adjusted over time, as needed.

The three phases of the STS are summarized below and illustrated in the graphic on the following page:

Phase I: This phase includes development of the STS document, including establishing a vision, identifying the recommendations for helping to reduce emissions, and conducting public outreach. Phase I began in fall 2010 and will be completed when the OTC adopts the final STS, scheduled to occur in fall 2012.

Phase II: The implementation phase will involve defining specific implementation actions, roles, and responsibilities. This phase also includes a more detailed assessment and analysis of potential economic impacts and opportunities. Phase II is anticipated to start in fall 2012 and continue for approximately one year.

Phase III: The monitoring and adjustment phase includes tracking of performance measures over time and the periodic assessment and modification of the STS and timelines as elements of the STS are implemented. Phase III is anticipated to begin in fall 2013 and will be an ongoing process.



www.pedbikeimages.org /Laura Sandt

A special thank you to the following committee members for their contributions during the development of the STS. We also wish to thank the citizens of Oregon, including policy board members and their staff who provided valuable comments and assistance on the STS.

STS Policy Committee Members

Chair: **Ken Williamson** Oregon Environmental Quality Commission (2004-2012), Professor Emeritus – Oregon State University

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Rex Burkholder Metro

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Bob Russell Oregon Trucking Association

John VanLandingham Land Conservation and Development Commission

John Vial Jackson County

Oregon Transportation Commission

Chair: **Pat Egan**

David Lohman

Mary Olson

Mark Frohnmayer

Tammy Baney

"I am really looking forward to Phase 2, to doing something on the ground."

— Mark Capell, Bend City Councilor

For the most current information go to:

www.oregon.gov/ODOT/TD/OSTI/STS.shtml

To Comment on the Draft Statewide Transportation Strategy

Comments may be provided electronically at:
www.oregon.gov/ODOT/TD/OSTI/STS.shtml

Written comments may be submitted to:

The Oregon Department of Transportation
Transportation Planning Unit
555 13th Street NE, Suite 2
Salem, Oregon 97301

Written comments on the Draft STS must be received by Friday, July 20, 2012.

Draft Oregon Statewide Transportation Strategy

www.oregon.gov/ODOT/TD/OSTI/STS.shtml

Oregon Department of Transportation

CLICK HERE FOR FULL REPORT

Draft Oregon Statewide Transportation Strategy

A 2050 Vision for
Greenhouse Gas Emissions Reduction

Oregon Sustainable Transportation Initiative (OSTI)

May 2012

Oregon Department of Transportation

CLICK HERE FOR FULL REPORT

Draft Oregon Statewide Transportation Strategy

A 2050 Vision for
Greenhouse Gas Emissions Reduction

Oregon Sustainable Transportation Initiative (OSTI)

Technical Appendices

May 2012

Oregon Department of Transportation

Materials following this page were distributed at the meeting.

Analysis: Cities with More Walkers, Bike Commuters are Less Obese

BY: Mike Maciag | June 14, 2012

The latest data from the Centers for Disease Control and Prevention affirms an alarming trend: we're fat and not getting any slimmer. An estimated 35 percent of U.S. adults are obese, and another third still maintain weights exceeding those deemed healthy. This doesn't bode well for governments and individuals paying insurance premiums, especially with the country's aging population.

But there are antidotes to the problem, and among the best could be sidewalks and bike lanes. The infrastructure not only allows residents to enjoy outdoor recreation and bypass congested roadways, but data shows it delivers slimmer waistlines in some of the nation's largest metropolitan regions.

A *Governing* review of census and CDC data finds communities where more residents walk or bike to work boast significantly healthier weights. The analysis of 2010 statistics for 126 metropolitan areas finds these communities are strongly correlated with higher numbers of residents who are neither obese nor overweight.

Historically, studies have linked trails, sidewalks and bike lanes with an increase in walking or cycling. As medical costs continue to rise and evidence mounts that such infrastructure also improves well-being, public officials may look to give health consideration greater standing in transportation planning.

"The more access that people have to these kinds of places, the more likely they are to be healthy," said Susan Polan, associate executive director for public affairs and advocacy with the American Public Health Association.

Metropolitan regions with the healthiest weights are home to high counts of walkers and bike commuters.

The CDC considers those with sizable weights for their height (body mass index of 30 or greater) to be obese, and others who are not quite obese, but exceeding healthy weights, to be "overweight."

Approximately half of Fort Collins-Loveland, Colo., metro area residents are neither overweight nor obese. That might not sound like a lot, but it's the highest percentage of healthy residents of all metro areas surveyed for the CDC's 2010 Behavioral Risk Factor Surveillance System, an annual telephone survey measuring a range of health issues. Accordingly, census figures indicate 5.3 percent of Fort Collins-Loveland area commuters walk or bike as their primary form of transportation to work, one of the highest rates in the country.

Five of the top 10 healthiest metro areas in terms of weight were among the 10 regions with highest percentages of residents walking or biking to work in the *Governing* analysis. Although tallies of walkers and bikers are small compared to all commuters, many who walk or bike to public transit stations aren't counted in the Census Bureau's American Community Survey data, and significantly more exercise outdoors outside of their daily commutes.

While only a fraction of workers in an area may opt to bike or walk to work, having the necessary infrastructure in place compels others to use it more regularly.

Spending hours a day in a car or living a sedentary lifestyle makes it difficult to shed pounds. Exercising helps, and eating habits, medical conditions and other factors understandably drive obesity rates as well.

Along with commuting habits, other measures showed statistically significant relationships with healthy weights in the analysis. Healthier metro areas were most closely correlated with the portion of a region's

population holding at least a bachelor's degree. The Bridgeport-Stamford-Norwalk, Conn. metro area, a wealthy region ranking near the top in education attainment, recorded the lowest obesity rate in the CDC's 2010 survey.

Still, the correlation between commuting and residents not considered obese nor overweight was strong--16 percent greater than the relationship with median household income. An area's average commute time was slightly correlated with weight, but was not statistically significant.

Scatter plot of metro areas' walkers/bike commuters correlated with healthy weights:

The CDC recommends a range of infrastructure for communities to rein in obesity. Bike lanes, shared-use paths and bike racks promote cycling. Urban design with adequate sidewalks, lighting, street crossings and similar features supports walking and other physical activity. The agency also suggests localities work to cut miles driven on roadways.

American Public Health Association's Polan cited public transit projects and converting old rail lines into trails as two of the more popular initiatives localities pursue. It's particularly important, she said, to encourage kids to walk to school and educate them about pedestrian safety at a young age.

Last year, Los Angeles County, Calif., earmarked nearly $16 million in funding for an initiative aimed at curbing obesity, part of which included expanding bike networks and promoting open spaces.

"There are a lot of smaller initiatives that can engage and energize people and make them realize what a difference they can make at the local level," Polan said.

When cutting expenses, health costs are an easy target. A recent study by two Lehigh University researchers reported obesity-related costs accounted for $190 billion annually in U.S. health expenditures, nearly 21 percent of the country's total bill.

Advocates often push for related projects in transportation planning, but the amount of weight officials actually give to health concerns varies. While it may be a major consideration in some communities, others focus strictly on economic concerns, Polan said.

John Norquist, president of the Congress for the New Urbanism, said many cities have taken steps in recent years to promote walking and biking.

To improve walkability, connected street grids – with slower speed limits and no more than two lanes in each direction -- are a key component, he said.

Those looking to move can use the popular walkscore.com website to measure how accessible an apartment or home's various neighborhood amenities are on foot. Norquist, whose group advocates mixed-use and transit-oriented development, cited New York City, San Francisco, Denver and Albuquerque, N.M., as cities making strides in developing walkable communities.

Biking has also accelerated, Norquist said, particularly in Seattle and other older urban environments. "The old downtowns are in great shape for biking," he said.

Young people's attitudes toward biking and public transit have shifted, with more seeking alternatives to long car rides, Norquist said. Bicycle manufacturers have joined in the push to remake communities, hiring lobbyists to pressure Washington and support more bike-friendly transportation planning policies.

The emphasis on healthy lifestyles in urban design isn't new, though. Richard Jackson, a former head of the CDC's National Center for Environmental Health who has since become one the movement's most vocal proponents, published an article linking built environments to adverse health effects back in 2001.

Norquist said that the benefits of walking and biking have now become one of the central themes of urbanists' arguments for urban revival as recreation represents an increasingly key aspect of living downtown.

"It's really going to be a big factor, because people want to be healthier," he said. "It's a very personal thing."

View a summary of the methodology and results

Data

The CDC's Behavioral Risk Factor Surveillance System measures obesity and other health factors. The table below shows 2010 estimates for each geographic region surveyed, most of which are metro areas. Click here for a complete list of communities included in the 2010 survey, along with specific counties comprising each area.

The following definitions describe the data:

-- **Healthy weight**: Neither overweight nor obese
-- **Overweight**: Body mass index of 25-29.9
-- **Obese**: Body mass index of 30-99.8
-- **No physical activity**: Respondents reporting doing no physical activity or exercise in the past 30 days

Search:

Area	Healthy Weight	Overweight	Obese	No Physical Activity
Akron-OH Metro Area	38.2%	32.5%	29.3%	22.6%
Albuquerque-NM Metro Area	43.3%	34.9%	21.7%	18.0%
Allentown-Bethlehem-Easton-PA-NJ Metro Area	37.5%	33.5%	29.0%	26.1%
Amarillo-TX Metro Area	35.0%	36.3%	28.7%	24.1%
Arcadia-FL Micropolitan Area	32.2%	33.7%	34.1%	35.1%
Asheville-NC Metro Area	37.3%	35.2%	27.5%	22.2%
Atlanta-Sandy Springs-Marietta-GA Metro Area	37.4%	33.9%	28.7%	22.1%
Atlantic City-NJ Metro Area	30.7%	42.5%	26.8%	27.8%
Augusta-Richmond County-GA-SC Metro Area	31.1%	36.8%	32.1%	25.9%
Augusta-Waterville-ME Micropolitan Area	37.1%	33.4%	29.4%	22.3%
Austin-Round Rock-TX Metro Area	35.9%	37.1%	27.0%	19.3%
Baltimore-Towson-MD Metro Area	33.5%	38.4%	28.0%	24.0%

Alternative Means of Transportation Map

Governing compiled 2010 American Community Survey estimates for means of transportation to work for metropolitan statistical areas for the data analysis. Separate data for more than 400 U.S. cities, towns and other census-designated places is shown on the map. Larger icons represent higher total percentages of

workers who either walk, bike, use public transportation or another alternate means of commuting to work. (Click to open interactive map in a new window).

Oregon MPO Consortium

Salem | June 1, 2012


Union Street Pedestrian Bridge


OMPOC Tour

Union Street Pedestrian Bridge

Union Street Bridge at Night

(courtesy City of Salem)

Union Street Wayfinding

The Acid Ball to Eco-Earth

The Eco-Earth was once an asphalt covered stainless steel “acid ball” used by Boise-Cascade Corp at this site as a pressure vessel used in the processing of wood pulp into paper.

There were no specific plans for the ball, which measures 25 feet in diameter, when the City of Salem purchased the land for Riverfront Park in the 1980s.

It was through community effort that the idea of the Eco-Earth proceeded, with donations and volunteer work going into its creation. It took 5 years and 86,000 tiles to complete the project in 2010.

The Eco-Earth now stands as a symbol of the worlds struggle for peace, cultural diversity and ecological awareness.

Boring Station Trailhead Park

Boring Station Trailhead Park

Boring Station Trailhead Park

Boring Station Trailhead Park

The Trolley Trail

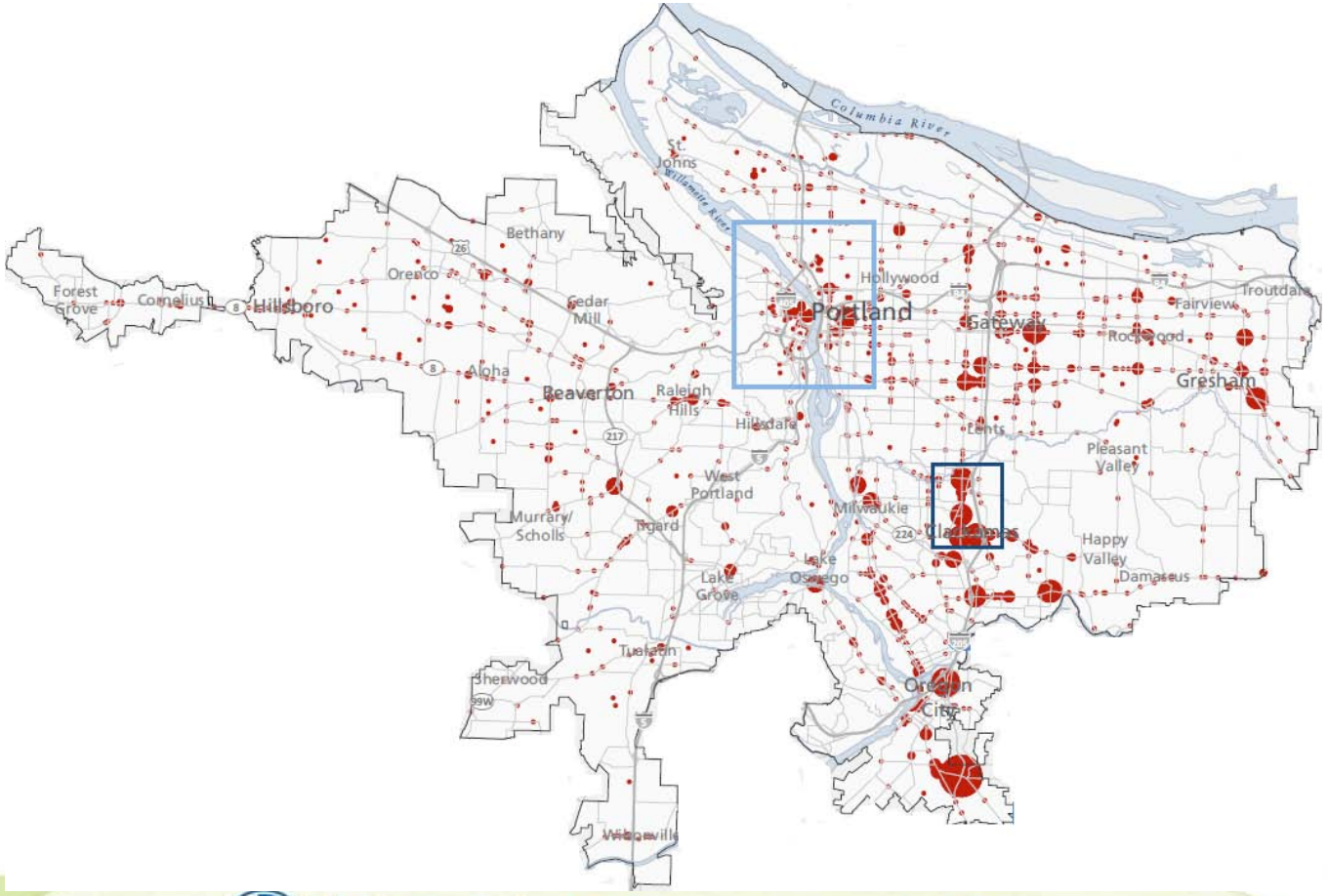
The Trolley Trail

The Trolley Trail

The Trolley Trail

Regional Transportation Safety Plan:

Findings & JPACT Direction on Next Steps



Metro | *Making a great place*

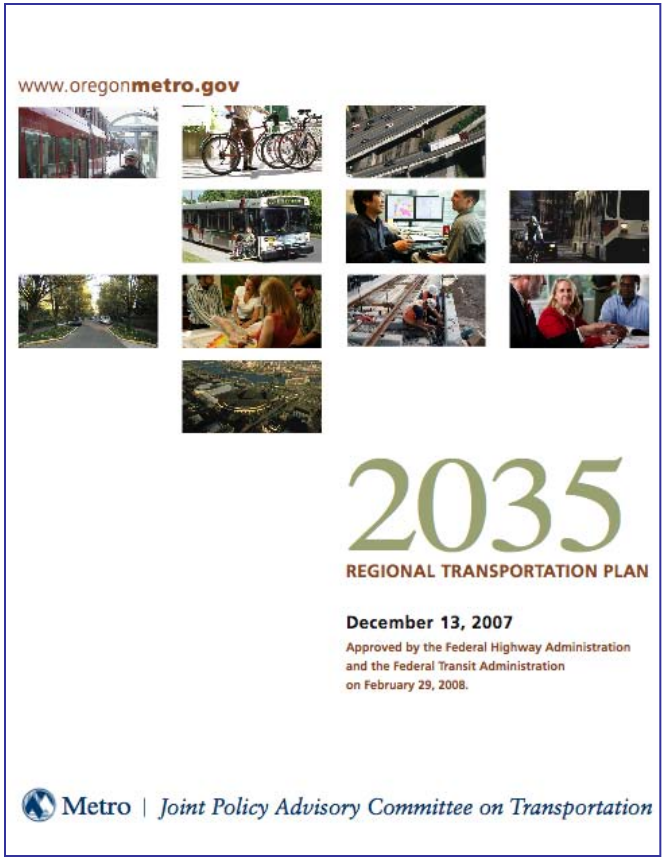
Background

- 2008 federal certification review FHWA recommendation
- MPOs across the country have struggled incorporating safety into the planning process
- FHWA sponsored workshop in fall 2009

Regional Vision for Safety

- One of the 6 Desired Outcomes

- 2035 RTP Goal



Getting Started

- Convened Regional Safety Workgroup
  - 2035 RTP performance target
  - State of Safety in the Region report (http://www.oregonmetro.gov/regionalmobility)
  - Regional Transportation Safety Plan

The 5 E's

- Education
- EMS
- Enforcement
- Engineering
- Evaluation

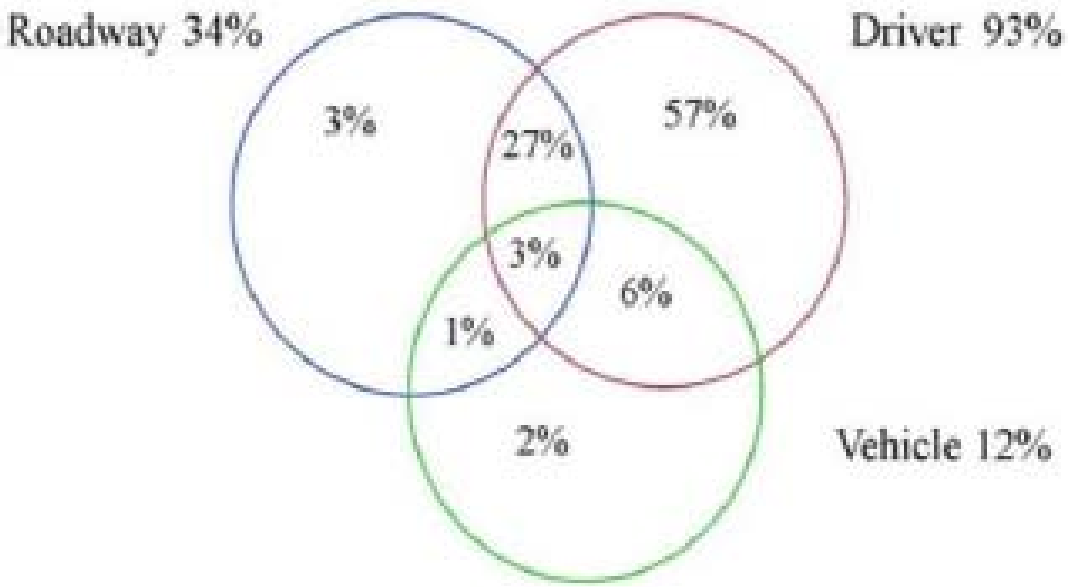


Figure 2 – Contributing Factors to Crashes

Figure Source: Highway Safety Manual, 1st Edition

The Problem

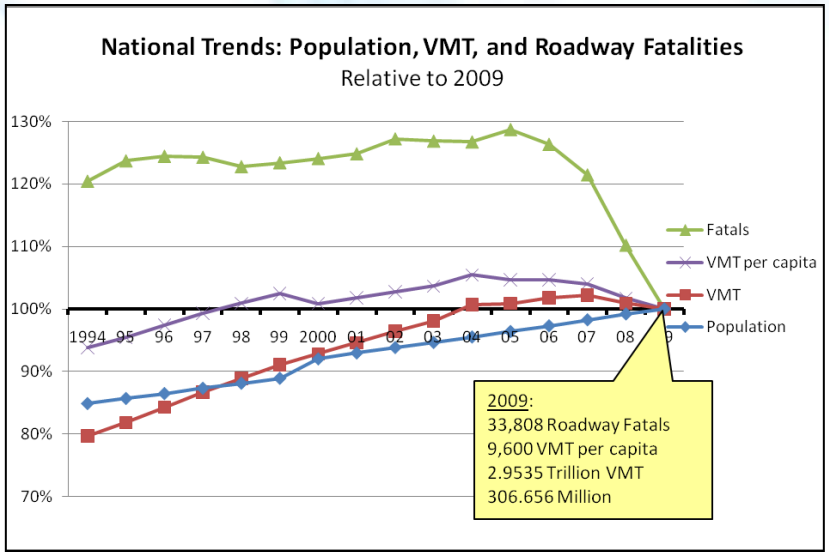
- US roads
  - 2000 – 2009: 411,212 people killed
  - Average of one person killed every 13 minutes….24/7 for 10 years straight
  - Leading cause of accidental deaths
  - Leading cause of all deaths, age 15 – 34
- Metro region roads
  - 2007 – 2009: 159 people killed, 1,400+ severely injured
  - Societal costs of $958 Million/year

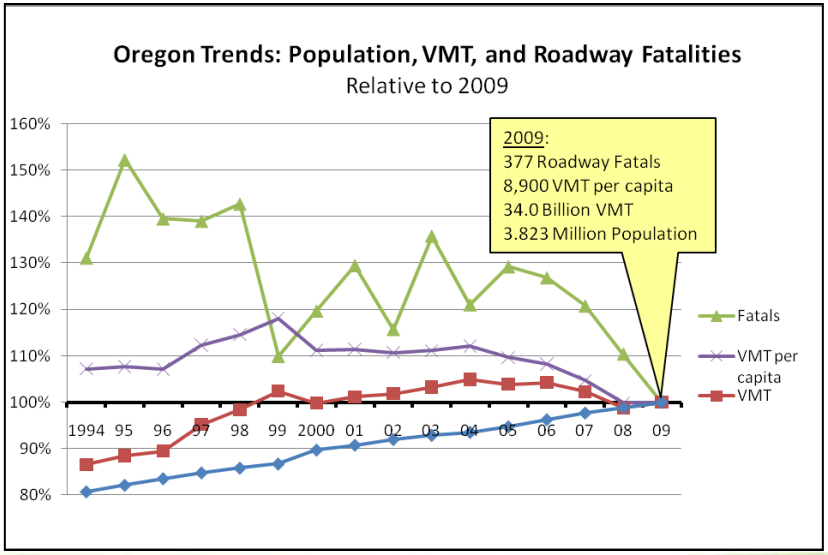
Section 1
National and International data

Source: NHTSA

State and National Trends

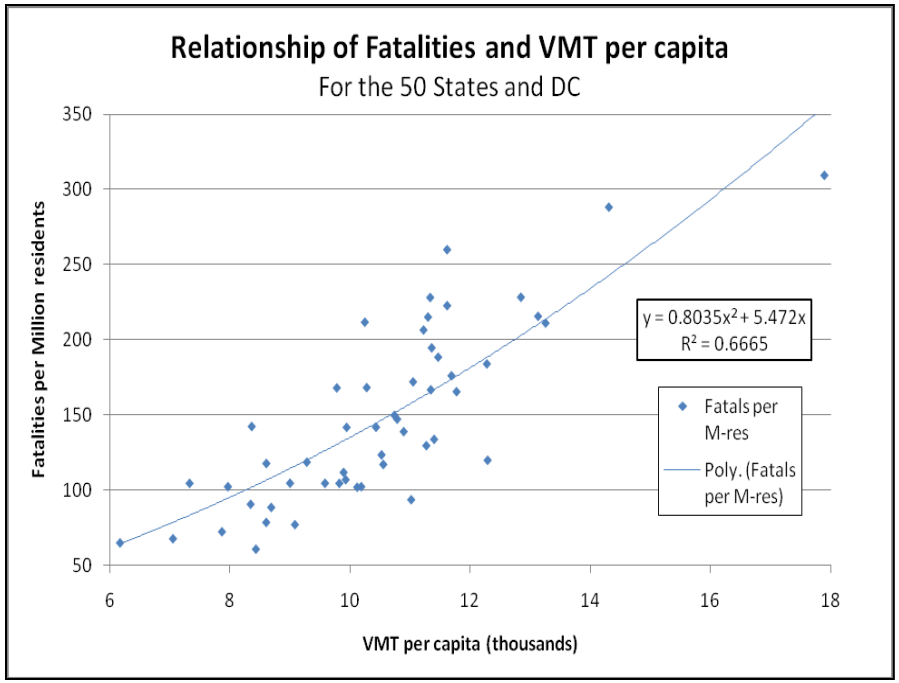
- Fatalities are decreasing nationally
- From 43,510 in 2005 to 33,808 in 2009.
- Declines are greater than VMT





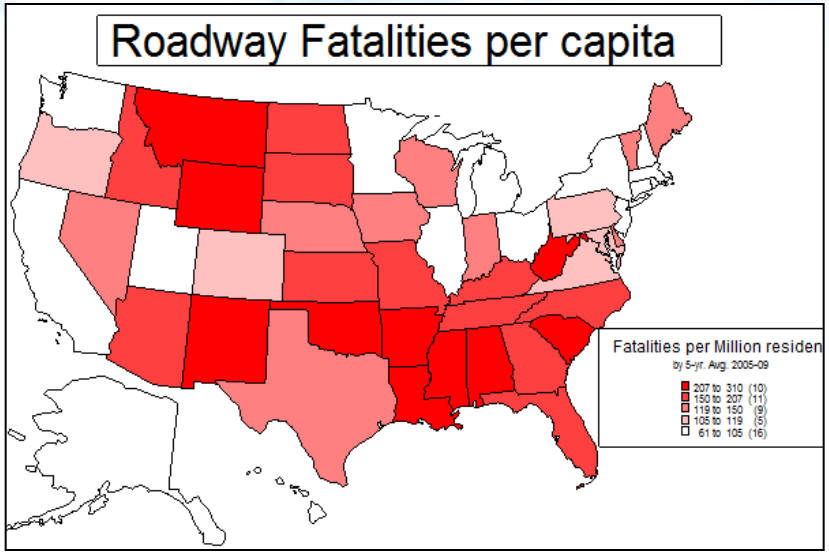
VMT and Fatalities

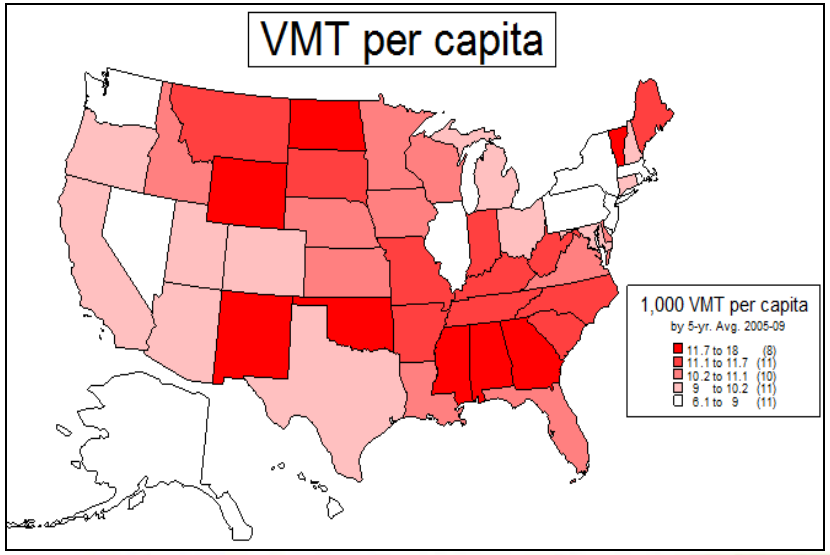
- By State
- Relationship with VMT is strong but only part of the story

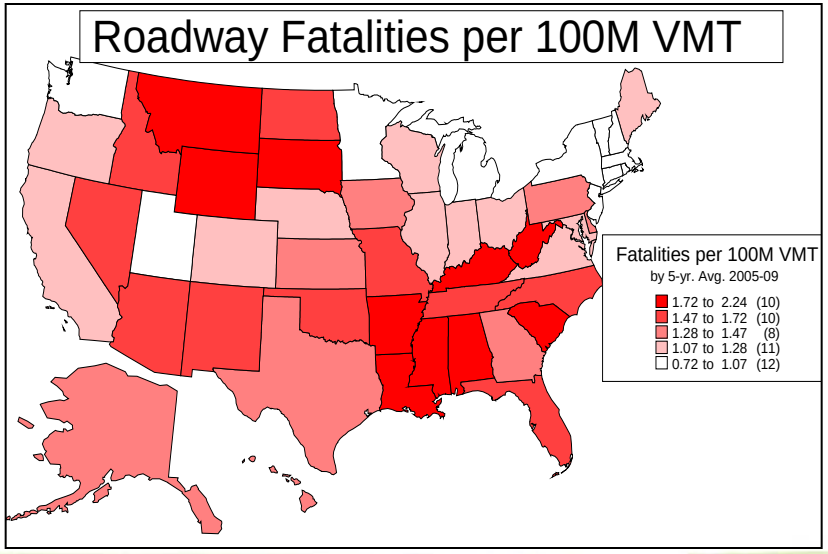


State-by-State

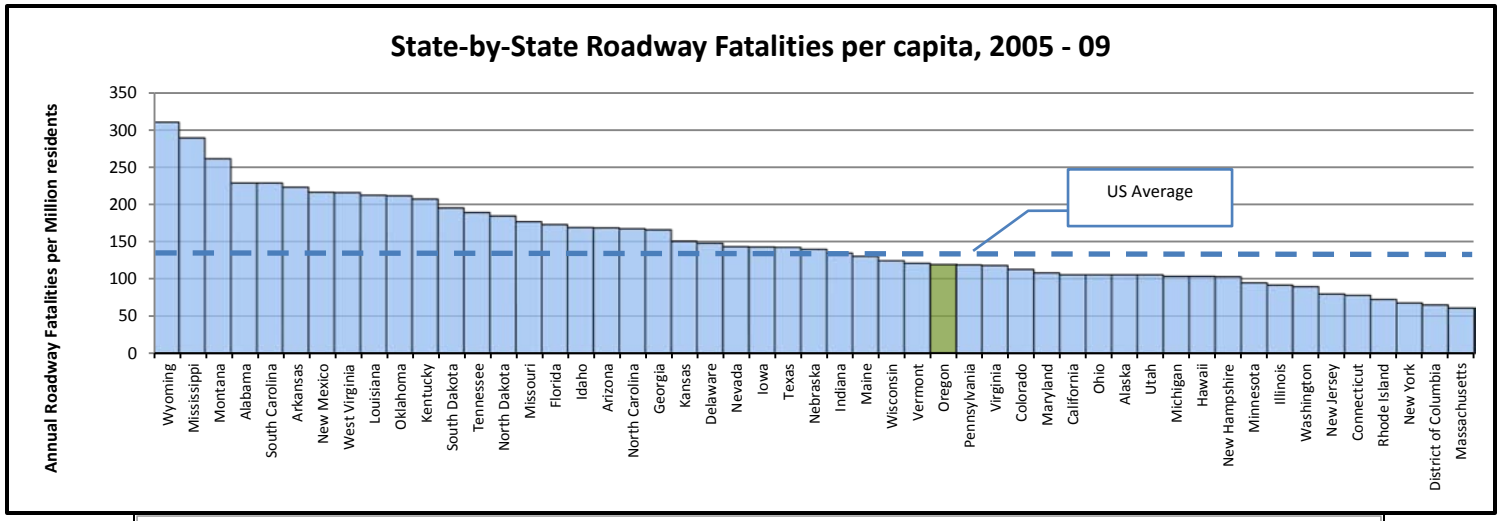
- Southeast and Mountain West are doing most poorly

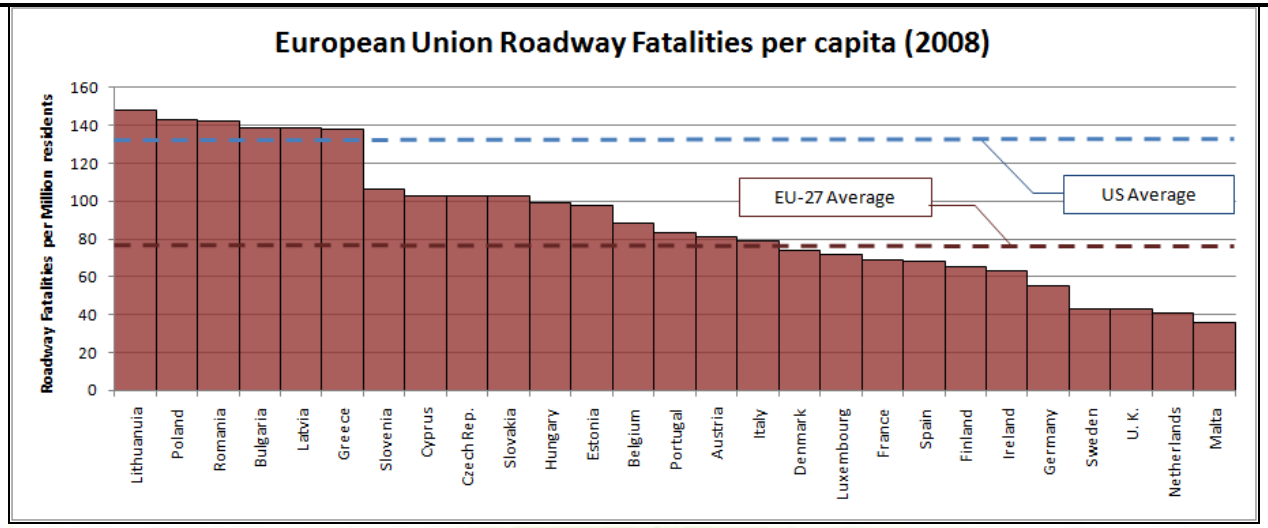






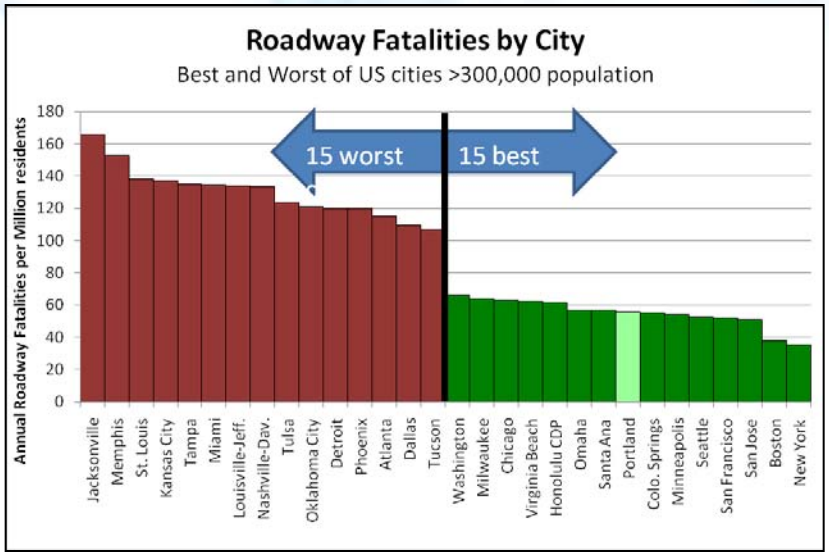
National & International context

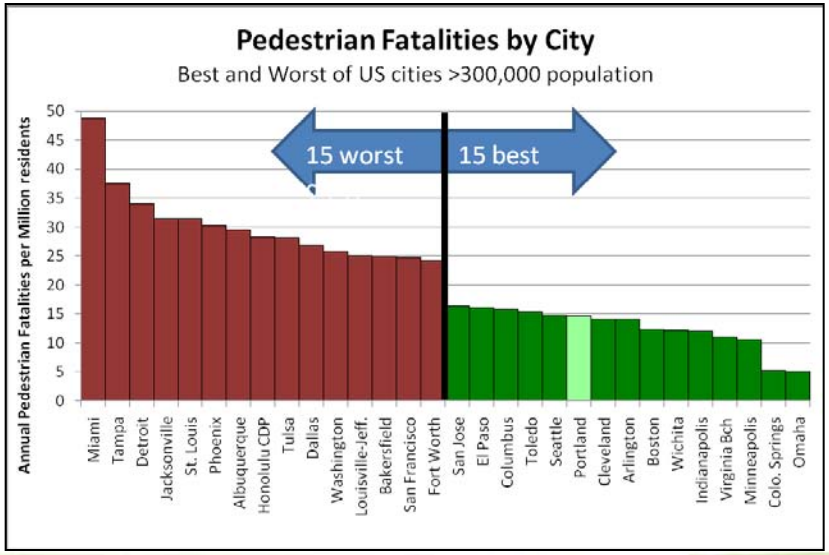




Fatalities by large US city

- Portland has fewer overall fatalities, pedestrian fatalities compared to peers





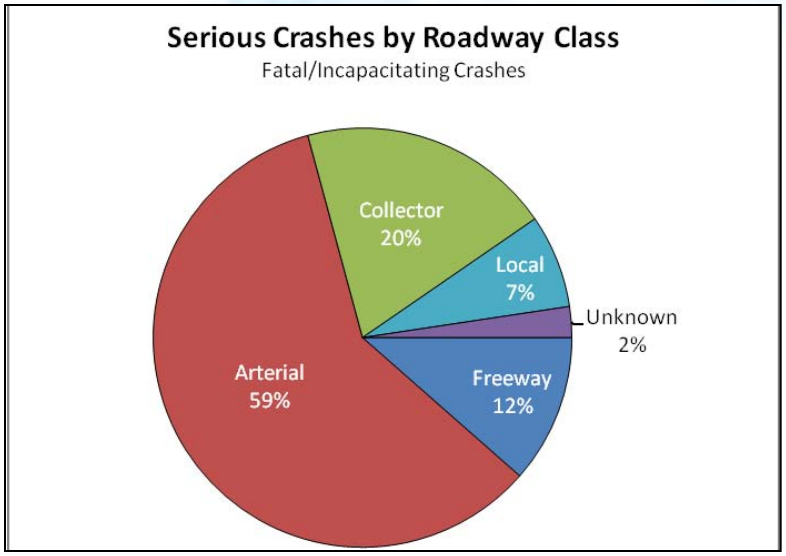
Section 2
Data in the Metro region

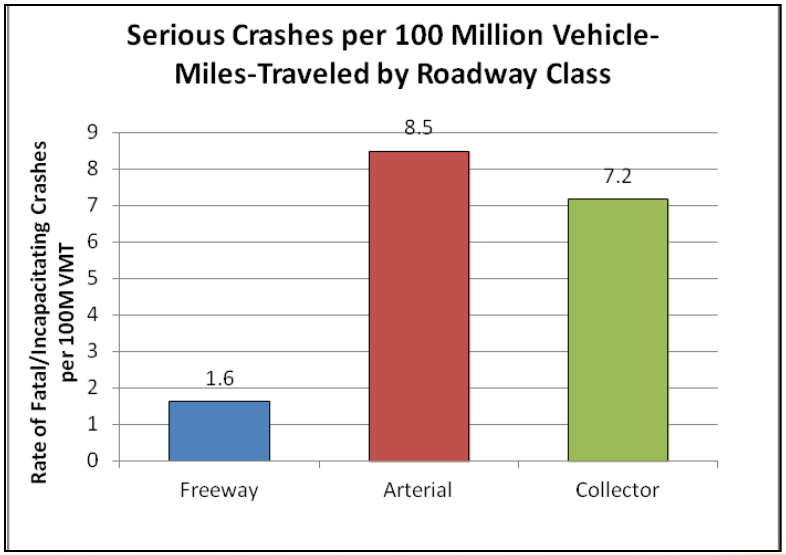
Sources: ODOT Crash Reporting, Metro RLIS, Metro Traffic Model

- What this is: *High-level comparison of roadway types to crash types*
- What this isn't: *Detailed analysis of why crashes are/aren't occurring in any given location*

Roadway class

- Arterials are the main problem
- 59% of all serious crashes
- Arterials include 82nd, Foster, 181st, 185th, etc.
- Collectors include NE Fremont, SW Millikan Way, SE River Rd, etc.





By Day and Hour

Serious Crashes by Day of Week and Hour

Annual Fatal/Incapacitating Crashes

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Hour	Avg Wkday	Avg Wkend
12 AM	2.3	1.0	1.0	0.7	1.3	1.7	4.0		12 AM	1.1	3.2
1 AM	2.0	1.0	1.3	0.3	2.0	0.7	4.0		1 AM	1.1	3.0
2 AM	1.7	1.0	0.3	0.7	2.0	2.3	5.7		2 AM	1.3	3.7
3 AM	1.7	0.0	0.0	0.3	0.0	1.0	1.0		3 AM	0.3	1.3
4 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.7		4 AM	0.0	1.3
5 AM	1.3	1.7	1.3	0.3	0.7	1.3	0.0		5 AM	1.1	0.7
6 AM	0.7	3.7	3.3	3.0	5.3	2.0	0.7		6 AM	3.5	0.7
7 AM	1.7	3.3	3.7	3.3	5.0	3.7	1.3		7 AM	3.8	1.5
8 AM	1.0	4.7	3.3	3.7	5.3	5.0	1.3		8 AM	4.4	1.2
9 AM	0.7	2.3	4.7	1.3	1.3	3.7	2.7		9 AM	2.7	1.7
10 AM	2.3	3.3	4.3	4.3	2.0	3.7	2.0		10 AM	3.5	2.2
11 AM	2.3	4.0	3.7	4.0	2.7	4.7	4.3		11 AM	3.8	3.3
12 PM	3.3	5.3	4.7	5.3	2.7	2.7	4.0		12 PM	4.1	3.7
1 PM	3.7	2.3	3.7	3.7	4.7	4.0	7.0		1 PM	3.7	5.3
2 PM	6.3	5.0	5.0	4.3	2.3	6.0	3.7		2 PM	4.5	5.0
3 PM	3.7	7.0	5.3	7.0	5.3	3.7	4.7		3 PM	5.7	4.2
4 PM	2.0	6.3	5.7	8.0	6.3	5.0	3.7		4 PM	6.3	2.8
5 PM	5.0	11.0	9.3	7.7	7.7	9.0	7.7		5 PM	8.9	6.3
6 PM	4.0	8.7	5.0	3.7	4.0	6.0	3.7		6 PM	5.5	3.8
7 PM	3.3	4.0	2.3	2.7	5.3	4.7	5.3		7 PM	3.8	4.3
8 PM	1.0	1.3	2.0	1.7	5.0	3.0	1.7		8 PM	2.6	1.3
9 PM	2.3	3.0	2.0	3.0	3.0	3.3	2.3		9 PM	2.9	2.3
10 PM	1.7	1.7	1.7	1.3	2.3	4.0	4.3		10 PM	2.2	3.0
11 PM	1.7	2.0	2.0	1.7	2.3	3.7	2.0		11 PM	2.3	1.8

	Sun	Mon	Tue	Wed	Thu	Fri	Sat			Avg Wkday	Avg Wkend
All Day	55.7	83.7	75.7	72.0	78.7	84.7	79.7		All Day	78.9	67.7

By Day and Hour

Serious Crashes by Day of Week and Hour

Annual Fatal/Incapacitating Crashes

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Avg Wkday	Avg Wkend
12 AM	2.3	1.0	1.0	0.7	1.3	1.7	4.0	1.1	3.2
1 AM	2.0	1.0	1.3	0.3	2.0	0.7	4.0	1.1	3.0
2 AM	1.7	1.0	0.3	0.7	2.0	2.3	5.7	1.3	3.7
3 AM	1.7	[illegible]	0.0	0.3	0.0	1.0	1.0	0.3	1.3
4 AM	0.0	[illegible]	0.0	0.0	0.0	0.0	2.7	0.0	1.3
5 AM	1.3	[illegible]	1.3	0.3	0.7	1.3	0.0	1.1	0.7
6 AM	0.7	[illegible]	3.3	3.0	5.3	2.0	0.7	3.5	0.7
7 AM	1.7	[illegible]	3.7	3.3	5.0	3.7	1.3	3.8	1.5
8 AM	1.0	4.7	[illegible]	3.7	5.3	5.0	1.3	4.4	1.2
9 AM	0.7	2.3	[illegible]	1.3	1.3	3.7	2.7	2.7	1.7
10 AM	2.3	3.3	[illegible]	4.3	2.0	3.7	2.0	3.5	2.2
11 AM	2.3	4.0	[illegible]	4.0	2.7	4.7	4.3	3.8	[illegible]
12 PM	3.3	5.3	[illegible]	5.3	2.7	2.7	4.0	4.1	[illegible]
1 PM	3.7	2.3	3.7	3.7	4.7	4.0	7.0	3.7	[illegible]
2 PM	6.3	5.0	5.0	4.3	2.3	6.0	3.7	4.5	[illegible]
3 PM	3.7	7.0	5.3	7.0	5.3	3.7	4.7	5.7	4.2
4 PM	2.0	6.3	5.7	8.0	6.3	5.0	3.7	6.3	2.8
5 PM	5.0	11.0	9.3	7.7	7.7	9.0	7.7	8.9	6.3
6 PM	4.0	[illegible]	5.0	[illegible]	[illegible]	6.0	[illegible]	5.5	3.8
7 PM	3.3	4.0	2.3	2.7	5.3	4.7	5.3	3.8	4.3
8 PM	1.0	1.3	2.0	1.7	5.0	3.0	1.7	2.6	1.3
9 PM	2.3	3.0	2.0	3.0	3.0	3.3	2.3	2.9	2.3
10 PM	1.7	1.7	1.7	1.3	2.3	4.0	4.3	2.2	3.0
11 PM	1.7	2.0	2.0	1.7	2.3	3.7	2.0	2.3	1.8

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Avg Wkday	Avg Wkend
All Day	55.7	83.7	75.7	72.0	78.7	84.7	79.7	78.9	67.7

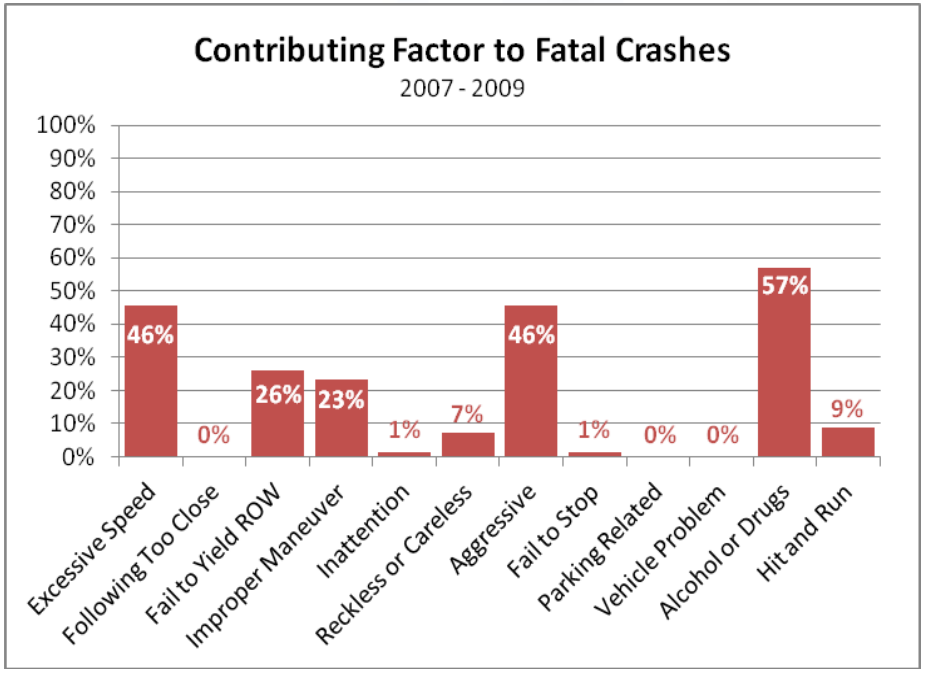
Late Fri nite/ early Sat

Weekday + Saturday PM Peak

Weekday PM Peak

Contributing Factor

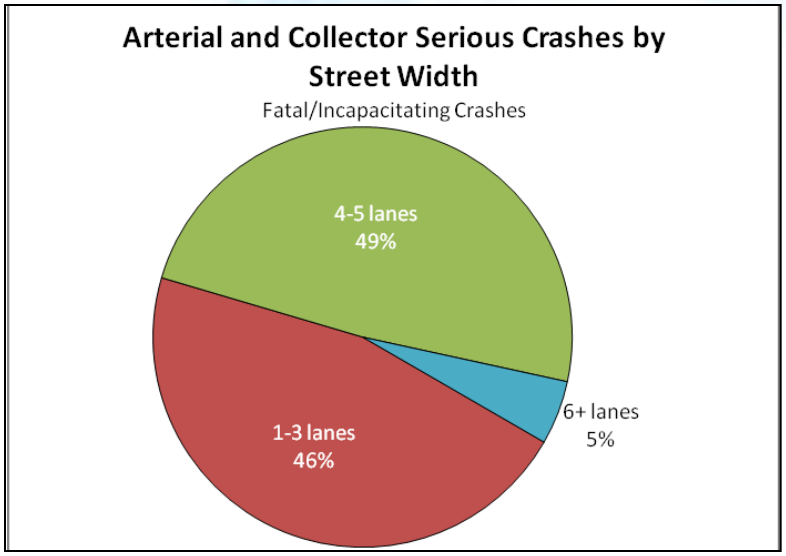
- Alcohol and Drugs
- Excessive Speed
- Aggressive Driving

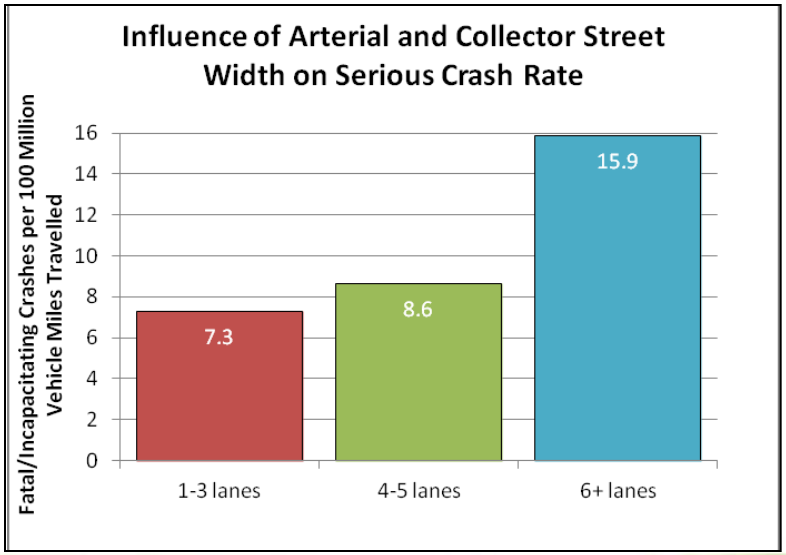


Section 3
Non-Freeway Data

Number of Lanes

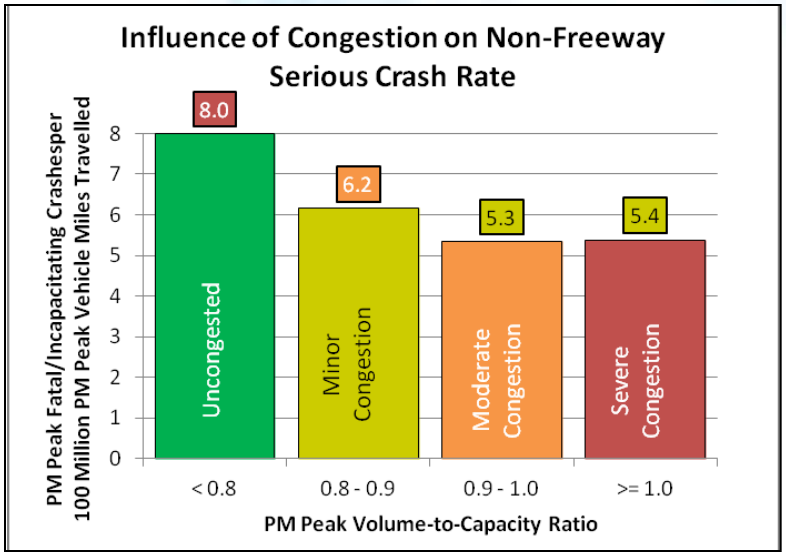
- Streets with more lanes have higher crash rates
- Rate increases for 6+ lanes
- Consistent with HSM

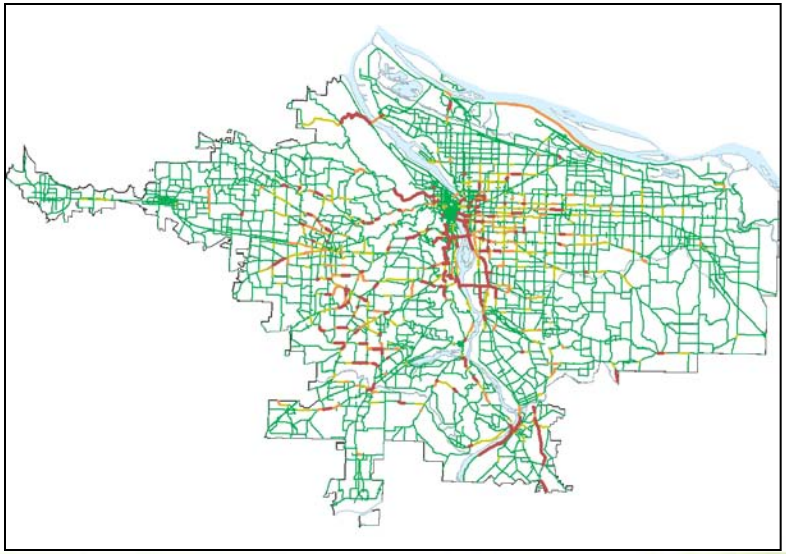




Non-Freeway Congestion

- Surface streets with more congestion have lower serious crash rates
- Likely due to speed

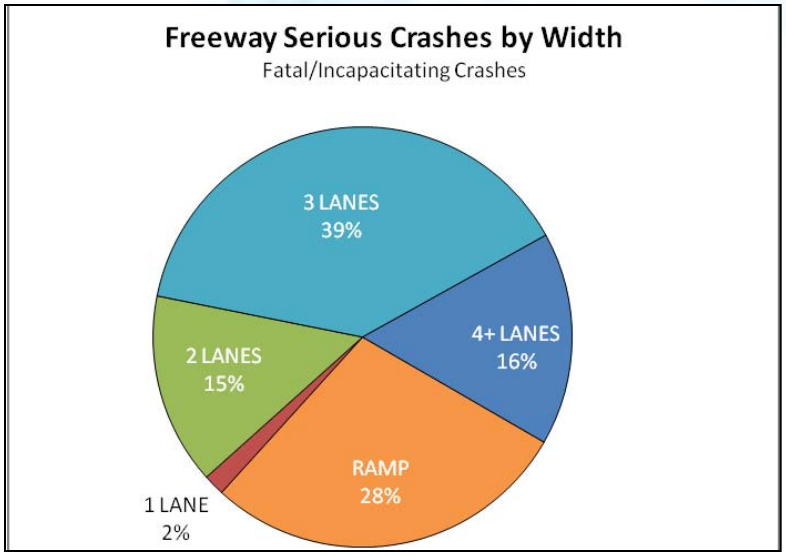


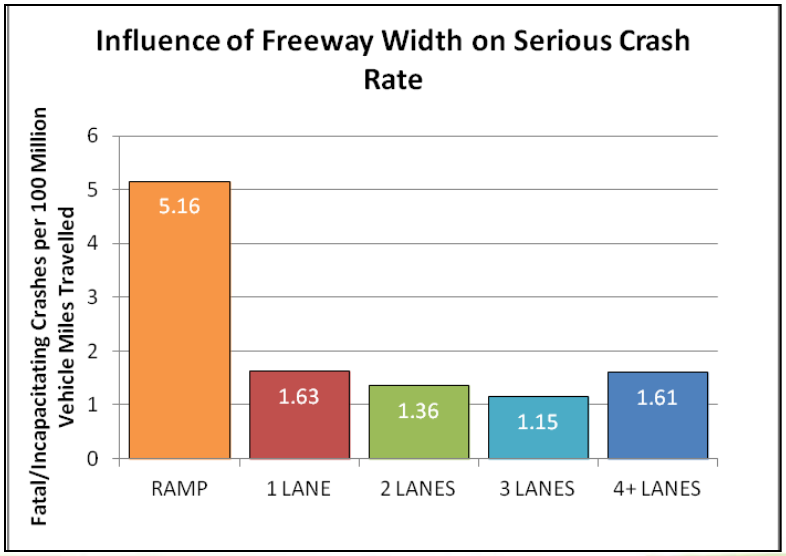


Section 4
Freeway Data

Number of Freeway Lanes

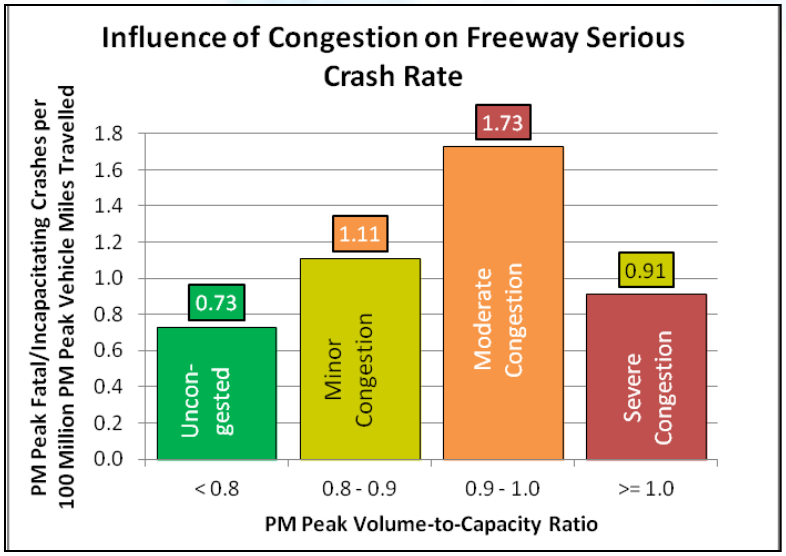
- Ramps
- 3 lanes including aux lanes has lowest crash rate
- Crash rate is higher above 3 lanes

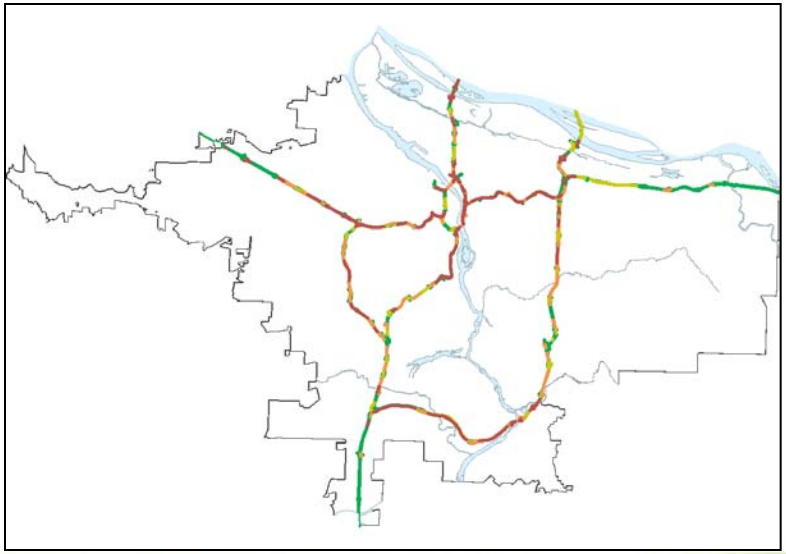




Freeway Congestion

- Serious crash rate increases with increasing congestion; drops with severe congestion
- Likely due to speed

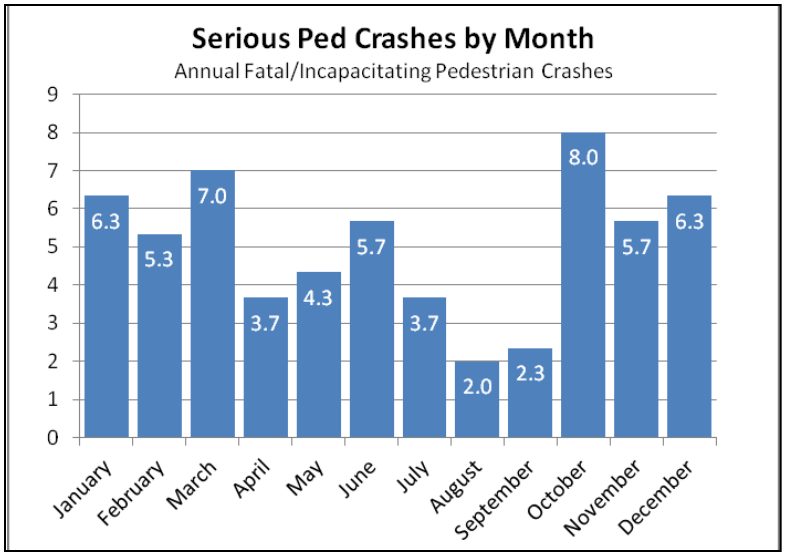




Section 5
Pedestrians

By month

- Summer is better, winter months have more crashes



Pedestrians by Day and Hour

Serious Pedestrian Crashes by Day of Week and Hour

Annual Fatal/Incapacitating Pedestrian Crashes

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Hour	Average Wkday	Average Wkend
12 AM	0.3	0.0	0.0	0.0	0.0	0.0	0.7	12 AM	0.0	0.5
1 AM	0.0	0.0	0.0	0.0	0.3	0.0	1.0	1 AM	0.1	0.5
2 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2 AM	0.0	0.2
3 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3 AM	0.0	0.0
4 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4 AM	0.0	0.0
5 AM	0.0	0.3	0.3	0.3	0.0	1.0	0.0	5 AM	0.4	0.0
6 AM	0.0	0.3	0.7	0.7	1.3	0.3	0.0	6 AM	0.7	0.0
7 AM	0.0	0.7	0.3	0.3	1.0	1.7	0.0	7 AM	0.8	0.0
8 AM	0.0	0.7	0.3	0.3	0.7	0.0	0.0	8 AM	0.4	0.0
9 AM	0.0	0.0	0.3	0.0	0.3	0.0	0.0	9 AM	0.1	0.0
10 AM	0.7	0.0	0.0	0.7	0.0	0.0	0.3	10 AM	0.1	0.5
11 AM	0.3	0.0	0.3	0.3	0.3	0.7	0.3	11 AM	0.3	0.3
12 PM	0.3	0.7	0.0	0.3	0.0	0.3	0.7	12 PM	0.3	0.5
1 PM	0.7	0.0	0.3	0.0	0.0	0.0	0.3	1 PM	0.1	0.5
2 PM	0.0	0.3	0.3	0.3	0.0	0.0	0.3	2 PM	0.2	0.2
3 PM	0.0	0.7	0.3	0.7	0.7	0.7	1.0	3 PM	0.6	0.5
4 PM	0.7	0.0	2.3	1.0	0.0	0.7	0.3	4 PM	0.8	0.5
5 PM	0.7	1.3	0.7	0.7	0.7	1.3	0.7	5 PM	0.9	0.7
6 PM	0.7	0.7	0.7	0.3	0.7	0.3	0.7	6 PM	0.5	0.7
7 PM	0.3	0.3	1.0	0.3	0.0	0.7	1.0	7 PM	0.5	0.7
8 PM	0.0	0.0	0.3	1.0	1.0	0.7	0.7	8 PM	0.6	0.3
9 PM	0.0	0.3	0.3	1.3	1.0	0.3	1.0	9 PM	0.7	0.5
10 PM	0.0	0.3	0.3	0.3	0.3	1.0	1.0	10 PM	0.5	0.5
11 PM	0.7	0.0	0.3	0.0	0.3	0.7	0.3	11 PM	0.3	0.5

	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Average Wkday	Average Wkend
All Day	5.3	6.7	9.3	9.0	8.7	10.3	10.7	All Day	8.8	8.0

Pedestrians by Day and Hour

Serious Pedestrian Crashes by Day of Week and Hour

Annual Fatal/Incapacitating Pedestrian Crashes

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Hour	Average Wkday	Average Wkend
12 AM	0.3	0.0	0.0	0.0	0.0	0.0	0.7	12 AM	0.0	0.5
1 AM	0.0	0.0	0.0	0.0	0.3	0.0	1.0	1 AM	0.1	0.5
2 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2 AM	0.0	0.2
3 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3 AM	0.0	0.0
4 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4 AM	0.0	0.0
5 AM	0.0	0.3	0.3	0.3	0.0	1.0	0.0	5 AM	0.4	0.0
6 AM	0.0	0.3	0.7	0.7	1.3	0.3	0.0	6 AM	0.7	0.0
7 AM	0.0	0.7	0.3	0.3	1.0	1.7	0.0	7 AM	0.8	0.0
8 AM	0.0	0.7	0.3	0.3	0.7	0.0	0.0	8 AM	0.4	0.0
9 AM	0.0	0.0	0.3	0.0	0.3	0.0	0.0	9 AM	0.1	0.0
10 AM	0.7	0.0	0.3	0.0	0.0	0.0	0.3	10 AM	0.1	0.5
11 AM	0.3	0.0	0.3	0.3	0.3	0.7	0.3	11 AM	0.3	0.3
12 PM	0.3	0.7	0.0	0.3	0.3	0.3	0.7	12 PM	0.3	0.5
1 PM	0.7	0.0	0.3	0.3	0.3	0.0	0.3	1 PM	0.1	0.3
2 PM	0.0	0.3	0.3	0.3	0.0	0.3	0.3	2 PM	0.2	0.3
3 PM	0.0	0.7	0.3	0.7	0.7	0.7	1.0	3 PM	0.6	0.5
4 PM	0.7	0.0	2.3	1.0	0.0	0.7	0.3	4 PM	0.8	0.5
5 PM	0.7	1.3	0.7	0.7	0.7	1.3	0.7	5 PM	0.9	0.7
6 PM	0.7	0.7	0.7	0.3	0.7	0.3	0.7	6 PM	0.5	0.7
7 PM	0.3	0.3	1.0	0.3	0.0	0.7	1.0	7 PM	0.5	0.7
8 PM	0.0	0.0	0.3	1.0	1.0	0.7	0.7	8 PM	0.6	0.3
9 PM	0.0	0.3	0.3	1.3	1.0	0.3	1.0	9 PM	0.7	0.5
10 PM	0.0	0.3	0.3	0.3	0.3	1.0	1.0	10 PM	0.3	0.5
11 PM	0.7	0.0	0.3	0.0	0.3	0.7	0.7	11 PM	0.3	0.5

	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Average Wkday	Average Wkend
All Day	5.3	6.7	9.3	9.0	8.7	10.3	10.7	All Day	8.8	8.0

Friday + Saturday Evening

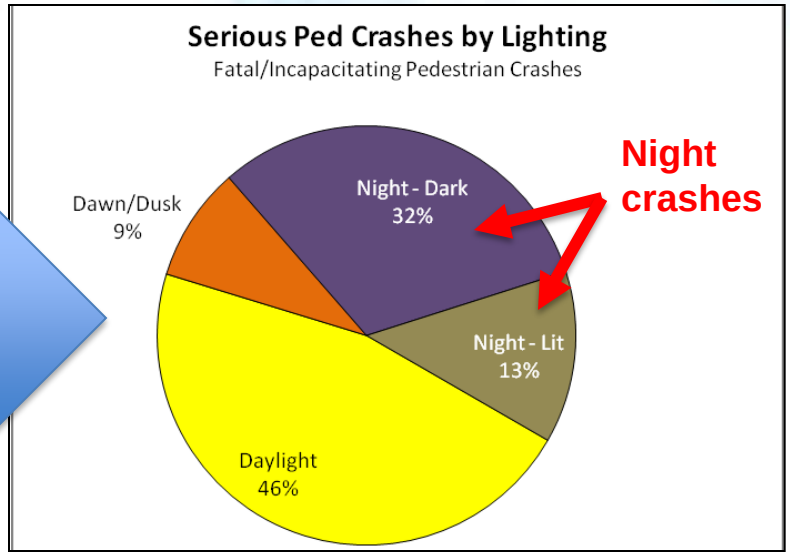
Weekday PM Peak + Evening

Friday + Saturday

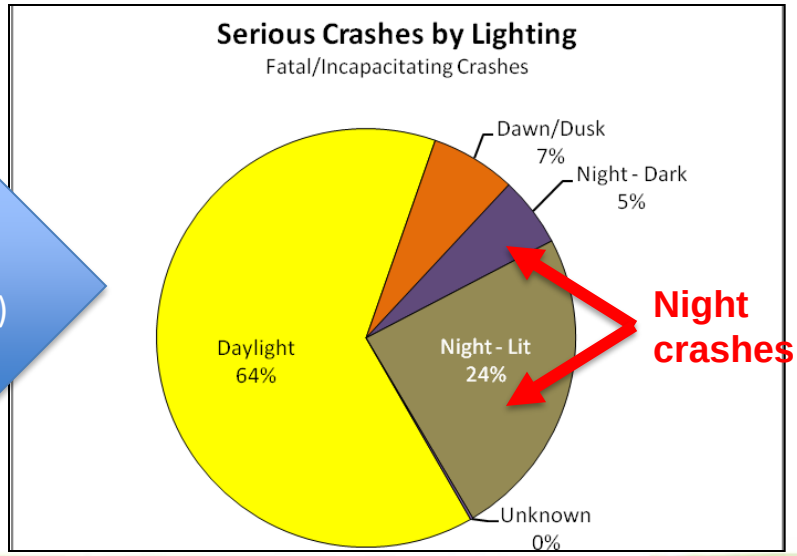
By Lighting

- More crashes at night than autos or bikes

Pedestrians

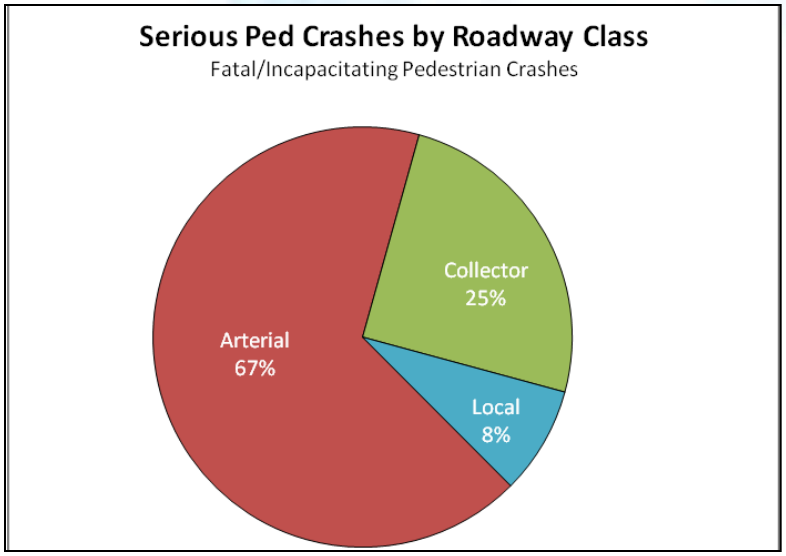


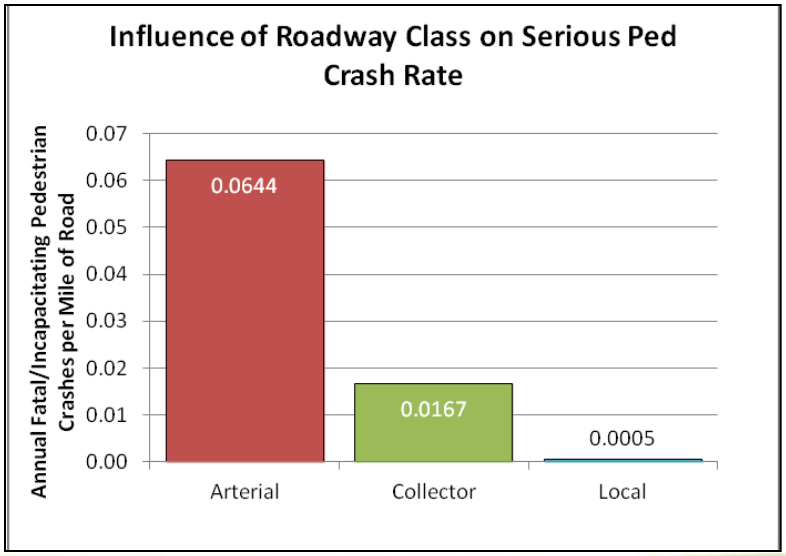
All crashes (comparison)



Roadway Class

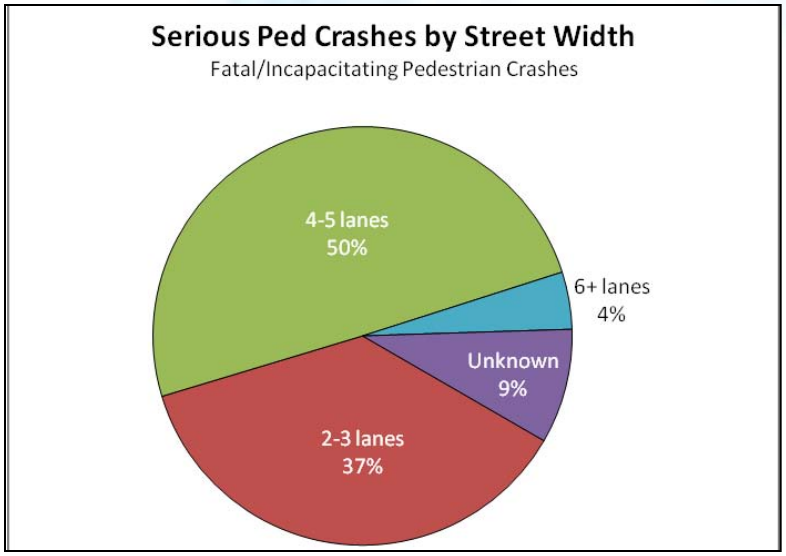
- 67% of serious ped crashes happen on arterials
- Often serve as bus routes

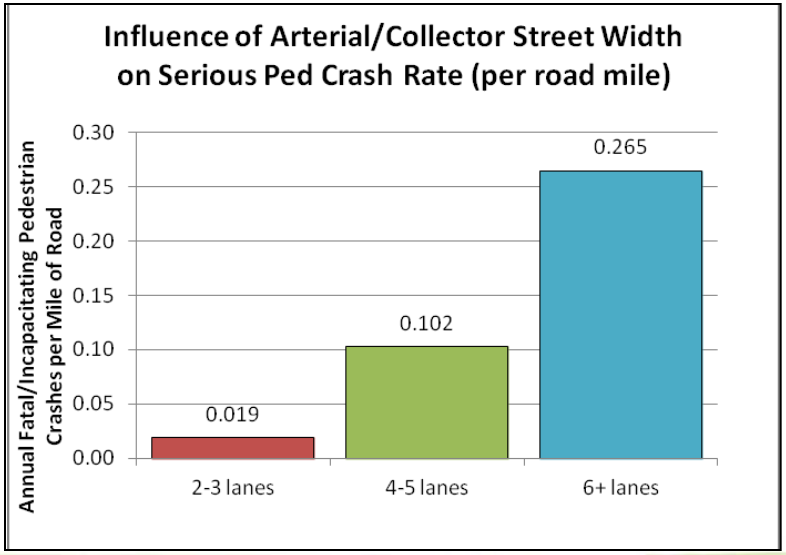




Number of Lanes

- Wider roads are disproportionately represented

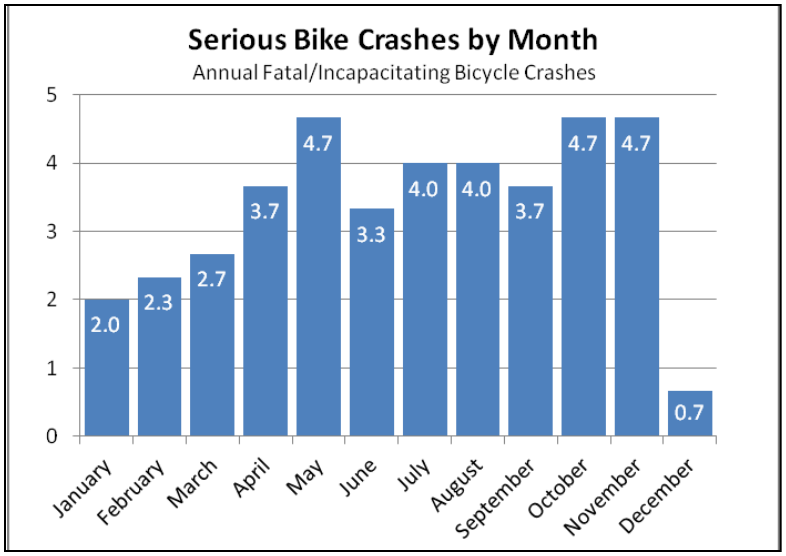




Section 6
Bicyclists

By month

- Warmer, drier months have more crashes



Bicyclists by Day and Hour

Serious Bicycle Crashes by Day of Week and Hour

Annual Fatal/Incapacitating Bicycle Crashes, 2007 – 2009

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Hour	Average Wkday	Average Wkend
12 AM	0.3	0.0	0.0	0.0	0.3	0.3	0.3	12 AM	0.1	0.3
1 AM	0.0	0.0	0.0	0.0	0.3	0.0	0.3	1 AM	0.1	0.2
2 AM	0.0	0.0	0.0	0.3	0.3	0.0	0.3	2 AM	0.1	0.2
3 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3 AM	0.0	0.0
4 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4 AM	0.0	0.0
5 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5 AM	0.0	0.0
6 AM	0.3	0.3	1.0	0.0	0.0	0.3	0.0	6 AM	0.3	0.2
7 AM	0.3	0.0	0.3	0.0	0.7	0.3	0.0	7 AM	0.3	0.2
8 AM	0.0	0.3	0.3	0.3	0.3	0.0	0.3	8 AM	0.3	0.2
9 AM	0.0	0.3	0.0	0.3	0.3	0.3	0.3	9 AM	0.3	0.2
10 AM	0.3	0.0	0.0	0.7	0.0	0.0	0.3	10 AM	0.1	0.3
11 AM	0.3	0.0	0.0	0.3	0.7	0.3	0.3	11 AM	0.3	0.3
12 PM	0.0	0.3	0.0	0.3	0.0	0.7	0.0	12 PM	0.3	0.0
1 PM	0.3	0.3	0.0	0.3	0.3	0.0	0.0	1 PM	0.2	0.2
2 PM	0.0	0.3	0.0	1.3	0.0	0.0	0.7	2 PM	0.3	0.3
3 PM	0.7	0.0	0.3	0.0	0.3	1.0	0.7	3 PM	0.3	0.7
4 PM	0.0	1.0	0.3	1.3	1.0	0.3	0.3	4 PM	0.8	0.2
5 PM	0.3	0.7	1.0	1.3	1.7	0.7	0.0	5 PM	1.1	0.2
6 PM	0.3	0.7	0.3	0.0	0.7	1.0	0.3	6 PM	0.5	0.3
7 PM	0.7	0.0	0.0	0.0	0.7	0.3	0.0	7 PM	0.2	0.3
8 PM	0.0	0.0	0.7	0.0	0.3	0.0	0.0	8 PM	0.2	0.0
9 PM	0.3	0.0	0.0	0.0	0.3	0.0	0.0	9 PM	0.1	0.2
10 PM	0.0	0.0	0.3	0.0	0.0	0.3	0.0	10 PM	0.1	0.0
11 PM	0.3	0.3	0.3	0.0	0.3	0.3	0.0	11 PM	0.3	0.2

	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Average Wkday	Average Wkend
All Day	4.7	4.7	5.0	6.7	8.7	6.3	4.3	All Day	6.3	4.5

Bicyclists by Day and Hour

Serious Bicycle Crashes by Day of Week and Hour

Annual Fatal/Incapacitating Bicycle Crashes, 2007 – 2009

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Hour	Average Wkday	Average Wkend
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1 AM	0.0	0.0	0.0	0.0	0.3	0.0	0.3	1 AM	0.1	0.2
2 AM	0.0	0.0	0.0	0.3	0.3	0.0	0.3	2 AM	0.1	0.2
3 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3 AM	0.0	0.0
4 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4 AM	0.0	0.0
5 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5 AM	0.0	0.0
6 AM	0.3	0.3	1.0	0.0	0.0	0.3	0.0	6 AM	0.3	0.2
7 AM	0.3	0.0	0.3	0.0	0.7	0.3	0.0	7 AM	0.3	0.2
8 AM	0.0	0.3	0.3	0.3	0.3	0.0	0.3	8 AM	0.3	0.2
9 AM	0.0	0.3	0.0	0.3	0.3	0.3	0.3	9 AM	0.3	0.2
10 AM	0.3	0.0	0.0	0.7	0.0	0.0	0.3	10 AM	0.1	0.3
11 AM	0.3	0.0	0.0	0.3	0.7	0.3	0.3	11 AM	0.3	
12 PM	0.0	0.3	0.0	0.3	0.0	0.7	0.0	12 PM	0.3	
1 PM	0.3	0.3	0.0	0.3	0.3	0.0	0.0	1 PM	0.2	
2 PM	0.0	0.3	0.0	1.3	0.0	0.0	0.7	2 PM	0.3	
3 PM	0.7	0.0	0.3	0.0	0.3	1.0	0.7	3 PM	0.3	0.7
4 PM	0.0	1.0	0.3	1.3	1.0	0.3	0.3	4 PM	0.8	0.2
5 PM	0.3	0.7	1.0	1.3	1.7	0.7	0.0	5 PM	1.1	0.2
6 PM	0.3	0.7	0.3	0.0	0.7	1.0	0.3	6 PM	0.5	0.3
7 PM	0.7	0.0	0.0	0.0	0.7	0.3	0.0	7 PM	0.2	0.3
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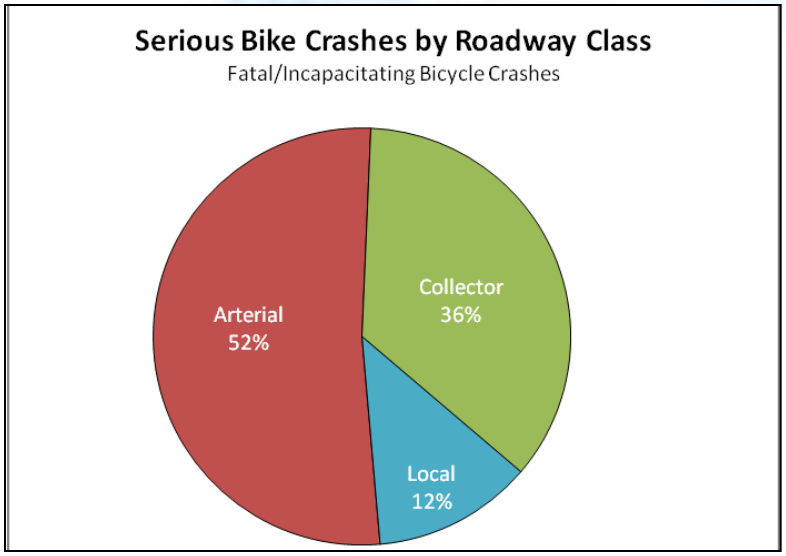
9 PM	0.3	0.0	0.0	0.0	0.3	0.0	0.0	9 PM	0.1	0.2
10 PM	0.0	0.0	0.3	0.0	0.0	0.3	0.0	10 PM	0.1	0.0
11 PM	0.3	0.3	0.3	0.0	0.3	0.3	0.0	11 PM	0.3	0.2

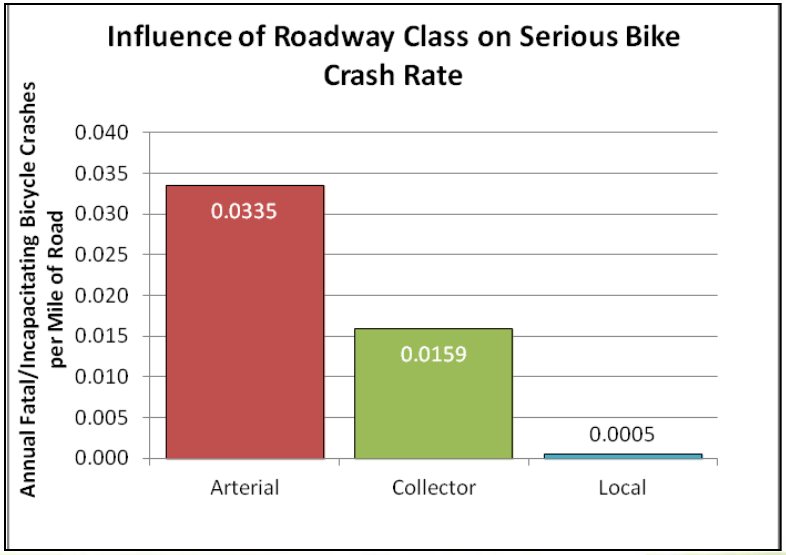
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Average Wkday	Average Wkend
All Day	4.7	4.7	5.0	6.7	8.7	6.3	4.3	All Day	6.3	4.5

Weekday PM Peak

Roadway Class

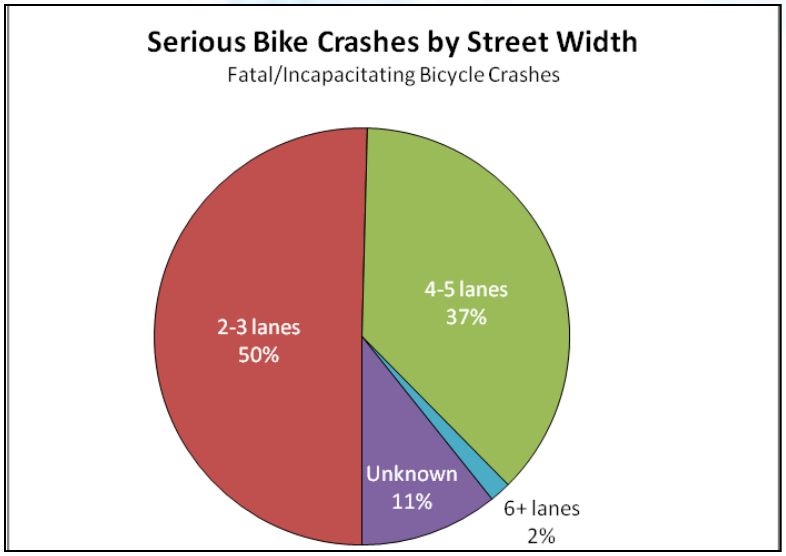
- Arterials are the problem (again!)
- 52% of serious bike crashes are on arterials

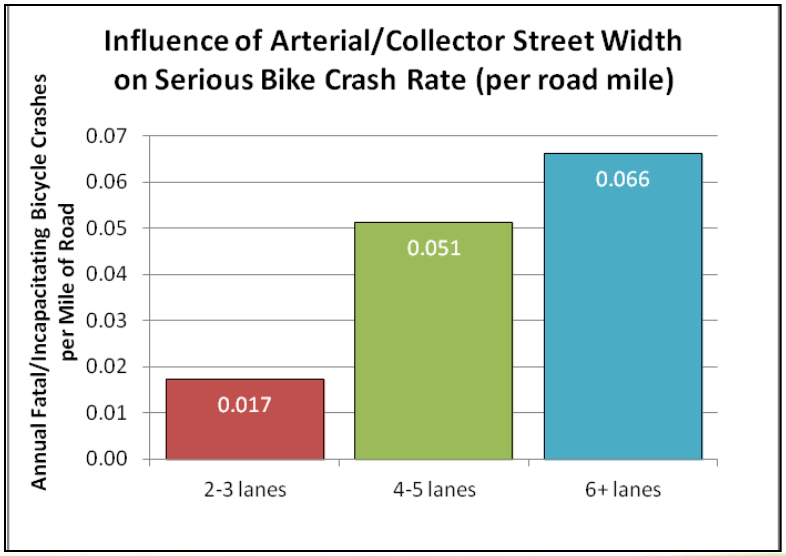




Number of Lanes

- Most crashes happen on 2-3 lane roads
- Crash rate increases with street width

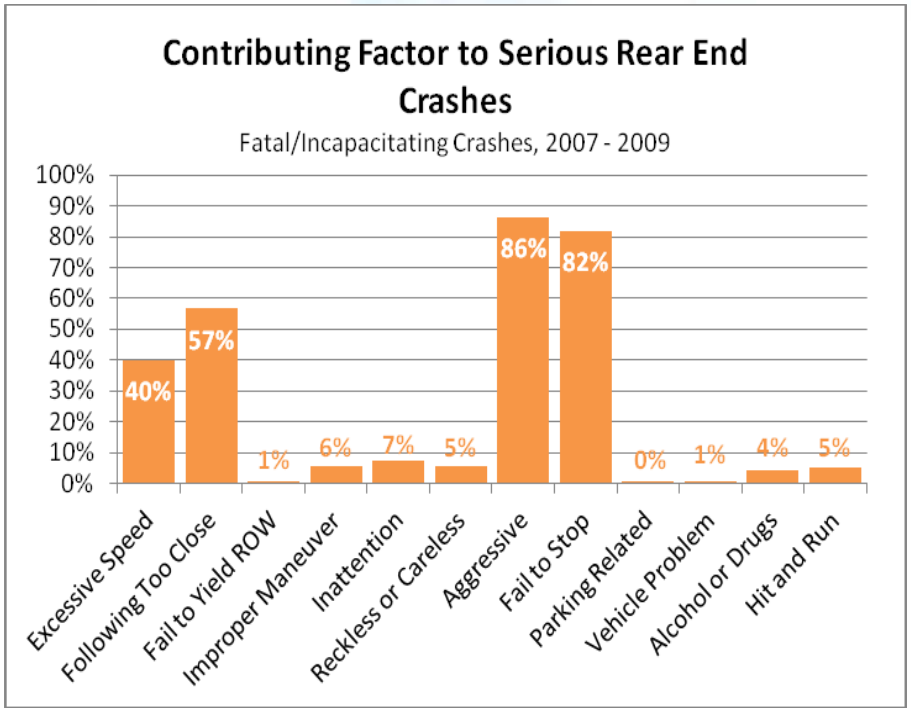


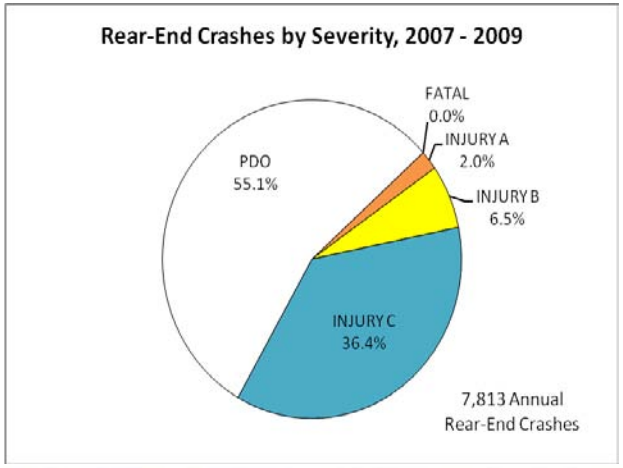


Section 7
Contributing Factors

Rear End crashes

- Most common serious crash type (29%)



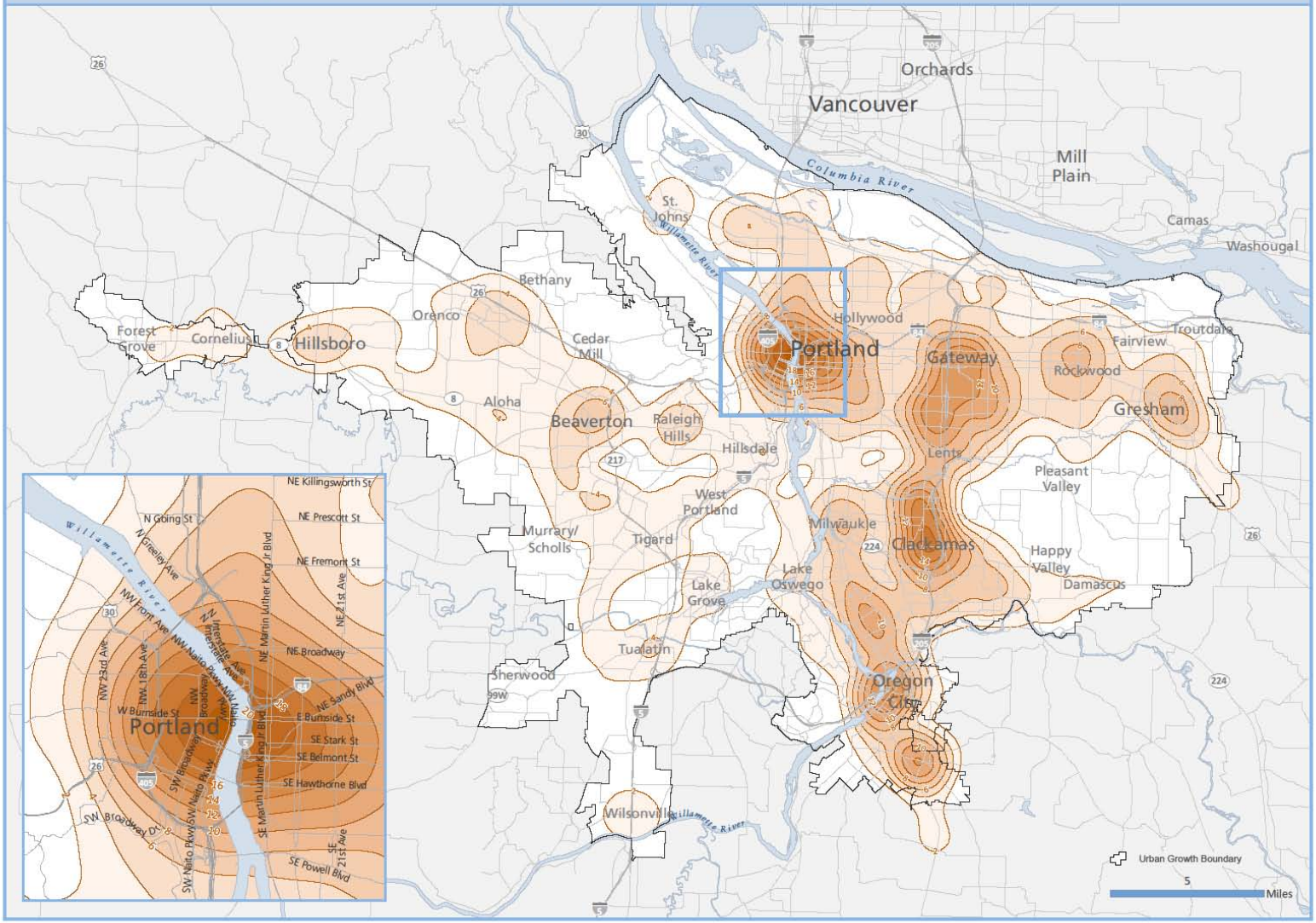


Section 8
Land Use

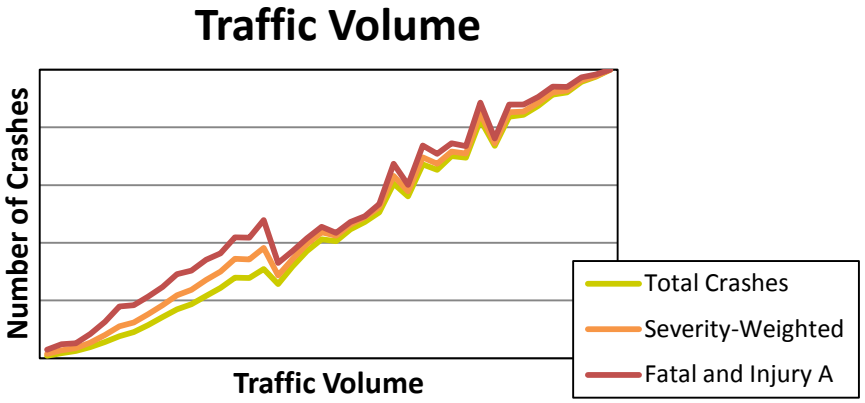
Automobile Crashes

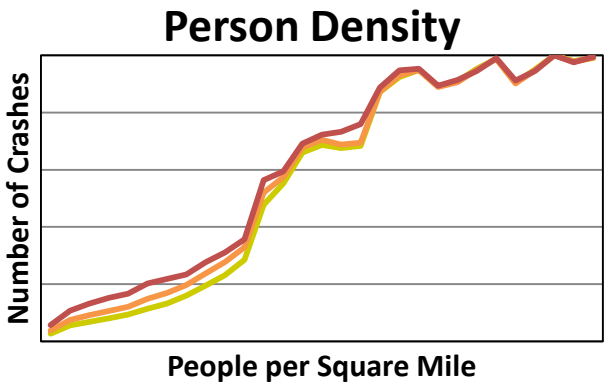
Metro | *Making a great place*

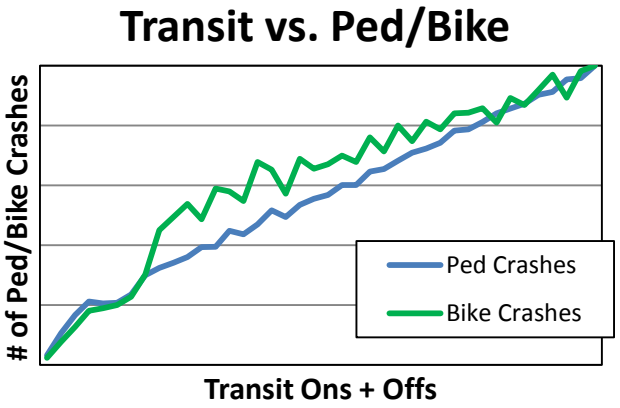
density of all non-freeway-related fatal and serious injury crashes (2007-2009), using a 1.5 mile search radius



Relationship of Variables







Transit and Rail

- TriMet
  - 2007 – 2009: 3 accidental fatalities (1/year)
  - 0.23 fatalities/100M passenger-miles (compared to 0.42 for all vehicles)
- Freight Rail
  - 2007 – 2009: No reported fatalities at RR crossings

What are the general patterns?

- Arterials are the major safety challenge in the region
- Alcohol/Drugs, Speed, and Aggressive Driving are major behaviors to be addressed
- Higher VMTs → more serious crashes
- Streets with more lanes → higher serious crash rates, particularly for people walking
- Risk for people walking increases most after dark
- Street lighting is important for bikes and peds

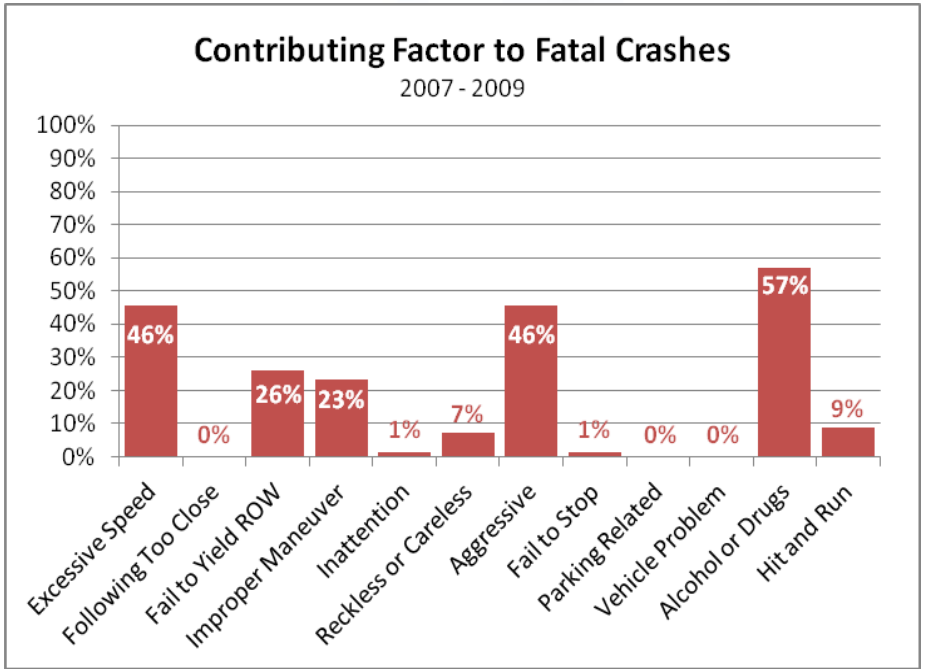
Regional Transportation Safety Plan

- Urban focused
- Data-driven
- Multimodal
- Focuses on fatal and severe injury crashes
- Identify recommendations to meet RTP targets

Short-Term Workgroup Recommendations

Contributing Factors

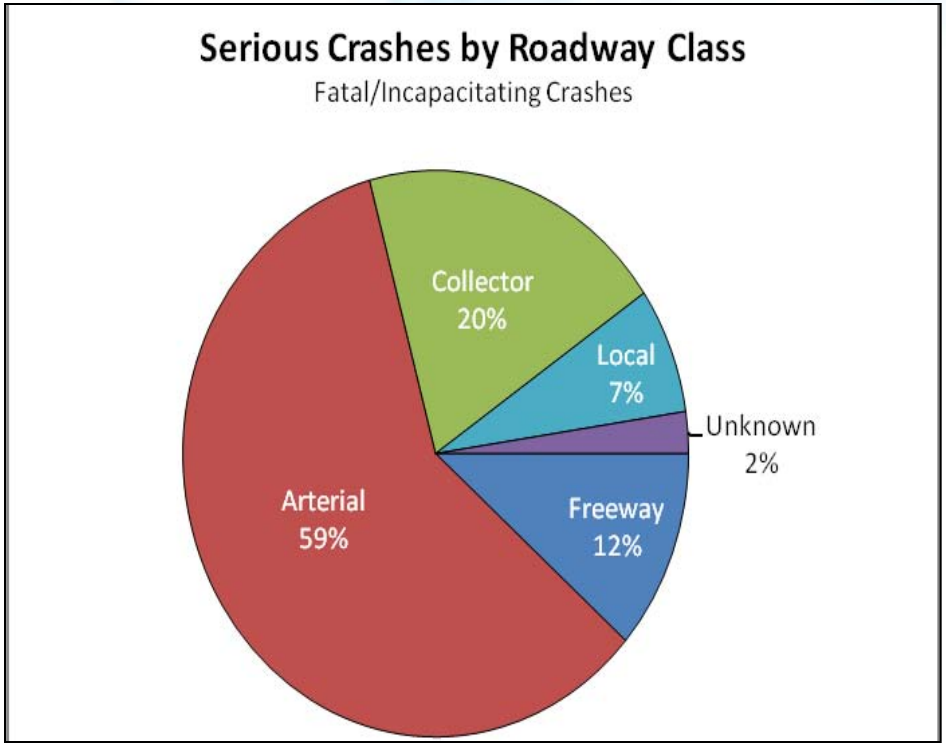
- Alcohol and Drugs
- Excessive Speed
- Aggressive Driving



Workgroup Recommendation: Convene targeted Workgroup of safety service professionals (law enforcement, education, EMS etc.) to focus on these contributing factors.

Roadway class

- Arterials are the major safety challenge in the region.

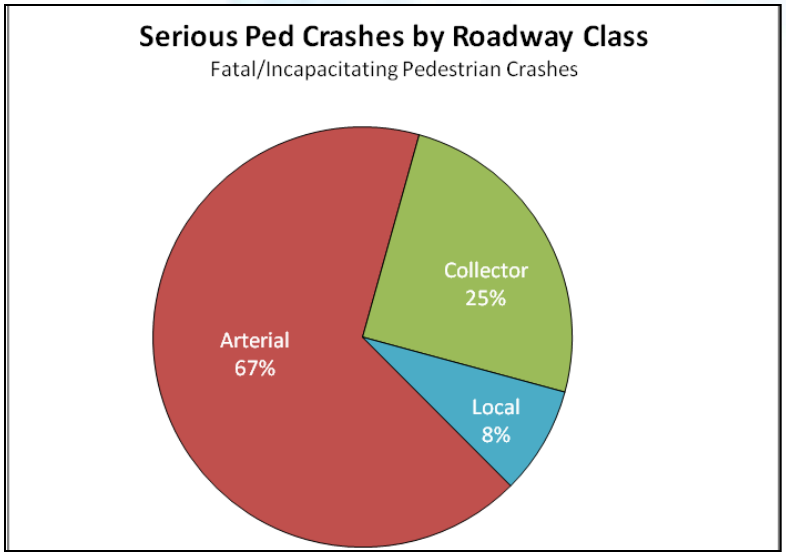


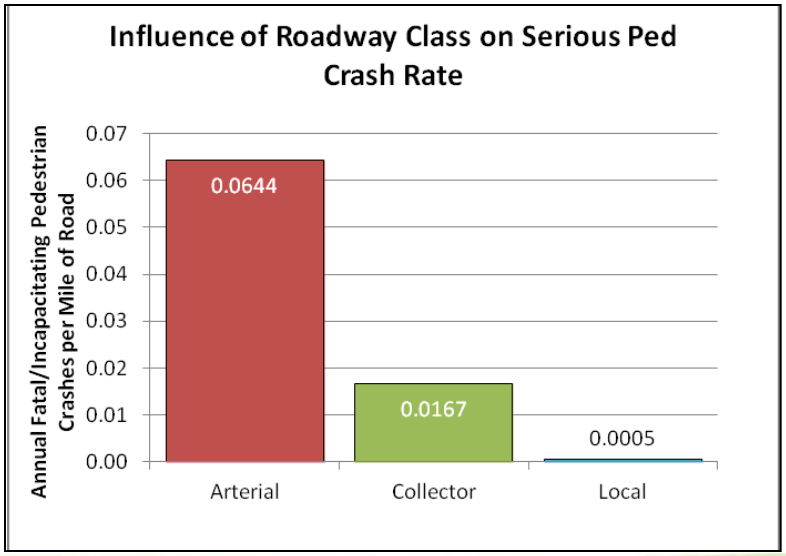
Workgroup Recommendation: Develop arterial safety program to identify high severity crash arterials across the region.

Pedestrian Crashes #1

- 67% of serious ped crashes happen on arterials
- Wider roads are over-represented

Workgroup Recommendation:
1) Develop safe crosswalks on arterials & multi-lane roadways, 2) Crosswalk enforcement actions



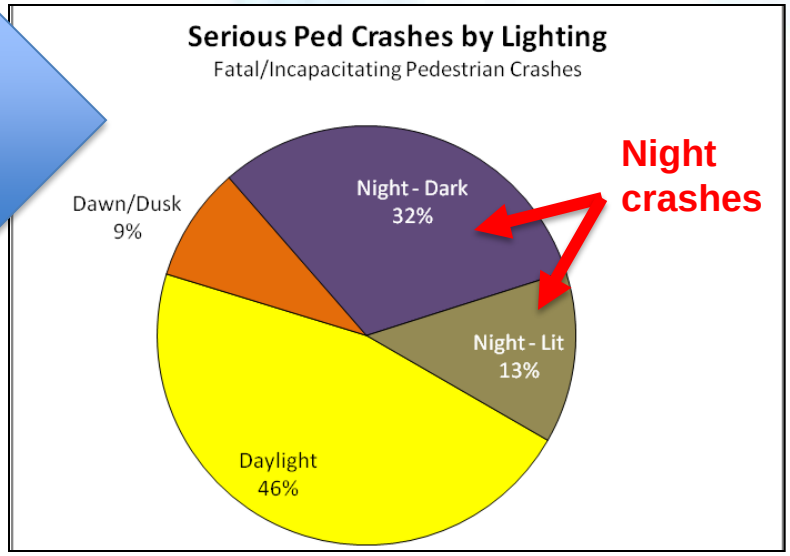


Pedestrian Crashes #2

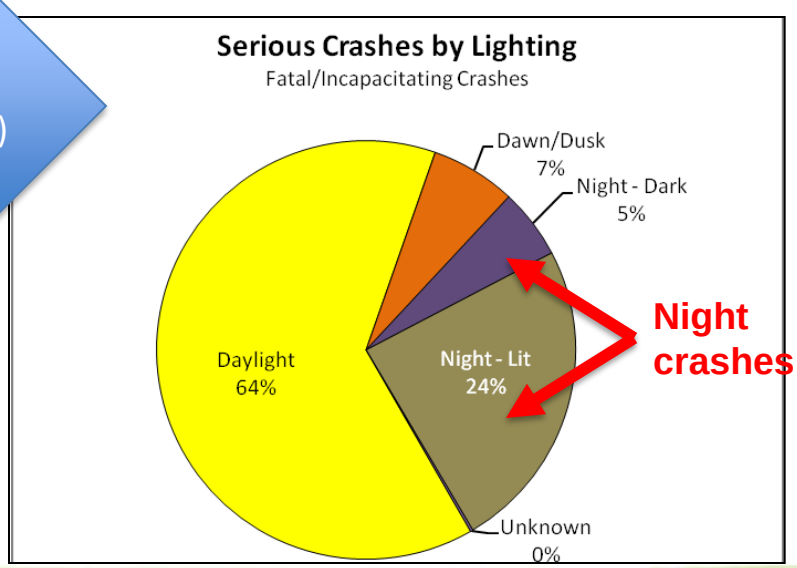
- More crashes at night than autos or bikes

Workgroup Recommendation:
Improved pedestrian crossings, including lighting, with focus on multi-lane arterials.

Pedestrians

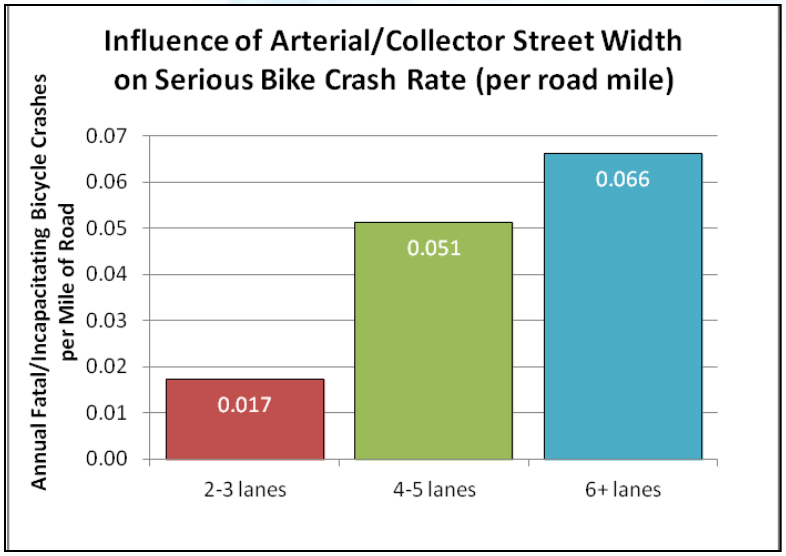


All crashes (comparison)



Bike Crashes

- Serious bike crash rate increases with street width



Workgroup Recommendation: Provide protected bike facilities, where feasible, along high volume and/or high speed roadways.

Long-Term Recommendations

- Potential future policy changes
- Developing safety design best practices based on the Highway Safety Manual
- Further research on the linkage between safety, land use and the built environment.

Resources to Leverage

- Federal, state and local partners
- Regional Active Transportation Plan
- Regional corridor refinement plans

Questions

Report available at www.oregonmetro.gov/regionalmobility
For more information, contact:

Josh Naramore – joshua.naramore@oregonmetro.gov
Anthony Butzek – anthony.butzek@oregonmetro.gov

Oregon Department of Transportation

Oregon's Statewide Transportation Strategy

A 2050 Vision for Greenhouse Gas Emissions Reduction

Oregon Sustainable Transportation Initiative

METRO - JPACT

June 14, 2012

Presentation Overview

- Background
- Statewide Transportation Strategy Overview
- Next Steps

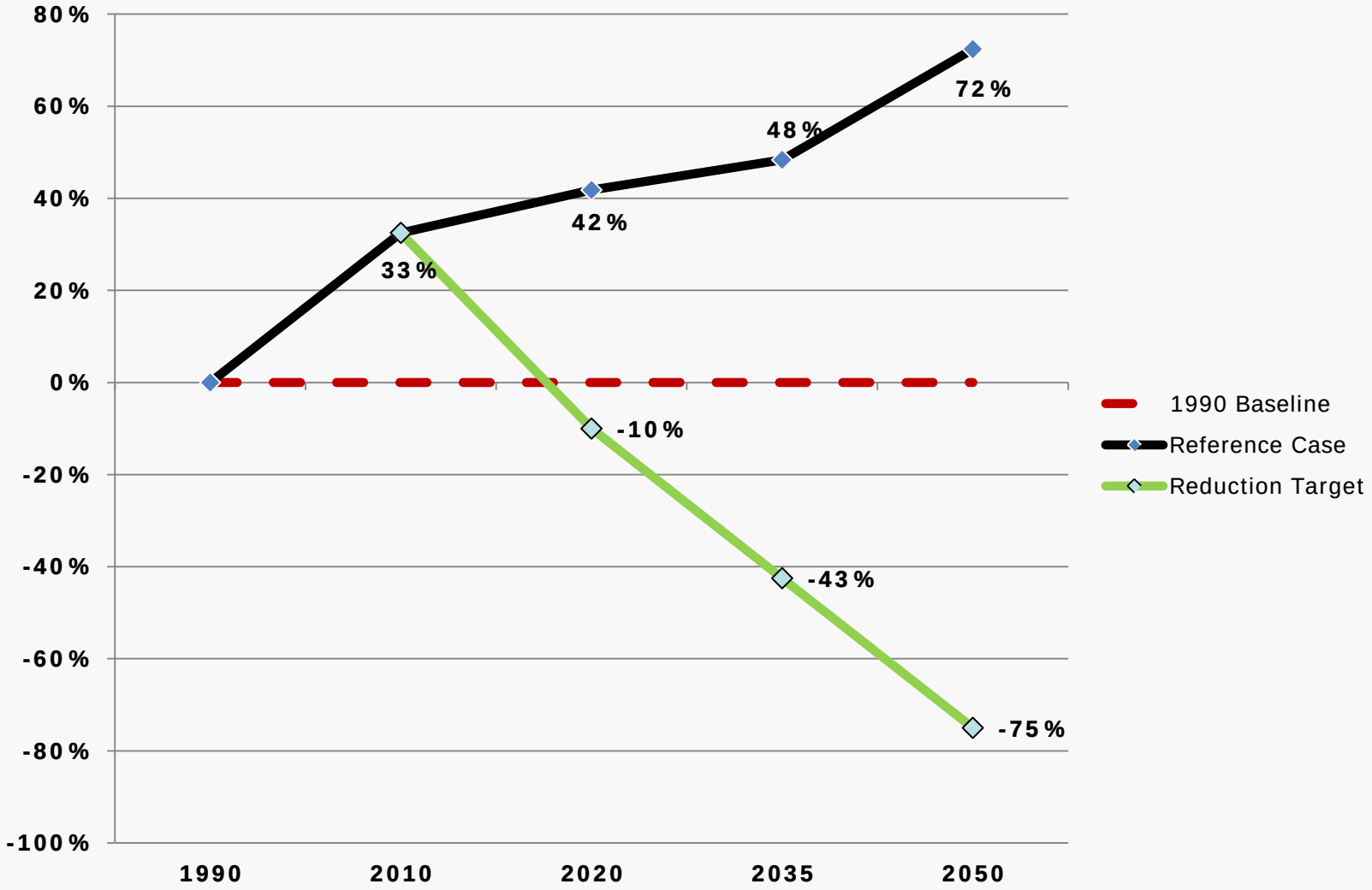
Legislative Directive

- 2007: Reduce GHG emissions by 75% below 1990 levels by 2050

- 2010: Planning to reduce GHG emissions from transportation

    - **The Statewide Transportation Strategy (STS)**

A Significant Challenge: Projected GHG Trends and Future Goals



STS Overview

The STS addresses:

What actions and strategies will be effective in reducing transportation-related GHG emissions in Oregon while supporting other societal goals such as livable communities, economic vitality, and public health?

Looking out to 2050, intended to identify most effective transportation-related GHG emissions reduction strategies in:

- Transportation systems
- Vehicle and fuel technologies
- Land use patterns

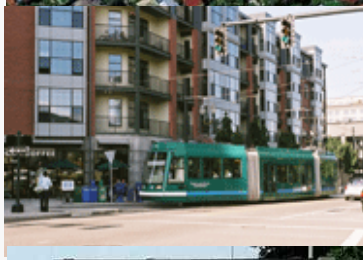




STS Overview

- Is one part of the Oregon Sustainable Transportation Initiative, which includes:
  - GHG Reduction Toolkit
  - Target Rules
  - Public Outreach
  - Scenario Planning Guidelines
  - Metropolitan Scenario Planning
- The STS is essentially a state-level scenario plan
- It differs from metropolitan scenario planning in the following ways:
  - Looks out to 2050, instead of 2035
  - Examine freight and air passenger GHG reduction strategies, not just ground



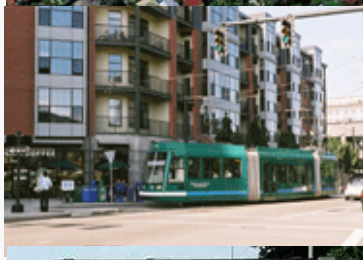




STS Overview

- The STS is not directive nor regulatory

- Requires collaboration between public and private sectors and coordination among local, regional, state, and federal levels

- The STS is not one-size-fits-all
  - Different strategies work for urban and rural areas



Travel Markets

The STS considers the entire transportation system, and policy recommendations are provided in each of three travel markets:

- **Ground Passenger and Commercial Services**

  Cars, SUVs, pick-up trucks, public transportation, delivery/service vehicles

- **Freight**

  Movement of goods *(road, air, rail, water)*

- **Air Passenger**

  Aircraft, airport ground access and support equipment

The STS Development Process

Test transportation and land use options

Inputs

Level of intensity

- Vehicle Fuel Efficiency
- ITS and Technology
- Pricing and Markets
- Land Use Change
- Mode Share

Evaluate potential outcomes

Outputs

- GHG Emissions
- Energy Consumption
- Public Health Impacts
- Economic Impact
- Land Use and Resource Impacts
- Infrastructure & Implementation Costs
- Potential Implementation Risks
- Travel and System Performance

Select the mix of strategies with the best potential outcomes (Recommendations)

Recommendations

- Developed for Ground Passenger and Commercial Services, Freight Movement, and Air Passenger

- Many recommendations are already underway

- Most recommendations have benefits in addition to GHG reduction

- The following slides show high-level recommendations that need to be assessed further prior to implementation

Ground/Commercial Recommendations

Vehicle and Fuel Technologies

- More fuel-efficient and lower emissions vehicles
- Cleaner fuels

Land Use

- Compact, mixed-use development
- Limited Urban Growth Boundary expansion

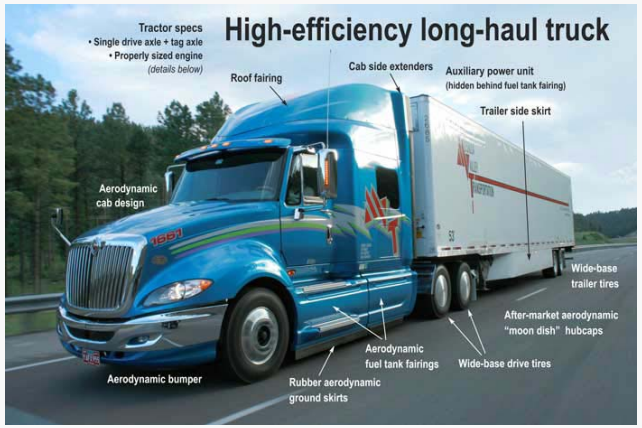
System and Mode Optimization

- Transportation system operations optimization *(e.g., ITS)*
- More local SOV trips shift to zero-emission modes *(e.g., bicycling, walking)*
- Public transportation infrastructure and operations investments
- Carpool/vanpool, carsharing, and TDM programs
- Road expansions and parking management

Pricing and Markets

- Funding sources for transportation system operations and maintenance

Freight Recommendations



Vehicle and Fuel Technologies

- More efficient engines, bodies, rail cars, trailers
- Idle reduction technologies
- Low carbon freight fuels

System and Mode Optimization

- Low-carbon, more efficient freight modes *(e.g., rail, water, pipeline)*
- High-value industries *(e.g., electronics, precision manufacturing, aerospace)*
- Efficient industrial land use *(e.g., urban consolidation centers)*

Tolling and Pricing

- Carbon fee
- Options to pay for other environmental costs

Air Passenger Recommendations

Aviation System

- Airframe and engine efficiency technology
- Low carbon aviation fuels
- Efficient airport ground access activities
- Efficient airport ground support operations and maintenance
- FAA *NextGen* technologies for flight and ground operations

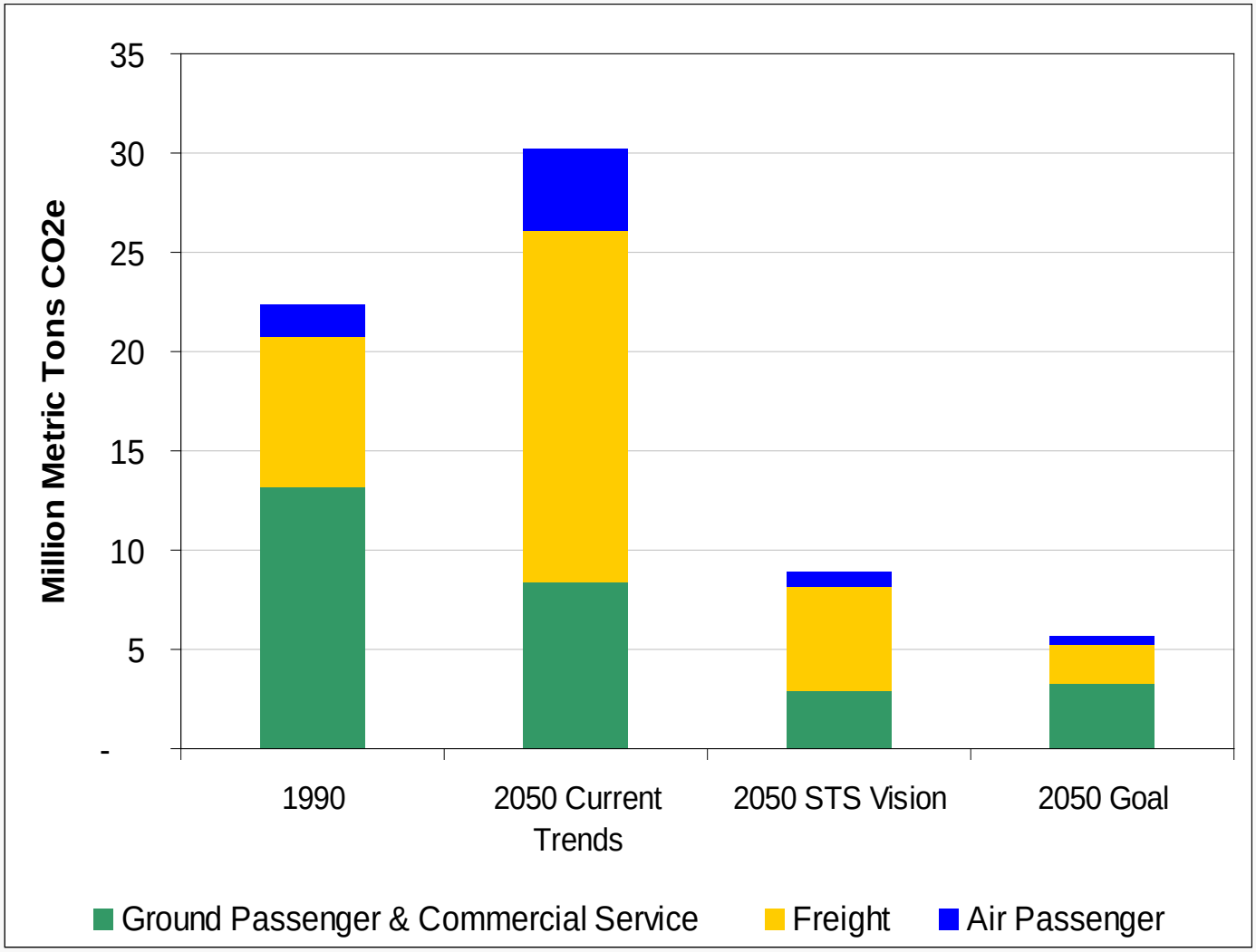
Air Travel Demand Management

- Improved intercity rail corridor service
- On-line business solutions (e.g., video conferencing)

Pricing

- Carbon fee
- Fuel charges for non-climate change related externalities
- Increased air travel passenger fees

Overall GHG Reduction Impacts



Key Drivers of GHG Reduction in the STS

- Vehicle and fuel technology advancements
- Improved system performance
- Shifts to more fuel-efficient modes
- Increased land use density and mixed-use development
- Efficient pricing of transportation: use of market signals to promote and support desired changes

Other Impacts and Benefits

- Reduced fuel consumption
- Lower levels of vehicle delay
- Accommodate increasing population and improving performance at lower cost
- Improved public health
- Reduced resource consumption, water use, and public utility expenditures

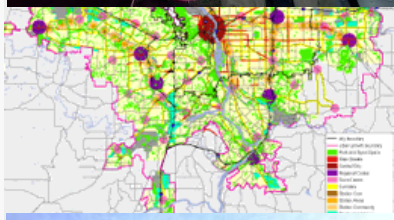
Other Impacts and Benefits

- Reduced fuel consumption
- Lower levels of vehicle delay
- Accommodate increasing population and improving performance at lower cost
- Improved public health
- Reduced resource consumption, water use, and public utility expenditures

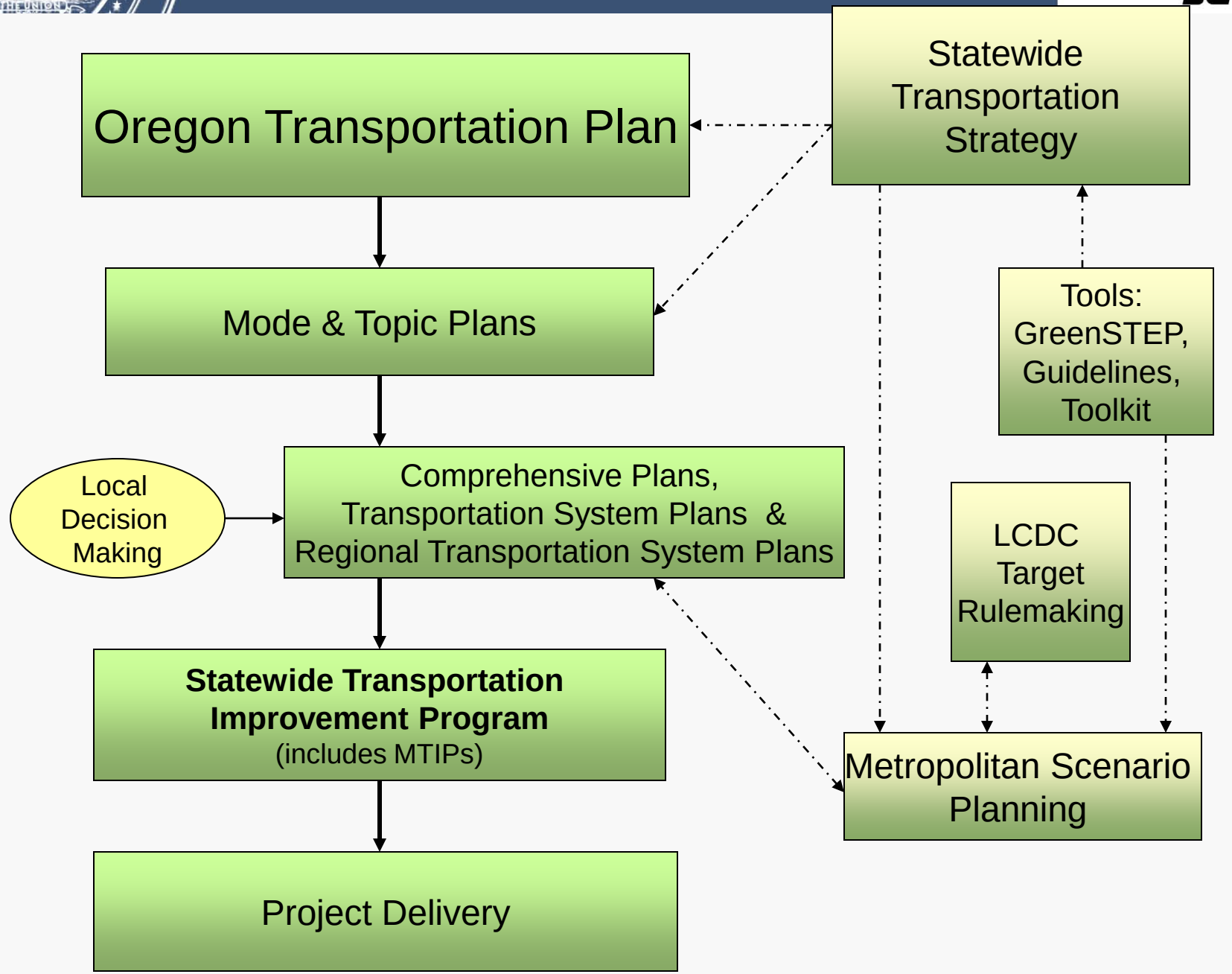
Potential Challenges

to achieving the 2050 STS Vision:

- Public Acceptance and Participation
- Financing/Funding Sources
- Adoption Rate of Technology
- Land Use
- Support of Decision-Makers
- Multi-Jurisdiction Coordination and Collaboration



Relationship of OSTI in Oregon's Transportation Planning System

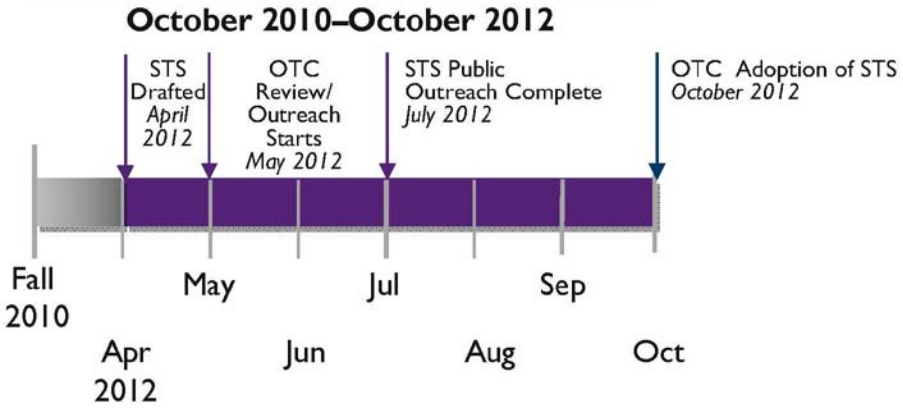


STS Timeline: Phase I

Phase I:
Statewide
Transportation Strategy

Clarify:
•The Problem
What it takes to reduce GHG

Establish:
•Future Vision (2050)
of reduced GHG
•Broad Recommendations
for achieving the vision



- May 16: OTC workshop, public outreach begins
- July 20: Public outreach period ends
- July: Public hearing
- October: OTC adopts STS

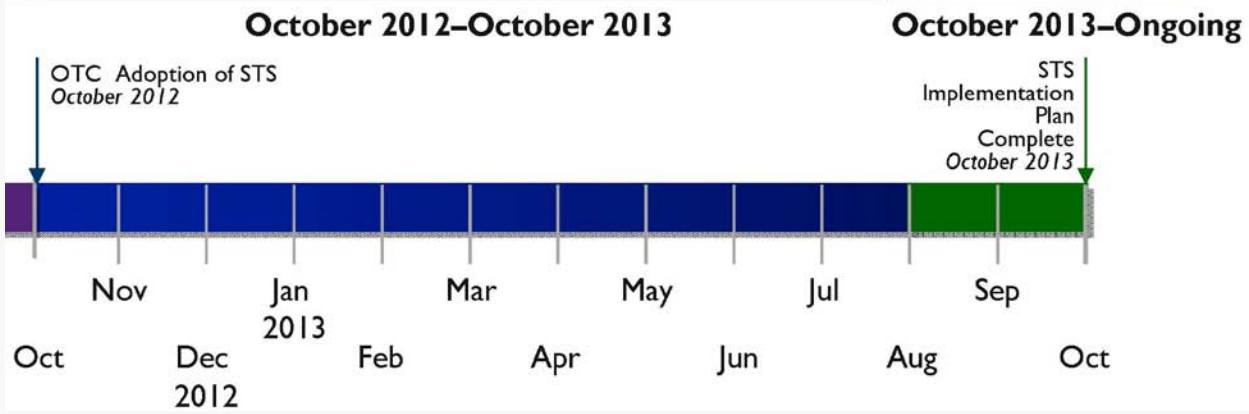
STS Timeline: Phase II

Phase II: Implementation

In near-term, identify:
- Legislative concepts
- Ways to work with federal partners and other partnership opportunities
- Necessary policy changes
- Necessary incentive programs

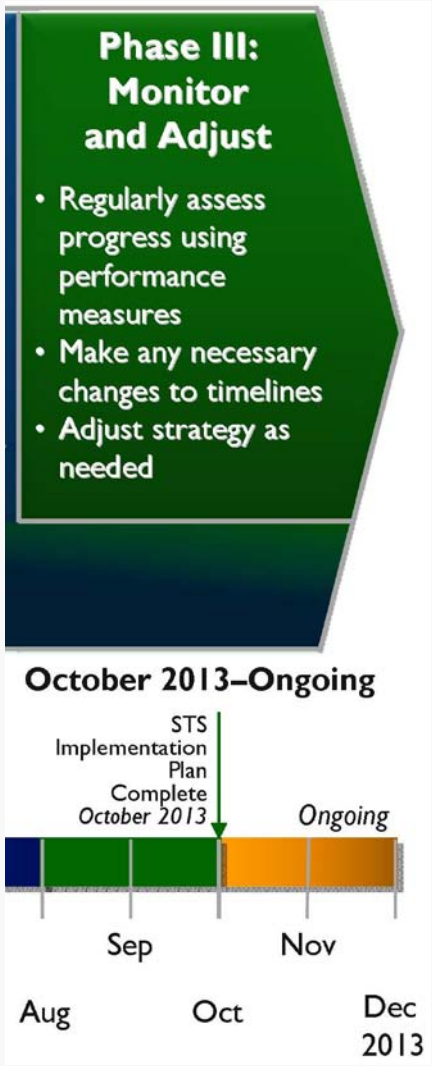
In mid-term, develop Implementation Plan:
- More detailed economic assessment of individual STS actions
- Specific implementation actions, timelines and responsibilities
- Performance measures

Long-term (ongoing):
- Execute implementation plan
- Develop and/or amend long-range transportation policies



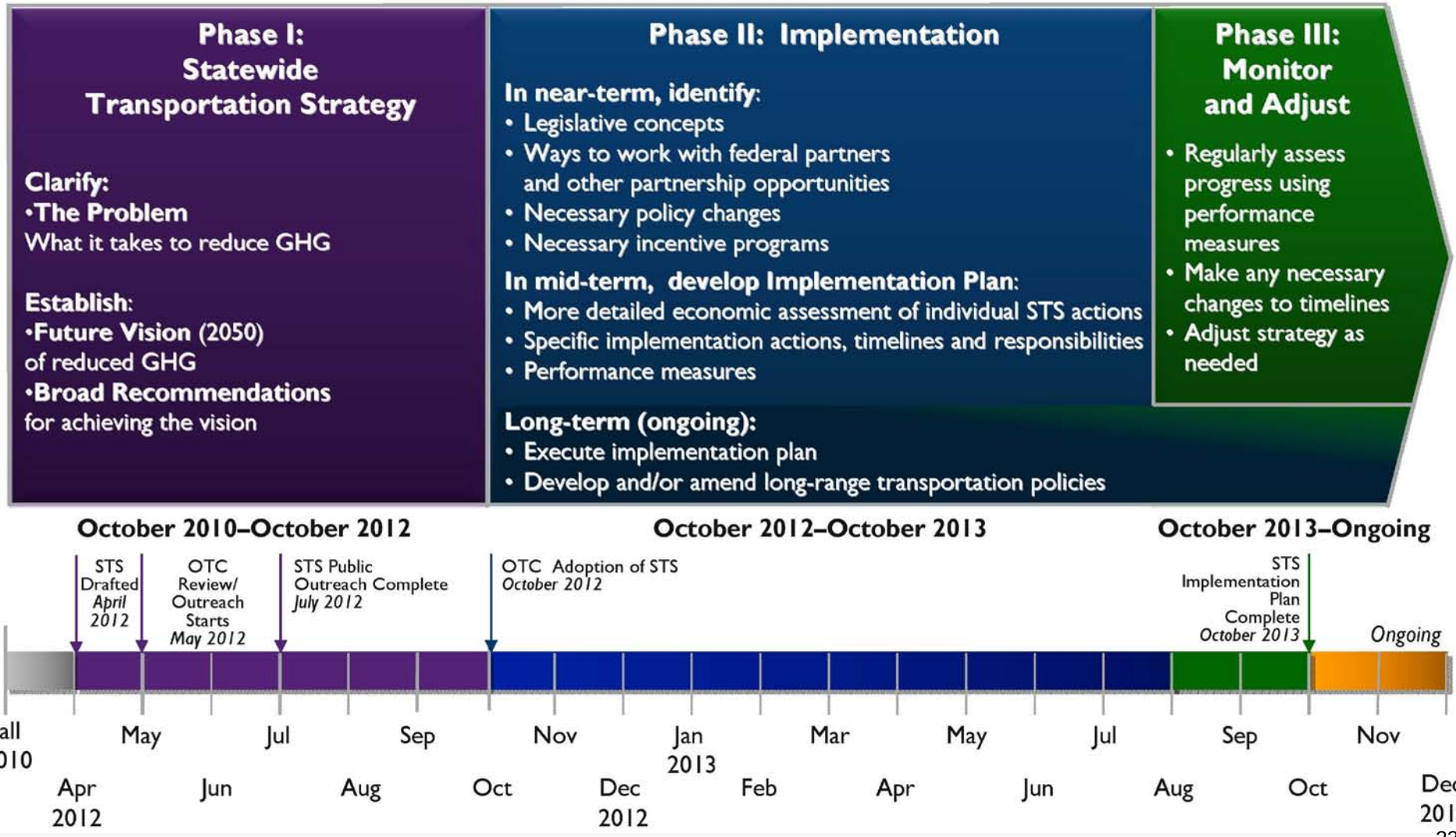
- Fall 2012 – fall 2013
- Develop an implementation plan
- Economic assessment of actions
- Performance measures
- Policy changes, programs
  - Roles & responsibilities
  - Partnership opportunities

STS Timeline: Phase III



- Monitoring and adjusting of STS timelines & elements

STS Timeline



Public Outreach and Priorities Survey

- Open public outreach process to gather feedback on the STS
- Survey to help ODOT staff form strategic priorities
  - *What's most important to communities and organizations?*
- Strategic priorities help with development of implementation plan and next steps

Statewide Transportation Strategy

http://www.oregon.gov/ODOT/TD/OSTI/pages/sts.aspx

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