



Transportation Project Sponsors

1. Project Sponsor (must be a public agency)–REQUIRED

Organization Name: ODOT Region 1	
Contact Person Name: Andy Johnson	Title: Major Projects Manager
Street Address: 123 NW Flanders Street	Phone: (503) 731-8356
City, State Zip: Portland, OR 97209-4012	
E-mail: Andrew.JOHNSON@odot.state.or.us	

2. Co-Sponsor(s)

List the organization names for any Co-Sponsors of this project:

Transportation Project Information

3. Project Name–REQUIRED

Project Name: OR 224-212 Corridor ITS

4. Project Budget Summary - This table will automatically fill in.

	Project Funds	% of Project Costs
Total Costs	\$750,000	
Non-Eligible Costs		
Total Transportation Project Cost	\$750,000	100%
Matching Funds	\$77,025	10.27%
Requested Funds	\$672,975	89.73%

5. Provide a brief summary of the project (max 800 characters)–REQUIRED:



MULTIMODAL TRANSPORTATION PROGRAM PROJECT APPLICATION

This project is located on OR 224 and OR 212 from OR 99E to the Rock Creek Junction. There are serious transportation safety issues with numerous SPIS sites in both the top 5% and 10% categories.

The project purpose is to improve transportation safety and mobility for the many system users driving through the corridor, particularly during peak traffic periods. The primary goal is to reduce crash rate and improve mobility for all users without adding more costly additional travel lanes. No negative impacts are anticipated to nearby communities and the environment. The project will add Bluetooth readers along the corridor and add CCTVs to allow ODOT to better manage the traffic along the corridor. These investments will leverage other ODOT investments to ITS in the corridor.

6. Is this project a continuation of a previous Statewide Transportation Improvement Program (STIP) Project?

- Yes No

If yes, describe the status of the previous STIP project.

7. Does this project complement or enhance an existing or planned STIP project? For example, does it provide a more complete solution for an existing project or is it intended to work with another planned project, including a "Fix-It" STIP project?

- Yes No

If yes, describe the relationship of this proposed project to the other, including planned timing of both projects.

8. Project Problem Statement–REQUIRED

Provide a paragraph explaining the problem or transportation need the project will address:

There are serious transportation safety issues with numerous SPIS sites in both the top 5% and 10% categories. There are also traffic incidents that have negative impacts on both safety and traffic mobility. The problems are exasperated with many at grade signalized intersections with relatively high speeds. The 2010 ADT traffic volumes are relatively high ranging from 10,000 to 47,000 vpd. There is a considerable amount of traffic congestion during the peak periods.

9. Transportation Project Location–REQUIRED

City: <input type="text"/>	County: <input type="text" value="Clackamas County"/>
MPO: <input type="text" value="Metro"/>	Special District: <input type="text"/>

Project Location Detail: (include as appropriate: road and milepost range, rail line and milepost range, GPS coordinates, bus route and stops, bike path or multipurpose trail locations, sidewalk locations, or other location detail)

OR 224 Milwaukie Expressway, MP 0 – 3.73
OR 212 Clackamas, MP 0 – 8.87

10. Maps and Plans (Project Site and Vicinity Maps are required for all construction projects. Include other applicable maps or drawings, if available.)

<input type="radio"/> Attached/Upload <input checked="" type="radio"/> Not Applicable	Vicinity Map (8.5x11) (may be inset on site map page)
<input checked="" type="radio"/> Attached/Upload <input type="radio"/> Not Applicable	Site map/air photo (showing existing site) (8.5x11)
<input type="radio"/> Attached/Upload <input checked="" type="radio"/> Not Applicable	Site map (showing proposed construction area clearly marked) (8.5x11)
<input type="radio"/> Attached/Upload <input checked="" type="radio"/> Not Applicable	Typical Cross Section Drawings (showing proposed construction funded by the requested funds clearly marked) (8.5x11)

11. Project Description–REQUIRED

Clearly describe the work to be funded and describe what will be built, any services that will be provided, what equipment will be purchased, or project planning or environmental document efforts that will be paid for with Requested Funds. Include whether [Practical Design](#) considerations have been applied to the proposed project. Identify if the project can be completed in phases, and whether the project or phase will provide a complete, useful product or service. (Maximum 4000 characters)

The project that is to be built is a small-scale operational and safety improvement that is cost efficient and fits within constrained revenue forecasts. These improvements include bluetooth readers and CCTVs to provide better information along the corridor and cameras that allow for corridor traffic management. This set of improvements was identified in the Region 1 ITS plan.

The project will not require any purchasing or leasing of ROW. The ROW exists in the corridor to accommodate these relatively minor improvements.



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These improvements are by their nature less expensive and cost effective ways to deal with urban transportation problems. Other alternatives were considered to address the congestion and safety problems on the corridor, including widening or adding additional lanes; however the cost and impact of these alternatives were too expensive. From a practical design perspective, the proposed project meets the S.C.O.P.E. values in the following ways:

Safety- Although the proposed ITS infrastructure does not eliminate safety issues of congestion, it will provide for better route choices and fewer collisions, especially secondary collisions.

Corridor Context- The proposed project grew out of the Region 1 ITS Plan that identified problems in the corridor and cost effective ways to address the transportation problems. These solutions are being implemented along the entire corridor, so as to manage the corridor comprehensively.

Optimize the System- the proposed project takes advantage of the opportunity to optimize the system by reducing collisions and improving reliability with minor investments.

Public Support- Providing choices and information to travelers has been well supported by the public.

12. Primary Project Mode(s)

<input type="checkbox"/> Passenger Rail	<input type="checkbox"/> Light Rail	<input type="checkbox"/> Bus/Transit
<input type="checkbox"/> Pedestrian	<input type="checkbox"/> Bike	<input checked="" type="checkbox"/> Highway/Road
<input type="checkbox"/> Other:		

13. Project Activities

<input checked="" type="checkbox"/> Infrastructure Engineering, Design, or Construction	<input type="checkbox"/> Project Planning and Development	<input type="checkbox"/> Operations/Service Delivery
<input type="checkbox"/> Capital Equipment Purchases	<input checked="" type="checkbox"/> Transportation Demand Management	<input type="checkbox"/> Other

Timetable and Readiness Information

14. Indicate anticipated timing for the following activities, as applicable. Provide a date, if known, or year—REQUIRED.

Anticipated Dates	Activity
2016	Requested STIP Funding Year (e.g. 2016, 2017, 2018) - REQUIRED
	Bid Let Date
	Construction Contract Award
	Construction Complete
	Capital Equipment Purchase
	Operations/Service Begin
	Other Major Milestone:
2017	Project Completion/End of Activities funded through this request - REQUIRED

15. Is the proposed project consistent with adopted plans? (Plans may include, for example, transportation plans, mode plans such as bike/ped or transit plans, economic development plans, comprehensive plans, corridor plans or facility plans.)—REQUIRED

- Yes No



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Describe how the proposed project is consistent with adopted plans. List plans that include the project (with page numbers if possible) or describe how the project meets plan intent. If the project is not consistent, explain how and when plans will be amended to include the project.

The project is consistent with the 2006 Oregon Transportation Plan (OTP) and the 1999 Oregon Highway Plan (OHP). In particular, the project is consistent with the following policies and action strategies:

OTP Goal 2 – Management of the System, Strategy 2.1.3 (pg 50), by seeking to develop advanced traveler information devices, incident management, speed management, improvements to signaling systems and other technologies to extend the efficiency, safety and capacity of transportation systems.

OHP Goal 1: System Definition, Action 1A.1 (pg 41), in managing the Statewide Highways to provide for safe and efficient high-speed continuous-flow operation in urban areas.

OHP Policy 1G: Major Improvements, Action 1G.1. (pg 85), by protecting the existing highway system and developing transportation demand management systems for the existing highway.

OHP Goal 2: Policy 2E: Intelligent Transportation Systems (pg. 110) seek to develop and implement ITS strategies to improve the highway systems.

Not only is this project consistent with the policies mentioned above, but it is true to the spirit of the policy. These improvements are very cost effective, with minimal to no impacts, and will help extend the functional lifespan of the corridor and put off the need for more expensive solutions.

16. Is the proposed Transportation Project consistent with Major Improvement Policies including [OTP Strategy 1.1.4](#) and [OHP Action 1G.1](#)?—REQUIRED

- Yes No

Describe how the proposed investment is consistent with OTP Strategy 1.1 and for highway projects, OHP Action 1G.1. If the project corresponds to a later priority in these strategies, describe how higher priority solutions have already been tried or why they are not applicable or not appropriate to the location.

The project is consistent with the ODOT Major Improvements Policies including OTP Strategy 1.1.4 and OHP Action 1G.1, particularly 'Protect the existing system'. The project was selected from the ODOT Region 1 ITS Plan. The Region 1 ITS Plan identifies locations that are in need of new signal controllers, Bluetooth readers, variable message signs, variable speed limits, ramp meters, or any other technology that may optimize and protect the existing system.

ATM/ITS applications help protect the existing system by providing the traveler with choices and information, as well as trying to managing travel so as to improve stability and reliability of flow. These improvements have shown results around the nation and world, and have recently begun implementation in this region. Variable speeds and variable message signs have been shown to reduce the frequency and severity of accidents, and have proven a very cost effective strategy to address certain types of accidents.

Project Benefit Information

Questions 17 through 26: Describe how the proposed solution will help achieve the outcomes listed below. Describe the benefits that the proposed solution is expected to achieve and provide documentation of those benefits where available, such as summaries of data analysis or modeling results, or letters of commitment from participants or employers. Where appropriate, also include in the description whether the proposal will mitigate or prevent a negative impact to the desired outcome.

This information and information throughout the application will be used as input to the STIP decision process. It is not expected that every solution will help achieve every benefit. Different types of solutions are likely to have different kinds of benefits and no type of solution or benefit is assumed to be more important than others. Please provide a realistic description of expected benefits of the proposed solution and feel free to use N/A where the benefit or outcome listed does not apply to the proposal.

17. Benefits to State-Owned Facilities

Outcome sought: preserve public investment by maintaining efficient operation of state-owned highways and other facilities through operational improvements, local connectivity, congestion-reducing projects and activities, etc.

For example, will the solution:

- Provide an alternative to travel on state owned facilities?
- Cost less than a state facility improvement with equal benefits?
- Include local efforts to protect the investment such as an Interchange Area Management Plan?
- Plan for or contribute to development of a seamless multimodal transportation system?
- Complete or extend a critical system or modal link?

This project is located on a designated freight route through the Portland Metro area. This route comprises the primary connection from the Metro area, OR 99E and I-205 to US 26 and destinations East. These freight routes serve a function very important to the State of Oregon economy.

This project will have substantial benefits to the State System, and is entirely located on the existing system. These benefits are cost effective, minor investments that will prolong the life of the existing facility.

18. Mobility

Outcome sought: provide mobility for all transportation system users and a balanced, efficient, cost-effective and integrated multimodal transportation system.

For example, will the solution:

- Improve or better integrate passenger or freight facilities and connections, including multimodal connections, to expedite travel and provide travel options?
- Improve or provide a critical link in the transportation system or connection between modes for travelers or goods?

This project is located on the critical statewide route through the Portland Metro area. OR 224/OR 212 provide the primary parallel east-west route to I-84 in the Portland metropolitan area. This through-route serves population centers along its route such as Sandy, Milwaukie, Clackamas and Portland, as well as other destinations such as Sandy.

Freight volumes moved by truck to and from the region are projected to more than double over the next 25 years. Vehicle-hours of delay on truck routes in the Portland-Vancouver area are projected to increase by more than 90 percent over the next 20 years. Growing demand and congestion will result in increasing delay, costs and uncertainty for all businesses that rely on this corridor for freight movement. This corridor connects users in the North Milwaukie Industrial area, Clackamas/Lawnfield Industrial area, Clackamas Regional Center. These areas include many key businesses such as Oregon Ironworks, Fred Meyer, Safeway and other important distribution and industrial services. This route also provides an important recreational route for people from the Portland Metro area travelling to the destinations in Mt Hood, the Cascades or Eastern Oregon.

19. Accessibility

Outcome sought: ensure appropriate access to all areas with connectivity among modes and places and enable travelers and shippers to reach and use various modes with ease.

For example, will the solution:

- Improve connections within residential areas and/or to schools, services, transit stops, activity centers and open spaces, such as by filling a gap in bicycle, pedestrian, or transit facilities?
- Improve or expand access to employers, businesses, labor sources, goods or services?
- Plan for or contribute to expanding transportation choices for all Oregonians?

OR 224/OR212 provides access to residential, industrial and commercial areas in SE Portland, Milwaukie and Happy Valley, Clackamas County, Damascus.

This project will help improve the access for goods and services to and from employment and shopping centers along OR 224/OR212 between Clackamas County and Portland. This will help address the many safety issues along the corridor and provide choices to travelers along the corridor. These ITS improvements are within the existing ROW that will have a positive benefit to travelers on OR 224/OR 212 at a low cost.

20. Economic Vitality

Outcome sought: expand and diversify Oregon's economy by efficiently transporting people, goods, services and information.

For example, will the solution:

- Support, preserve, or create long-term jobs and capital investment? Will it do so in an economically distressed area?
- Enhance opportunities for tourism and recreation?
- Plan for or contribute to linking workers to jobs?

These ITS improvements will improve connections, both physical and economic, between the key employers along the corridor and the workers commuting to those locations. These improvements will provide better travel through the corridor at a relatively low cost. These improvements will enhance tourists experience when accessing some of the recreational opportunities in the surrounding mountains and destinations east. This corridor provides one of the best connections to the various destinations East and Southeast of the Portland Metro area, such as fishing, hiking, cycling, camping and other outdoor related recreational activities.

21. Environmental Stewardship

Outcome sought: provide an environmentally responsible transportation system that does not compromise the ability of future generations to meet their needs and encourage conservation of natural resources.

For example, will the solution:

- Use design, materials or techniques that will more than meet minimum environmental requirements or mitigate an existing environmental problem in the area?
- Help meet air or water quality, energy or natural resource conservation, greenhouse gas reduction or similar goals?
- Plan for or contribute to the use of sustainable energy sources for transportation?

The proposed project will be built within the existing highway ROW. The improvements do not involve adding lanes and will not result in work causing any environmental disruption. The reduction in congestion will also reduce vehicular idling, better meeting some of the air quality measures, without increasing vehicular demand.

22. Land Use and Growth Management

Outcome sought: support existing land use plans and encourage development of compact communities and neighborhoods that integrate land uses to help make short trips, transit, walking and biking feasible.

For example, will the solution plan for or contribute to:

- Efficient development and use of land as designated by comprehensive or other land use plans?
- Community revitalization including downtowns, economic centers and main streets?
- Compact urban development and mixed land uses?

NA

23. Livability

Outcome sought: promote solutions that fit the community and physical setting, enable healthy communities and serve and respond to the scenic, aesthetic, historic, cultural and environmental resources.

For example, will the solution:

- Enhance or serve unique characteristics of the community?
- Use context sensitive principles in design and minimize impacts on the built and natural environment?
- Encourage a healthy lifestyle and enable active transportation by enhancing biking and walking networks and connections to community destinations or public transit stops or stations?
- Include elements that will make the facility or service more attractive, enjoyable, comfortable or convenient for potential users?

The proposed project will be built within the existing highway ROW. The project will increase the reliability of the system, and will provide choices for drivers to make informed decisions on choosing which route to go. Displaying these options improves the driving experience by reducing the stress and uncertainty at a congested and unreliable location.

24. Safety and Security

Outcome sought: Investment improves the safety and security of the transportation system and takes into account the needs of potential users.

For example, will the solution:

- Improve safety by using designs or techniques that exceed minimum requirements for safety and are likely to reduce the frequency or severity of crashes?
- Help reduce crashes involving vulnerable road users such as bicyclists and pedestrians?
- Improve the ability to respond to an emergency and quickly recover use of the facility or service?

The primary mission of ODOT is to improve safety on its transportation system for all users. The proposed improvement will reduce the frequency and severity of accidents along a corridor with many 5% SPIS locations, as well as stabilize traffic flow and travel time reliability.

The project will help inform drivers by providing information about travel along the corridor. This would result in safety improvements due to enhanced traffic operations and early warning of potential collisions ahead when an incident has occurred.

The reduction in collisions and increase in reliability will improve emergency vehicle response times along OR224/OR212 and the surrounding area. Congestion duration will be slightly reduced and the facility will be able to recover from incident more quickly than under the current condition.

These improvements will help in emergency situations by informing travelers what is happening and where to go. This route also provides for East-West travel in and around the Portland metro area, and connects the hinterland to the East to Clackamas County, Milwaukie and Portland.

25. Equity

Outcome sought: promote a transportation system with multiple travel choices for potential users and fairly share benefits and burdens among Oregonians.

For example, will the solution:

- Benefit a large segment of the community?
- Benefit one or more transportation disadvantaged populations?
- Improve environmental justice or economic equity of the community or region?

The OR224/OR212 corridor traverses diverse and some low income communities in Milwaukie and Clackamas County. People living along or travelling through the corridor will benefit from these investments. Many business owners, especially small business owners, along OR 224/OR224 rely on the corridor for workers and consumers to access the businesses. No impacts are expected to environmental justice populations, except the positive impacts of better information for travel along the corridor.

26. Funding and Finance

Outcome sought: investment uses funding structures that will support a viable transportation system and are fair and fiscally responsible.

For example, will the solution:

- Have ongoing funding available for operations and maintenance?
- Support the continued use of prior investments or reduce the need for future investments?

This project is an example of ODOT's focus on developing low cost solutions to improve safety for the travelling public. This ATM/ITS project addresses the issues on OR224/OR212 with the most cost effective way possible, and fits within projected revenue streams. Funds for ongoing operations and maintenance have been identified, and the infrastructure to fully utilize these tools already exists in our Region Operations Center. This will minimize the need to make significant investments on this corridor and optimize the system as is exists today.



Budget Information

27. Estimated Project Costs–REQUIRED

List estimated costs for the various activities listed below, as applicable to proposed project. Shaded fields are automatically calculated.

	Enter Values in this Column	Total Column
Project Administration		
Staff Costs (for Service/Educational Projects)		
Project development and PE		
Environmental Work	\$0	
Coordination and Outreach		
Leased Space		
Building purchase and/or Right of Way	\$0	
Capital Equipment		
Non-Construction Project Costs Total		\$0
Utility Relocation		
Construction	\$750,000	
Construction Project Costs Total		\$750,000
Total Eligible Project Cost		\$750,000
Non-Eligible Costs (other project non-transportation expenditures, e.g. un-reimbursable utilities)		

28. Project Participants and Contributions–REQUIRED

List expected project participants and their contributions in the table below. Begin with the amount contributed by the Sponsor and include contributions from Project Co-Sponsor and other participants, if applicable. Sponsor and participant contributions must add to at least 10.27% of Total Transportation Project Costs. This is the amount of matching funds typically required for most federal funding programs. The specific amount of matching funds required for the proposed project may be more or less than 10.27%, depending on its funding eligibility. Specific match requirements will be determined during application review.



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Participant Role	Participant Name	Project Funds Contribution	Percent of Transportation Project Total Cost
Sponsor	ODOT	\$77,025	10%
Co-Sponsor			0%
Participant			0%
Participant			0%
Total		\$77,025	10%

If you have more co-sponsors and participants than lines in the table above, list their names and contribution amounts in the box below and enter the totals of Co-Sponsor and Participant contributions in the appropriate spaces in the table above.



Submittal Approval

29. Project Sponsor Signature Authority Information–REQUIRED

The Authorizing Authority identified below approved the submittal of this application on behalf of the Project Sponsor. Project sponsors other than the Oregon Department of Transportation will be required to sign an Intergovernmental Agreement (IGA) with ODOT prior to receiving any project funds. The IGA with the state will detail the requirements for the use and management of requested funds.

Authorizing Authority Name:

Authorizing Authority Title:

Electronic submittal was approved by the identified authorizing individual. No signature needed if checked.

Signature: Date:

30. Co-Sponsor Signature Authority Information

The signature below demonstrates support of this application on behalf of the Co-Sponsor:

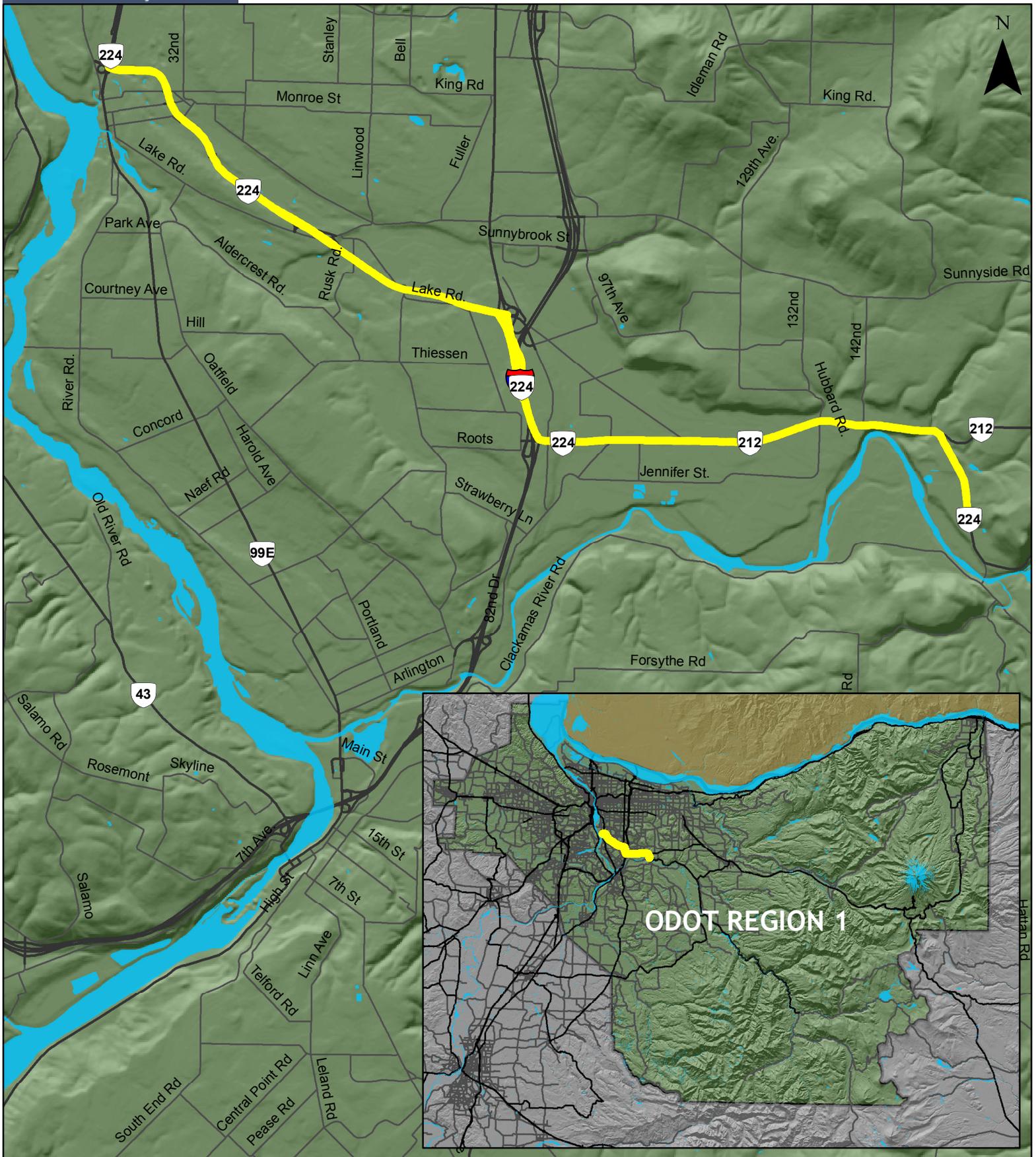
Authorizing Authority Name:

Authorizing Authority Title:

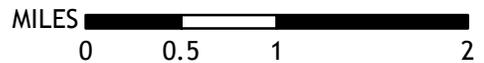
Signature: Date:

If you have more than one Co-Sponsor, list further Co-Sponsors' submittal authority names and titles in the box below and ask those named to provide their signatures and the date signed by their names.

Electronic submittal was approved by the identified authorizing individuals. No signatures needed if checked.



- OR-224/OR-212 CORRIDOR
- STATE HIGHWAYS
- REGION 1
- NON STATE CLASSIFIED ROADS

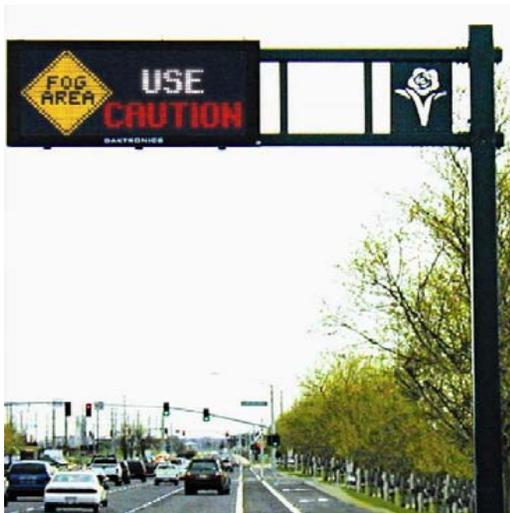


ATM/ITS Signs



Example Incident Messages

Source: Daktronics and Skyline Products



Example Arterial Street DMS

Source: Daktronics and Skyline Product



Examples Travel Time Messages

Source: Daktronics and Skyline Products



Example Travel Time Messages for Arterial Roads

Source: Daktronics