



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: US 26 ATMS/ITS

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

	Project Funds	% of Project Costs
Total Costs	\$3,600,000	
Non-Eligible Costs		
Total Transportation Project Cost	\$3,600,000	100%
Matching Funds	\$384,450	10.68%
Requested Funds	\$3,215,550	89.32%

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



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There are several SPIS sites in the top 5 percent category and congestion in the stretch of US 26 from OR 217 to the Vista Ridge tunnel. This project will also add a Variable Message Sign (VMS) in the Westbound direction to better manage Zoo related traffic. This project will install Variable Message Signs (VMS), Variable Advisory Speeds and other ITS infrastructure to better manage traffic on US 26, including a VMS in the Westbound direction to better manage Zoo related traffic

The primary goals are to reduce crash rates and improve mobility for all users without adding additional travel lanes. The ATM/ITS system will provide for smoother and safer traffic flows through the use of real time traffic information and active transportation management.

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 transportation safety issues with several SPIS sites in the top 5 percent category. There are also many traffic incidents that have negative impacts on both safety and traffic mobility. The traffic demands in this corridor are higher during peak periods than the highway infrastructure is capable of efficiently/safely accommodating. The high 2010 ADT traffic volume range from 130,000 to 150,000 vpd illustrates the high travel demand in the corridor.

The primary goals are to reduce crash rates and improve mobility for all users without adding additional travel lanes. The ATM system will achieve positive outcomes by providing for smoother and safer traffic flows via the use of real time traffic information, communications with drivers and active transportation management.

9. Transportation Project Location–REQUIRED

City: <input type="text" value="Portland"/>	County: <input type="text" value="Multnomah and Washington Counties"/>
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)

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 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 type="radio"/> Not Applicable	Site map (showing proposed construction area clearly marked) (8.5x11)
<input type="radio"/> Attached/Upload <input 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)

US 26 east bound is constrained in this location because of the capacity limitation of the Vista Ridge tunnel. In the US 26 westbound direction, back-ups from events at the Oregon Zoo and Washington Park overflow the parking areas and spill back onto the freeway, resulting in collisions. To fully address the collisions and congestion the tunnel would need to be widened and the connections would need to be rebuilt. This solution would be extremely expensive and is well beyond the projected available funds. The proposed ITS project presents a much less costly improvement.

The Westbound dynamic signage would also provide motorists on Highway 26 with real-time information contributing to a seamless multimodal transportation system for Washington Park



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visitors. When the main lots at the south entrance of Washington Park are full, visitors would be diverted to the remote parking areas at the Sylvan Exit where a multimodal transportation would move them between the Washington Park venues. When the main lots are not at capacity, the sign would be part of ODOT's traffic management system able to warn motorists of upcoming congestion, stopped vehicles, or adverse road conditions.

From a Practical Design perspective, the proposed project meets the S.C.O.P.E. values in the following ways:

Safety- Although the proposed variable message or variable speed signs do not eliminate the congestion, it will provide for better travel time reliability and fewer accidents.

Corridor Context- The proposed project grew out of a corridor analysis to identify congestion bottlenecks and their causes, and develop reasonable solutions to address them. This ATM/ITS corridor improvement also matches what is being done on OR 217 with variable message signs, is provides a more consistent corridor treatment for these connections.

Optimize the System- the proposed project optimizes the system by reducing collisions and improving flow stability with minor investments. These minor investments extend the functional lifespan of this highway.

Public Support- The reduction in congestion and increase in safety will benefit all users. VMS and ATM solutions have seen very positive public response when implemented, for example the VMS applications in Seattle have been well used and effective.

Efficient Cost- As compared to the more expensive options, the proposed project provides good benefit at reducing collisions and unreliability reasonable cost.

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). The project is consistent with the following policies and action strategies:

OTP Goal 1 – Mobility and Accessibility (page 45). The project addresses the ODOT Major Improvements Policies including OTP Strategy 1.1.4. in managing the existing freeway system to improve its efficiency and operational capacity by making minor improvements to the system. In this case, adding dynamic variable message signs maximizes the use of and protects the existing capacity on this segment of US 26.

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 2: System Management, Policy 2E: Intelligent Transportation System (pg. 110) seek to develop and implement ITS strategies to improve the highway systems.

Policy 2F: Traffic Safety, Action 2F.1 (pg 113), identify and develop cost-efficient solutions to high priority safety problems on the Metro-area freeways.

This plan is also consistent with the Region 1 ITS Plan, which identified these improvements at this location.

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 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, such as those found near the I-405/US 26 tunnel.

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 will reduce accidents, and provide for more reliable flow for the stretch of US 26 EB between OR 217 and the tunnel. This corridor segment is characterized by unreliable flows, high accidents rates, and heavy congestion for long periods of the day. The ATM/ITS tools proposed at this location will optimize the system with low cost, very minor impacts, and good cost effectiveness. These improvements will result in a more stable flow, reduce the frequency and severity of accidents near the tunnel, and minimize the need for more expensive solutions in the corridor.

Electronic signage on Highway 26 will more efficiently direct visitors to the remote lots, while establishing shuttle shelters will improve the visibility and appeal of the shuttle system to patrons, increasing its usage as an alternative to using personal automobiles to move throughout the park. This will reduce the impacts of major traffic events by better utilizing shuttles at less congested locations, thus minimizing the back-ups onto US 26.

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?

US 26 is identified as part of the National Truck Network which designates highways for use by large trucks. In the Portland-Vancouver area, US 26 is a critical component of this national network as it provides a regional connection from the many businesses and industrial users on the West side to the PDX air cargo services; marine terminals on the Columbia River; as well as many of the area's freight consolidation facilities and distribution terminals. There are no suitable alternatives to East-west travel, making this connection a very critical link in the Regional and Statewide transportation system.

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% 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 project will improve the traffic operations and safety of freight-reliant users. Currently, the US 26 eastbound traffic slows due to the congestion at the tunnel near the confluence of I-405 and US 26. The project will improve the travel time reliability at the tunnel and will reduce the accidents related to the instability and congestion near the tunnel. This will help the freight industry maintain a more reliable travel time for US 26 EB between OR217 and I-405.

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?

US 26 is identified as part of the National Truck Network which designates highways for use by large trucks. In the Portland-Vancouver area, US 26 is a critical component of this national network as it provides a regional connection from the many businesses and industrial users on the West side to the PDX air cargo services; marine terminals on the Columbia River; as well as many of the area's freight consolidation facilities and distribution terminals along the Columbia Corridor. There are no suitable alternatives to East-West travel, making this connection a very critical link in the Regional and Statewide transportation system.

This project will help improve access to the regional freeway network and the Central Business District of Portland from the Western Metro Region. This US 26 segment also provides access to key regional destinations such as the Portland Zoo, Washington Park, Sunset Transit Center.

This project will improve the access for goods and services to and from employment centers located along the US 26 and OR 217 corridors and provide a more reliable connection to I-5, I-405, US 30 and other key regional facilities. This will reduce one of the bottlenecks identified in the Corridors Bottleneck Operations Study (CBOS) which seeks to address FHWA Localized Bottleneck Reduction (LBR) Program objectives. CBOS is an innovative approach to develop freeway operational and safety improvements. This solution would address a major bottleneck without a major recons

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?

In the Portland-Vancouver area, US 26 is a critical west-east connection of the national network as it provides access to PDX air cargo services, marine terminal transfer facilities on the Columbia River; as well as many of the area's freight consolidation facilities and distribution terminals and connections to heavy rail. It is extremely important to retain reliable travel times through the Portland Central City as all traffic from the Westside, such as Intel, Nike, Solar World and Genetech must travel through this connection to reach their international destinations.

This project will help to contribute the overall expansion and broadening of the Oregon and Portland economies by efficiently enhancing the existing freeway system at very low cost.

This project contributes to the overall improvement of the transportation system, and helps in enhancing the region's economic vitality. People will have better travel time and reliability to get to work and freight can move more easily within the region with this improvement. Workers and freight users will have more information to make better choices before and during their trips.

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 freeway ROW. The improvements do not involve adding lanes and will result in little 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.

Electronic signage on Highway 26 will more efficiently direct visitors to the remote parking areas, while establishing shuttle shelters will improve the visibility and appeal of the shuttle system to patrons, increasing its usage as an alternative to using personal automobiles to move throughout the park.

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 freeway ROW. The project will increase the reliability of the system, and will provide choices for drivers to make informed decisions as related to choosing which route to go. Displaying these options improves the driving experience by reducing the stress and uncertainty at a congested and unreliable location.

This improvement will provide for improved access to transit and park-and-ride facilities served by Tri-Met at the Sunset Transit Center and shuttle services offered by the Oregon Zoo. This will also provide for safer access to Washington Park.

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 at a critical bottleneck, as well as stabilize traffic flow and travel time reliability. The tunnel area has a crash rate much higher than the Statewide average.

The project will help warn drivers by providing advisory speed limits to reduce the likelihood of accidents. This would result in safety improvements due to enhanced traffic operations and better driver behavior when an incident has occurred. National studies have shown that where travel time information is provided, freeway daily traffic can decrease by 20%, with delay time improving by as much as 50% during heavily congested periods. Other studies have shown that up to 85% of drivers will change routes when en route delay information is available.

The installation of a advisory speed limit on US 26 is recommended to reduce rear-end collisions by lowering travel speeds during congested periods. In regions where variable speed systems have been implemented, rear-end collisions have decreased by 30%, with overall crashes decreasing by 20%. The reduction in congestion and turbulence will improve emergency vehicle response times along US 26 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.

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 Oregon Zoo and other WPA venues draw visitors from all over the region, state and beyond. For all Oregon and out-of-state families with children, these institutions are a top draw. The high carpool rate reflects this group patronage, but also signals difficulties for those families without convenient access to the transit options. For these families, providing an efficient, safe system for getting visitors from Highway 26 to available parking is critical to maintaining access for all to these world-class venues.

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 strategy of developing low cost solutions for the worst bottlenecks in the Portland Metro Region. The US 26/I-405 connection was identified as a major bottleneck with a high frequency of crashes. This ATM/ITS project address these issue with the most cost effective way possible, and fit within projected revenue streams. Funds for ongoing operations and maintenance have been identified, and the infrastructure to fully utilize these tools already exists. This will minimize the need to make significant investments at this location 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	\$3,600,000	
Construction Project Costs Total		\$3,600,000
Total Eligible Project Cost		\$3,600,000
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	\$359,450	10%
Co-Sponsor			0%
Participant	Metro	\$15,000	0%
Participant	Portland Parks and Recreation	\$10,000	0%
Total		\$384,450	11%

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:

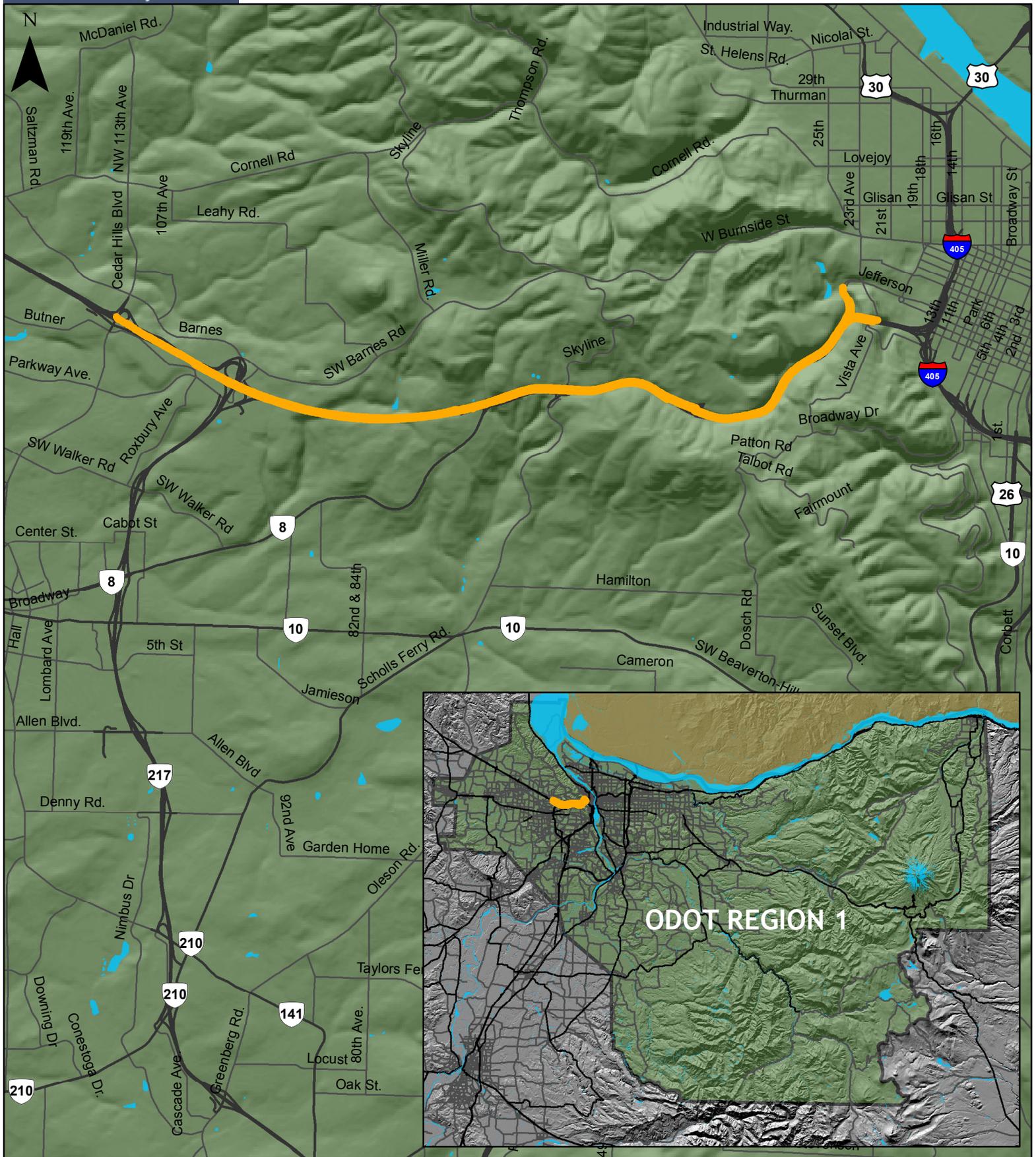
Authorizing Authority Name:

Authorizing Authority Title:

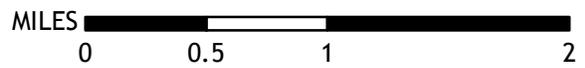
Signature: Date:

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.



- US-26
- 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