PSRC's 2014 Regional FHWA Application

Important: Please review the following information before beginning the application.

Definition of a project: For the purposes of this competition, a project must be clearly defined by geographic limits and/or functionality. If a project contains multiple components, the sponsor must clearly indicate how they are logically connected to one another. A project with multiple geographic locations must demonstrate their functional relationship (for example, signal coordination work in various locations tied together through a traffic control center).

Projects that include multiple components or sponsors are allowed to be submitted, but the scope of work, funding amounts and schedules for each individual agency and/or component must be clearly identified at the time of application. If awarded PSRC funds, these projects may be separated into their individual components or lead agency in the regional Transportation Improvement Program. Each individual TIP project will be subject to PSRC's project tracking policies and will be administered according to the scope of work and funding awarded for each. If you have questions please contact Kelly McGourty at (206) 971-3601 or kmcgourty@psrc.org.

Resources: A resource document has been developed to assist sponsors in completing PSRC's online applications for the 2014 project selection process. The document summarizes information needed by sponsors to complete applications, as well as provides useful information on various topic areas such as financial constraint and project tracking requirements.

Submitting Applications: The importance of complete and accurate information on every application cannot be overemphasized. The evaluation and scoring of all submitted projects will be based on the answers provided in this application.

There is no set page limit for applications submitted to the regional competition. It is important to provide complete, detailed responses, but please be as concise as possible. Additional supporting information such as maps and other diagrams are encouraged, but other attachments such as comprehensive plan materials are unnecessary.

All applications must be submitted by 5:00p.m. April 8, 2014.

Project Information

Project Title

Center City Gateway ITS

Transportation 2040 ID#

N/A

The current list of investments that are required to be on the Transportation 2040 Regional Capacity Project List and have a designated ID # can be accessed at Appendix N of the 2014 Transportation 2040 Update, here. If your project is exempt from this requirement, please enter "N/A." Helpful information on those exempt investments that are considered programmatic in nature or are on local facilities and therefore not required to be on the Project

List can be found here.

For assistance or questions regarding these issues, contact Kimberly Scrivner at 206-971-3281 or kscrivner@psrc.org.

Sponsoring Agency

City of Seattle

Co-Sponsoring Agency

Port of Seattle

CA Status

- (●) Yes
- ( ) No

CA Sponsor (if applicable)

Contact Information

Project Contact Name

Jim Storment

Project Contact Phone

206-684-5013

Project Contact Email

jim.storment@seattle.gov

Project Description

Project Scope

The Center City Gateway Intelligent Transportation Systems (ITS) project will design and build traffic management systems to reduce congestion and delay on two corridors near Seattle's downtown core. On Denny Way, the improvements include upgraded signals, vehicle detection, traffic cameras, dynamic message signs, and fiber communication. On 1st Avenue South, the project includes upgraded signals (including traffic responsive operations), vehicle detection, fiber communication, and traffic cameras.

Additional citywide ITS improvements are included in the project scope, designed to maximize the effectiveness of these site-specific investments and also to improve traffic operations throughout the city. These citywide improvements are as follows:

1.Traveler Information Map (TIM) Enhancements – Provide more robust real-time information to roadway users, and improve the user interface by incorporating information from e-Park, dynamic message signs, enhanced travel time data, transit, etc.

2.Access Seattle Mobile Application – Create a mobile phone/tablet application called Access Seattle that will consolidate comprehensive traveler information into one place for pedestrian, bike, transit, motor vehicle operators, and freight operators.

3.Traffic Management Center (TMC) System Upgrades and Modernization – Expand and upgrade the City's current ITS management system to operate existing and new ITS devices installed through this project and other current ITS projects. Also replace obsolete TMC components and upgrade the TMC to maximize efficiency and incorporate current best practices.

Project Purpose

The project has been developed to advance five primary objectives:

1. Support movement for all travel modes to and through the region's economic heart
2. Maintain freight and visitor access – two of the region's most important industry clusters
3. Support efficient transit movement
4. Enhance access to special events – stadiums and event centers (near 1st Avenue) and Seattle Center and cruise ports (near Denny Way)
5. Create a citywide network that optimizes access and mode choice

Seattle, particularly in its Regional Growth Centers, is experiencing unprecedented pressure on its constrained transportation system from a variety of sources. Primary factors are increasing population density, the increasing appeal of urban neighborhoods, and multiple large-scale construction projects within the central business district (CBD). The City has identified the need to develop strategies to mitigate the cumulative impacts to the transportation system as a result of major construction projects and continued growth.

Along the waterfront, these projects include the Alaskan Way Viaduct replacement, Elliott Bay Seawall replacement, and a major reconstruction of the waterfront streets and their connections to downtown. Near 1st Avenue, a proposed 18,000-seat sports arena is expected to require extensive mitigation work on nearby roads, including those serving the Port of Seattle seaport and two existing stadiums. Near Denny Way, the reconstruction of Mercer Street is the largest construction project that this neighborhood has seen for many decades. These projects alone represent a total transportation investment of over $4 billion. The projects are a renaissance of sorts for Seattle, representing the largest spike in public transportation investment that the city has ever seen.

However, with this unique opportunity comes a unique challenge. Construction projects typically result in added road closures, traffic detours, and restricted access. In addition to mobility and air quality impacts, the actual and perceived impediments to accessing downtown can have a negative impact on businesses, tourism, and freight movement, damaging the economic vitality of the city and the region. Real solutions are hard to find: Seattle's urban core already experiences very high traffic volumes and heavy traffic congestion, and roadway expansion projects are rarely an option due to the intense land uses adjacent to all major roadways. Strategic Transportation System Management (TSM) projects, synchronized with the city's major construction activities, offer an effective way to mitigate construction impacts now and also make sure the transportation system functions efficiently for years to come.

The City of Seattle has already begun investing heavily in the ITS systems that will keep its streets functioning during this period of intense construction activity (approximately 2014 to 2018). In 2013 and 2014, the City is spending over $3 million on ITS projects. However, this work to date has been strongly focused within the Central Business District. In the Center City Gateway project, the City will address two of the primary access-ways to reach the CBD and the new Alaskan Way tunnel (Denny Way at the north portal and 1st Avenue South at the south portal).

These corridors, and the supporting system-wide improvements, are primarily focused on allowing freight to circumvent the downtown core, avoiding the city's most heavily congested corridors and keeping traffic flowing in the region's largest regional center. They are also major transit corridors with a high number of bus passengers that rely on efficient movement of traffic to meet their daily needs. This load-balancing and efficiency, while focused on freight movement, will improve safety and mobility for all travel modes in this area. Both of the roadways are strategic corridors for freight movement and economic vitality.

Project Location

Various

Please identify the county(s) the project is located in. Check all that apply.

- [x] King County
- [ ] Kitsap County
- [ ] Pierce County
- [ ] Snohomish County

Please identify the crossroad, milepost or landmark nearest the beginning and end of the project below, if applicable. Crossroad/landmark nearest to the beginning of the project:

NA

Crossroad/landmark nearest to the end of the project:

NA

Please identify the center(s)

Seattle CBD, Uptown, South Lake Union, First Hill/Capitol Hill, Ballard-Interbay, and Duwamish

Federal Functional Classification

Roadways must be approved on the federally classified roadway system before projects on it may use federal transportation funds (this includes proposed new facilities), unless the project meets certain exceptions. Resources to identify a facility's functional classification or exceptions to this requirement may be found here.

Federal Functional Class

Urban Functional Classification Population over 5,000

You have selected Rural. If this is not the appropriate classification, please go back and change your selection.

Please select the appropriate rural classification.

You have selected Urban. If this is not the appropriate classification, please go back and change your selection.

Please select the appropriate urban classification.

14 Principal Arterial

Plan Consistency

All projects must be consistent with a comprehensive plan that has been certified by PSRC as being consistent with the Growth Management Act, VISION 2040 and Transportation 2040. Projects must be consistent with the comprehensive plan of each jurisdiction in which the project is located. If a comprehensive plan has not been certified, projects located in that jurisdiction may not be included in the Regional TIP.

Is the project specifically identified in a local comprehensive plan?

- ○ Yes
- ◉ No

Is the project specifically identified in a local comprehensive plan?

If no, describe how the project is consistent with the applicable local comprehensive plan, including specific local policies and provisions the project supports.

Seattle's Comprehensive Plan identifies the efficient movement of freight as a priority for meeting the City's transportation and economic development goals. Specific references include the following:

Section D: Promoting the Economy: Moving Goods and Services: "The transport of goods and services is critical to Seattle's and the region's economic development. As a major port city, Seattle's businesses and indus¬tries rely on rail, water, and truck transport. These policies, and those in the Economic Development and the Neighborhood Planning elements, support existing businesses and industries, and promote Se¬attle as a place for economic expansion."

Transportation Goal 19: "Preserve and improve mobility and access for the transport of goods and services."

Transportation Goal 20: "Maintain Seattle as the hub for regional goods movement and as a gateway to national and international suppliers and markets."

Category Specific Questions

Select the project category

Corridor Serving Centers

Designated Regional Growth Center

In the sections below,please provide complete but concise responses, addressing as many bullet points as possible. The evaluation and scoring of all submitted projects will be based on the answers provided by the sponsor. Refer to the 2014 Regional Project Evaluation Criteria for PSRC's FHWA Funds in PSRC's Call for Projects for guidance, examples, and details on scoring for additional information.

A1. Regional Growth Center Development

A2. Project's Benefit to the Regional Growth Center

Manufacturing/Industrial Center

B1. Development and Users Benefit

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Corridor Serving Center(s)

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C1. Benefit to Regional Growth or Manufacturing/Industrial Center

The project sites are within or adjacent to several Regional Growth Centers (RGCs), Manufacturing/Industrial Centers (MICs), and regional transportation facilities. These RGCs include the Seattle CBD, Uptown, South Lake Union, and First Hill/Capitol Hill. MICs include Ballard-Interbay and Duwamish. Denny Way is located primarily within the Seattle CBD Urban Growth Center, and 1st Avenue South is located within the Duwamish Manufacturing/Industrial Center.

Both corridors are principal arterials, and as such they convey large numbers of freight trucks, buses, and general purpose traffic within and between each of these designated urban centers. Daily traffic volumes are around 35,000 on Denny Way, and 18,000 on 1st Avenue South.

Many of the area's largest employers rely on 1st and Denny as primary accesses to their businesses. Truckers serving the Port of Seattle's seaport depend on the streets in the Duwamish to move international cargo between the container terminals, the BNSF and Union Pacific rail yards and support and transload facilities in the Duwamish, and to access the regional highways (I-5, I-90, SR 509/SR 599). About 135,100 direct and related jobs in Washington State are created by international and Alaskan containerized cargo handled at marine terminals. The Port's Century Agenda calls for growth in Port operations and specifically container volumes in the Duwamish. This will require maximizing the efficiency of all of the road network in the harbor, to which the improvements on 1st Avenue, and especially its intersection with South Atlantic Street, will contribute.

Denny Way serves the rapidly expanding South Lake Union area, home to Amazon.com, the Bill and Melinda Gates Foundation, and numerous other major employers. Due to recent development by Paul Allen's Vulcan Inc., as well as other prominent developers, South Lake Union is becoming a hub for Life Sciences and Global Health organizations. These include Fred Hutchinson Cancer Research Center, Zymogenetics, Battelle, Seattle Biomedical Research Institute, Seattle Children's Hospital, PATH, Rosetta, Bio-Rad, and University of Washington Medicine. The Duwamish Manufacturing/Industrial Center is anchored by Boeing and Starbucks; 85% of the businesses in this center are industrial, and dependent on freight flow for their livelihood.

While the selected corridors and the other elements of this project are heavily freight-focused, benefits extend to all travel modes. Denny Way is one of the region's busiest transit corridors, with 600 to 700 buses each day. This frequent transit service, as well as the corridor's proximity to Seattle Center and many other large employers, create high pedestrian and cyclist volumes. Each of these audiences depend on a Denny Way corridor that is functioning as smoothly and efficiently as possible.

1st Avenue carries approximately 80 buses on a typical day, but as a designated alternate route for SR 99 on snow days, it can carry hundreds of additional buses during the region's worst days of traffic congestion. Not only are these days of peak demand each year, but they are days when many

As a TSM project, Center City Gateway ITS is entirely focused on smart use of existing resources. With virtually no opportunity for road expansion or new capacity in Seattle's urban centers, the City's long-term strategy must rely almost exclusively on increased efficiencies and promoting positive mode shift within the existing transportation network. The City's long-term plans for mobility and job creation have entirely embraced this principle. The City focuses its short-term and long-term efforts on system management – especially projects that move freight, transit, and non-motorized modes more efficiently. Seattle's Transportation Strategic Plan, as well as the City's ITS plan (called NextGen ITS), explicitly address the necessity of optimizing the existing infrastructure in the city's built-out, urban environment.

1st and Denny provide direct links to some of the city's most significant businesses, and other important land uses. These include Seattle Center, the Port of Seattle seaport, Amazon.com, Group Health, the city's sports stadiums, and numerous other major employers in the Duwamish and South Lake Union neighborhoods. In addition, these corridors offer access to the north and south portals of the SR 99 tunnel – one of the most region's most significant facilities for long-range trips, including long-haul freight. Finally, these corridors complete a grid that allows active load-balancing and real-time traffic management between SR 99, I-5, and other major surface streets in the urban centers (Mercer Street, 4th Avenue South, Spokane Street, East Marginal Way, etc.).

TSM relieves pressure on the overall system by operating key corridors at maximum capacity. Traffic-management tools such as signal synchronization, signal optimization, and signal priority for transit all serve to maximize the throughput of people and goods on a specific roadway. However, the benefits are not limited to specific corridors; they are network-wide. New data-collection and data-processing capacity leads to proactive, real-time traffic management that improves flow on all nearby roadways.

As performance begins to break down on one corridor, or at one intersection, corridors and intersections throughout the network can adjust to release the bottleneck. This adjustment can take place through pre-set algorithms, automatically adjusting signal timing on nearby facilities when traffic volumes or flow rates reach certain levels. It may happen through real-time informational signage on nearby facilities that would direct traffic to less-congested corridors. Likewise, with current technology, it may also help drivers before they begin their trip: selecting an appropriate travel time or travel mode based on existing conditions. Finally, benefits may accrue from truly active traffic management – intervention in pre-set algorithms, performed by live staff in Seattle's TOC. Each of these traffic management tools are enabled by new data, as well as new data–processing capacity, from the Center City Gateway ITS project. I-5 at Seattle's Convention Center (near Denny Way) and I-5 at I-90 (near 1st Avenue) are some the region's worst bottlenecks. The I-5/I-90 interchange is listed as one of the worst bottlenecks in the country for freight, based on FHWA's report on truck delay.

Non-motorized transportation, and other "alternative" transportation modes such as public transit, are likewise aided by the implementation of the Center City Gateway ITS project. While freight mobility is the primary focus of this project, and improved general-purpose traffic flow is clearly a secondary benefit, the informational tools that will be enabled by this project will lead to a mode shift toward more active transportation.

As real-time information becomes more widely used, showing traffic congestion and travel conditions for all modes, the opportunity also becomes readily available to showcase active transportation modes. Travelers will see, side-by-side, the relative advantages and disadvantages of clogged single-occupant roadway lanes compared with transit lanes, trails, and bike lanes. Opportunities also become available to actively promote these modes: for example, showing the availability of transit services, bike share

Please describe how your project will reduce emissions. Include a discussion of the population served by the project (who will benefit, where, and over what time period). Specific questions have been prepared to assist you in responding to this criterion depending on the type of project.

Please select all of the elements in the list below that are included in the project's scope of work, and provide the requested information in the text box below.

- ☐ Diesel Particulate Emissions Reduction Projects (e.g. diesel engine retrofits)
- ☐ Roadway Capacity (general purpose and high occupancy lanes)
- ☐ Transit
- ☐ Bicycle/Pedestrian Facilities
- ☑ Intelligent Transportation Systems (signalization, etec.)
- ☐ Alternative Fuels or Vehicle Technology
- ☐ Other

The implementation of traffic management systems on Denny Way and 1st Avenue South is expected to produce a 7 to 13 percent reduction in overall travel time, a 15 to 37 percent reduction in delay, and a 6 to 9 percent fuel savings, according to modeling work performed for these two corridors. Both corridors are primary freight routes and transit routes. Denny Way carries 35,000 trips per day, as well as King County Metro routes 2, 8, 13, 19, 24, 29, and 33. 1st Avenue South carries 24,000 trips per day (30% large vehicles), as well as routes 21 and 37. The improvements are expected to bring a variety of operational benefits: improvements for freight flow and general purpose traffic flow, transit speed and reliability, quicker response times for emergency vehicles, and higher mode split for non-motorized modes. Each of these benefits is discussed in detail in relevant sections of this application.

Financial Plan & Project Readiness

In this section, sponsors will address questions regarding the PSRC funding request, the total estimated project cost and schedule, and the project's readiness to obligate PSRC funds. Sponsors should be aware of the following information before completing this section:

Funding Request: Sponsors may request funding for any single project phase, but requests for multiple phases are limited to preliminary engineering plus the subsequent phase necessary. I.e, a sponsor may request funding for both preliminary engineering and right of way phases or preliminary engineering and construction phases, but not both right of way and construction phases.

Funding Requirements: A minimum of 13.5% of local matching funds is required for both Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ) funding. The combination of the requested PSRC funds plus all other funding must be adequate to fully fund that phase. Requests that do not result in a phase being fully funded will be considered ineligible for PSRC funding.

Obligation Requirements: Per PSRC's project tracking policies, all project phases awarded PSRC funds must obligate by June 1st of the program year selected. For more information, see PSRC's project tracking policies here.

PSRC Funding Request

Please identify the phase(s) for which PSRC funds are being requested, the funding source,the amount, and expected year of obligation. Confirm the total by pressing the calculate button.

Funding Source

- (●) STP
- ( ) CMAQ

Phase

Preliminary EngineeringDesign

Obligation Year

2015

Amount Requested

1310000

Phase

Construction

Obligation Year

2016

Amount Requested

5260000

Total PSRC Funding Request

6570000

Total Estimated Project Cost and Schedule

In the table below, please provide the total estimated cost and schedule for all phases of the project, from start to finish, and indicate when each phase was, or is planned to be, completed. If a phase is not required for the project, indicate with N/A.

Please include all funding amounts and sources (including the requested PSRC funds) and identify whether they are secure, reasonably expected, or unsecure. PSRC's definitions and guidance for determining secure and reasonably expected funds may be found here.

NOTE: If you find that you need more rows than provided in the tables below, please fill out the supplemental project cost spreadsheet available here and upload in the area below.

Upload (only if necessary)

Planning Phase

Please note, the planning phase of a capital project is considered to be part of the preliminary engineering phase. Complete this section only if this project is an independent planning study.

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Total Planning Phase Cost

0

Actual or estimated completion date

Preliminary Engineering/Design Phase

Funding Source

Federal

Funding Status

Unsecured

Funding Amount

1310000

Funding Source

Local

Funding Status

Secured

Funding Amount

210000

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Total Preliminary Engineering/Design Cost

1520000

Actual or estimated completion date

December 2015

Right of Way Phase

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Total Right of Way Phase Cost

0

Actual or estimated completion date

Construction Phase

Funding Source

Federal

Funding Status

Unsecured

Funding Amount

5260000

Funding Source

Local

Funding Status

Secured

Funding Amount

830000

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Total Construction Phase Cost

6090000

Actual or estimated completion date

December 2016

Other Phase

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Funding Source

Funding Status

Funding Amount

Total Other Phase Cost

0

Actual or estimated completion date

Project Summary

The calculated total project cost below is based on the entries completed above. Please review for accuracy before proceeding to ensure all funding is reflected.

Total Estimated Project Cost

7610000

Estimated Project Completion Date

December 2016

Financial Documentation

Please provide supporting documentation using the upload function below to demonstrate that all additional funds for the phase(s) for which PSRC funds are being requested are secure or reasonably expected.

Upload

http://fs19.formsite.com/psrc/files/f-0-475-7868550_dbYRlxZP_Doc3.docx

Upload

Upload

Please describe the secure or reasonably expected funds identified in the supporting documentation. For funds that are reasonably expected, an explanation of procedural steps with milestone dates for completion which will be taken to secure the funds for the project or program should also be included. For more information, refer to PSRC's financial constraint guidance.

Project Readiness

PSRC recognizes that the complexity of some projects can trigger a variety of prerequisites that must be satisfied before federal funding is typically eligible to be obligated. The questions in this section are designed to identify those requirements and assist sponsors to:

- Identify which obligation prerequisites and milestones apply to their specific project.
- Identify which of these have already been satisfied at time of application.
- Provide an explanation and realistic completion date for all obligation prerequisites and milestones not yet completed.

In the following section, sponsors will be asked a series of questions about the project. Based on these responses, sponsors will be directed to the appropriate set of subsequent questions addressing the project's readiness.

NOTE: Sponsors applying for funds for only planning studies or preliminary engineering/design phases are not required to provide further information for project readiness and will be directed to the next required set of questions.

Are you requesting funds for ONLY a planning study or preliminary engineering?

- ○ Yes
- ◉ No

Is preliminary engineering for the project complete?

- ○ Yes
- ◉ No

What was the date of completion (month and year)?

Have preliminary plans been submitted to WSDOT for approval?

- ○ Yes
- ◉ No

When are preliminary plans expected to be complete and approved by WSDOT (month and year)?

September 2015

Are there any other PE/Design milestones not listed above?

Project Readiness

What is the current level of NEPA documentation?

- ○ Environmental Impact Statement (EIS)
- ○ Environmental Assessment (EA)
- ○ Documented Categorical Exclusion (DCE)
- ◉ Categorical Exclusion (CE)

Has the NEPA documentation been approved?

- ○ Yes
- ◉ No

Please provide the date of NEPA approval, or the anticipated date of completion (month and year).

September 2015

Project Readiness

Will right of way be required for the project?

- ○ Yes
- ◉ No

How many parcels do you need?

What is the zoning in the project area?

Discuss the extent to which your schedule reflects the possibility of condemnation and the actions needed to pursue this.

Does your agency have experience in conducting right of way acquisitions of similar size and complexity?

- ○ Yes
- ○ No

If not, when do you expect a consultant to be selected, under contract, and ready to start (month and year)?

In the box below, please identify all relevant right of way milestones, including the current status and estimated completion date of each. For example, these might include:• True cost estimate of right of way• Right of way plans (stamped)• Relocation plan• Right of way certification• Right of way acquisition• Certification audit by WSDOT • Relocation certification

Project Readiness

Are funds being requested for construction?

- (●) Yes
- ( ) No

Do you have an engineer's estimate?

- ( ) Yes
- (●) No

Identify the environmental permits needed for the project and when they are scheduled to be acquired.

A NEPA Categorical Exclusion would be obtained for this project, if required as a condition for accepting federal funds.

Are Plans, Specifications & Estimates (PS&E) approved?

- ( ) Yes
- (●) No

Please provide the date of approval, or the date when PS&E is scheduled to be submitted for approval (month and year).

September 2015

When is the project scheduled to go to ad (month and year)?

January 2016

Other Considerations

Please describe any additional aspects of your project not previously addressed in the application that could be relevant to the final project recommendation and decision-making process. In addition, please describe any innovative components included in your project: these could include design elements, cost saving measures, or other innovations.

File Submission

Please provide any additional supporting documents, including maps, through the upload functions below.

Upload

Upload

Final Review

Please review all application form questions to ensure you have completed all fields. An email containing a PDF version of the project application will be sent to the project contact upon submission.

NOTE: Sponsors may update and resubmit information included in the application until the April 8th deadline. After the deadline has passed, the form site will close and sponsors will not have access for revisions.

Last Update

2014-03-19 12:02:44

Start Time

N/A with Save & Return

Finish Time

N/A with Save & Return

IP

156.74.250.11

Browser

IE 9

OS

Windows

Referrer

http://fs19.formsite.com/res/formLoginReturn

Project Scope

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It is anticipated that 1st Avenue will be most severely impacted by major construction consistently throughout the next five years. This corridor has close proximity to SR 99 and the Seattle waterfront, so it will be one of the corridors that many roadway users will consider as an alternative for north-south connectivity. It is highly congested at present, even without additional traffic from SR 99 and Alaskan Way, and it will require investment just to maintain existing conditions. Because Denny Way is the primary east-west arterial on the north side of the CBD, it serves dual purposes as a distributor to the various routes to and

from downtown, and as an access to I-5 and the Capitol Hill Regional Growth Center.

Benefit to Regional Growth Center or Manufacturing/Industrial Center

- SUPPORT FOR HOUSING AND EMPLOYMENT DEVELOPMENT IN CENTERS
- RANGE OF TRAVEL MODES
- RANGE OF USER GROUPS
- SUPPORT FOR JOBS AND BUSINESSES, AND INDUSTRY CLUSTERS WITHIN THE REGIONAL ECONOMIC STRATEGY

Comment [s1]: These are the scoring criteria for this section.

The project sites are within or adjacent to several Regional Growth Centers (RGCs), Manufacturing/Industrial Centers (MICs), and regional transportation facilities. These RGCs include the Seattle CBD, Uptown, South Lake Union, and First Hill/Capitol Hill. MICs include Ballard-Interbay and Duwamish. Denny Way is located primarily within the Seattle CBD Urban Growth Center, and 1st Avenue South is located within the Duwamish Manufacturing/Industrial Center.

Both corridors are principal arterials, and as such they convey large numbers of freight trucks, buses, and general purpose traffic within and between each of these designated urban centers. Daily traffic volumes are around 35,000 on Denny Way, and 18,000 on 1st Avenue South.

Many of the area's largest employers rely on 1st and Denny as primary accesses to their businesses. Truckers serving the Port of Seattle's seaport depend on the streets in the Duwamish to move international cargo between the container terminals, the BNSF and Union Pacific rail yards and support and transload facilities in the Duwamish, and to access the regional highways (I-5, I-90, SR 509/SR 599). About 135,100 direct and related jobs in Washington State are created by international and Alaskan containerized cargo handled at marine terminals. The Port's Century Agenda calls for growth in Port operations and specifically container volumes in the Duwamish. This will require maximizing the

efficiency of all of the road network in the harbor, to which the improvements on 1st Avenue, and especially its intersection with South Atlantic Street, will contribute.

Denny Way serves the rapidly expanding South Lake Union area, home to Amazon.com, the Bill and Melinda Gates Foundation, and numerous other major employers. Due to recent development by Paul Allen's Vulcan Inc., as well as other prominent developers, South Lake Union is becoming a hub for Life Sciences and Global Health organizations. These include Fred Hutchinson Cancer Research Center, Zymogenetics, Battelle, Seattle Biomedical Research Institute, Seattle Children's Hospital, PATH, Rosetta, Bio-Rad, and University of Washington Medicine. The Duwamish Manufacturing/Industrial Center is anchored by Boeing and Starbucks; 85% of the businesses in this center are industrial, and dependent on freight flow for their livelihood.

While the selected corridors and the other elements of this project are heavily freight-focused, benefits extend to all travel modes. Denny Way is one of the region's busiest transit corridors, with 600 to 700 buses each day. This frequent transit service, as well as the corridor's proximity to Seattle Center and many other large employers, create high pedestrian and cyclist volumes. Each of these audiences depend on a Denny Way corridor that is functioning as smoothly and efficiently as possible.

1st Avenue carries approximately 80 buses on a typical day, but as a designated alternate route for SR 99 on snow days, it can carry hundreds of additional buses during the region's worst days of traffic congestion. Not only are these days of peak demand each year, but they are days when many would-be drivers become suddenly transit-dependent. In sum, traffic flow on both corridors is critical to the regional transit system.

The citywide components of the Gateway ITS project also affect various travel modes. One of the primary benefits of the project is better data sets that will give truckers – including those serving the Port of Seattle's seaport terminals - real-time, user-friendly information that allows them to choose the best, least congested routes for each trip. However, while truckers may be the most

benefitted group, all roadway users will see improvements in their ability to choose the best route for each trip. This includes cyclists and walkers as well as drivers of all types. As improvements are made to the city's Traffic Management Center, it will support, update, and add to the existing Intelligent Transportation System network already in operation in the Duwamish. These improvements will provide additional benefits to the maritime and industrial uses located there. The specific signal enhancements on 1st Avenue South will add to that network and further improve flows for freight in the city's largest Manufacturing/Industrial Center.

The project helps to address the needs of disadvantaged populations, where 1st Avenue serves the cluster of social services providers in the Pioneer Square district, and Denny Way serves one of the primary neighborhoods for affordable housing near downtown. Approximately 3,500 affordable housing units are located within South Lake Union alone, making it one of the highest concentrations of affordable or subsidized housing in the city. Thousands more similar units are found within the adjacent neighborhoods of Uptown, lower Capitol Hill, and Belltown/Uptown.

While all users of the two corridors will see mobility benefits, as will users of the rest of the network, some of the most significant benefits of this project accrue from its environmental improvements in the adjacent neighborhoods and throughout the broader region. On 1st Avenue South, 30% of all vehicles are oversized vehicles powered by large diesel engines (heavy-haul trucks or large buses). On Denny Way, King County Metro's nearly 700 bus trips each day are a substantial component of overall traffic – in addition to freight volumes along the Mercer/Denny corridor. These heavy duty diesel engines are a primary contributor to harmful PM2.5 emissions, generating nearly 50 times as much fine particulate matter per mile as a typical single-occupant vehicle.

Smoother traffic flow along these roadways can bring benefits of 7 to 13 percent reduction in overall travel time, 15 to 37 percent reduction in delay, and 6 to 9 percent fuel savings, according to modeling work performed for these corridors. The corresponding improvement in air quality has immediate, direct impacts on

the 88,000 workers and 20,000 residents who work and/or live in these neighborhoods.

The project locations support many of the region's economically critical industry clusters, as defined by the Regional Economic Strategy. Maritime businesses, as well as Transportation and Logistics businesses, are heavily affected by 1st Avenue. Business Services, Information Technology, Life Sciences and Global Health, Philanthropies, and Tourism and Visitors clusters are all served by Denny Way.

System Continuity/Long-Term Benefit and Sustainability

- LONG-TERM STRATEGY, INCLUDING TDM AND TSM OPPORTUNITIES
- PROVIDES A LOGICAL SEGMENT THAT LINKS TO A DESIGNATED URBAN CENTER
- FILLS A MISSING LINK OR REMOVES BARRIERS
- RELIEVES PRESSURE OR REMOVES A BOTTLENECK TO POSITIVELY IMPACT OVERALL SYSTEM PERFORMANCE
- IMPROVES SAFETY, REDUCES MODAL CONFLICT, AND PROVIDES OPPORTUNITIES FOR ACTIVE TRANSPORTATION

Comment [s2]: These are the scoring criteria for this section.

As a TSM project, Center City Gateway ITS is entirely focused on smart use of existing resources. With virtually no opportunity for road expansion or new capacity in Seattle's urban centers, the city's long-term strategy must rely almost exclusively on increased efficiencies and promoting positive mode shift within the existing transportation network. The city's long-term plans for mobility and job creation have entirely embraced this principle. The city focuses its short-term and long-term efforts on system management – especially projects that move freight, transit, and non-motorized modes more efficiently. Seattle's Transportation Strategic Plan, as well as the city's ITS plan (called NextGen ITS), explicitly address the necessity of optimizing the existing infrastructure in the city's built-out, urban environment.

1st and Denny provide direct links to some of the city's most significant businesses, and other important land uses. These include Seattle Center, the Port of Seattle seaport, Amazon.com, Group Health, the city's sports stadiums, and numerous other major employers in the Duwamish and South Lake Union neighborhoods. In addition, these corridors offer access to the north and south portals of the SR 99 tunnel – one of the most region's most significant facilities for long-range trips, including long-haul freight. Finally, these corridors complete a grid that allows active load-balancing and real-time traffic management between SR 99, I-5, and other major surface streets in the urban centers (Mercer Street, 4th Avenue South, Spokane Street, East Marginal Way, etc.).

TSM relieves pressure on the overall system by operating key corridors at maximum capacity. Traffic-management tools such as signal synchronization, signal optimization, and signal priority for transit all serve to maximize the throughput of people and goods on a specific roadway. However, the benefits are not limited to specific corridors; they are network-wide. New data-collection and data-processing capacity leads to proactive, real-time traffic management that improves flow on all nearby roadways.

As performance begins to break down on one corridor, or at one intersection, corridors and intersections throughout the network can adjust to release the bottleneck. This adjustment can take place through pre-set algorithms, automatically adjusting signal timing on nearby facilities when traffic volumes or flow rates reach certain levels. It may happen through real-time informational signage on nearby facilities that would direct traffic to less-congested corridors. Likewise, with current technology, it may also help drivers before they begin their trip: selecting an appropriate travel time or travel mode based on existing conditions. Finally, benefits may accrue from truly active traffic management – intervention in pre-set algorithms, performed by live staff in Seattle's TMC. Each of these traffic management tools are enabled by new data, as well as new data–processing capacity, from the Center City Gateway ITS project. I-5 at Seattle's Convention Center (near Denny Way) and I-5 at I-90 (near 1st Avenue) are some the region's worst bottlenecks. The I-5/I-90 interchange is listed as one of the

worst bottlenecks in the country for freight, based on FHWA's report on truck delay.

Non-motorized transportation, and other "alternative" transportation modes such as public transit, are likewise aided by the implementation of the Center City Gateway ITS project. While freight mobility is the primary focus of this project, and improved general-purpose traffic flow is clearly a secondary benefit, the informational tools that will be enabled by this project will lead to a mode shift toward more active transportation.

As real-time information becomes more widely used, showing traffic congestion and travel conditions for all modes, the opportunity also becomes readily available to showcase active transportation modes. Travelers will see, side-by-side, the relative advantages and disadvantages of clogged single-occupant roadway lanes compared with transit lanes, trails, and bike lanes. Opportunities also become available to actively promote these modes: for example, showing the availability of transit services, bike share operations, and other potential mode choices along a selected corridor or route. This new awareness of alternatives, and their various trade-offs, will help to make non-motorized modes become the modes of choice for more travelers.

Finally, the improvements on these corridors are expected to enhance public safety through improved traffic flow. While ITS projects targeted toward speed and reliability are normally not significant contributors to crash rates, they do improve response times for emergency vehicles, and enhance the ability of first responders to manage traffic incidents. In addition, the ability to help divert traffic flow away from the scene of a crash can help to avoid the secondary incidents that are common near crash sites. Approximately 600 crashes have occurred on these two roadway segments within the past three years.