



## Active Transportation & Complete Streets Projects

**Name of Project** Hillsdale Town Center Pedestrian Connections: Sidewalk Infill on SW Beaverton-Hillsdale Highway

*(project name will be adjusted to comply with ODOT naming convention if necessary)*

### Project application

The project application provides in depth process, location and project definition details and serves as the nomination form for project funding consideration. **Project applications should be kept to 12 pages total per project.** The application form is available electronically at: <http://www.oregonmetro.gov/rffa>. Please complete the following:

### Project Definition

#### Project Description

- **Facility or area: street(s), intersection(s), path or area:**  
SW Dosch Road from Beaverton-Hillsdale Hwy. to 200' north  
SW Beaverton-Hillsdale Hwy. from SW Dosch Rd. to SW 18th Drive (Hillsdale Town Center)
- **Beginning facility or milepost.** SW Beaverton-Hillsdale Hwy. & SW Dosch
- **Ending facility or milepost:**  
SW Dosch, 200' north of SW Beaverton-Hillsdale Hwy. & SW Dosch  
SW Beaverton-Hillsdale Hwy. & SW 18<sup>th</sup> Drive (Hillsdale Town Center)
- **Provide a brief description of the project elements.** On SW Dosch, construct 200' (total 400') of sidewalk on both sides. On SW Beaverton-Hillsdale Hwy., construct 1,750' (total 3,500') of sidewalk or multi-use path on both sides. SW Beaverton-Hillsdale Hwy. is part of a Metro Mobility Corridor and classified as a Pedestrian Parkway by Metro and a Major City Traffic Street by the City of Portland.
- **City (ies).** Portland
- **County(ies).** Multnomah

#### Base project information

- **Corresponding RTP project number(s) for the nominated project:**  
10278: Hillsdale Pedestrian District  
10279: Beaverton-Hillsdale Hwy, SW (Capitol Hwy – 65<sup>th</sup>): Multi-modal Improvements
- Attach a completed Public Engagement and Non-discrimination checklist (Appendix A).
- **Purpose and need statement:**  
The proposed project will make walking significantly safer and easier on a high-speed, high-traffic Metro Pedestrian Parkway by adding sidewalk, grade-separated multiuse pathway, lighting and street trees. A concurrent, funded repaving project will also shorten pedestrian crossing distances and

narrow motor vehicle lane widths in the project area. The proposed project will help people use active transportation to access a variety of essential services in a designated town center, including two community centers, five schools, two public parks and a grocery store. Nearby residents include 1,384 children and 772 older adults, who are especially vulnerable to death or serious injury in crashes that occur while walking.

Current walking conditions on SW Beaverton-Hillsdale Highway are poor. People who walk on SW Beaverton-Hillsdale Highway generally must share space with people biking on a roadway with posted motor vehicle speeds of up to 40 miles per hour. The deficient conditions have likely contributed to a series of crash deaths and serious injuries, which have earned the project area a place on Metro's regional map of hotspots for fatal and near fatal crashes, including for people walking and biking. The City of Portland has also placed SW Beaverton-Hillsdale Hwy. on its High Crash Network due to its frequency of deaths and serious injuries (see [www.visionzeroportland.com](http://www.visionzeroportland.com)).

- **Attach a completed Active Transportation Design checklist (Appendix C).**
- **Description of post implementation measurement of project effectiveness (Metro staff is available to help design measurement methodologies for post-construction project criteria performance).**  
First, PBOT will conduct pre- and post-project traffic counts that will include bicycle and pedestrian use. Bicycles and pedestrian traffic will be monitored with manual traffic counts. The methodology will be consistent with PBOT's annual Bicycle Count Reports and pedestrian count methodology used for engineering evaluations. Motor vehicle traffic is not expected to change with these sidewalk and pathway improvements.

Second, PBOT will measure safety by evaluating pre- and post-project traffic crash data. Traffic crash information will be monitored for early performance. However, the best data analysis can only take place at least three years post-project. PBOT will monitor to compare pre- and post- crash data in three- and five-year evaluations.

Third, PBOT will gather information on user experience. PBOT will conduct pre- and post-project intercept surveys on the affected streets. The purpose will be to ask about comfort, safety, and convenience of walking and bicycling along the treated roadways.

#### **Project Cost and Funding Request Summary**

- **Attach a completed Cost Methodology workbook (Appendix E) or alternative cost methodology. Describe how the project cost estimate was determined, including details on project readiness and ability for project funding to be obligated within the 2019-21 timeframe. Reference availability of local match funds, status of project development relative to the requirements of federal-aid projects, and indicators of political and community support**

The project cost estimate was determined by engineers in the Civil Design Services and Traffic Design Services sections at PBOT, based on a scope jointly developed by planners and engineers familiar with

the project area. In order to support extensive and inclusive community engagement, PBOT has added an additional \$80,000 to the attached cost estimate; this additional funding will support community engagement for project development, construction, demand management, and project measurement.

This project has a high level of readiness. Funding for the project can be obligated within the allotted timeframe. This project is not expected to have significant environmental impacts and would be eligible for a categorical exclusion under NEPA. The local funding will come from Transportation System Development Charges, an ongoing revenue stream for PBOT that is eligible to be used for a portion of the cost of capacity-enhancing projects. Elements of this project have been identified as priorities in multiple locally-adopted plans, including Portland's Transportation System Plan and Metro's Regional Transportation Plan.

Political and community support is high for this project. Portland City Council passed Ordinance No. 187954 directing PBOT to submit this and other RFF grant applications on August 17, 2016. See attached Ordinance. This grant was prioritized and selected based on input from the City's modal advisory committees and the Transportation Justice Alliance during the Spring and Summer of 2016. In addition, PBOT's High Crash Corridor program targeted engineering and education safety work along Beaverton-Hillsdale Hwy. from 2011 to 2013. During this time, PBOT staff engaged with SWNI District Coalition, neighborhood associations and individuals traveling, working and living along Beaverton-Hillsdale Hwy. Groups and individuals consistently called for pedestrian facilities along the high-speed, multi-lane street for safe access to bus stops, schools, businesses and homes.

- Total project cost: \$3,128,000
- RFFA funding request by project phase:
  - PE: \$685,800
  - ROW: \$114,300
  - Construction: \$1,485,900
  - TDM: \$60,000
- Local match or other funds:
  - \$782,000 (25% of estimated total project cost)

#### **Map of project area**

- Provide a map of the project consistent with GIS shapefile standards found in Appendix B

#### **Project sponsor agency**

- Contact information (phone # & email) for:
- Application lead staff: Matt Ferris-Smith, 503-823-5831, matt.ferris-smith@portlandoregon.gov
- Project Manager: Dan Layden, 503-823-2804, dan.layden@portlandoregon.gov
- Project Engineer: Lola Gailey, 503-823-7563, lola.gailey@portlandoregon.gov

- **Describe the agencies record in delivering federal aid transportation projects on time and budget or whether the lead agency has failed to deliver a federal aid transportation project and if so, why.**

The Portland Bureau of Transportation was among the first agencies in Oregon to be fully certified by ODOT to deliver federal aid projects. PBOT has successfully delivered federal transportation projects for over 20 years, including large bridges, active transportation facilities and Safe Routes to School improvements. PBOT has completed the majority of the projects on time and on budget. When projects have encountered budget issues, PBOT has identified funding to deliver the projects successfully.

A few PBOT projects have been delayed in the past. These delays were generally caused by permitting and right-of-way issues. Those issues are resolved for all current projects, which are on track to be delivered.

The following are examples of previously awarded RFFA projects and their status:

- N. Lombard/St. Louis/Ivanhoe/Philadelphia intersection project  
Construction Phase completed in 2012
  - N. Portland Rd/Columbia Blvd intersection project  
2014/15 RFFA. Planning and Design Phase completed in 2013. Construction Phase funded by STIP and will begin in 2017
  - North Time Oil Road-Burgard Street Intersection Project  
2014/15 RFFA. Awaiting notice to proceed from FHWA.
  - Going to the Island Freight Improvement Project  
2014/15 RFFA. Design Phase to be completed in 2017 and Construction completed in 2019
  - South Rivergate Freight improvement Project  
2016-18 RFFA. Design Phase to begin in 2016. Project construction will be funded by multiple local and federal funding sources
  - SE Foster Road  
2014-2016 and 2015-2017 RFFA. Design phase underway. Construction to occur in 2017
- **Describe how the agency currently has the technical, administrative and budget capacity to deliver the project, with an emphasis on accounting for the process and requirements of federal aid transportation projects.**

PBOT has staff capable of providing administrative services related to project management and technical services related to design engineering. PBOT project managers and delivery staff also have extensive experience in delivering federal transportation projects. The bureau has a long track record of delivering federal projects that meet Federal Highway Administration requirements.

## Highest priority criteria

- 1. What communities will the proposed project serve? What are the estimated totals of low-income, low-English proficiency, non-white, elderly and young, and persons with disabilities populations that will benefit from this project, and how will they benefit?**

The proposed sidewalk infill will make walking significantly safer and easier for the approximately 5,846 people living in census tracts intersecting the project area. This population includes an estimated 456 low-income households, 31 people with low English proficiency, 531 people who are non-white, 772 people who are elderly, 1,384 people who are young, and 395 people who have disabilities. (These numbers are based on the 2010-2014 American Community Survey five-year data profile.) Much of the project area is zoned for multi-family housing. Portland's recently adopted 2035 Comprehensive Plan maintains multifamily housing along much of SW Beaverton-Hillsdale Highway, allowing one unit per 1,000 or 2,000 square feet of site area, depending on the location.

Currently, people walking on SW Beaverton-Hillsdale Highway (also known as Highway 10) within the project area must share space with people biking. The unprotected bike lanes run alongside people driving at posted speeds of up to 40 miles per hour. At 40 miles per hour, a person hit while walking has an 80 percent probability of dying or being seriously injured.

The benefits of sidewalk facilities are especially valuable for the communities noted above. Research indicates that people with low incomes, low English proficiency, non-white people, elderly and young people, and people with disabilities are more likely to travel by foot or mobility device, relative to average national travel patterns. In addition, children and older adults are more likely to be killed or seriously injured in the event of a crash, relative to young and middle-aged adults.

- 2. What safety problem does the proposed project address in an area(s) with higher-than-average levels of fatal and severe crashes? How does the proposed project make people feel safer in an area with high walking and bicycling demand by removing vehicle conflicts?**

This project will make people safer by providing more separation between people walking, biking and driving on both sides of SW Beaverton-Hillsdale Highway and SW Dosch Rd. in an area that has significantly below average proximity to sidewalk facilities relative to the Metro region.

The project area is a known safety risk. As part of its Vision Zero program, the City of Portland has identified SW Beaverton-Hillsdale Highway as a High Crash Corridor (see [www.visionzeroportland.com](http://www.visionzeroportland.com)). Metro has identified the project area as a regional "hotspot" for fatal and near fatal crashes, including for people walking and biking. Two people walking have been seriously injured and one person died while walking on SW Beaverton-Hillsdale Highway in Portland between 2005 and 2014. During the same time period, 15 people driving have been seriously injured and two people have died on SW Beaverton-Hillsdale Highway in Portland.

There is strong demand for walking and biking within the project area. This is likely due in part to Hillsdale Town Center’s above average concentration of essential services. According to Metro’s 2015 Mobility Atlas, SW Beaverton-Hillsdale Highway serves transit volumes of between 5,001 and 10,000 people per day within the project area. Most people who ride transit also walk at some point during their trip, which means they are likely to benefit from the proposed project. Metro’s atlas also indicates that between 251 and 500 people bike daily in the project area along SW Beaverton-Hillsdale Highway. While crashes between people walking and biking are less dangerous relative to those involving people driving, physical separation generally helps people to feel safer in both situations.

**3. What priority destinations will the proposed project will serve? How will the proposed project improve access to these destinations?**

The proposed sidewalk on SW Dosch Rd. and SW Beaverton-Hillsdale Highway will help people access a variety of priority destinations in an area with a higher than average concentration of essential services, including two community centers (Oregon Latvian Community Center and the Mittleman Jewish Community Center), five schools (Robert Gray Middle School, Rieke Elementary School, Portland Jewish Academy, Multnomah Playschool and the Hilltop Preschool & Kindergarten at Portland Christian Center), five religious facilities (Japanese Fellowship Church, Congregation Neveh Shalom, Chabad of Oregon, Portland Christian Center and the Greater Portland Bible Church), two public parks (Hillsdale City Park and Dewitt City Park), three medical facilities (Fanno Creek Medical Clinic, Bowman’s Hillsdale Pharmacy and Hillsdale Veterinary Facility), food sources (Food Front Cooperative, Hillsdale Farmer’s Market and assorted restaurants), and other destinations including a U.S. Post Office, Multnomah County Library branch, banks and the Portland Ballet.

In addition, the proposed project improves access to six TriMet bus stops serving two lines and to the Red Electric Trail, a partially completed four-mile path for people walking and biking that is included in Metro’s 2013 report on regional trails and greenways.

The proposed project improves access to the destinations noted above by providing safe walking facilities, a majority of which will be on a Metro-identified “pedestrian parkway” (SW Beaverton-Hillsdale Highway). For some destinations, the proposed project will construct sidewalk directly adjacent to their sites; in other cases, the proposed project will improve access by connecting with existing walking facilities, which indirectly support access to the priority destinations.

**4. How will the proposed project support the existing and planned housing/employment densities in the project area?**

Both existing and planned housing and employment densities benefit from the proposed project because sidewalks provide people with an additional travel option—walking—in order to access destinations.

Much of the project area is zoned for multi-family housing. Portland’s recently adopted 2035 Comprehensive Plan maintains multifamily housing along much of SW Beaverton-Hillsdale Highway,

allowing one unit per 1,000 or 2,000 square feet of site area, depending on the location. Portland projects that total housing units within a half mile of the project area will increase from 3,628 to 4,849 units by 2035.

Employment densities are expected to grow in and around the project area. The new Comprehensive Plan rezoned much of the Hillsdale Town Center as “Central Commercial,” which encourages multiple uses, high building coverage, large buildings, and buildings placed close together alongside a pedestrian-oriented, safe and attractive streetscape. By the year 2035, Portland expects jobs within a half mile of the project area to increase from 1,690 to 2475 jobs. As housing and employment densities increase, the proposed project will serve increasing numbers of people and jobs, providing additional value to the community and region.

### **Higher priority criteria**

**5. How does the proposed project complete a gap or improve a deficiency in the Regional Active Transportation network? (See Appendix 1 of the Regional ATP: Network Completion, Gaps and Deficiencies).**

The proposed project helps complete a pedestrian network gap by adding sidewalk on a segment of SW Dosch Rd. between the Highway 26 Trail and Beaverton-Hillsdale Hwy, a designated Pedestrian Parkway. (ATP ID B9). In addition, the proposed project helps complete a pedestrian network gap by adding sidewalk on a segment of SW Beaverton-Hillsdale Hwy. between SW Dosch Rd. and SW 18th Dr. (ATP ID B9 and P11). Metro’s Pedestrian District Summary Matrix gives the Hillsdale Pedestrian District (#22) the lowest possible rating for sidewalk completion.

**6. What design elements of the proposed project will lead to increased use of Active Transportation modes by providing a good user experience/increasing user comfort? What barriers will be eliminated or mitigated?**

The proposed project will lead to increased use of Active Transportation modes by providing access to sidewalk facilities connecting residential and commercial areas. Shortened pedestrian crossing distances, narrowed motor vehicle lanes, and additional lighting and street trees will also help provide good user experience and increase user comfort. (See Appendix C for design details.)

Currently, people walking on SW Beaverton-Hillsdale Hwy. in the project area must walk in the bike lane on street segments with posted motor vehicle speeds as high as 40 miles per hour. People walking on SW Dosch must walk in motor vehicle travel lanes or on unpaved “desire paths” alongside the street. Without improved sidewalk facilities, it is likely that people who might consider walking in the project area—including people who might consider walking to a bus stop—choose to drive instead.

The proposed project will eliminate a barrier created by the winding, disconnected nature of the street network in the project area. People who do not feel comfortable walking on today’s SW Beaverton-

Hillsdale Highway may have no good alternative; the closest parallel streets, SW Bertha Blvd. and SW Boundary St., have no sidewalks and require significant out-of-direction travel.

**7. How does the proposed project complete a so-called 'last-mile' connection between a transit stop/station and an employment area(s)?**

The proposed project serves six bus stops for TriMet lines 54 and 56, which connect Beaverton Transit Center and Washington Square with Portland City Center. TriMet recently enhanced the service to both bus lines, which are Frequent Service lines that run every 15 minutes or better most days.

**Priority criteria**

**8. How the public will be engaged relative to the proposed project? Include description of engagement during project development and construction, as well as demand management efforts to increase public awareness and utilization of the project post-construction. (Metro Regional Travel Options staff is available to help design an effective and appropriate level of education and marketing for your project nomination).**

Before beginning engagement, PBOT will complete a stakeholder analysis to identify potentially impacted businesses, community organizations and historically underrepresented populations, user groups and other potential audiences to engage. PBOT staff will document consideration of potential distribution of benefits and burdens, especially as pertaining to people of color, people with Limited English Proficiency and people with low income. A plan for engagement will be created and will include specific milestones and engagement activities. Public engagement during project development and construction will follow the International Association for Public Participation (IAP2) Spectrum of Public Participation framework in which a variety of engagement tools will be used in order to inform, consult, involve and collaborate with community members at large and those who could potentially be impacted by project decisions.

PBOT will keep the public informed, listen to and acknowledge concerns, work with the public to ensure that concerns and issues are directly reflected in the alternatives developed and provide feedback on how public input influenced the decisions. Where possible, PBOT will look to the public for direct advice and innovation in formulating solutions and will incorporate public advice and recommendations into the decisions to the maximum extent possible. At every opportunity, staff will conduct culturally-responsive and language-based outreach and engagement especially focused to traditionally underserved communities. Public engagement tools to be used for informing the public may include website, social media updates, interested parties' emails, selective advertising, press releases, earned media and mailers. Tools to consult, involve and collaborate with the public may also include community advisory groups, public workshops, feedback surveys, open houses, focus groups, Community Engagement Liaison services and direct contact with businesses, neighborhood and cultural organizations and community groups.

After the project is completed, we will use demand management programs to increase public awareness and utilization of the projects. Portland's long-running SmartTrips program will conduct targeted awareness activities and guided walks to ensure people are aware of their newly improved active transportation options.

**9. What additional sources of funding, and the amounts, will be leveraged by an investment of regional flexible funds in the proposed project?**

The City of Portland will contribute local match funds totaling \$782,000 in order to leverage an investment of regional flexible funds in the proposed project. This is 25% of the estimated total project cost.

**10. How will the proposed project provide people with improved options to driving in a congested corridor?**

The proposed project provides people with a safe alternative to driving on SW Beaverton-Hillsdale Highway. SW Beaverton-Hillsdale Hwy. is part of Metro Mobility Corridor 13, which connects Portland Central City and Beaverton. According to Metro's 2015 Mobility Corridor Atlas, this mobility corridor serves 140,046 residents and supports 170,280 jobs, and carries between 2,000 and 10,000 vehicles total during peak morning and evening periods. The proposed project fills a critical gap for people who already—or might consider—walking instead of driving on the congested SW Beaverton-Hillsdale Hwy.

- **Process**

**Describe the planning process that led to the identification of this project and the process used to identify the project to be put forward for funding consideration. (Answer should demonstrate that the process met minimum public involvement requirements for project applications per Appendix A)**

In the spring of 2014, PBOT staff began the process of forming a Candidate list of Major Projects for inclusion in the TSP. This process began by considering projects that were included in the 2007 TSP, the 2014 TRP, or other plans adopted since 2007. The TSP Major Project List update process included extensive opportunities for public engagement with projects displayed on the 2035 Comprehensive Plan Proposed Draft Map App starting in June 2014. Members of the public were invited to comment directly through the Map App, and there was extensive community outreach at meetings and events. As noted in our certification of Appendix A – the public engagement and non-discrimination certification, PBOT developed and used a thorough public engagement plan which included stakeholder analysis and a focus on efforts to engage underrepresented populations.

In order to develop the TSP Major Projects list, projects were also evaluated based on criteria that measures the following: safety, neighborhood access, economic benefit, health, equity, climate, costs effectiveness and community support. This evaluation, along with additional public feedback, helped to determine the final TSP Major Projects List.

When looking for projects to be considered for this funding opportunity, PBOT staff looked to projects identified within the above TSP Major Projects selection process. We narrowed this large list by also

considering the specific RFF grant criteria, the availability of match, readiness factors for projects, feedback from PBOTs pedestrian and bicycle advisory committees, feedback from the Transportation Justice Alliance, other City Bureau priorities, and community needs identified not only within the TSP, but also from additional ongoing planning efforts and bureau commitments.

**Describe how you coordinated with regional or other transportation agencies (e.g. Transit, Port, ODOT, Metro, Freight Rail operators, ODOT Region 1, Regional Safety Workgroup, and Utilities if critical to use of right-of-way) and how it impacted the project location and design.**

This project proposal did not require coordination with other transportation agencies. SW Beaverton-Hillsdale Hwy is a City of Portland right-of-way and this project would not negatively impact other agency facilities. During project design, PBOT will coordinate with TriMet regarding the location and design of bus stops.

## APPENDIX A – ENVIRONMENTAL JUSTICE COMPLIANCE

### Public engagement and non-discrimination certification

#### Regional flexible funds 2019-21

#### Background and purpose

Use of this checklist is intended to ensure project applicants have offered an adequate opportunity for public engagement, including identifying and engaging historically underrepresented populations. Applications for project implementation are expected to have analyzed the distribution of benefits and burdens for people of color, people with limited English proficiency and people with low income compared to those for other residents.

The completed checklist will aid Metro in its review and evaluation of projects.

#### Instructions

Applicants must complete this certification, including a summary of non-discriminatory engagement (see Section B), for projects submitted to Metro for consideration for 2019-21 regional flexible funding.

Project sponsors should keep referenced records on file in case of a dispute. Retained records do not have to be submitted unless requested by Metro.

Please forward questions regarding the public involvement checklist to regional flexible funds allocation project manager Dan Kaempff at [daniel.kaempff@oregonmetro.gov](mailto:daniel.kaempff@oregonmetro.gov) or 503-813-7559.

#### 1. Checklist

##### Transportation or service plan development

- At the beginning of the agency's transportation or service plan, a public engagement plan was developed to encourage broad-based, early and continuing for public involvement.  
**Retained records:** *public engagement plan and/or procedures*
- At the beginning of the agency's transportation or service plan, a jurisdiction-wide demographic analysis was completed to understand the location of communities of color, limited English proficient and low-income populations, disabled, seniors and youth in order to include them in engagement opportunities.  
**Retained records:** *summary of or maps illustrating jurisdiction-wide demographic analysis*
- Public notices included a statement of non-discrimination (Metro can provide a sample).  
**Retained records:** *public engagement reports including/or dated copies of notices*
- Throughout the process, timely and accessible forums for public input were provided.  
**Retained records:** *public engagement reports including/or descriptions of opportunities for ongoing engagement, descriptions of opportunities for input at key milestones, public meeting records, online or community survey results*

- Throughout the process, appropriate interested and affected groups were identified and contact information was maintained in order to share project information, updates were provided for key decision points, and opportunities to engage and comment were provided.

*Retained records: public engagement reports including/or list of interested and affected parties, dated copies of communications and notices sent, descriptions of efforts to engage the public, including strategies used to attract interest and obtain initial input, summary of key findings; for announcements sent by mail or email, documented number of persons/groups on mailing list*

- Throughout the process, focused efforts were made to engage underrepresented populations such as communities of color, limited English proficient and low-income populations, disabled, seniors and youth. Meetings or events were held in accessible locations with access to transit. Language assistance was provided, as needed, which may include translation of key materials, using a telephone language line service to respond to questions or take input in different languages and providing interpretation at meetings or events.

*Retained records: public engagement reports including/or list of community organizations and/or diverse community members with whom coordination occurred; description of language assistance resources and how they were used, dated copies of communications and notices, copies of translated materials, summary of key findings*

- Public comments were considered throughout the process, and comments received on the staff recommendation were compiled, summarized and responded to, as appropriate.

*Retained records: public engagement reports or staff reports including/or summary of comments, key findings and final staff recommendation, including changes made to reflect public comments*

- Adequate notification was provided regarding final adoption of the plan or program, at least 15 days in advance of adoption, if feasible, and follow-up notice was distributed prior to the adoption to provide more detailed information. Notice included information and instructions for how to testify, if applicable.

*Retained records: public engagement reports or final staff reports including/or dated copies of the notices; for announcements sent by mail or email document number of persons/groups on mailing list*

## **Project development**

*This part of the checklist is provided in past tense for applications for project implementation funding. Parenthetical notes in future tense are provided for applicants that have not completed project development to attest to ongoing and future activities.*

- At the beginning of project development, a public engagement plan was (is budgeted to be) developed to encourage broad-based, early and continuing opportunity for public involvement.

*Retained records: public engagement plan and/or procedures*

- At the beginning of project development, a demographic analysis was (is budgeted to be) completed for the area potentially affected by the project to understand the location of

communities of color, limited English proficient and low-income populations, disabled, seniors and youth in order to include them in engagement opportunities.

**Retained records:** *summary of or maps illustrating demographic analysis*

- Throughout project development, project initiation and requests for input were (will be) sent at least 15 days in advance of the project start, engagement activity or input opportunity.

**Retained records:** *public engagement reports including/or dated copies of notices*

- Throughout project development, public notices included (will include) a statement of non-discrimination.

**Retained records:** *public engagement reports including/or dated copies of notices*

- Throughout project development, timely and accessible forums for public input were (will be) provided.

**Retained records:** *public engagement reports including/or descriptions of opportunities for ongoing engagement, descriptions of opportunities for input at key milestones, public meeting records, online or community survey results*

- Throughout project development, appropriate interested and affected groups were (will be) identified and contact information was (will be) maintained in order to share project information, updates were (will be) provided for key decision points, and opportunities to engage and comment were (will be) provided.

**Retained records:** *public engagement reports including/or list of interested and affected parties, dated copies of communications and notices sent, descriptions of efforts to engage the public, including strategies used to attract interest and obtain initial input, summary of key findings; for announcements sent by mail or email, documented number of persons/groups on mailing list*

- Throughout and with an analysis at the end of project development, consideration was (will be) given to the benefits and burdens of the project for people of color, people with limited English proficiency and people with low income compared to those for other residents, as identified through engagement activities.

**Retained records:** *staff reports including/or description of identified populations and information about benefits and burdens of the project for them in relation to other residents;*

- There was a finding of inequitable distribution of benefits and burdens for people of color, people with limited English proficiency and people with low income

**Submitted records:** *for a finding of inequitable distribution of benefits and burdens, attach analysis, finding and documentation justifying the project and showing there is no less discriminatory alternative.*

- Public comments were (will be) considered throughout project development, and comments received on the staff recommendation were (will be) compiled, summarized and responded to, as appropriate.

**Retained records:** public engagement reports or staff reports including/or summary of comments, key findings and final staff recommendation, including changes made to reflect public comments

- Adequate notification was (will be) provided regarding final adoption of the plan, at least 15 days in advance of adoption, if feasible, and follow-up notice was distributed prior to the adoption to provide more detailed information. Notice included (will include) information and instructions for how to testify, if applicable.

**Retained records:** public engagement reports or final staff reports including/or dated copies of the notices; for announcements sent by mail or email document number of persons/groups on mailing list

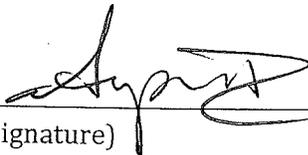
## 2. Summary of non-discriminatory engagement

Attach a summary (1-2 pages) of the key elements of the public engagement process, including outreach to communities of color, limited English and low-income populations, for this project or transportation or service plan.

## 3. Certification statement

Portland Bureau of Transportation (agency) certifies adherence to engagement and non-discrimination procedures developed to enhance public participation and comply with federal civil rights guidance.

As attested by:

  
\_\_\_\_\_  
(signature)

Art Pearce, Policy, planning and projects manager  
\_\_\_\_\_  
(name and title)

8/23/16  
\_\_\_\_\_  
(date)

## APPENDIX C – ACTIVE TRANSPORTATION DESIGN GUIDELINES

The following checklist items are street design elements that are appropriate and desirable in regional mobility corridors. Trail projects should use the *Off-Street and Trail Facilities* checklist (item D) at the end of this list. All other projects should use items A – C.

Use of federal transportation funds on separated pathways are intended for projects that primarily serve a transportation function. Pathways for recreation are not eligible for federal transportation funding through the regional flexible fund process. Federal funds are available from other sources for recreational trails. To allow for comfortable mixing of persons on foot, bicycle and mobility devices at volumes expected to be a priority for funding in the metropolitan region, a 12-foot hard surface with shoulders is a base design width acceptable to FHWA Oregon. Exceptions to this width for limited segments is acceptable to respond to surrounding context, with widths less than 10-feet subject to a design exception process. Wider surfaces are desirable in high volume locations.

**A. Pedestrian Project design elements – check all that apply**  
***Design elements emphasize separating pedestrians from auto traffic with buffers, increasing the visibility of pedestrians, especially when crossing roadways, and make it easier and more comfortable for people walking to access destinations.***

For every element checked describe existing conditions and proposed features:

- ✓ **Add sidewalks or improve vertical delineation of pedestrian right-of-way (i.e. missing curb)**  
**Existing** on SW Dosch: No sidewalk, 2 motor vehicle through lanes, 1 right turn lane, 1 left turn lane in 60' AC pavement strip.  
**Proposed** on SW Dosch: 36' AC pavement 2 motor vehicle through lanes and 1 left turn lane; 6" curb, 4' planter, 6' sidewalk on both sides.  
**Existing** on SW Beaverton-Hillsdale Hwy: 5 motor vehicle travel lanes with buffered bike lanes, intermittent curb and curb tight sidewalk in 67' to 74' AC pavement (roadway width and right-of-way varies)  
**Proposed** on SW Beaverton-Hillsdale Hwy: narrow 5 motor vehicle travel lanes and maintain existing westbound bike lanes. Convert portions of eastbound bike lane to shared bike/ped path where sidewalk is missing.  
**Westbound:** construct 7.5' curb tight sidewalk to replace AC pavement where no sidewalk exists.  
**Eastbound:** in areas with no existing sidewalk, add 7.5' curb tight sidewalk along existing bike lane or construct 9' curb tight concrete multi-use path. Both options replace existing AC pavement, with the exception of a few short segments of sidewalk infill behind existing curb.
- Add sidewalk width and/or buffer for a total width of 17 feet (recommended), 10 feet minimum; buffer may be provided by parking on streets with higher traffic volumes and speeds (over 35 mph, ADT over 6,000)
- Add sidewalk width and/or buffer for a total width of 10 feet (recommended), 8 feet minimum on streets with lower traffic volumes and speeds (ADT less than 6,000 and 30 mph or less); Buffer may be provided by parking, protected bike lane, furnishing zone, street trees/planting strip
- ✓ **Sidewalk clear zone of 6 feet or more**  
**Entire project area:** clear zone on all constructed sidewalk will be at least 6' in width
- Remove obstructions from the primary pedestrian-way or add missing curb ramps  
Curb ramps will be added or improved, where necessary.
- Add pedestrian crossing at appropriate location
- Re-open closed crosswalks
- Raised pedestrian refuge median or raised crossing, required if project is on a roadway with 4 or more lanes

- ✓ **Reduced pedestrian crossing distance**  
**Existing** on SW Dosch: 60' crossing distance  
**Proposed** on SW Dosch: reduce crossing distance to 36' through elimination of the right-turn lane for people driving  
**Existing** on SW Beaverton-Hillsdale Hwy: approximately 60'  
**Proposed** on SW Beaverton-Hillsdale Hwy: reduce crossing distance to approximately 50' by narrowing motor vehicle lanes from 12' to 10' via concurrent, funded repaving project
- ✓ **Narrowed travel lanes**  
**Existing** on SW Beaverton-Hillsdale Hwy: 12' motor vehicle lanes  
**Proposed** on SW Beaverton-Hillsdale Hwy: narrow motor vehicle lanes to 10' via concurrent, funded repaving project
- Reduced corner radii (e.g. truck apron)
- Curb extensions
- Rectangular Rapid Flashing Beacon (RRFB) or pedestrian signal
- ✓ **Lighting, especially at crosswalks – pedestrian scale (10-15 feet), preferably poised over sidewalk**  
**Existing** on SW Dosch: LED lighting  
**Proposed** on SW Dosch: additional LED lighting at intersections  
**Existing** on SW Beaverton-Hillsdale Hwy: LED lighting on both sides  
**Proposed** on SW Beaverton-Hillsdale Hwy: additional LED lighting at intersections
- Add countdown heads at signals
- Shorten signal cycle lengths of 90 seconds or less – pedestrian friendly signal timing, lead pedestrian intervals
- Access management: minimize number and spacing of driveways
- Arterial traffic calming: Textured intersections, gateway treatments, raised medians, road diets, roundabouts
- Wayfinding
- Benches
- Transit stop amenities or bus stop pads
  - Add crosswalk at transit stop
- Pedestrian priority street treatment (e.g. woonerf) on very low traffic/low volume street

#### ***B. Bicycle Projects design elements***

***Design elements emphasize separating bicycle and auto traffic, increasing visibility of bicyclists, making it easier and more comfortable for people traveling by bicycle to access routes and destinations.***

For every element checked describe existing conditions and proposed features:

- ✓ **On streets with higher traffic volumes and speeds (over 35 mph, ADT over 6,000): Buffered bicycle lane, 6 foot bike lane, 3 foot buffer; Protected bikeway with physical separation (e.g. planters, parking); Raised bikeway**  
**Existing** on SW Beaverton-Hillsdale Hwy: buffered bike lanes  
**Proposed** on SW Beaverton-Hillsdale Hwy: convert portions of eastbound bike lane to raised, shared, 9' bike/ped path where sidewalk is missing
- Separated multi-use trail parallel to roadway
- Bike priority treatments at intersections and crossings (i.e. advance stop lines, bike boxes, signals, high-intensity activated crosswalk (HAWK) signals, user-activated signals)
- Medians and crossing treatments
- Wayfinding, street markings
- Lighting at intersections

- Bicycle boulevard treatment where ADT is less than 3,000 per day: Buffered bicycle lane, 6 foot bike lane, 3 foot buffer

### ***C. Other Complete Street Features***

For every element checked describe existing conditions and proposed features:

- Turning radius improvements (freight route only)
- Gateway feature
- Street trees**  
**Existing** on SW Beaverton-Hillsdale Hwy: trees alongside roadways  
**Proposed** on SW Beaverton-Hillsdale Hwy: additional street trees
- ITS elements (i.e. signal timing and speed detection)

### ***D. Off-Street and Trail Facilities***

For every element checked describe existing conditions and proposed features:

- Minimum 12' trail width (plus 2' graded area each side)
- Always maintains minimum 5' separation when adjacent to street **or** never adjacent to street
- All on-street segments include improvements beyond bike lanes (item C, above) **or** no on-street segments
- All street crossings include an appropriate high-visibility crosswalk treatment
- All 4-lane street crossings include appropriate refuge island **or** no 4-lane street crossings
- Frequent access points (generally every ¼-mile)
- All crosswalks and underpasses include lighting
- Trail lighting throughout
- Trailhead improvements
- Rest areas with benches and wheelchair spaces
- Wayfinding or interpretive signage
- Signs regulating bike/pedestrian interaction (e.g. bikes yield to pedestrians)
- Trail priority at all local street/driveway crossing



## Summary of non-discriminatory engagement

The City of Portland Bureau of Transportation (PBOT) recognizes that equity is realized when identity -such as race, ethnicity, gender, age, disability, national origin, sexual orientation- has no detrimental effect on the distribution of resources, opportunities, and outcomes for group members in society. PBOT is committed to the fair treatment and meaningful involvement of all people, regardless of income or identity, with respect to the development, implementation and enforcement of plans, policies and procedures in the course of the Bureau's work.

Fair treatment means that no group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Meaningful involvement means that: (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment or health; (2) the public's contribution can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision making process; and (4) the decision makers seek out and facilitate the involvement of those potentially affected.

PBOT acknowledges historical injustice and context of local decision-making and supports the equitable distribution of the benefits and burdens of decisions to ensure that those most impacted from decisions have an opportunity to meaningfully participate. PBOT's commitment to non-discriminatory engagement includes supporting special efforts to engage minority, low-income, women, people with disabilities, people with Limited English Proficiency, senior and youth populations.

**Non-discrimination policy statement** It is the policy of the City of Portland that no person shall be denied the benefits of or be subjected to discrimination in any City program, service, or activity on the grounds of race, religion, color, national origin, English proficiency, sex, age, disability, religion, sexual orientation, gender identity, or source of income. The City of Portland also requires its contractors and grantees to comply with this policy. This is in accordance with Title VI of the Civil Rights Act of 1964 and subsequent federal nondiscrimination directives such as the Federal-Aid Highway Act of 1973, the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Civil Rights Restoration Act of 1987, Americans with Disabilities Act of 1990 (ADA), Executive Order 12898 (Environmental Justice), and Executive Order 13166 (Limited English Proficiency).

**Implementation of non-discriminatory engagement** PBOT's public engagement plans, policies and practices are guided by and in conformance with the City of Portland Title VI Civil Rights Program and Plan.

In June 2013 the City Council unanimously adopted the Civil Rights Title VI Plan which included the Environmental Justice Policy and Analysis Guidelines. The City of Portland also adopted, by Ordinance, the above Non Discrimination Policy Statement and the Non Discrimination Agreement for Certified Local Agencies. All of the above support implementation of the City of Portland's Civil Rights Code, located in Chapter 23.01 Civil Rights, which was adopted on October 3, 1991 by Ordinance Number 164709.

The City has developed extensive resources and best practices to ensure that the public is meaningfully involved in the decisions it makes. Such involvement is critical to the implementation of the Title VI program. The City Council adopted the following Public Involvement Principles in August, 2010, and is committed to applying them in planning, providing services and decision-making.

- *Partnership*: Community members have a right to be involved in decisions that affect them. Participants can influence decision-making and receive feedback on how their input was used. The public has the opportunity to recommend projects and issues for government consideration.
- *Early Involvement*: Public involvement is an integral part of issue and opportunity identification, concept development, design, and implementation of City policies, programs, and projects.
- *Building Relationships and Community Capacity*: Public involvement processes develop long-term, collaborative working relationships and learning opportunities with community partners and stakeholders.
- *Inclusiveness and Equity*: Public dialogue and decision-making processes identify, reach out to, and encourage participation of the community in its full diversity. Processes respect a range of values and interests and the knowledge of those involved. Historically excluded individuals and groups are included authentically in processes, activities, and decision- and policy-making. Impacts, including costs and benefits, are identified and distributed fairly.
- *Good Quality Process Design and Implementation*: Public involvement processes and techniques are well-designed to appropriately fit the scope, character, and impact of a policy or project. Processes adapt to changing needs and issues as they move forward.
- *Transparency*: Public decision-making processes are accessible, open, honest, and understandable. Members of the public receive the information they need to participate effectively.
- *Accountability*: City leaders and staff are accountable for ensuring meaningful public involvement in the work of city government.

**Additional non-discriminatory policies** The Portland Bureau of Transportation has in place a Transportation Title VI Civil Rights Program and Plan to support and ensure implementation of the above policy. The plan's elements that protect against discrimination apply to PBOT, its sub-recipients, contractors and consultants. The Transportation Title VI Civil Rights Program Plan and Ordinance are located on the Portland Bureau of Transportation website at the following web address: [www.portlandonline.com/transportation/index.cfm?c=34752](http://www.portlandonline.com/transportation/index.cfm?c=34752)

The August 2016 Recommended Draft of the Transportation System Plan (TSP) Stage 2 Update includes specific acknowledgement of the goals and policies of *Chapter 2: Community Involvement* of the adopted City of Portland 2035 Comprehensive Plan. It also identifies 19 additional TSP *Section 3: Community Involvement Objectives*.

**Inclusive Outreach and Engagement Strategies** To insure participation of Title VI protected groups, and to address physical accessibility, language issues and other accommodations for Title VI protected groups. At a minimum, such strategies shall include:

- Providing for a variety of ways for community members to participate in public processes, including informal meetings/open house presentations and written and oral testimony;
- Ensuring that meeting locations and times are convenient and accessible to all, including low income, minority communities, people with Limited English Proficiency and people with disabilities;
- Seeking out and considering the views of minority and/or low income communities;
- Providing meeting facilities that are accessible to all and specifying in meeting notices that accommodations are available upon request;
- Ensuring equal access to City programs, services and activities by providing reasonable modifications and accommodations upon request; and
- Following all Oregon Public Records and Public Meetings Laws for relevant meetings.

ORDINANCE NO. 187954

\*Authorize application to the Metro Regional Government for grants up to \$30 million for eight Active Transportation infrastructure or project development projects and two Regional Freight Investment Projects (Ordinance)

The City of Portland ordains:

Section 1. The Council finds:

1. Through the Regional Flexible Funds grant process, the Metro Regional Government is soliciting transportation infrastructure and project development proposals for federal transportation funding that will be available between 2019 and 2021.
2. There is approximately \$26 million available region-wide for Active Transportation/Complete Streets projects that support non-auto trips and ensure safe streets designed for all users.
3. There is approximately \$7 million available region-wide for Regional Freight Investments projects which support the development of the region's economy through investment in green infrastructure and key freight projects or programs.
4. Working with stakeholders, the Bureaus of Transportation and Parks and Recreation identified eight priority Active Transportation projects and two priority freight projects (Exhibit A) for application for Metro Regional Flexible Funds grants.
5. The projects identified will help to build critical transportation infrastructure and support multi-modal safety improvements throughout the City of Portland transportation system.
6. The projects listed on Exhibit A are consistent with the recently updated Transportation System Plan Project List. The grant application project list was developed with the help of the City's Bicycle, Pedestrian and Freight Advisory Committees and with additional feedback provided by the Transportation Justice Alliance.
7. Local match of at least 10.27% will be provided from Transportation and Parks System Development Charges.

NOW, THEREFORE, The Council directs:

- a. The Director of the Portland Bureau of Transportation is hereby authorized to make application to Metro for grants in the amount of up to \$30 million and to document City Council support in the required projects nomination letter.
- b. The Director of the Portland Bureau of Transportation is authorized to provide such information and assurances as are required for the grant period.
- c. The OMF Grants Office is authorized to perform all administrative matters in relation to the grant application, grant agreement or amendments, requests for reimbursement from the grantor, and to submit required online grant documents on the Commissioner-in-Charge's behalf.

Section 2. The Council declares that an emergency exists because the grant applications are due immediately; therefore, this ordinance shall be in full force and effect from and after its passage by the Council.

Passed by the Council: **AUG 17 2016**

Commissioner Steve Novick

Prepared by: Mark Lear:CK

Date Prepared: 08/02/16

**Mary Hull Caballero**

AUDITOR OF THE CITY OF PORTLAND

By 

Deputy

Agenda No.  
**ORDINANCE NO. 187954**  
 Title

\*Authorize application to the Metro Regional Government for grants in the amount of up to \$30 million for eight Active Transportation infrastructure or project development projects and two Regional Freight Investment Projects. (Ordinance)

|  |   |
|--|---|
| <p><b>INTRODUCED BY</b><br/>                 Commissioner/Auditor:<br/> <b>COMMISSIONER STEVE NOVICK</b></p> <p><b>COMMISSIONER APPROVAL</b></p> <p>Mayor—Finance and Administration - Hales</p> <p>Position 1/Utilities - Fritz</p> <p>Position 2/Works - Fish</p> <p>Position 3/Affairs - Saltzman</p> <p>Position 4/Safety - Novick <i>SN</i></p> <p><b>BUREAU APPROVAL</b></p> <p><b>Bureau: Transportation</b><br/> <b>LEAH TREAT, DIRECTOR</b> <i>LT</i></p> <p>Prepared by: Mark Lear: CK <i>MSL</i></p> <p>Date Prepared: August 2, 2016</p> <p>Supervisor:</p> <p>Impact Statement<br/>                 Completed <input checked="" type="checkbox"/> Amends Budget <input type="checkbox"/></p> <p>Portland Policy Document<br/>                 If "Yes" requires City Policy paragraph stated in document.<br/>                 Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p><b>City Auditor Office Approval:</b><br/>                 required for Code Ordinances</p> <p><b>City Attorney Approval:</b><br/>                 required for contract, code, easement, franchise, comp plan, charter</p> <p><b>Council Meeting Date</b><br/>                 August 17<sup>th</sup>, 2016</p> | <p>CLERK USE: DATE FILED <u>AUG 09 2016</u></p> <p style="text-align: center;">Mary Hull Caballero<br/>                 Auditor of the City of Portland</p> <p>By: <u><i>MHC</i></u><br/>                 Deputy</p> <p>ACTION TAKEN:</p> |
|--|---|

|  |
|--|
| <b>AGENDA</b>  |
| <p><b>TIME CERTAIN</b> <input type="checkbox"/></p> <p>Start time: _____</p> <p><b>Total amount of time needed:</b><br/>                 (for presentation, testimony and discussion)</p> <p><b>CONSENT</b> <input type="checkbox"/></p> <p><b>REGULAR</b> <input checked="" type="checkbox"/></p> <p><b>Total amount of time needed: 20 minutes</b><br/>                 (for presentation, testimony and discussion)</p> |

| FOUR-FIFTHS AGENDA | COMMISSIONERS VOTED AS FOLLOWS: |       |      |
|--------------------|---------------------------------|-------|------|
|                    |                                 | YEAS  | NAYS |
| 1. Fritz           | 1. Fritz                        | ✓     |      |
| 2. Fish            | 2. Fish                         | _____ |      |
| 3. Saltzman        | 3. Saltzman                     | ✓     |      |
| 4. Novick          | 4. Novick                       | ✓     |      |
| Hales              | Hales                           | ✓     |      |

## Exhibit A: City of Portland Grant Applications for Metro Regional Flexible Funds

| <b>Active Transportation Projects<br/>Name (Alphabetical)</b>  | <b>Description</b>  | <b>Maximum Grant<br/>Request</b> |
|--|---|----------------------------------|
| Brentwood-Darlington Safe Routes to School: Sidewalk Infill & Neighborhood Greenway                      | Brentwood-Darlington is a neighborhood with numerous sidewalk gaps and substandard bicycle facilities. This project would provide sidewalk infill on SE Duke St and SE Flavel St. from 52 <sup>nd</sup> Ave to 82 <sup>nd</sup> Ave; a neighborhood greenway on Knapp and Ogden from 32 <sup>nd</sup> to 87 <sup>th</sup> ; and a pedestrian/bicycle connection to the Springwater Corridor on 87 <sup>th</sup> Ave. south of Flavel.   | \$3,500,000                      |
| Connected Cully, Phase 2: NE 72 <sup>nd</sup> Ave Pedestrian/Bicycle Parkway                             | Provide a high-quality pedestrian and bicycle parkway along NE 72 <sup>nd</sup> Ave through the heart of Cully. This project will connect Cully residents to nearby commercial areas and schools, provide multimodal accessibility to parks and green space in Cully and Roseway, and will connect to the future 70s Neighborhood Greenway to the south. The project would construct a multi-use path in the center of the heritage parkway median from Sandy to Prescott, separated pedestrian and bicycle pathways from Prescott to Sumner, and a shared pathway from Sumner to Killingsworth. The project will also include lighting, street trees, and place-making elements. | \$4,000,000                      |
| David Douglas Safe Routes to School: Sidewalk Infill on 117 <sup>th</sup> , 130 <sup>th</sup> , and Mill | This project would fill important sidewalk gaps on key walking routes in the David Douglas School District. The project would construct sidewalk infill on SE 130 <sup>th</sup> Ave from Stark to Division, SE Mill St from 130 <sup>th</sup> to 148 <sup>th</sup> , and SE 117 <sup>th</sup> Ave from Stark to Division.   | \$3,500,000                      |
| Hillsdale Town Center Pedestrian Connections: Sidewalk Infill on SW Beaverton-Hillsdale Hwy              | Provide better pedestrian facilities and access to Hillsdale Town Center, the Red Electric Trail, transit and schools by constructing sidewalk infill on SW Beaverton-Hillsdale Highway between Dosch and 18 <sup>th</sup> Avenue/Hillsdale Town Center and on Dosch from Beaverton-Hillsdale Highway to Flower.  | \$3,500,000                      |
| Jade & Montavilla Connected Centers Project  | Construct multi-modal improvements on key pedestrian and bicycle routes within and connecting to the Jade District and Montavilla Neighborhood Centers. Several improvements have been identified through the Portland Local Action Plan for the Powell-Division Transit and Development Project and additional improvements will be identified through coordinated planning efforts by ODOT, PBOT and BPS along the 82 <sup>nd</sup> Ave. Corridor.  | \$4,000,000                      |

**Exhibit A: City of Portland Grant Applications for Metro Regional Flexible Funds**

|  |  |                    |
|--|--|--------------------|
| <p>NE Halsey Safety &amp; Access to Transit</p>                          | <p>NE Halsey is a High Crash Network street and a street TriMet has identified for more frequent future transit service. This project would focus on the 82<sup>nd</sup> Ave MAX Station Area and would provide signal improvements, intersection redesigns, bus stop improvements and high-priority crossings on NE Halsey between 47<sup>th</sup> and 92<sup>nd</sup>, a bikeway on Halsey from 65<sup>th</sup> to 92<sup>nd</sup>, and multi-use path connection from the 82<sup>nd</sup> Ave. MAX station to the future I-205 undercrossing.</p> | <p>\$3,000,000</p> |
| <p>N. Portland Greenway Trail: Baltimore Woods Segment</p>               | <p>This project will provide better active transportation connections to nature and also to Rivergate jobs by construct 1.8 miles of high quality bikeway improvements in the St. Johns neighborhood to complete a trail gap between Pier Park and Willamette Greenway. The improvements will include bicycle lanes, sidewalks, neighborhood greenways and off-street pathways.</p>  | <p>\$3,000,000</p> |
| <p>Outer Stark and Outer Halsey Complete Streets Project Development</p> | <p>Outer Stark and Outer Halsey are both High Crash Network streets that need to be fundamentally redesigned as Complete Streets to achieve Vision Zero goals and allow for multimodal accessibility to transit and commercial areas such as Gateway and Rosewood. This project development grant will be used to help determine the most effective infrastructure improvements and roadway designs to increase safety and provide transit, schools, services and employment access improvements to community members.</p>                           | <p>\$300,000</p>   |

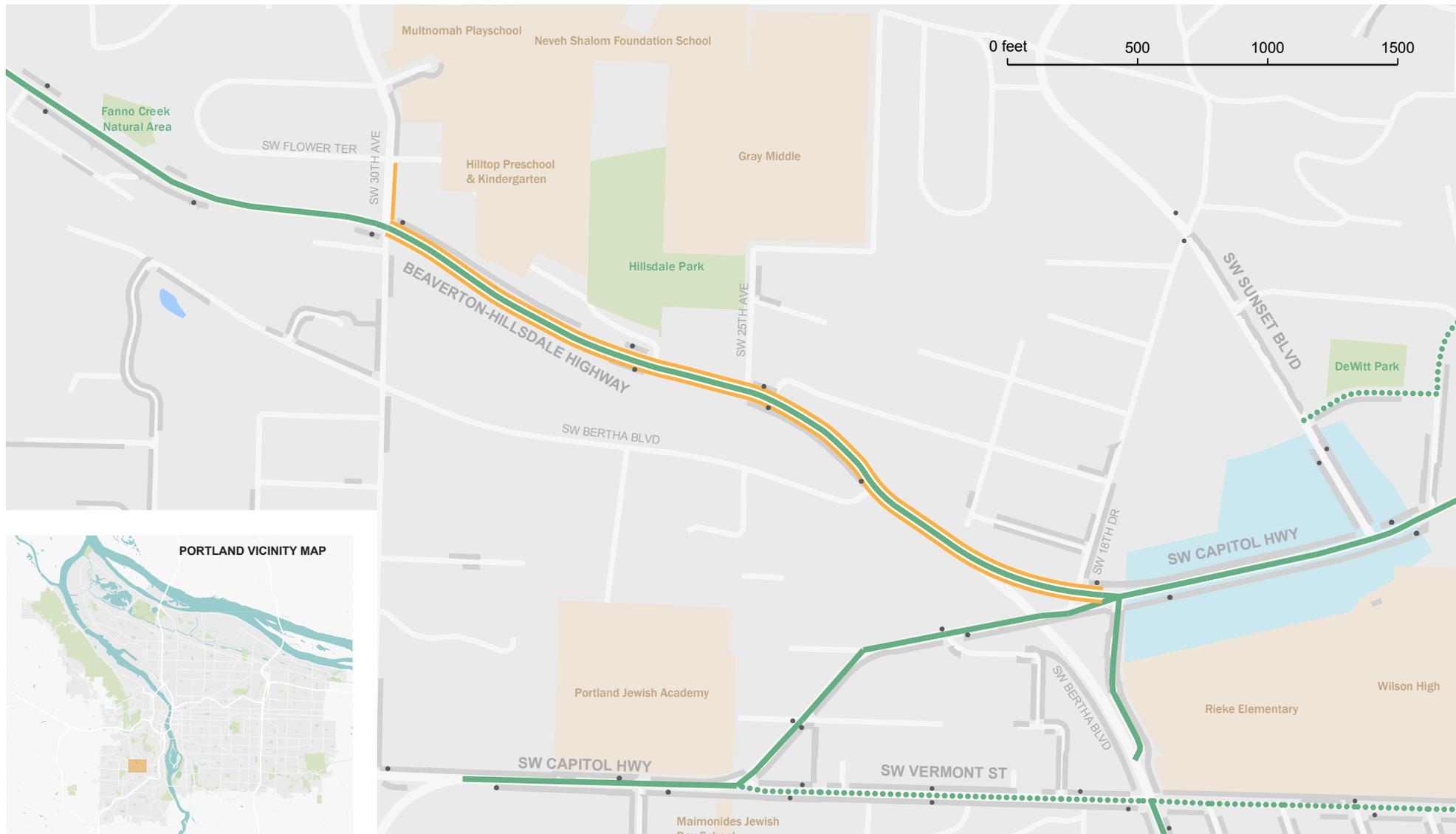
## Exhibit A: City of Portland Grant Applications for Metro Regional Flexible Funds

### Regional Freight Investment Projects

| Name (Alphabetical)   | Description  | Maximum Grant Request |
|---|--|-----------------------|
| Central Eastside Circulation and Safety Enhancement Project | Drawing on themes identified in the Central City 2035 Southeast Quadrant Plan, improve freight movement through the Central Eastside and reduce mode conflict. ITS improvements would include new traffic signals at MLK and Washington, Grand and Washington, 16 <sup>th</sup> and Irving and additional locations and protected left turns at Stark and Washington and Clay and Mill.  | \$3,500,000           |
| Columbia Blvd. ITS for Freight                              | The traffic signals throughout the Columbia Blvd. corridor are neither interconnected nor timed for the heavy concentration of truck activity that is present in the corridor. The individual performance characteristics of freight vehicles is not accounted for in current signal operations. As a result, travel through the corridor is unpredictable, negatively affecting the companies that depend on delivery as a part of their business. Smart Technologies and advanced communications infrastructure will allow active management of the corridor to improve conditions for freight and enable safer and more efficient progression of truck traffic. | \$750,000             |

# BEAVERTON HILLSDALE HIGHWAY SIDEWALK PROJECT

## Project elements



PORTLAND VICINITY MAP



# Project Estimate Report: Development Phase

for

## SW Beaverton-Hillsdale Hwy: 18<sup>th</sup> Drive to Dosch Road Sidewalk Infill

August 18, 2016

**Requested by:** Clay Veka

**Prepared by:** Ruthanne Bennett

**Location:** SW Dosch Road from Beaverton-Hillsdale Hwy. to 200' north  
SW Beaverton-Hillsdale Hwy. from SW Dosch Rd. to SW 18<sup>th</sup> Drive

**Description:** Construct 200' (total 400') of sidewalk on each side of SW Dosch Road.  
Construct 1750' (total 3500') of infill sidewalk or concrete path on each side  
SW B-H Hwy.

### Current Cross-Section:

Dosch Rd.: 2 through lanes, 1 right turn lane, 1 left turn lane in 60' AC pavement strip,  
right-of-way width varies

B-H Hwy.: 5 travel lanes with intermittent bike lanes, curb and curb tight sidewalk in 67'  
to 74' AC pavement, right-of-way width varies

### Proposed Cross-Section:

Dosch Rd.: 39' AC pavement with 2 through lanes and 1 left turn lane; curb, 4' planter  
and 6' sidewalk on both sides

B-H Hwy.: Retain 5 travel lanes and existing bike lanes and sidewalks.  
N. Side – Construct 7.5' curb tight sidewalk to replace AC pavement where  
no sidewalk exists.  
S. Side – In areas with no existing sidewalk, add 7.5' curb tight sidewalk  
along existing bike lane or construct 9' curb tight concrete multi-use path.  
Both options replace existing AC pavement.

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### Issues: *(describe issues, or indicate "none identified")*

- Water – none identified, possible relocations of valves and adjacent mains
- BES (storm, sanitary, water-quality facilities) – Pollution reduction needed. Install water quality planters along SW Dosch Rd.
- Signals and Street Lighting – none.
- Environmental and Zoning (OPDR; Army Corp of Engineers; Division of State Lands) – none
- Contaminated Media – none identified
- Right-of-Way Needs – none.
- Railroads (BNSF; UPRR; PTTR) – none
- Parks (landscaping and irrigation) – none
- Other Jurisdictions (counties, schools, Port, ODOT, Tri-Met) – ODOT, Trimet

**Cost Estimate:**Dosch Rd. and N. Side of B-H Hwy.: Dosch Rd. to 18<sup>th</sup> Dr.

|                                       |            |
|---------------------------------------|------------|
| Construction                          | \$713,000  |
| Project Management (5%)               | \$ 28,000  |
| Design Engineering (25%)              | \$141,000  |
| Construction Management (15%)         | \$ 84,000  |
| Right-of-Way (Cost + 20% Contingency) | 0          |
| Overhead (79.27%)                     | \$ 201,000 |
| Estimate Contingency                  | \$500,000  |

Total Project Estimate: \$1,667,000S. Side of B-H Hwy.: Dosch Rd. to 25<sup>th</sup> Ave.

|                                       |           |
|---------------------------------------|-----------|
| Construction                          | \$394,000 |
| Project Management (5%)               | \$ 16,000 |
| Design Engineering (25%)              | \$ 80,000 |
| Construction Management (15%)         | \$ 48,000 |
| Right-of-Way (Cost + 20% Contingency) | 0         |
| Overhead (79.27%)                     | \$114,000 |
| Estimate Contingency                  | \$279,000 |

Total Project Estimate: \$931,000S. Side of B-H Hwy.: 25<sup>th</sup> Ave. to 18<sup>th</sup> Dr.

|                                       |           |
|---------------------------------------|-----------|
| Construction                          | \$196,000 |
| Project Management (5%)               | \$ 7,000  |
| Design Engineering (25%)              | \$ 37,000 |
| Construction Management (15%)         | \$ 22,000 |
| Right-of-Way (Cost + 20% Contingency) | 0         |
| Overhead (79.27%)                     | \$ 52,000 |
| Estimate Contingency                  | \$136,000 |

Total Project Estimate: \$450,000Total

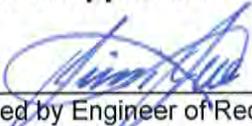
|                                       |             |
|---------------------------------------|-------------|
| Construction                          | \$1,303,000 |
| Project Management (5%)               | \$ 51,000   |
| Design Engineering (25%)              | \$ 258,000  |
| Construction Management (15%)         | \$ 154,000  |
| Right-of-Way (Cost + 20% Contingency) | 0           |
| Overhead (79.27%)                     | \$ 367,000  |
| Estimate Contingency                  | \$ 915,000  |

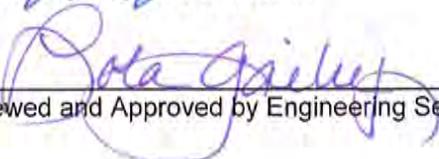
Total Project Estimate: \$3,048,000

**Estimating Assumptions:**

- Existing conditions per GIS, site visit and photos where available.
- All sidewalk and bike/pedestrian path construction will replace existing AC pavement. Striping on Beaverton-Hillsdale Hwy. will be done as part of a separate paving project (with the exception of bike/pedestrian stencils for concrete paths). Wendy Cawley designed the proposed striping on Beaverton-Hillsdale Hwy. to allow for construction of sidewalk or bike/pedestrian path within the edges of existing pavement.
- The BES estimate for water quality facilities along Dosch Rd. was provided by Tim Knighton. The stormwater off-site management fee is not required for impervious area proposed along Beaverton-Hillsdale Highway.
- No right-of-way acquisition is required.
- No walls are required.
- Estimate includes 25' spacing for street trees in planting strip along Dosch Rd. only. No trees along Beaverton-Hillsdale Hwy. due to lack of width and many existing trees.
- Street lighting is adequate.
- Bid item construction contingency is 3½ % due to federal funding.
- Assume construction within 5 years.
- Level of confidence for estimate is low.

**Review & Approval:**

  
\_\_\_\_\_  
Reviewed by Engineer of Record 8.19.16  
Date

  
\_\_\_\_\_  
Reviewed and Approved by Engineering Services Division Manager 8/19/16  
Date

**Attachments:**

- Detailed estimate spreadsheet
- Site map

## **Hillsdale Town Center Pedestrian Connections: Sidewalk Infill on SW Beaverton-Hillsdale Hwy**

**Project Description:** Construct sidewalk infill on SW Beaverton-Hillsdale Highway between Dosch and 18th Avenue/Hillsdale Town Center and on Dosch from Beaverton-Hillsdale Highway to Flower (1 block.)

**Project Cost Estimate:** \$3,646,000

**Grant Request Estimate:** \$3,272,000

**Purpose and Need for Project:** There is a lack of pedestrian facilities within the Hillsdale Pedestrian District leading to Hillsdale Town Center and nearby Robert Gray Middle School and Lincoln High School. Currently, pedestrians must walk in the bike lane along Beaverton-Hillsdale Highway on segments where the posted speed is 40 MPH. This project would fill important sidewalk gaps, providing pedestrian access to transit and schools, better access to Hillsdale Town Center and the Red Electric Trail, and provide separation between bicyclists and pedestrians on Beaverton-Hillsdale Highway.

**Why is this a priority?** Project scores highly on safety, equity, and health criteria. High safety score because the project will add sidewalks to a High Crash Corridor which is classified as a Major City Traffic Street and is used for school routes with school crossings. High equity score because of concentrations of low income housing along Beaverton-Hillsdale Highway. High health score because project addresses an area very deficient in active transportation facilities.

**Readiness Factors:** This project is well scoped and has a planning level cost estimate. This project has high community and political support.

### **Meets RFF Criteria:**

- Benefits underserved communities immediately adjacent to the corridor that rely on active transportation
- Improves safety on a High Crash Corridor and removes conflicts between modes
- Improves access to and from priority destinations, including multiple schools and the Hillsdale Town Center

Regional Flexible Funds Active Transportation Candidate Project (details subject to change)



CITY OF PORTLAND, OREGON  
BUREAU OF TRANSPORTATION  
PRELIMINARY ENGINEER'S ESTIMATE

SW Beaverton-Hillsdale Hwy from 18th Dr. to Dosch Rd. Sidewalk Infill, N. Side

Date: August 18, 2016

By: RB

PRELIMINARY ENGINEER'S ESTIMATE FOR THE IMPROVEMENT OF B-H Hwy FROM 18th TO Dosch AND OF SW Dosch FROM B-H Hwy. TO 200' North  
VALUES IN BLUE ARE PERCENT OF CONTRACT.

##### BID ITEMS #####

| NO. | ITEMS OF WORK AND MATERIALS                 | UNIT | TOTAL<br>QUANTITY | UNIT PRICE   | TOTAL<br>AMOUNT |
|-----|---|------|-------------------|--------------|-----------------|
| 1   | MOBILIZATION                                | LS   | 1.00              | \$ 46,615.18 | \$ 46,615.18    |
| 2   | TEMPORARY PROTECTION & DIRECTION OF TRAFFIC | LS   | 1.00              | \$ 13,984.55 | \$ 13,984.55    |
| 3   | TEMPORARY SIGNS                             | SQFT | 162.00            | \$ 20.00     | \$ 3,240.00     |
| 4   | TEMPORARY BARRICADES, TYPE II               | EACH | 0.00              | \$ 100.00    | \$ -            |
| 5   | TEMPORARY BARRICADES, TYPE III              | EACH | 0.00              | \$ 150.00    | \$ -            |
| 6   | TEMPORARY CONCRETE BARRIER, REFLECTORIZED   | FOOT | 0.00              | \$ 17.00     | \$ -            |
| 7   | MOVING TEMPORARY CONCRETE BARRIER           | FOOT | 0.00              | \$ 5.30      | \$ -            |
| 8   | TEMPORARY IMPACT ATTENUATOR                 | EACH | 0.00              | \$ 1,150.00  | \$ -            |
| 9   | TEMPORARY PEDESTRIAN WALKWAYS               | FOOT | 0.00              | \$ 65.00     | \$ -            |
| 10  | TEMPORARY PLASTIC DRUMS                     | EACH | 10.00             | \$ 52.00     | \$ 520.00       |
| 11  | TEMPORARY REFLECTIVE PAVEMENT MARKERS       | EACH | 0.00              | \$ 4.80      | \$ -            |
| 12  | TEMPORARY FLEXIBLE PAVEMENT MARKERS         | EACH | 0.00              | \$ 3.00      | \$ -            |
| 13  | TEMPORARY STRIPING                          | FOOT | 0.00              | \$ 0.65      | \$ -            |
| 14  | STRIPE REMOVAL                              | FOOT | 0.00              | \$ 0.82      | \$ -            |
| 15  | STRIPING & STRIPE REMOVAL MOBILIZATION      | EACH | 0.00              | \$ 425.00    | \$ -            |
| 16  | TEMPORARY TRAFFIC SIGNAL INSTALLATION       | EACH | 0.00              | \$ 68,000.00 | \$ -            |
| 17  | SEQUENTIAL ARROW SIGNS                      | EACH | 0.00              | \$ 1,800.00  | \$ -            |
| 18  | PORTABLE CHANGEABLE MESSAGE SIGNS           | EACH | 1.00              | \$ 4,330.00  | \$ 4,330.00     |
| 19  | FLAGGERS                                    | hour | 1,000.00          | \$ 48.50     | \$ 48,500.00    |
| 20  | TRAFFIC CONTROL SUPERVISOR                  | hour | 0.00              | \$ 65.40     | \$ -            |
| 21  | TEMPORARY TYPE ORANGE PLASTIC MESH FENCE    | FOOT | 0.00              | \$ 3.60      | \$ -            |
| 22  | TEMPORARY CL-6R CHAIN LINK FENCE            | FOOT | 0.00              | \$ 17.60     | \$ -            |
| 23  | EROSION CONTROL                             | LS   | 1.00              | \$ 4,661.52  | \$ 4,661.52     |
| 24  | PLASTIC SHEETING                            | SQFT | 0.00              | \$ 0.20      | \$ -            |
| 25  | MATTING                                     | SQFT | 0.00              | \$ 0.78      | \$ -            |
| 26  | CONSTRUCTION ENTRANCES                      | EACH | 0.00              | \$ 1,890.00  | \$ -            |
| 27  | SEDIMENT FENCE, SUPPORTED                   | FOOT | 0.00              | \$ 4.20      | \$ -            |
| 28  | SEDIMENT FENCE, UNSUPPORTED                 | FOOT | 400.00            | \$ 2.50      | \$ 1,000.00     |
| 29  | INLET PROTECTION                            | EACH | 16.00             | \$ 88.00     | \$ 1,408.00     |
| 30  | POLLUTION CONTROL PLAN                      | LS   | 1.00              | \$ 466.15    | \$ 466.15       |
| 31  | CONTAMINATED MEDIA DISPOSAL                 | CUYD | 0.00              | \$ 163.00    | \$ -            |
| 32  | TRUCK LINERS                                | EACH | 0.00              | \$ 470.00    | \$ -            |
| 33  | HASP/CMDP WORKPLANS                         | LS   | 0.00              | \$ 1,000.00  | \$ -            |
| 34  | REMOVAL OF PIPES                            | FOOT | 0.00              | \$ 25.30     | \$ -            |
| 35  | REMOVAL OF CURBS                            | FOOT | 0.00              | \$ 7.30      | \$ -            |
| 36  | REMOVAL OF WALKS AND DRIVEWAYS              | SQYD | 0.00              | \$ 13.90     | \$ -            |
| 37  | REMOVAL OF SURFACINGS                       | SQYD | 0.00              | \$ 8.20      | \$ -            |
| 38  | REMOVAL OF INLETS                           | EACH | 0.00              | \$ 310.00    | \$ -            |
| 39  | REMOVAL OF MANHOLES                         | EACH | 0.00              | \$ 1,050.00  | \$ -            |
| 40  | REMOVAL OF RAILROAD TRACK AND TIES          | FOOT | 0.00              | \$ 58.70     | \$ -            |
| 41  | SALVAGING AND STOCKPILING OF COBBLESTONES   | SQYD | 0.00              | \$ 20.90     | \$ -            |
| 42  | REMOVE AND REINSTALL HORSE RINGS            | EACH | 0.00              | \$ 227.00    | \$ -            |
| 43  | REMOVAL OF STRUCTURES & OBSTRUCTIONS        | LS   | 1.00              | \$ 18,646.07 | \$ 18,646.07    |
| 44  | REMOVAL OF FENCES                           | FOOT | 0.00              | \$ 3.06      | \$ -            |
| 45  | CLEARING AND GRUBBING                       | LS   | 1.00              | \$ 12,119.95 | \$ 12,119.95    |
| 46  | TREE ROOT REMOVAL                           | hour | 0.00              | \$ 178.00    | \$ -            |
| 47  | TREE TRIMMING                               | hour | 0.00              | \$ 152.00    | \$ -            |
| 48  | DITCH EXCAVATION                            | CUYD | 0.00              | \$ 18.00     | \$ -            |
| 49  | GENERAL EXCAVATION                          | CUYD | 316.00            | \$ 49.00     | \$ 15,484.00    |
| 50  | SURCHARGE EXCAVATION                        | CUYD | 0.00              | \$ 3.80      | \$ -            |
| 51  | EMBANKMENT IN PLACE                         | CUYD | 0.00              | \$ 24.00     | \$ -            |

CITY OF PORTLAND, OREGON  
BUREAU OF TRANSPORTATION  
PRELIMINARY ENGINEER'S ESTIMATE

SW Beaverton-Hillsdale Hwy from 18th Dr. to Dosch Rd. Sidewalk Infill, N. Side

Date: August 18, 2016

By: RB

PRELIMINARY ENGINEER'S ESTIMATE FOR THE IMPROVEMENT OF B-H Hwy FROM 18th TO Dosch AND OF SW Dosch FROM B-H Hwy. TO 200' North  
VALUES IN BLUE ARE PERCENT OF CONTRACT.

##### BID ITEMS #####

| NO. | ITEMS OF WORK AND MATERIALS                 | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|---|------|----------------|--------------|--------------|
| 1   | MOBILIZATION                                | LS   | 1.00           | \$ 46,615.18 | \$ 46,615.18 |
| 2   | TEMPORARY PROTECTION & DIRECTION OF TRAFFIC | LS   | 1.00           | \$ 13,984.55 | \$ 13,984.55 |
| 3   | TEMPORARY SIGNS                             | SQFT | 162.00         | \$ 20.00     | \$ 3,240.00  |
| 4   | TEMPORARY BARRICADES, TYPE II               | EACH | 0.00           | \$ 100.00    | \$ -         |
| 5   | TEMPORARY BARRICADES, TYPE III              | EACH | 0.00           | \$ 150.00    | \$ -         |
| 6   | TEMPORARY CONCRETE BARRIER, REFLECTORIZED   | FOOT | 0.00           | \$ 17.00     | \$ -         |
| 7   | MOVING TEMPORARY CONCRETE BARRIER           | FOOT | 0.00           | \$ 5.30      | \$ -         |
| 8   | TEMPORARY IMPACT ATTENUATOR                 | EACH | 0.00           | \$ 1,150.00  | \$ -         |
| 9   | TEMPORARY PEDESTRIAN WALKWAYS               | FOOT | 0.00           | \$ 65.00     | \$ -         |
| 10  | TEMPORARY PLASTIC DRUMS                     | EACH | 10.00          | \$ 52.00     | \$ 520.00    |
| 11  | TEMPORARY REFLECTIVE PAVEMENT MARKERS       | EACH | 0.00           | \$ 4.80      | \$ -         |
| 12  | TEMPORARY FLEXIBLE PAVEMENT MARKERS         | EACH | 0.00           | \$ 3.00      | \$ -         |
| 13  | TEMPORARY STRIPING                          | FOOT | 0.00           | \$ 0.65      | \$ -         |
| 14  | STRIPE REMOVAL                              | FOOT | 0.00           | \$ 0.82      | \$ -         |
| 15  | STRIPING & STRIPE REMOVAL MOBILIZATION      | EACH | 0.00           | \$ 425.00    | \$ -         |
| 16  | TEMPORARY TRAFFIC SIGNAL INSTALLATION       | EACH | 0.00           | \$ 68,000.00 | \$ -         |
| 17  | SEQUENTIAL ARROW SIGNS                      | EACH | 0.00           | \$ 1,800.00  | \$ -         |
| 18  | PORTABLE CHANGEABLE MESSAGE SIGNS           | EACH | 1.00           | \$ 4,330.00  | \$ 4,330.00  |
| 19  | FLAGGERS                                    | HOUR | 1,000.00       | \$ 48.50     | \$ 48,500.00 |
| 20  | TRAFFIC CONTROL SUPERVISOR                  | HOUR | 0.00           | \$ 65.40     | \$ -         |
| 21  | TEMPORARY TYPE ORANGE PLASTIC MESH FENCE    | FOOT | 0.00           | \$ 3.60      | \$ -         |
| 22  | TEMPORARY CL-6R CHAIN LINK FENCE            | FOOT | 0.00           | \$ 17.60     | \$ -         |
| 23  | EROSION CONTROL                             | LS   | 1.00           | \$ 4,661.52  | \$ 4,661.52  |
| 24  | PLASTIC SHEETING                            | SQFT | 0.00           | \$ 0.20      | \$ -         |
| 25  | MATTING                                     | SQFT | 0.00           | \$ 0.78      | \$ -         |
| 26  | CONSTRUCTION ENTRANCES                      | EACH | 0.00           | \$ 1,890.00  | \$ -         |
| 27  | SEDIMENT FENCE, SUPPORTED                   | FOOT | 0.00           | \$ 4.20      | \$ -         |
| 28  | SEDIMENT FENCE, UNSUPPORTED                 | FOOT | 400.00         | \$ 2.50      | \$ 1,000.00  |
| 29  | INLET PROTECTION                            | EACH | 16.00          | \$ 88.00     | \$ 1,408.00  |
| 30  | POLLUTION CONTROL PLAN                      | LS   | 1.00           | \$ 466.15    | \$ 466.15    |
| 31  | CONTAMINATED MEDIA DISPOSAL                 | CUYD | 0.00           | \$ 163.00    | \$ -         |
| 32  | TRUCK LINERS                                | EACH | 0.00           | \$ 470.00    | \$ -         |
| 33  | HASP/CMDP WORKPLANS                         | LS   | 0.00           | \$ 1,000.00  | \$ -         |
| 34  | REMOVAL OF PIPES                            | FOOT | 0.00           | \$ 25.30     | \$ -         |
| 35  | REMOVAL OF CURBS                            | FOOT | 0.00           | \$ 7.30      | \$ -         |
| 36  | REMOVAL OF WALKS AND DRIVEWAYS              | SQYD | 0.00           | \$ 13.90     | \$ -         |
| 37  | REMOVAL OF SURFACINGS                       | SQYD | 0.00           | \$ 8.20      | \$ -         |
| 38  | REMOVAL OF INLETS                           | EACH | 0.00           | \$ 310.00    | \$ -         |
| 39  | REMOVAL OF MANHOLES                         | EACH | 0.00           | \$ 1,050.00  | \$ -         |
| 40  | REMOVAL OF RAILROAD TRACK AND TIES          | FOOT | 0.00           | \$ 58.70     | \$ -         |
| 41  | SALVAGING AND STOCKPILING OF COBBLESTONES   | SQYD | 0.00           | \$ 20.90     | \$ -         |
| 42  | REMOVE AND REINSTALL HORSE RINGS            | EACH | 0.00           | \$ 227.00    | \$ -         |
| 43  | REMOVAL OF STRUCTURES & OBSTRUCTIONS        | LS   | 1.00           | \$ 18,646.07 | \$ 18,646.07 |
| 44  | REMOVAL OF FENCES                           | FOOT | 0.00           | \$ 3.06      | \$ -         |
| 45  | CLEARING AND GRUBBING                       | LS   | 1.00           | \$ 12,119.95 | \$ 12,119.95 |
| 46  | TREE ROOT REMOVAL                           | HOUR | 0.00           | \$ 178.00    | \$ -         |
| 47  | TREE TRIMMING                               | HOUR | 0.00           | \$ 152.00    | \$ -         |
| 48  | DITCH EXCAVATION                            | CUYD | 0.00           | \$ 18.00     | \$ -         |
| 49  | GENERAL EXCAVATION                          | CUYD | 316.00         | \$ 49.00     | \$ 15,484.00 |
| 50  | SURCHARGE EXCAVATION                        | CUYD | 0.00           | \$ 3.80      | \$ -         |
| 51  | EMBANKMENT IN PLACE                         | CUYD | 0.00           | \$ 24.00     | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                    | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|--|------|----------------|--------------|--------------|
| 52  | SETTLEMENT PLATE   | EACH | 0.00           | \$ 772.00    | \$ -         |
| 53  | 12 INCH SUBGRADE STABILIZATION                                 | SQYD | 0.00           | \$ 30.17     | \$ -         |
| 54  | AGGREGATE DITCH LINING   | SQYD | 0.00           | \$ 38.40     | \$ -         |
| 55  | WATERING   | MGAL | 0.00           | \$ 26.20     | \$ -         |
| 56  | DRAINAGE GEOTEXTILE, TYPE 2                                    | SQYD | 0.00           | \$ 1.05      | \$ -         |
| 57  | EMBANKMENT GEOTEXTILE  | SQYD | 0.00           | \$ 1.50      | \$ -         |
| 58  | SUBGRADE GEOTEXTILE  | SQYD | 0.00           | \$ 1.25      | \$ -         |
| 59  | GEOGRID  | SQYD | 0.00           | \$ 2.60      | \$ -         |
| 60  | GRANULAR DRAINAGE BLANKET                                      | TON  | 0.00           | \$ 93.00     | \$ -         |
| 61  | FILTER BLANKET   | SQYD | 0.00           | \$ 15.00     | \$ -         |
| 62  | LOOSE RIPRAP, CLASS 50   | CUYD | 0.00           | \$ 35.10     | \$ -         |
| 63  | LOOSE RIPRAP, CLASS 100  | CUYD | 0.00           | \$ 59.70     | \$ -         |
| 64  | WIRE MESH SLOPE PROTECTION                                     | SQFT | 0.00           | \$ 5.60      | \$ -         |
| 65  | VIDEO INSPECTION OF SEWERS, MAINLINE                           | FOOT | 0.00           | \$ 3.30      | \$ -         |
| 66  | TRENCH EXCAVATION, COMMON                                      | CUYD | 0.00           | \$ 16.70     | \$ -         |
| 67  | EXPLORATORY EXCAVATION   | CUYD | 0.00           | \$ 51.60     | \$ -         |
| 68  | POTHOLE EXCAVATION   | EACH | 0.00           | \$ 548.00    | \$ -         |
| 69  | TRENCH FOUNDATION STABILIZATION                                | CUYD | 0.00           | \$ 61.00     | \$ -         |
| 70  | TRENCH BACKFILL, CLASS B                                       | CUYD | 0.00           | \$ 33.00     | \$ -         |
| 71  | STORMWATER CURB EXTENSIONS                                     | SQFT | 0.00           | \$ 23.80     | \$ -         |
| 72  | STORMWATER PLANTERS  | SQFT | 733.00         | \$ 38.10     | \$ 27,927.30 |
| 73  | STORMWATER SWALES  | SQFT | 0.00           | \$ 15.10     | \$ -         |
| 74  | 3 INCH DRAIN PIPE  | FOOT | 0.00           | \$ 17.00     | \$ -         |
| 75  | SUBSURFACE DRAIN OUTLETS                                       | EACH | 0.00           | \$ 387.00    | \$ -         |
| 76  | 12 INCH PIPE, PVC AWWA C900, CI 150, BEDDING TYPE: D, COMPLETE | FOOT | 0.00           | \$ 130.00    | \$ -         |
| 77  | 6 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D             | FOOT | 0.00           | \$ 80.00     | \$ -         |
| 78  | 8 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D             | FOOT | 0.00           | \$ 90.00     | \$ -         |
| 79  | 10 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D, COMPLETE  | FOOT | 50.00          | \$ 110.00    | \$ 5,500.00  |
| 80  | 12 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D, COMPLETE  | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 81  | 18 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D            | FOOT | 0.00           | \$ 130.00    | \$ -         |
| 82  | 10 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D, COMPLETE   | FOOT | 0.00           | \$ 110.00    | \$ -         |
| 83  | 12 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D, COMPLETE   | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 84  | 8 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D              | FOOT | 0.00           | \$ 90.00     | \$ -         |
| 85  | 10 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D             | FOOT | 0.00           | \$ 110.00    | \$ -         |
| 86  | 12 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D             | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 87  | CONCRETE CLOSURE COLLAR  | EACH | 0.00           | \$ 550.00    | \$ -         |
| 88  | CONCRETE MANHOLES, 48 INCH, 0-8 FT DEPTH                       | EACH | 0.00           | \$ 4,400.00  | \$ -         |
| 89  | CONCRETE MANHOLES, 48 INCH, DEEPER THAN 8 FT                   | FOOT | 0.00           | \$ 300.00    | \$ -         |
| 90  | CONCRETE MANHOLES, SANITARY SEWER                              | EACH | 0.00           | \$ 3,460.00  | \$ -         |
| 91  | CONCRETE MANHOLES, WATER QUALITY                               | EACH | 0.00           | \$ 12,410.00 | \$ -         |
| 92  | CONCRETE MANHOLES, SEDIMENTATION                               | EACH | 0.00           | \$ 5,610.00  | \$ -         |
| 93  | CONCRETE MANHOLES, SUMP  | EACH | 0.00           | \$ 13,000.00 | \$ -         |
| 94  | SUMP CAPACITY TEST   | EACH | 0.00           | \$ 1,690.00  | \$ -         |
| 95  | CONCRETE INLETS, TYPE CG-1                                     | EACH | 0.00           | \$ 1,700.00  | \$ -         |
| 96  | CONCRETE INLETS, TYPE CG-2                                     | EACH | 5.00           | \$ 1,900.00  | \$ 9,500.00  |
| 97  | CONCRETE INLETS, TYPE CG-3                                     | EACH | 0.00           | \$ 2,000.00  | \$ -         |
| 98  | CONCRETE INLETS, TYPE D  | EACH | 0.00           | \$ 1,750.00  | \$ -         |
| 99  | CONCRETE INLETS, TYPE G-1                                      | EACH | 0.00           | \$ 1,940.00  | \$ -         |
| 100 | CONCRETE INLETS, TYPE G-2                                      | EACH | 0.00           | \$ 1,800.00  | \$ -         |
| 101 | CONCRETE INLETS, TYPE G-2MA                                    | EACH | 0.00           | \$ 1,900.00  | \$ -         |
| 102 | CONCRETE INLETS, DEEPER THAN 4 FT                              | FOOT | 0.00           | \$ 300.00    | \$ -         |
| 103 | CONCRETE INLETS, TYPE METAL                                    | EACH | 0.00           | \$ 500.00    | \$ -         |
| 104 | CONCRETE INLETS, TYPE METAL, MODIFIED                          | EACH | 0.00           | \$ 550.00    | \$ -         |
| 105 | CONCRETE INLETS, TYPE CHANNEL & GRATE                          | EACH | 0.00           | \$ 2,290.00  | \$ -         |
| 106 | CONCRETE INLETS, TYPE CONCRETE                                 | EACH | 10.00          | \$ 135.00    | \$ 1,350.00  |
| 107 | CONCRETE INLETS, TYPE BEEHIVE                                  | EACH | 2.00           | \$ 1,500.00  | \$ 3,000.00  |
| 108 | CATCH BASINS, METAL SUMP                                       | EACH | 0.00           | \$ 1,710.00  | \$ -         |
| 109 | ACCESS DOORS   | EACH | 0.00           | \$ 2,700.00  | \$ -         |
| 110 | DRAINAGE CURBS   | FOOT | 0.00           | \$ 19.10     | \$ -         |
| 111 | ADJUSTING BOXES  | EACH | 0.00           | \$ 217.00    | \$ -         |
| 112 | CONNECTION TO EXISTING STRUCTURES                              | EACH | 0.00           | \$ 841.00    | \$ -         |
| 113 | ADJUSTING INLETS   | EACH | 0.00           | \$ 664.00    | \$ -         |
| 114 | FILLING ABANDON STRUCTURES                                     | EACH | 0.00           | \$ 3,000.00  | \$ -         |
| 115 | MINOR ADJUSTMENT OF MANHOLES                                   | EACH | 7.00           | \$ 642.00    | \$ 4,494.00  |
| 116 | MAJOR ADJUSTMENT OF MANHOLES                                   | EACH | 0.00           | \$ 1,520.00  | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                 | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT  |
|-----|---|------|----------------|--------------|---------------|
| 117 | MANHOLES OVER EXISTING SEWERS                               | EACH | 0.00           | \$ 4,200.00  | \$ -          |
| 118 | TRENCH RESURFACING  | SQYD | 0.00           | \$ 109.00    | \$ -          |
| 119 | TEMPORARY TRENCH RESURFACING                                | SQYD | 0.00           | \$ 25.20     | \$ -          |
| 120 | SHORING, CRIBBING AND COFFERDAMS                            | LS   | 0.00           | \$ -         | \$ -          |
| 121 | STRUCTURE EXCAVATION  | CUYD | 0.00           | \$ 48.30     | \$ -          |
| 122 | GRANULAR WALL BACKFILL                                      | CUYD | 0.00           | \$ 63.90     | \$ -          |
| 123 | GRANULAR STRUCTURAL BACKFILL                                | CUYD | 0.00           | \$ 40.60     | \$ -          |
| 124 | REINFORCEMENT   | LS*  | 0.00           | \$ 0.86      | \$ -          |
| 125 | CONCRETE BRIDGE   | SQFT | 0.00           | \$ 250.00    | \$ -          |
| 126 | BIKE OASIS  | EACH | 0.00           | \$ 32,400.00 | \$ -          |
| 127 | 3 INCH ELECTRICAL CONDUIT                                   | FOOT | 0.00           | \$ 9.05      | \$ -          |
| 128 | ASPHALTIC PLUG JOINT SEALS                                  | LS   | 0.00           | \$ 7,470.00  | \$ -          |
| 129 | ASPHALTIC PLUG JOINT SEAL MATERIAL                          | CUYD | 0.00           | \$ 5,350.00  | \$ -          |
| 130 | CONCRETE BRIDGE RAIL WITH ORNAMENTAL PROTECTIVE SCREENING   | LS*  | 0.00           | \$ 158.00    | \$ -          |
| 131 | RETAINING WALL, CAST-IN-PLACE CONCRETE                      | SQFT | 0.00           | \$ 95.80     | \$ -          |
| 132 | RETAINING WALL, GABION                                      | SQFT | 0.00           | \$ 24.10     | \$ -          |
| 133 | RETAINING WALL, PREFABRICATED MODULAR                       | SQFT | 0.00           | \$ 39.50     | \$ -          |
| 134 | RETAINING WALL, CONVENTIONAL SEGMENTAL                      | SQFT | 0.00           | \$ 43.30     | \$ -          |
| 135 | RETAINING WALL, MSE   | SQFT | 0.00           | \$ 49.00     | \$ -          |
| 136 | SOUND WALLS   | SQFT | 0.00           | \$ 23.50     | \$ -          |
| 137 | CONCRETE ARCH CULVERT                                       | FOOT | 0.00           | \$ 1,530.00  | \$ -          |
| 138 | CONCRETE SLOPE PAVING                                       | SQFT | 0.00           | \$ 11.25     | \$ -          |
| 139 | COLD PLANE PAVEMENT REMOVAL, 2 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 140 | COLD PLANE PAVEMENT REMOVAL, 3 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 141 | COLD PLANE PAVEMENT REMOVAL, 4 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 142 | COLD PLANE PAVEMENT REMOVAL, 5 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 143 | AGGREGATE BASE  | TON  | 0.00           | \$ 36.90     | \$ -          |
| 144 | AGGREGATE BASE, 4 INCH THICK                                | SQYD | 0.00           | \$ 7.15      | \$ -          |
| 145 | AGGREGATE BASE, 6 INCH THICK                                | SQYD | 0.00           | \$ 9.80      | \$ -          |
| 146 | AGGREGATE BASE, 8 INCH THICK                                | SQYD | 0.00           | \$ 12.30     | \$ -          |
| 147 | LEVEL 1, 1/2 INCH DENSE, MWMAC MIXTURE, IN TEMPORARY        | TON  | 0.00           | \$ 89.50     | \$ -          |
| 148 | LEVEL 2, 1/2 INCH DENSE, MWMAC MIXTURE                      | TON  | 0.00           | \$ 89.50     | \$ -          |
| 149 | LEVEL 3, 1/2 INCH DENSE, MWMAC MIXTURE                      | TON  | 0.00           | \$ 89.50     | \$ -          |
| 150 | LEVEL 3, 1/2 INCH DENSE, MWMAC MIXTURE, IN LEVELING         | TON  | 0.00           | \$ 89.50     | \$ -          |
| 151 | LEVEL 3, 3/4 INCH ATPB, MWMAC MIXTURE                       | TON  | 0.00           | \$ 89.50     | \$ -          |
| 152 | CRACK SEALING   | FOOT | 0.00           | \$ 1.00      | \$ -          |
| 153 | 13 INCH ASPHALT CONCRETE PAVEMENT REPAIR                    | SQYD | 245.00         | \$ 179.00    | \$ 43,855.00  |
| 154 | 16 INCH ASPHALT CONCRETE PAVEMENT REPAIR                    | SQYD | 0.00           | \$ 112.00    | \$ -          |
| 155 | EXTRA FOR ASPHALT APPROACHES                                | EACH | 0.00           | \$ 651.00    | \$ -          |
| 156 | ASPHALT CONNECTIONS   | SQFT | 0.00           | \$ 7.30      | \$ -          |
| 157 | ASPHALT SPEED BUMPS   | EACH | 0.00           | \$ 1,800.00  | \$ -          |
| 158 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 6 INCH THICK           | SQYD | 0.00           | \$ 64.70     | \$ -          |
| 159 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 8 INCH THICK           | SQYD | 0.00           | \$ 66.40     | \$ -          |
| 160 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 10 INCH THICK          | SQYD | 0.00           | \$ 68.10     | \$ -          |
| 161 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 12 INCH THICK          | SQYD | 0.00           | \$ 70.00     | \$ -          |
| 162 | PLAIN PERVIOUS CONCRETE PAVEMENT, UNDOWELLED, 10-INCH THICK | SQYD | 0.00           | \$ 73.00     | \$ -          |
| 163 | CONCRETE CURBS, CURB AND GUTTER                             | FOOT | 0.00           | \$ 33.03     | \$ -          |
| 164 | CONCRETE CURBS, STANDARD CURB                               | FOOT | 217.00         | \$ 25.50     | \$ 5,533.50   |
| 165 | CONCRETE CURB, MOUNTABLE CURB                               | FOOT | 0.00           | \$ 28.09     | \$ -          |
| 166 | CONCRETE CURBS, THICKENED CURB AND GUTTER                   | FOOT | 183.00         | \$ 37.70     | \$ 6,899.10   |
| 167 | CONCRETE ISLANDS  | SQFT | 0.00           | \$ 11.70     | \$ -          |
| 168 | CONCRETE DRIVEWAYS  | SQFT | 630.00         | \$ 8.40      | \$ 5,292.00   |
| 169 | CONCRETE DRIVEWAYS, REINFORCED                              | SQFT | 0.00           | \$ 9.20      | \$ -          |
| 170 | CONCRETE WALKS  | SQFT | 2,400.00       | \$ 7.40      | \$ 17,760.00  |
| 171 | MONOLITHIC CURB AND SIDEWALKS                               | SQFT | 12,908.00      | \$ 18.00     | \$ 232,344.00 |
| 172 | MONOLITHIC CURB GUTTER AND SIDEWALKS                        | SQFT | 0.00           | \$ 19.00     | \$ -          |
| 173 | CONCRETE VALLEY GUTTER                                      | FOOT | 0.00           | \$ 35.90     | \$ -          |
| 174 | 6 INCH CONCRETE SURFACING                                   | SQFT | 0.00           | \$ 4.90      | \$ -          |
| 175 | CONCRETE STAIRS   | CUYD | 0.00           | \$ 2,170.00  | \$ -          |
| 176 | CONCRETE DRIVEWAY CONNECTIONS                               | SQFT | 0.00           | \$ 7.75      | \$ -          |
| 177 | CONCRETE SIDEWALK RAMPS                                     | EACH | 0.00           | \$ 1,930.00  | \$ -          |
| 178 | CONCRETE BUS SHELTER PADS                                   | EACH | 0.00           | \$ 730.00    | \$ -          |
| 179 | DETECTABLE WARNING SURFACE                                  | SQFT | 0.00           | \$ 42.30     | \$ -          |
| 180 | MONOLITHIC SIDEWALKS AND WALL, REINFORCED                   | SQFT | 0.00           | \$ 14.00     | \$ -          |
| 181 | BRICK PAVERS  | SQFT | 0.00           | \$ 45.90     | \$ -          |

| NO. | ITEMS OF WORK AND MATERIALS                      | UNIT | TOTAL QUANTITY | UNIT PRICE    | TOTAL AMOUNT |
|-----|--|------|----------------|---------------|--------------|
| 182 | CONCRETE PAVERS                                  | SQFT | 0.00           | \$ 11.70      | \$ -         |
| 183 | PERMEABLE PAVERS                                 | SQFT | 0.00           | \$ 11.00      | \$ -         |
| 184 | CONCRETE RAILROAD CROSSING                       | FOOT | 0.00           | \$ 472.00     | \$ -         |
| 185 | GUARDRAIL, TYPE 2A                               | FOOT | 0.00           | \$ 17.30      | \$ -         |
| 186 | GUARDRAIL, TYPE 3                                | FOOT | 0.00           | \$ 48.80      | \$ -         |
| 187 | GUARDRAIL ANCHORS, TYPE 1                        | EACH | 0.00           | \$ 722.00     | \$ -         |
| 188 | GUARDRAIL END PIECES, TYPE C                     | EACH | 0.00           | \$ 121.00     | \$ -         |
| 189 | GUARDRAIL TRANSITION                             | EACH | 0.00           | \$ 2,240.00   | \$ -         |
| 190 | GUARDRAIL CONNECTIONS                            | EACH | 0.00           | \$ 415.00     | \$ -         |
| 191 | GUARDRAIL TERMINALS, NON-FLARED                  | EACH | 0.00           | \$ 220.00     | \$ -         |
| 192 | GUARDRAIL TERMINALS, FLARED                      | EACH | 0.00           | \$ 1,980.00   | \$ -         |
| 193 | REMOVABLE BOLLARDS                               | EACH | 0.00           | \$ 750.00     | \$ -         |
| 194 | CONCRETE BARRIER                                 | FOOT | 0.00           | \$ 35.40      | \$ -         |
| 195 | IMPACT ATTENUATORS, TYPE B                       | EACH | 0.00           | \$ 4,780.00   | \$ -         |
| 196 | IMPACT ATTENUATORS, TYPE E                       | EACH | 0.00           | \$ 16,000.00  | \$ -         |
| 197 | DELINEATORS TYPE 2                               | EACH | 0.00           | \$ 68.80      | \$ -         |
| 198 | DELINEATORS TYPE 4                               | EACH | 0.00           | \$ 29.30      | \$ -         |
| 199 | PAVEMENT LINE REMOVAL                            | FOOT | 60.00          | \$ 0.60       | \$ 36.00     |
| 200 | PAVEMENT LEGEND REMOVAL                          | EACH | 0.00           | \$ 55.10      | \$ -         |
| 201 | PAVEMENT BAR REMOVAL                             | SQFT | 0.00           | \$ 3.00       | \$ -         |
| 202 | BI-DIRECTIONAL YELLOW TYPE I MARKERS             | EACH | 0.00           | \$ 5.65       | \$ -         |
| 203 | MONO-DIRECTIONAL WHITE TYPE I MARKERS            | EACH | 0.00           | \$ 5.65       | \$ -         |
| 204 | LONGITUDINAL PAVEMENT MARKING - PAINT            | FOOT | 0.00           | \$ 0.46       | \$ -         |
| 205 | CURB MARKINGS - PAINT                            | FOOT | 0.00           | \$ 2.00       | \$ -         |
| 206 | THERMOPLASTIC, NON-PROFILE, 120 MILS, EXTRUDED   | FOOT | 60.00          | \$ 1.40       | \$ 84.00     |
| 207 | PAVEMENT LEGEND, TYPE B: ARROWS                  | EACH | 0.00           | \$ 279.00     | \$ -         |
| 208 | PAVEMENT LEGEND, TYPE B: "ONLY"                  | EACH | 0.00           | \$ 332.00     | \$ -         |
| 209 | PAVEMENT LEGEND, TYPE B: BICYCLE LANE SYMBOLS    | EACH | 0.00           | \$ 286.00     | \$ -         |
| 210 | PAVEMENT LEGEND, TYPE B-HS: ARROWS               | EACH | 0.00           | \$ 261.00     | \$ -         |
| 211 | PAVEMENT LEGEND, TYPE B-HS: BICYCLE LANE STENCIL | EACH | 15.00          | \$ 290.00     | \$ 4,350.00  |
| 212 | PAVEMENT BAR , TYP B-HS                          | SQFT | 0.00           | \$ 9.90       | \$ -         |
| 213 | PAVEMENT BAR, TYPE A                             | SQFT | 0.00           | \$ 4.50       | \$ -         |
| 214 | PAVEMENT BAR, TYPE B                             | SQFT | 0.00           | \$ 9.40       | \$ -         |
| 215 | REMOVE EXISTING SIGNS                            | LS*  | 0.00           | \$ 41.70      | \$ -         |
| 216 | REMOVE & REINSTALL EXISTING SIGNS                | LS*  | 0.00           | \$ 167.00     | \$ -         |
| 217 | SIGN SUPPORT FOOTINGS, BREAKAWAY                 | LS*  | 0.00           | \$ 182.00     | \$ -         |
| 218 | SIGNAL POLE MOUNTS                               | LS*  | 0.00           | \$ 570.00     | \$ -         |
| 219 | PIPE SIGN SUPPORTS                               | LS*  | 0.00           | \$ 180.00     | \$ -         |
| 220 | TYPE "B" SIGNS IN PLACE                          | SQFT | 0.00           | \$ 18.60      | \$ -         |
| 221 | TYPE "B1" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 23.20      | \$ -         |
| 222 | TYPE "C" SIGNS IN PLACE                          | SQFT | 0.00           | \$ 19.80      | \$ -         |
| 223 | TYPE "G" SIGNS IN PLACE                          | SQFT | 0.00           | \$ 39.60      | \$ -         |
| 224 | TYPE "G1" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 36.10      | \$ -         |
| 225 | TYPE "G5" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 33.00      | \$ -         |
| 226 | TYPE "R" SIGNS IN PLACE                          | SQFT | 0.00           | \$ 20.90      | \$ -         |
| 227 | TYPE "R1" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 18.80      | \$ -         |
| 228 | TYPE "W1" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 19.00      | \$ -         |
| 229 | TYPE "W2" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 19.90      | \$ -         |
| 230 | TYPE "W4" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 20.90      | \$ -         |
| 231 | TYPE "W6" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 15.00      | \$ -         |
| 232 | TYPE "W7" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 20.60      | \$ -         |
| 233 | TYPE "W12" SIGNS IN PLACE                        | SQFT | 0.00           | \$ 25.60      | \$ -         |
| 234 | TYPE "Y1" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 19.00      | \$ -         |
| 235 | TYPE "Y2" SIGNS IN PLACE                         | SQFT | 0.00           | \$ 14.60      | \$ -         |
| 236 | REMOVAL OF ELECTRICAL SYSTEMS (lighting)         | LS*  | 0.00           | \$ 389.00     | \$ -         |
| 237 | REMOVAL OF ELECTRICAL SYSTEMS (traffic signals)  | LS*  | 0.00           | \$ 3,640.00   | \$ -         |
| 238 | POLE FOUNDATIONS                                 | LS*  | 0.00           | \$ 2,000.00   | \$ -         |
| 239 | LIGHTING POLES, FIXED BASE                       | LS*  | 0.00           | \$ 6,890.00   | \$ -         |
| 240 | LIGHTING POLE ARMS                               | LS*  | 0.00           | \$ 338.00     | \$ -         |
| 241 | LUMINAIRES, LAMPS AND BALLASTS                   | LS*  | 0.00           | \$ 1,000.00   | \$ -         |
| 242 | SWITCHING, CONDUIT AND WIRING                    | LS*  | 0.00           | \$ 25.00      | \$ -         |
| 243 | TRAFFIC SIGNAL INSTALLATION                      | LS*  | 0.00           | \$ 120,000.00 | \$ -         |
| 244 | TRAFFIC SIGNAL MODIFICATION                      | LS*  | 0.00           | \$ 45,700.00  | \$ -         |
| 245 | FLASHING BEACON INSTALLATION                     | LS*  | 0.00           | \$ 40,000.00  | \$ -         |

| NO.             | ITEMS OF WORK AND MATERIALS                   | UNIT  | TOTAL QUANTITY | UNIT PRICE  | TOTAL AMOUNT  |
|-----------------|---|-------|----------------|-------------|---------------|
| 246             | LOOP DETECTOR INSTALLATION                    | LS*   | 0.00           | \$ 9,120.00 | \$ -          |
| 247             | INTERCONNECT SYSTEM (underground)             | LS*   | 0.00           | \$ 38.90    | \$ -          |
| 248             | INTERCONNECT SYSTEM (overhead)                | LS*   | 0.00           | \$ 3.80     | \$ -          |
| 249             | TRAFFIC CAMERA INSTALLATION                   | LS*   | 0.00           | \$ 2,600.00 | \$ -          |
| 250             | PERMANENT SEEDING                             | ACRE  | 0.00           | \$ 2,480.00 | \$ -          |
| 251             | LAWN SEEDING                                  | SQYD  | 222.00         | \$ 10.04    | \$ 2,228.88   |
| 252             | TOPSOIL                                       | CUYD  | 69.00          | \$ 60.00    | \$ 4,140.00   |
| 253             | SOIL CONDITIONER                              | CUYD  | 0.00           | \$ 35.20    | \$ -          |
| 254             | CONIFER TREES, 9 FT HEIGHT                    | EACH  | 0.00           | \$ 351.00   | \$ -          |
| 255             | DECIDUOUS TREES, 2-1/2 INCH CALIPER           | EACH  | 16.00          | \$ 822.00   | \$ 13,152.00  |
| 256             | DECIDUOUS TREES, 3 INCH CALIPER               | EACH  | 0.00           | \$ 890.00   | \$ -          |
| 257             | SHRUBS, NO. 1 CONTAINER                       | EACH  | 0.00           | \$ 12.50    | \$ -          |
| 258             | SHRUBS, NO. 2 CONTAINER                       | EACH  | 0.00           | \$ 19.10    | \$ -          |
| 259             | SHRUBS, NO. 3 CONTAINER                       | EACH  | 0.00           | \$ 33.50    | \$ -          |
| 260             | SHRUBS, NO. 5 CONTAINER                       | EACH  | 0.00           | \$ 21.70    | \$ -          |
| 261             | GROUND COVERS, NO. 1 CONTAINERS               | EACH  | 0.00           | \$ 8.00     | \$ -          |
| 262             | GROUND COVERS, 4 INCH POTS                    | EACH  | 0.00           | \$ 4.50     | \$ -          |
| 263             | BULBS   | EACH  | 0.00           | \$ 2.40     | \$ -          |
| 264             | SEEDLING PLANTS                               | EACH  | 0.00           | \$ 11.30    | \$ -          |
| 265             | ROOTED PLANT CUTTINGS                         | EACH  | 0.00           | \$ 5.10     | \$ -          |
| 266             | SOD LAWN                                      | SQYD  | 0.00           | \$ 8.20     | \$ -          |
| 267             | BARK MULCH                                    | CUYD  | 0.00           | \$ 55.60    | \$ -          |
| 268             | ROCK MULCH                                    | TON   | 0.00           | \$ 92.60    | \$ -          |
| 269             | ADDITIONAL ESTABLISHMENT PERIOD               | YEAR* | 16.00          | \$ 264.00   | \$ 4,224.00   |
| 270             | TREE GRATES                                   | EACH  | 0.00           | \$ 1,170.00 | \$ -          |
| 271             | ROOT BARRIER                                  | FOOT  | 0.00           | \$ 11.90    | \$ -          |
| 272             | TREE GRATE FRAMES                             | EACH  | 0.00           | \$ 451.00   | \$ -          |
| 273             | BORDER EDGING                                 | FOOT  | 0.00           | \$ 6.70     | \$ -          |
| 274             | TYPE 2 FENCE                                  | FOOT  | 0.00           | \$ 6.85     | \$ -          |
| 275             | CL-6 CHAIN-LINK FENCE                         | FOOT  | 0.00           | \$ 25.80    | \$ -          |
| 276             | CL-6R CHAIN-LINK FENCE                        | FOOT  | 0.00           | \$ 22.90    | \$ -          |
| 277             | CL-4R CHAIN-LINK FENCE WITH VINYL CLAD FABRIC | FOOT  | 0.00           | \$ 27.80    | \$ -          |
| 278             | ORNAMENTAL PROTECTIVE SCREENING               | FOOT  | 0.00           | \$ 158.00   | \$ -          |
| 279             | REMOVING AND REBUILDING FENCE                 | FOOT  | 0.00           | \$ 27.40    | \$ -          |
| 280             | SINGLE MAILBOX SUPPORTS                       | EACH  | 0.00           | \$ 300.00   | \$ -          |
| 281             | MULTIPLE MAILBOX SUPPORTS                     | EACH  | 0.00           | \$ 339.00   | \$ -          |
| 282             | MAILBOX CONCRETE COLLARS                      | EACH  | 0.00           | \$ 66.00    | \$ -          |
| 283             | REMOVE & REINSTALL MAILBOX SUPPORTS           | EACH  | 0.00           | \$ 224.00   | \$ -          |
| 284             | BENCHES, TYPE                                 | EACH  | 0.00           | \$ 3,090.00 | \$ -          |
| 285             | BICYCLE RACKS                                 | EACH  | 0.00           | \$ 739.00   | \$ -          |
| 286             | LITTER RECEPTACLES                            | EACH  | 0.00           | \$ 1,290.00 | \$ -          |
| 287             | IRRIGATION SYSTEM                             | LS    | 0.00           | \$ 3,100.00 | \$ -          |
| 288             | 4 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 67.70    | \$ -          |
| 289             | 6 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 74.90    | \$ -          |
| 290             | 8 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 82.00    | \$ -          |
| 291             | 12 INCH DUCTILE IRON PIPE                     | FOOT  | 0.00           | \$ 96.40    | \$ -          |
| 292             | 4 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 924.00   | \$ -          |
| 293             | 6 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 1,090.00 | \$ -          |
| 294             | 8 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 1,970.00 | \$ -          |
| 295             | 12 INCH GATE VALVE, MJ                        | EACH  | 0.00           | \$ 2,340.00 | \$ -          |
| 296             | HYDRANT ASSEMBLIES                            | EACH  | 0.00           | \$ 5,040.00 | \$ -          |
| 297             | 2 INCH SERVICE LINE, SHORT RUN                | EACH  | 0.00           | \$ 2,100.00 | \$ -          |
| 298             | 3 INCH SERVICE LINE, SHORT RUN                | EACH  | 0.00           | \$ 2,820.00 | \$ -          |
| TOTAL BID ITEMS |   |       |                |             | \$ 562,645.20 |

##### ANTICIPATED ITEMS #####

| NO. | ITEMS OF WORK AND MATERIALS  | UNIT | QUANTITY | UNIT PRICE   | AMOUNT       |
|-----|--|------|----------|--------------|--------------|
| 1   | RIGHT OF WAY MONUMENTATION   | LS   | 0.00     | \$ -         | \$ -         |
| 2   | RELOCATE WATER FACILITIES - MAINS, VALVES, ETC.                        | LS   | 1.00     | \$ 60,000.00 | \$ 60,000.00 |
| 3   | RELOCATE WATER FACILITIES - METER                                      | EACH | 0.00     | \$ 6,000.00  | \$ -         |
| 4   | STREET LIGHTING - UPGRADE LUMINAIRES                                   | EACH | 0.00     | \$ 600.00    | \$ -         |
| 5   | STREET LIGHTING - INSTALL ARMS AND LUMINAIRES                          | EACH | 0.00     | \$ 5,000.00  | \$ -         |
| 6   | CONNECT CONTRACTOR INSTALLED TRAFFIC SIGNAL LOOPS TO CONTROLLER BY BOM | EACH | 0.00     | \$ 1,000.00  | \$ -         |

| NO.                     | ITEMS OF WORK AND MATERIALS   | UNIT | TOTAL QUANTITY | UNIT PRICE    | TOTAL AMOUNT  |
|-------------------------|---|------|----------------|---------------|---------------|
| 7                       | STORMWATER PLANTINGS AND PLANT ESTABLISHMENT                              | SQFT | 660.00         | \$ 20.00      | \$ 13,200.00  |
| 8                       | STORMWATER OFFSITE MANAGEMENT FEE   | SQFT | 0.00           | \$ 3.70       | \$ -          |
| 9                       | ROCK EXCAVATION   | CUYD | 0.00           | \$ 106.00     | \$ -          |
| 10                      | RAILROAD PROTECTION SERVICES (ONE YEAR)                                   | LS   | 0.00           | \$ 100,000.00 | \$ -          |
| 11                      | ASPHALT CEMENT ESCALATION   | LS   | 1.00           | \$ -          | \$ -          |
| 12                      | FUEL ESCALATION   | LS   | 1.00           | \$ -          | \$ -          |
| 13                      | TESTING CONTAMINATED MEDIA  | LS   | 0.00           | \$ 5,000.00   | \$ -          |
| 14                      | BOLI FEE PAYMENT  | LS   | 1.00           | \$ 562.65     | \$ 562.65     |
| 15                      | CONTRACT CONTINGENCY (REQUIREMENT TO ACCEPT BIDS UP TO 10% OVER ESTIMATE) | LS   | 1.00           | \$ 56,264.52  | \$ 56,264.52  |
| TOTAL ANTICIPATED ITEMS |   |      |                |               | \$ 130,027.17 |

**SCHEDULE SUMMARY**

|  |   |                     |
|--|---|---------------------|
| BID ITEMS  |   | \$ 562,645          |
| CONSTRUCTION CONTINGENCY                                 | 3.5% of Bid Items <sup>*</sup>          | \$ 19,693           |
| SUBTOTAL   |   | \$ 582,338          |
| ANTICIPATED ITEMS  |   | \$ 130,027          |
| <b>TOTAL CONSTRUCTION</b>                                |   | <b>\$ 712,365</b>   |
| PROJECT MANAGEMENT                                       | 5% of Bid Items                         | \$ 28,132           |
| DESIGN ENGINEERING                                       | 25% of Bid Items                        | \$ 140,661          |
| CONSTRUCTION MANAGEMENT                                  | 15% of Bid Items                        | \$ 84,397           |
| SUBTOTAL   |   | \$ 253,190          |
| PROJECT ENGINEERING & MANAGEMENT OVERHEAD                | 79.27% of PM, Eng. and CM               | \$ 200,704          |
| <b>TOTAL PROJECT ENGINEERING &amp; MANAGEMENT</b>        |   | <b>\$ 453,894</b>   |
| RIGHT-OF-WAY LAND, IMPROVEMENTS, AND DAMAGES             |   | \$ -                |
| RIGHT-OF-WAY APPRAISAL, TITLE INSURANCE, AND NEGOTIATION |   | \$ -                |
| RIGHT-OF-WAY CONTINGENCY                                 | 30% of Land, Improve, and Damages       | \$ -                |
| <b>TOTAL PROJECT RIGHT-OF-WAY</b>                        |   | <b>\$ -</b>         |
| INFLATION RATE ON CONTRACT                               | Years 5 Inflation 4.5% of Construction  | \$ 175,371          |
| INFLATION RATE ON PERSONNEL                              | 5 2.0% of Eng & Mgmt                    | \$ 47,242           |
| ESTIMATE CONTINGENCY FOR UNDEFINED OR CHANGE IN SCOPE    | 20% of Const, Eng & Mgmt, and Inflation | \$ 277,775          |
| <b>TOTAL PROJECT CONTINGENCY</b>                         |   | <b>\$ 500,388</b>   |
| <b>TOTAL PROJECT ESTIMATE</b>                            |   | <b>\$ 1,666,647</b> |

LS\* Unit Price shown is on Pound, Each, or Foot Basis as applicable  
Remove \* and change unit to 1 in the Bid Form

SW Beaverton-Hillsdale Hwy from 18th Dr. to Dosch Rd. Sidewalk Infill, N. Side

Location:  
Description:  
Current Cross-Section:  
Proposed Cross-Section:

| Typical Sections | PL | SW/Curb | SW/Curb | Parking | through | Left turn | through | Parking | SW/Curb | SW/Curb | PL |
|------------------|----|---------|---------|---------|---------|-----------|---------|---------|---------|---------|----|
|                  |    |         |         |         |         |           |         |         |         |         |    |

Existing  
0' pavement  
0' pavement

0' RW  
0' RW

| M/W/MAC        | L, ft. | W, ft. | Area, sf | Vol, cy | Tons |
|----------------|--------|--------|----------|---------|------|
| Base & Wearing |        |        | 0.0      | 0.0     | 0.0  |
|                |        |        | 0.0      | 0.0     | 0.0  |
|                |        |        | 0.0      | 0.0     | 0.0  |
|                |        |        | 0.0      | 0.0     | 0.0  |
|                |        |        | 0        | 0       | 0    |

| Aggregate Base - Thickness | L, ft. | W, ft. | Area, sf | Depth, in. | Vol, cy | Tons |
|----------------------------|--------|--------|----------|------------|---------|------|
| X inch Thick               |        |        | 0.0      | 0.0        | 0.0     | 0.0  |
| X inch Thick               |        |        | 0.0      | 0.0        | 0.0     | 0.0  |
| X inch Thick               |        |        | 0.0      | 0.0        | 0.0     | 0.0  |
| X inch Thick               |        |        | 0.0      | 0.0        | 0.0     | 0.0  |

Total 4 Inch Thick  
Total 6 Inch Thick  
Total 8 Inch Thick

| Aggregate Base - Tons | L, ft. | W, ft. | Area, sf | Depth, in. | Vol, cy | Tons |
|-----------------------|--------|--------|----------|------------|---------|------|
|                       |        |        | 0.0      | 0.0        | 0.0     | 0.0  |
|                       |        |        | 0.0      | 0.0        | 0.0     | 0.0  |
|                       |        |        | 0.0      | 0.0        | 0.0     | 0.0  |
|                       |        |        | 0        | 0          | 0       | 0    |

| Subgrade Geotextile | Area, sy |
|---------------------|----------|
| 0                   |          |

| General Excavation - from Thickness | Area, sf | Depth, in. | Vol, cy |
|-------------------------------------|----------|------------|---------|
| Roadway                             | 0.0      | 0.0        | 0.0     |
| Roadway                             | 0.0      | 0.0        | 0.0     |
| Roadway                             | 630      | 8          | 15.6    |
| Driveways                           | 109      | 10         | 3.4     |
| Thickened Curb & 18" Gutter         | 366      | 12         | 13.5    |
| Sidewalk                            | 15308    | 6          | 283.5   |
| Total Impervious Area               | 16413.0  |            | 316     |

Swale curb & gutter

| General Excavation - from Tons | Area, sf | Depth, in. | Vol, cy |
|--------------------------------|----------|------------|---------|
| Roadway                        | 0.0      | 0.0        | 0.0     |
| Roadway                        | 0.0      | 0.0        | 0.0     |
| Roadway                        | 0.0      | 0.0        | 0.0     |
| Roadway                        | 109      | 0.0        | 0.0     |
| Curb & gutter                  | 0        | 0.0        | 0.0     |
| Sidewalk                       | 0        | 0.0        | 0.0     |

Create link to Estimate >>

Swale curb & gutter

| Concrete Curbs              | L, ft. | W, ft. | Area, sf |
|-----------------------------|--------|--------|----------|
| Curb - Dosch Rd, Both Sides | 217    | 0.5    | 109      |
| Thickened Curb & 18" Gutter | 183    | 2      | 366      |
|                             | 400    |        | 0        |

| Sidewalks                         | L, ft. | W, ft. | Area, sf |
|-----------------------------------|--------|--------|----------|
| Separated - Dosch Rd., Both Sides | 400    | 6      | 2400     |
| Monolithic Curb & Sidewalk        | 1721   | 7.5    | 12908    |
| Monolithic Curb Gutter & Sidewalk |        |        | 0        |

(includes wings)

| Driveways                         | Dwy L, ft. | Wings L, ft | W, ft. | Area, sf |
|-----------------------------------|------------|-------------|--------|----------|
| Adjacent to Swale                 |            |             |        | 0        |
| Adjacent to Planting Strip        |            |             |        | 0        |
| Monolithic Curb & Driveway        | 84         |             | 7.5    | 630      |
| Monolithic Curb Gutter & Driveway | 84         |             |        | 0        |

| Inlets & Leads | Length | Total   | ft.   |
|----------------|--------|---------|-------|
| SW Inlets      |        | #DIV/0! | 1 per |
| PB Inlets      |        | #DIV/0! | 1 per |
| G-2 Inlets     | 0      | 0       | 2 per |
| CG-2 Inlets    | 2022   | 5       | 2 per |
| Inlet Lead     |        |         | LF    |
| Rip Rsp        |        |         | CY    |

| Swales                      | L, ft. | W, ft. | Area, sf |
|-----------------------------|--------|--------|----------|
| 10% of Dosch Rd. Impervious | 400    | 14     | 560      |

| Trees                   | L, ft. | Dwys, ft. | 1 every 25' |
|-------------------------|--------|-----------|-------------|
| Trees in Swales         | 400    | 0         | 0           |
| Trees in Planting Strip | 400    | 0         | 16          |
| Trees in Tree Wells     |        |           | 0           |
|                         |        |           | 16          |

| Topsoil                        | L, ft. | W, ft. | D, ft. | Vol, cy |
|--------------------------------|--------|--------|--------|---------|
| Tree Wells                     | 6      | 3      | 3      | 32      |
| Adjacent to Separated Sidewalk | 400    | 5      | 0.5    | 37      |
|                                |        |        |        | 69      |

| Retaining Wall        | L, ft. | Ht, ft. | Area, sf |
|-----------------------|--------|---------|----------|
| Segmental             |        |         | 0        |
| Prefabricated modular |        |         | 0        |

| Striping  | L, ft. | L, ft. | L, Tot, ft. | Removal   |
|-----------|--------|--------|-------------|-----------|
| Removal   | 0      | 0      | 0           | Permanent |
| Permanent | 0      | 0      | 0           | Permanent |

| Marking   | L, ft. | L, ft. | L, Tot, ft. |
|-----------|--------|--------|-------------|
| Arrows    |        |        | 0           |
| Stop Bars |        |        | 0           |

| illumination      | Ea |
|-------------------|----|
| New Lt. Poles     |    |
| Wood Pole Lights  |    |
| Cobra             |    |
| Single Ornamental |    |
| Twin Ornamental   |    |

| R/W Location            | Area | Cost / SF | Land Cost | No. Properties | Total R/W |
|-------------------------|------|-----------|-----------|----------------|-----------|
| Walsh Holdings LLC      |      |           | \$ -      |                | \$ -      |
| Vancouver Ways Land Co. |      |           | \$ -      |                | \$ -      |
|                         |      |           | \$ -      |                | \$ -      |

Insert values

| Factor: | 2    | 2    | 0.6  | 1.125  | 1        | 1      |
|---------|------|------|------|--------|----------|--------|
|         | Bike | Turn | skip | double | 2 way LT | Fog    |
|         |      |      |      |        |          | Spiral |

| Signs          | City # | ea | Dimensions, in | Area, sf | Name                            |
|----------------|--------|----|----------------|----------|---------------------------------|
| ODOT #         | G5500  | 6  | 24             | 0        | Street name                     |
| G              | G5500  | 9  | 60             | 0        | Destination                     |
| R2             | R 1060 | 36 | 36             | 0        | Yield                           |
| W7             | R 5020 | 36 | 12             | 0        | One Way (RL Arrow)              |
| W7             |        | 30 | 30             | 0        | roundabout left thru/right only |
| Y1             | R 4020 | 30 | 30             | 0        | roundabout left thru/right thru |
| Y3             | R 1700 | 18 | 18             | 0        | 15 MPH Rider                    |
| posts/footings |        | 30 | 30             | 0        | Traffic Circle Ahead            |

| Summary | G   | R2  | W7  | Y1  | Y3  |
|---------|-----|-----|-----|-----|-----|
|         | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

CITY OF PORTLAND, OREGON  
BUREAU OF TRANSPORTATION  
PRELIMINARY ENGINEER'S ESTIMATE

SW Beaverton-Hillsdale Hwy from 18th Dr. to 25th Ave. Sidewalk Infill, S. Side

Date: August 18, 2016

By: RB

PRELIMINARY ENGINEER'S ESTIMATE FOR THE IMPROVEMENT OF SW Beaverton-Hillsdale Hwy FROM SW 18th Drive TO SW 25th Avenue  
VALUES IN BLUE ARE PERCENT OF CONTRACT.

##### BID ITEMS #####

| NO. | ITEMS OF WORK AND MATERIALS                 | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|---|------|----------------|--------------|--------------|
| 1   | MOBILIZATION                                | LS   | 1.00           | \$ 12,121.70 | \$ 12,121.70 |
| 2   | TEMPORARY PROTECTION & DIRECTION OF TRAFFIC | LS   | 1.00           | \$ 3,636.51  | \$ 3,636.51  |
| 3   | TEMPORARY SIGNS                             | SQFT | 54.00          | \$ 20.00     | \$ 1,080.00  |
| 4   | TEMPORARY BARRICADES, TYPE II               | EACH | 0.00           | \$ 100.00    | \$ -         |
| 5   | TEMPORARY BARRICADES, TYPE III              | EACH | 0.00           | \$ 150.00    | \$ -         |
| 6   | TEMPORARY CONCRETE BARRIER, REFLECTORIZED   | FOOT | 0.00           | \$ 17.00     | \$ -         |
| 7   | MOVING TEMPORARY CONCRETE BARRIER           | FOOT | 0.00           | \$ 5.30      | \$ -         |
| 8   | TEMPORARY IMPACT ATTENUATOR                 | EACH | 0.00           | \$ 1,150.00  | \$ -         |
| 9   | TEMPORARY PEDESTRIAN WALKWAYS               | FOOT | 0.00           | \$ 65.00     | \$ -         |
| 10  | TEMPORARY PLASTIC DRUMS                     | EACH | 5.00           | \$ 52.00     | \$ 260.00    |
| 11  | TEMPORARY REFLECTIVE PAVEMENT MARKERS       | EACH | 0.00           | \$ 4.80      | \$ -         |
| 12  | TEMPORARY FLEXIBLE PAVEMENT MARKERS         | EACH | 0.00           | \$ 3.00      | \$ -         |
| 13  | TEMPORARY STRIPING                          | FOOT | 0.00           | \$ 0.65      | \$ -         |
| 14  | STRIPE REMOVAL                              | FOOT | 0.00           | \$ 0.82      | \$ -         |
| 15  | STRIPING & STRIPE REMOVAL MOBILIZATION      | EACH | 0.00           | \$ 425.00    | \$ -         |
| 16  | TEMPORARY TRAFFIC SIGNAL INSTALLATION       | EACH | 0.00           | \$ 68,000.00 | \$ -         |
| 17  | SEQUENTIAL ARROW SIGNS                      | EACH | 0.00           | \$ 1,800.00  | \$ -         |
| 18  | PORTABLE CHANGEABLE MESSAGE SIGNS           | EACH | 1.00           | \$ 4,330.00  | \$ 4,330.00  |
| 19  | FLAGGERS                                    | HOUR | 500.00         | \$ 48.50     | \$ 24,250.00 |
| 20  | TRAFFIC CONTROL SUPERVISOR                  | HOUR | 0.00           | \$ 65.40     | \$ -         |
| 21  | TEMPORARY TYPE ORANGE PLASTIC MESH FENCE    | FOOT | 0.00           | \$ 3.60      | \$ -         |
| 22  | TEMPORARY CL-6R CHAIN LINK FENCE            | FOOT | 0.00           | \$ 17.60     | \$ -         |
| 23  | EROSION CONTROL                             | LS   | 1.00           | \$ 1,212.17  | \$ 1,212.17  |
| 24  | PLASTIC SHEETING                            | SQFT | 0.00           | \$ 0.20      | \$ -         |
| 25  | MATTING                                     | SQFT | 0.00           | \$ 0.78      | \$ -         |
| 26  | CONSTRUCTION ENTRANCES                      | EACH | 0.00           | \$ 1,890.00  | \$ -         |
| 27  | SEDIMENT FENCE, SUPPORTED                   | FOOT | 0.00           | \$ 4.20      | \$ -         |
| 28  | SEDIMENT FENCE, UNSUPPORTED                 | FOOT | 444.00         | \$ 2.50      | \$ 1,110.00  |
| 29  | INLET PROTECTION                            | EACH | 5.00           | \$ 88.00     | \$ 440.00    |
| 30  | POLLUTION CONTROL PLAN                      | LS   | 1.00           | \$ 121.22    | \$ 121.22    |
| 31  | CONTAMINATED MEDIA DISPOSAL                 | CUYD | 0.00           | \$ 163.00    | \$ -         |
| 32  | TRUCK LINERS                                | EACH | 0.00           | \$ 470.00    | \$ -         |
| 33  | HASP/CMDP WORKPLANS                         | LS   | 0.00           | \$ 1,000.00  | \$ -         |
| 34  | REMOVAL OF PIPES                            | FOOT | 0.00           | \$ 25.30     | \$ -         |
| 35  | REMOVAL OF CURBS                            | FOOT | 0.00           | \$ 7.30      | \$ -         |
| 36  | REMOVAL OF WALKS AND DRIVEWAYS              | SQYD | 0.00           | \$ 13.90     | \$ -         |
| 37  | REMOVAL OF SURFACINGS                       | SQYD | 0.00           | \$ 8.20      | \$ -         |
| 38  | REMOVAL OF INLETS                           | EACH | 0.00           | \$ 310.00    | \$ -         |
| 39  | REMOVAL OF MANHOLES                         | EACH | 0.00           | \$ 1,050.00  | \$ -         |
| 40  | REMOVAL OF RAILROAD TRACK AND TIES          | FOOT | 0.00           | \$ 58.70     | \$ -         |
| 41  | SALVAGING AND STOCKPILING OF COBBLESTONES   | SQYD | 0.00           | \$ 20.90     | \$ -         |
| 42  | REMOVE AND REINSTALL HORSE RINGS            | EACH | 0.00           | \$ 227.00    | \$ -         |
| 43  | REMOVAL OF STRUCTURES & OBSTRUCTIONS        | LS   | 1.00           | \$ 4,848.68  | \$ 4,848.68  |
| 44  | REMOVAL OF FENCES                           | FOOT | 0.00           | \$ 3.06      | \$ -         |
| 45  | CLEARING AND GRUBBING                       | LS   | 1.00           | \$ 3,151.64  | \$ 3,151.64  |
| 46  | TREE ROOT REMOVAL                           | HOUR | 0.00           | \$ 178.00    | \$ -         |
| 47  | TREE TRIMMING                               | HOUR | 0.00           | \$ 152.00    | \$ -         |
| 48  | DITCH EXCAVATION                            | CUYD | 0.00           | \$ 18.00     | \$ -         |
| 49  | GENERAL EXCAVATION                          | CUYD | 74.00          | \$ 49.00     | \$ 3,626.00  |
| 50  | SURCHARGE EXCAVATION                        | CUYD | 0.00           | \$ 3.80      | \$ -         |
| 51  | EMBANKMENT IN PLACE                         | CUYD | 0.00           | \$ 24.00     | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                    | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|--|------|----------------|--------------|--------------|
| 52  | SETTLEMENT PLATE   | EACH | 0.00           | \$ 772.00    | \$ -         |
| 53  | 12 INCH SUBGRADE STABILIZATION                                 | SQYD | 0.00           | \$ 30.17     | \$ -         |
| 54  | AGGREGATE DITCH LINING   | SQYD | 0.00           | \$ 38.40     | \$ -         |
| 55  | WATERING   | MGAL | 0.00           | \$ 26.20     | \$ -         |
| 56  | DRAINAGE GEOTEXTILE, TYPE 2                                    | SQYD | 0.00           | \$ 1.05      | \$ -         |
| 57  | EMBANKMENT GEOTEXTILE  | SQYD | 0.00           | \$ 1.50      | \$ -         |
| 58  | SUBGRADE GEOTEXTILE  | SQYD | 0.00           | \$ 1.25      | \$ -         |
| 59  | GEOGRID  | SQYD | 0.00           | \$ 2.60      | \$ -         |
| 60  | GRANULAR DRAINAGE BLANKET                                      | TON  | 0.00           | \$ 93.00     | \$ -         |
| 61  | FILTER BLANKET   | SQYD | 0.00           | \$ 15.00     | \$ -         |
| 62  | LOOSE RIPRAP, CLASS 50   | CUYD | 0.00           | \$ 35.10     | \$ -         |
| 63  | LOOSE RIPRAP, CLASS 100  | CUYD | 0.00           | \$ 59.70     | \$ -         |
| 64  | WIRE MESH SLOPE PROTECTION                                     | SQFT | 0.00           | \$ 5.60      | \$ -         |
| 65  | VIDEO INSPECTION OF SEWERS, MAINLINE                           | FOOT | 0.00           | \$ 3.30      | \$ -         |
| 66  | TRENCH EXCAVATION, COMMON                                      | CUYD | 0.00           | \$ 16.70     | \$ -         |
| 67  | EXPLORATORY EXCAVATION   | CUYD | 0.00           | \$ 51.60     | \$ -         |
| 68  | POTHOLE EXCAVATION   | EACH | 0.00           | \$ 548.00    | \$ -         |
| 69  | TRENCH FOUNDATION STABILIZATION                                | CUYD | 0.00           | \$ 61.00     | \$ -         |
| 70  | TRENCH BACKFILL, CLASS B                                       | CUYD | 0.00           | \$ 33.00     | \$ -         |
| 71  | STORMWATER CURB EXTENSIONS                                     | SQFT | 0.00           | \$ 23.80     | \$ -         |
| 72  | STORMWATER PLANTERS  | SQFT | 0.00           | \$ 38.10     | \$ -         |
| 73  | STORMWATER SWALES  | SQFT | 0.00           | \$ 15.10     | \$ -         |
| 74  | 3 INCH DRAIN PIPE  | FOOT | 0.00           | \$ 17.00     | \$ -         |
| 75  | SUBSURFACE DRAIN OUTLETS                                       | EACH | 0.00           | \$ 387.00    | \$ -         |
| 76  | 12 INCH PIPE, PVC AWWA C900, CI 150, BEDDING TYPE: D, COMPLETE | FOOT | 0.00           | \$ 130.00    | \$ -         |
| 77  | 6 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D             | FOOT | 0.00           | \$ 80.00     | \$ -         |
| 78  | 8 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D             | FOOT | 0.00           | \$ 90.00     | \$ -         |
| 79  | 10 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D, COMPLETE  | FOOT | 10.00          | \$ 110.00    | \$ 1,100.00  |
| 80  | 12 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D, COMPLETE  | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 81  | 18 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D            | FOOT | 0.00           | \$ 130.00    | \$ -         |
| 82  | 10 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D, COMPLETE   | FOOT | 0.00           | \$ 110.00    | \$ -         |
| 83  | 12 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D, COMPLETE   | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 84  | 8 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D              | FOOT | 0.00           | \$ 90.00     | \$ -         |
| 85  | 10 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D             | FOOT | 0.00           | \$ 110.00    | \$ -         |
| 86  | 12 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D             | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 87  | CONCRETE CLOSURE COLLAR  | EACH | 0.00           | \$ 550.00    | \$ -         |
| 88  | CONCRETE MANHOLES, 48 INCH, 0-8 FT DEPTH                       | EACH | 0.00           | \$ 4,400.00  | \$ -         |
| 89  | CONCRETE MANHOLES, 48 INCH, DEEPER THAN 8 FT                   | FOOT | 0.00           | \$ 300.00    | \$ -         |
| 90  | CONCRETE MANHOLES, SANITARY SEWER                              | EACH | 0.00           | \$ 3,460.00  | \$ -         |
| 91  | CONCRETE MANHOLES, WATER QUALITY                               | EACH | 0.00           | \$ 12,410.00 | \$ -         |
| 92  | CONCRETE MANHOLES, SEDIMENTATION                               | EACH | 0.00           | \$ 5,610.00  | \$ -         |
| 93  | CONCRETE MANHOLES, SUMP  | EACH | 0.00           | \$ 13,000.00 | \$ -         |
| 94  | SUMP CAPACITY TEST   | EACH | 0.00           | \$ 1,690.00  | \$ -         |
| 95  | CONCRETE INLETS, TYPE CG-1                                     | EACH | 0.00           | \$ 1,700.00  | \$ -         |
| 96  | CONCRETE INLETS, TYPE CG-2                                     | EACH | 1.00           | \$ 1,900.00  | \$ 1,900.00  |
| 97  | CONCRETE INLETS, TYPE CG-3                                     | EACH | 0.00           | \$ 2,000.00  | \$ -         |
| 98  | CONCRETE INLETS, TYPE D  | EACH | 0.00           | \$ 1,750.00  | \$ -         |
| 99  | CONCRETE INLETS, TYPE G-1                                      | EACH | 0.00           | \$ 1,940.00  | \$ -         |
| 100 | CONCRETE INLETS, TYPE G-2                                      | EACH | 0.00           | \$ 1,800.00  | \$ -         |
| 101 | CONCRETE INLETS, TYPE G-2MA                                    | EACH | 0.00           | \$ 1,900.00  | \$ -         |
| 102 | CONCRETE INLETS, DEEPER THAN 4 FT                              | FOOT | 0.00           | \$ 300.00    | \$ -         |
| 103 | CONCRETE INLETS, TYPE METAL                                    | EACH | 0.00           | \$ 500.00    | \$ -         |
| 104 | CONCRETE INLETS, TYPE METAL, MODIFIED                          | EACH | 0.00           | \$ 550.00    | \$ -         |
| 105 | CONCRETE INLETS, TYPE CHANNEL & GRATE                          | EACH | 0.00           | \$ 2,290.00  | \$ -         |
| 106 | CONCRETE INLETS, TYPE CONCRETE                                 | EACH | 0.00           | \$ 135.00    | \$ -         |
| 107 | CONCRETE INLETS, TYPE BEEHIVE                                  | EACH | 0.00           | \$ 1,500.00  | \$ -         |
| 108 | CATCH BASINS, METAL SUMP                                       | EACH | 0.00           | \$ 1,710.00  | \$ -         |
| 109 | ACCESS DOORS   | EACH | 0.00           | \$ 2,700.00  | \$ -         |
| 110 | DRAINAGE CURBS   | FOOT | 0.00           | \$ 19.10     | \$ -         |
| 111 | ADJUSTING BOXES  | EACH | 0.00           | \$ 217.00    | \$ -         |
| 112 | CONNECTION TO EXISTING STRUCTURES                              | EACH | 0.00           | \$ 841.00    | \$ -         |
| 113 | ADJUSTING INLETS   | EACH | 0.00           | \$ 664.00    | \$ -         |
| 114 | FILLING ABANDON STRUCTURES                                     | EACH | 0.00           | \$ 3,000.00  | \$ -         |
| 115 | MINOR ADJUSTMENT OF MANHOLES                                   | EACH | 0.00           | \$ 642.00    | \$ -         |
| 116 | MAJOR ADJUSTMENT OF MANHOLES                                   | EACH | 0.00           | \$ 1,520.00  | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                 | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|---|------|----------------|--------------|--------------|
| 117 | MANHOLES OVER EXISTING SEWERS                               | EACH | 0.00           | \$ 4,200.00  | \$ -         |
| 118 | TRENCH RESURFACING  | SQYD | 0.00           | \$ 109.00    | \$ -         |
| 119 | TEMPORARY TRENCH RESURFACING                                | SQYD | 0.00           | \$ 25.20     | \$ -         |
| 120 | SHORING, CRIBBING AND COFFERDAMS                            | LS   | 0.00           | \$ -         | \$ -         |
| 121 | STRUCTURE EXCAVATION  | CUYD | 0.00           | \$ 48.30     | \$ -         |
| 122 | GRANULAR WALL BACKFILL                                      | CUYD | 0.00           | \$ 63.90     | \$ -         |
| 123 | GRANULAR STRUCTURAL BACKFILL                                | CUYD | 0.00           | \$ 40.60     | \$ -         |
| 124 | REINFORCEMENT   | LS*  | 0.00           | \$ 0.86      | \$ -         |
| 125 | CONCRETE BRIDGE   | SQFT | 0.00           | \$ 250.00    | \$ -         |
| 126 | BIKE OASIS  | EACH | 0.00           | \$ 32,400.00 | \$ -         |
| 127 | 3 INCH ELECTRICAL CONDUIT                                   | FOOT | 0.00           | \$ 9.05      | \$ -         |
| 128 | ASPHALTIC PLUG JOINT SEALS                                  | LS   | 0.00           | \$ 7,470.00  | \$ -         |
| 129 | ASPHALTIC PLUG JOINT SEAL MATERIAL                          | CUYD | 0.00           | \$ 5,350.00  | \$ -         |
| 130 | CONCRETE BRIDGE RAIL WITH ORNAMENTAL PROTECTIVE SCREENING   | LS*  | 0.00           | \$ 158.00    | \$ -         |
| 131 | RETAINING WALL, CAST-IN-PLACE CONCRETE                      | SQFT | 0.00           | \$ 95.80     | \$ -         |
| 132 | RETAINING WALL, GABION                                      | SQFT | 0.00           | \$ 24.10     | \$ -         |
| 133 | RETAINING WALL, PREFABRICATED MODULAR                       | SQFT | 0.00           | \$ 39.50     | \$ -         |
| 134 | RETAINING WALL, CONVENTIONAL SEGMENTAL                      | SQFT | 0.00           | \$ 43.30     | \$ -         |
| 135 | RETAINING WALL, MSE   | SQFT | 0.00           | \$ 49.00     | \$ -         |
| 136 | SOUND WALLS   | SQFT | 0.00           | \$ 23.50     | \$ -         |
| 137 | CONCRETE ARCH CULVERT                                       | FOOT | 0.00           | \$ 1,530.00  | \$ -         |
| 138 | CONCRETE SLOPE PAVING                                       | SQFT | 0.00           | \$ 11.25     | \$ -         |
| 139 | COLD PLANE PAVEMENT REMOVAL, 2 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -         |
| 140 | COLD PLANE PAVEMENT REMOVAL, 3 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -         |
| 141 | COLD PLANE PAVEMENT REMOVAL, 4 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -         |
| 142 | COLD PLANE PAVEMENT REMOVAL, 5 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -         |
| 143 | AGGREGATE BASE  | TON  | 0.00           | \$ 36.90     | \$ -         |
| 144 | AGGREGATE BASE, 4 INCH THICK                                | SQYD | 0.00           | \$ 7.15      | \$ -         |
| 145 | AGGREGATE BASE, 6 INCH THICK                                | SQYD | 0.00           | \$ 9.80      | \$ -         |
| 146 | AGGREGATE BASE, 8 INCH THICK                                | SQYD | 0.00           | \$ 12.30     | \$ -         |
| 147 | LEVEL 1, 1/2 INCH DENSE, MWMAC MIXTURE, IN TEMPORARY        | TON  | 0.00           | \$ 89.50     | \$ -         |
| 148 | LEVEL 2, 1/2 INCH DENSE, MWMAC MIXTURE                      | TON  | 0.00           | \$ 89.50     | \$ -         |
| 149 | LEVEL 3, 1/2 INCH DENSE, MWMAC MIXTURE                      | TON  | 0.00           | \$ 89.50     | \$ -         |
| 150 | LEVEL 3, 1/2 INCH DENSE, MWMAC MIXTURE, IN LEVELING         | TON  | 0.00           | \$ 89.50     | \$ -         |
| 151 | LEVEL 3, 3/4 INCH ATPB, MWMAC MIXTURE                       | TON  | 0.00           | \$ 89.50     | \$ -         |
| 152 | CRACK SEALING   | FOOT | 0.00           | \$ 1.00      | \$ -         |
| 153 | 13 INCH ASPHALT CONCRETE PAVEMENT REPAIR                    | SQYD | 49.00          | \$ 179.00    | \$ 8,771.00  |
| 154 | 16 INCH ASPHALT CONCRETE PAVEMENT REPAIR                    | SQYD | 0.00           | \$ 112.00    | \$ -         |
| 155 | EXTRA FOR ASPHALT APPROACHES                                | EACH | 0.00           | \$ 651.00    | \$ -         |
| 156 | ASPHALT CONNECTIONS   | SQFT | 0.00           | \$ 7.30      | \$ -         |
| 157 | ASPHALT SPEED BUMPS   | EACH | 0.00           | \$ 1,800.00  | \$ -         |
| 158 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 6 INCH THICK           | SQYD | 0.00           | \$ 64.70     | \$ -         |
| 159 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 8 INCH THICK           | SQYD | 0.00           | \$ 66.40     | \$ -         |
| 160 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 10 INCH THICK          | SQYD | 0.00           | \$ 68.10     | \$ -         |
| 161 | PLAIN CONCRETE PAVEMENT, UNDOWELLED, 12 INCH THICK          | SQYD | 0.00           | \$ 70.00     | \$ -         |
| 162 | PLAIN PERVIOUS CONCRETE PAVEMENT, UNDOWELLED, 10-INCH THICK | SQYD | 0.00           | \$ 73.00     | \$ -         |
| 163 | CONCRETE CURBS, CURB AND GUTTER                             | FOOT | 0.00           | \$ 33.03     | \$ -         |
| 164 | CONCRETE CURBS, STANDARD CURB                               | FOOT | 0.00           | \$ 25.50     | \$ -         |
| 165 | CONCRETE CURB, MOUNTABLE CURB                               | FOOT | 0.00           | \$ 28.09     | \$ -         |
| 166 | CONCRETE CURBS, THICKENED CURB AND GUTTER                   | FOOT | 0.00           | \$ 37.70     | \$ -         |
| 167 | CONCRETE ISLANDS  | SQFT | 0.00           | \$ 11.70     | \$ -         |
| 168 | CONCRETE DRIVEWAYS  | SQFT | 0.00           | \$ 8.40      | \$ -         |
| 169 | CONCRETE DRIVEWAYS, REINFORCED                              | SQFT | 0.00           | \$ 9.20      | \$ -         |
| 170 | CONCRETE WALKS  | SQFT | 0.00           | \$ 7.40      | \$ -         |
| 171 | MONOLITHIC CURB AND SIDEWALKS                               | SQFT | 3,996.00       | \$ 18.00     | \$ 71,928.00 |
| 172 | MONOLITHIC CURB GUTTER AND SIDEWALKS                        | SQFT | 0.00           | \$ 19.00     | \$ -         |
| 173 | CONCRETE VALLEY GUTTER                                      | FOOT | 0.00           | \$ 35.90     | \$ -         |
| 174 | 6 INCH CONCRETE SURFACING                                   | SQFT | 0.00           | \$ 4.90      | \$ -         |
| 175 | CONCRETE STAIRS   | CUYD | 0.00           | \$ 2,170.00  | \$ -         |
| 176 | CONCRETE DRIVEWAY CONNECTIONS                               | SQFT | 0.00           | \$ 7.75      | \$ -         |
| 177 | CONCRETE SIDEWALK RAMPS                                     | EACH | 0.00           | \$ 1,930.00  | \$ -         |
| 178 | CONCRETE BUS SHELTER PADS                                   | EACH | 0.00           | \$ 730.00    | \$ -         |
| 179 | DETECTABLE WARNING SURFACE                                  | SQFT | 0.00           | \$ 42.30     | \$ -         |
| 180 | MONOLITHIC SIDEWALKS AND WALL, REINFORCED                   | SQFT | 0.00           | \$ 14.00     | \$ -         |
| 181 | BRICK PAVERS  | SQFT | 0.00           | \$ 45.90     | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                    | UNIT | TOTAL QUANTITY | UNIT PRICE    | TOTAL AMOUNT |
|-----|--|------|----------------|---------------|--------------|
| 182 | CONCRETE PAVERS  | SQFT | 0.00           | \$ 11.70      | \$ -         |
| 183 | PERMEABLE PAVERS   | SQFT | 0.00           | \$ 11.00      | \$ -         |
| 184 | CONCRETE RAILROAD CROSSING                                     | FOOT | 0.00           | \$ 472.00     | \$ -         |
| 185 | GUARDRAIL, TYPE 2A   | FOOT | 0.00           | \$ 17.30      | \$ -         |
| 186 | GUARDRAIL, TYPE 3  | FOOT | 0.00           | \$ 48.80      | \$ -         |
| 187 | GUARDRAIL ANCHORS, TYPE 1                                      | EACH | 0.00           | \$ 722.00     | \$ -         |
| 188 | GUARDRAIL END PIECES, TYPE C                                   | EACH | 0.00           | \$ 121.00     | \$ -         |
| 189 | GUARDRAIL TRANSITION   | EACH | 0.00           | \$ 2,240.00   | \$ -         |
| 190 | GUARDRAIL CONNECTIONS  | EACH | 0.00           | \$ 415.00     | \$ -         |
| 191 | GUARDRAIL TERMINALS, NON-FLARED                                | EACH | 0.00           | \$ 220.00     | \$ -         |
| 192 | GUARDRAIL TERMINALS, FLARED                                    | EACH | 0.00           | \$ 1,980.00   | \$ -         |
| 193 | REMOVABLE BOLLARDS   | EACH | 0.00           | \$ 750.00     | \$ -         |
| 194 | CONCRETE BARRIER   | FOOT | 0.00           | \$ 35.40      | \$ -         |
| 195 | IMPACT ATTENUATORS, TYPE B                                     | EACH | 0.00           | \$ 4,780.00   | \$ -         |
| 196 | IMPACT ATTENUATORS, TYPE E                                     | EACH | 0.00           | \$ 16,000.00  | \$ -         |
| 197 | DELINEATORS TYPE 2   | EACH | 0.00           | \$ 68.80      | \$ -         |
| 198 | DELINEATORS TYPE 4   | EACH | 0.00           | \$ 29.30      | \$ -         |
| 199 | PAVEMENT LINE REMOVAL  | FOOT | 0.00           | \$ 0.60       | \$ -         |
| 200 | PAVEMENT LEGEND REMOVAL  | EACH | 0.00           | \$ 55.10      | \$ -         |
| 201 | PAVEMENT BAR REMOVAL   | SQFT | 0.00           | \$ 3.00       | \$ -         |
| 202 | BI-DIRECTIONAL YELLOW TYPE I MARKERS                           | EACH | 0.00           | \$ 5.65       | \$ -         |
| 203 | MONO-DIRECTIONAL WHITE TYPE I MARKERS                          | EACH | 0.00           | \$ 5.65       | \$ -         |
| 204 | LONGITUDINAL PAVEMENT MARKING - PAINT                          | FOOT | 0.00           | \$ 0.46       | \$ -         |
| 205 | CURB MARKINGS - PAINT  | FOOT | 0.00           | \$ 2.00       | \$ -         |
| 206 | THERMOPLASTIC, NON-PROFILE, 120 MILS, EXTRUDED                 | FOOT | 0.00           | \$ 1.40       | \$ -         |
| 207 | PAVEMENT LEGEND, TYPE B: ARROWS                                | EACH | 0.00           | \$ 279.00     | \$ -         |
| 208 | PAVEMENT LEGEND, TYPE B: "ONLY"                                | EACH | 0.00           | \$ 332.00     | \$ -         |
| 209 | PAVEMENT LEGEND, TYPE B: BICYCLE LANE SYMBOLS                  | EACH | 0.00           | \$ 286.00     | \$ -         |
| 210 | PAVEMENT LEGEND, TYPE B-HS: ARROWS                             | EACH | 0.00           | \$ 261.00     | \$ -         |
| 211 | PAVEMENT LEGEND, TYPE B-HS: BICYCLE LANE OR PEDESTRIAN STENCIL | EACH | 5.00           | \$ 290.00     | \$ 1,450.00  |
| 212 | PAVEMENT BAR, TYP B-HS   | SQFT | 0.00           | \$ 9.90       | \$ -         |
| 213 | PAVEMENT BAR, TYPE A   | SQFT | 0.00           | \$ 4.50       | \$ -         |
| 214 | PAVEMENT BAR, TYPE B   | SQFT | 0.00           | \$ 9.40       | \$ -         |
| 215 | REMOVE EXISTING SIGNS  | LS*  | 0.00           | \$ 41.70      | \$ -         |
| 216 | REMOVE & REINSTALL EXISTING SIGNS                              | LS*  | 0.00           | \$ 167.00     | \$ -         |
| 217 | SIGN SUPPORT FOOTINGS, BREAKAWAY                               | LS*  | 0.00           | \$ 182.00     | \$ -         |
| 218 | SIGNAL POLE MOUNTS   | LS*  | 0.00           | \$ 570.00     | \$ -         |
| 219 | PIPE SIGN SUPPORTS   | LS*  | 0.00           | \$ 180.00     | \$ -         |
| 220 | TYPE "B" SIGNS IN PLACE  | SQFT | 0.00           | \$ 18.60      | \$ -         |
| 221 | TYPE "B1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 23.20      | \$ -         |
| 222 | TYPE "C" SIGNS IN PLACE  | SQFT | 0.00           | \$ 19.80      | \$ -         |
| 223 | TYPE "G" SIGNS IN PLACE  | SQFT | 0.00           | \$ 39.60      | \$ -         |
| 224 | TYPE "G1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 36.10      | \$ -         |
| 225 | TYPE "G5" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 33.00      | \$ -         |
| 226 | TYPE "R" SIGNS IN PLACE  | SQFT | 0.00           | \$ 20.90      | \$ -         |
| 227 | TYPE "R1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 18.80      | \$ -         |
| 228 | TYPE "W1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 19.00      | \$ -         |
| 229 | TYPE "W2" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 19.90      | \$ -         |
| 230 | TYPE "W4" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 20.90      | \$ -         |
| 231 | TYPE "W6" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 15.00      | \$ -         |
| 232 | TYPE "W7" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 20.60      | \$ -         |
| 233 | TYPE "W12" SIGNS IN PLACE                                      | SQFT | 0.00           | \$ 25.60      | \$ -         |
| 234 | TYPE "Y1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 19.00      | \$ -         |
| 235 | TYPE "Y2" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 14.60      | \$ -         |
| 236 | REMOVAL OF ELECTRICAL SYSTEMS (lighting)                       | LS*  | 0.00           | \$ 389.00     | \$ -         |
| 237 | REMOVAL OF ELECTRICAL SYSTEMS (traffic signals)                | LS*  | 0.00           | \$ 3,640.00   | \$ -         |
| 238 | POLE FOUNDATIONS   | LS*  | 0.00           | \$ 2,000.00   | \$ -         |
| 239 | LIGHTING POLES, FIXED BASE                                     | LS*  | 0.00           | \$ 6,890.00   | \$ -         |
| 240 | LIGHTING POLE ARMS   | LS*  | 0.00           | \$ 338.00     | \$ -         |
| 241 | LUMINAIRES, LAMPS AND BALLASTS                                 | LS*  | 0.00           | \$ 1,000.00   | \$ -         |
| 242 | SWITCHING, CONDUIT AND WIRING                                  | LS*  | 0.00           | \$ 25.00      | \$ -         |
| 243 | TRAFFIC SIGNAL INSTALLATION                                    | LS*  | 0.00           | \$ 120,000.00 | \$ -         |
| 244 | TRAFFIC SIGNAL MODIFICATION                                    | LS*  | 0.00           | \$ 45,700.00  | \$ -         |
| 245 | FLASHING BEACON INSTALLATION                                   | LS*  | 0.00           | \$ 40,000.00  | \$ -         |

| NO.             | ITEMS OF WORK AND MATERIALS                   | UNIT  | TOTAL QUANTITY | UNIT PRICE  | TOTAL AMOUNT  |
|-----------------|---|-------|----------------|-------------|---------------|
| 246             | LOOP DETECTOR INSTALLATION                    | LS*   | 0.00           | \$ 9,120.00 | \$ -          |
| 247             | INTERCONNECT SYSTEM (underground)             | LS*   | 0.00           | \$ 38.90    | \$ -          |
| 248             | INTERCONNECT SYSTEM (overhead)                | LS*   | 0.00           | \$ 3.80     | \$ -          |
| 249             | TRAFFIC CAMERA INSTALLATION                   | LS*   | 0.00           | \$ 2,600.00 | \$ -          |
| 250             | PERMANENT SEEDING                             | ACRE  | 0.00           | \$ 2,480.00 | \$ -          |
| 251             | LAWN SEEDING                                  | SQYD  | 49.00          | \$ 10.04    | \$ 491.96     |
| 252             | TOPSOIL                                       | CUYD  | 8.00           | \$ 60.00    | \$ 480.00     |
| 253             | SOIL CONDITIONER                              | CUYD  | 0.00           | \$ 35.20    | \$ -          |
| 254             | CONIFER TREES, 9 FT HEIGHT                    | EACH  | 0.00           | \$ 351.00   | \$ -          |
| 255             | DECIDUOUS TREES, 2-1/2 INCH CALIPER           | EACH  | 0.00           | \$ 822.00   | \$ -          |
| 256             | DECIDUOUS TREES, 3 INCH CALIPER               | EACH  | 0.00           | \$ 890.00   | \$ -          |
| 257             | SHRUBS, NO. 1 CONTAINER                       | EACH  | 0.00           | \$ 12.50    | \$ -          |
| 258             | SHRUBS, NO. 2 CONTAINER                       | EACH  | 0.00           | \$ 19.10    | \$ -          |
| 259             | SHRUBS, NO. 3 CONTAINER                       | EACH  | 0.00           | \$ 33.50    | \$ -          |
| 260             | SHRUBS, NO. 5 CONTAINER                       | EACH  | 0.00           | \$ 21.70    | \$ -          |
| 261             | GROUND COVERS, NO. 1 CONTAINERS               | EACH  | 0.00           | \$ 8.00     | \$ -          |
| 262             | GROUND COVERS, 4 INCH POTS                    | EACH  | 0.00           | \$ 4.50     | \$ -          |
| 263             | BULBS   | EACH  | 0.00           | \$ 2.40     | \$ -          |
| 264             | SEEDLING PLANTS                               | EACH  | 0.00           | \$ 11.30    | \$ -          |
| 265             | ROOTED PLANT CUTTINGS                         | EACH  | 0.00           | \$ 5.10     | \$ -          |
| 266             | SOD LAWN                                      | SQYD  | 0.00           | \$ 8.20     | \$ -          |
| 267             | BARK MULCH                                    | CUYD  | 0.00           | \$ 55.60    | \$ -          |
| 268             | ROCK MULCH                                    | TON   | 0.00           | \$ 92.60    | \$ -          |
| 269             | ADDITIONAL ESTABLISHMENT PERIOD               | YEAR* | 0.00           | \$ 264.00   | \$ -          |
| 270             | TREE GRATES                                   | EACH  | 0.00           | \$ 1,170.00 | \$ -          |
| 271             | ROOT BARRIER                                  | FOOT  | 0.00           | \$ 11.90    | \$ -          |
| 272             | TREE GRATE FRAMES                             | EACH  | 0.00           | \$ 451.00   | \$ -          |
| 273             | BORDER EDGING                                 | FOOT  | 0.00           | \$ 6.70     | \$ -          |
| 274             | TYPE 2 FENCE                                  | FOOT  | 0.00           | \$ 6.85     | \$ -          |
| 275             | CL-6 CHAIN-LINK FENCE                         | FOOT  | 0.00           | \$ 25.80    | \$ -          |
| 276             | CL-6R CHAIN-LINK FENCE                        | FOOT  | 0.00           | \$ 22.90    | \$ -          |
| 277             | CL-4R CHAIN-LINK FENCE WITH VINYL CLAD FABRIC | FOOT  | 0.00           | \$ 27.80    | \$ -          |
| 278             | ORNAMENTAL PROTECTIVE SCREENING               | FOOT  | 0.00           | \$ 158.00   | \$ -          |
| 279             | REMOVING AND REBUILDING FENCE                 | FOOT  | 0.00           | \$ 27.40    | \$ -          |
| 280             | SINGLE MAILBOX SUPPORTS                       | EACH  | 0.00           | \$ 300.00   | \$ -          |
| 281             | MULTIPLE MAILBOX SUPPORTS                     | EACH  | 0.00           | \$ 339.00   | \$ -          |
| 282             | MAILBOX CONCRETE COLLARS                      | EACH  | 0.00           | \$ 66.00    | \$ -          |
| 283             | REMOVE & REINSTALL MAILBOX SUPPORTS           | EACH  | 0.00           | \$ 224.00   | \$ -          |
| 284             | BENCHES, TYPE _____                           | EACH  | 0.00           | \$ 3,090.00 | \$ -          |
| 285             | BICYCLE RACKS                                 | EACH  | 0.00           | \$ 739.00   | \$ -          |
| 286             | LITTER RECEPTACLES                            | EACH  | 0.00           | \$ 1,290.00 | \$ -          |
| 287             | IRRIGATION SYSTEM                             | LS    | 0.00           | \$ 3,100.00 | \$ -          |
| 288             | 4 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 67.70    | \$ -          |
| 289             | 6 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 74.90    | \$ -          |
| 290             | 8 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 82.00    | \$ -          |
| 291             | 12 INCH DUCTILE IRON PIPE                     | FOOT  | 0.00           | \$ 96.40    | \$ -          |
| 292             | 4 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 924.00   | \$ -          |
| 293             | 6 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 1,090.00 | \$ -          |
| 294             | 8 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 1,970.00 | \$ -          |
| 295             | 12 INCH GATE VALVE, MJ                        | EACH  | 0.00           | \$ 2,340.00 | \$ -          |
| 296             | HYDRANT ASSEMBLIES                            | EACH  | 0.00           | \$ 5,040.00 | \$ -          |
| 297             | 2 INCH SERVICE LINE, SHORT RUN                | EACH  | 0.00           | \$ 2,100.00 | \$ -          |
| 298             | 3 INCH SERVICE LINE, SHORT RUN                | EACH  | 0.00           | \$ 2,820.00 | \$ -          |
| TOTAL BID ITEMS |   |       |                |             | \$ 146,308.88 |

##### ANTICIPATED ITEMS #####

| NO. | ITEMS OF WORK AND MATERIALS  | UNIT | QUANTITY | UNIT PRICE   | AMOUNT       |
|-----|--|------|----------|--------------|--------------|
| 1   | RIGHT OF WAY MONUMENTATION   | LS   | 0.00     | \$ -         | \$ -         |
| 2   | RELOCATE WATER FACILITIES - MAINS, VALVES, ETC.                        | LS   | 1.00     | \$ 30,000.00 | \$ 30,000.00 |
| 3   | RELOCATE WATER FACILITIES - METER                                      | EACH | 0.00     | \$ 6,000.00  | \$ -         |
| 4   | STREET LIGHTING - UPGRADE LUMINAIRES                                   | EACH | 0.00     | \$ 600.00    | \$ -         |
| 5   | STREET LIGHTING - INSTALL ARMS AND LUMINAIRES                          | EACH | 0.00     | \$ 5,000.00  | \$ -         |
| 6   | CONNECT CONTRACTOR INSTALLED TRAFFIC SIGNAL LOOPS TO CONTROLLER BY BOM | EACH | 0.00     | \$ 1,000.00  | \$ -         |

| NO.                            | ITEMS OF WORK AND MATERIALS   | UNIT | TOTAL QUANTITY | UNIT PRICE    | TOTAL AMOUNT        |
|--------------------------------|---|------|----------------|---------------|---------------------|
| 7                              | STORMWATER PLANTINGS AND PLANT ESTABLISHMENT                              | SQFT | 0.00           | \$ 20.00      | \$ -                |
| 8                              | STORMWATER OFFSITE MANAGEMENT FEE   | SQFT | 0.00           | \$ 3.70       | \$ -                |
| 9                              | ROCK EXCAVATION   | CUYD | 0.00           | \$ 106.00     | \$ -                |
| 10                             | RAILROAD PROTECTION SERVICES (ONE YEAR)                                   | LS   | 0.00           | \$ 100,000.00 | \$ -                |
| 11                             | ASPHALT CEMENT ESCALATION   | LS   | 1.00           | \$ -          | \$ -                |
| 12                             | FUEL ESCALATION   | LS   | 1.00           | \$ -          | \$ -                |
| 13                             | TESTING CONTAMINATED MEDIA  | LS   | 0.00           | \$ 5,000.00   | \$ -                |
| 14                             | BOLI FEE PAYMENT  | LS   | 1.00           | \$ 250.00     | \$ 250.00           |
| 15                             | CONTRACT CONTINGENCY (REQUIREMENT TO ACCEPT BIDS UP TO 10% OVER ESTIMATE) | LS   | 1.00           | \$ 14,630.89  | \$ 14,630.89        |
| <b>TOTAL ANTICIPATED ITEMS</b> |   |      |                |               | <b>\$ 44,880.89</b> |

**SCHEDULE SUMMARY**

|  |                                   |   |                   |
|--|-----------------------------------|---|-------------------|
| BID ITEMS  |                                   |   | \$ 146,309        |
| CONSTRUCTION CONTINGENCY                                 | 3.5% of Bid Items <sup>*</sup>    |   | \$ 5,121          |
| <b>SUBTOTAL</b>  |                                   |   | <b>\$ 151,430</b> |
| ANTICIPATED ITEMS  |                                   |   | \$ 44,881         |
| <b>TOTAL CONSTRUCTION</b>                                |                                   |   | <b>\$ 196,311</b> |
| PROJECT MANAGEMENT                                       | 5% of Bid Items                   |   | \$ 7,315          |
| DESIGN ENGINEERING                                       | 25% of Bid Items                  |   | \$ 36,577         |
| CONSTRUCTION MANAGEMENT                                  | 15% of Bid Items                  |   | \$ 21,946         |
| <b>SUBTOTAL</b>  |                                   |   | <b>\$ 65,838</b>  |
| PROJECT ENGINEERING & MANAGEMENT OVERHEAD                | 79.27% of PM, Eng. and CM         |   | \$ 52,190         |
| <b>TOTAL PROJECT ENGINEERING &amp; MANAGEMENT</b>        |                                   |   | <b>\$ 118,029</b> |
| RIGHT-OF-WAY LAND, IMPROVEMENTS, AND DAMAGES             |                                   |   | \$ -              |
| RIGHT-OF-WAY APPRAISAL, TITLE INSURANCE, AND NEGOTIATION |                                   |   | \$ -              |
| RIGHT-OF-WAY CONTINGENCY                                 | 30% of Land, Improve, and Damages |   | \$ -              |
| <b>TOTAL PROJECT RIGHT-OF-WAY</b>                        |                                   |   | <b>\$ -</b>       |
| INFLATION RATE ON CONTRACT                               | Years                             | Inflation                               |                   |
| INFLATION RATE ON PERSONNEL                              | 5                                 | 4.5% of Construction                    | \$ 48,328         |
| ESTIMATE CONTINGENCY FOR UNDEFINED OR CHANGE IN SCOPE    | 5                                 | 2.0% of Eng & Mgmt                      | \$ 12,285         |
|  |                                   | 20% of Const, Eng & Mgmt, and Inflation | \$ 74,990         |
| <b>TOTAL PROJECT CONTINGENCY</b>                         |                                   |   | <b>\$ 135,603</b> |
| <b>TOTAL PROJECT ESTIMATE</b>                            |                                   |   | <b>\$ 449,943</b> |

LS\* Unit Price shown is on Pound, Each, or Foot Basis as applicable  
Remove \* and change unit to 1 in the Bid Form



CITY OF PORTLAND, OREGON  
BUREAU OF TRANSPORTATION  
PRELIMINARY ENGINEER'S ESTIMATE

SW Beaverton-Hillsdale Hwy from 25th Ave. to Dosch Rd. Sidewalk Infill, S. Side

Date: August 18, 2016

By: RB

PRELIMINARY ENGINEER'S ESTIMATE FOR THE IMPROVEMENT OF SW Beaverton-Hillsdale Hwy FROM 25th Ave. TO Dosch Rd.

VALUES IN BLUE ARE PERCENT OF CONTRACT.

##### BID ITEMS #####

| NO. | ITEMS OF WORK AND MATERIALS                 | UNIT  | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|---|-------|----------------|--------------|--------------|
| 1   | MOBILIZATION                                | LS    | 1.00           | \$ 26,522.86 | \$ 26,522.86 |
| 2   | TEMPORARY PROTECTION & DIRECTION OF TRAFFIC | LS    | 1.00           | \$ 7,956.86  | \$ 7,956.86  |
| 3   | TEMPORARY SIGNS                             | SQFT  | 54.00          | \$ 20.00     | \$ 1,080.00  |
| 4   | TEMPORARY BARRICADES, TYPE II               | EACH  | 0.00           | \$ 100.00    | \$ -         |
| 5   | TEMPORARY BARRICADES, TYPE III              | EACH  | 0.00           | \$ 150.00    | \$ -         |
| 6   | TEMPORARY CONCRETE BARRIER, REFLECTORIZED   | FOOT  | 0.00           | \$ 17.00     | \$ -         |
| 7   | MOVING TEMPORARY CONCRETE BARRIER           | FOOT  | 0.00           | \$ 5.30      | \$ -         |
| 8   | TEMPORARY IMPACT ATTENUATOR                 | EACH  | 0.00           | \$ 1,150.00  | \$ -         |
| 9   | TEMPORARY PEDESTRIAN WALKWAYS               | FOOT  | 0.00           | \$ 65.00     | \$ -         |
| 10  | TEMPORARY PLASTIC DRUMS                     | EACH  | 5.00           | \$ 52.00     | \$ 260.00    |
| 11  | TEMPORARY REFLECTIVE PAVEMENT MARKERS       | EACH  | 0.00           | \$ 4.80      | \$ -         |
| 12  | TEMPORARY FLEXIBLE PAVEMENT MARKERS         | EACH  | 0.00           | \$ 3.00      | \$ -         |
| 13  | TEMPORARY STRIPING                          | FOOT  | 0.00           | \$ 0.65      | \$ -         |
| 14  | STRIPE REMOVAL                              | FOOT  | 0.00           | \$ 0.82      | \$ -         |
| 15  | STRIPING & STRIPE REMOVAL MOBILIZATION      | EACH  | 0.00           | \$ 425.00    | \$ -         |
| 16  | TEMPORARY TRAFFIC SIGNAL INSTALLATION       | EACH  | 0.00           | \$ 68,000.00 | \$ -         |
| 17  | SEQUENTIAL ARROW SIGNS                      | EACH  | 0.00           | \$ 1,800.00  | \$ -         |
| 18  | PORTABLE CHANGEABLE MESSAGE SIGNS           | EACH  | 1.00           | \$ 4,330.00  | \$ 4,330.00  |
| 19  | FLAGGERS                                    | HOURL | 500.00         | \$ 48.50     | \$ 24,250.00 |
| 20  | TRAFFIC CONTROL SUPERVISOR                  | HOURL | 0.00           | \$ 65.40     | \$ -         |
| 21  | TEMPORARY TYPE ORANGE PLASTIC MESH FENCE    | FOOT  | 0.00           | \$ 3.60      | \$ -         |
| 22  | TEMPORARY CL-6R CHAIN LINK FENCE            | FOOT  | 0.00           | \$ 17.60     | \$ -         |
| 23  | EROSION CONTROL                             | LS    | 1.00           | \$ 2,652.29  | \$ 2,652.29  |
| 24  | PLASTIC SHEETING                            | SQFT  | 0.00           | \$ 0.20      | \$ -         |
| 25  | MATTING                                     | SQFT  | 0.00           | \$ 0.78      | \$ -         |
| 26  | CONSTRUCTION ENTRANCES                      | EACH  | 0.00           | \$ 1,890.00  | \$ -         |
| 27  | SEDIMENT FENCE, SUPPORTED                   | FOOT  | 0.00           | \$ 4.20      | \$ -         |
| 28  | SEDIMENT FENCE, UNSUPPORTED                 | FOOT  | 638.00         | \$ 2.50      | \$ 1,595.00  |
| 29  | INLET PROTECTION                            | EACH  | 7.00           | \$ 88.00     | \$ 616.00    |
| 30  | POLLUTION CONTROL PLAN                      | LS    | 1.00           | \$ 265.23    | \$ 265.23    |
| 31  | CONTAMINATED MEDIA DISPOSAL                 | CUYD  | 0.00           | \$ 163.00    | \$ -         |
| 32  | TRUCK LINERS                                | EACH  | 0.00           | \$ 470.00    | \$ -         |
| 33  | HASP/CMDP WORKPLANS                         | LS    | 0.00           | \$ 1,000.00  | \$ -         |
| 34  | REMOVAL OF PIPES                            | FOOT  | 0.00           | \$ 25.30     | \$ -         |
| 35  | REMOVAL OF CURBS                            | FOOT  | 0.00           | \$ 7.30      | \$ -         |
| 36  | REMOVAL OF WALKS AND DRIVEWAYS              | SQYD  | 0.00           | \$ 13.90     | \$ -         |
| 37  | REMOVAL OF SURFACINGS                       | SQYD  | 0.00           | \$ 8.20      | \$ -         |
| 38  | REMOVAL OF INLETS                           | EACH  | 0.00           | \$ 310.00    | \$ -         |
| 39  | REMOVAL OF MANHOLES                         | EACH  | 0.00           | \$ 1,050.00  | \$ -         |
| 40  | REMOVAL OF RAILROAD TRACK AND TIES          | FOOT  | 0.00           | \$ 58.70     | \$ -         |
| 41  | SALVAGING AND STOCKPILING OF COBBLESTONES   | SQYD  | 0.00           | \$ 20.90     | \$ -         |
| 42  | REMOVE AND REINSTALL HORSE RINGS            | EACH  | 0.00           | \$ 227.00    | \$ -         |
| 43  | REMOVAL OF STRUCTURES & OBSTRUCTIONS        | LS    | 1.00           | \$ 10,609.15 | \$ 10,609.15 |
| 44  | REMOVAL OF FENCES                           | FOOT  | 0.00           | \$ 3.06      | \$ -         |
| 45  | CLEARING AND GRUBBING                       | LS    | 1.00           | \$ 6,895.94  | \$ 6,895.94  |
| 46  | TREE ROOT REMOVAL                           | HOURL | 0.00           | \$ 178.00    | \$ -         |
| 47  | TREE TRIMMING                               | HOURL | 0.00           | \$ 152.00    | \$ -         |
| 48  | DITCH EXCAVATION                            | CUYD  | 0.00           | \$ 18.00     | \$ -         |
| 49  | GENERAL EXCAVATION                          | CUYD  | 212.00         | \$ 49.00     | \$ 10,388.00 |
| 50  | SURCHARGE EXCAVATION                        | CUYD  | 0.00           | \$ 3.80      | \$ -         |
| 51  | EMBANKMENT IN PLACE                         | CUYD  | 0.00           | \$ 24.00     | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                    | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT |
|-----|--|------|----------------|--------------|--------------|
| 52  | SETTLEMENT PLATE   | EACH | 0.00           | \$ 772.00    | \$ -         |
| 53  | 12 INCH SUBGRADE STABILIZATION                                 | SQYD | 0.00           | \$ 30.17     | \$ -         |
| 54  | AGGREGATE DITCH LINING   | SQYD | 0.00           | \$ 38.40     | \$ -         |
| 55  | WATERING   | MGAL | 0.00           | \$ 26.20     | \$ -         |
| 56  | DRAINAGE GEOTEXTILE, TYPE 2                                    | SQYD | 0.00           | \$ 1.05      | \$ -         |
| 57  | EMBANKMENT GEOTEXTILE  | SQYD | 0.00           | \$ 1.50      | \$ -         |
| 58  | SUBGRADE GEOTEXTILE  | SQYD | 0.00           | \$ 1.25      | \$ -         |
| 59  | GEOGRID  | SQYD | 0.00           | \$ 2.60      | \$ -         |
| 60  | GRANULAR DRAINAGE BLANKET                                      | TON  | 0.00           | \$ 93.00     | \$ -         |
| 61  | FILTER BLANKET   | SQYD | 0.00           | \$ 15.00     | \$ -         |
| 62  | LOOSE RIPRAP, CLASS 50   | CUYD | 0.00           | \$ 35.10     | \$ -         |
| 63  | LOOSE RIPRAP, CLASS 100  | CUYD | 0.00           | \$ 59.70     | \$ -         |
| 64  | WIRE MESH SLOPE PROTECTION                                     | SQFT | 0.00           | \$ 5.60      | \$ -         |
| 65  | VIDEO INSPECTION OF SEWERS, MAINLINE                           | FOOT | 0.00           | \$ 3.30      | \$ -         |
| 66  | TRENCH EXCAVATION, COMMON                                      | CUYD | 0.00           | \$ 16.70     | \$ -         |
| 67  | EXPLORATORY EXCAVATION   | CUYD | 0.00           | \$ 51.60     | \$ -         |
| 68  | POTHOLE EXCAVATION   | EACH | 0.00           | \$ 548.00    | \$ -         |
| 69  | TRENCH FOUNDATION STABILIZATION                                | CUYD | 0.00           | \$ 61.00     | \$ -         |
| 70  | TRENCH BACKFILL, CLASS B                                       | CUYD | 0.00           | \$ 33.00     | \$ -         |
| 71  | STORMWATER CURB EXTENSIONS                                     | SQFT | 0.00           | \$ 23.80     | \$ -         |
| 72  | STORMWATER PLANTERS  | SQFT | 0.00           | \$ 38.10     | \$ -         |
| 73  | STORMWATER SWALES  | SQFT | 0.00           | \$ 15.10     | \$ -         |
| 74  | 3 INCH DRAIN PIPE  | FOOT | 0.00           | \$ 17.00     | \$ -         |
| 75  | SUBSURFACE DRAIN OUTLETS                                       | EACH | 0.00           | \$ 387.00    | \$ -         |
| 76  | 12 INCH PIPE, PVC AWWA C900, CI 150, BEDDING TYPE: D, COMPLETE | FOOT | 0.00           | \$ 130.00    | \$ -         |
| 77  | 6 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D             | FOOT | 0.00           | \$ 80.00     | \$ -         |
| 78  | 8 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D             | FOOT | 0.00           | \$ 90.00     | \$ -         |
| 79  | 10 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D, COMPLETE  | FOOT | 30.00          | \$ 110.00    | \$ 3,300.00  |
| 80  | 12 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D, COMPLETE  | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 81  | 18 INCH PIPE, PVC ASTM D3034 SDR35, BEDDING TYPE: D            | FOOT | 0.00           | \$ 130.00    | \$ -         |
| 82  | 10 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D, COMPLETE   | FOOT | 0.00           | \$ 110.00    | \$ -         |
| 83  | 12 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D, COMPLETE   | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 84  | 8 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D              | FOOT | 0.00           | \$ 90.00     | \$ -         |
| 85  | 10 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D             | FOOT | 0.00           | \$ 110.00    | \$ -         |
| 86  | 12 INCH PIPE, HDPE ASTM F714 SDR 26 BEDDING TYPE:D             | FOOT | 0.00           | \$ 120.00    | \$ -         |
| 87  | CONCRETE CLOSURE COLLAR  | EACH | 0.00           | \$ 550.00    | \$ -         |
| 88  | CONCRETE MANHOLES, 48 INCH, 0-8 FT DEPTH                       | EACH | 0.00           | \$ 4,400.00  | \$ -         |
| 89  | CONCRETE MANHOLES, 48 INCH, DEEPER THAN 8 FT                   | FOOT | 0.00           | \$ 300.00    | \$ -         |
| 90  | CONCRETE MANHOLES, SANITARY SEWER                              | EACH | 0.00           | \$ 3,460.00  | \$ -         |
| 91  | CONCRETE MANHOLES, WATER QUALITY                               | EACH | 0.00           | \$ 12,410.00 | \$ -         |
| 92  | CONCRETE MANHOLES, SEDIMENTATION                               | EACH | 0.00           | \$ 5,610.00  | \$ -         |
| 93  | CONCRETE MANHOLES, SUMP  | EACH | 0.00           | \$ 13,000.00 | \$ -         |
| 94  | SUMP CAPACITY TEST   | EACH | 0.00           | \$ 1,690.00  | \$ -         |
| 95  | CONCRETE INLETS, TYPE CG-1                                     | EACH | 0.00           | \$ 1,700.00  | \$ -         |
| 96  | CONCRETE INLETS, TYPE CG-2                                     | EACH | 3.00           | \$ 1,900.00  | \$ 5,700.00  |
| 97  | CONCRETE INLETS, TYPE CG-3                                     | EACH | 0.00           | \$ 2,000.00  | \$ -         |
| 98  | CONCRETE INLETS, TYPE D  | EACH | 0.00           | \$ 1,750.00  | \$ -         |
| 99  | CONCRETE INLETS, TYPE G-1                                      | EACH | 0.00           | \$ 1,940.00  | \$ -         |
| 100 | CONCRETE INLETS, TYPE G-2                                      | EACH | 0.00           | \$ 1,800.00  | \$ -         |
| 101 | CONCRETE INLETS, TYPE G-2MA                                    | EACH | 0.00           | \$ 1,900.00  | \$ -         |
| 102 | CONCRETE INLETS, DEEPER THAN 4 FT                              | FOOT | 0.00           | \$ 300.00    | \$ -         |
| 103 | CONCRETE INLETS, TYPE METAL                                    | EACH | 0.00           | \$ 500.00    | \$ -         |
| 104 | CONCRETE INLETS, TYPE METAL, MODIFIED                          | EACH | 0.00           | \$ 550.00    | \$ -         |
| 105 | CONCRETE INLETS, TYPE CHANNEL & GRATE                          | EACH | 0.00           | \$ 2,290.00  | \$ -         |
| 106 | CONCRETE INLETS, TYPE CONCRETE                                 | EACH | 0.00           | \$ 135.00    | \$ -         |
| 107 | CONCRETE INLETS, TYPE BEEHIVE                                  | EACH | 0.00           | \$ 1,500.00  | \$ -         |
| 108 | CATCH BASINS, METAL SUMP                                       | EACH | 0.00           | \$ 1,710.00  | \$ -         |
| 109 | ACCESS DOORS   | EACH | 0.00           | \$ 2,700.00  | \$ -         |
| 110 | DRAINAGE CURBS   | FOOT | 0.00           | \$ 19.10     | \$ -         |
| 111 | ADJUSTING BOXES  | EACH | 0.00           | \$ 217.00    | \$ -         |
| 112 | CONNECTION TO EXISTING STRUCTURES                              | EACH | 0.00           | \$ 841.00    | \$ -         |
| 113 | ADJUSTING INLETS   | EACH | 0.00           | \$ 664.00    | \$ -         |
| 114 | FILLING ABANDON STRUCTURES                                     | EACH | 0.00           | \$ 3,000.00  | \$ -         |
| 115 | MINOR ADJUSTMENT OF MANHOLES                                   | EACH | 2.00           | \$ 642.00    | \$ 1,284.00  |
| 116 | MAJOR ADJUSTMENT OF MANHOLES                                   | EACH | 0.00           | \$ 1,520.00  | \$ -         |

| NO. | ITEMS OF WORK AND MATERIALS                                 | UNIT | TOTAL QUANTITY | UNIT PRICE   | TOTAL AMOUNT  |
|-----|---|------|----------------|--------------|---------------|
| 117 | MANHOLES OVER EXISTING SEWERS                               | EACH | 0.00           | \$ 4,200.00  | \$ -          |
| 118 | TRENCH RESURFACING  | SQYD | 0.00           | \$ 109.00    | \$ -          |
| 119 | TEMPORARY TRENCH RESURFACING                                | SQYD | 0.00           | \$ 25.20     | \$ -          |
| 120 | SHORING, CRIBBING AND COFFERDAMS                            | LS   | 0.00           | \$ -         | \$ -          |
| 121 | STRUCTURE EXCAVATION  | CUYD | 0.00           | \$ 48.30     | \$ -          |
| 122 | GRANULAR WALL BACKFILL                                      | CUYD | 0.00           | \$ 63.90     | \$ -          |
| 123 | GRANULAR STRUCTURAL BACKFILL                                | CUYD | 0.00           | \$ 40.60     | \$ -          |
| 124 | REINFORCEMENT   | LS*  | 0.00           | \$ 0.86      | \$ -          |
| 125 | CONCRETE BRIDGE   | SQFT | 0.00           | \$ 250.00    | \$ -          |
| 126 | BIKE OASIS  | EACH | 0.00           | \$ 32,400.00 | \$ -          |
| 127 | 3 INCH ELECTRICAL CONDUIT                                   | FOOT | 0.00           | \$ 9.05      | \$ -          |
| 128 | ASPHALTIC PLUG JOINT SEALS                                  | LS   | 0.00           | \$ 7,470.00  | \$ -          |
| 129 | ASPHALTIC PLUG JOINT SEAL MATERIAL                          | CUYD | 0.00           | \$ 5,350.00  | \$ -          |
| 130 | CONCRETE BRIDGE RAIL WITH ORNAMENTAL PROTECTIVE SCREENING   | LS*  | 0.00           | \$ 158.00    | \$ -          |
| 131 | RETAINING WALL, CAST-IN-PLACE CONCRETE                      | SQFT | 0.00           | \$ 95.80     | \$ -          |
| 132 | RETAINING WALL, GABION                                      | SQFT | 0.00           | \$ 24.10     | \$ -          |
| 133 | RETAINING WALL, PREFABRICATED MODULAR                       | SQFT | 0.00           | \$ 39.50     | \$ -          |
| 134 | RETAINING WALL, CONVENTIONAL SEGMENTAL                      | SQFT | 0.00           | \$ 43.30     | \$ -          |
| 135 | RETAINING WALL, MSE   | SQFT | 0.00           | \$ 49.00     | \$ -          |
| 136 | SOUND WALLS   | SQFT | 0.00           | \$ 23.50     | \$ -          |
| 137 | CONCRETE ARCH CULVERT                                       | FOOT | 0.00           | \$ 1,530.00  | \$ -          |
| 138 | CONCRETE SLOPE PAVING                                       | SQFT | 0.00           | \$ 11.25     | \$ -          |
| 139 | COLD PLANE PAVEMENT REMOVAL, 2 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 140 | COLD PLANE PAVEMENT REMOVAL, 3 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 141 | COLD PLANE PAVEMENT REMOVAL, 4 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 142 | COLD PLANE PAVEMENT REMOVAL, 5 INCH DEEP                    | SQYD | 0.00           | \$ 3.42      | \$ -          |
| 143 | AGGREGATE BASE  | TON  | 0.00           | \$ 36.90     | \$ -          |
| 144 | AGGREGATE BASE, 4 INCH THICK                                | SQYD | 0.00           | \$ 7.15      | \$ -          |
| 145 | AGGREGATE BASE, 6 INCH THICK                                | SQYD | 0.00           | \$ 9.80      | \$ -          |
| 146 | AGGREGATE BASE, 8 INCH THICK                                | SQYD | 0.00           | \$ 12.30     | \$ -          |
| 147 | LEVEL 1, 1/2 INCH DENSE, MWMAC MIXTURE, IN TEMPORARY        | TON  | 0.00           | \$ 89.50     | \$ -          |
| 148 | LEVEL 2, 1/2 INCH DENSE, MWMAC MIXTURE                      | TON  | 0.00           | \$ 89.50     | \$ -          |
| 149 | LEVEL 3, 1/2 INCH DENSE, MWMAC MIXTURE                      | TON  | 0.00           | \$ 89.50     | \$ -          |
| 150 | LEVEL 3, 1/2 INCH DENSE, MWMAC MIXTURE, IN LEVELING         | TON  | 0.00           | \$ 89.50     | \$ -          |
| 151 | LEVEL 3, 3/4 INCH ATPB, MWMAC MIXTURE                       | TON  | 0.00           | \$ 89.50     | \$ -          |
| 152 | CRACK SEALING   | FOOT | 0.00           | \$ 1.00      | \$ -          |
| 153 | 13 INCH ASPHALT CONCRETE PAVEMENT REPAIR                    | SQYD | 208.00         | \$ 179.00    | \$ 37,232.00  |
| 154 | 16 INCH ASPHALT CONCRETE PAVEMENT REPAIR                    | SQYD | 0.00           | \$ 112.00    | \$ -          |
| 155 | EXTRA FOR ASPHALT APPROACHES                                | EACH | 0.00           | \$ 651.00    | \$ -          |
| 156 | ASPHALT CONNECTIONS   | SQFT | 0.00           | \$ 7.30      | \$ -          |
| 157 | ASPHALT SPEED BUMPS   | EACH | 0.00           | \$ 1,800.00  | \$ -          |
| 158 | PLAIN CONCRETE PAVEMENT, UNDOVELLED, 6 INCH THICK           | SQYD | 0.00           | \$ 64.70     | \$ -          |
| 159 | PLAIN CONCRETE PAVEMENT, UNDOVELLED, 8 INCH THICK           | SQYD | 0.00           | \$ 66.40     | \$ -          |
| 160 | PLAIN CONCRETE PAVEMENT, UNDOVELLED, 10 INCH THICK          | SQYD | 0.00           | \$ 68.10     | \$ -          |
| 161 | PLAIN CONCRETE PAVEMENT, UNDOVELLED, 12 INCH THICK          | SQYD | 0.00           | \$ 70.00     | \$ -          |
| 162 | PLAIN PERVIOUS CONCRETE PAVEMENT, UNDOVELLED, 10-INCH THICK | SQYD | 0.00           | \$ 73.00     | \$ -          |
| 163 | CONCRETE CURBS, CURB AND GUTTER                             | FOOT | 0.00           | \$ 33.03     | \$ -          |
| 164 | CONCRETE CURBS, STANDARD CURB                               | FOOT | 0.00           | \$ 25.50     | \$ -          |
| 165 | CONCRETE CURB, MOUNTABLE CURB                               | FOOT | 0.00           | \$ 28.09     | \$ -          |
| 166 | CONCRETE CURBS, THICKENED CURB AND GUTTER                   | FOOT | 0.00           | \$ 37.70     | \$ -          |
| 167 | CONCRETE ISLANDS  | SQFT | 0.00           | \$ 11.70     | \$ -          |
| 168 | CONCRETE DRIVEWAYS  | SQFT | 2,262.00       | \$ 8.40      | \$ 19,000.80  |
| 169 | CONCRETE DRIVEWAYS, REINFORCED                              | SQFT | 0.00           | \$ 9.20      | \$ -          |
| 170 | CONCRETE WALKS  | SQFT | 0.00           | \$ 7.40      | \$ -          |
| 171 | MONOLITHIC CURB AND SIDEWALKS                               | SQFT | 8,420.00       | \$ 18.00     | \$ 151,560.00 |
| 172 | MONOLITHIC CURB GUTTER AND SIDEWALKS                        | SQFT | 0.00           | \$ 19.00     | \$ -          |
| 173 | CONCRETE VALLEY GUTTER                                      | FOOT | 0.00           | \$ 35.90     | \$ -          |
| 174 | 6 INCH CONCRETE SURFACING                                   | SQFT | 0.00           | \$ 4.90      | \$ -          |
| 175 | CONCRETE STAIRS   | CUYD | 0.00           | \$ 2,170.00  | \$ -          |
| 176 | CONCRETE DRIVEWAY CONNECTIONS                               | SQFT | 0.00           | \$ 7.75      | \$ -          |
| 177 | CONCRETE SIDEWALK RAMPS                                     | EACH | 0.00           | \$ 1,930.00  | \$ -          |
| 178 | CONCRETE BUS SHELTER PADS                                   | EACH | 0.00           | \$ 730.00    | \$ -          |
| 179 | DETECTABLE WARNING SURFACE                                  | SQFT | 0.00           | \$ 42.30     | \$ -          |
| 180 | MONOLITHIC SIDEWALKS AND WALL, REINFORCED                   | SQFT | 0.00           | \$ 14.00     | \$ -          |
| 181 | BRICK PAVERS  | SQFT | 0.00           | \$ 45.90     | \$ -          |

| NO. | ITEMS OF WORK AND MATERIALS                                    | UNIT | TOTAL QUANTITY | UNIT PRICE    | TOTAL AMOUNT |
|-----|--|------|----------------|---------------|--------------|
| 182 | CONCRETE PAVERS  | SQFT | 0.00           | \$ 11.70      | \$ -         |
| 183 | PERMEABLE PAVERS   | SQFT | 0.00           | \$ 11.00      | \$ -         |
| 184 | CONCRETE RAILROAD CROSSING                                     | FOOT | 0.00           | \$ 472.00     | \$ -         |
| 185 | GUARDRAIL, TYPE 2A   | FOOT | 0.00           | \$ 17.30      | \$ -         |
| 186 | GUARDRAIL, TYPE 3  | FOOT | 0.00           | \$ 48.80      | \$ -         |
| 187 | GUARDRAIL ANCHORS, TYPE 1                                      | EACH | 0.00           | \$ 722.00     | \$ -         |
| 188 | GUARDRAIL END PIECES, TYPE C                                   | EACH | 0.00           | \$ 121.00     | \$ -         |
| 189 | GUARDRAIL TRANSITION   | EACH | 0.00           | \$ 2,240.00   | \$ -         |
| 190 | GUARDRAIL CONNECTIONS  | EACH | 0.00           | \$ 415.00     | \$ -         |
| 191 | GUARDRAIL TERMINALS, NON-FLARED                                | EACH | 0.00           | \$ 220.00     | \$ -         |
| 192 | GUARDRAIL TERMINALS, FLARED                                    | EACH | 0.00           | \$ 1,980.00   | \$ -         |
| 193 | REMOVABLE BOLLARDS   | EACH | 0.00           | \$ 750.00     | \$ -         |
| 194 | CONCRETE BARRIER   | FOOT | 0.00           | \$ 35.40      | \$ -         |
| 195 | IMPACT ATTENUATORS, TYPE B                                     | EACH | 0.00           | \$ 4,780.00   | \$ -         |
| 196 | IMPACT ATTENUATORS, TYPE E                                     | EACH | 0.00           | \$ 16,000.00  | \$ -         |
| 197 | DELINEATORS TYPE 2   | EACH | 0.00           | \$ 68.80      | \$ -         |
| 198 | DELINEATORS TYPE 4   | EACH | 0.00           | \$ 29.30      | \$ -         |
| 199 | PAVEMENT LINE REMOVAL  | FOOT | 0.00           | \$ 0.60       | \$ -         |
| 200 | PAVEMENT LEGEND REMOVAL  | EACH | 0.00           | \$ 55.10      | \$ -         |
| 201 | PAVEMENT BAR REMOVAL   | SQFT | 0.00           | \$ 3.00       | \$ -         |
| 202 | BI-DIRECTIONAL YELLOW TYPE I MARKERS                           | EACH | 0.00           | \$ 5.65       | \$ -         |
| 203 | MONO-DIRECTIONAL WHITE TYPE I MARKERS                          | EACH | 0.00           | \$ 5.65       | \$ -         |
| 204 | LONGITUDINAL PAVEMENT MARKING - PAINT                          | FOOT | 0.00           | \$ 0.46       | \$ -         |
| 205 | CURB MARKINGS - PAINT  | FOOT | 0.00           | \$ 2.00       | \$ -         |
| 206 | THERMOPLASTIC, NON-PROFILE, 120 MILS, EXTRUDED                 | FOOT | 0.00           | \$ 1.40       | \$ -         |
| 207 | PAVEMENT LEGEND, TYPE B: ARROWS                                | EACH | 0.00           | \$ 279.00     | \$ -         |
| 208 | PAVEMENT LEGEND, TYPE B: "ONLY"                                | EACH | 0.00           | \$ 332.00     | \$ -         |
| 209 | PAVEMENT LEGEND, TYPE B: BICYCLE LANE SYMBOLS                  | EACH | 0.00           | \$ 286.00     | \$ -         |
| 210 | PAVEMENT LEGEND, TYPE B-HS: ARROWS                             | EACH | 0.00           | \$ 261.00     | \$ -         |
| 211 | PAVEMENT LEGEND, TYPE B-HS: BICYCLE LANE OR PEDESTRIAN STENCIL | EACH | 10.00          | \$ 290.00     | \$ 2,900.00  |
| 212 | PAVEMENT BAR, TYP B-HS   | SQFT | 0.00           | \$ 9.90       | \$ -         |
| 213 | PAVEMENT BAR, TYPE A   | SQFT | 0.00           | \$ 4.50       | \$ -         |
| 214 | PAVEMENT BAR, TYPE B   | SQFT | 0.00           | \$ 9.40       | \$ -         |
| 215 | REMOVE EXISTING SIGNS  | LS*  | 0.00           | \$ 41.70      | \$ -         |
| 216 | REMOVE & REINSTALL EXISTING SIGNS                              | LS*  | 0.00           | \$ 167.00     | \$ -         |
| 217 | SIGN SUPPORT FOOTINGS, BREAKAWAY                               | LS*  | 0.00           | \$ 182.00     | \$ -         |
| 218 | SIGNAL POLE MOUNTS   | LS*  | 0.00           | \$ 570.00     | \$ -         |
| 219 | PIPE SIGN SUPPORTS   | LS*  | 0.00           | \$ 180.00     | \$ -         |
| 220 | TYPE "B" SIGNS IN PLACE  | SQFT | 0.00           | \$ 18.60      | \$ -         |
| 221 | TYPE "B1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 23.20      | \$ -         |
| 222 | TYPE "C" SIGNS IN PLACE  | SQFT | 0.00           | \$ 19.80      | \$ -         |
| 223 | TYPE "G" SIGNS IN PLACE  | SQFT | 0.00           | \$ 39.60      | \$ -         |
| 224 | TYPE "G1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 36.10      | \$ -         |
| 225 | TYPE "G5" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 33.00      | \$ -         |
| 226 | TYPE "R" SIGNS IN PLACE  | SQFT | 0.00           | \$ 20.90      | \$ -         |
| 227 | TYPE "R1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 18.80      | \$ -         |
| 228 | TYPE "W1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 19.00      | \$ -         |
| 229 | TYPE "W2" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 19.90      | \$ -         |
| 230 | TYPE "W4" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 20.90      | \$ -         |
| 231 | TYPE "W6" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 15.00      | \$ -         |
| 232 | TYPE "W7" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 20.60      | \$ -         |
| 233 | TYPE "W12" SIGNS IN PLACE                                      | SQFT | 0.00           | \$ 25.60      | \$ -         |
| 234 | TYPE "Y1" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 19.00      | \$ -         |
| 235 | TYPE "Y2" SIGNS IN PLACE                                       | SQFT | 0.00           | \$ 14.60      | \$ -         |
| 236 | REMOVAL OF ELECTRICAL SYSTEMS (lighting)                       | LS*  | 0.00           | \$ 389.00     | \$ -         |
| 237 | REMOVAL OF ELECTRICAL SYSTEMS (traffic signals)                | LS*  | 0.00           | \$ 3,640.00   | \$ -         |
| 238 | POLE FOUNDATIONS   | LS*  | 0.00           | \$ 2,000.00   | \$ -         |
| 239 | LIGHTING POLES, FIXED BASE                                     | LS*  | 0.00           | \$ 6,890.00   | \$ -         |
| 240 | LIGHTING POLE ARMS   | LS*  | 0.00           | \$ 338.00     | \$ -         |
| 241 | LUMINAIRES, LAMPS AND BALLASTS                                 | LS*  | 0.00           | \$ 1,000.00   | \$ -         |
| 242 | SWITCHING, CONDUIT AND WIRING                                  | LS*  | 0.00           | \$ 25.00      | \$ -         |
| 243 | TRAFFIC SIGNAL INSTALLATION                                    | LS*  | 0.00           | \$ 120,000.00 | \$ -         |
| 244 | TRAFFIC SIGNAL MODIFICATION                                    | LS*  | 0.00           | \$ 45,700.00  | \$ -         |
| 245 | FLASHING BEACON INSTALLATION                                   | LS*  | 0.00           | \$ 40,000.00  | \$ -         |

| NO.             | ITEMS OF WORK AND MATERIALS                   | UNIT  | TOTAL QUANTITY | UNIT PRICE  | TOTAL AMOUNT  |
|-----------------|---|-------|----------------|-------------|---------------|
| 246             | LOOP DETECTOR INSTALLATION                    | LS*   | 0.00           | \$ 9,120.00 | \$ -          |
| 247             | INTERCONNECT SYSTEM (underground)             | LS*   | 0.00           | \$ 38.90    | \$ -          |
| 248             | INTERCONNECT SYSTEM (overhead)                | LS*   | 0.00           | \$ 3.80     | \$ -          |
| 249             | TRAFFIC CAMERA INSTALLATION                   | LS*   | 0.00           | \$ 2,600.00 | \$ -          |
| 250             | PERMANENT SEEDING                             | ACRE  | 0.00           | \$ 2,480.00 | \$ -          |
| 251             | LAWN SEEDING                                  | SQYD  | 71.00          | \$ 10.04    | \$ 712.84     |
| 252             | TOPSOIL                                       | CUYD  | 12.00          | \$ 60.00    | \$ 720.00     |
| 253             | SOIL CONDITIONER                              | CUYD  | 0.00           | \$ 35.20    | \$ -          |
| 254             | CONIFER TREES, 9 FT HEIGHT                    | EACH  | 0.00           | \$ 351.00   | \$ -          |
| 255             | DECIDUOUS TREES, 2-1/2 INCH CALIPER           | EACH  | 0.00           | \$ 822.00   | \$ -          |
| 256             | DECIDUOUS TREES, 3 INCH CALIPER               | EACH  | 0.00           | \$ 890.00   | \$ -          |
| 257             | SHRUBS, NO. 1 CONTAINER                       | EACH  | 0.00           | \$ 12.50    | \$ -          |
| 258             | SHRUBS, NO. 2 CONTAINER                       | EACH  | 0.00           | \$ 19.10    | \$ -          |
| 259             | SHRUBS, NO. 3 CONTAINER                       | EACH  | 0.00           | \$ 33.50    | \$ -          |
| 260             | SHRUBS, NO. 5 CONTAINER                       | EACH  | 0.00           | \$ 21.70    | \$ -          |
| 261             | GROUND COVERS, NO. 1 CONTAINERS               | EACH  | 0.00           | \$ 8.00     | \$ -          |
| 262             | GROUND COVERS, 4 INCH POTS                    | EACH  | 0.00           | \$ 4.50     | \$ -          |
| 263             | BULBS   | EACH  | 0.00           | \$ 2.40     | \$ -          |
| 264             | SEEDLING PLANTS                               | EACH  | 0.00           | \$ 11.30    | \$ -          |
| 265             | ROOTED PLANT CUTTINGS                         | EACH  | 0.00           | \$ 5.10     | \$ -          |
| 266             | SOD LAWN                                      | SQYD  | 0.00           | \$ 8.20     | \$ -          |
| 267             | BARK MULCH                                    | CUYD  | 0.00           | \$ 55.60    | \$ -          |
| 268             | ROCK MULCH                                    | TON   | 0.00           | \$ 92.60    | \$ -          |
| 269             | ADDITIONAL ESTABLISHMENT PERIOD               | YEAR* | 0.00           | \$ 264.00   | \$ -          |
| 270             | TREE GRATES                                   | EACH  | 0.00           | \$ 1,170.00 | \$ -          |
| 271             | ROOT BARRIER                                  | FOOT  | 0.00           | \$ 11.90    | \$ -          |
| 272             | TREE GRATE FRAMES                             | EACH  | 0.00           | \$ 451.00   | \$ -          |
| 273             | BORDER EDGING                                 | FOOT  | 0.00           | \$ 6.70     | \$ -          |
| 274             | TYPE 2 FENCE                                  | FOOT  | 0.00           | \$ 6.85     | \$ -          |
| 275             | CL-6 CHAIN-LINK FENCE                         | FOOT  | 0.00           | \$ 25.80    | \$ -          |
| 276             | CL-6R CHAIN-LINK FENCE                        | FOOT  | 0.00           | \$ 22.90    | \$ -          |
| 277             | CL-4R CHAIN-LINK FENCE WITH VINYL CLAD FABRIC | FOOT  | 0.00           | \$ 27.80    | \$ -          |
| 278             | ORNAMENTAL PROTECTIVE SCREENING               | FOOT  | 0.00           | \$ 158.00   | \$ -          |
| 279             | REMOVING AND REBUILDING FENCE                 | FOOT  | 0.00           | \$ 27.40    | \$ -          |
| 280             | SINGLE MAILBOX SUPPORTS                       | EACH  | 1.00           | \$ 300.00   | \$ 300.00     |
| 281             | MULTIPLE MAILBOX SUPPORTS                     | EACH  | 0.00           | \$ 339.00   | \$ -          |
| 282             | MAILBOX CONCRETE COLLARS                      | EACH  | 0.00           | \$ 66.00    | \$ -          |
| 283             | REMOVE & REINSTALL MAILBOX SUPPORTS           | EACH  | 0.00           | \$ 224.00   | \$ -          |
| 284             | BENCHES, TYPE _____                           | EACH  | 0.00           | \$ 3,090.00 | \$ -          |
| 285             | BICYCLE RACKS                                 | EACH  | 0.00           | \$ 739.00   | \$ -          |
| 286             | LITTER RECEPTACLES                            | EACH  | 0.00           | \$ 1,290.00 | \$ -          |
| 287             | IRRIGATION SYSTEM                             | LS    | 0.00           | \$ 3,100.00 | \$ -          |
| 288             | 4 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 67.70    | \$ -          |
| 289             | 6 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 74.90    | \$ -          |
| 290             | 8 INCH DUCTILE IRON PIPE                      | FOOT  | 0.00           | \$ 82.00    | \$ -          |
| 291             | 12 INCH DUCTILE IRON PIPE                     | FOOT  | 0.00           | \$ 96.40    | \$ -          |
| 292             | 4 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 924.00   | \$ -          |
| 293             | 6 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 1,090.00 | \$ -          |
| 294             | 8 INCH GATE VALVE, MJ                         | EACH  | 0.00           | \$ 1,970.00 | \$ -          |
| 295             | 12 INCH GATE VALVE, MJ                        | EACH  | 0.00           | \$ 2,340.00 | \$ -          |
| 296             | HYDRANT ASSEMBLIES                            | EACH  | 0.00           | \$ 5,040.00 | \$ -          |
| 297             | 2 INCH SERVICE LINE, SHORT RUN                | EACH  | 0.00           | \$ 2,100.00 | \$ -          |
| 298             | 3 INCH SERVICE LINE, SHORT RUN                | EACH  | 0.00           | \$ 2,820.00 | \$ -          |
| TOTAL BID ITEMS |   |       |                |             | \$ 320,130.97 |

##### ANTICIPATED ITEMS #####

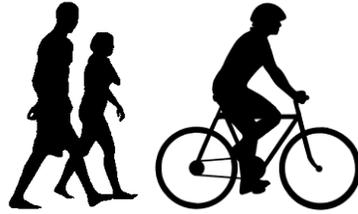
| NO. | ITEMS OF WORK AND MATERIALS  | UNIT | QUANTITY | UNIT PRICE   | AMOUNT       |
|-----|--|------|----------|--------------|--------------|
| 1   | RIGHT OF WAY MONUMENTATION   | LS   | 0.00     | \$ -         | \$ -         |
| 2   | RELOCATE WATER FACILITIES - MAINS, VALVES, ETC.                        | LS   | 1.00     | \$ 30,000.00 | \$ 30,000.00 |
| 3   | RELOCATE WATER FACILITIES - METER                                      | EACH | 0.00     | \$ 6,000.00  | \$ -         |
| 4   | STREET LIGHTING - UPGRADE LUMINAIRES                                   | EACH | 0.00     | \$ 600.00    | \$ -         |
| 5   | STREET LIGHTING - INSTALL ARMS AND LUMINAIRES                          | EACH | 0.00     | \$ 5,000.00  | \$ -         |
| 6   | CONNECT CONTRACTOR INSTALLED TRAFFIC SIGNAL LOOPS TO CONTROLLER BY BOM | EACH | 0.00     | \$ 1,000.00  | \$ -         |

| NO.                     | ITEMS OF WORK AND MATERIALS   | UNIT | TOTAL QUANTITY | UNIT PRICE    | TOTAL AMOUNT |
|-------------------------|---|------|----------------|---------------|--------------|
| 7                       | STORMWATER PLANTINGS AND PLANT ESTABLISHMENT                              | SQFT | 0.00           | \$ 20.00      | \$ -         |
| 8                       | STORMWATER OFFSITE MANAGEMENT FEE   | SQFT | 0.00           | \$ 3.70       | \$ -         |
| 9                       | ROCK EXCAVATION   | CUYD | 0.00           | \$ 106.00     | \$ -         |
| 10                      | RAILROAD PROTECTION SERVICES (ONE YEAR)                                   | LS   | 0.00           | \$ 100,000.00 | \$ -         |
| 11                      | ASPHALT CEMENT ESCALATION   | LS   | 1.00           | \$ -          | \$ -         |
| 12                      | FUEL ESCALATION   | LS   | 1.00           | \$ -          | \$ -         |
| 13                      | TESTING CONTAMINATED MEDIA  | LS   | 0.00           | \$ 5,000.00   | \$ -         |
| 14                      | BOLI FEE PAYMENT  | LS   | 1.00           | \$ 320.13     | \$ 320.13    |
| 15                      | CONTRACT CONTINGENCY (REQUIREMENT TO ACCEPT BIDS UP TO 10% OVER ESTIMATE) | LS   | 1.00           | \$ 32,013.10  | \$ 32,013.10 |
| TOTAL ANTICIPATED ITEMS |   |      |                |               | \$ 62,333.23 |

**SCHEDULE SUMMARY**

|  |   |            |
|--|---|------------|
| BID ITEMS  |   | \$ 320,131 |
| CONSTRUCTION CONTINGENCY                                 | 3.5% of Bid Items <sup>*</sup>          | \$ 11,205  |
| SUBTOTAL   |   | \$ 331,336 |
| ANTICIPATED ITEMS  |   | \$ 62,333  |
| TOTAL CONSTRUCTION                                       |   | \$ 393,669 |
| PROJECT MANAGEMENT                                       | 5% of Bid Items                         | \$ 16,007  |
| DESIGN ENGINEERING                                       | 25% of Bid Items                        | \$ 80,033  |
| CONSTRUCTION MANAGEMENT                                  | 15% of Bid Items                        | \$ 48,020  |
| SUBTOTAL   |   | \$ 144,060 |
| PROJECT ENGINEERING & MANAGEMENT OVERHEAD                | 79.27% of PM, Eng, and CM               | \$ 114,196 |
| TOTAL PROJECT ENGINEERING & MANAGEMENT                   |   | \$ 258,256 |
| RIGHT-OF-WAY LAND, IMPROVEMENTS, AND DAMAGES             |   | \$ -       |
| RIGHT-OF-WAY APPRAISAL, TITLE INSURANCE, AND NEGOTIATION |   | \$ -       |
| RIGHT-OF-WAY CONTINGENCY                                 | 30% of Land, Improve, and Damages       | \$ -       |
| TOTAL PROJECT RIGHT-OF-WAY                               |   | \$ -       |
| INFLATION RATE ON CONTRACT                               | Years 5 Inflation 4.5% of Construction  | \$ 96,914  |
| INFLATION RATE ON PERSONNEL                              | 5 2.0% of Eng & Mgmt                    | \$ 26,879  |
| ESTIMATE CONTINGENCY FOR UNDEFINED OR CHANGE IN SCOPE    | 20% of Const, Eng & Mgmt, and Inflation | \$ 155,144 |
| TOTAL PROJECT CONTINGENCY                                |   | \$ 278,937 |
| TOTAL PROJECT ESTIMATE                                   |   | \$ 930,861 |

LS\* Unit Price shown is on Pound, Each, or Foot Basis as applicable  
Remove \* and change unit to 1 in the Bid Form



A Joint Letter from the  
Bicycle Advisory Committee & Pedestrian Advisory Committee  
1120 SW 5<sup>th</sup> Avenue Room 800, Portland OR 97204

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August 24, 2016

Metro Council  
600 NE Grand Ave  
Portland, OR 97232

The City of Portland Bureau of Transportation (PBOT) Pedestrian Advisory Committee and Bicycle Advisory Committee consist of a wide cross-section of Portlanders who come together to advise City decision makers on matters related to their particular transportation mode. Members come from every area of the City as well as a broad spectrum of interests and professional backgrounds. Each modal committee has been an ongoing contributor and advisor during the City's Regional Flexible Fund selection process.

Each committee has reviewed the projects and feels that all of the projects, both collectively and individually, are strong candidates that would bring needed investment to geographic areas where it has long been lacking. Therefore as modal Chairs, we would like to express the support of our committees for the City of Portland applications for Metro's Regional Flexible Funds for the following active transportation projects:

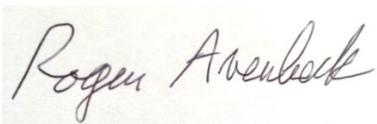
- Brentwood-Darlington Safe Routes to School - Sidewalk Infill & Neighborhood Greenway: Provides Brentwood-Darlington, an underserved neighborhood that relies on active transportation, walking and bicycle facilities. The project will improve safety in a high-crash area and removes conflicts between modes to improve access to and from priority destinations.
- Connected Cully, Phase 2 - NE 72nd Ave Pedestrian/Bicycle Parkway: Provides the Cully neighborhood low-stress walking and bicycling facilities. Traditionally a lower socioeconomic neighborhood with high concentration of low-income Hispanic residents, the project will improve a high-crash area, provide access to and from priority destinations (i.e. schools, parks and economic centers) and ultimately is supported by the community through stakeholder engagement.
- David Douglas Safe Routes to School - Sidewalk Infill on 117th, 130th, and Mill: Provides David Douglas High School and the surrounding neighborhoods a safe route for students to get to school. The David Douglas School District is one of the most diverse communities within the Portland Metropolitan Region yet it is deficient in active transportation facilities. This project will close sidewalk gaps, create safe bicycle facilities and most importantly has strong support from the residents, David Douglas High School and political representatives in the area.
- Hillsdale Town Center Pedestrian Connections: Sidewalk Infill on SW Beaverton-Hillsdale Hwy: Provides the Hillsdale Town Center with pedestrian facilities between nearby Robert Grey Middle School, Mary Rieke Elementary and Wilson High School. This project has strong community support and will improve access to an underserved community with many children and seniors adjacent to a High Crash Corridor.

- Jade & Montavilla Connected Centers Project: Provides multi-modal improvements in key areas to the up and coming Jade District and Montavilla Neighborhood Centers. These improvements will promote safety along a high crash corridor, address climate change and health through the creation of a walkable and bikeable network and serve diverse communities of color.
- NE Halsey Safety & Access to Transit: Provide solutions to problems in this High Crash Network. Using the suite of tools, which include signal improvements, intersection redesigns, pedestrian improvements and bicycle facilities, this project will alleviate deficiencies in the transportation network and better connect the growing population to the developing economic centers in this area.
- N. Portland Greenway Trail: Baltimore Woods Segment: Provides a better active transportation connection between nature, places of interest, job corridors and other priority locations. This project will add bicycle lanes, sidewalks, off-street pathways and other improvements to create a high quality network of alternative options for the St. Johns neighborhood.
- Outer Stark and Outer Halsey Complete Streets Project Development: Provide safety improvements to a High Crash Network that affects all modes. This project will add bicycle and pedestrian facilities for an area that is highly dependent on single occupancy vehicles thereby giving the residents greater choice in their transportation options and modes. These updates will also serve a diverse community that is low-income and has a high percent of immigrant/refugee or identify as people of color.

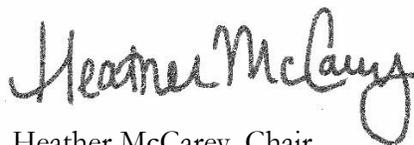
Each of these projects are region-wide investments that make our communities more livable and give people choices in how they travel. Each of these projects score high on the prioritization criteria by serving underrepresented populations that are in projected high growth areas in the Portland Metro region, improving safety in high crash corridors, and providing access to priority destinations.

These projects achieve multiple transportation policy objectives for both a bicycling and walking perspective and support Metro’s efforts to address air quality requirements by ensuring the region reduces its reliance on fossil fuel consumption and single occupancy trips. Each of these projects provides significant transportation benefits to the Portland Metropolitan Region in helping to ensure that our transportation system is strong, diverse and efficient.

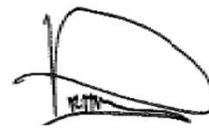
Respectfully submitted on behalf of Portland’s Pedestrian Advisory Committee and Bicycle Advisory Committee,



Roger Averbeck, Co-Chair  
Pedestrian Advisory Committee



Heather McCarey, Chair  
Bicycle Advisory Committee



Rithy Khut, Vice-Chair  
Bicycle Advisory Committee

Please note: PAC members Rebecca Hamilton, Co-Chair and Anthony Buczek, as Metro employees, recused themselves from participating in all discussions related to the RFF project selection and related issues.

cc: Joint Policy Advisory Committee on Transportation (JPACT)