

**INTERGOVERNMENTAL AGREEMENT BETWEEN TRIMET AND CITY OF PORTLAND
FOR DIVISION TRANSIT PROJECT DESIGN AND CONSTRUCTION SERVICES**

TriMet Contract Number _____
City of Portland Contract Number _____

THIS DIVISION TRANSIT PROJECT DESIGN AND CONSTRUCTION SERVICES AGREEMENT ("Agreement") is between the TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON ("TriMet") and the CITY OF PORTLAND ("City"); (collectively hereinafter referred to as "the Parties"), effective this day of _____ day _____ ("Effective Date").

RECITALS

1. TriMet is created and operated under ORS Chapter 267 and owns and operates the public mass transit system serving the tri-county area of Multnomah, Washington, and Clackamas counties. The City is a municipal corporation organized under the laws of the State of Oregon.
2. Pursuant to ORS Chapter 190, the Parties have the authority to enter into this Agreement.
3. Metro began planning for the Powell-Division Corridor in 2014 by convening a project Steering Committee and holding a series of public open houses and meetings.
4. On October 2, 2015, the Federal Transit Administration ("FTA") approved the Powell-Division Corridor Project for entry into Small Starts Project Development.
5. The committee of key stakeholders and community members approved the Powell-Division Corridor Project plan, formally known as the "Locally-Preferred Alternative," in November 2016.
6. On December 7, 2016, the Portland City Council approved Resolution No. 37254 adopting the Locally Preferred Alternative for the Powell Division Corridor Project and conditions of approval. The Locally Preferred Alternative was unanimously approved by the City of Gresham, Metro Council, the Multnomah County Commission and the TriMet Board of Directors.
7. Powell-Division Corridor Project leadership was transferred from Metro to TriMet on December 20, 2016. The name of the Project was subsequently changed to the Division Transit Project ("Project") to reflect the preferred alignment.
8. On March 22, 2017, the FTA approved the Project for project justification warrants, limiting the project budget to less than \$175 million.
9. On August 15, 2018, the Portland City Council approved Ordinance No. 189116 authorizing execution of a financing agreement with TriMet to provide a portion of the total local match funding as required by the FTA.
10. On April 17, 2019, City Council approved Ordinance No. 189463 authorizing execution of an Intergovernmental Agreement (IGA) for design and construction services for the Project and accepting

a grant of \$2 million from TriMet. The IGA documents understandings and agreements relating to services being provided between TriMet and the City.

11. On December 19, 2019, City Council approved Resolution No. 37471 accepting the Building Healthy Connected Communities Along the Division Transit Corridor Report and accepted a status report on the progress toward items listed in the Division Transit Project Locally Preferred Alternative Conditions of Approval including an update on project final design and construction approach.
12. On September 16, 2020, City Council approved Ordinance No. 190120 authorizing an Amendment to the IGA for design and construction services for the Project from \$2,000,000 to \$5,165,159.
13. The Project is defined as a 15-mile project to improve transit service in the Division Street corridor, consisting of Bus Rapid Transit (BRT) and up to forty enhanced BRT stations between Union Station in downtown Portland and Gresham. Approximately 11.2 miles of that alignment are within the City of Portland limits.
14. The Project schedule is included as Exhibit A.A. Final design was complete in December 2019 with construction currently underway. Final completion of the project is projected for September 2022.
15. TriMet cannot construct or implement the Project without the use of City right-of-way or property. The City is willing to allow TriMet use of City right-of-way and property for the Project without being compensated for such use because the Project provides benefits to the public in the form of enhanced transit service.
16. The Portland Bureau of Transportation (PBOT) serves as the City's lead on the Project, with other City bureaus, including but not limited to, the bureaus of Environmental Services, Planning and Sustainability, Water, and Parks and Recreation contributing professional expertise.
17. The City of Portland and TriMet are committed to Vision Zero improvements in this corridor. The City has undertaken the Outer Division Multi-Modal Safety Project ("ODMMSP") and will be installing pedestrian and bicycle safety improvements including buffered bicycle lanes, raised center median, more streetlights and lower speed limits. TriMet and the City of Portland will work coordinate these improvements with the vision zero improvements included in the Project.
18. The City of Portland and ODOT are coordinating on All Roads Transportation Safety (ARTS) and Highway Safety Improvement Program (HSIP) projects in the Project corridor. Located at 112th/Division Street, the ARTS project will rebuild the traffic signals at the intersection. An additional ARTS project will install intersection illumination on Division St. at 158th to 167th. At 125th/Division, the HSIP project will install a new traffic signal at the existing uncontrolled intersection. TriMet and the City of Portland will work to coordinate these projects with the Project.
19. City staff are also coordinating East Portland Access to Transit (EPAT) improvement projects in the Project corridor. Rapid Rectangular Flashing Beacon (RRFB) pedestrian crossing improvement projects are planned for 132nd/Division and 139th/Division. TriMet and the City of Portland will work to coordinate these improvement projects with the Project.
20. City of Portland staff time expended on the Project for Preliminary Engineering up to completion of 30% design drawings has been provided via in-kind match.

21. The original Design and Construction IGA and \$2 million grant from TriMet included City services related to the Final Design phase of the project as well as estimates for scopes of work to be performed during construction.
22. The original Design and Construction IGA and \$2 million grant from TriMet included City services related to the Final Design phase of the project as well as estimates for scopes of work to be performed during construction. The first Amendment reflected additional services required by the City for construction delivery.
23. Now, with 60% of Project construction complete, it is, it is appropriate to amend the IGA again to reflect right-of-way construction work and additional services being provided by City staff to support successful Project delivery.
24. The City has a duty to the general public to provide safe and convenient streets and to protect itself from unreasonable financial burdens imposed by TriMet's use of the streets.
25. The Project is subject to budgetary limitations imposed by the FTA and Finance Agreements, and all terms and conditions of the FTA Small Starts Grant Agreement ("SSGA") will apply to this Agreement.
26. The Parties have identified the following objectives with respect to the Project:
 - (a) Build the Project within budget and on-schedule;
 - (b) Demonstrate that bus rapid transit can be constructed in a cost-effective manner; and
 - (c) Effectively coordinate separately funded yet related transportation improvement projects in the Project corridor, and
 - (d) Develop the best-qualified City-TriMet team for management of the Project.
27. The Parties desire to enter into this Agreement to document each Party's understandings and agreements relating to services provided during the design, construction, testing and start-up, and close-out phases of the Project. The Parties understand that this Agreement will provide a starting point for future modifications or amendments to this Agreement that better define each Parties services related to construction and start-up, and close out phases of the Project once more details are known.
28. Upon completion of Project construction, the Parties plan to enter into a Project maintenance agreement that will detail each Party's obligations with respect to maintenance of the facilities.

NOW, THEREFORE, the premises being in general as stated in the foregoing Recitals, it is agreed by and between the Parties as follows:

AGREEMENT

ARTICLE I – TERM

The term of this Agreement will be effective from July 1, 2018, through March 30, 2023, unless terminated or extended under the provisions of this Agreement.

ARTICLE II -TRIMET OBLIGATIONS

- A. **Responsibility for the Project.** Except as otherwise provided herein, TriMet shall design, construct, operate, and pay all costs for the Project, in accordance with the Project's funding arrangements. In the execution of the design and construction, except as otherwise provided herein, TriMet shall provide for the public's health, safety, and welfare by providing the proper construction, reconstruction, and modifications to those existing public facilities in the City's public right-of-way that are affected by the Project.
- B. **Construction Standards for the Project.** TriMet shall use the 2010 City of Portland Standard Construction Specifications and standard drawings, except as amended and approved by the City Engineer, for all portions of the Project that will ultimately be owned and/or maintained by the City.
- C. **City Requests and Payment for Additional Work.** TriMet shall design and construct, at the City's expense, any Betterment (as that term is defined in Article IV, Section O below) identified and requested by the City, and agreed to by TriMet, that enhances the basic Project or public improvements in the vicinity of the Project alignment.
- D. **Development of Preliminary Engineering Documents.** TriMet has submitted to the City copies of the PE design documents for review at the 30% stages and the City provided comments for resolution, including comments from involved city bureaus in accordance with the Project Milestones and Schedule shown in Exhibit A.A. TriMet provided a response to the City identifying how these comments and issues will be approached during the final design of the Project. TriMet did not submit signed or sealed drawings for review purposes. TriMet will submit signed and sealed drawings only when all design review is complete.
- E. **Development of Final Plans and Specifications.** TriMet shall work in close cooperation with the City during preparation of final engineered plans and will submit plans and specifications (hereinafter "Plans") for official City review at the deliverable stages established by the Project, currently anticipated to be the Final 30% Refined 60%, 90%, and 100%/issued for construction plans.

The 60% stage is the first draft of final design drawings and specifications. Other City Bureau and Commission review, to the extent required by City Code and not previously satisfied, shall be undertaken based on the 60% stage submission. This stage will include the identification and specification of all major construction work.

The City and TriMet shall cooperate and exercise good faith efforts to provide documents, review, and comment, and resolve comments on plans and specifications so that the Project schedule milestones identified in Exhibit A.A are met. The Parties agree that should the Project schedule be revised in the future, they shall make best efforts to comply with the updated schedule milestones. The Parties agree that coordination is required with other planned projects in the project area (including but not limited to, Outer Division Multi-Modal Safety Project (ODMMSP), East Portland Access to Transit (EPAT), Fixing our Streets, HSIP, ODOT ARTS) and should those project schedules be revised in the future, they shall make best efforts to ensure design and construction coordination.

The Parties understand that City review times shall not commence until all elements appropriately included at each stage are incorporated into the submission at a level of detail that allows effective and efficient review by the City. The elements to be included at each stage of plan submittal in order for the

City to enter review are as shown in Exhibit A.B. The City shall use its best efforts to minimize the review times, however it is anticipated that a three-week City review period will be needed at the Final 30% Refined, 60% and 90% stages.

The review at the 100% stage is intended only to verify that the revisions identified at the 90% stage have been completed. The 100% review shall be accomplished within 15 working days, unless otherwise agreed between City and TriMet. It is agreed between Parties that if additional design elements are added between 90 and 100% plans, the 15 working day review time will be extended accordingly. In the event that the City does not respond in a timely manner, the submitted plans and specifications shall be deemed approved as submitted, however permits will not be issued by City for construction until the review is complete. City required changes at the 100% stage may be incorporated by addendum into construction documents. TriMet shall maintain records of all comments received from City reviews, including TriMet response and action taken. The record of response from the prior plan review phase will be provided with the subsequent plan set to be reviewed.

F. Preliminary List of Anticipated Project Approvals. TriMet's Project Manager, or its designee, shall work with the City's Project Manager or its designee, to develop an agreed upon list of permits and approvals necessary for Project construction. The list may include but not be limited to:

1. design exceptions approved by City Engineer;
2. sign encroachment variances or waivers;
3. building and/or construction permits;
4. provisions for temporary parking removal during construction;
5. provisions for permanent parking relocation or removal;
6. provisions for bus relocations during construction;
7. street opening permit(s) issued by construction phase if appropriate; and
8. Tree Removal Permits.

G. Issuance of Permits. TriMet will manage the process to ensure that the construction contractor obtains all necessary City permits for the Project. Some permits from the City will be issued as an outcome of a land use, design review, building permit, tree permit, or other process involving private property. For work in the public right-of-way, following the City Engineer's approval of the final plans for the Project and prior to construction, the City Engineer shall issue a Public Improvement Construction Permit (Permit). If construction activities are phased (i.e. public utility work prior to civil) by the contractor, then multiple Public Improvement Construction permits may be needed. As with previous projects, TriMet will seek to convert small remnant private property into City ROW.

H. Relocation of Utilities. The City shall use its best efforts to cause relocation of privately-owned utilities without cost to the City or Project, as provided in Article III, paragraph C below. However, if the City does not have the legal authority or power to cause such relocation and if the utility provider is unwilling, TriMet, without cost to the City, shall be responsible for relocation of existing privately-owned utility facilities as necessary to conform utilities or facilities to the plans for the Project. The cost of relocating publicly owned utilities for purposes of the Project shall be at TriMet's expense or shared between Parties based on contributions by the City as provided in this Agreement. The Parties understand that TriMet's relocation obligation does not include Betterment(s) of the existing facilities. Additionally, as part of utility work, City owed communication lines will be required to be relocated (moved to new poles, etc.). The City agrees to coordinate this effort with private communications providers and TriMet to reduce schedule delays. As part

of the City and TriMet joint construction program, the City agrees to use the contracting method collaboratively agreed to.

- I. **Inspection of Relocated Utilities.** TriMet shall also allow City engineers and/or inspectors or consulting engineers/inspectors to inspect any relocation of utility conduits, lines, poles, mains, pipes, and other facilities to determine whether they have been relocated or installed in accordance with the contract documents and the City/TriMet Agreement and permits for the Project.
- J. **Real Property Acquisition/Relocation Assistance.** TriMet shall be solely responsible for the acquisition of real property or interests therein for the Project, including property that will eventually become City right-of-way. For property that will become City right-of-way, TriMet shall use standard City forms, terms, and conditions, and shall obtain review and approval from PBOT's real property group. TriMet shall also acquire all other property needed for the Project. TriMet shall be responsible for providing any relocation assistance required for the Project, and such relocation assistance shall be pursuant to the Uniform Relocation Assistance and Real Property Acquisition Policies Act, and other applicable federal, state, and local laws.
- K. **Staffing Plan.** TriMet's Project Manager and the City's Project Manager shall create a staffing plan for final design, construction, testing and start-up, and close-out of the Project, included as Exhibit A.D. Staffing for key positions shall be jointly agreed to by the City's Director of the Bureau of Transportation and TriMet's Executive Director of Capital Projects. These key positions will include TriMet and City project managers, field engineers and inspectors, and office engineers as necessary to complete the Project according to its schedule.

TriMet's Project Managers shall assemble key members of the construction management team, including assigned TriMet staff, consultants, and City staff to implement procedures for coordination between the City and TriMet. TriMet is responsible for communication with the Project's Construction Manager/General Contractor ("CM/GC") and all subcontractors.
- L. **Contractor Selection, Oversight, Payment.** TriMet will prepare procurement and contract documents, make the CM/GC selection, manage and enforce provisions of the CM/GC contracts, and make payments to the CM/GC. TriMet shall secure in all such construction service contracts for the Project that the Contractor shall (1) name the City as an additional insured on the contractor's insurance on the same terms the contractor agrees to TriMet as an additional insured and (2) indemnify the City, its officers, employees and agents on the same terms the contractor agrees to indemnify TriMet or as otherwise required as condition of permits. Contractor shall furnish the City with evidence of said insurance. The City Project Manager or designee shall have the opportunity to participate in CM/GC selection and review and comment on all Project construction procurement and construction contract documents prior to issuance by TriMet.
- M. **Community Relations.** TriMet shall perform all community relations functions and keep the City Project Manager and PBOT's Public Information Officer ("PIO") apprised of all activities. Media involvement will be planned in advance with PBOT's PIO and Project Manager. TriMet shall perform all private property owner outreach for temporary or permanent parking removal in areas where the Project requires parking removal and that parking has not otherwise been removed as a result of another City project.

N. **Issue Resolution.** It is understood by both Parties that a project of this size and complexity will raise issues requiring speedy resolution. In the event of any issues or disputes between the City and TriMet, it is understood by both Parties that the dispute shall be referred for resolution as follows (“Issue Resolution”):

- Refer the dispute to the City Project Manager and TriMet's Project Manager, who shall make a good faith effort to resolve it;
- If unresolved, refer it to the Bureau of Transportation Director or designee and to TriMet's Executive Director of Capital Projects;
- If unresolved, refer it to the City's Commissioner-in-Charge of Transportation and TriMet's General Manager for resolution.

In the event that any of the issues or disputes relating to facilities owned and maintained by City bureaus other than the Bureau of Transportation, the corresponding Bureau Project Manager, Bureau Director, and/or Commissioner-in-Charge will participate in resolving the issue with PBOT's Project Manager in a liaison role.

O. **Changes to the Work.**

- The City and TriMet recognize and acknowledge that there may be changes required to the plans and specifications during construction.
 - TriMet and the City agree to make timely responses as appropriate and required to keep the work progressing.
1. Changes directed by the City. Subject to the terms of this Agreement, TriMet acknowledges that the City, as permitting authority, can order changes to the work being performed in the public right-of-way as it considers necessary as permitted by City code, and within the general scope and limits of the Project's street, sewer, and water construction work. In the event that TriMet disagrees with the City's change directive, the issue will be resolved through the Issue Resolution process described above.
 2. Changes proposed by TriMet. All changes proposed by TriMet, or others, which would impact work authorized by the Permit(s) or this Agreement will be submitted to the City Project Manager for review and approval. The City Project Manager will coordinate any necessary reviews by City Bureaus, citizen groups, or other interested parties, as appropriate, and work with TriMet to facilitate a decision as required to meet contract milestones or keep the work progressing.
 3. TriMet will handle any claims by the CM/GC for change orders and will not look to the City for reimbursement or compensation for any such changes except when those changes are agreed to be Betterments. Should changes result in added work by the City, the City Project Manager shall submit an estimate of added costs to TriMet. TriMet shall review the estimate and negotiate a modification to this Agreement for added work.

P. **Services to be Provided by TriMet.** TriMet shall provide the following services through its own forces or by contract:

- Architectural design
- Conduct of Construction
- Traffic Analysis and Design
- Traffic Signals Design and Timing Plans
- Traffic Signal Communications (fiber)
- Street Lighting Design
- Stormwater Management Facility Design
- Public Involvement & Communications
- Public Utility Design: (sewer and water)
- Private Utility Coordination
- Regulatory Permitting
- Civil Design
- Construction Management
- Construction consultants
- Inspectors
- Materials testing and survey services
- Provide surface restoration (final pavement, curb and sidewalk) for all Portland Water Bureau (PWB) crew work located within the TriMet Project limits.
- Provide any required plumbing services for property-side water service line adjustments.
- Provide survey services as required by PWB for water service and fire hydrant work. Stake the face of the curbs and front of the sidewalks where meters are to be moved into the furnishing zone, and back of water meter location where water meter are moved to the back of sidewalks.
- Where applicable, obtain Design Exceptions from PBOT where water meters will remain in or be relocated to sidewalks.
- Direct the contractor to provide traffic control for PWB crew work if the PWB work is within the direct contract work area.
- As-Built drawings for public utility construction (sewer and water)

In addition, TriMet shall provide the following support services:

1. Review and approve monthly progress payments.
2. Coordinate with City's Project Manager regarding Project work activities as they impact adjacent properties and businesses.
3. Assist City in its obligation to comply with all federal provisions prescribed for third party contracts by the SSGA at such time as the contracts are negotiated and executed.
4. Review shop drawings and other contractor submittals; certify substantial and final completion of work; provide inspection; accept work for maintenance; review change orders; and construct Betterments.
5. Coordinate with PBOT, their consultants or contractors on projects including Outer Division Multi-Modal Safety Project (ODMMSP), East Portland Access to Transit (EPAT), Fixing our Streets, HSIP, ODOT ARTS, and other transportation improvements planned along the Division corridor.
6. TriMet has a construction field office and has included space for critical City staff, including parking for City construction vehicles as required.

Q. **TriMet Staff.** TriMet shall assign the following personnel to the Project:

- Project Manager
- Design Manager
- Community Affairs Specialists
- Support staff
- Construction Manager
- Project Controls Lead
- Utility engineer
- Comm/ITS
- ROW staff
- Inspectors

R. **Easements.** TriMet shall obtain construction and permanent easements from private parties as needed for the Project. Any permanent easements acquired for City facilities shall use standard City forms, terms, and conditions and shall be reviewed and approved by the appropriate City Bureau.

S. **Maintenance Agreement.** TriMet shall, in good faith, prepare and negotiate with the City and others as appropriate a maintenance agreement that defines maintenance responsibilities for the Project segments within the City. TriMet has agreed that to proceed with some station area infrastructure and design exception approvals, specific terms are required and agreed upon, to be further defined in the Maintenance Agreement with the Portland Water Bureau (PWB), see Article IV, section I, number 9 for detail.

TriMet and its contractor, with the assistance and participation of City, will create a Conduct of Construction (COC) for the Project. The COC will become one of the contract documents that affirms and guides the construction of the Project for all elements within City limits.

ARTICLE III -CITY OBLIGATIONS

A. **Project Design Standard.** The City and TriMet agree that the starting point for final design of the Project is the Final 30% Refined drawings. The completed Final 30% Refined, 60%, 90%, and 100% Issued for Construction drawings, together with TriMet response to City comments, and other work products developed after the date of this Agreement are anticipated to be the design for the Project.

B. **Maintaining Project Schedule.** The City agrees to use its best efforts to assist TriMet in maintaining the Project schedule. To this end, City staff shall assist TriMet with all permit/approval processes including, but not limited to, scheduling all hearings and briefings before City Council, commissions or other City entities.

C. **Relocations in Right-of-Way.** The City shall allow TriMet participation in review and approval of utility relocation plans submitted by public and private utilities for the alignment area.

The City shall also allow TriMet engineers or inspectors or consulting engineers or inspectors to inspect any relocation of utility conduits, lines, poles, mains, pipes, and other facilities in order to determine whether they have been relocated in accordance with the plans of the Project.

The City, at TriMet's expense unless otherwise apportioned in this Agreement, shall relocate, cause to be relocated, or assist in the relocation of all City-owned conduits, lines, poles, mains, pipes, and other facilities, whether located within the public right-of-way or not, as required by the Project. The Project plans and specifications shall include all relocations necessary to conform facilities to the Project. The City shall endeavor to conduct this relocation work in accordance with the Construction Phasing/Scheduling Plan for the Project.

In accordance with Portland City Code Chapter 17.56 Public Utilities, the City shall cause the owners of privately-owned utility conduits, lines, poles, mains, pipes, and other facilities in or on City rights-of-way and/or property to relocate their facilities at the expense of said privately-owned utility as necessary to conform to the Project. The City shall endeavor to cause this relocation work to be accomplished in accordance with the Construction Phasing/Scheduling Plan for the Project.

The City agrees that refined 60% design plans will serve as the threshold after which TriMet may request private utility relocation. All Parties agree to work collaboratively to determine an appropriate point in the design process to move forward with private utility work. Should TriMet request private utility relocations in the right-of-way prior to receiving the FTA Small Starts Grant Agreement or obtaining a Public Improvement Construction Permit, TriMet, without cost to the City, shall be responsible for utility relocation expenses (that are not deemed a benefit to the public). Should private utility relocations be performed based on the refined 60% design plans or some other point prior to 100% issued for construction plan completion and subsequent relocation is required, all costs associated with this expense shall will be at TriMet's expense and will not be the responsibility of the City.

- D. **Bus Layover Relocation at North Terminus** - When the Project begins start-up operations and if a permanent facility has not been identified and delivered, the City will allow temporary accommodations for up to six 40-foot buses (approximately 660 feet) to layover and/or stage in a designated location on NW Station Way between NW Northrup and NW Lovejoy Court. TriMet temporary accommodations will be subject to terms of a separate street use agreement and include, but may not be limited to: buses shall not block City of Portland access to existing fire hydrants for fire and safety or water system maintenance purposes. TriMet will continue to work with the City to identify a permanent off-street facility for buses in this area. Until a permanent facility is identified and delivered, but not later than facility construction completion, TriMet will continue to use NW Station Way for bus layover and staging. As several challenges exist with a permanent off-street facility and limited space in the area, TriMet is pursuing an operational solution to reduce Portland layover needs for DTP. TriMet is now planning to pilot fallback schedules, so most DTP layovers will be in the city of Gresham and DTP would no longer require temporary layover use of NW Station Way. Parking removal will still be required on NW Irving between NW 5th and NW 6th as identified in the IFC plans. TriMet will continue to work with the City to identify permit or street use agreements required for the proposed solution.
- E. **Coordination of City Issues.** The City Project Manager shall coordinate comments from all City bureaus and shall assist in resolution of all Project issues raised by any City bureau.
- F. **Permits and Approvals.** The City Project Manager or designee shall assist TriMet in developing a list of the permits or approvals necessary to complete the Project construction and installation. However, nothing in this Agreement waives any Portland City Policy or prohibits the City from maintaining or enforcing its current policies or agreements. The City is specifically not obligating itself or any other agency with respect to any discretionary or regulatory action, including but not limited to zoning,

variance, dedications, vacations, regulatory plan reviews, issuance of permits, code compliance or any other governmental approvals or regulatory actions which may be required or authorized.

- G. **Issuance of Construction Permit.** In accordance with the provisions of this Agreement, the City shall, when appropriate and in accordance with the Project schedule, issue Public Improvement Construction Permit(s) for the Project within the City right-of-way, which shall permit Project construction based on the end products referred to in Article VI. End Products. If construction activities are phased (i.e. public utility work prior to civil) by Contractor then multiple construction permits may be needed. The City agrees to provide the end products identified as its responsibility in Article VI of this Agreement, or a reasonable substitute produce as agreed by the Parties. Public Improvement Construction Permit fees are covered under the staff compensation outlined in Article IV, section D and attached as Exhibit A.D.
- H. **City Staffing.** City shall make available the persons and resources identified in the staffing plan attached as Exhibit A.D.
- I. **Maintenance Agreement.** Upon Project completion, City shall, in good faith, negotiate with TriMet and others, as appropriate, the TriMet-developed maintenance agreement that defines the maintenance responsibilities for the Project.
- J. **Asset Transfer.** Ownership and maintenance of right of way and roadway improvements acquired for the Project, including but not limited to travel lanes, bus pullouts, sidewalks, station platforms, traffic and pedestrian signals, and water and sewer/stormwater improvements, will be transferred to the City. Asset transfer will be performed in such a way that assets are directed to individual City bureaus having jurisdiction over that infrastructure. TriMet will own and maintain station infrastructure, including shelters, benches, fare collection equipment, signage, and other infrastructure necessary to operate its transit system.
- K. **City Control of right of way.** The City retains the ownership of the right-of-way and control of utility easements, property leases, private crossing agreements, and utility franchise rights. Nothing in this Agreement allows TriMet to lease the City right-of-way, rent the City right-of-way or otherwise provide access and use of City right-of-way by third parties unless permitted by City.
- L. **Continuing Control.** To satisfy the continuing control requirements of the FTA as set forth in 49 U.S.C. § 5307(c)(1)(B), the Parties agree that upon completion of construction, the City will allow the Project as a permitted use within City right of way for the life of the Project for the benefit of the public. The City retains the ownership of the right-of-way and control of utility easements, property leases, private crossing agreements, and utility franchise rights.

ARTICLE IV-CITY SERVICES TO BE PROVIDED TO TRIMET

- A. **City Staffing Plan.** The City shall provide the staff and services necessary to assist TriMet in completing the Project on budget and in accordance with the Project schedule. During the Project, the City shall make available the persons identified in Exhibit A.D. The Parties recognize that these persons and attendant services will be adjusted and allocated as necessary and reasonable to fulfill the purpose of this Agreement. The Parties agree that this Staffing Plan may be modified to include the service needs during the final design, construction, start-up and close-out phases of the Project and as may be necessary.

- B. Ensuring No Adverse Effects to City.** The City's services are intended to ensure: (1) that the City's facilities and operations within the public right-of-way are adequately provided for; (2) that the City's facilities and operation outside the public right-of-way are not adversely affected; (3) that bicycle, pedestrian (including transit access), and vehicular traffic is adequately provided for; and (4) that public health, safety, and welfare, including without limitation aesthetic, environmental, and commercial values, are not adversely affected.
- C. Invoices.** The City, through the Office of Finance and Administration, shall to the extent possible given limitations in its financial accounting system, submit to TriMet monthly billings for reimbursable costs incurred since the previous billings. TriMet shall pay the City the balance due within thirty (30) days of receipt of such billings. Financial reports accompanying requests for reimbursement shall be in accordance with FTA requirements. TriMet shall review records for suitability and provide assistance as necessary to assure compliance with FTA requirements.
1. Invoices must be supported by staff time reports or other supporting documentation for each month. The Project Managers shall review the invoices and billings against the Project budget to provide real time cost tracking and budget management.
 2. The participating City Bureau Project Coordinators shall oversee the work of the various City Bureaus or Departments to the end that their work is completed within the staffing budget for that work.
 3. With the exception of PWB crew work requiring overtime premium pay (pay in excess of straight time) in order to avoid negatively impacting businesses with water shut downs during business hours, overtime shall not be invoiced to TriMet unless TriMet's Project Manager has specifically authorized overtime in advance of the work, or in the event of an emergency.
 4. The fringe rate applied to overtime hours must be an adjusted rate such that items are not included in both the regular hour fringe rate and the overtime fringe rate, unless such allocation is approved by TriMet.
- D. Compensation.** The City's compensation for services provided under this Agreement shall be broken down into at least two (2) parts: (1) final design; (2) construction startup and close out phases.
1. The City's compensation for services as currently identified in this Agreement, shall not exceed five million one hundred sixty-five thousand, one hundred and fifty-nine Dollars and No/Cents (\$5,165,159) unless the Parties execute an amendment signed by authorized representatives. Such services shall be provided on a cost-reimbursable basis. The Parties agree that line item budgets may be reallocated within this Agreement without further amendment, when approved by the City and TriMet Project Managers, so long as the overall approved budget amount of this Agreement is not exceeded.
 2. TriMet agrees to not withhold the timely approval of additional resources without cause, subject to available budget limitations.
 3. **Construction, Testing & Start-Up.** As part of the scope of work under this Agreement, the City and TriMet will be providing construction management services along with testing and start-up. Prior to the start of construction or as needed later, both Parties will, negotiate in good faith and make agreed-

upon amendments as necessary to provide added specificity and compensation as appropriate for services provided in this Agreement.

4. **Close Out.** As part of the scope of work under this Agreement, the City and TriMet will be providing close-out services. Prior to the beginning of close-out, both Parties will negotiate in good faith and make amendments as needed to provide added specificity and compensation as appropriate to this Agreement.

E. Method of Payment and Overhead Costs. Subject to the limitations stated in this Agreement, TriMet agrees to pay the City's actual costs for the performance of the services required herein. The actual cost shall include direct salary costs, fringe benefits, direct non-salary costs, and general overhead. The City has provided a cost estimate for its services under this Agreement, including a projection of overhead rates (rounded up for purposes of this Agreement only) for the following bureaus as follows:

- PBOT: Eighty-five-point eighty-five percent (85.85%)
- BES: Ninety-four-point twenty two percent (94.22%)
- PWB: One-hundred and four-point zero seven percent (104.07%)
- BPS: Forty-two-point eleven percent (42.11%)
- Parks: Forty-seven-point sixty two percent (47.62%)

TriMet recognizes that the City's overhead rates may change during the course of the Project and that this may affect total City compensation. Should the rate change result in compensation shortfall to City, this Agreement will be amended to reflect new rate, and a negotiated total compensation. The general overhead is determined as follows:

1. Direct salary costs and fringe benefits. The cost of salaries, wages, and fringe benefits are determined as follows:
 - a. Actual time computed at the applicable hourly payroll rate and fringe benefits earned with actual time. The City's salary rates for any time period shall be as set out in the official City Compensation Plan, or as amended by the City Council for the particular period.
 - b. Charges in addition to (a) above for vacation, sick leave, holiday, jury duty, and bereavement leave are authorized but shall be charged to the Project only in proportion to the time devoted to the Project.
2. Direct non-salary. Those reasonable costs directly incurred in fulfilling the terms of this Agreement, including, but not limited to, reproduction, telephone long distance, equipment rentals, and purchase of outside services requested by TriMet.
3. General overhead. PBOT, and the Bureaus of Parks, Water, and Environmental Services, and other bureaus as deemed necessary, shall charge for general overhead as provided by Chapter 5.48 of the City Code.

Any overhead rates charged to TriMet by the City must meet all federal requirements for federally-funded projects.

F. City Services General. Each City bureau or agency with Code authority or other responsibility over the Project shall provide to TriMet the following services:

1. Supply copies of all available file data on all existing facilities as requested by TriMet for the Project. The City has found the completeness and accuracy of this file information to be inadequate when used as the sole basis for design and construction purposes and recommends verification before incorporation into any final design. Any reliance on the data by TriMet shall be at its own risk.
2. Review, require revisions to, and approve the Project plans as provided for in this Agreement.
3. Cooperate fully with the City's Project Manager, TriMet's Project Manager, and City and TriMet designated representatives as reasonably necessary to assist in the timely and proper completion of the Project.

G. Portland Bureau of Transportation ("PBOT").

1. Capital Delivery Division (CDD). Under the coordination of the City's Project Manager, PBOT CDD shall provide services as described below:
 - (a) Act as the lead City agency in carrying out the City's obligations and exercising the City's rights under this Agreement.
 - (b) Provide as necessary, services of the City's Project Manager and other positions as identified in the Agreement.
 - (c) Assist in and coordinate all plan reviews, including structures.
 - (d) Assist in resolution of all design, construction, and permitting issues.
 - (e) Coordinate and track compliance with all City permits.
 - (f) Oversee City Staffing Plan development, and work with City Bureau leads in monitoring, tracking, and billing. Prepare budget status reports as required.
 - (g) Manage development, monitoring, tracking, and payment for City-requested betterments and for billings of TriMet requested betterment services
 - (g) Assist TriMet in coordinating the relocation of all publicly owned utilities.
 - (i) Assist in project briefings to City Council and Commissions (for example, Design Commission, Historic Landmarks Commission, and Planning and Sustainability Commission) as required.
2. Right of Way Programs & Permitting (RWPP). Provide necessary staffing and support services for the right-of-way acquisition of parcels to be owned or controlled by the City upon completion of construction. RWPP shall provide services as described below:
 - (a) Review of property rights to be acquired.

- (b) Acquisition and transfer process.
 - (c) Legal documents used for acquisition and subsequent transfer to city.
 - (d) Recording of documents and recording fees.
 - (e) Additional services include but are not limited to file set-up and maintenance, title work, GIS indexing and attendance at meetings.
3. Traffic Design Section (TDS). Under the coordination of the City's Project Manager, TDS shall provide services as described below:
- (a) Review, require revisions to, and approve analyses for traffic control performed as part of the design, and Construction efforts.
 - (c) Provide necessary staffing and support services to cover the City's involvement in Transit Signal Priority (TSP) and signal, phasing, timing, and commissioning
 - (d) Review, require revisions to, and approve plans for all pavement markings, traffic signs, and other work affecting vehicular, bicycle and pedestrian traffic within City right-of-way developed as part of the project development and Construction phases. Notify the City's Project Manager of all required revisions, for forwarding to TriMet.
 - (e) Assist in resolution of all traffic related design and anticipated construction issues.
 - (f) Participate in the development of construction phasing plans for incorporation into construction documents.
4. Civil Design Section (CDS). Under the coordination of the City's Project Manager, CDS shall provide services as described below:
- (a) Review, require revisions to, and approve analyses for civil design performed as part of the design, and construction efforts.
 - (b) Provide necessary staffing and support services to cover the City's involvement in utility coordination and relocation.
 - (c) Review, require revisions to, and approve plans for civil improvements and new facilities. Notify the City's Project Manager of all required revisions, for forwarding to TriMet.
 - (d) During construction review submittals and RFIs as needed, review any changes to the civil design, participate in pre-construction and civil related project meetings, and offer engineering support to inspection and project staff when issues arise during construction.
 - (e) During final design and construction, coordinate project Design Exceptions as required for approval by the City.
5. Signals & Street Lights. Under the coordination of the City's Project Manager, shall provide services

as described below:

- (a) Assign a signals engineer and street lighting engineer for all work performed under this Agreement, and coordinate all work, budget and information covered under this Agreement with the City's Project Manager.
 - (b) Review and comment on plans for all traffic signaling devices and other work affecting vehicular, bicycle and pedestrian traffic within City right-of-way. Notify the City's Project Manager of all required revisions, for forwarding to TriMet. Provide inspection services during construction.
 - (c) Provide necessary staffing and support services to cover the City's involvement in Transit Signal Priority (TSP) and signal, phasing, timing, and commissioning.
 - (d) Review, require revisions to, and approve plans for all City street lighting facilities, as needed. Notify the City's Project Manager of all required revisions, for forwarding to TriMet.
 - (e) Participate in the development of construction phasing plans for incorporation into construction documents.
 - (f) Perform traffic signal modifications and signal activation/deactivation as required by TriMet, the City, and/or the Contractor. Support, review and approve design of necessary temporary signal plans, inspect new temporary and permanent signals and provide testing, turn-on services and modifications to signal operations as needed during construction and close-out. Note signal on/off services are requested by TriMet's contractor and a direct contractor cost responsibility, not covered in the City staff services budget.
 - (g) Complete traffic signal cabinet prints for new and modified signals for use and implementation by the project.
 - (h) Review and approve traffic signal timing plans as needed for construction and for final operation, including timing and operational configuration of major protected intersection designs and new cabinets to be used on the project.
 - (i) Complete scope defined in Exhibit A.F to review and update signal timing and transit priority for the Division Transit Project within Portland.
6. Transportation Policy & Planning Division. Under the coordination of the City's Project Manager, the Transportation Policy & Planning Division shall provide services as described below:
- (a) Assign modal coordinator/point of contact for work performed under this Agreement, and coordinate all work, budget and information covered under this Agreement with the City's Project Manager.
 - (b) Review and comment on plans for traffic and other work affecting bicycle, pedestrian, freight and accessible (ADA) traffic within City right-of-way. Notify the City's Project Manager of all required revisions, for forwarding to TriMet.

7. Construction Inspection & Pavement Management. Under the coordination of the City's Project Manager, the Construction, Inspection & Pavement Management Division shall provide services as described below:

- (a) Assign specialty inspectors to the Project as needed.
- (b) Provide input and approval of the selection of the Chief Inspector for each CM/GC segment within the City limits.
- (c) Develop procedures relating to completion of daily inspection logs or reports, distribution of such reports, and the recommendation of action based on such logs or reports.
- (d) Once joint inspection program or inspection approach otherwise defined is developed and agreed upon this agreement and Staffing Plan will be amended.

H. Bureau of Environmental Services ("BES"). Under coordination with the City's Project Manager, BES shall provide services as described below:

- 1. Assign a single Project Coordinator/point of contact for all new sewer and sewer relocation work performed under this Agreement, and coordinate all said work, budget and information under this Agreement with the City's Project Manager.
- 2. Assign a single Project Coordinator as the point of contact for all work related to implementation of the City's "Stormwater Management" Manual.
- 3. Review and provide comments on Final Engineering plans for all storm, sanitary, combined sewerage and stormwater management facilities. Notify the City's Project Manager of all required revisions, for forwarding to TriMet.
- 4. Provide construction management and inspection services for all storm, sanitary, combined sewer and stormwater management facilities.
- 5. Provide construction phase material testing and vector control as necessary for all storm, sanitary, and combined sewer work.
- 6. Provide planting plans and establishment services for all BES-owned and maintained stormwater management facilities. Plant procurement and installation to be provided by the project.
- 7. Participate in development of maintenance agreement for Project facilities.

I. Portland Water Bureau ("PWB"). Under the coordination of the City's Project Manager, PWB shall provide services as described below:

- 1. Assign a single Project Coordinator/point of contact for all work performed under this Agreement, and coordinate all work, budget and information under this Agreement with the City's Project Manager.

3. Assist TriMet in completing the final design of any water system relocations and improvements, or any Betterments, by working with TriMet.
 3. Review and provide comments on Project plans for all water facilities. Notify the City's Project Manager of all required revisions, for forwarding to TriMet.
 4. Provide engineering assistance and work with TriMet to manage the the final design of water system relocation, improvements, and Betterments included in the Project.
 5. Provide construction management of water relocations, improvements, and Betterments included in the Project.
 6. Provide inspection services and engineering support services related to the water relocations, improvements, and Betterments during construction. Including: 1) review of required Engineer stamped/sealed Utility Protection Plans for construction activities overtop of or adjacent to large diameter distribution, supply, transmission or conduit water mains, and 2) required on-site inspection.
 7. Make all permanent and temporary connections to the public live water system, including but not limited to water mains, hydrants, valves, services, meter boxes, vaults, etc. During street grading and paving, adjustments on live valves, vault lids, and other appurtenances not involving the public live water system will be performed by TriMet's contractor. Permanent connections to relocated property-side water service lines or OAR 333 required backflow prevention assemblies will be completed after the TriMet contractor supplied licensed and/or sprinkler system certified plumber has completed the work in accordance with the required Plumbing permit and/or the requirements of PWB Water Quality.
 8. Use its best efforts to accomplish all work in accordance with the Construction Phasing/Scheduling plan for the Project.
 9. Provide additional services for new water relocations and improvements included in the project during construction, including additional design and construction work as required due to the design lacking consideration for Conduit 1 (as provided by the City at 60% design).
 10. Develop, review, and approve terms for the maintenance agreement related to PWB facilities. The maintenance agreement will include further detail related to scenarios in which PWB requires access to their infrastructure that is located beneath TriMet facilities – to be identified in the Maintenance Agreement asset maps:
 - a. Defining TriMet and PWB permit and cost responsibilities when performing planned maintenance on assets below TriMet owned infrastructure.
 - b. Defining clear expectations, work, and cost responsibilities in emergency situations where PWB may need to remove TriMet structures to access water pipes and make repairs.
- J. Bureau of Parks and Recreation ("Parks").** Under the coordination of the City's Project Manager, Parks' planning and capital projects development, and forestry section shall provide services as described below:

1. Assign a single Project Coordinator/point of contact for all work performed under this Agreement, and coordinate all work, budget and information under this Agreement with the City's Project Manager.
2. Review plans for street trees and monitor existing street tree removals and new street tree installations.
3. Review plans for landscaping installation in City right-of-way.

K. Bureau of Technology Services (“BTS”). Under the coordination of the City’

1. Assign a single Project Coordinator/point of contact for all work performed under this Agreement, and coordinate all work, budget and information under this Agreement with the City’s Project Manager.
2. Review plans for fiber communications.
3. Provide input on development of joint fiber design and build approach, to be defined in separate project agreement.

L. Additional Support Services By City Bureaus.

1. Review, along with other members of the construction management team (as identified in Article II, paragraph K), the shop drawings and other contractor submittals.
2. Certify final completion and acceptance of work pursuant to City permit(s).
3. Review and approve the portions of monthly progress payments related to work that is to be reimbursed by the City.
4. Review and approve changes to the work covered under the Construction Permit in accordance with this Agreement.
5. Coordinate with TriMet regarding work activities as they impact adjacent properties and businesses.
6. Provide inspection, along with others from the construction management team, of the work, as provided below.
7. Accept the completed work from TriMet’s contractors for maintenance consistent with maintenance agreement(s) to be approved by TriMet and the City, and warranty provisions of the Construction Permit.
8. Pay for Betterments or other improvements that the City desires incorporated into the Project.

M. City Staff. City shall assign the following personnel to the Project:

1. The City Project Manager
2. City Project Engineer(s)
3. City Project Planner(s)

4. Traffic Engineer(s)
5. Structural Engineer(s)
6. Electrical Engineer(s)
7. Bureau Project Coordinators for PWB, BES, BPS, Parks, and BTS
8. City Staff Inspector(s)
9. Specialty Inspector(s) (e.g., street lighting, signals, water, sewer)

N. Inspection.

1. The City will provide input and approve of the selection of the Chief Inspector CM/GC segment within the City limits. The Parties intend to conduct a joint inspection program. If so conducted, the Parties shall develop procedures relating to completion of daily inspection logs or reports, distribution of such reports, and the recommendation of action based on such logs or reports. Either Party may assign specialty inspectors to the Project. Specialty inspectors shall coordinate their inspections through the Chief Inspector, but will continue to report to their respective agency. Once joint inspection program or inspection approach otherwise defined is developed and agreed upon this agreement and Staffing Plan will be amended.

O. Others. Other City agencies and City bureaus with Code authority or other responsibilities over the Project shall provide the required services necessary to carry out the responsibilities as identified by the City Code.

P. Payment for Permits. During the design and construction of the Project, the City will provide services related to permits. There will be no charge for the PBOT Public Improvement Construction Permit (to be issued based on services outlined herein and fees covered in the Staffing Plan).. However, other permits related to private property, street trees, temporary street use, and trade permits, will be paid by TriMet and/or their contractor. Refer to Exhibit A.C for a list of expected permits, and related cost coverage for the Project.

Q. Status of Contractor. The City shall perform this Agreement as an independent contractor and its staff, even though they may be assigned full time to the Project, will not be deemed employees of TriMet.

R. Betterments/Cost Sharing. the City agrees that it shall specify and provide or pay costs for any Betterments that are incorporated into the Project at the request of the City. The Parties shall, through modification of this Agreement, negotiate the work scope and cost of such Betterments prior to TriMet proceeding with the design and construction of such Betterments. As used in this Agreement, "Betterment" means replacement of existing infrastructure with new where the infrastructure is beyond its useful life; or replacement with a kind, size or type of infrastructure facility that differs from that existing as of the commencement of this Agreement. If the facility is near the end of its useful life, "Betterment" includes that portion of the cost associated with replacing new that is equivalent to the portion of the expended useful life when compared to the entire useful life.

S. Review Requirements for New Development – Through review of proposed developments adjacent to the Project, the City will use its regulatory powers to ensure that new development does not conflict with physical and/or functional aspects of the Project design to the extent allowed by City Code. The City will initiate this development requirement once the Project issues complete permitted 100% Issue For Construction plans or receives a funding commitment through the FTA.

T. Other City Project Costs. The City shall provide all necessary services to properly coordinate with this Project all design and construction work related to or required by other City projects within or near this Project's contract limits. This includes but is not limited to ODMMS, EPAT, HSIP, ODOT ARTS, and Fixing our Streets.

The City agrees to coordinate with the Project within the limits of the ODMMS project (SE 82nd Ave to SE 174th Ave.), and will execute permanent parking removals indicated in the ODMMS design. The City agrees to continue to work with TriMet on facilitating the required permanent parking removal within DTP Project areas in order to achieve the defined Project construction schedule.

Further, the Parties recognize that in some instances it may be more cost effective or result in less public impact for certain other City project work to be performed under this Project. For any such instances, the City and TriMet shall append and incorporate into this Agreement a separate Memorandum of Understanding that documents each particular cost or work sharing agreement.

TriMet shall not be responsible for any of the final, actual costs for other City project work that are transferred into and performed as part of this Project. Preliminary cost estimates may not accurately reflect final, actual costs for which the City will be responsible.

The Parties agree that costs for other City projects may be appended and incorporated into this Agreement with prior written approval from TriMet during the term of this Agreement.

ARTICLE VI -END PRODUCTS

A. This Agreement is intended to enable TriMet, with City assistance, to perform all tasks necessary to ensure the successful design, construction, operation, and maintenance of the Project. Additionally, it allows for integration of Project facilities into the City's existing public and private improvements in a manner that ensures protection of the public health, safety, and welfare. TriMet and the City acknowledge that amendments to this Agreement may be necessary to reflect changing conditions. The purpose of this Article is to identify the end products that TriMet and the City cooperatively must produce or accomplish to accommodate construction of the Project. The list of end products identified in this Article is not all-inclusive. The City or TriMet may identify other required end products during final design or construction phases. The Parties may produce or accomplish individual end products at any time between the date this Agreement becomes effective and the City's issuance of Public Improvement Construction Permit(s) or as appropriate after permit issuance. Prior to issuance of the Public Improvement Construction Permit, the City will require the production or accomplishment and approval of all end products identified herein or added hereto.

B. End Products. The lead agency for the following end products shall have primary responsibility for initiating and accomplishing those end products. It is understood, however, that the accomplishment to the end products will require cooperative efforts of both Parties and TriMet and the City agree to utilize their best efforts to this end.

1. Detailed Final Plans and Specifications

Lead Agency: TriMet

(a) Baseline Project

- (b) Water, Sanitary and Storm Sewers relocation plans and specifications
- (c) Public Utility Relocations Plans. Private utility plan and specifications will be completed by the private utilities themselves
- (d) City Requested Extra Work/Betterments. Plans, specifications and bid documents for any such extra work shall be structured so that actual bid prices, construction costs, extra billings, post construction claims, and any and all other cost items are clearly separated from the baseline Project costs.

2. Approval of Final Design

Lead Agency: City

- (a) City Bureaus with City Charter or City Code Responsibility
- (b) Sewer, Water, Utility Relocations
- (c) City Council

3. Construction Phasing/Scheduling Plan

Lead Agency: TriMet

- (a) Project Overall
- (b) Sewer, Water, Utility Relocations windows
- (c) Improvements within City right-of-way unrelated to Project
- (d) Private property improvements unrelated to Project

4. Public Information/property owner liaison plan

Lead Agency: TriMet

5. Conduct of Construction Plan

Lead Agency: TriMet

To be completed in partnership with City and with input from public prior to issuance of City's permits.

- (a) Protection of public and private property provisions
- (b) Dirt/Debris Mitigation Provisions
- (c) Construction Drainage and Erosion Control provisions
- (d) Construction Zone Traffic Control Provisions Traffic Control Parking Temporary street closures Emergency vehicle access Construction staging
- (e) Construction Zone Private Property Access Provisions Through pedestrian traffic Building-pedestrian access Driveway/Loading Zone Access
- (f) Provisions to assure the protection of pedestrians and vehicles using the corridor that comply with Safe Accommodations for Pedestrians and Cyclists In and Around Work Zones (TRN-8.12)
- (g) Provision to ensure operations through temporary signal design
- (h) Provisions for days of the week, hours of the day construction activity may proceed
- (i) City Noise Control Variance Provisions
- (j) Responsibility for existing tree trimming, signal and sign visibility
- (k) Provisions for Construction Restrictions during special civic events
- (l) Coordinate project work via bi-weekly SE Division St project coordination meetings with Project contractors and contractors performing public or private work unrelated to the project
- (m) Provisions for conflict resolution between Project contractors and contractors performing

- public or private work unrelated to the Project
- (n) permit information including different jurisdictional requirements (COP, ODOT, COG)

6. Property owner/TriMet/City three-party agreements, if necessary Lead Agency: TriMet

7. Liability/Insurance Agreement Lead Agency: TriMet

- (a) During Construction
- (b) Between construction completion and City acceptance of the Project and assumption of its ongoing maintenance responsibilities

8. Amendments to City Code provisions Lead Agency: City

Amendments to City Code provisions, if necessary, to construct and operate the Project.

9. Maintenance Agreement Lead Agency: TriMet

Execution of City/TriMet maintenance agreement for the Project, based on terms and conditions and division of responsibilities.

10. Conditional use and other land use approvals Lead Agency: TriMet

Conditional use and other land use approvals to be applied for by TriMet, for any TriMet facilities on private property within the City that are not allowed outright under City zoning regulations.

11. Record drawings Lead Agency: TriMet

Record drawings will be produced by TriMet and distributed to the City Bureaus within 120 days after completion of the work.

12. Continuing Control Agreement Lead Agency: TriMet

Under this Agreement, TriMet has the right to use City right of way as required by the Continuing Control requirements of 49 USC 5307(c)(1)(B). At the conclusion of the Project, TriMet will work with the City of Portland to execute an agreement detailing the rights and responsibilities of the Parties related to this permanent use of city streets and other city property necessary for construction, operation and maintenance of those elements of the Project within City right-of-way that are for the benefit of the public, in accordance with the continuing control requirements of federal law as administered by the FTA. The City retains the ownership of the right-of-way and control of utility easements, property leases, private crossing agreements, and utility franchise rights.

ARTICLE VII -PROJECT POLICY AND MANAGEMENT

A. **Policy and Budget Committee** - The Policy and Budget Committee serves to provide high-level guidance to the Project as needed, meeting on a quarterly basis. This committee will consist of leaders

from TriMet, Metro, the City of Gresham, the City of Portland, Multnomah County, the Oregon Dept. of Transportation, and select members of the Community Advisory Committee.

- B. Project Management Group (PMG).** The PMG shall be responsible for addressing policy and advising TriMet on the direction of the Project. It will assist in the resolution of issues related to the design of the Project within the City and will recommend and forward any unresolved issues, or issues of regional significance, to the Policy and Budget Committee for consideration. The PMG will consist of representatives from TriMet, City of Portland, City of Gresham, Multnomah County, ODOT, and Metro.
- C. Project Partners Group (PPG) –** The PPG is composed of project staff leads for each of the jurisdictional partners, and serves to coordinate and facilitate a broad range of decisions at the technical and design staff level. This group provides project assistance and accountability in delivering this regional project. Issues that cannot be resolved by this group due to political or financial challenges are forwarded to the PMG. The PPG consists of representatives from TriMet, Metro, the City of Gresham, the City of Portland, Multnomah County, and the Oregon Dept. of Transportation.

D. Management.

1. **Managers.** TriMet designates Michael Kiser as its Project Manager and the City designates Caitlin Reff as its Project Manager (collectively, “Managers”). These roles can be re-assigned at the direction of the TriMet Capital Projects and Construction Division Manager and the PBOT Major Projects & Partnerships Section Manager, respectively. The Managers shall be responsible for coordinating all aspects of their respective work scopes for the Project and all the respective employees, consultants and contractors assigned to the Project. The Managers shall ensure that the Project and tasks related thereto are completed expeditiously and economically, shall be the contact persons through whom TriMet and the City officially communicate, and shall have the authority to make decisions and resolve disputes relating to the Project. In the event that a disagreement or dispute occurs between the Managers, it shall be resolved in accordance with Article II, Section N, Issue Resolution.
2. **City Project Manager.** The City shall assign a Project Manager, with the required experience, ability, and skills necessary to perform the following tasks:
 - (a) Have access to the City Engineer and TriMet’s Construction Manager.
 - (b) Inform the City Engineer of TriMet’s Project staff’s decisions.
 - (c) Inform Project staff of progress of required City approvals and work on end products.
 - (d) Assist TriMet in coordinating utility relocations.
 - (e) Prepare a schedule interfacing City or City-permitted work with Project work.
 - (f) Assist TriMet in gathering information in a timely manner from City staff and assist TriMet’s Project staff in understanding the information.
 - (g) Assist TriMet in obtaining required end products and approvals.

- (h) Advise TriMet of documentation necessary to obtain City approvals and permits.
 - (i) Advise and assist TriMet in accomplishing City issuance of the Public Improvement Construction Permit.
 - (j) Assist assigned TriMet design lead persons as necessary so that final design is accomplished in accordance with Project schedule milestones, budget and identified quality standards.
 - (k) Provide field and/or office engineering functions during construction, as needed by TriMet.
 - (l) Report to the assigned TriMet design or construction lead and interface with Project consultants or subconsultants only as permitted by the assigned TriMet lead person.
- E. **Decision-Making.** Whenever either party's decision, determination, approval or consent (each a "decision") is required on the subject matter in this Agreement, the party will promptly exercise judgment and grant or deny the matter for which a decision was requested in a reasonable manner. Any consent or approval granted by a party shall not constitute a waiver of the requirement for consent or approval in subsequent cases. No change in the rights of the Parties or the terms of this Agreement shall be required as a condition to the granting of approval or consent. Consent or approval under this Agreement shall not be unreasonably withheld, delayed, or conditioned.

ARTICLE VIII -GENERAL PROVISIONS

- A. **Liability.** Subject to the limitations of the Oregon Tort Claims Act and the Oregon Constitution, City agrees to indemnify, hold harmless and defend TriMet, its officers, employees and agents from and against all claims, suits, actions, or whatsoever nature, damages or losses, and all expenses and costs incidental to the investigation and defense thereof including reasonable attorneys fees, resulting from or arising out of the acts of City, its officers, employees or agents under this Agreement. Subject to the limitation of the Oregon Tort Claims Act and the Oregon Constitution, TriMet agrees to indemnify, hold harmless and defend City, its officers, employees and agents from and against all claims, suits, actions, of whatsoever nature, damages or losses, and all expenses and costs incidental to the investigation and defense thereof including reasonable attorneys fees, resulting from or arising out of the acts of TriMet, its officers, employees or agents under this Agreement. Each Party's indemnification obligations under this Section shall survive termination of this Agreement.
- B. **Interest of Members of Congress.** No member of or delegate to the Congress of the United States shall be admitted to any share or part of this Agreement or to any benefit arising there from.
- C. **Interest of Public Officials.** No member, officer, or employee of the City or TriMet during his or her tenure or for one (1) year thereafter shall have any interest, direct or indirect, in this Agreement or the proceeds thereof
- D. **Disadvantaged Business Enterprise.** In connection with the performance of this Agreement, the City will cooperate with TriMet in meeting TriMet's commitments and goals with regard to the maximum utilization of disadvantaged business enterprises and will use its best efforts to ensure that disadvantaged business enterprises shall have the maximum practicable opportunity to compete for subcontract work

under this Agreement. TriMet and the City may desire to enter into an agreement whereby the City provides technical assistance for the DBE efforts. In the event an agreement is reached on the scope and budget for this work, the Parties will modify this Agreement to provide for such scope and budget.

- E. **Equal Employment Opportunity.** In connection with the execution of this Agreement, neither the City nor TriMet shall discriminate against any employee or applicant for employment because of race, religion, color, sex, age, or natural origin. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; raise or pay or other forms of compensation; and selection for training, including apprenticeship.
- F. **Termination for Convenience.** The City or TriMet may terminate this Agreement in whole or in part at any time by written notice to the other Party. In the event of such termination, TriMet shall pay any City costs that are owed under this Agreement, including any costs necessarily incurred by the City in terminating its work or the work of others under contract to City. The City promptly shall submit its termination claim to be paid by TriMet. If either party has any property in its possession belonging to the other Party (Owner), the party having possession will account for it and dispose of it in the manner as the Owner directs.
- G. **Termination for Default.** If the City fails to perform in the manner called for in the Agreement, or if the City fails to comply with any other provisions of the Agreement, TriMet may terminate this Agreement for default. Termination for default shall be effected by serving a notice of termination on the City setting forth the manner in which the City is in default. The City will be paid only the Agreement price for authorized services performed prior to termination in accordance with the manner of performance set forth in this Agreement.
- If it is later determined by TriMet that the City has an excusable reason for not performing, such as a strike, fire, flood, or events which are not the fault of, or are beyond the control of the City, TriMet shall establish a new performance schedule, and allow the City to continue work, or treat the termination as a termination for convenience.
- In the event TriMet fails to pay the City any amount that is owed under this Agreement or otherwise fails to comply with its obligations under this Agreement, such failure shall be deemed a material breach for which the City may seek any remedy available to it under the law, including but not limited to, termination of contract or suspension of its services.
- H. **Maintenance of Records.** The City shall maintain records to show actual time involved in accomplishment of the Project and the cost incurred for the period of time specified. The City shall cooperate in good faith with TriMet and the FT A to provide records in a form satisfactory to FT A. TriMet shall take the lead and provide assistance to the City as necessary for compliance with FfA requirements.
- I. **Audit and Inspection of Records.** The City shall permit the authorized representatives of TriMet, the United States Department of Transportation, and the Comptroller General of the United States to inspect and audit data and records of the City relating to its performance under this Agreement. TriMet shall be responsible for all auditing costs incurred by TriMet to conduct its audits under this Agreement.

- J. **Documents.** All records, reports, data, documents, systems, and concepts, whether in the form of

writings, figures, graphs, or models that are prepared or developed in connection with this Project shall become public property. All design drawings and documents prepared by the City staff under this Agreement shall be property of TriMet. Nothing herein shall prevent the City from retaining original design drawings and providing reproducible copies to TriMet.

- K. **Successors; No Assignment.** The benefits conferred by this Agreement, and the obligations assumed hereunder, shall inure to the benefit of and bind the successors of the Parties. The rights and obligations of each party under this Agreement may not be assigned in whole or in part without the prior written consent of the other party.
- L. **Choice of Law; Place of Enforcement.** This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon.
- M. **Waivers.** No waiver by either party of any provision of this Agreement shall be of any force or effect unless in writing. Except as otherwise provided herein, no waiver made by a party with respect to the performance, or manner or time thereof, or obligation of the other party or any condition inuring to its benefit under this Agreement shall be considered a waiver of any other rights of the party making the waiver or a waiver by the other party not joining in such waiver, and no such waiver shall be construed to be a continuing waiver.
- N. **No Third Party Beneficiaries.** The Parties intend that the rights, obligations, and covenants in this Agreement shall be exclusively enforceable by the Parties. There are no third party beneficiaries to this Agreement, either express or implied.
- O. **Severability/Survivability.** If any clause, sentence, or portion of the terms and conditions of this Agreement becomes illegal, null, or void for any reason, the remaining portions will remain in full force and effect to the fullest extent permitted by law. All provisions concerning indemnity survive the termination of this Agreement for any cause.
- P. **Interpretation of Agreement.** This Agreement shall not be construed for or against any party by reason of the authorship or alleged authorship of any provision.
- Q. **Integration, Modification, and Administrative Changes.** This Agreement includes the entire agreement between the Parties on the subject matter contained in this Agreement and supersedes any and all prior or contemporaneous written or oral understandings, representations, or communications of every kind. No course of dealing between the Parties and no usage of trade will be relevant to supplement any term used in this Agreement. This Agreement may only be modified in writing by a modification that has been signed by individuals authorized to bind each of the Parties contractually. The Parties shall not make changes to this Agreement through the issuance of permits, approvals, or other administrative requirements or processes.
- R. **Compliance with Law.** The parties recognize that funds provided by the Federal Transit Administration (“FTA”) will be used to pay for a portion of the Project. Each party agrees to comply with all local, state, and federal laws and regulations and fully understands and agrees to comply with all applicable requirements governing the work of FTA and contractors.
- S. **Federal Funding Limitation.** To the extent applicable to each of the respective parties, this Agreement is subject to all federal provisions prescribed for third-party contracts by the federal grant agreement.

- T. **Public Contracting Requirements.** To the extent applicable, the provisions of ORS Chapter 279 are incorporated by this reference as though fully set forth.
- U. **No Partnership.** Each Party is an independent contractor with regard to each other party. No party is an agent or employee of any other party.
- M. **No Participation.** No Party or its employees is entitled to participate in a pension plan, insurance, bonus, or similar benefits provided by any other party.
- N. **Amendments to this Agreement.** This Agreement embodies the full agreement between the Parties with regard to the subject matters set forth herein, unless amended.

EXCEPT FOR THE CHANGES OUTLINED ABOVE, THERE ARE NO OTHER CHANGES TO THIS AGREEMENT AT THIS TIME.

City of Portland

Tri-County Metropolitan Transportation
District of Oregon

By: _____

By: _____

Commissioner of _____

TriMet General Manager

Dated: _____

Dated: _____

APPROVED AS TO FORM

By: _____
City Attorney

By: _____
TriMet Deputy General Counsel

**Exhibit A.A
Project Schedule**

Summary Schedule for Division Transit Project	
Activity	Schedule Date
FTA Approval to Enter Project Development	2-Oct-15
Locally Preferred Alternative Selected	7-Nov-16
Final Engineering Commences	9-Jun-17
Small Starts Rating Materials Submitted	7-Sept-17
NEPA Clearance Received	13-March-19
Submit for SYGA	30-Aug-19
SYGA Award	21-Jan-19
Begin Revenue Service	11-Sept-22

Exhibit A.B
PBOT's Design Submittal Requirements

	First Review (60%)	Second Review (90%)	Final Review (100%)
Civil	<p>Index of all plan sheets, showing preliminary sheet count and description</p> <p>Limits of demolition identified. Removal of existing facilities identified (curb, pavement, sidewalk, utilities, trees, above-ground street furnishings)</p> <p>Vertical alignment---roadway profiles, curb elevation details, curve data, drainage, sidewalk warping at platforms, doorway elevations in areas of sidewalk replacement, driveway connections</p> <p>Draft of all sheets including sewers, lighting, signals, water, traffic, landscape</p> <p>Preliminary plan view including, curbs, sidewalks, stations, curve data, vaulted s/w limits, sidewalks, driveways</p> <p>Preliminary bubble notes</p> <p>All details identified</p> <p>All utilities shown, both existing and proposed, including poles, vaults and manholes. Verify that proposed foundations do not conflict with underground utilities.</p> <p>Typical roadway sections, including lane widths, roadway x-slope, sidewalk widths, proposed slopes in sidewalk zones, and pavement sections.</p> <p>Proposed storm drainage information: type of facility, location, elevations, piping information, connection point</p> <p>Storm water treatment preliminary design, including calculations, type of facility, locations, dimensions, elevations</p> <p>Street feature preliminary locations identified - art, parking pay stations, station amenities, benches, bike facilities, electrical cabinets</p> <p>Pavement replacement limits identified, and conform to PBOT's pavement replacement standards.</p> <p>Additional Right-of-Way needs and temporary construction easements identified</p> <p>Curb ramp locations identified with preliminary design (dimensions)</p> <p>Geotechnical report submitted, including pavement design section and pole foundation recommendations</p> <p>Any proposed variances from City standards identified and Design Exception application made to PBOT for these items.</p> <p>Preliminary erosion control plan</p> <p>Draft specifications/special provisions</p>	<p>Plan index finalized, showing all sheet numbers and description</p> <p>Comments from 60% review incorporated</p> <p>Vertical alignment conflicts resolved.</p> <p>All sheets including sewers, lighting, signals, water, traffic, landscape finalized</p> <p>Horizontal alignment finalized and all conflicts resolved</p> <p>Bubble notes finalized</p> <p>Details drafted</p> <p>Utility conflicts resolved.</p> <p>Provide sidewalk x-sections in critical areas to ensure match at doorways and 2% pedestrian zone. Provide driveway x-sects for rebuilt d/w's to ensure match.</p> <p>Storm drainage details finalized.</p> <p>Storm water treatment design finalized.</p> <p>Street feature locations finalized</p> <p>Curb ramp elevation diagram for each proposed curb ramp, and ADA Curb Ramp Design Forms completed.</p> <p>Approved Design Exception documents</p> <p>Final erosion control plan</p> <p>Final specifications/special provisions</p>	<p>Design complete</p> <p>Incorporate any final comments from 90% review</p> <p>Curb ramp designs finalized</p> <p>Final specifications/special provisions</p>
Traffic	<p>Construction staging plan/traffic control plan</p> <p>Proposed signing in the appropriate location.</p>	<p>Construction staging/Traffic control plan finalized</p> <p>Reviewed for correctness (MUTCD, capacity, materials), completeness, clarity, and effectiveness</p>	<p>90% review comments addressed.</p>

	Sign and post data table Show sign installation details, sign details and notes Draft sign-related specs Striping plan, including crosswalks, lane lines and tie in to existing section Striping details and notes Draft striping specs Preliminary Work Zone Traffic Control Plan (including pedestrian traffic). 1"=30' scale full size, 1"=60' scale 1/2 size	Proposed signing plan that incorporates other street features including street lights, parking signs, driveways, landscaping, etc.) into the plan view Striping plan adjusted to reflect civil design adjustments Final sign-related specs Final striping related specs Staging plans &/or Special traffic mgmt specs Update work zone traffic control plan to account for constructability review Feasibility, effectiveness and safety confirmed.	
Structures	Complete structural design calculations with professional seal and stamp. Structural calculations should be separated from other calculations Draft of all plan sheets Complete design of all structural items (retaining walls, special pole foundations, transit shelters, artwork) Geotechnical reports/recommendations with professional seal and stamp Final construction sequence All structural elements (vaulted s/w's, retaining walls, special pole foundations, transit shelters, artwork) clearly identified on plans (a memo identifying plan sheet #'s with structural details is acceptable) Draft Specifications	Updated specifications Updated Plan Sheets with professional seal and signature Updated structural calculations with professional seal and signature	Final Drawings Final Specifications Stamped Design Calculations
Signals	Traffic signal plans should be designed based on the items listed below and include all existing/proposed civil elements, overhead/underground utilities, street trees, etc. Plans should follow PBOT design and drafting standards.	90% review comments should be regarding minor design changes and drafting edits	Incorporate 90% review comments. Design complete.
	Signal equipment locations: traffic signals and pedestrian poles, controller cabinets, signs, traffic signal and pedestrian signal heads, junction boxes, pedestrian push buttons located		
	Conduit runs and junction boxes sized with correct wiring		
	Phase orientation and phase rotation diagrams		
	Bubble notes		
	Legend		
	Mast arm calculations		
	Termination diagrams		
	Pole orientation and attachment charts	X,Y coordinates and/or station offsets for poles	
	Wiring diagram (blank place-holder)	Wiring diagram complete	
	Overhead signs (traffic control street name signs)		
	Removal plan and/or signal construction staging design		
	Temporary signal designs (if applicable)		
	Power source design including panel and UJB		
	Utility power service design plan		
	Detection plans		
	Detector wiring diagrams		

	Input file diagram and cabinet interface diagram if radar detection		
	Communications design		
	Communications equipment list		
	Plans should show existing utilities grayscaled.		
	All unique details for this project		
	Draft specifications/special provisions	Final specifications/special provisions	Specifications complete
Street Lighting	Lighting plans should be designed based on the items listed below and include all existing/proposed civil elements, overhead/underground utilities, street trees, etc. Plans should follow PBOT design and drafting standards.	90% review comments should be regarding minor design changes and drafting edits	Incorporate 90% review comments. Design complete.
	Proposed pole locations	X,Y coordinates and/or station offsets for poles	
	Diagrams showing circuits and panel schematic		
	Conduit runs and junction boxes sized with correct wiring		
	Power source design including panel and UJB		
	Utility power service design plan		
	Temporary street lighting (as applicable)		
	Type of luminaire		
	Pole schedules with location and type		
	Voltage drop calcs per City standards (i.e. 120V branch breakers)		
	Standard construction notes		
	Unique details (place-holder)	Unique details for the project (complete).	
	Street tree type and locations, removals		
	AGI analysis to support proposed pole locations		
	Existing street lighting (if applicable)		
	Draft specifications/special provisions		
Landscape and Streetscape Design	Preliminary location and type of landscaping	Final landscaping location and type identified	Landscape design complete
	Urban Forestry Tree Permit application submitted	Urban Forestry Tree Permit Issued	
	Existing landscaping removals identified		
	Preliminary irrigation facilities	Final irrigation facilities identified	
	Identify City O and M responsibilities	O and M responsibilities finalized	

Exhibit A.C
TriMet Permit Matrix

PERMIT NAME
Private Property Building Permits (not covered in this agreement)
Public Improvement Construction Permit
Public/Private Utility Permit(s), Street Opening Permits
Sign & Awning Permits (not covered in this agreement)
Building Permit for Temporary Construction Staging Permit (not covered in this agreement)
Noise Variance Permit (not covered in this agreement)
Trade Permit (not covered in this agreement)
Water Quality Inspection Fee for relocated or new installation of backflow prevention assemblies (Portland Water Bureau)
Hydrant permit(s) for testing of newly installed SED/Sump systems (Portland Water Bureau)

Exhibit A.D
Staffing Plan

Amendment 1 Sept 2020		Preliminary Engineering	Final Design (35% - 100%)	Construction & Start-Up	Close-Out	
	PBOT	\$ 752,336	\$ 700,870	\$ 2,990,935	\$ 48,824	
	BES		\$ 30,844	\$ 139,669	0	
	PWB		\$ 102,635	\$ 1,368,975	0	
	BPS		\$ 14,461	\$ 7,779	0	
	Parks		\$ 3,866	\$ 3,965	0	
	Subtotal	\$ 752,336	\$ 852,676	\$ 4,511,323	\$ 48,824	
	Total	\$ 6,165,159				
			Des/Con IGA authorized April 2019	\$ 2,000,000		
			City in-kind services (PE & Design)	\$ 1,000,000		
Amendment 2 May 2021			Additional budget required	\$ 3,165,159		
			Total Des/Con IGA	\$ 5,165,159		
		Preliminary Engineering	Final Design (35% - 100%)	Construction & Start-Up	Close-Out	Amendment 2 change (increase)
	PBOT	\$ 752,336	\$ 700,870	\$ 3,261,331	\$ 48,824	\$ 270,396
	BES		\$ 30,844	\$ 154,545	0	\$ 14,876
	PWB		\$ 102,635	\$ 2,084,428	0	\$ 715,453
	BPS		\$ 14,461	\$ 7,779	0	
	Parks		\$ -	\$ 10,689	0	\$ 2,858
	Subtotal	\$ 752,336	\$ 848,810	\$ 5,518,773	\$ 48,824	
	Total				\$ 7,168,743	
			Des/Con IGA authorized September 2020	\$ 5,165,159		
			City in-kind services (PE & Design)	\$ 1,000,000		
			Additional budget required	\$ 1,003,584		
			Total Des/Con IGA	\$ 6,168,743		\$ 1,003,584

Exhibit A.E
Signal Tracking & Monitoring at 11th/12th TriMet Betterment

Scope:
Download, format, compile and summarize monthly rail crossing data (heavy rail and light rail) for the 11th/12th/Clinton intersection. Data are gathered from the traffic signal controller and include signal state, rail preemptions, and gate activity.

Budget:
\$8,000.00
Work to be performed by Adam Moore, Senior Engineering Associate
Breakdown:

Monitoring	25 hrs
Reporting	20 hrs
Meetings	10 hrs
Misc	<u>5 hrs</u>
Total	60 hrs
Wage rate	\$70.56
Total	\$4,233.60
Overhead 85.85%	<u>\$3,634.54</u>
Grand total	\$7,868.15

Timeline:
5 months

Exhibit A.F
Signal Timing Scope

Guiding Principles for the City of Portland Traffic Signal Priority on the Division Transit Project

Transit Signal Priority (TSP) is a series of steps to modify traffic signal timing for buses that will improve conditions for transit. The City of Portland is committed to moving people via public transit and implementing major changes both within this corridor and in the traffic signal system. Portland’s experience with TSP dates from 1999 and the City staff will use this history to enhance the system and deliver a system that works to reduce bus travel time that would reduce carbon emissions and address inequities in this corridor. It will set the standard for future investments in corridors for the region. TSP can be a powerful tool to improve both reliability and travel time, especially on corridor streets with long signal cycles and distances between signals.

How will Portland be effective?

Aggressive implementation to make the bus faster

Transit signal priority offers the potential to provide a significant benefit when combined with dedicated bus lanes. In many applications across the U.S., TSP has been implemented with the constraint of signal coordination focused on moving cars on the arterial street. This coordination limited the ability of the signal controller and the resulting signal timing to make a significant difference for reducing delays. When a transit vehicle receives a priority phase, the extension is limited to approximately 10 seconds depending on the intersection and the dedicated time is restored by deducting time from the subsequent cycles. Portland is committed to extending the advantage to buses on the Division corridor to the furthest extent possible, even considering eliminating coordination between subsequent traffic signals in order to improve conditions for the bus. There is some risk in this strategy because the elimination of coordination could increase traffic congestion that may result in delays to the next bus on the schedule. The City is building a 21st century system that will provide monitoring functions that will address the potential for congestion that results in increased person (or bus) delay on the corridor. Further, the effect of these strategies on people walking and cycling will also be a key consideration that will be evaluated as a part of the implementation. Changes will be made with an emphasis on making the bus as fast as possible through the traffic signals without compromising the safety of other modes (due to increased delays or shortened times for people walking, etc).

Monitoring functions will be developed to fine tune Priority

The Federal Highway Administration Office of Operations has promoted and helped advance the concept of Automated Traffic Signal Performance Measures (ATSPM). ATSPM has provided a framework for an agency to assess the performance of the traffic signal system. While the ATSPM is primarily used for understanding traffic congestion primarily for private automobiles, PBOT is committed to work with our regional partners and experts in industry to develop multimodal performance measures to support the evaluation of transit signal priority. The implementation of ATSPM will provide the followingii:

- Validation of expected performance, including functionality of subsystems (e.g., detectors) and communication links;
- The efficiency of capacity utilization on lanes/movements at local intersections;
- The effectiveness of progression through coordinated lanes/movements in the system (relative success or failure of progressive timing); and
- The characterization of delay and travel time.

Commitment to advance operations and maintenance to support long-term cost savings

The PBOT Strategic Plan, Moving to our Future, 2019-2022 highlights the importance of prioritizing bus traffic by implementing key projects within the Enhanced Transit Corridors Plan (Goal 2, Objective 2, Strategic Initiative C or “2.2.C”). The PBOT Strategic Plan also includes an initiative to upgrade the signal system to give priority to transit “2.2.E” with key MOEs being bus travel times and reliability. The Plan also includes Division Transit Project as Strategic Initiative “2.1.B”, so there is a significant emphasis for PBOT to deliver this project. Our intent is to have the Division Transit Project be a model that can be used on other bus corridors, successfully demonstrating how bus performance can be improved while recognizing that safety of all multimodal users will be a primary objective.

Scope of Services

Traffic Signal Timing

Division Transit Project

Project Description

The proposed tasks describe the effort necessary to review and update signal timing and transit priority for the Division Transit Project within Portland.

Scope of Services

Task 1.0 – Project Management and Coordination

City shall report to TriMet as necessary to coordinate the tasks included in this Scope of Services.

Task 1.1 Project Management and Coordination

City shall conduct the following activities:

- Maintain a schedule for TriMet oversight.
- Coordinate with other agencies for project direction and control.

Task 1.1 Deliverables/Schedule:

- Quarterly updates via email.

Task 1.2 – Project Meetings

City shall attend project related meetings. This will include a kick-off meeting that includes at a minimum, TriMet and the City of Gresham signal operations staff. City shall review meeting agendas and minutes for each meeting, which will include action items and record of any decisions from the meetings.

Task 1.2 Deliverables:

- Attend the kick-off meeting and subsequent updates.
- Review of meeting agendas and meeting summaries (including action item/decision log).

Task 2 – Data Collection

Order data sufficient to evaluate the existing conditions and refine signal timing. City shall conduct the following activities:

- Collect 2-hour weekend peak period turning movement counts at intersections shown in Appendix A – Table 1. Counts shall include heavy vehicles and pedestrians in addition to vehicles.

- Collect a.m., midday, p.m. and weekend peak period turning movement counts as necessary Counts shall include heavy vehicles, bicycle, and pedestrians in addition to automobile traffic.
- Collect 7-day, 24-hour volume counts at four locations along Division Street.

Task 2 Deliverables:

- Electronic copy of turn movement counts and 24-hour counts

Task 2 Scope Basis:

- Existing a.m., midday, and p.m. peak hour counts collected in Spring 2018 for Inner Division will be used.

Task 3 – Develop Local, Coordinated, and Transit Signal Priority Timings

Task 3.1 – Synchro Model Preparation

Subcontractor shall calibrate an existing conditions a.m., midday, p.m., and weekend peak period Synchro model of the study corridor along SW Portland Bus Mall between SE 8th and SE 174th Ave.

- Review a.m., midday, p.m., and Saturday peak period Synchro models to be consistent with observed field conditions using data collected in Task 2.

Task 3.1 Internal Deliverable:

- Prepare a.m., midday, p.m. and weekend existing conditions Synchro models
- Meeting summaries to document key information, decisions, and action items

Task 3.1 Scope Basis:

- Metro provided Synchro model of SE Division Street from 8th Avenue to 76th Ave.

Task 3.2 – Update Local Timing Parameters

The geometry of several intersections will be updated as part of the Division Transit project, which impacts the crossing distances for pedestrians. City shall review and update the local timing parameter values at each project intersection including:

- Measure pedestrian crossing distance of each crosswalk
- Calculate flashing don't walk values for each pedestrian phase
- Review and update the minimum green and walk values for each phase based on agency policy
- Review and update the yellow and all-red values for each phase based on agency policy

Task 3.2 Internal Deliverables:

- Updated local timing parameters

Task 3.2 Scope Basis:

- PBOT will be responsible for developing and providing the MaxTime databases.

Task 3.3 – Develop Proposed Signal Timing

City shall develop a proposed a.m., midday, p.m., and weekend peak plan for signal timing from SW Bus Mall to SE Division Street.

- Determine subsystem configurations (signal timing groups)
- Evaluate mode of operation and if necessary select cycle lengths for each peak period
- Evaluate lead/lag left-turn phasing options at intersections (if applicable)
- Develop coordinated timing plans (cycle length, splits, and offsets) for each peak period

Task 3.3 Deliverables:

- Draft and final proposed signal timing plans.
- Meeting summaries to document bus stop location information, decisions, and action items

Task 3.4 – Develop TSP Controller Timings

City shall develop the TSP controller timings for the Intelight MaxTime firmware.

As this is an iterative process, we will implement the timing and then determine whether the performance is meeting expectations in subsequent tasks.

Task 3.4 Deliverables:

- Draft and final TSP timing parameters for each project intersection in Intelight MaxTime.

Task 4 – Field Review and Fine-Tune Coordinated Timings

City shall work with TriMet staff to fine-tune the timings based on AVL performance and Automated Traffic Signal Performance Measures (ATSPM) defined in the field. The field review and fine-tuning involves a combination of observing individual intersection operation, and using enhanced data (Bluetooth, ATSPM, and AVL from TriMet). The corridor timings will be fine-tuned right after the new timings are implemented. Additional fine-tuning will occur as an addendum if necessary. PBOT shall conduct the following activities:

- Observe the signal performance in the field as the new timings are implemented during the a.m., midday, p.m. peak periods.
- Identify and implement changes to signal timing that improve performance.

Task 4 Internal Deliverables:

- Electronic signal timing files for a.m. peak, midday, p.m., and weekend peak, including any changes made during field fine-tuning.
- Summary of performance for all new transit signal timing data for project intersections.

Task 5 - Field Review and Fine-Tune TSP Timings

City shall field review the TSP operations during each of the coordinated timing plan periods and recommend adjustments as needed.

Task 5 Scope Basis:

- PBOT will program the TSP parameters in the central traffic signal software and download to the field traffic signal controllers
- TriMet will program the TSP parameters into the central TSP system (See Task 6).

Task 5 Deliverables:

- Final TSP timings, including any changes made during field fine-tuning.

Total Summary of Labor Estimate (as incorporated in Exhibit A.D, City Staffing Plan)						
	PM	Data	Signal Timing	Fine Tune	Field Review	Total
PBOT Staff	1	2	3	4	5	
Mark Haines	40	60	400	420	200	1120
Kate Petak	20	20	300	260	120	720
Julie Kentosh	40	20	100	120	60	320
Total	100	100	800	800	380	2180

Task 6 - TSP Settings in the Central System

The previous scope indicated that “TriMet will program the TSP parameters into the central TSP system”. It seems that the City could provide this service working collaboratively with TriMet, serving as one point of contact providing guidance to the agency. Portland could serve TriMet in training other cities in the implementation and providing peer review for partner agencies similar to the initial TSP implementation in 1999. PBOT currently serves as the manager for the regional signal system and the input will be through that system that will be developed in concert with this work.

Task 6 Scope Basis:

- PBOT will assess functionality of the Intelight controller to manage TSP requests.
- PBOT will program the TSP parameters into the central TSP system.
- TriMet will review before and after AVL data with PBOT staff to identify TSP activation trends and performance of each critical signalized intersection along the corridor.

Task 6 Deliverables:

- Programming TSP settings within the AVL system, includes a summary of any changes made during field fine-tuning.
- Spreadsheet summary for purposes of record keeping.

(as incorporated in Exhibit A.D, City Staffing Plan)

PBOT Staff	TSP Setting
	6
SSL Manager	60
Kate Petak	240
Total	300

ⁱ Harriet R Smith, P Brendon Hemily, and Miomir Ivanovic. Transit signal priority (TSP): A Planning and Implementation Handbook. ITS America, Washington, DC: 2005.

ⁱⁱ Day, C. M., D. M. Bullock, H. Li, S. M. Remias, A. M. Hainen, R. S. Freije, A. L. Stevens, J. R. Sturdevant, and T. M. Brennan. *Performance Measures for Traffic Signal Systems: An Outcome-Oriented Approach*. Purdue University, West Lafayette, Indiana, 2014.
<http://dx.doi.org/10.5703/1288284315333>