

Agency has entered into the PSK with Consultant to provide services to the Project as described in this Exhibit A.

EXHIBIT A
PROJECT DESCRIPTION and DELIVERY SCHEDULE
for
Columbia/Lombard Mobility Corridor Plan
(Based on PSK Statement of Work)
TGM 1B-17

Abbreviations

- Agency or ODOT – Oregon Department of Transportation
- APM – Agency Project Manager
- BES – Portland Bureau of Environmental Services
- BPS – Portland Bureau of Planning and Sustainability
- City – City of Portland
- GIS – Geographic Information System
- PBOT – Portland Bureau of Transportation
- PMT – Project Management Team
- Project - Columbia/Lombard Mobility Corridor Plan Project
- SAC – Stakeholder Advisory Committee
- TAC – Technical Advisory Committee
- NTP – Notice to Proceed
- DBE – Disadvantaged Business Enterprise
- ORS – Oregon Revised Statutes
- SOW – Statement of Work set forth in Consultant PSK

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| Name: Address: Phone: Email: | Agency’s Project Manager (“APM”) for the WOC Lidwina Rahman ODOT Region 1 123 NW Flanders Portland, OR 97209 (503) 731-8229 Lidwien.Rahman@odot.state.or.us | Name: Address: Phone: Email: | Consultant’s Project Manager (“PM”) for the WOC Elizabeth Wemple, PE HDR 1050 SW Sixth Avenue, Suite 1800 Portland, OR 97204 (503)727-3915 Beth.Wemple@hdrinc.com |
| | Contract Administrator for the WOC is the same as APM listed above | Name: Address: Phone: Email: | Local Project Manager Zef Wagner Portland Bureau of Transportation 1120 SW Fifth Avenue, Suite 800 Portland, OR 97204 (503) 823-7164 Zef.Wagner@portlandoregon.gov |

PROJECT DESCRIPTION and OVERVIEW of SERVICES

Agency is contracting with Consultant for Services in connection with the following project (the “Project”):

Project Purpose and Transportation Relationship and Benefit

The Columbia/Lombard Mobility Corridor Plan project (“Project”) will identify, develop, and prioritize infrastructure improvements and traffic management systems to make multimodal transportation and freight movement safer, more efficient, and more resilient along this Regional Mobility Corridor within the City of Portland (“City”).

The Project will develop a plan to improve the street network in a mobility corridor that is a key hub for freight mobility and access to employment for people from around the region. The benefits of this plan include increased safety, efficiency, and low-cost access to jobs. It will develop projects and systems to alleviate congestion, allowing people and goods to reach their destinations more quickly and reducing emissions.

Project Area

The Project Area encompasses the corridor and adjacent area bound by N/NE Columbia Boulevard and the parallel US 30 Bypass (portions of N/NE Lombard Street, NE Portland Highway, and NE Killingsworth Street) from Oregon Route 99W (Interstate Avenue) to Interstate 205, including a buffer area of roughly ½ mile on the north and south sides of this corridor to include potential parallel and perpendicular routes.

Background

N/NE Columbia Boulevard and US 30 Bypass running parallel to the Union Pacific Kenton Line railroad, are vital links in the Regional Mobility Corridor running between Rivergate and I-205 in a major employment area for the Portland region. According to the Regional Transportation Plan, mobility corridors should function well for all modes of transportation, although different modes may be prioritized to a greater or lesser degree on different facilities within the corridor. Due to aging infrastructure, gaps and deficiencies in the multimodal network, growing traffic congestion, increased trucking activity, major safety issues, and longer commuting distances, the Columbia/Lombard Mobility Corridor - <https://www.oregonmetro.gov/mobility-corridors-atlas> and http://library.oregonmetro.gov/files/Mobility_Atlas_Corridor_18.pdf - is not functioning optimally for multimodal travel or goods movement. The corridor has also been identified by Portland Bureau of Environmental Services (“BES”) as an area with a high level of stormwater treatment need in the public right-of-way.

A lack of separation between modes, outdated roadway designs, very high traffic speeds, and sub-standard infrastructure have led to major safety concerns on both Columbia Boulevard and US 30 Bypass. Both streets are on the designated Vision Zero High Crash Network because of high crash rates, especially those involving high-speed motor vehicles. The pedestrian and bicycle networks have numerous gaps and deficiencies, both along and across the corridor, which create safety issues (including a recent bicycle fatality on US 30 Bypass, and pedestrian fatalities on Columbia) and make it difficult for pedestrians and bicyclists to access jobs and

other destinations in the corridor. Transit service is very limited, with only a single bus line serving a small section of Columbia Boulevard. Lombard west of Interstate is a frequent service transit route and has been identified as a future Enhanced Transit Corridor. While TriMet has plans to create a new bus line along Columbia Boulevard, the street currently lacks adequate pedestrian facilities and crossings, which would present an obstacle to potential users of public transit. Because of these limitations, most commuters or visitors only feel safe or comfortable traveling to the area in a personal vehicle. This adds to traffic congestion along the corridor and increases the cost of living for employees and impacts freight goods movement. The transportation system also lacks the infrastructure and technology to efficiently manage freight travel and provide reliable movement of goods in this critical freight district. At-grade railroad crossings, sub-standard over-crossings, missing connections and signals, and traffic bottlenecks contribute to growing concerns about freight mobility and access in the corridor.

The Project will include analysis of traffic flows, freight mobility and access needs, multimodal gaps and deficiencies, and access to transit. The Project will develop alternative cross-sections, modal priorities, project concepts, and management systems, and evaluate them using clear criteria. The public will be involved through stakeholder committees, open houses, online engagement, and targeted outreach.

Project Objectives

The Project Objectives of the Columbia/Lombard Mobility Corridor Plan are to:

- Identify system needs, i.e. gaps and deficiencies for all modes;
- Identify infrastructure and operating strategies for addressing identified needs, including projects to support planned TriMet bus service along Columbia Boulevard, and transportation demand management strategies that provide real-time travel information to balance travel demand between the two major roadways;
- Prioritize improvements to the transportation system for all modes;
- Identify opportunities for coordination and partnership between transportation agencies and the City's BES to address both transportation and stormwater needs;
- Improve safety and efficiency of multimodal transportation and freight movement and access along the corridor;
- Develop a Vision Zero strategy and context-sensitive safety solutions for all modes on the corridor;
- Develop conceptual designs and cross-sections for Columbia Boulevard, US 30 Bypass, and connections between them to help inform future capital projects, paving projects, and other improvements;
- Evaluate and prioritize projects and programs identified in the 2016 Transportation System Plan, as well as additional projects and programs identified through the Project.

Expectations

Unless otherwise specified in the task:

Expectations for Project Management

City shall provide a Project Manager throughout the Project and other adequate staff to complete the Project in accordance with the anticipated timeline. City shall maintain effective communication and coordination between City departments –Bureau of Transportation (“PBOT”), Portland Bureau of Planning and Sustainability (“BPS”), and BES, Oregon Department of Transportation (“ODOT”), Metro, TriMet, and other agencies throughout the Project through participation with the Project Management Team (“PMT”) and Technical Advisory Committee (“TAC”).

PMT must include Consultant Project Manager, City Project Manager, and Agency Project Manager (“APM”). PMT shall provide overall guidance for the Project, address project management issues such as schedule, budget, progress, and invoicing, review draft deliverables, prepare for TAC and SAC meetings, and resolve unanticipated issues and conflicting feedback. The ODOT Region 1 Active Transportation Liaison and ODOT Rail Crossing Compliance Specialist will participate in these PMT responsibilities with regard to tasks and deliverables related to active transportation on Lombard and rail crossings, respectively.

City and ODOT will form a Steering Committee consisting of City and ODOT Region 1 management to keep them informed and gain agreement and guidance as the Project progresses.

Consultant has acknowledged that the City has significant tasks related to, and involvement with, the Project. Under the PSK Consultant shall cooperate with the City and the Agency to achieve the objectives of the Project and this Exhibit A, and the City and ODOT shall engage with the Consultant as provided in Section 6 of this Agreement to achieve the objectives and deliverables of this Exhibit A, including coordination and oversight to achieve those deliverables and activities that are the responsibility of Consultant.

Expectations for Public, Stakeholder, and Agency Involvement

City shall assume primary responsibility for designing and executing public and stakeholder outreach for the Project. Public and Stakeholder Outreach events may be held in conjunction with other planning processes to reach a broad audience. The events may include public open houses and focused outreach to targeted stakeholder groups and standing citywide committees, including the Portland Freight Committee, Bicycle Advisory Committee, and Pedestrian Advisory Committee. The number and types of events will depend upon what is learned during the planning process about interested stakeholder groups. Outreach may also include an online survey, comment opportunity or other online engagement tool.

City shall provide Stakeholder Advisory Committee (“SAC”) and TAC meeting logistics, facilitation of TAC meetings, and agendas. Consultant shall facilitate SAC meetings, prepare presentation materials and meeting summaries. At least one and up to five members of the Consultant team shall attend SAC and TAC Meetings in accordance with the requirements of the SOW.

Meeting arrangement responsibilities described above include: scheduling meeting dates and times with meeting participants, distribution of agendas and meeting materials in advance of the

meeting, reserving a suitable meeting location, and posting notices in public locations (such as City buildings and libraries).

Expectations for Deliverables

Deliverables must be written concisely and use a simple and direct style, both to minimize the length of the final document and to make the document understandable to as large an audience as is reasonable. Where possible, Consultant shall present information in tabular or graphic format, with a simple and concise accompanying narrative (e.g., system inventories, traffic conditions).

Deliverables: Consultant shall provide a draft of all written deliverables to the City's Project Manager and APM in electronic format at least two weeks prior to broader distribution. City and APM will review the deliverables and submit comments to Consultant within one week. Consultant shall make corrections prior to distribution of the draft deliverables to the TAC and SAC. Consultant's draft deliverables must be substantially complete and any changes or revisions needed to address PMT comments are expected to be minor and part of the draft. This provision does not limit the right of Agency to require correction of deliverables that do not meet the standards outlined in this Exhibit A.

City shall collect, prepare, and provide to Consultant one coordinated set of written comments on the draft deliverables following any comments received from SAC and TAC and Public Outreach. Consultant shall provide the revised deliverables to the City and APM within one week unless otherwise specified or another agreed-upon amount of time is established.

Electronic versions must be in Microsoft Office formats or an editable format agreed upon by PMT.

Consultant shall prepare and provide to PMT draft memoranda in Word format, and *maps and graphic deliverables* in PDF format. Final versions must be separately provided in their native format, e.g., AutoCAD or ArcGIS.

Consultant shall provide any Geographic Information Systems ("GIS") layers used for inventory and graphic deliverables (e.g., volumes, transit layers) to the City.

Consultant name or logos may not appear on *final* documents, with the exception of the acknowledgement page.

Consultant shall transmit all electronic files and materials used to develop previous memos, maps, graphics and presentation materials so they can be inserted into the final plan and for future use by the City. Transmittal must include original source files, such as GIS shapefiles and geodatabases should they need to be revised.

TASKS, DELIVERABLES and SCHEDULE

Task 1: Project Management, Agency and Public Involvement

Objectives

- Provide efficient and productive project management processes
 - Provide public involvement in a way that meets best practices
- 1.1 PMT Check-Ins** – Consultant shall arrange and facilitate up to 24 PMT Check-ins (by phone) regularly throughout the Project to discuss scope and schedule. Consultant project manager and deputy project manager shall attend up to 24 conference calls; other Consultant team members shall attend as needed. Meeting time assumes time to prepare for, attend and complete follow up activities.
 - 1.2 Project Timeline** – City shall prepare and update up to 9 times, a graphical, easy to read Project Timeline showing Project milestones by task, anticipated dates for deliverables and milestones, along with key times to engage the community. Consultant shall review and provide input to schedule with each Project Timeline update.
 - 1.3 Memo #1: Public and Stakeholder Outreach Plan** – Consultant shall prepare draft and final Memo #1 to address engagement of, and coordination between agencies, organizations, stakeholders, groups, and individuals likely to have an interest in the Project outcome, and outreach needed to meet Title VI, Civil Rights goals. City shall provide guidance and input on outreach and engagement strategies as well as identify which key agency and community stakeholder groups to target for inclusion in the Outreach Plan. PMT members shall review and comment on draft Memo #1. Consultant shall prepare final Memo #1.
 - 1.4 Fact Sheets** – Consultant shall prepare three draft and final two-page Fact Sheets describing the Project at key points. PMT shall approve the timing and content. City shall print and distribute Fact Sheets.
 - 1.5 Public Involvement Activities** – City shall arrange and Consultant shall conduct four to five public involvement activities through the duration of the Project, including but not limited to physical open houses, online open houses, focus groups, walking/biking tours, surveys, and charrettes. Consultant shall plan, coordinate and produce a one- to two-page summary memo for each activity or event. Some activities may differ between the west and east side of the corridor for the same milestone. In this case, each scheduled event counts as one event. Events are anticipated to be 3 to 4 hours in length, including travel time.
 - 1.6 TAC Roster** – City shall create a TAC roster consisting of City departments PBOT, BPS, and BES, Port of Portland, TriMet, Metro, Department of Land Conservation and Development, ODOT Planning, ODOT Technical Services, ODOT Traffic, ODOT Rail, and others as determined by the PMT. Expertise represented should include freight, streetcar, bicycle, and pedestrian modes, systems operations, intelligent transportation systems, emergency management, transit operations, transit planning, and land use planning.

- 1.7 SAC Roster** - City shall create a SAC roster consisting of community members with an interest in the Project Area, including representatives of business associations, neighborhood associations, community-based organizations, schools, historically underserved communities, modal and other advocacy groups, as well as individual residents and business owners.

City Deliverables

- 1a PMT Check-ins (up to 24) (task 1.1)
- 1b Project Timeline and Updates (task 1.2)
- 1c Fact Sheets review, comments, printing and distribution (task 1.4)
- 1d TAC Roster (task 1.6)
- 1e SAC Roster (task 1.7)

Consultant Deliverables

- 1A PMT Check-ins (up to 24 phone calls) (task 1.1)
- 1B Input for Project Timeline Updates (task 1.2)
- 1C Draft Memo #1: Public and Stakeholder Outreach Plan (task 1.3)
- 1D Final Memo #1: Public and Stakeholder Outreach Plan (task 1.3)
- 1E 3 Draft and Final Fact Sheets (task 1.4)
- 1F Public Involvement Activities (4 to 5 scheduled activities and activity summaries) (task 1.5)

Task 2: Existing Conditions Inventory

Objectives

- Collect and summarize data regarding existing corridor conditions, including existing and funded transportation facilities, adjacent land uses and zoning, traffic counts, commute patterns, operations analysis, and crash data
- Review past plans and studies to establish the existing planning and policy context along the corridor

Subtasks

- 2.1 Data Request Memo** - Consultant shall provide City and Agency with a data request memo containing a list of data needed for remaining project analyses, delivery timeline, and preferred formats. Requested data will likely include but is not limited to crash data, geospatial data, roadway characteristics, transit, pedestrian and bicycle facilities, state, regional, and City functional classifications for all modes, existing and forecast traffic volumes, operational and system analysis results (level of service or volume to capacity), roadway centerline and other relevant spatial data needed for analysis in the needs analysis (Task 3).
- 2.2 Memo #2: Existing Conditions and Plan and Policy Review** – City shall prepare a draft and final Memo #2: Existing Conditions and Plan and Policy Review.

City shall collect existing and new data and prepare a summary of existing conditions in the Project Area. Information must be presented using text, maps, and charts as appropriate.

Data collected must include vehicular traffic speeds, vehicle volumes, turning movement counts, and classification counts, as well as pedestrian and bicycle volumes at key locations. In addition the memo must respond to items specified in the Data Request Memo (Task 2.1). Summary of existing conditions must also include most recent five years of geo-located crash data, state, regional, and City functional classifications for all modes, existing transportation facility dimensions (e.g., vehicle and bicycle lane widths; presence, type and width of sidewalks), transit stop location and activity, and adjacent land uses, and existing operations and system analyses. Memo # 2 must include existing facility information for the segment of US 30 Bypass (N Lombard Avenue) from Interstate Avenue west to N Woolsey Avenue, based on data provided by ODOT. Consultant shall review and provide comments on draft Memo #2. Comments must confirm whether the information provided by the City and Agency is adequate for remaining project activities, and identify missing information.

City shall also review and summarize local, regional, and state plans, studies, identified needs, project lists, standards of adequacy or completeness, and policy documents that are relevant to the corridor and Project. City's review must cover, at a minimum, the Portland 2016 Transportation System Plan, including functional classifications and project lists with Project Area, Ped PDX, Portland Freight Master Plan, Portland Bicycle Plan for 2030, Portland Comprehensive Plan designations and relevant policies, zoning designations; City of Portland Climate Action Plan; 2014 and 2018 Regional Transportation Plan including network designations for all modes and project lists, Regional Freight Strategy, Regional Transit Strategy, Regional Safety Strategy, Regional Travel Options Strategy, Regional Active Transportation Plan, Regional TSMO Action Plan, Regional Over-dimensional Freight Study; Oregon Highway Plan, Oregon Freight Plan, ODOT Freight Highway Bottlenecks List Project, Oregon Freight Intermodal Connector System Study, Statewide Transportation Strategy, and ODOT Region 1 Active Transportation Needs Inventory, updated to reflect recent and planned improvements.

PMT shall review and comment on draft Memo # 2 prior to distribution to TAC and SAC. City shall revise draft Memo # 2 based on PMT, TAC, and SAC comments.

- 2.3 TAC Meeting #1** - City shall arrange and facilitate and present at TAC Meeting #1. The purpose of TAC Meeting #1 is to obtain feedback on draft Memo #2. City shall prepare presentation materials and a meeting summary. Three members of the Consultant team shall attend TAC Meeting #1. TAC Meeting #1 is anticipated to be up to two hours in length and to be held in the Sixth and Main building in Portland.
- 2.4 SAC Meeting #1** - City shall arrange and facilitate at SAC Meeting #1. The purpose of SAC Meeting #1 is to obtain feedback on draft Memo #2. City shall prepare presentation materials, facilitate the meeting, and produce a meeting summary. Three members of the

Consultant team shall attend SAC Meeting #1. SAC Meeting #1 is anticipated to be up to two hours in length and to be held in the Sixth and Main building in Portland.

City Deliverables

- 2a Memo #2: Existing Conditions and Plan and Policy Review (task 2.2)
- 2b TAC Meeting # 1 (task 2.3)
- 2c SAC Meeting # 1 (task 2.4)

Consultant Deliverables

- 2A Data Request Memo (Task 2.1)
- 2B Comment on Memo #2 (Task 2.2)
- 2C TAC Meeting #1 (Task 2.3)
- 2D SAC Meeting #1 (Task 2.4)

Task 3: Needs Analysis

Objectives

- Analyze gaps and deficiencies in the pedestrian, bicycle, transit, freight, and traffic networks and develop a needs inventory
- Develop a list of feasible projects to address the needs along and across the corridor

Subtasks

- 3.1 Memo #3: Safety Analysis** - Consultant shall prepare a draft and final Memo #3 containing a safety analysis of crash data and risk factors in the Project Area. The analysis must summarize the crashes (i.e., how many, what mode (pedestrian, bicycle, passenger vehicle, heavy vehicle), who, where, what type and severity) and identify common countermeasures to address these crashes. The analysis must consider pedestrian, bicycle, motor vehicle and freight crashes. The analysis must be conducted using the most recent complete five years of crash data.

The safety analysis will also include a qualitative bicycle/pedestrian safety risk analysis to identify and locate crash indicators other than speed and roadway width, which are the dominant features of the Vision Zero High Crash network. Crash indicators may include crash history that is not highlighted in the City's Vision Zero network, roadway characteristics known to contribute to crashes involving people walking and biking, and operational and planning characteristics that could create or increase crash exposure for people walking and bicycling. The intent is to demonstrate, at a qualitative level, whether there is value in avoiding or mitigating these locations for bike and pedestrian travel.

The outcomes of this analysis will be integrated with the crash analysis to summarize safety conditions on the corridor. The findings will be documented in Memo #3 Safety Analysis which will document opportunities, constraints and potential safety countermeasures.

PMT shall review and comment prior to distribution; Consultant shall make corrections. Consultant shall revise draft Memo #3 based on coordinated PMT, TAC, and SAC comments and as directed by PMT.

- 3.2 Memo #4: Mobility and Access Needs Analysis** - Consultant shall prepare a draft and final Memo #4 containing an analysis of mobility and access needs (gaps and deficiencies) for all modes based on City existing conditions data and policy guidance summarized in Memo # 2, and a list of previously identified and potential new projects to address the identified needs.

In Memo #4 Consultant shall document:

- Motor Vehicle Mobility and Traffic Operations
 - existing and future vehicle capacity, congestion, and reliability needs, based on data and analysis provided by City and Agency
 - Identification and evaluation of intelligent transportation system and transportation demand management strategies to better balance transportation demand on the two major roadways along the corridor
 - Identification of previously identified major capital projects that require design concepts and further feasibility and alternatives analysis to assess benefits and costs and evaluate trade-offs (see Task 5)
 - Motor vehicle mobility and operational needs and previously identified and new projects based on the analysis in the above bullets
- Freight mobility and access
 - types of businesses and industries adjacent to and dependent on corridor routes for freight mobility; and goods and commodities moved on these routes.
 - height and weight restrictions; safety and security issues; rail crossings, bridges, overhead cables/lines, etc.
 - freight routes and critical connections in the corridor
 - routes for truck and rail egress/ingress access to businesses
 - workforce mobility to/from businesses along the corridor
 - use of freight related Information Technology and Information Technology Systems
 - freight needs and previously identified and new projects based on the analysis in the above bullets
- Pedestrian and Bicycle Facilities
 - Qualitative analysis of gaps and deficiencies in the pedestrian and bicycle networks based on City standards of adequacy per Memo # 2, including crossing needs per the City's Interim Crossing Spacing Guidelines and PedPDX (Portland Pedestrian Master Plan Update) crossing needs analysis and consideration of the location of bus stops

and other destinations/pedestrian generators along the corridor. The active transportation needs analysis must extend beyond the Project Area to include the needs identified in ODOT's Active Transportation Needs Inventory for the segment of N Lombard Avenue (US 30 Bypass) from N. Interstate west to Woolsey Avenue. This must include needs for additional roadway or pedestrian/bicycle-only connections across railroad lines.

- Existing conditions Bicycle Level of Traffic Stress analysis (consistent with ODOT's Analysis Procedure Manual v2.), based on readily-available data provided by City and Agency.
- Bicycle Suitability Analysis on Columbia - Area-wide assessment of needed bicycle connections based on the locations of housing, employment centers, schools, shopping, and recreation destinations.
- Consultant shall place special emphasis on the identification of potential bicycle and pedestrian facility co-location, gaps in connectivity, "Level of Stress", and potential opportunity sites that support a better integrated multi-modal network.
- Bicycle and pedestrian needs and previously identified and new projects based on the analysis in the above bullets
- Health and Equity –
Review available health and equity information from City and provide brief summary

PMT shall review and comment on draft Memo # 4 prior to distribution to TAC and SAC; City shall provide one set of coordinated TAC and SAC comments. Consultant shall revise draft Memo #4 as directed by PMT.

3.3 Memo #4.1: ODOT Traffic and Crossing Analysis - Consultant shall prepare a draft and final Memo #4.1 containing an analysis of the operational, safety, and network impacts of two specific proposed improvements on Lombard (US30By) in the segment between Greeley and Interstate. In Memo #4.1, Consultant shall document:

- Operational, safety, parking, and network impacts of extending the 4- to 3-lane conversion on Lombard east of the currently planned terminus at Greeley Ave. Based on a.m. and p.m. peak hour existing year Synchro analysis, Consultant shall recommend location and configuration of eastern transition from 3-lane cross section to existing 4- or 5-lane cross section. Recommendation should balance safety and operational needs of all modes, optimize lane usage at Lombard/Denver intersection, and provide connections to the surrounding bicycle network where bike lanes are ended on Lombard. On-street parking impacts of proposal (i.e., estimate of parking spaces to be removed; not a parking utilization study) shall be documented to inform public outreach efforts to impacted properties.
- Crossing engineering study for the Lombard/Delaware intersection, including NCHRP 562 analysis, documenting recommended crossing location and treatment at the intersection when the existing half signal is replaced. Analysis should consider appropriate crossing treatments for existing 4-lane configuration and 3-lane

reconfiguration based on results of Synchro analysis presented in Memo 4.1. Pedestrian counts, vehicle turning movement counts, and video of the Lombard/Delaware intersection will be provided by ODOT.

ODOT will review and comment on Memo 4.1 to ensure compliance with ODOT engineering procedure/standards and to ensure analysis results can be used to inform ODOT approvals for upcoming STIP projects.

C1 Additional ODOT Crossing Studies

(CONTINGENCY TASK –) This task identifies specific deliverables that the Agency at its discretion may elect to authorize Consultant to produce. Consultant shall only complete this Task and the identified deliverables if written (email acceptable) NTP is issued by the APM.

Based on the results of the crossing needs analysis for US30By presented in Memo 4.1, ODOT may identify the need to conduct engineering studies for additional crossing locations.

Consultant shall conduct crossing engineering study for up to three additional locations identified by ODOT and document findings/recommendations in Memo 4.2, Additional ODOT Crossing Studies. Crossing studies must include NCHRP 562 analysis and document existing conditions, recommended crossing location and treatment, and access/safety/operational impacts of proposed treatment. Where appropriate as determined by Agency, analysis must consider appropriate crossing treatments for existing lane configuration and proposed future reconfigurations.

Consultant shall collect pedestrian counts, vehicle turning movement counts, and video at study locations to inform engineering studies.

3.4 Memo #5 Project Evaluation Criteria – Consultant shall develop draft and final Memo #5 defining project evaluation criteria for application in Tasks 5 and 6. Evaluation criteria must be submitted to the PMT, TAC and SAC for review and comment. Consultant shall recommend project evaluation criteria based on PMT, SAC and TAC feedback. Potential evaluation criteria must relate to the findings of the existing conditions, safety, and mobility and access needs analyses, and may include:

- Closure of critical network gaps
- Improvement that addresses an immediate safety need
- Destinations served, including existing and future transit stops
- Improvement to system connectivity
- Provides/enhances a Safe Routes to School connection
- planning level costs
- Qualitative evaluation of impacts to freight reliability
- Qualitative assessment of change in safety conditions for all modes
- Qualitative assessment of impacts on intermodal connectivity and truck and rail access,
- Potential impacts on other transportation modes (e.g. transit, freight, bicycle, pedestrian, etc.)

3.5 Needs Evaluation Workshop - Consultant shall distribute Draft Memo #3, #4 and #5 to PMT one week in advance of a four-hour PMT and Consultant team workshop to review

findings. The purpose of the workshop is to confirm understanding of needs, discuss ideas for consideration in Task 5, discuss draft project evaluation criteria, and to review and comment on draft Memos #3, #4 and #5. Needs Evaluation Workshop is anticipated to be four-hours. Six to eight members of the Consultant team shall attend the workshop. Consultant shall integrate outcomes from the workshop into revised Memos #3, #4 and #5 for distribution to the TAC and SAC.

- 3.6 TAC Meeting #2** - City shall arrange and facilitate and Consultant shall present at TAC Meeting #2. The purpose of TAC Meeting #2 is to obtain feedback on draft Memos #3, #4 and #5. Consultant shall prepare presentation materials and a meeting summary. Three members of the Consultant team shall attend TAC Meeting#2 in person. TAC Meeting #2 is anticipated to be up to 2 hours in length and to be held at the Sixth and Main Building in Portland.
- 3.7 SAC Meeting #2** - City shall arrange and Consultant shall present and facilitate SAC Meeting #2. The purpose of SAC Meeting #2 is to obtain feedback on draft Memo #3 and #4. Consultant shall prepare presentation materials, facilitate the meeting, and produce a meeting summary. Five members of the Consultant team shall attend SAC Meeting#2 in person. SAC Meeting #2 is anticipated to be up to 2 hours in length and to be held at the Sixth and Main Building in Portland.

City Deliverables

- 3a Comments on Memo #3 (task 3.1)
- 3b Comments on Memo #4 (task 3.2)
- 3c Comments on Memo #5 (Task 3.4)
- 3e Needs Evaluation Workshop (task 3.5)
- 3f TAC Meeting #2 (Task 3.6)
- 3g SAC Meeting #2 (Task 3.7)

Consultant Deliverables

- 3A Draft Memo #3: Safety Analysis (Task 3.1)
 - 3B Final Memo #3: Safety Analysis (Task 3.1)
 - 3C Draft Memo #4: Mobility and Access Needs Analysis (task 3.2)
 - 3D Final Memo #4: Mobility and Access Needs Analysis (task 3.2)
 - 3E Draft and Final Memo #4.1: ODOT Traffic and Crossing Analysis (task 3.3)
 - 3F Draft and Final Memo #5 Project Evaluation Criteria (Task 3.4)
 - 3G Needs Evaluation Workshop (Task 3.5)
 - 3H TAC Meeting #2 (task 3.6)
 - 3I SAC Meeting #2 (task 3.7)
- Contingency Deliverable C1 Memo 4.2, Draft and Final Additional ODOT Crossing Studies

Task 4: Railroad Crossing Study

Objectives

- Evaluate safety needs at Union Pacific Railroad crossings at NE 11th Avenue near NE Lombard Street and at NE Cully Boulevard near NE Columbia Boulevard
- Develop and evaluate concept designs for at-grade and grade-separated solutions
- Recommend near-term and long-term railroad crossing projects

Subtasks

- 4.1 Memo #6.1: Railroad Crossings Existing Conditions** - Consultant shall prepare draft and revised Memo #6.1 summarizing the existing conditions for the roadway and railroad portions of the corridor, including color photographs.

Consultant shall perform an evaluation of the existing conditions of the 11th Avenue and Cully Boulevard at-grade crossings within the corridor from both the roadway and railroad perspectives.

- Roadway evaluation must be based on information provided by PBOT and one site visit by members of the Consultant team. Consultant shall review the roadway conditions for automobile, pedestrian and bicycle access and identify the projected traffic volumes in 20 years. For each crossing, Consultant's traffic engineer shall conduct a visual evaluation to assess queue storage, roadway lane configuration, traffic control devices in proximity to the crossing (such as a nearby traffic signal on NE Lombard Street or NE Columbia Boulevard, qualitative sight distance assessment, and visual volume assessment). Local connectivity issues will be identified which include maintaining safe routes to school and transit as well as emergency access routes.
- Railroad evaluation must be based on information collected from Union Pacific, ODOT Rail, Federal Railroad Administration, American Railway Engineering and Maintenance of Way Association and a single site visit as described above in roadway evaluation. Consultant shall contact Union Pacific to determine current operations and planned track upgrades on the Union Pacific Kenton Line. Consultant shall request a corridor-wide inventory from ODOT Rail Safety Division that identifies the existing equipment and crash history for each grade crossing.

Memo 6.1 must include a table ranking the existing conditions of the crossings accompanied by budgetary cost estimate to bring each crossing up to American Association of State Highway and Transportation Officials roadway and American Railway Engineering and Maintenance of Way Association railroad standards for an actively protected grade crossing.

To inform this task, Consultant shall use the following data provided by City, Union Pacific, or ODOT:

- Average Number of Cars per Train

- Average Length of Cars (feet)
- Number of Trains per Day
- Number of Locomotives per Train
- Time periods in which Train Trips are made (e.g. 10% between 12AM-6AM; 50% 6AM-12PM)
- Growth Rate in Freight Train Traffic, (%)
- Average Speed of Trains (mph)
- Type of Grade Crossing
- Average Daily Trips at Grade Crossing
- Time periods in which Average Daily Trips are made (%) (e.g. 10% between 12AM-6AM; 50% 6AM-12PM etc.)
- Percent of Average Daily Trips that are Automobiles, (%)
- Percent of Average Daily Trips that are Trucks, (%)
- Percent of Average Daily Trips that are Buses, (%)
- Pedestrian and Bicycle Counts
- Free-Flow Speed of Highway Vehicles, (mph)
- Delay per Train per Day, (hours)

Consultant shall revise draft Memo #6.1 after Coordination Meeting #1 (task 4.3) based on City and ODOT feedback.

- 4.2 Memo #6.2: At-grade Improvements Concept Designs** - Consultant shall develop up to two concept designs for at-grade improvements at each railroad crossing (NE 11th Avenue and NE Cully Boulevard). These improvements shall include roadway, track, bicycle and pedestrian, track signal, retaining walls, stormwater facilities, utilities, environmental impacts, regulatory compliance, constructability, and cost estimates. Consultant shall prepare draft and revised Memo #6.2, a technical memorandum presenting these concept designs and assumptions, as well as a recommendation for a preferred concept design for each location.

Consultant shall revise draft Memo #6.2 after Coordinated Meeting #1 based on City and ODOT feedback.

- 4.3 Coordination Meeting #1** - Consultant shall arrange and facilitate meeting with City and ODOT to discuss draft Memos #6.1 Railroad Crossings Existing Conditions (Task 4.1) and #6.2 At-grade Improvements Concept Designs (Task 4.2). Two members of the Consultant team shall attend Coordination Meeting#1 in person. Coordination Meeting #1 is anticipated to be up to 2 hours in length and to be held at the Sixth and Main Building in Portland.

- 4.4 Memo #6.3: Grade Separation Warrant Analysis** - Consultant shall prepare draft and revised Memo #6.3 summarizing the results of a grade separation warrant analysis for each railroad crossing (NE 11th Avenue and NE Cully Boulevard) using data collected in the existing conditions sub-task 4.1. Consultant shall apply the rough screening process

based on train and roadway vehicular volumes from the *Texas Transportation Institute Grade Separations – When Do We Separate* which is referenced in the latest US Department of Transportation – Federal Highway Administration Railroad-Highway Grade Crossing Handbook:

- Traffic and Safety Analysis to include:
 - Current and future traffic volumes (from City)
 - Current and future train frequency and length
 - Identify train queues and roadway blockage frequency
 - Calculate vehicle delays from roadway blockage
 - Identify vehicle/train crashes and calculate future exposure

Consultant shall revise draft Memo #6.3 after Coordination Meeting #2 (task 4.6) based on City and ODOT feedback.

4.5 C2- (CONTINGENCY TASK -) *This task identifies specific deliverables that the Agency at its discretion may elect to authorize Consultant to produce. Consultant shall only complete this Task and the identified deliverables if written (email acceptable) NTP is issued by the APM.*

Memo #6.4: Railroad Grade Separations Concept Designs – If grade separation is found to be warranted (per Task 4.4), Consultant shall use the Multnomah County or City of Portland LIDAR information and Assessor Parcel Maps to develop a topographical map and approximate right-of-way lines to use in the development of grade separation design concepts at NE 11th Avenue and NE Cully Boulevard. Consultant shall prepare one base map for each location.

Consultant shall develop up to two concept designs for grade-separated improvements at each railroad crossing (NE 11th Avenue and NE Cully Boulevard), if grade separation is found to be warranted (see Task 4.4). These improvements must include roadway, track, bicycle and pedestrian, track signal, retaining walls, stormwater facilities, utilities, environmental impacts, regulatory compliance, constructability, and cost estimates. The deliverable for each concept shall be a roll plot (horizontal and vertical alignment including InRoads modeling) for each of the concepts including roadway, railroad, and bridge geometrics so that appropriate cost estimates can be developed.

Consultant shall prepare draft Memo #C1 (6.4) Grade Separations Concept Design, presenting concept designs and assumptions, as well as a recommendation for a preferred concept design for each location.

Consultant shall revise draft Memo #C1 (6.4) after Coordination Meeting #2 based on City and ODOT feedback.

4.6 Coordination Meeting #2 - Consultant shall arrange and facilitate meeting with City and ODOT to discuss draft Memos #6.3 and # C1 (6.4) (if prepared). Two members of the Consultant team shall attend Coordination Meeting #2 in person. Coordination Meeting #2 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

4.7 Memo #6: Railroad Crossings Study - Consultant shall prepare draft and final Memo #6 summarizing the results of Memos 6.1 to 6.4 and recommending near-term and long-term projects to address identified needs at the two railroad crossings. Memos 6.1 to 6.3 (or 6.4 if Contingency Task C1 is conducted) must be included as technical appendices.

PMT shall review and comment prior to distribution; Consultant shall make corrections. Consultant shall revise draft Memo #6 based on coordinated PMT, TAC, and SAC comments and as directed by PMT.

4.8 TAC Meeting #3 - City shall arrange and facilitate and Consultant shall present at TAC Meeting #3. The purpose of TAC Meeting #3 is to obtain feedback on draft Memo #6. Consultant shall prepare presentation materials and a meeting summary. Three members of the Consultant team shall attend TAC Meeting #3 in person. TAC Meeting #3 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

4.9 SAC Meeting #3 - City shall arrange and Consultant shall present and facilitate at SAC Meeting #3. The purpose of SAC Meeting #3 is to obtain feedback on draft Memo #6. Consultant shall prepare presentation materials, facilitate the meeting, and produce a meeting summary. Four members of the Consultant team shall attend SAC Meeting #3 in person. SAC Meeting #3 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

City Deliverables

- 4a Comment on Memo #6 and accompanying Memos 6.1 through 6.4 (Task 4.1, 4.2, 4.4, 4.5, and 4.7)
- 4b Coordination Meeting #1 (Task 4.3)
- 4c Coordination Meeting #2 (Task 4.6)
- 4d TAC Meeting #3 (Task 4.8)
- 4e SAC Meeting #3 (Task 4.9)

Consultant Deliverables

- 4A Draft and Final Memo #6.1: Railroad Crossings Existing Conditions (Task 4.1)
- 4B Draft and Final Memo #6.2: At-grade Improvements Concept Designs (Task 4.2)
- 4C Coordination Meeting #1 (Task 4.3)
- 4D Draft and Final Memo #6.3: Grade Separation Warrant Analysis (Task 4.4)
- 4E Coordination Meeting #2 (Task 4.6)
- 4F Draft and Final Memo #6: Railroad Crossings Study (Task 4.7)

4G TAC Meeting #3 (Task 4.8)

4H SAC Meeting #3 (Task 4.9)

CONTINGENCY DELIVERABLE C2: Memo #6.4: Railroad Grade Separation Concept Designs (Task 4.5)

Task 5: Project Development and Refinement

Objectives

- Develop and evaluate alternative mobility corridor design concepts for Columbia Boulevard and US 30 Bypass, and recommend preferred design concepts.
- Develop and evaluate alternative design concepts for selected major capital projects (as identified in Task 3.2) to assess feasibility and costs/benefits, and recommend preferred design concepts.

Subtasks

5.1 Memo #7: Alternatives Development and Evaluation - Consultant shall prepare draft and final Memo #7 with alternative mobility corridor design concepts (allocation of space among modes within roadway or parallel routes) for Columbia Boulevard and US 30 Bypass. The concepts must be developed based on needs identified in Memo # 3, and projects and programs identified in past plans and studies compiled in Memo # 2. Concepts must be developed for:

- Five projects identified from past City of Portland or Metro work. Concepts must be developed to a planning level suitable to show footprint, feasibility, and to develop planning level cost estimates.
- Columbia Boulevard – For each of two segments Consultant shall prepare up to two segment plan views plus up to three typical cross-sections per segment.
- US 30 Bypass/Lombard Street – For each of two segments Consultant shall prepare up to two segment plan views plus up to 3 typical cross-sections per segment.
- North/South Connections – For each of two different north/south connections Consultant shall prepare two plan view plus one example cross-section per segment.
- Active transportation solutions for the segment of N. Lombard between N Interstate and N Woolsey Avenues – Consultant shall prepare one plan view of the segment plus three example cross-sections.

Memo #7 must document the proposed concepts and the alternatives analysis applying the project evaluation criteria (Memo # 5).

PMT shall review and comment prior to distribution to SAC and TAC; Consultant shall make corrections. Consultant shall receive one set of coordinated TAC, SAC, and Steering Committee comments and revise as directed by PMT in draft Memo #7.

5.2 Memo #8: Recommended Concepts, Cross-sections and Project List- Consultant shall prepare draft Memo #8, Recommended Cross-sections and Project List, documenting the preferred refined concepts and projects. Consultant shall break out the project concepts developed in Memo #7 to near, mid and long-term individual project recommendations. Consultant shall develop a full Project List to address identified needs, prioritized based on the criteria developed in Memo #5, to move forward into the Investment and Implementation Strategy (Task 6). Memo #8 must be a refinement of Memo #7 plus the Project List.

PMT shall review and comment prior to distribution; Consultant shall make corrections. Consultant shall revise draft Memo #7 based on coordinated TAC, SAC, and Steering Committee comments as directed by PMT.

5.3 TAC Meeting #4 - City shall arrange and facilitate and Consultant shall present at TAC Meeting #4. The purpose of TAC Meeting #4 is to obtain feedback on draft Memo #7 and Memo #8. Consultant shall prepare presentation materials and meeting summary. Four members of the Consultant team shall attend TAC Meeting #4. TAC Meeting #4 is anticipated be up to two hours in length and to be held at the Sixth and Main Building in Portland.

5.4 SAC Meeting #4 - City shall arrange and Consultant shall present and facilitate at SAC Meeting #4. The purpose of SAC Meeting #4 is to obtain feedback on draft Memos #7 and #8. Consultant shall prepare presentation materials, facilitate the meeting, and produce a meeting summary. Four members of the Consultant team shall attend SAC Meeting #4. SAC Meeting #4 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

5.5 Steering Committee Meeting #1 - City shall arrange a Steering Committee meeting with PBOT and ODOT Region 1 management to review project deliverables to date and get feedback. City shall prepare a summary of feedback and transmit to Consultant. Consultant shall not attend Steering Committee Meeting #1.

C3: (CONTINGENCY TASK –) *This task identifies specific deliverables that the Agency at its discretion may elect to authorize Consultant to produce. Consultant shall only complete this Task and the identified deliverables if written (email acceptable) NTP is issued by the APM.*

Operations Analysis Memo - As an outcome of Task 5.1 ODOT may identify the need to develop future conditions, traffic volumes and conduct an a.m. and p.m. peak hour traffic operations analysis on five intersection concepts on US30By using SYNCHRO software. Consultant shall document results in draft and final Operations Analysis Memo.

C4: (CONTINGENCY TASK –) *This task identifies specific deliverables that the Agency at its discretion may elect to authorize Consultant to produce. Consultant shall only complete this Task and the identified deliverables if written (email acceptable) NTP is issued by the APM.*

Additional Plan View Layouts– As an outcome of Tasks 5.1 and 5.2, ODOT may identify the need to develop one optional plan view at up to 3 locations on US30By to inform scoping of future paving or other projects related to active transportation. Plan view concepts must identify right-of-way, on-street parking, and access impacts; areas where a constrained cross section design is needed; how the concept will connect with north/south routes; and how the concept will be applied at the intersection. Consultant shall develop draft and final plan view concept layouts for preferred cross sections identified by ODOT.

City Deliverables

- 5a Comments on Memo #7 (task 5.1)
- 5b Comments on Memo #8 (task 5.2)
- 5d TAC Meeting #4 (task 5.3)
- 5e SAC Meeting #4 (task 5.4)
- 5f Steering Committee Meeting #1 (task 5.5)

Consultant Deliverables

- 5A Draft and Final Memo #7: Alternatives Development and Evaluation (task 5.1)
 - 5B Draft Memo #8: Recommended Concepts, Cross-sections and Project List (task 5.2)
 - 5C TAC Meeting #4 (task 5.3)
 - 5D SAC Meeting #4 (task 5.4)
- CONTINGENCY DELIVERABLE C3: Operations Analysis Memo
CONTINGENCY DELIVERABLE C5: Additional Plan View Layouts

Task 6: Investment and Implementation Strategy

Objectives

- Develop and apply prioritization criteria to identified projects
- Create a tiered list of priority projects with implementation strategies and timeframes

Subtasks

6.1 Memo #9: Investment and Implementation Strategy - Consultant shall develop draft and final Memo #9, recommending an investment strategy to address Project Objectives and meet identified needs. Prior to conducting analysis, Consultant shall develop draft Prioritization Criteria for approval by PMT. Consultant shall apply the Prioritization Criteria to the list of projects in Memo #8 to develop recommended priority tiers and timeframes for implementation. Memo #9 must include the Prioritization Criteria, the results of the project prioritization, discussions of potential City, regional, state, and federal funding sources and assessments of financially constrained funding scenarios, potential agency and City bureau partnerships, leverage opportunities, needs for further study, and action items. Consultant shall conduct 5 one-hour in-person interviews with partner agencies to develop the investment and leveraging information. The City shall provide input to Memo #8 with recommended updates to the 2016 Transportation System Plan project list and street classifications, if needed, based on the results of the prioritized project list.

PMT shall review and comment prior to distribution; Consultant shall make corrections. Consultant shall provide one revised draft Memo #9 based on coordinated TAC, SAC, and Stormwater Charrette #2 comments and as directed by PMT.

- 6.2 TAC Meeting #5** - City shall arrange and facilitate and Consultant shall present at TAC Meeting #5. The purpose of TAC Meeting #5 is to obtain feedback on draft Memo #9. Consultant shall prepare presentation materials and a meeting summary. Two members of the Consultant team shall attend TAC meeting #5. TAC Meeting #5 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.
- 6.3 SAC Meeting #5** - City shall arrange and Consultant shall present and facilitate at SAC Meeting #5. The purpose of SAC Meeting #5 is to obtain feedback on draft Memo #9. Consultant shall prepare presentation materials, facilitate the meeting, and produce a meeting summary. Three members of the Consultant team shall attend SAC Meeting #5. The meeting is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

City Deliverables

- 6a Comments on Memo #9 (task 6.1)
- 6b TAC Meeting #5 (task 6.2)
- 6c SAC Meeting #5 (task 6.3)

Consultant Deliverables

- 6A Draft Memo #9: Investment and Implementation Strategy (task 6.1)
- 6B Final Memo #9: Investment and Implementation Strategy (task 6.1)
- 6C TAC Meeting #5 (task 6.2)
- 6D SAC Meeting #5 (task 6.3)

Task 7: Recommended Columbia/Lombard Mobility Corridor Plan

Objectives

- Develop a recommended corridor plan that is adoption-ready for Portland City Council and that is acceptable to ODOT

Subtasks

- 7.1 Recommended Columbia/Lombard Mobility Corridor Plan** – Consultant shall prepare draft and final Recommended Columbia/Lombard Mobility Corridor Plan by preparing an executive summary and consolidating the previous Project Memos into the final Plan. The Corridor plan must focus on the recommendations for the corridor, including the prioritized project list and preferred concepts. Summaries of public outreach findings, planning process, and overall needs inventory must be included in the appendices. Consultant shall submit the final Columbia/Lombard Corridor Plan in an editable format for the City to assemble into a plan suitable for City adoption.

Consultant shall provide draft Recommended Columbia/Lombard Mobility Plan no later than two weeks before TAC Meeting #6 and SAC Meeting #6. PMT shall review and comment prior to distribution; Consultant shall make corrections and provide to City for distribution to TAC and SAC.

Consultant shall prepare one revised Recommended Columbia/Lombard Mobility Corridor Plan within one week of receipt of coordinated comments, PMT, TAC, SAC, and Steering Committee comments, and as directed by PMT.

Consultant shall submit the final Recommended Columbia/Lombard Mobility Corridor Plan to City and APM as follows:

- Two bound paper copies to both the City and APM
- Two electronic copies in native and .pdf format on CD, including attachments and appendices to both the City and APM.

Outside of the Project scope, City will make any additional edits to the Recommended Columbia/Lombard Mobility Corridor Plan based on subsequent comments from the public hearing process and from the Planning and Sustainability Commission and City Council.

7.2 TAC Meeting #6 - City shall arrange and facilitate and Consultant shall present at TAC Meeting #6. The purpose of TAC Meeting #6 is to obtain feedback on draft Recommended Columbia/Lombard Mobility Corridor Plan. Consultant shall prepare presentation materials and a meeting summary. Three members of Consultant team shall attend TAC Meeting #6. TAC Meeting #6 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

7.3 SAC Meeting #6 - City shall arrange and Consultant shall present and facilitate at SAC Meeting #6. The purpose of SAC Meeting #6 is to obtain feedback on draft Recommended Columbia/Lombard Mobility Corridor Plan. Consultant shall prepare presentation materials, facilitate the meeting, and produce a meeting summary. Four members of Consultant team shall attend SAC Meeting #6. SAC Meeting #6 is anticipated to be up to two hours in length and to be held at the Sixth and Main Building in Portland.

7.4 Steering Committee Meeting #2 – City shall arrange and facilitate a Steering Committee meeting with PBOT and ODOT Region 1 management to obtain feedback on the draft Recommended Columbia/Lombard Mobility Corridor Plan. City shall summarize feedback and submit to Consultant. Consultant shall not attend Steering Committee Meeting #2.

7.5 Title VI Report – City shall prepare and submit to APM a report to document outreach efforts to low-income, minority, and other local disadvantaged populations, in accordance with the requirements of Title VI.

City Deliverables

- 7a Comment on draft Recommended Columbia/Lombard Mobility Corridor Plan (task 7.1)
- 7b TAC Meeting #6 (task 7.2)
- 7c SAC Meeting #6 (task 7.3)
- 7d Steering Committee Meeting #2 (task 7.4)
- 7e Title VI Report (task 7.5)

Consultant Deliverables

- 7A Draft Recommended Columbia/Lombard Mobility Corridor Plan (task 7.1)
- 7B Final Recommended Columbia/Lombard Mobility Corridor Plan (task 7.1)
- 7C TAC Meeting #6 (task 7.2)
- 7D SAC Meeting #6 (task 7.3)

Delivery Schedule

| Task | Dates |
|------|----------------------|
| 1 | July 2018 – Dec 2019 |
| 2 | Jul – Sep 2018 |
| 3 | Oct 2018 – Feb 2019 |
| 4 | March – Jun 2019 |
| 5 | March – Jun 2019 |
| 6 | Jul – Oct 2019 |
| 7 | Nov – Dec 2019 |

Consultant Amount per Deliverable Table

| Deliverable | Description | Amount per Deliverable | Funding Source |
|------------------------------|---|------------------------|----------------|
| Non-Contingency Tasks | | | |
| Task 1 | Project Management, Agency and Public Involvement | \$ 85,290 | |
| 1A | PMT Check-ins (up to 24 @ \$1,500 per call) (Task 1.1) | \$36,000 | TGM/City |
| 1B | Input on Project Timeline Updates (up to 9 @ \$360 per update) (Task 1.2) | \$3,240 | TGM/City |
| 1C | Draft Memo #1: Public and Stakeholder Outreach Plan (task 1.3) | \$4,400 | TGM/City |
| 1D | Final Memo #1: Public and Stakeholder Outreach Plan (task 1.3) | \$1,200 | TGM/City |

| Deliverable | Description | Amount per Deliverable | Funding Source |
|--------------------|--|-------------------------------|-----------------------|
| 1E | 3 Draft and Final, Fact Sheets (task 1.4) | \$7,550 | TGM/City |
| 1F | Public Involvement Activities (4 to 5 @ \$6,580) (task 1.5) | \$32,900 | TGM/City |
| Task 2 | Existing Conditions Inventory | \$ 10,650 | |
| 2A | Data Request Memo (Task 2.1) | \$6,000 | TGM/City |
| 2B | Comments on Memo #2 (Task 2.2) | \$2,450 | TGM/City |
| 2C | TAC Meeting #1 (Task 2.3) | \$1,100 | TGM/City |
| 2D | SAC Meeting #1 (Task 2.4) | \$1,100 | TGM/City |
| Task 3 | Needs Analysis | \$ 113,200 | |
| 3A | Draft Memo #3: Safety Analysis (Task 3.1) | \$18,550 | TGM/City |
| 3B | Final Memo #3: Safety Analysis (Task 3.1) | \$3,250 | TGM/City |
| 3C | Draft Memo #4: Mobility and Access Needs Analysis (Task 3.2) | \$35,050 | TGM/City |
| 3D | Final Memo #4: Mobility and Access Needs Analysis (Task 3.2) | \$8,450 | TGM/City |
| 3E | Draft and Final Memo #4.1: ODOT Traffic and Crossing Analysis (Task 3.3) | \$13,350 | ATNI |
| 3F | Draft and Final Memo #5 Project Evaluation Criteria (Task 3.4) | \$12,350 | TGM/City |
| 3G | Needs Evaluation Workshop (Task 3.5) | \$14,500 | TGM/City |
| 3H | TAC Meeting #2 (task 3.6) | \$3,550 | TGM/City |
| 3I | SAC Meeting #2 (task 3.7) | \$4,150 | TGM/City |
| Task 4 | Railroad Crossing Study | \$ 54,150 | |
| 4A | Draft and Final Memo #6.1: Railroad Crossings Existing Conditions (Task 4.1) | \$15,100 | Rail |
| 4B | Draft and Final Memo #6.2: At-grade Improvements Concept Designs (Task 4.2) | \$17,350 | Rail |
| 4C | Coordination Meeting #1 (Task 4.3) | \$1,500 | Rail |
| 4D | Draft and Final Memo #6.3: Grade Separation Warrant Analysis (Task 4.4) | \$6,100 | Rail |
| 4E | Coordination Meeting #2 (Task 4.6) | \$1,500 | Rail |
| 4F | Draft and Final Memo #6: Railroad Crossings Study (Task 4.7) | \$5,850 | Rail |
| 4G | TAC Meeting #3 (Task 4.8) | \$2,750 | Rail |
| 4H | SAC Meeting #3 (Task 4.9) | \$4,000 | Rail |

| Deliverable | Description | Amount per Deliverable | Funding Source |
|--------------------------|---|-------------------------------|-----------------------|
| Task 5 | Project Development and Refinement | \$72,600 | |
| 5A | Draft and Final Memo #7: Alternatives Development and Evaluation (task 5.1) | \$30,800 | TGM/City |
| 5B | Draft Memo #8: Recommended Concepts, Cross-Sections and Project List (task 5.5) | \$32,900 | TGM/City |
| 5C | TAC Meeting #4 (task 5.3) | \$4,850 | TGM/City |
| 5D | SAC Meeting #4 (task 5.4) | \$4,050 | TGM/City |
| Task 6 | Investment and Implementation Strategy | \$23,400 | |
| 6A | Draft Memo #9: Investment and Implementation Strategy (task 6.1) | \$15,100 | TGM/City |
| 6B | Final Memo #9: Investment and Implementation Strategy (task 6.1) | \$3,500 | TGM/City |
| 6C | TAC Meeting #5 (task 6.2) | \$1,600 | TGM/City |
| 6D | SAC Meeting #5 (task 6.3) | \$3,200 | TGM/City |
| Task 7 | Recommended Columbia/Lombard Mobility Corridor Plan | \$32,950 | |
| 7A | Draft Recommended Columbia/Lombard Mobility Corridor Plan (task 7.1) | \$20,800 | TGM/City |
| 7B | Final Recommended Columbia/Lombard Mobility Corridor Plan (task 7.1) | \$6,600 | TGM/City |
| 7C | TAC Meeting #6 (task 7.2) | \$2,350 | TGM/City |
| 7D | SAC Meeting #6 (task 7.3) | \$3,200 | TGM/City |
| | Total | \$392,240 | |
| Contingency Tasks | | | |
| C1 | Draft and Final Additional ODOT Crossing Studies (task 3) | \$8,240 | ATNI |
| C2 | Memo #5.4: Railroad Grade Separation Concept Designs (task 4.5) | \$24,200 | Rail + City |
| C3 | Operations Analysis Memo (task 5) | \$11,050 | TGM |
| C4 | Additional Plan Layouts (task 5) | \$9,130 | ATNI |
| | Total | \$52,620 | |
| Grand Total | | \$ 444,860 | |

Summary Consultant Budget by ODOT Source Funds Table

| | Non-Contingency | Contingency | Total |
|--------------|-----------------|-------------|-------------------|
| TGM grant | \$ 233,090 | \$ 11,050 | \$ 244,140 |
| City (cash) | \$ 91,650 | \$ 18,350 | \$ 110,000 |
| Rail | \$ 54,150 | \$ 5,850 | \$ 60,000 |
| ATNI | \$ 13,350 | \$ 17,370 | \$ 30,720 |
| Total | \$ 392,240 | \$ 52,600 | \$ 444,860 |

TGM Grant Agreement No. 32914
TGM File Code 1B-17
EA # TG17LA03
#CON03999/010
#19PF120/021