shrewsberry
YOUR VISION. OUR FOCUS.

EXHIBIT A – SCOPE OF WORK
City of Redmond – Overlake Area Bicycle/Pedestrian Improvements

Project Description

The project will construct a new 12-ft wide shared used path along the eastside of 148th Ave NE starting at the Bell Overlake Apartments (3040 148th Ave NE) to the intersection of NE 40 St. The project also includes high comfort buffered bike lanes on NE 36th St between 148th Ave NE and the SR-520 Trail.

Scope of Work

Task 1 – Project Management, Administration & Meetings

Once we receive notice to proceed, we will schedule kickoff meeting for the entire design team with the City. Shrewsberry will host monthly design team meetings during the design phase to ensure coordination with subconsultants and to gauge progress. Shrewsberry will host monthly progress meetings with the City's Manager to provide status updates, and to discuss issues requiring the City's input.

Shrewsberry will provide project management services to ensure the completion of the work within this agreement. The effort will include project budget setup, monthly budget reviews and invoicing, schedule updates, developing and maintaining a risk log, progress meetings (as described above), distribution of meeting minutes, perform QA/QC on all submittals, coordination with other projects and project closeout.

Assumptions

- Assume 1 design kickoff meeting with City and Project Team (1 hour)
- Assume up to 3 coordination meetings with Redmond's 148th Safety Corridor Design Team
- Assume up to 3 project coordination meetings with City of Bellevue
- Assume 20 Monthly meeting with Design team (1 hr. each)
- Assume 20 Monthly Meetings with City (1 hr. each) with meeting minutes.
- Assume 20 invoices with schedule updates.

Deliverables

- Invoices
- Schedule Updates
- Risk Log
- Meeting Minutes

Task 2 – Topographic Survey and Basemap

A topographic survey shall be prepared by a professional land surveyor (DEA). Base mapping shall include topographic features and elevations in the work vicinity to a level of detail necessary for a proper design, underground and overhead facilities in addition to the surface features and above ground items. The Basemap and any Digital Terrain Models (DTM) shall be produced in the current version of Civil 3D and AutoCAD.

Assumptions

- Provide a 2' contour mapping accuracy on ground surfaces, and 0.1' accuracy on all hard/pavement/concrete surface, design topographic survey. Items included are:

  - Location of all curb, gutter, sidewalk, storm drainage and sanitary sewer (including rim, grate and invert elevations), water (surface evidence), crosswalks, wheelchair ramps, pedestrian facilities, street and traffic lights, planter areas, and all trees and landscape areas.
  - Limits of survey will be the western most curb along the west side of 148th Ave NE, from the mid-point of the Bell Apartments located at the SE corner of 148th Ave NE and NE 31st Circle, north to a line approximately 5' north of the intersection of 148th Ave NE and NE 40th st.
- Provide a surface topographic survey of NE 36th St, (R/W to R/W) and 25' up each driveway and/or intersection, from 148th Ave NE east to SR 520 Bicycle Trail. Surface evidence of utilities, no elevations.
- No underground utility locations included for NE 36th St.
- Assume up to 5 Legal Descriptions and Easement Exhibits

Deliverables

- AutoCAD drawing and .pdf file copy of design topographic surveys of 148th Ave and NE 36th St.
- Right of Way Plan for 148th Ave NE. Right of Way Plan does not include NE 36th St Corridor.
- Legal Descriptions and Exhibits for Easements

Task 3 – Engineering Reports

Draft Engineering reports shall be submitted to the City for review and comment before the final reports are produced. All work submitted to the City shall be stamped by a professional engineer. All reports shall be submitted in PDF format. The following reports are included in the scope:

Task 3a - NE 36 St Traffic Analysis Memo

A Traffic analysis report will be prepared to compare potential impacts of removing the eastbound right lane on NE 36 St between 148th Ave NE and 150th Ave NE. The report will compare before and after level of service. Level of service will be modeled using Synchro.

Assumptions

- City to provide traffic count data.
- LOS analysis to be completed in Synchro.
- Will model the based on existing and a future condition based on a growth factor.

Deliverables

- Draft and Final NE 36 St Traffic Analysis Memo

Task 3b - Geotechnical Report and Investigation

The Geotechnical Engineer (HWA) will conduct field work and prepare a geotechnical report that supports Design and construction of the proposed trail improvements including retaining walls, and embankment fill Placement and infiltration potential.

Geotechnical Site and Exploration Plan Memo

- **Research Existing Geotechnical Data**: HWA will review readily available geotechnical information for the project corridor. This review will include online geotechnical databases, geologic maps, and HWA's internal library resources.

- **Perform Geotechnical Site Reconnaissance:** HWA will conduct a geotechnical site reconnaissance of the project area. This reconnaissance will be used to identify site geometry, constraints, and potential geotechnical challenges.
- **Plan and Coordinate Geotechnical Field Exploration Program:** HWA will plan and coordinate a geotechnical engineering investigation. This will include marking the locations of the proposed borings, along with evaluation of site access considerations.
- **Conduct Utility Locates:** Prior to conducting the field exploration program, HWA will arrange for utility locates using the Utility Notification Center (UNC). HWA will make an additional site visit to verify if the proposed locations of the borings are clear of utilities prior to mobilizing the drilling equipment. HWA will also retain a private utility locating subcontractor to assess if existing utilities not marked by UNC are present at the exploration locations.
- **Coordinate Rights of Entry**: HWA will assist the City in obtaining rights of entry as needed.
- **Prepare Subsurface Exploration Plan (SEP):** HWA will prepare a SEP for the proposed exploration program. The SEP will be submitted to the City and the design team for review and approval. The SEP will detail the type, location, and extent of proposed field explorations along with logistics necessary to perform the work, such as traffic control plans and staging areas. The SEP will also be used for permitting that may be necessary to access the exploration locations. HWA assumes the City or Shrewsberry will provide any required permits at no cost to HWA. HWA assumes up to one round of consolidated review comments on the SEP.
- **Conduct Geotechnical Explorations:** HWA anticipates completing five days of drilling with a truck- or track-mounted drill rig. HWA will complete up to 8 borings to depths between 15 and 35 feet. The geotechnical borings will be logged by an HWA representative and soil samples will be recovered at 2½ to 5-foot intervals. The borings will be backfilled per Department of Ecology requirements. The surface will be restored to match existing conditions. Groundwater monitoring wells will be installed in up to two of the borings to monitor fluctuations in groundwater throughout the design process. Data logging transducers will be installed in the monitoring wells to record water levels.
- **Perform Geophysical Survey:** HWA will perform a geophysical investigation of subsurface soils at up to one location along the project alignment. Refraction-Microtremor (ReMi) or Extended Spatial Autocorrelation Method (ESPAC). The purpose of the geophysical investigation is to collect shear wave velocity measurements of soils in the upper 100 feet of the site and to evaluate the most appropriate seismic site class for proposed retaining walls. Work will be conducted by an HWA representative experienced in these geophysical methods, who will select the appropriate location and test method to be used. Following completion of the geophysical investigation, HWA will process the data and include the results in the geotechnical engineering report.
- **Conduct Groundwater Monitoring:** Transducers will be installed in the groundwater monitoring wells during drilling. HWA will make up to three site visits to collect groundwater data from the transducers within the wells and plot seasonal variations in groundwater. Our scope assumes groundwater transducers will remain in the monitoring wells for up to one year. This scope of work does not include decommission of the monitoring wells. Monitoring wells are anticipated to be decommissioned by the contractor during construction in accordance with Department of Ecology requirements.
- **Prepare Summary Logs and Assign Laboratory Testing:** HWA will generate summary boring logs and conduct geotechnical laboratory testing on representative soil samples obtained from the borehole explorations to evaluate engineering and index properties of the site soils. Laboratory testing will include determination of natural moisture content, grain size distribution, and Atterberg Limits.

Geotechnical Design Services:

- **Evaluate Field and Laboratory Data:** Based on the borings and the laboratory test results on selected samples, HWA will generate estimates of the soil strength and other properties needed to evaluate the effects the subsurface conditions will have on the proposed improvements.
- **Generate AASHTO Seismic Design Parameters:** Based on the soils encountered along the project corridor and the results of the geophysical survey, HWA will select the Site Class for seismic design of retaining walls. Peak ground acceleration parameters will be selected in accordance with the AASHTO Specifications for Roads and Bridges and the Washington State Department of Transpiration Geotechnical Design Manual.
- **Evaluate Liquefaction Potential:** HWA will evaluate the susceptibility of the subsurface soils along the project corridor to liquefaction and assess the potential impacts to the proposed improvements.
- **Develop Retaining Wall Design Recommendations:** HWA will evaluate and provide input on concept level design of up to 2 retaining structure alternatives. HWA expects that the proposed retaining walls to consist of structural earth walls (SEW) or gravity block walls. Once the preferred retaining wall alternative is selected, HWA will provide final design geotechnical recommendations for retaining structures along the project alignment.
- **Provide Luminaire and Pedestrian Signal Pole Foundation Design Recommendations:** HWA will evaluate the subsurface soils conditions along the project corridor and provide design foundation recommendations for new pole foundations, as necessary. HWA assumes that all foundations will be designed using WSDOT Standard Plans, if feasible.
- **Infiltration Screening:** HWA will screen the soil and groundwater conditions along the project corridor for infiltration potential. This screening will include evaluating soil grain size analysis and groundwater depths. No pilot infiltration testing will be conducted as part of this scope of work. If the screening results indicate potential for onsite infiltration and site geometry supports feasible infiltration facilities, additional infiltration testing will be necessary under a separate task.
- **HWA QA/QC:** All design calculations and recommendations will be reviewed by a senior engineer prior to distribution to the design team or the City.

Assumptions:

- Boring locations will be accessible by a truck- or track-mounted drill rig.
- The City will allow borings conducted through the roadway to be patched with rapid-setting concrete and saw cutting of the pavement or hot mix asphalt patches will not be required.
- All required street use permits will be provided by the City at no cost to HWA.
- The geotechnical explorations proposed herein will not be used to assess site environmental conditions. However, visual or olfactory observations regarding potential contamination will be noted. Analysis, testing, storage, and handling of potentially contaminated soil and groundwater (either sampled or spoils from drilling) are beyond this scope of services. If contaminated soils and/or groundwater are encountered, the material will be properly contained on-site for disposal as mutually agreed upon without additional cost to HWA.
- Non-contaminated drilling spoils and related debris will be drummed on-site and transported off-site for proper disposal by the drilling subcontractor.
- HWA assumes no concrete pavement or slab at the drilling locations and assumes that coring will not be required prior to drilling the proposed borings.
- All field works including site reconnaissance, utility locates, and drilling will be accomplished during normal daylight workdays and hours, with at least a minimum 8 hours available per day.

- Boring locations will be located using handheld GPS and measurement from existing known features.
- Infiltration feasibility will be evaluated by grain size analysis. No infiltration testing will be conducted during this task. If infiltration is feasible, small-scale pilot infiltration testing will be conducted as an additional task.
- Traffic control will consist of single lane closures with flaggers, single lane closures of multilane roadways, or shoulder closures. No uniformed police officer will be required for traffic control implementation during the exploration program.
- Vacuum extraction of the upper portions of the borings is not included.
- Following submittal of the draft geotechnical report, all soil samples will be disposed. Long-term storage of soil samples by HWA is not included.

Deliverables

- Geotechnical Site and Exploration Plan Memo
- Draft and Final Geotechnical Report

Task 3c - Drainage Report & Hydraulic Modeling

A drainage report will be developed for the project in accordance with the Department of Ecology 2019 Stormwater Management Manual for Western Washington Volume III, Chapter 3 and City of Redmond Standards. A hydraulic model will be developed as needed to size any required detention facilities to address flow control on 148th Ave NE. The design team will use Low Impact Development BMP's where they are feasible. Since the project will not add any pollution generating surfaces, no water quality facilities are assumed.

Drainage Report and Hydraulic Modeling Assumptions:

- One Hydraulic will be developed if needed.
- Hydraulic modeling will be performed in MGS Flood or WWHM
- LID BMP's will be used where feasible.
- No water quality facility is assumed.
- No flow control is assumed for NE 36 St

Deliverables

- Draft and Final Drainage Report

Task 3d - Wall Selection Memo

A wall selection memo will be prepared identifying up to three wall options for the path alignment. The memo shall summarize the findings of the wall type selection and include narrative of the rough order of magnitude estimated probable cost, constraints such as ROW, impacts to existing structures or private properties, geotechnical and soil conditions, constructability, environmental impact and maintenance of traffic during construction.

Wall Selection Memo Assumptions:

- Up to 3 wall options will be considered.
- Memo length – up to 3 pages

Deliverables

- Draft and Final Wall Selection Memo

Task 4 – Environmental and Permitting

All permits required to construct this project will be identified. A Project Permit Matrix will be developed and regularly updated outlining all the required permits for the project, the regulatory agency, permit requirements, submittal and anticipated issuance dates, and status of permit.

Supporting permit materials will be provided such as discipline reports, investigations, and consultations, necessary to complete SEPA processing.

Draft reports shall be submitted for City for review and comment before the final reports are produced. The review period shall last three weeks. All work submitted to the City shall be stamped or signed by a qualified professional. All draft and final documents will be provided in a PDF format.

A Construction stormwater pollution prevention plan (CSWPPP) will be developed in accordance with City of Redmond Standards and will include BMP's to be used on the project to accompany the earthwork and temporary erosion control plan sheets.

Assumptions

- No critical areas are present within the project area.
- No land use permits are necessary.
- No state or federal permits are necessary.
- A construction stormwater general permit from Ecology is not necessary.
- No NEPA documentation is required.
- The project design will not create any new pollution generating impervious surfaces.
- All project components will be permitted together.
- City of Redmond permits will be issued at no cost to the consultant.
- The Consultant will be reimbursed for City of Bellevue Right of Way Permit and other Non-City of Redmond Permits if needed.

Deliverables

- Permit Matrix
- Environmental Screening Memo
- Tree Inventory Table
- Draft and Final Arborist Report
- Draft and Final SEPA Checklist
- Draft and Final CSWPPP
- Redmond Tree Removal Permit
- Redmond Construction Permits (Civil Review, Clear and Grade Permit, and/or Building Permit)
- Bellevue Right of Way Permit

Task 5 – Utility Coordination and SUE/Potholing

Existing Utilities will be marked along 148th Ave NE within the project limits by Applied Professional Services (APS) prior to the topographic survey. As-built information will be obtained from all utilities within the project limits, including Redmond owned storm, water and sanitary sewer systems.

We will investigate and coordinate utility adjustments and relocations. We will conduct field walk-throughs as needed with utility owners impacted by the project to confirm locations and conditions of all existing utilities, needs for relocation and adjustment. If utility relocation is required; the design and relocation will be the responsibility of each utility company.

A potholing plan will be prepared to verify the locations of potential conflict with the proposed design and existing utilities. The location of proposed traffic signal poles will also be potholed to verify there are no conflict with the proposed pole foundation. A potholing plan showing all pothole locations will be provided to the City for review prior to performing field work.

Assumptions

- Utility Locating on 148th Ave NE Only
- Assume 8 Potholes
- City to provide Utility information for its Water, Storm, Sewer and Signal Systems.

Deliverables

- Potholing Plan for Existing Utilities and Pole Foundation Locations
- Potholing Results
- Utilities As-Built Information

Task 6 –Public Involvement & Outreach Support

The design team will provide support to the City in public involvement activities such as open house meetings and project informational materials. The design team will work with the City to develop project materials to communicate project information, purpose, and schedule in approachable, graphic formats.

Assumptions

- Outreach Exhibits - Up to 6 conceptual images, plus supplemental example images. Creation of Mailer, to be coordinated with City.
- PowerPoint Presentation slides for Boards and Committees – Assume up to 3 presentation boards, utilizing graphics from the Outreach Exhibits.
- Assume Participate in three in-person presentations.

Deliverables

- Outreach Exhibits
- PowerPoint Presentation slides for Boards and Committees (up to three presentation boards)

Task 7 – Design

Below is a list of plan sheets anticipated for the bid. 40 Scale is assumed for most plan sheets except as noted below.

shrewsberry
YOUR VISION. OUR FOCUS.

Sheet Name	Approx Number of Sheets	Responsible Party
Cover Sheet / Index	1	Shrewsberry and Associates
General Notes / Legend	1	Shrewsberry and Associates
Survey Control	1	David Evans and Associates
Existing Conditions Plan	9	David Evans and Associates
Site Preparation & Erosion Control Plans	6	Shrewsberry and Associates
Typical Roadway Sections	6	Shrewsberry and Associates
Roadway Plans	9	Shrewsberry and Associates
Path Profiles	6	Shrewsberry and Associates
Roadway Details & Driveway Profiles	3	Shrewsberry and Associates
ADA Ramp Details	4	Shrewsberry and Associates
Drainage Notes and Details	2	Shrewsberry and Associates
Drainage Design Plans	6	Shrewsberry and Associates
Drainage Profile Plans	6	Shrewsberry and Associates
Wall Plans/Notes	2	Facet
Wall Profiles	2	Facet
Wall Details	1	Facet
Signing and Pavement Marking Plans	9	Shrewsberry and Associates
Signing and Pavement Marking Details	2	Shrewsberry and Associates
Signal Plans, Wire Diagrams, Pole Sheets	9	Shrewsberry and Associates
Landscaping Details	3	HBB
Landscaping Plans (20 Scale)	7	HBB
Irrigation Plans (20 Scale)	7	HBB
Irrigation Details	1	HBB
Traffic Control Plans	12	Shrewsberry and Associates
Right of Way Plans	6	David Evans and Associates
Total Sheets	**121**	

Design plans, Specifications, and Estimates (PS&E) will be prepared for 30%, 60%, 90% and Bid Ready design submittal. The submittals shall be delivered to the City in PDF format. All review comments will be provided via Bluebeam. The design team shall use Bluebeam to respond to all City comments provided during the review period. The review period shall last three weeks.

Street lighting along 148th Ave NE will be modeled using AGI. The model will be used to upgrade existing lighting fixtures and to supplement lighting for the share use path as needed.

Wind load calculations will be prepared for all new signal poles. The wind load calculations will be used to fabricate the signal poles and size the pole foundations. Additionally, conduit fill calculations will be completed to validate and determine conduit sizes for traffic signal systems.

Design Deviations and Maximum Extent Feasible (MEF) documentation will be prepared for all elements of the design that are not able to conform to current standards.

Assumptions

- The design will be completed in AutoCAD Civil 3D 2026.
- The 2027 WSDOT Specifications for Road, Bridge and Municipal Construction will be basis for the Project Specifications
- The City shall provide special language for Division 0 and 1 and Public Works Contract for inclusion in the project specifications.
- Project Specifications will be provided at 60%, 90% and Bid Ready.
- City to provide existing luminaire information to be used in AGI lighting model.
- 2 Design Deviations and 5 MEF's are assumed.
- Design PS&E submittals and Bid Ready Documents will be delivered in PDF format only.
- Retaining wall design shall be of single design type.
- Walls will be cantilever up to a maximum 8 foot retaining height.
- Maximum Assumed Wall length is 600 ft.
- Geotechnical information analysis shows ordinary soil conditions allowing for typical wall design.
- If underground detention is required, one system in one location is assumed.
- Estimates will be prepared with current market bid information available. The design team offers no warranties associated with the estimates of probable cost provided during the milestone submittals.
- It is assumed that there are no hazardous materials within the project limits.

Deliverables

- AGI Lighting Modeling Results
- Draft and Final Wind Load Calcs/Conduit fill calcs.
- Draft and Final Design Deviations & MEF's
- 30% Conceptual Plans
- 60% Plans, Specifications and Estimate
- 90% Plans, Specifications and Estimate
- Bid Plans, Specifications and Estimate

Task 8 – Easement Acquisition

Easement acquisition services will be provided including the following:

- Overall coordination and implementation of easement acquisition activities.
- Coordinate with City staff to ensure compliance with its property acquisition procedures.
- Prepare an Acquisition Plan including estimated cost of easements and an acquisition schedule.
- Order Title reports and prepare Encumbrance Reports for City concurrence.
- Order Appraisals and perform desk review in preparation of offers.

- Maintain a Property Matrix to track and report on acquisition activities.
- Prepare written Offer Letters, Conveyance Documents, Vouchers, and REETAs.
- Make as many "pre-offer" contacts as feasible with each property owner to provide information about the project and potential affects to their property.
- Present offers in person, or by certified mail (Return Receipt Requested) when meetings are not feasible.
- Negotiate in good faith with property owners to acquire the permanent and/or temporary property rights on behalf of the City.
- Make timely follow ups with property owners to address all concerns and move toward acceptance.
- Maintain a detailed record (diary) of communication with each property owner.
- Prepare written justification for any Administrative Settlements and obtain City approval prior to owner signature.
- Facilitate the execution of all conveyance documents by property owners and transmit closing packages to City for payment and recording.
- Transmit complete electronic acquisition files to the City upon project completion.

Assumptions

- City Government Relations Staff will provide an initial outreach to Microsoft prior to sending out offer letters.
- Up to 5 acquisitions assumed.
- The City will provide easement templates.
- The City will approve offer amounts prior to Consultant presenting to owners.
- The City will pay for all property rights and transaction fees at closing (e.g. easements, escrow fees, recording fees, title insurance, etc.).
- Filing of any condemnation proceedings and/or obtaining a possession and use agreements shall be the responsibility of the City.

Deliverables

- Title Reports and Encumbrance Memos
- Appraisals
- Offer documents, Acquisition Status Reports, and Settlement Justifications.
- Closing Packages including acquisition documents signed by property owners.
- Complete acquisition files with signed Negotiator diaries/logs and supporting documentation.
- Offer Letters

Task 9 – Advertising & Bidding

The design team will provide support during the bid phase including responding to design questions from potential bidders, and preparing addendum as needed during the bidding process.

Assumptions

- Questions and Answer – up to 10
- Prepare up to 3 Addendum
- Construction support beyond bid support is included
- As-built record drawings not part of the scope

Deliverables

- Q &A
- Addendums