City of Sherwood Oregon

## Resolution No. 2001-937

## A RESOLUTION AUTHORIZING THE CITY MANAGER TO ENTER INTO A CONTRACT WITH HOPPER AND DENNIS, P.L.L.C FOR DESIGN OF THE MEINECKE-HANDLEY-HWY. 99W INTERSECTION

**WHEREAS**, the City of Sherwood and Oregon Department of Transportation (ODOT) desire to construct a new intersection at Meinecke Road, Handley Street, and Hwy. 99W; and

**WHEREAS**, improvements to the Meinecke-Handley-Hwy 99W intersection are included in the city's Transportation Plan Update adopted by the City Council through Resolution 90-473; and

**WHEREAS**, ODOT has allocated approximately $5.0 million toward construction and right-of-way acquisition for the intersection; and

**WHEREAS**, the project needs to be designed and constructed at an accelerated pace because the ODOT funding for the project must be spent by August 2003; and

**WHEREAS**, the firm of Hopper and Dennis, P.L.L.C. accomplished the preliminary design for the intersection last year and have worked closely with the city and ODOT staff in bringing the project to the final design phase; and

**WHEREAS**, the estimated cost from Hopper and Dennis for design of the intersection and surrounding street improvements is approximately $427,000 and this level of design fees is appropriate for this type of project; and

**WHEREAS**, the City Engineer recommends a contingency of 15% ($64,000) to cover unanticipated design costs.

**NOW, THEREFORE, THE CITY RESOLVES AS FOLLOWS:**

The City Manager is authorized to enter into a contract with Hopper and Dennis, P.L.L.C. for design of the Meinecke-Handley-99W intersection for an amount not exceeding $491,000.

Duly passed by the City Council this 27th day of March 2001.

Mark Cottle, Mayor

ATTEST:

C.L. Wiley, Recorder

**EXHIBIT B-1**

**SCOPE OF WORK**

**Project:**
**CITY OF SHERWOOD, OREGON**
**DEPARTMENT OF PUBLIC WORKS**

# HIGHWAY 99 W
# and
# MEINECKE ROAD/HANDLEY STREET
# INTERSECTION

## Description

The project is located at the intersection of Highway 99W and Meinecke Road, inside the City Limits of Sherwood, Oregon, and involves improvements/impacts to the existing Handley Street intersection (on Highway 99W) and the proposed Dewey Drive intersection (on Meinecke Road from the Woodhaven Subdivision). The project will also include design of roadway improvements between Highway 99W and Meinecke Road on Smith Street including an extension of Smith St. to an intersection with Meinecke Rd. Additional street widening improvements along Meinecke Road between the new Meinecke Road connection to the vicinity of Sir Lancelot Lane are also be included in the project.

The Oregon Highway Plan classifies Highway 99W as a statewide level of importance highway (LOI) and as an Access Oregon Highway (AOH). Highway 99W is a four lane, divided highway in the project area. A wide median break is provided at the Meinecke Road intersection to allow for access to Meinecke Road.

Meinecke Road is located on the south side of Highway 99W and consists of a two-lane cross section with no shoulders. Handley Street intersects Highway 99W directly across from Meinecke Road but is designed with a large island forcing right-in, right-out only. Handley Street is also a two lane road, but has curbs, trees, lawns and sidewalks.

Meinecke Road has a 90 degree corner approximately 650 feet south of the intersection with Highway 99W. The proposed Dewey Drive will intersect with Meinecke Road in the vicinity of the 90 degree corner on Meinecke Road.

## Purpose

The purpose of the constructed project as a whole is to provide a safe and convenient signalized intersection with Highway 99W which will accommodate increased traffic associated with the growth occurring in the immediate vicinity as well as the City of Sherwood as a whole; provide for bicycle and pedestrian safety; alleviate safety concerns in vertical curve areas, and; provide reasonable access for the existing land uses along the roadways.

## A. Initiation and Coordination

This item includes all coordination and meetings necessary to successfully complete all phases of the project:

1.) Meet with city staff to discuss the design approach for roadway design, pavement design, design year traffic volumes, and storm water quality/detention. Other items discussed will be review/approval process, establishment of a Memorandum of Understanding among the various affected agencies concerning the design approval process and right-of-way acquisition procedures and responsibilities.
2.) Meet with city staff to obtain the following project data:
   (a) Existing as-built records (if necessary).
   (b) Plan and profile sheets, standard blocks, line types, and font files.
3.) Meet with city drafting staff to discuss standard layering conventions, file naming and other current city drafting standards and formats.
4.) Bi-Weekly progress meetings with the City of Sherwood project manager.
5.) Weekly internal design team coordination meetings.
6.) Meet with City of Sherwood and ODOT after the 25%, 50%, 75% and 95% plan submittals to discuss the review comments and as necessary during the design process.
7.) Provide ongoing project management, coordination and communication with the project design team throughout the project.
8.) Prepare and submit monthly billings and reports.
9.) Prepare and transmit initial project information letter to local property owners within the project corridor.

## B. Interlocal Cooperation and Coordination

This item includes all work to resolve multi-jurisdiction issues with local agencies and utilities.

1.) Meet with all affected agencies and review current road and drainage standards.
2.) Discuss and agree on applicable standards for the project.
3.) Discuss utility conflicts and responsibilities related to agency permit and franchises.
4.) Prepare a memorandum of understanding for all agencies outlining the project review and approval process.
5.) Ongoing issue resolution with affected agencies.
6.) Prepare interlocal agreements for design and construction of utility features requested by other utilities or local agencies.

## C. Utility Verification and Coordination

This item includes all research, data collection, field review and communications necessary to determine impacts on existing and proposed utilities and to coordinate with the affected utility companies and agencies. Hopper & Dennis will take the lead for all utility coordination except for policy level decisions.

1.) Obtain utility as-built records from City Staff and all affected utility companies and review base maps for accuracy.
2.) Field review utility locations provided by the survey.
3.) Meet with city staff to determine relocation responsibilities. (Hopper and Dennis have assumed that all design efforts for the relocation of existing facilities will be the sole responsibility of the appropriate utility company.)

4.) Distribute utility base mapping to utility providers for review.
5.) Incorporate utility comments into base maps.
6.) Distribute plan sets for review to all affected utility companies and agencies at the 50% and 95% design phases.
7.) Develop and distribute a utility relocation/construction schedule to utility providers.

## D. Survey, Base Map Review and Terrain Modeling

**Survey**
This item includes all work necessary for AKS to survey the site and for H&D to develop a model of the existing ground. Hopper & Dennis, PLLC will then use that model to generate cross sections and profile information for preliminary and final design of the main road, intersections, affected side roads, storm drainage and sanitary sewer.

Survey by AKS will include the following work:

The following lists of items outlined are services, which AKS will be responsible for completing. It is our intent to provide all the necessary surveying services through completion of this project.

All work outlined below will be performed by or under the direct supervision of a Professional Land Surveyor.

**Topographic Survey**
Perform necessary research and acquire as-built information about existing utilities from governing agencies. Field locates to be provided by others prior to commencement of topographic survey.

A portion of the field survey has already been completed. This includes:

1.) Approx. ½ mile southwest of the intersection of NW Meinecke Road and SW Pacific Highway along SW Pacific Highway.
2.) Approx. ½ mile northeast of the intersection of NW Meinecke Road and SW Pacific Highway along SW Pacific Highway.
3.) 600' south of the intersection of NW Meinecke Road and SW Pacific Highway along NW Meinecke Road.
4.) 1000' west of the intersection of NW Meinecke Road and SW Pacific Highway along SW Handley Street.

Additional field surveying (right-of-way, site and topography) required for this project is to include:

1.) Areas to the Northwest and Southwest of the intersection of Handley Street and SW Pacific Highway.
2.) West along Handley Street to SW Roellich Avenue.
3.) Along the length of Meinecke Road from its intersection with SW Pacific Highway past Sherwood High School to the intersection with SW Marshall Street.
4.) Smith Street from its intersection with SW Pacific Highway south to NW Meinecke Road and south of the intersection to the vicinity of Woodhaven Drive.
5.) Lots 1 – 6, 43, 44, and Tract "A", Smith Farm Estates.
6.) "B" Street from Smith Boulevard to the beginning of "C" Street, Smith Farm Estates.

Field features to be surveyed include roadway centerline, roadway striping, edge of pavement, sidewalk, curb and gutter, all drainage structures, street signage and signalization, trees, buildings,

fencing, existing driveways and roads, tax lot property lines and corners and utilities both private and public.

**Right-of-Way**
Perform research to acquire all pertinent documentation regarding existing right-of-ways in which work will be performed.

Perform right-of-way/boundary survey for all affected properties to resolve existing right-of-way locations and widths involved in the project. Final right-of-way determination will be included in the topographic map provided to H&D.

**Legal Descriptions and Exhibits**
Perform closure calculations and preparation of legal descriptions for all easements and right-of-way takes for all affected properties.

Prepare 8.5"x11" exhibits of right-of-way takes and temporary construction easements.

**Deliverables**
1.) Final topographic survey
2.) Existing right-of-way plan
3.) Right-of-way take legal descriptions
4.) Temporary construction easement legal descriptions
5.) Supporting legal description exhibits
6.) As-builts of right-of-way improvements
7.) New right-of-way Record of Survey

**Terrain Modeling**
Perform all field work necessary to provide accurate depiction of existing field conditions.

1.) Review survey data to verify sufficient amount of field data has been gathered to generate accurate existing surface.
2.) Provide breaklines where significant surfaces features exist.
3.) Provide TIN of existing surface.
4.) Provide minor contours at 1' intervals and major contours at 5' intervals.
5.) Provide ASCII file of points used to generate existing surface.
6.) Verify that ODOT, Washington County and FEMA are consistent in elevation reference and provide a conversion factor as necessary.

**Base Map Review**
This item includes all work necessary to import, plot out and review provided base mapping for evaluation of completeness and suitability for design purposes.

1.) Import all electronic survey files and mapping and plot out base map of project site.
2.) Field review base mapping prepared by survey subconsultant.
3.) Request and obtain additional information as required (including additional offsite survey information on sites for ponds, detention and/or mitigation facilities).

**Existing Ground Modeling**
This item includes all work necessary to develop a model of the existing ground and then use that model to generate cross sections and profile information for conceptual, preliminary and final design of the main road, intersections, affected side roads and storm drainage.

1.) Review subconsultant survey points. Verify that a sufficient number of points are available for surface modeling.
2.) Review survey generated breaklines within the project corridor.
3.) Generate existing ground cross sections and/or profiles for the existing roadway centerline.

## E. Geotechnical Investigation and Pavement Design

This item includes all work necessary for Hopper & Dennis, PLLC and Hart-Crowser. Inc. to perform the necessary geotechnical investigations and analysis and provide the required reports and design recommendations. H&D will coordinate with Hart Crowser by providing necessary project information to facilitate the geotechnical investigation. H&D will review the report and incorporate report project recommendations, as appropriate, into the project design.

Based on anticipated conditions Hart Crowser proposes to perform the following scope of services for the subject project:

### Geotechnical

Based on anticipated conditions, we propose to perform the following scope of services for the subject project:

### Office Review

1.) Published geologic maps and reports concerning the project area.
2.) Soil conservation service maps.
3.) Previous soils reports by Hart Crowser and others in the vicinity of the site.
4.) Records of existing construction (pavements, sewers, water lines).
5.) Other data as available.

This office review would be followed by a surface reconnaissance of the site and surrounding areas. This reconnaissance would include:

### Surface Reconnaissance

1.) Surface soil conditions.
2.) Soil exposures in road cuts/ditches/drainage ways.
3.) Surface vegetation as indicative of subsurface conditions.
4.) Spring activity.
5.) Erosion or poor surface drainage.
6.) Evidence of high ground water.
7.) Fill areas.
8.) Condition of existing pavements.
9.) Other surface manifestations of soils or geologic conditions.

### Field Explorations

To limit disturbance to areas outside the City of Sherwood right-of-way, we propose to complete eight to twelve drilled borings within the project area. Borings would be located in new roadway areas as well as adjacent to half street improvement areas and

roadway rehabilitation areas. The borings would be completed using a trailer-mounted drill-rig. Boring depths below existing grades are planned to range from 10 to 20 feet. If borings terminate short of their scheduled depth, due to obstructions such as boulders, etc. we would notify you prior to leaving the site. Standard penetration tests will be conducted at regular intervals. At least one day of traffic control is anticipated.

Explorations would be coordinated by a member from our Geotechnical Department who would maintain a log of subsurface conditions encountered and collect samples for laboratory testing. Field infiltration will be completed in a representative number of explorations.

While there is no reason to suspect that drill cuttings will be contaminated, Oregon law prohibits replacing them in the borehole. These cuttings are part of the property, and as such are the property of the owner. At the present time, we would propose to spread the drill cuttings on an undeveloped portion of the site. If for some reason, the cuttings show evidence of contamination, we could provide recommendations for their disposal.

**Laboratory Testing**

The geotechnical laboratory testing program will depend upon the type of soil conditions encountered. To the maximum extent possible, we would rely on test data developed for nearby sites within the same geologic formations. Possible tests include:

1.) Atterberg Limits
2.) Grain Size Analysis
3.) Moisture and Density
4.) Maximum Density
5.) California Bearing Ratio

**Analysis and Report**

Comprehensive descriptions of soil and geologic conditions will be prepared by a senior geologist. This information will include locations of explorations, site and vicinity maps, exploration logs, material classification and properties, water table information, and any other geotechnical design data of note. This information, together with the field and laboratory test results, will be provided in our report and will be used by our engineers in analyses for engineering considerations related to site development.

The results of these analyses, coupled with engineering judgment, will be used as the basis of our recommendations.

Recommendations will include:

1.) Pavement designs for new pavements. Designs will be prepared for asphalt concrete pavements. In addition to conventional crushed rock base we will investigate the potential for cement treated subgrades.
2.) Site preparation (i.e. stripping, excavation problems, trafficability considerations for construction equipment, etc.).
3.) Suitability of native soils for use in compacted fill, including both wet and dry weather recommendations.
4.) Limitations of the site soils during wet weather construction.
5.) Control of groundwater and spring activity.
6.) Recommendations for subgrade stabilization including cement treatment.
7.) Recommendations for storm water disposal, per USA design and construction standards.
8.) Other recommendations for design and construction as requested, by ODOT, Washington County and City of Sherwood.

## F. Landscape Design / Irrigation / Photo Simulations

Hopper & Dennis, PLLC will coordinate the work of our subconsultant "Evergreen Landscape Architecture" in the performance of the following work:

**Project Site Photography**
Photograph existing pre-construction conditions along the proposed road right-of-way. Record locations of photos on a plan drawing or aerial map to create a record of existing conditions prior to construction, and for use by the design team during the design process. Photos will be available on CD-ROM with printed proof sheets and indexed location maps.

**Planting Design**
Design plantings for three round-abouts: Meinecke Road, Handley Street, and Washington County's Oregon Street improvements. The round-abouts will be similar with a common theme and plantings, and may include non-plant site design elements such as stonework, walls, or site furnishings. (The extent of these items will require additional drawings such as grading, layout, and details). The plantings will be attractive in the highly visible streetscape with a variety of seasonal color and texture used in groupings. Both native and ornamental plants will be chosen as appropriate. A mixture of evergreen and deciduous trees and shrubs could be used to provide seasonal variety and green during the winter. The edges of the round-about could include grass and groundcovers to allow maximum visibility of vehicles in the round-about. The center of round-abouts could have evergreen trees and taller shrub plantings. Plantings along the outer curb of the round-about pavement could match or be similar to plantings within the round-abouts, along the sidewalks, and to the edge of the road right-of-way.

Design plantings for the landscape medians. Plants in the medians will improve aesthetics within the roadway by dividing the street and providing color, texture and relief from hardscape. Street trees can be included in the medians where space allows. In addition to providing shade and a canopy effect, trees help to reduce traffic speed with the divided road, narrowing of curb-to-curb distance, and the passing repetition of trees.

Design plantings for road right-of-ways along Meinecke and Smith Roads. If sidewalks are detached, sidewalks could meander or curve to provide visual interest and to allow a variety

of planting types, widths, and heights. Grass, planted berms, shrubs, or evergreen trees could provide visual screening next to future parking lots in commercial developments or along fences around residential subdivisions. The planting design in right-of-ways in the existing residential areas may be affected by who is responsible for long term maintenance. Continuity will be provided in the right-of-way planting design where feasible for aesthetics.

Design plantings at the four corners of Meinecke and Highway 99W. Since this intersection will become a major entrance to Sherwood, planting design at these corners can help to create a gateway entrance to the City and could include attractive color plantings, grass berms, planted berms, street trees, and background evergreen trees. Water quality detention ponds could be integrated to the landscape at these corners.

**Irrigation Design**
Design an automatic irrigation system for the plantings in the round-abouts, medians, and right-of-ways. An automatic irrigation system provides water needed for plant establishment and survival while reducing labor and plant loss. The mainline and control system will serve the round-abouts, medians, and right-of-ways where feasible to minimize the number of water sources, meters, and backflow devices. Highway 99W is a logical dividing line to separate the irrigation mainline and control system into north and south systems. The Oregon Street round-about could be a stand-alone system, or connected to other nearby landscape areas. Rotary heads will be used for large areas such as the round-abouts and Highway 99 corners, and spray heads will be used in the medians and right-of-ways where appropriate depending on the width of the areas. Shrubs zones will be separate from lawn zones due to varying water requirements.

**Photo Simulation**
Create an optional photo simulation using a combination of photography and computer software. The simulation will show the proposed roadway design elements and the impacts to the project site and surrounding environment such as the Cherry Tree area. Simulations can be used as display exhibits in the public involvement process, on web sites, and in mailings.

## G. Preliminary Roadway Design

This item includes all work necessary to complete the 25%, 50%, and 75% roadway design of the project.

Based on the recommended/chosen alternative and comments from City of Sherwood, and ODOT. Hopper and Dennis will prepare a preliminary design of the main road, intersections, and sidewalks.

25% Design Phase and Submittal Shall Include:

1.) Prepare a 25% preliminary plan to include:
   a.) Horizontal alignment for the project including left and right curb and sidewalk based on centerline and layout of the proposed intersections and roundabouts.
   b.) Vertical alignment for the centerline.
   c.) Preliminary catch points for cut and fill slopes
   d.) Typical roadway sections.
   e.) Cover Sheet.
2.) Develop preliminary layout for mainline pavement, median, and cut or fill slopes.

3.) Generate preliminary design cross sections, earthwork volumes and cut or fill lines.
4.) Prepare a 25% engineers estimate.
5.) Submit 25% plan sets, engineers estimate, and cross section plots for review and attend design review meeting.

50% Design Phase and Submittal Shall Include:

1.) Revise the 25% plan per City of Sherwood and ODOT comments
2.) Prepare a 50% preliminary plan to include:
    a.) Horizontal alignment for the project including left and right curb based on centerline, and layout of the proposed intersections and vertical alignment for the centerline.
    b.) Catch points for cut and fill slopes.
    c.) Location of roadside ditches within the ODOT R/W.
    d.) Location and heights of potential retaining walls
    e.) Preliminary design of erosion control.
    f.) Typical roadway sections.
    g.) Preliminary Intersection plan for approval of signal location/design.
    h.) Prepare preliminary Right of Way plans.
    i.) Cover Sheet.
3.) Develop layout for mainline pavement, sound walls/berms (as required), retaining walls, and cut or fill slopes. Layout will also be generated for the treatment swales and for water quality treatment facility(s) as required.
4.) Generate design cross sections, earthwork volumes and cut or fill lines.
5.) Include 50% Drainage Design with 50% plan set. See Drainage Task Description.
6.) Submit 50% plan sets, cost estimate, and cross section plots for review and attend design review meeting.
7.) Prepare and submit preliminary R/W plans to ODOT for review and guidance on major issues.
8.) Submit preliminary signalized intersection plan for approval to ODOT.

75% Design Phase and Submittal Shall Include:

1.) Revise the 50% plan per City of Sherwood and ODOT staff comments and prepare a 75% preliminary plan to include:
    a.) Plan sheets that reflect the comments received from the 50% plan review.
    b.) Permanent signing and striping plans in accordance with AASHTO and MUTCD standards.
    c.) Construction signing plans for advance warning signs, construction signs plans for work zone traffic control and plans for temporary protection and direction of traffic.
    d.) Cover Sheet and Vicinity Map.
    e.) Index Sheet.
    f.) General Notes and Legend Sheet.
    g.) Summary of Quantities Sheet.
    h.) Typical Sections.
    i.) Erosion Control Plan per USA manual.
    j.) Wall Profiles
    k.) Preliminary street lighting plan
    l.) Signal design at Highway 99W intersection.
    m.) ODOT intersection plans as needed.

n.) Revise and update R/W plans, submit plan to ODOT for review and approval.
o.) Washington County "Recovery Map"
p.) Miscellaneous detail sheets

2.) Update layouts to reflect agency review comments and adjustments to design.
3.) Generate new design cross sections, earthwork volumes and cut or fill lines.
4.) Include 75% Drainage Design with 75% plan set. See Drainage Task Description.
5.) Submit 75% plan sets and construction estimate for review and attend design review meeting.
6.) Assist ODOT with the Right of Way acquisition phase. ODOT begins R/W acquisition.
7.) Submit Washington County Recovery Map.

## H. Drainage and Water Quality Design

This item includes all work necessary to complete the drainage design of the project. Select the preferred drainage alternatives and develop preliminary and final design of the stormwater conveyance, infiltration and water quality treatment system.

Drainage Research and Data Collection Shall Include:

1.) Compare and evaluate ordinances of affected agencies
2.) Collect and review all existing plans and data.
3.) Provide a downstream and upstream drainage impact analysis, ¼ mile from the project limits

25% Drainage Design Shall Include:

1.) Prepare preliminary hydrologic model.
2.) Perform preliminary drainage hydraulics calculations.
3.) Prepare conceptual water quality and conveyance system layout.
4.) Incorporate the conceptual drainage layout with the 25% roadway plans.
5.) Submit 25% drainage plans as part of the 25% roadway plan submittal.
6.) Submit drainage assumptions, basin areas and calculations in a draft drainage report.

50% Drainage Design Shall Include:

1.) Update the preliminary hydrologic model from the 25% phase.
2.) Update the preliminary drainage hydraulics calculations.
3.) Prepare preliminary water quality and conveyance system design based on the conceptual layout and comments from agency staff.
4.) Incorporate the preliminary drainage plans with the 50% roadway plans.
5.) Submit 50% drainage plans as part of the 50% roadway plan submittal.
6.) Conduct a preliminary drainage design conference with City of Sherwood/USA staff to review the preliminary design.

75% Drainage Design Shall Include:

1.) Update and fine-tune hydrologic model, drainage hydraulics calculations and water quality and conveyance system design per review comments and for adjustments to the roadway design.

2.) Submit 75% drainage plans as part of the 75% roadway plan submittal.

95% Drainage Design Shall Include:

1.) Incorporate agency review comments and update plans accordingly.
2.) Complete 95% drainage specifications.
3.) Prepare 95% drainage plans and details.
4.) Incorporate and submit 95% drainage plans with 95% roadway plan submittal.
5.) Prepare final "Storm Water Design Report" and submit for review at 95% plan phase.

Final Drainage Design Shall Include:

1.) Incorporate city review comments and update plans accordingly.
2.) Complete Final drainage specifications.
3.) Prepare Final drainage plans and details.
4.) Incorporate and submit Final drainage plans with Final roadway plan submittal.
5.) Update the final Storm Water Design Report per City of Sherwood/USA review comments and submit for final review and approval. Submit report to the City of Sherwood/USA for approval.

## I. 95% and Final Contract Plans

This item covers all work to bring the 75% plans to a 95% review status and then to complete the final Plans, Specifications and Estimate (PS&E) ready for bid. Provide specifications at 95% for review and final ready for bid. Additionally provide overall coordination of the plans, and specifications from all subconsultants to develop 95% review and finals ready for bid.

1.) Revise plans per agency comments and incorporate utility relocation plans. Utility relocation plans assumed to be prepared by others, including PGE, Verizon, AT&T and NW Natural Gas.
2.) Add construction notes, detail references, and earthwork quantities to plan and profile sheets.
3.) Prepare cover sheet, notes and legends, required details, typical section, street lighting plans, striping plans, summary of quantities, etc. consistent with Oregon Department of Transportation procedures for PS&E.
4.) Revise erosion control plans and details per City of Sherwood/USA comments.
5.) Prepare contract special provisions to current ODOT Standard Specifications for Road, Bridge, and Municipal Construction.
6.) Compute quantities and prepare an estimate of construction costs.
7.) Submit plans and specifications for final review and make corrections or address comments as required.
8.) Submit hard copies of plans, specifications, and drainage calculations.
9.) Final R/W plan complete.

## J. Public Involvement Program

Assist the city with public involvement by providing the following services during project design:

1.) Attend up to two open house meetings in support of the project.
2.) Supply various exhibits as requested to facilitate public meetings

3.) Provide photo simulations as requested by the city.

## K. Project Tracking and Reporting

This item covers all work to prepare and update the project schedule and prepare the necessary progress reports as detailed below.

1.) Submit a summary for each activity associated with the project (including sub-consultants) which indicates beginning and ending dates, duration (hrs.), milestones, and a Gantt Chart. Update the project schedule as necessary during the course of the project.
2.) Submit a monthly progress report indicating work completed on an hourly and percentage basis for each activity. Review the work completed and budget used periodically throughout the project between regular progress reports to ensure that the schedule and budget are being maintained.

## L. Permits and Environmental Requirements

Hopper & Dennis, PLLC will coordinate and assist our subconsultant "The JD White Company" with the following work:

**Environmental Evaluation**
The JD White Company, Inc. (TWC) will identify critical areas using Metro GIS data and make a site visit to assess natural resources. TWC will draft a memorandum summarizing of the baseline conditions for distribution to the project team. It is TWC's understanding that the US Army Corps of Engineers and Oregon Division of State Lands have approved wetland delineations; consequently, no wetland work will be required. However, TWC will provide limited technical support to the project regarding wetland issues as needed.

*Deliverable*
- Preparation of Baseline Conditions Memorandum for distribution to the project team
- Technical support (12 hours) on wetland issues.

**Permit Assistance**

1.) **Oregon Department of Transportation (ODOT) Access Permit**
ODOT requires an access permit for any right-of-way or privately owned access onto a state-owned highway. The proposed project incorporates three publicly owned rights-of-way intersecting State Highway 99 West; SW Handley Street, NW Meinecke Road and Smith Street. TWC will coordinate with the project engineer for the preparation and submittal of a complete Access Permit application packages. Specifically, TWC will work with the project engineer to draft a narrative identifying the proposed project, fulfilling ODOT criteria, and addressing potential project impacts. Additionally, TWC will coordinate with the project engineer to compile the application package, including all required plans in metric. This permit has a maximum initial review period of 365 days; if the project is appealed, the review period may be longer.

TWC will prepare for and attend up to three 2-hour meetings with ODOT and the project team throughout the application review process. It is anticipated that one meeting will be held on site, and two meetings will be held at ODOT, or the City of Sherwood offices. Should permit-processing meetings extend beyond the three meetings that are identified, or any additional hearings or information be required, the additional preparation and

attendance will be billed on a time and materials basis, and is not included in this scope of work and budget.

*Deliverable:*

- Preparation for and attendance at up to three 2-hour meetings with ODOT
- Completed Access Permit Package(s)

**2.) Unified Sewerage Agency (USA) Permits**

USA regulates surface water quality within Washington County. Because the proposed project will create stormwater runoff from impervious surfaces, USA will review the project for surface water quality compliance. TWC will conduct a preliminary site assessment or an on-site meeting with USA staff and members of the project relating to surface water concerns.

TWC will prepare and submit completed permits as directed by USA staff. Should USA require information in addition to that which is listed on their application forms or correspondence, the additional preparation will be billed on a time and materials basis, and is not included in this scope of work and budget.

TWC will prepare for and attend up to three 2-hour meetings with USA staff to evaluate the project site. It is anticipated that two meetings will be held on site, and one meeting will be held at the USA or the City of Sherwood offices. Should permit-processing meetings extend beyond the three that are identified, or any additional hearings or information be required, the additional preparation and attendance will be billed on a time and materials basis, and is not included in this scope of work and budget.

*Deliverable:*

- Complete application packages for USA-directed applications
- Preparation for and attendance at up to three 2-hour meetings

**3.) Washington County Platting**

The Washington County Surveyor will require a plat of the new right-of-way boundary and the new adjacent lot boundaries. This portion of the project is not a permit per se. Washington County requires specific information and submittal requirements to accompany the final plat. TWC will coordinate with the project engineers and/or surveyors for the submission of the final plat materials to the Washington County Surveyor. TWC will prepare for and attend one 3-hour meeting with the Washington County Surveyor at their Hillsboro office to discuss the project and review application materials.

*Deliverable:*

- Complete final plat submittal package
- Preparation for and attendance at one 3-hour meeting with the Surveyor's office

**4.) Permit Memorandum**

According to City staff, local approvals or permits will not be required. Regional permits or approvals to Metro Title III regulations and USA permits such as a Site Permit, an Erosion Control Permit, and a joint Department of Environmental Quality / National Pollutant Discharge Elimination System (NPDES) Permit may all be necessary. State permits may include a DSL wetland buffer impact permit and Oregon Department of Transportation (ODOT) access permits. A federal Section 404 permit may be required for the project depending on the engineering design.

To address additional permitting requirements by local, state, and federal agencies that

might be required to progress the project into the construction phase, TWC recommends preparation of a permit memorandum. If necessary, this memorandum will identify key review criteria and define specific permits necessary to respond to those criteria. The analysis used to complete the memorandum will serve to identify any potential fatal flaw or flaws within the context of the minimum requirements for a successful project.

A permit memorandum would list the information needed from the project team, the application elements that TWC will prepare, and a review timeline for the completed permit application package. To ensure compliance with state and local requirements, it is recommended that legal council review the permit memorandum. TWC does not anticipate legal challenges or public hearings requiring legal council beyond this role; however, if this type of involvement becomes necessary, legal counsel is available to perform in this capacity. Upon completion of this memorandum, TWC will prepare another scope of work and budget for the required additional permits.

*Deliverable:*

- Permit memorandum
- Permit schedule and preliminary timeline
- Preliminary agency meeting preparation
- Report composition identifying preliminary issues and project-specific questions

**Project Meetings and Task Management**

Throughout the project, project management and quality control measures will be employed to ensure timely completion of required products within budget parameters. Task management and quality control activities prescribed for this task will include preparation of progress reports *(both verbal and written),* invoicing, Client communications, staff management, budget control, and arranging internal and external project meetings. For budgeting purposes TWC has included in this task preparation for and attendance at up to twelve 2-hour project meetings. These meetings include, but are not limited to, project kick-off meetings, sub-consultant meetings, Client meetings, and project team meetings.

*Deliverable:*

- Preparation for and attendance at up to twelve 2-hour meetings

**Assumptions**

This scope is written with the following assumptions:

- The project will not impact wetland C-17 as it is identified on the local wetland inventory maps. According to preliminary information derived from the project engineer, the project may only impact the C-17 wetland buffer. Previous permits and applications (US Army Corps of Engineers Permit Application No. 94-00193 and Oregon Division of State Lands Permit No. 8524) and wetland work is adequate for this project.
- A single ODOT access permit will be required.
- City of Sherwood land use review procedures and permits, if required, will be the responsibility of the City of Sherwood.
- Washington County Platting will require a Type II administrative review without a public hearing.
- Permit application fees will be paid by the City of Sherwood.
- Cost estimates associated with meetings were developed assuming that each meeting would be scheduled individually, meetings are not scheduled successively, and staff would travel to and from TWC's Vancouver, Washington office to attend all meetings. It is TWC's intention to schedule joint meetings, and/or successive meetings whenever possible. If meetings can be combined or scheduled successively, costs associated with these meetings will be reduced.

- In order to assist the project team, TWC will need the City of Sherwood's assistance in working with jurisdictional agencies and making initial contacts so that appropriate liaisons will be identified at the outset.

Should the City of Sherwood request additional assistance related to the above items, TWC will provide a scope of work for expanded services. If TWC has made substantial progress in completing the following tasks, and significant project changes are requested or required, TWC will provide the Client with a new cost estimate for revisions to the applications. In this situation, TWC will not proceed with completion of the permit applications until the Client has approved the new cost estimate of professional fees.

•

## M. Bidding and Construction

1). Attend a pre-bid conference.
2). Assemble the bid package which includes plans, Contractor Prequalification Application, specs, etc. Review the bids after they are opened to insure the low bidder meets all the qualifications.
3). Respond to questions arising during bidding and construction.
4). If the City of Sherwood desires, the H&D contract can be supplemented to provide construction survey, administration, materials testing/certification and inspection services for the construction phase of the project.

## N. Deliverables

1.) Review sets of documents at 25%, 50%, 75% and 95% stages.
2.) Storm Water Design Report for the Project Manager
3.) Bid ready contract and specification documents, 8½x11 (1 copy). Printing and binding of required quantities for bid will be Hopper and Dennis responsibility. We can establish a certain quantity and not to exceed amount.
4.) Bid ready contract plan; full size mylar 22"x34", and half size bond paper 11"x17", (1 set of each).
5.) Engineers estimate of construction costs. Rough estimate at 25%, 50% and 75% stages, and then 95% Engineers Estimate then updated for Final PS&E.
6.) Design cross sections and earthwork volumes on bond paper copies.
7.) Electronic files of plans and specifications.

## O. Extra Work – Management Reserve Fund

This work includes any item not covered in the above scope of work or specifically excluded in "Task V" below. Typical tasks that may be required under this task include additional surveying for alternative roadway alignments and archaeological investigation. No costs have been included for extra work on the cost estimate, an amount equal to 10% of design budget is included in the Management Reserve Fund for extra work authorized by the City.

## Reimbursable Expenses

This work includes non-salary costs associated with, printing, copies, exhibit preparation, photo processing, mileage, etc. Invoices will be submitted with billings for any items covered under reimbursable expenses.

## Specific Exclusions

The following items of work are specifically excluded from the scope of this agreement.

1.) Preparation of Mitigation Plans for currently undiscovered archaeological sites.
2.) Preparation of Utility Relocation Plans for the various utilities that may be affected by the construction of the project.
3.) Right of Way acquisition services.
4.) Construction management and inspection.
5.) Value Engineering Study.
6.) Hazardous material plan

## City of Sherwood

The City of Sherwood will provide the following items and / or services:

1.) Consultant identified pertinent and reasonable City maps of the project including any existing topo, right of way and other currently available maps.
2.) Direction as to agreements with adjacent property in regards to the construction project and right of way acquisition.
3.) Review time, giving direction and answering questions regarding various project issues.
4.) Review and assist in the resolution of utility conflicts identified by Hopper & Dennis during the design process.

**City of Sherwood**

**Meinecke Rd/Handley St.**

Budget breakdown

| | Hopper & Dennis, PLLC (Engineering/Management) | | | | | | | | | | | | | | H&D | SUBCONSULTANTS | | | | SUB | Budget |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Task and Description** | *ENG-VI* | *ENG-V* | *ENG-IV* | *ENG-III* | *ENG-II* | *TECH-III* | *TECH-II* | *TECH-I* | *CAD-III* | *CAD-II* | *CAD-I* | *COUNTER* | *SEC* | *Expense* | **TOTAL** | **HC** | **AKS** | **ELA** | **TWC** | **TOTAL** | **Amount** |
| *A. Initiation and Coordination* | 20 | 280 | | | | | | | | | | | 24 | - | 29,380 | | | | | - | 29,380 |
| *B. Interlocal Cooperation & Coordination* | 12 | 60 | | | | | | | | | | | | - | 6,900 | | | | | - | 6,900 |
| *C. Utility Verification and Coordination.* | | 22 | 7 | | | | | | | | | | | - | 2,691 | | | | | - | 2,691 |
| *D. Survey, Base Map Review & Terrain Mod* | | 28 | 8 | | | | | | 20 | | | | | - | 4,624 | | 49,000 | | | 49,000 | 53,624 |
| *E. Geotechnical Investigation* | | 30 | | | | | | | | | | | | - | 2,820 | 10,130 | | | | 10,130 | 12,950 |
| *F. Landscape Design /Irrigation/Photo Sim* | | 48 | 16 | | | | | | 30 | | | | | - | 7,856 | | | 32,798 | | 32,798 | 40,654 |
| *G. Preliminary Roadway Design* | 70 | 215 | 276 | 160 | | | 20 | 64 | 300 | 24 | | 10 | 7 | - | 92,766 | | | | | - | 92,766 |
| *H. Drainage and W.Q. Design* | | 92 | 200 | | | | | | | | | | 6 | - | 26,688 | | | | | - | 26,688 |
| *I. 95% and Final Contract Plans* | 30 | 210 | 180 | 8 | | | | 24 | 150 | 6 | | | | - | 51,148 | | | | | - | 51,148 |
| *J. Public Involvement Program* | | 108 | | | | | | | | | | | | - | 10,152 | | | 4,229 | | 4,229 | 14,381 |
| *K. Project Tracking and Reporting* | 8 | 258 | | | | | | | | | | | 13 | - | 25,612 | | | | | - | 25,612 |
| *L. Permits and Environmental* | | 110 | 27 | | | | | | 16 | | | | | - | 13,767 | | | | 43,336 | 43,336 | 57,103 |
| *M. Bidding and Construction* | | 28 | 20 | | | | | | | | | | 4 | - | 4,572 | | | | | - | 4,572 |
| *N. Deliverables* | | | | | | | | | | | | | | - | - | | | | | - | - |
| *O. Extra Work* | | | | | | | | | | | | | | - | - | | | | | - | - |
| *Reimbursable Expenses* | | | | | | | | | | | | | | 5,000 | 5,000 | | | | 1,070 | 1,070 | 6,070 |
| *B&O Taxes on Subconsultant Fees (1.6%)* | | | | | | | | | | | | | | 2,249 | 2,249 | | | | | - | 2,249 |
| | | | | | | | | | | | | | | | | | | | | - | - |
| | | | | | | | | | | | | | | | | | | | | - | - |
| ***TOTAL HOURS*** | 140 | 1489 | 734 | 168 | 0 | 0 | 20 | 88 | 516 | 30 | 0 | 10 | 54 | | | | | | | | |
| ***HOURLY RATES*** | 105 | 94 | 89 | 83 | 77 | 77 | 73 | 67 | 64 | 61 | 57 | 67 | 40 | | | | | | | | |
| ***TOTAL DOLLARS*** | 14,700 | 139,966 | 65,326 | 13,944 | - | - | 1,460 | 5,896 | 33,024 | 1,830 | - | 670 | 2,160 | 7,249 | 286,225 | 10,130 | 49,000 | 37,027 | 44,406 | 140,563 | 426,788 |

# Meinecke-Handley-99W
# Design Schedule

| | | | |
|---|---|---|---|
| Initiation and Coordination | 34 wks | Wed 3/28/01 | Tue 11/20/01 |
| Interlocal Cooperation and Coordination | 30 wks | Wed 3/28/01 | Tue 10/23/01 |
| Utility Verification & Coordination | 18 wks | Wed 3/28/01 | Tue 7/31/01 |
| Survey, Base Map and Terrain Model | 24 days | Wed 3/28/01 | Mon 4/30/01 |
| Geotechnical Investigation & Pav Design | 15 wks | Tue 5/1/01 | Mon 8/13/01 |
| Landscape, Irregation & photo simulations | 20 wks | Tue 5/1/01 | Mon 9/17/01 |
| Preliminary Roadway design | 110 days | Tue 5/1/01 | Mon 10/1/01 |
| 25% Design | 6 wks | Tue 5/1/01 | Mon 6/11/01 |
| 50% | 35 days | Tue 6/12/01 | Mon 7/30/01 |
| All 50% design | 7 wks | Tue 6/12/01 | Mon 7/30/01 |
| Signal design | 20 days | Tue 6/12/01 | Mon 7/9/01 |
| 75% | 45 days | Tue 7/31/01 | Mon 10/1/01 |
| All 75% design | 9 wks | Tue 7/31/01 | Mon 10/1/01 |
| Signal design | 26 days | Tue 7/31/01 | Tue 9/4/01 |
| Drainage and Water quality design | 90 days | Tue 5/1/01 | Mon 9/3/01 |
| 25% drainage | 5 wks | Tue 5/1/01 | Mon 6/4/01 |
| 50% Drainage | 6 wks | Tue 6/5/01 | Mon 7/16/01 |
| 75% Drainage | 7 wks | Tue 7/17/01 | Mon 9/3/01 |
| 95% and Final plans | 50 days | Tue 9/4/01 | Mon 11/12/01 |
| All 95% Design, plans and specifications | 6 wks | Tue 10/2/01 | Mon 11/12/01 |
| Complete Signal design | 20 days | Tue 10/2/01 | Mon 10/29/01 |
| Public involvement | 34 wks | Mon 4/9/01 | Fri 11/30/01 |
| Project Tracking & reporting | 38 wks | Wed 3/28/01 | Tue 12/18/01 |
| Permits and enviromental | 30 wks | Wed 3/28/01 | Tue 10/23/01 |
| Bidding and Construction | 65 days | Tue 10/30/01 | Mon 1/28/02 |

3/21/01