CITY OF NEWBERG
CITY RECORDER INDEX NO. 1649

CITY OF NEWBERG
AGREEMENT WITH OTAK, INC.
TO PROVIDE CONSULTING SERVICES
TO THE CITY OF NEWBERG

THIS CONTRACT is entered into this 11 day of January, 99 by and between the City of Newberg, a municipal corporation of the State of Oregon, hereinafter called **City**, and **OTAK, Inc.**
17355 SW Boones Ferry Road
Lake Oswego, Oregon 97035

hereinafter called **Consultant**.

RECITAL

1. **City** has need for the services of a consultant with particular training, ability, knowledge, expertise and experience possessed by **Consultant**.

NOW, THEREFORE, in consideration of mutual promises, covenants and agreements of the parties, it is agreed as follows.

1. **Scope of Work**: The **Consultant** agrees to provide the services provided in the Scope of Work which is Exhibit "A" and attached hereto and incorporated by this reference. The **Consultant** represents and warrants to the **City** that the **Consultant** can perform the work outlined in the Scope of Work for the fee proposal amount.

2. **Compensation**: The **Consultant** agrees to perform the work for a not-to-exceed fee as indicated in their professional fee proposal obtained in the Scope of Work. Compensation is defined in Exhibit A with a total not-to-exceed figure of:

$139,911.00

The **Consultant** shall not exceed the fee for any task included in the fee proposal amount. If the **Consultant** sees that the fee is going to exceed the not-to-exceed figure because the task has changed or is outside the scope, the **Consultant** shall notify the **City** in writing of the circumstances with an estimated amount that the fee is to be exceeded. The **Consultant** shall obtain written permission from the **City** before exceeding the maximum fee amount. If the **Consultant** does work that exceeds the maximum fee amount prior to obtaining the written permission, the **Consultant** waives any right to collect that fee amount.

3. **Additional Work Not Shown Within The Scope of Work**: If **City** requests or requires work to be done not within the Scope of Work of this project, the **Consultant** shall notify the **City** of such work, give an estimated fee amount, and obtain written instructions to proceed with work in the form of a contract amendment prior to proceeding with work and incurring any costs on behalf of the **City**. If **Consultant** proceeds with work prior to obtaining permission and/or contract amendment, the **Consultant** waives any right to collect fees for work performed.

4. **Status**: **Consultant** is not currently employed by the **City**. The parties to this contract intend that the relationship between them created by this contract is that of an employer-independent contractor. No agent, employee, or servant of **Consultant** shall be or shall be deemed to be the employee, agent or servant of **City**. **City** is interested only in the results obtained under this contract; the manner and means of conducting the work are under the sole control of **Consultant**, however, the work contemplated herein must meet the approval of the **City** and shall be subject to **City**'s general right of inspection and supervision to secure the satisfactory performance thereof.

5. **Work Performed**: The work to be performed by **Consultant** includes services generally performed by **Consultant** in his or her usual line of business.

6. **Taxes**: **Consultant** will be responsible for any federal or state taxes applicable to payments received under this contract. **City** will report the total of all payments to **Consultant**, including any expenses, in accordance with the Federal Internal Revenue Service and the State of Oregon Department of Revenue regulations.

7. **Benefits**: **Consultant** will not be eligible for any federal social security, state workers compensation, unemployment insurance, or public employees' retirement system benefits from the contract payment except as a self-employed individual.

8. **Federal Employment Status**: In the event any payment made pursuant to this contract is to be charged against federal funds, **Consultant** certifies that

he or she is not currently employed by the federal government and the amount charged does not exceed his or her normal charge for the type of services provided.

9. **Hold Harmless**: **Consultant** shall defend, indemnify and hold harmless **City** from and against all liability or loss and against all claims or actions based upon or arising out of damage or injury to persons or property caused by or sustained in connection with the negligent acts, errors, and omissions of the **Consultant**.

10. **Insurance**:

a) **Consultant**, its subconsultants, if any, and all employers working under this agreement are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers; or by signing this contract, **Consultant** represents that he or she is a sole proprietor and is exempt from the laws requiring workers' compensation coverage.

b) **Consultant** will at all times carry a Comprehensive General Liability insurance policy for at least $1,000,000 combined single limits per occurrence for Bodily Injury, Property Damage, and Personal Injury. If the policy is written on the new occurrence form then the aggregate limit shall be $2,000,000.

c) **Consultant** will at all times carry a Professional Liability/Errors and Omission type policy with limits of at least $500,000. If this policy is a "claims made" type policy, the policy type and company shall be approved by the City Manager prior to commencement of any work under this contract.

d) **Consultant** shall furnish the **City** with Certificates of Insurance upon execution of contract and **City** acknowledges receipt of such Certificates of Insurance.

11. **Indemnification**: The City of Newberg, its agents, employees and officials all while acting within their official capacity as such, shall be named as an additional insured on the insurance specified in paragraph 10(b) above. A certificate of insurance evidencing any policies required by this contract shall be delivered to the **City** prior to the commencement of any work. A 30-day notice of cancellation clause shall be included in said certificate. The **City** has the right to reject any certificate for unacceptable coverage and/or companies.

12. **Employees' Taxes**: **Consultant** shall also defend, indemnify and hold harmless **City** against all liability and loss in connection with and shall assume full responsibility for, payment of all federal, state and local taxes or contributions imposed or required under unemployment insurance, social security and income tax laws, with respect to **Consultant's** employees engaged in the performance of this contract.

13. **Termination**: This contract may be terminated by either party at the end of a project phase as defined in Exhibit "A" or at any time upon 30 days written notice.

14. **Contract Duration**: Except as provided for under paragraph 3, the duration of this contract shall be in accordance with Exhibit "A" or until project completion, whichever comes first. This fact not withstanding, the services of **Consultant** shall be authorized and paid on a phase-by-phase basis as described in Exhibit "A".

15. **Performance**: **Consultant** shall perform all of its professional services in a workmanlike and professional manner. **City** shall indemnify and hold harmless **Consultant**, its agents, subcontractors and employees from and against all claims, damages, losses, and expenses arising out of the development of this project not caused by the failure of **Consultant**, its agents, subcontractors and employees, to perform their services in a professional and workmanlike manner.

16. **Additional Services**: If the project is materially changed, or if **City** desires other professional services not already included in this Agreement or not customarily furnished as part of the agreed upon services, then additional consideration shall be paid to **Consultant** which shall be subject to negotiation by both parties, however, such services shall be furnished per the direct labor rate outlined in the professional fee proposal in the scope of work. Indirect labor costs and fixed fee shall be applied to the direct labor costs for these extra services in accordance with this agreement. The terms of this agreement shall apply to such additional services.

17. **Documents**: All original documents prepared by **Consultant** in performance of this Professional Services Agreement, including but not limited to original maps, plans, drawing and specifications are the property of **City** upon compensation to the consultant unless otherwise agreed in writing. Quality reproducible records copies shall be provided to **City** at **City**'s expense, upon request. Any reuse, change or alteration to original documents prepared by **Consultant** is not permitted without written verification or adaption by **Consultant**. **City** shall indemnify and hold harmless **Consultant** and **Consultant** independent professional associates or subconsultants from all claims, damages, losses and expenses including attorney's fees arising out of any unauthorized use of any instruments of professional service.

18. **Invoices**: All invoices are payable upon receipt and payments are due within 30 days of receipt unless otherwise agreed in writing. Failure to pay an invoice when due outside the cause of **Consultant**, shall constitute default, and interest at 14% per annum shall be payable on all such invoices. In the event of a default, **Consultant** may elect to suspend all

professional services under this Agreement until such invoice is paid in full, and may elect to terminate this Agreement as of the 30th day of default.

19. **Remobilization Charges:** If the project is idle for more than sixty (60) days there will be a remobilization charge of 10% of the contract fee to cover the cost of restarting the project.

20. **Failure to Make Payment:** **City** agrees to pay the costs and reasonable attorney's fees and disbursements incurred by **Consultant** in connection with the failure by **City** to make any payment in accordance with the provisions of this Agreement. The parties agree that in the event action or suit is commenced, to enforce any provision of this Agreement or in the event of any breach of this Agreement, the prevailing party shall have and recover reasonable attorney fees, both at trial and on appeal together with all other costs and disbursements allowed by law.

21. **Release of Liability**: **Consultant** shall be free from any liability for delay or failure of providing the services contemplated by this Agreement which arise from strikes, lockouts, or labor troubles of any kind, accidents, fire, earthquake, civil commotion, war or consequences of war, government acts, restrictions, or requisitions, failure of manufacturers, or suppliers suspension of shipping facilities, any act or default of a carrier or any other contingency of whatsoever nature beyond **Consultant's** control, including disturbances existing at the time this Agreement was made. In such a situation, if the services contemplated by this Agreement are not provided during the period contracted for, **City** shall accept the services and pay for the same when provided, however, provided that the services are provided within a reasonable time after cessation of the aforementioned impediments or causes.

22. The parties hereto each bind themselves, their partners, successors, assigns and legal representatives of such other party in respect to all terms of this Agreement. Neither party shall assign the contract as a whole without written consent of the other.

23. This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements, written and oral, courses of dealing, or other understanding between the parties. No modification of this Agreement shall be binding unless in writing and signed by both parties.

IN WITNESS WHEREOF, THE PARTIES HAVE AFFIXED THEIR SIGNATURES BELOW.

CONSULTANT	**CITY OF NEWBERG**
By: R. Gregg Weston	By: Duane R. Cole
Name: R. GREGG WESTON	Name: Duane R. Cole
Title: DIR. OF ENGINEERING	Title: City Manager
Date: 1/5/99	Date: Jan 11, 1999

Approved as to form/content:

Terrence Mahr, City Attorney

Exhibit A

City of Newberg - Fernwood Road Utilities Project

Description of Services

Task 1 - Project Management

1.1 Contract Administration

1.2 Meetings

1.2.1 City Engineer Meetings

- Progress reports with each invoice
- Design review meetings at the 50%, 90% and 100% completion stages (likely to be combined with regular progress meetings for efficiency)

1.2.2 Agency Review Meetings

Although multiple agencies could have input on the project as it develops, we believe only DEQ involvement will require sit down meetings. Two DEQ meetings will be necessary to:

- First review our sewage pump station design presubmittal report, and
- A second meeting to discuss design reviews of the pump station and force main issues following submittal of plans and specifications.

1.2.3 Project Coordination

Otak will manage coordination among the design team members and property owners to facilitate the project design:

- Coordinate the efforts of the team including design survey mapping, right-of-way easement descriptions; mapping and staking; geotechnical investigations; electrical/mechanical design; wetland delineation; civil design; pump station design; piping layouts
- Coordinate/facilitate meetings with the City and the property owner to establish pipe alignments and other needs
- Coordinate with the utilities for service needs and locations
- Assist the City with other public meetings (assumes attendance at one public meeting and two property owner meetings)

1.3 Agency Coordination

Otak will be responsible for coordinating the design with the various agencies who will have comment or other input on the project. This includes gaining plan approvals from the Department of Health - Drinking Water Section for the water system extensions, and the Department of Environmental Quality for the gravity sewers, pump stations and force mains.

We assume permitting costs associated with these and other agencies will be the responsibility of the City of Newberg.

We will coordinate with the City and Yamhill County for the improvements that will be placed in or along the Fernwood Road right-of-way.

1.4 Invoicing and Reporting
Each invoice will identify amounts due for the current period, due to date, received to date, initial contract amount, and any contract revision information. Billings from our subconsultants will be included with our invoices for payment. Along with the invoice, we will provide you with a progress report of work performed in the billing period.

Task 2 - Surveys and Data Collection

2.1 Predesign Field Review
Otak will conduct a detailed job walk and field review with City of Newberg staff associated with the project. Property owners affected by the project will be invited at the direction of City staff. We would attempt to schedule this initial field review with an early progress meeting to minimize costs. During this field review, we will discuss the nature of the improvements, and how they will affect the surrounding environment and existing improvements.

2.2 Aerial Mapping
To begin layout of the project and advance the schedule, we will gather existing mapping information to determine the best project layout. This step will utilize existing mapping and GIS system information previously provided to Otak.

2.3 Design Surveys
Topographic surveys will be performed for preparing base maps for final design drawings. The Fernwood Road segment will be surveyed right-of-way to right-of-way.

The pump station site will be topographically surveyed as well. This will include surveying the delineated wetland boundary, the FEMA flood elevation and detailed grade shots to allow for calculation of fill material needed to provide a level site for operation of the pump station.

Sufficient right-of-way research will be done to locate the right-of way and property lines at the pump station site to prepare a legal description. We assume that the City will provide updated title reports. It is also assumed that the Fernwood and Brutscher right-of-ways are of sufficient width to accommodate the project.

2.4 Geotechnical Investigations
Otak will utilize information provided by AGI that was prepared for development by Sumitomo Corporation. This information will minimize the extent of the geotechnical investigations needed for design of this project. Preliminary analysis of this information has shown that encountering rock excavation and groundwater are not significant project concerns.

To supplement the available information, AGI will drill four exploratory borings in the pump station site and along Fernwood Road. In addition to giving us design information regarding excavations and groundwater presence, laboratory tests will help us determine foundation pressures and buoyancy requirements for the pump station.

Along Fernwood Road, AGI's investigation will determine existing pavement sections, trenching, backfilling, and compaction requirements. Although we may avoid pavement by locating improvements in roadside ditch areas or new right-of-way/easements, this information will be beneficial for pavement restoration and avoidance of trench settlement.

2.5 Wetland Boundary Delineation
Along the general area where the pump station is to be located, a low area may be classified as wetlands. PALSA will perform a field reconnaissance of the area to determine the boundary. It is our understanding that project goals include the avoidance of wetland impact at the pump station site. As such, this scope of work is for a modified wetland delineation. To prevent unnecessary cost expenditures, we will flag the wetland boundary at the pump station site. However, we will not prepare a wetland delineation report.

The field delineation will allow the surveyors to tie in the wetland boundary and develop project plans based on the wetland location. If, however, it appears that wetland impact avoidance is not possible, a wetland delineation report would be prepared and submitted to the U.S. Army Corps of Engineers and the Oregon Division of State Lands upon the City's prior authorization for permit processing. Once the delineation is completed, we will design the pump station to avoid wetlands (if possible), and also indicate the boundaries, setbacks, and buffers on our construction drawings.

Task 3 - Design

3.1 Review Existing Information
Our first design task will be to analyze and update the available design information. This includes information from:
- The City Newberg's Water and Sewer Master Plans
- A Reservoir Siting Study - currently being prepared for the City

- Sumitomo's Feasibility Study of the Werth property.

Each element of the project will be reviewed for design criteria, including capacity and intended flow rate for current and build-out conditions.

3.2 Prepare Base Maps

Design base maps will be prepared from information gathered in Task 2. Plan and profile sheets for the sewer and water improvements will be prepared in AutoCAD 14 at a scale not smaller than 1"=40' in plan view, and 1"=5' (vertical) and 1"=40' (horizontal) for profiles. Each of the new pipelines will be profiled to minimize potential conflicts.

A site plan for the pump station will be prepared for the lift station site at a plan view scale of 1"=10'.

3.3 Water Transmission Main Design

We will design the transmission main to comply with assumptions in the Water Master Plan and the Reservoir Siting Study. The pipeline sizing will be based upon the assumed line loss factor used in the studies - to ensure adequate sizing corresponding to the line loss presumed in the studies. It is beyond our scope to reanalyze the hydraulics of the overall system, although if the modeling input and programming are made available, we can analyze the system hydraulics with the effects of the new transmission lines.

3.3.1 Thickness Design

Thickness design will be based on system pressures. We will utilize appropriate factors of safety and design methods stipulated by AWWA (and industry standards for the selected pipe material). Maximum hydrostatic pressures, coupled with appropriate transient and test pressures will establish the thickness designs.

3.3.2 Material Comparisons

The City has a preference of ductile iron pipe for large water mains, with which we concur. We will prepare a brief cost comparison on construction of ductile mains (with and without basic cathodic protection), versus high density polethylene, and large diameter polyvinyl chloride piping products now available. Once the brief comparison is complete, we will proceed into design with the pipe material as directed by the City of Newberg, and/or provide for alternative construction materials in the construction documents.

3.3.3 Thrust Restraint

For this proposal, we have assumed that ductile iron pipe will be the material of choice. Otak will complete design of all thrust restraint required - by thrust block, restrained joint

or a combination of both. Details of all joints will be included in the documents to allow for precise estimating by bidders.

3.3.4 Cathodic Protection

Preliminary investigations have shown that the soils which we will encounter in the project area are not aggressive, and that little potential exists for soil induced corrosion. As with any pipeline project, however, there is the possibility that another pipeline could be placed in proximity to this line, with its owners impressing a protective current. If your pipeline is not protected from these impressed currents, it could cause corrosion.

Since corrosion now or in the future is a possibility that could have very costly ramifications, we will recommend that passive types of cathodic protection be employed. One level of protection is installation of test stations along the pipe route that can be checked occasionally. Combined with the bonding of joints, this is a quick and inexpensive method for protecting your investment. A second protection is with polethylene encasement. Each of these is very inexpensive, and we recommend both be utilized.

3.4 Sewer Gravity Main Design

We will design the gravity sewer main in accordance with the City's standard design guidelines. The line will be sized to ensure adequate capacity, without surcharge, for the design flows indicated.

The line will be checked with the design flows using HYDRA or SWMM software, to avoid surcharges, yet maintain adequate flushing velocities, either of which could become operational nightmares.

The gravity sewer line design appears to be very straightforward, and we do not expect to have unique issues involved. The most significant concern with the gravity sewer will be during construction - making sure that proper line and grade is held, and that trenches are properly backfilled and compacted to prevent settlement or displacement. Existing utility crossings will be checked and proper cover over the pipe to allow future development will be provided.

3.5 Force Main Design

3.5.1 Analysis of Flows

A wide range of flows will be delivered to the force mains from the pump station. Initially, flows will be either very small or very infrequent. Once the pump station begins to receive larger flows, a force main sized for initial flows will be too small, resulting in excessive head loss through the system, and causing inefficiencies in the pumping system.

Conversely, if the force main installed is too large to deal with initial flow rates, potential exists for hydrogen sulfide production and settling of solids in the pipe.

To resolve the problem, we will attempt to discern the nature of the incoming flows. It may be possible to control the pumping system enough to ensure that scouring velocities are achieved by going with one force main sized for full build-out design flows. Alternatively, we may need to plan for dual force mains.

3.5.2 Thickness Design

Force mains will typically be subject to design pressures that are well below the pressure ratings of the pipe materials. We will, however, check to ensure that adequate pipe thickness is provided to withstand expected transient pressures from rapid pump stops due to loss of power.

If dual force mains are needed, we'll design a single trench section to accommodate both pipelines.

3.6 Pump Station Design

The basis of design for the pump station is a submersible sewage lift station, with a connection for the City's portable backup power unit and telemetry to the City's existing telemetry system. The site will be graded for maintenance vehicle access, and be landscaped and screened.

Foremost in the design of this lift station, will be how well the extreme flow conditions are addressed - very low initial flows versus the full 2.5 mgd at buildout. An iterative process is needed to balance efficiencies of operation, maintenance, and initial cost. Our design approach allows for this process and works with the City's preferences in station layout to determine the best approach.

The major design elements and issues involved with the pump station are as follows:

3.6.1 Civil Site Work

Site plans will be prepared to show:

- Placement of the station components (wet wells, valve vaults, electrical pads and panels, etc.)
- Grading, drainage and surfacing
- Potable water service (yard hydrants and/or flushing connections as applicable)
- Gravity sewer and force main alignments on the station site

Civil design will be coordinated with design of both mechanical and landscape disciplines. This is particularly important in addressing the security of the finished site.

3.6.2 System Design and Mechanical Engineering

Given the basic configuration of the pump station will be a submersible sewage lift station, in this task we will size the system components and determine the system layout. The following elements are included:

- Wet well configuration will be important to allow for proper pump cycling. To address the increasing flows over time, it may be cost effective to implement serial wet wells. It is conceivable that a second smaller wet well may be less expensive than a single large one. We will examine the cost of this in detail.
- With very low flows in the initial stages of operation, the potential exists for odors from the pump station. A pro-active approach to odor control in design will certainly be appreciated by neighbors, and likely be more cost effective than a retrofit situation down the road.
- Along with force main and wet well sizing, pump sizing will determine the proper combination for dealing with escalating flow rates. One solution is to install small pumps for now, with the hardware and electrical control sized to handle future pump equipment. Until the system hydraulics and design flows are examined in detail, we do not know if this will be necessary.
- All of the components designed will be collectively studied to make sure that maintenance and operation is maintained as a key focus.

3.6.3 Electrical Engineering

- Site Power - The pump station site will be evaluated by the project team to determine the best alternative for source of electrical service. We will contact Portland General Electric (PGE) and with their assistance determine the equipment necessary to provide electrical power to the pump station.
- Back-up Power - The pump station electrical system will be designed to accommodate the existing portable generator provided by the City. Transfer equipment and connections will be coordinated and designed to allow city staff to connect the generator during power failures.
- Instrumentation - Working with city staff, we will design instrumentation systems that will be compatible with existing equipment in the Newberg sewerage system and are easy to operate and maintain. Expected instrumentation includes level monitoring, flow monitoring, pump status monitoring, and station security.
- Variable Speed Motor Control - Using computer software developed by Electric Power Research Institute and Bonneville Power Administration, the team will evaluate the cost savings and applicability of variable speed drives for the pump motors. If variable speed

drives are desired, our experience with drive and drive control will allow us to design a variable speed system to maximize the efficiency of the pump station.

- Programmable Control System - A programmable logic controller (PLC) will be designed to operate the pump station that is compatible with existing waste water treatment PLC systems. The PLC system will be designed to provide supervisory control and data acquisition (SCADA) link to the treatment plant. The PLC type will match the existing at the treatment plant. During design we will explore the need for a touch panel type of operator interface which would allow alarm and monitoring functions to be performed at the pump station without the use of a computer. During construction we will provide a ladder logic program to operate the pump station and allow communication with the treatment plant. Programming of the SCADA system at the treatment plant is not included as part of the proposed services.

3.6.4 Landscape Architecture

Prepare a landscape plan for the pump station site. Themes for the landscaping will be thoroughly reviewed with City staff to make sure that what is included in the plans meets the expectations of staff. Irrigation is assumed to be excluded.

During design, we will also address screening of the pump station site. This can be accomplished by berming, fencing, plantings, or a combination of the above.

3.6.5 Predesign Conference

To begin the pump station design, we propose to conduct a kick-off meeting to establish preferences. Following this meeting, we would issue a summary predesign memorandum.

3.6.6 Predesign Report

DEQ will require a predesign report. The predesign report will give DEQ the parameters included in design, general system layout, and include calculations of the incoming flows, hydraulics of the system, and preliminary sizing of the components. The report will address the pump station design, and the force main design.

3.7 Preliminary Design - 50% Completion

The 50% design will be submitted to the City for initial review and comment. In addition to 50% complete design drawings, we will submit outline specifications (we assume that the City will utilize its standard contract documents, and that we will be responsible for preparation of special provisions and technical specifications), and the preliminary cost estimate. To comply with design schedule requirements, we anticipate a two week period for design review by City staff.

3.8 90% Design Documents
The 90% submittal will include construction plans that are essentially complete, full technical specifications and special provisions, and an updated detailed cost estimate. This submittal will have fully addressed the review comments from City staff received from the 50% submittal.

At this completion stage, we would recommend submittal to DEQ as well.

3.9 Final Design Documents
During this final design stage, comments from both City staff and DEQ will be addressed. Work products from this stage will include final drawings, technical specifications, and pre-bid cost estimates. The documents will be provided in a form ready for publication and advertising of the project.

Task 4 - Right-of-Way and Easement Acquisition Assistance
Once design has established the ROW needs, Otak will prepare a legal description for the pump station site acquisition. The location of the Brutscher Street right-of-way will be worked out with the property owner and the City. We have assumed that actual property and easement documents, as well as negotiation and acquisition tasks will be performed by the City.

Task 5 - Bidding

5.1 Pre-Bid Conference
Otak will attend the pre-bid conference to assist City staff by responding to technical questions from bidders. We will provide the City with a summary of the questions referred to our engineer, and the answer given.

5.2 Bidder Questions
During the bidding process, we will make our project design team available for answering questions. Each question received will be logged, along with the answer given. We will also assist the City with preparing language for inclusion in addenda to clarify design.

5.3 Award Recommendation
We will conduct a review of the bids and check for inaccuracies and omissions. Additionally, we would conduct an evaluation of the bidder's qualifications. Following these reviews, we would provide the City with a recommendation of award.

Task 6 - Construction Services
Similar to the bidding services, we understand that the majority of the construction phase services will be taken on by the City directly.

6.1 Preconstruction Conference
The Otak design team will attend the preconstruction conference. We propose to include our project manager, civil and mechanical design engineers, and the electrical engineer from our subconsultant.

6.2 Contractor/Owner/Engineer Meetings
We have budgeted for one person's attendance at up to six meetings.

6.3 Construction Observation
We have assumed this will be performed by City of Newberg staff. An exception to this is the pump station - see task 6.5 below. Otak team members will be available to assist the City, however, as issues arise in construction.

6.4 Construction Staking
Construction staking will be provided for:
- 3,900 lf water main
- 3,800 lf gravity sewer
- 3,500 lf force main trench
- pump station facilities
- service stub outs are not included, except for two at the northerly terminus on Brutscher

6.5 Pump Station Construction Services
Based on discussions with your office, time is included for specific tasks relating to the pump station. The DEQ requires certification of completed pump stations. Our scope includes hours specifically to deal with these issues.

6.5.1 Construction Observation
We have included eight site visits during construction. These visits will be utilized by various members of the design team (including subconsultants) as issues needed resolution on the construction site arise. We will assist the City in developing a final punch-list

6.5.2 Shop Drawing Review
Review shop drawings and contractor submittals

6.5.3 Draft O&M Manual (prior to 50% completion of construction)
Prior to the construction of the station reaching its 50% completion stage, a draft Operation and Maintenance manual must be provided. In addition to running and maintaining the various components of the system, it must also include items such as maintenance schedules, safety provisions, staffing requirements, and staff costs. Although this is a significant effort for this station, the manual can serve as a "template" for future stations, particularly effective for those that implement a similar layout.

6.5.4 Start-Up and Testing

We anticipate start-up and testing of the system to be completed in one day. Typically, our mechanical/civil engineer will attend along with our electrical subconsultant. Our specifications will require that representatives of the equipment suppliers be on hand for the start-up. A brief report will be submitted documenting the start-up and performance testing of the equipment.

6.5.5 Final O&M Manual

After submittal of the 50% complete manual, DEQ will respond with comments. These will be addressed in preparation of the final manual. We assume ten copies of the finalized manual.

6.5.6 Warranty Period Services

The one-year "warranty" period after start-up is not assumed to require assistance from the design team.

6.6 As-Builts

As-constructed record drawings will be prepared on mylar bases for archival. Electronic copies will also be provided.

Fee Compensation Summary

Lump Sum will include:

- Otak Design Survey
- Preliminary Engineering
- Final Design
- Legal Descriptions
- Electrical Design
- Geotechnical Investigation
- Wetlands Investigation
- Design Direct Costs

Total Lump Sum: $96,798.00

Time and materials not-to-exceed will include:

- Bid Support
- Construction Administration
- Electrical Construction Support
- Construction Administration Direct Costs

Total Time and Materials Not to Exceed: $43,113.00