

**RESOLUTION NO. 953**

**A RESOLUTION AWARDDING A SERVICE CONTRACT TO ASSOCIATED TRANSPORTATION ENGINEERING & PLANNING (ATEP) FOR TRAFFIC SIGNAL DESIGN AT THE INTERSECTION OF WILSONVILLE ROAD AND KINSMAN; VERIFYING FUNDING SOURCE; AND AUTHORIZING THE EXPENDITURE OF FUNDS.**

WHEREAS, the Transportation Advisory Commission and the City Council did identify in their July, 1991 Transportation Master Plan for the City of Wilsonville, a provision to signalize the intersection of Wilsonville Road and Kinsman Road when Engineering Warrants were met; and

WHEREAS, a study was completed by Associated Transportation Engineering & Planning (ATEP) and concluded that access requirements to Wilsonville Road by the Fire District emergency vehicles should take precedence and those warrants were met; and

WHEREAS, as part of the budget process, the Budget Committee and City Council did include in the 1992-95 fiscal year budget, funds in the amount of \$175,000 for the design and construction of a Wilsonville Road-Kinsman traffic signal; and

WHEREAS, Section 2.312 of the City Code states that "The Council is hereby designated as a Local Contract Review Board and relative to contract concerns for the City, shall have all the powers granted to the State Public Contract Review Board"; and

WHEREAS, Section 2.314(1) states that "All contracts shall be based upon competitive bid with certain exception"; and

WHEREAS, Section 2.314(2) states that "The Board may, by Resolution, exempt other contracts from competitive bidding if it finds: (a) the lack of bids will not result in favoritism or substantially diminish competition in awarding the contract; and (b) the exemption will result in substantial cost savings. In making such finding, the Board may consider the type, cost, amount of the contract, number of persons available to bid and such other factors as the Board may deem appropriate"; and

WHEREAS, Oregon Revised Statutes 279.015 Competitive Bidding Exemptions also allows exemptions as stated in the City Code; and

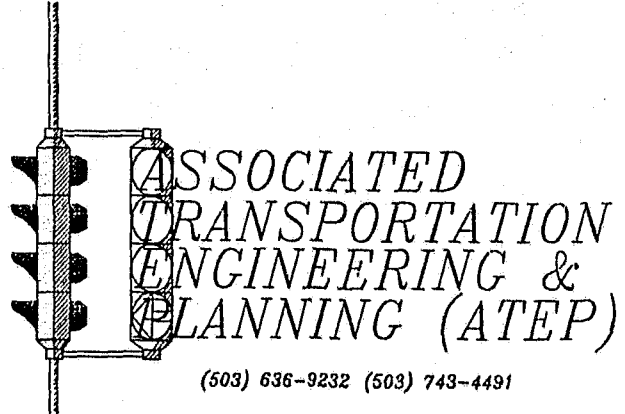
WHEREAS, ATEP was the firm used to begin our warrant study, compiling necessary data and having that information on hand for construction design; and

WHEREAS, it would cost substantially more to have the process duplicated if the City opened the project again to competitive bid.



August 5, 1992

Mr. Jim Long  
City of Wilsonville  
3000 Town Center Loop  
Wilsonville, OR 97070



RE: Traffic Signal Design Services for Wilsonville  
Road and Kinneman

Dear Jim:

Attached is the information you requested regarding the design services for the Wilsonville Road Project.

ATEP is uniquely qualified to do signal design in the State of Oregon. During the past ten years, ATEP has designed over 100 traffic signals within the State of Oregon. Mr Richard Woelk, a principal in ATEP has over 20 years of experience in the design and construction inspection of over 110 traffic signals.

Attached is our Scope of Work, Work Tasks and Cost Estimates for the design and construction inspection of the above mentioned intersection. The Scope of Work outlined in our proposal allows ATEP to coordinate its efforts with your staff and the City of Wilsonville for complete review and control of the project.


As you requested, I have reviewed the proposed design schedule for this project and have determined that plans and specification for your review could be provided in approximately 45 days from notice to proceed. Depending on review time needed by City of Wilsonville staff, I estimate that the project could be ready to bid by the City in approximately 75 days from Notice to Proceed. The estimated time of construction would be between 90 and 120 days for completion.

Again, thank you for this opportunity to present ATEP's traffic signal design expertise to you and your Client.

If you have any questions, please contact me at 743-4491.

Sincerely,

ASSOCIATED TRANSPORTATION ENGINEERING & PLANNING, (ATEP)

  
RICHARD L. WOELK, P.E., T.E.  
Principal

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4040 DOUGLAS WAY LAKE OSWEGO, OR 97035  
P.O. BOX 13185 SALEM, OR 97309

(503) 636-9232  
(503) 743-4491

Based on our prior experiences with local traffic conditions and this proposed project, we have developed a preliminary work plan for the traffic signal project which is broken down into the following categories.

I. DESIGN ENGINEERING SERVICES -

- A. Pre-Design Tasks
- B. Preliminary Engineering
- C. Final Design
- D. Bidding Process
- E. Construction Inspection

A preliminary outline of these specific tasks follows. It is our understanding that these tasks will be reviewed and modified, as required, at the initial project meeting with staff.

DESIGN ENGINEERING SERVICES

I.A. PRE-DESIGN TASKS - Staff - (Richard Woelk)

- Conduct with City staff a start up meeting to review all design and construction elements.
- Finalize work tasks and project schedules.
- Review existing traffic data.
- Prepare preliminary construction cost estimate.
- Prepare research on existing utilities and obtain additional as-built information.
- Identify key areas for detailed survey specifically future needs, right of way, pole placement, truck turning radii etc.

I.B. PRELIMINARY ENGINEERING -Staff (Richard Woelk, Pam Barclay)

- Make arrangements to have underground utilities field located and marked.
- Prepare predesign study to establish the phasing required for the proposed signal installation.
- Plot existing utilities from as-built and research information previously obtained.
- Prepare intersection base maps for signal installation and detector location plans.

- Preliminary layout of traffic signal poles and all other signal equipment and related accessories.
- Draft signal plans & specifications -

1. The Traffic Signal Design and specifications to conform to Section 661 of the "Standard Specifications for Highway Construction" (1991) of the Oregon State Highway Division including all current supplements or modification thereof made by the Oregon State Highway Division.

2. The Traffic Signal Design will include the following design parameters:

A. The Traffic Signals will be designed as a four-phase, fully-actuated traffic signal with protected left-turn phases.

B. The signals will be designed as a mast arm installation.

C. Street light illumination will be incorporated in the mast arm poles as required to produce an average horizontal illumination level of 1.0 foot candles within the intersection using 250-watt high-pressure sodium semi-cutoff luminaires (35-foot minimum mounting height). Luminaire arms will extend in same plane as mast arm.

D. A Type 170 traffic signal controller in a Model 332 cabinet will be specified to operate the intersection. The controller will include all modules to operate the intersection including a modem Model 400, detector amplifier with scanning capability, display panel and including eight (8) blank (unprogrammed) PROMS. The controller will be located at the intersection so that the doors open east and west with view of the intersection facing the front of the controller.

E. A fire pre-emption system will be included in the design. An "Opticom" brand system will be used as manufactured by the Traffic Control Products Division of the 3M Company. "Opticom" brand Model 262 Discriminator modules will be specified for the Type 170 controller. Detectors will be located at the end of all mast arms for emergency vehicles approaching the intersection in the direction opposite the direction of the signal head on the mast arm.

F. Traffic signal pole foundations will be located behind future sidewalk locations (property line side) unless property line walks are specified, in which case the poles may be located on the curb side of the sidewalk. In no case will the face of the poles be any closer than three feet from the face of curb. Poles will be located so that pedestrian signal heads are no further than five (5) feet from the extended crosswalk lines for the pedestrian crossing requiring view of the signal.

G. Pedestrian signal heads will be single-section international symbol type mounted to traffic signal mast arm poles using a "Clam Shell" type mounting framework.

H. Pedestrian push button with instructional sign will be provided for all crosswalks and be located on traffic signal mast arm poles.

I. Traffic signal heads will be specified for all left-turn phases. Heads will be located on a line three (3) feet toward the centerline of the street from the extended lane line division of the through and left-turn lane.

J. Traffic signal heads for through and/or through and left-turn lanes will be located as follows:

1. Approaches with left-turn signal heads. Through signal heads will be located in the center of the travel lanes (exclusive of parking lanes). If only one travel lane exists, the second through head will be located on the traffic signal pole or at a point 15 feet from the first signal head.

2. Approaches without left-turn signal heads. Through and left-turn signal head will be located so that the first head will be directly on a line separating the through and left-turn lane line. The second signal head will be located on a through lane division line (if two through lanes exist) or 15 feet from the first signal head (if only one through lane exists).

K. The signal design will provide loop detection 3'x3'loops as presence detection for all approaches and all left- turn lanes. Presence detectors will be located at the "STOP" line.

L. All detectors will have separate detector feeder cable from the detector splice function box to the traffic signal controller (no splices).

Splicing of detector wires and detector feeder cables will be made in detector splice junction boxes located behind the future curb at points nearest the detectors. Rigid electrical conduit will be used between the detector splice junction box and traffic signal controller or pull boxes at there respective corners of the intersection.

M. Design will include concrete pull boxes (size shown in Standard Drawings) at all traffic signal poles and additionally at the traffic signal controller. All signal circuit conduits and detector feeder conduits will be routed to the traffic signal controller and/or traffic signal poles through these pull boxes.

N. Underground power service conductors will be provided for electrical service. A pole mounted electrical service cabinet located at the traffic signal pole and shall be used to terminate electrical service. Service conductors for street light circuit and interior illuminated sign circuit and interior illuminated sign circuit will not be routed through the traffic signal controller cabinet. Separate breakers will be provided for all services.

3. The signing and striping plan will indicate the size, type and location of all permanent signing required for the new street. The striping plan will indicate the lane striping, crosswalks, etc., needed for the completed project. All signing and striping will conform to the Manual on Uniform Traffic Control Devices (1978).

- Review all data with City staff and submit preliminary plans for review.

I.C. FINAL DESIGN - Staff (Richard Woelk, Pamela Barclay)

- Incorporate revisions into design process from City review as agreed upon.

- Complete traffic control plan and detail temporary traffic control measures.
- Complete signal installation plan and signal detector sheet.
- Prepare project specifications and bid documents for City bid.
- Identify and itemize all quantities and produce a cost estimate.
- Submit to City for final review and approval.
- Make final revisions identified in final review process.
- Submit to City for agency approvals.

#### I.D. BIDDING PROCESS - Staff - (Richard Woelk)

- Present City with design original sets of all documents, photocopy ready, full-size and reduced-size originals.
- Assist City in bidding procedures and answer bidders questions as required.
- Prepare any required addenda using standard City format. (City will reproduce and distribute.)
- Attend bid opening.
- Check all bids submitted for proper extensions and additions and tabulate bid items in City-approved format.
- Make recommendations for award to City within one day of bid opening.
- Provide written report if the low bid exceeds Engineer's estimate by more than 10 percent.
- Attend Council meeting to provide justification for recommending award or rejection of bids.

#### II.A CONSTRUCTION MANAGEMENT/INSPECTION - Staff (Richard Woelk)

- Attend pre-construction meeting to answer Contractor questions concerning surveying, plans, specifications and construction procedures.
- Supervise construction inspection and testing services.
- Field locate all traffic signal equipment and detectors to plans and specifications.
- Assure compliance with the Plans and Specifications.
- Initial review and approval of Contractor's proposed construction schedule with periodic reviews for compliance.

- Prepare contract change orders.
- Maintain a field copy of the Plans and Specifications that show all construction revisions.
- Review all shop drawings and submittals.
- Ensure Contractor's compliance with various permits and regulatory requirements.
- Prepare contractor manhour estimates and approve pay estimates for City payment.
- Conduct final inspection and prepare punch list.
- Monitor completion of punch list items.
- Prepare a final construction report.
- Investigate and make recommendation of all Contractor's claims.
- Provide clerical support for typing, report writing and record keeping.
- Provide traffic signal timing plan and turn on inspection services.

#### II.B MATERIAL AND CONSTRUCTION TESTING - Staff -(Richard Woelk)

- Coordinate and schedule gathering of samples and implementation of field and laboratory tests.
- Inspect all traffic signal equipment for compliance with the Specifications.
- Coordinate testing of the traffic signal controller by the Oregon State Signal Testing Laboratory.
- Final test all electrical wiring and signal operation upon completion of all signal work.

#### II.C. AS-BUILTS - Staff - (Richard Woelk, Pamela Barclay)

- Prepare record drawings on original plan sheets.



FEE SCHEDULE

TRAFFIC ENGINEER	\$75.00
SIGNAL INSPECTION	\$50.00
TECHNICIAN	\$35.00
SECRETARY	\$25.00

Preferred method of compensation - LUMP SUM NOT TO EXCEED - with payment by Major Task Completion.

**ATEP SCOPE OF WORK  
CITY OF WILSONVILLE - WILSONVILLE ROAD DESIGN PROJECT**

ATTACHMENT "A"

CONSULTANT RESPONSIBILITIES	MANHOURS		
	ENG	TECH	SECR
<b>PHASE I - PROJECT FAMILIARIZATION</b>			
A. Meet with City staff to review all design and construction elements	2		
B. Review existing traffic data	1		
<b>PHASE II - PRELIMINARY ENGINEERING</b>			
A. Prepare preliminary draft plans and and specifications for traffic signal and loop detectors to conform to ODOT and City of Wilsonville standards.	38	40	2
B. Submit preliminary to City for Review	1		
C. Review preliminary work with City staff.	1		
<b>PHASE III - FINAL DESIGN</b>			
A. Complete Plans and Specifications Complete list of quantities with Engineer's Estimate to construct Submit plans for final review	15	25	1
B. Provide composite mylars of bid-ready plans and specifications for City bid.	10		
C. Coordination with Bid Package through approval	10		
<b>PHASE IV - CONSTRUCTION INSPECTION</b>	<b>40</b>		
<b>TOTAL</b>	<b>116</b>	<b>66</b>	<b>4</b>

**BREAKDOWN OF DIRECT SALARY AND DIRECT NONSALARY COSTS**

COST ELEMENTS	TOTAL MANHOURS	PAYRATES	COSTS
A. DIRECT SALARY COSTS			
PRINCIPAL	76	\$41.65	\$3,165.40
SIGNAL INSPECTOR	40	\$36.50	\$1,460.00
TECHNICIAN	66	\$19.45	\$1,283.70
SECRETARY	4	\$13.90	\$ 55.60
		TOTAL	<hr/> \$5,965.75
Direct Nonsalary Costs			
Travel and Per diem			\$ .00
Air Travel			n/a
Office and Equipment			n/a
Rent			n/a
Computer Expense			\$ 500.00
Reproduction Expenses			\$ 500.00
Communications			\$ 0.00
Other (survey of intersection)			\$ 0.00
E. DIRECT NON SALARY COST			\$1,000.00
F. TOTAL		TOTAL	\$6,964.70

**ANALYSIS OF FEE FOR ENGINEERING SERVICES**

Direct Salary Costs		\$5,964.70
Overhead Cost (including payroll additives)	80.00%	\$4,771.76
	Subtotal	\$10,736.46

Net Fee

**Direct Nonsalary Costs**

Travel and Per diem	n/a
Air Travel	n/a
Office and Equipment	n/a
Rent	n/a
Computer Expense	\$ 500.00
Reproduction Expenses	\$ 500.00
Communications	\$ 0.00
Other	\$ 0.00

Subtotal	\$1,000.00
<b>Total Estimate</b>	<b>\$11,736.46</b>

### **ATEP'S KEY STAFF**

A team of experienced, qualified personnel is available to perform this work. The key professional staff members have been selected on the basis of experience in management, technical qualifications and communication skills. Their individual skills will be merged into a coordinated team effort under the direction of our Project Team Manager.

Following is a brief description of key personnel available for this project. This personnel will be available to devote the time necessary to assure effective performance of this project within the established time schedule.

**Mr. Richard L. Woelk, P.E.** President of ATEP, will be available to serve as ATEP's project Team Manager. Mr. Woelk has 20 years of experience having preformed traffic signal design and construction inspection for over 90 traffic signal installations throughout the state.

Mr. Woelk is expected to perform approximately 50% of the work for this project.

**Mr. Jay Toll** will serve as the engineering technician and lead draftsman for the project. Mr. Toll has over 10 years experience with civil and traffic signal design and construction projects.

Mr. Toll is expected to perform approximately 50% of the work for this project.

## **RICHARD L. WOELK, P. E.**

Traffic Engineer  
President

### **EDUCATION:**

Site Impact Traffic Evaluation, National Highway Institute, 1987

Urban Arterial Planning & Operations, National Highway Institute, 1986

B. S. Civil Engineering courses; Portland State University, Oregon State University, Chemeketa Community College, Northwest Christian College, 1965-1981

Certificates in: Fundamentals of Traffic Engineering; Traffic Engineering and Safety; Traffic Signal Design & Operation, University of Washington, 1971-1978

Traffic Operations and Urban Planning; Principles of Traffic Safety, Oregon Board of Education, 1974

### **EXPERIENCE**

- o As President and General Manager, Mr. Woelk is responsible for corporate activities and Project Engineer for transportation design projects.

Prior to organizing Associated Transportation Engineering & Planning, Inc., Mr. Woelk's experience and responsibilities have included the following:

- o Traffic Engineer for Regional Consultants, Inc..  
Mr. Woelk was responsible for conducting traffic and transportation studies.
- o Project Engineer for:  
  
Traffic Impact Analysis, Timbershore Subdivision, Lincoln City, Oregon; Beaverton West Hotel, Portland, Oregon; Queen Iris Estates Subdivision, Clackamas County, Oregon; Traffic Safety Studies, Curry County, and Cities of Reedsport, Coquille and Myrtle Point, Oregon.
- o Traffic Project Engineer for the City of Salem, Oregon. His responsibilities included supervising all field and office traffic data collection; traffic studies on parking turnover, intersection capacity, traffic volumes, pedestrian safety, and proposed development site reviews; traffic signal and systems design for all fixed time and sub-master systems; and review of all new city street designs, including street light design.

As Traffic Investigator for the City of Salem, his responsibilities included: Field and office data collection, conducting all traffic investigation and analysis, report preparation for the Citizen's Advisory Traffic Commission, conducting studies in response to citizen requests, such as speed analysis, intersection control needs, parking restriction, pedestrian safety analysis and school crosswalk needs.

COMMUNITY INVOLVEMENT:

Mr. Woelk served for three years as Chairman of the City of Salem Citizen's Advisory Traffic Commission

PROFESSIONAL REGISTRATION;

Oregon - No. 11155 (Civil and Traffic)

AWARDS:

FHWA Education Scholarship for study in Transportation Planning and Highway Safety, 1975-1976

MEMBERSHIP IN ORGANIZATIONS:

Institute of Transportation Engineers, 1974 to date

PUBLICATIONS AND PAPERS:

"Registration of Traffic Engineers in Oregon", ITE Journal, January, 1981