

TO: James L. App, City Manager
FROM: Meg Williamson, Interim Public Works Director
SUBJECT: Niblick Road Corridor Signal Synchronization – First Street to Creston Road
DATE: December 7, 2004

NEEDS: For the City Council to consider awarding a contract to inter-connect eight (8) signals along the Niblick Road Corridor from First Street to Creston Road.

- FACTS:**
1. The Niblick Road Corridor from First Street to Creston Road is now a four-lane roadway (two lanes each way) as of August 2004.
 2. In addition to the additional traffic lanes, two new signals were installed.
 3. These new improvements have changed the traffic flow within this corridor.
 4. With the changed traffic flow, it is proposed that the City Council consider engaging the services of a registered Traffic Engineer to synchronize the eight (8) traffic signals between First Street and Creston Road.

**ANALYSIS
AND**

CONCLUSION: Staff solicited a scope of work and fee proposals, to perform the work to synchronize the traffic signals along Niblick, from two firms who are currently on contract with the City on other projects.

Since the roadway has two lanes of traffic each way and with the addition of two new signals, the traffic pattern has changed. It is necessary that new traffic counts be performed, that turning movement counts be conducted at all intersections, and that speed studies be conducted along Niblick Road to determine the prevailing vehicle speeds. With this data, the eight signals would be programmed to optimize the cycle lengths for the morning, noon and afternoon peak traffic flow periods.

TPG Consulting (currently on contract to design a new signal at 24th and Vine) submitted a proposal to perform the signal synchronization work in the amount of \$15,200. ATE (currently on contract for the 13th Street Bridge project) submitted a proposal in the amount of \$28,475.

POLICY

REFERENCE: Adopted Capital Improvement Program General Plan

FISCAL

IMPACT: The City Council adopted a budget (200.910.5452.512) for the improvements at Niblick Road. There is a balance of about \$50,000 available to fund the work to synchronize the signals.

- OPTIONS:**
- a. Authorize the City Manager to engage the services of TPG Consulting to perform signal synchronization of eight (8) signals along Niblick Road from First Street to Creston Road in the amount of \$15,200.
 - b. Amend, modify, or reject the foregoing option.

Attachments (2)

- 1) Proposal from TPG Consulting
- 2) Proposal from ATE



November 16, 2004

Ms. Ditas Esperanza
Capital Projects Engineer
City of El Paso de Robles
1000 Spring Street
Paso Robles, CA 93446

SUBJECT: Niblick Road Traffic Signal Synchronization

Dear Ms. Esperanza,

TPG Consulting, Inc. is pleased to submit this proposal for Engineering Services for the Design of a Traffic Signal Coordination System for the eight (8) traffic signals on Niblick Road corridor between First Street and Creston Road. Our project team is rich in professional expertise and practical experience. We are confident that our experience with similar projects, coupled with the technical expertise of our project team will provide the background needed for this engagement.

We propose to conduct the following tasks to provide Paso Robles with a complete and comprehensive traffic signal coordination system that will fully meet the needs of the community:

- Review the proposed tasks and work products with City staff prior to commencement of work to establish baseline parameters.
- Gather all available mapping, as-built plans, traffic signal timing cards, etc. for each intersection, as well as the complete Niblick Road corridor.
- Field studies will be conducted to confirm the research data. Additional geometric information will be supplied as necessary for production of the signal coordination system.
- Conduct manual turning movement counts at each of the eight intersections along the corridor during A.M., Noon, P.M. and Off-Peak periods.
- Conduct Speed Studies on each segment of Niblick Road to determine the prevailing vehicle speeds. Such checks will be performed in conformance with the provisions of Section 627 of the California Vehicle Code.
- Code the roadway geometric information, traffic volumes, prevailing speeds, and other parameters into SYNCHRO signal timing software. Then export optimized signal timing program results and optimization options into a custom signal timing computer program to numerically/graphically establish the final cycle lengths, splits and offsets.

Visalia Office
222 N. Garden, Suite 100
Visalia, CA 93291
Tel 559.739.8072
Fax 559.739.8377

Fresno Office
470 E. Herndon, Suite 110
Fresno, CA 93720
Tel 559.439.4331
Fax 559.439.1142

San Luis Obispo Office
679 Monterey Street
San Luis Obispo, CA 93401
Tel 805.547.9498
Fax 805.547.9596

Irvine Office
3 Amargosa
Irvine, CA 92602
Tel/Fax 714.669.3799

Dallas Office
6807 Leameadow
Dorins, TX 75248
Tel 903.566.3150
Fax 903.566.3510

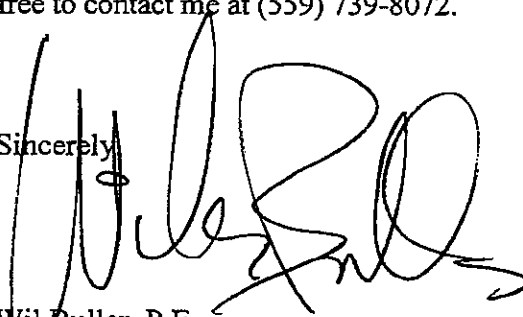
Ms. Esperanza
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- Prepare final signal timing programs for the A.M., Noon, P.M. and Off-Peak periods for each of the eight intersections on the Niblick Road corridor.
- Prepare a summary report containing the traffic volume, prevailing vehicle speeds, geometrics, proposed signal timing cards and numerical/graphical band widths for the eight intersections on the Niblick Road corridor.
- Implement the said final signal timing plans into the Niblick Road corridor traffic signal controllers using a laptop computer and BI Tran Systems, Inc. *Quickload* software. This final task will include field observations and such fine tuning as may be necessary to optimize the traffic signal coordination system.

The maximum, not to exceed cost, for the above work covering the eight (8) intersections on the Niblick Road corridor is \$15,200. No conflicts of interest exist in the provisions of these services. This proposal is valid for a period of 30 days.

Thank you for the opportunity to participate in this project. If you so desire, we would be pleased to discuss the details of the project with you. Should you have any questions or comments, please feel free to contact me at (559) 739-8072.

Sincerely,



Wil Buller, P.E.
Senior Civil Engineer

enclosure



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • FAX (805) 682-8509

Maynard Keith Franklin, P.E.
Richard L. Pool, P.E.
Scott A. Schell, AICP

September 16, 2004

04634P01.WP

Ditas Esperanza
Capital Projects Engineer
City of Paso Robles
1000 Spring Street
Paso Robles, CA 93446

NIBLICK ROAD SIGNAL SYNCHRONIZATION

Thank you for considering Associated Transportation Engineers (ATE) for the Niblick Road signal synchronization project. ATE has had extensive experience in signal work. There are 8 signals that are interconnected from Spring Street to Creston Road. In general, ATE proposes to collect the traffic counts required to develop timing plans for the A.M., Noon, P.M. and Off-Peak periods, develop the signal timing plans, and implement the timing plans. ATE will subcontract with BiTrans Systems for coding the signal timing plans into the system.

SCOPE OF WORK

ATE proposes to provide the personnel required and pay necessary expenses to produce the following work product:

1. Review project data and discuss project with City staff.
2. Gather existing mapping, as-built plans, etc. for the corridor. ATE will use the Niblick Road Restriping plans to determine the necessary distances and geometry for the signal timing program.
3. Collect A.M., Noon, P.M. and Off-Peak hour turning movement counts at each of the 8 intersections along the corridor for development of coordinated signal timing plans.

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Public Works Dept

4. Determine vehicle speeds on each segment of Niblick Road, either from data on file, or from radar speed surveys. It is expected that vehicle speeds will vary by time of day, due to the traffic turning movements at the high school.
5. Code geometry, distances, traffic volume data, and other parameters into SYNCHRO signal timing software and run initial timing program options.
6. Export initial signal timing options into the PASSER signal timing software and run timing program options to check/optimize cycle lengths, splits and offsets.
7. Prepare final signal timing programs for the A.M., Noon, P.M. and Off-Peak time periods.
8. Prepare summary report containing the traffic volume data and SYNCHRO & PASSER signal timing reports.
9. Implement the system signal timing plans. This task will require 2 days for an ATE Principal Engineer working with a Bitrans software engineers to code the timing plans into the system, field observe operations, and fine tune timing settings.

PERSONNEL

Richard L. Pool, PE will be the Principal in Charge and Dan Dawson will be project manager. Maynard Keith Franklin will assist with signal timing optimization and will be the field engineer in charge of implementing the signal timing programs. ATE will subcontract to BiTrans Systems to provide a software engineer for coding the signal timing plans into the system.

SCHEDULE AND FEES

ATE can begin the work upon authorization to proceed and complete the work in approximately 30 working days. Our fee for work will be **\$28,475**, which includes \$7,700 for traffic counts and speed surveys; \$13,725 for developing the signal timing plans; and \$7,050 for implementing the plans, field observations and fine tuning. Additional work will be completed based on time-and-materials when authorized by the City of Paso Robles. This proposal is valid for a period of 30 days. Payment will be due within 30 days of submittal of invoices for work completed during the course of the study.

We appreciate your consideration of ATE and look forward to beginning the project.

Associated Transportation Engineers

A handwritten signature in black ink, appearing to read "Richard L. Pool". The signature is stylized and cursive.

Richard L. Pool, PE
President

RLP/DLD

Attachment: ATE Fee Schedule (September 2004)