



Northeast Ohio Areawide Coordinating Agency

NOACA

1299 Superior Avenue

Cleveland, Ohio 44114-3204

(216) 241-2414

www.noaca.org

Request for Proposals (RFP) for a Signal Timing Optimization Program Pilot Project

Issue Date: March 21, 2016

Closing Date: April 21, 2016

NOACA is seeking a qualified person or firm to contract for consulting services for the signal timing optimization program pilot phase. The deadline for submittals is 12:00 NOON ET on April 21, 2016. Please read entire RFP for specific information and requirements.

CONTENTS

1. The Northeast Ohio Areawide Coordinating Agency (NOACA)	3
2. Background	3
3. Scope & Project Details	4
4. Cost	7
5. Qualifications	7
6. Procurement Timeline	7
7. Selection Procedures	8
8. Evaluation Criteria	9
9. Administration Procedures & Conditions	10
10. Questions	11
11. Submittals	11

1. THE NORTHEAST OHIO AREAWIDE COORDINATING AGENCY (NOACA)

The Northeast Ohio Areawide Coordinating Agency (NOACA) is a Cleveland-based transportation and environmental planning organization that serves as the metropolitan planning organization (MPO) and designated areawide water quality management agency for the counties of Cuyahoga, Geauga, Lake, Lorain and Medina in Ohio.

In these capacities it:

- Works with other organizations to help address northeast Ohio's transportation, air quality, and water quality needs.
- Conducts metropolitan planning for various modes of transportation, including vehicles, freight, transit, bicycle, pedestrian, etc., while considering the transportation system's impact on the environment and land use.
- Prepares the region's long-range transportation plan and short-range transportation improvement program, which is the region's capital budget for federally funded transportation projects.
- Conducts studies that address congestion, improve safety and strengthen community livability.

The vision of NOACA is as follows: NOACA will **STRENGTHEN** regional cohesion, **PRESERVE** existing infrastructure, and **BUILD** a sustainable multimodal transportation system to **SUPPORT** economic development and **ENHANCE** quality of life in Northeast Ohio.

NOACA is directed by a 45-member Board of Directors, representing the City of Cleveland and all five NOACA counties and their communities, plus transit agencies, the Northeast Ohio Regional Sewer District (NEORS), the Cleveland-Cuyahoga County Port Authority, the Ohio Environmental Protection Agency (Ohio EPA) and the Ohio Department of Transportation (ODOT).

The NOACA region is home to 2.1 million people and more than 150 units of government. The region is anchored by several urban core cities, with the largest being Cleveland.

More information about NOACA is available on our website at www.noaca.org.

2. BACKGROUND

Today, there are more than 272,000 traffic signals in the United States. They play an important role in the transportation network and are a source for significant frustration for the public when not operated efficiently. As the era of freeway building draws to a close, urban arterials are being called upon to carry more users than ever before at a time when the users of these facilities are growing more complex (older drivers, more distractions, larger vehicles, etc.) and the demand for such use continues to outpace transportation supply. Traffic signal timing efficiency degrades over time as volume patterns and magnitude change, development occurs or infrastructure changes. Outdated or poor traffic signal timing accounts for a significant portion of traffic delay on urban arterials, and traffic signal optimization is one of the most cost-effective ways to reduce emissions, improve mobility, reduce delays and improve corridor safety.

The solution to inefficient traffic signal timing is to develop a signal timing optimization program (STOP). NOACA will use (or hire) a consultant to implement signal timing corridor pilot projects to provide technical assistance to Northeast Ohio agencies to help improve the safe and efficient operation of traffic signal systems and corridors.

NOACA will administer and manage this program, but the projects will not be implemented without the approval of the agencies that own, operate and/or maintain the project signals. NOACA will work closely with the project sponsors and consultants to complete the STOP projects successfully.

3. SCOPE & PROJECT DETAILS

NOACA is seeking proposals from qualified persons or firms to contract for consulting services to provide technical assistance to Northeast Ohio agencies to help improve the safe and efficient operation of certain traffic signal systems and corridors. NOACA's role will be to provide streamlined program administration, project management and facilitation of inter-agency communication and coordination. The STOP aims to provide high-quality technical assistance and project management in a cost-effective manner.

The STOP pilot will consist of two corridors:

- Cedar Rd. (from S. Green Rd. to Lander Rd., 2.9 miles, 13 signalized intersections)
- Pearl Rd. (from W 130th St. to Brookpark Rd., 4 miles, 20 signalized intersections)

The goals of the STOP are to help Northeast Ohio achieve the following outcomes:

- I. **Goal: Improve air quality** through decreased motor vehicle emissions and fuel consumption.
 - a. Develop and implement signal coordination plans (a.m., p.m. and/or midday) that reduce travel time and delay.
 - b. Develop and implement signal coordination plans that reduce starts and stops of vehicles and promote uniform travel speeds.
 - c. Develop and implement transit signal priority plans to improve speed and reliability of transit through reducing the number of vehicles on arterials.
- II. **Goal: Improve reliability** and predictability of travel along arterials.
 - a. Collect peak period turning movement counts at all study intersections, including pedestrian and bicycle counts.
 - b. Develop specialized timing plans to address mobility issues during school start and end times, special events, construction projects, etc.
 - c. Develop and implement flush plans for arterials that are used as diversion routes in the event of freeway incidents, in conjunction with other incident management initiatives.
- III. **Goal: Improve the safety** of motorists, pedestrians and bicyclists.
 - a. Collect pedestrian and bicyclist volume data.
 - b. Develop and implement signal coordination plans that promote uniform travel speeds, possibly reducing rear-end collisions.
 - c. Review existing pedestrian crossing times and bicycle timings at intersections to be coordinated, and update them to current Ohio Manual of Uniform Traffic Control Devices (OH MUTCD) and/or federal standards.
 - d. Review crash history for patterns that can be corrected through signal timing coordination and recommend any changes as necessary.

The focus of this program is to accomplish these goals by implementing optimized signal timing plans, low-cost equipment repairs or additions that have direct impact on safety or operational

improvements of the signal system (e.g., vehicle detection, pushbuttons, GPS time clock). The program focus is on making more efficient use of the existing signal equipment and addressing needed repairs. Although all-inclusive, high-cost signal equipment upgrades are not the focus of this program, the consultant should evaluate the existing equipment for any potential needed upgrades.

The primary purpose of the pilot program is to demonstrate the high benefit to cost ratio, relative to other types of roadway improvements, and grow the program in the future.

Consultant tasks will include the following:

1. Kickoff meeting

The successful consultant shall hold the meeting within 20 working days of the effective date of the agreement at 1299 Superior Avenue, Cleveland, Ohio 44114. Minutes of the meeting shall be submitted to NOACA for approval within five (5) working days. The kickoff meeting will include a discussion of expectations for the project. The agenda for the meeting will be developed by the NOACA project manager.

2. Develop project management plan

The project management plan (PMP) is the main planning document that describes how the project will be managed. The PMP is a living document and should be updated throughout the project. At a minimum the plan should contain:

- a. Project overview
- b. Scope
- c. Methodology
- d. Schedule
- e. Budget
- f. Project team
- g. Risk management
- h. Data collection plan
- i. Communication/public involvement

The completed PMP should be submitted to NOACA within two (2) months of contract execution.

3. Data collection

- a. Conduct field inspection of all signalized intersections
- b. Conduct turning movement counts using Miovision or equivalent equipment and processing, where recent turning movement counts do not exist
- c. Obtain recent turning movement counts
- d. Obtain traffic signal as-built drawings
- e. Obtain signal timing plans
- f. Obtain three-year crash history (from NOACA)

The data collection task should be completed within four (4) months of contract execution.

4. Review data from Task 3 and document any needed equipment repairs or additional equipment needs that would impact the ability to improve signal timings for efficiency or safety based on the following:

- a. SAFETY: Coordinate with the local safety forces to review crash data to determine if any crash patterns could be improved via signal timing adjustments and/or minor striping or lane configuration adjustments (e.g., adding a turn lane, adjusting alignment of existing lanes, advance stop bar placement, high-visibility crosswalks)
- b. PEDESTRIAN SAFETY: Review all signal timings with regard to safe pedestrian crossing. Consider if a slower pedestrian walking speed should be accommodated at certain locations.
- c. PEDESTRIAN PRIORITY: Identify any signals in the study area that should prioritize pedestrian travel or improve pedestrian safety by adjusting the signal phasing (e.g., Leading Pedestrian Interval, Lagging Left Turns or other strategies outlined in the NACTO Urban Street Design Guide, NHI Designing for Pedestrian Safety training).
- d. BICYCLE: Determine if any intersections are part of a bicycle route or otherwise should be sensitive to bicycle needs. Review these intersections for bicycle detection capabilities and clearance intervals that are appropriate for bicycle travel speeds.
- e. TRANSIT: Coordinate with transit agencies to consider any changes they have planned for, such as consolidated stops, moving stops to the far side of an intersection, transit signal priority and any other known issues with existing signal operations.
- f. REPAIRS: Broken equipment (e.g., vehicle detection, vehicle and pedestrian signal heads, pushbuttons, signal coordination equipment).
- g. IMPROVEMENTS: Missing equipment (e.g., pedestrian crosswalks and equipment, signal coordination equipment, protected turn signals).
- h. WARRANTS: Use HCM 2010 Warrant procedures to justify removals of signals that are no longer needed.
- i. COST: Develop cost estimates for proposed equipment upgrades and review with NOACA and the municipalities involved.

The consultant should include, at a minimum, two public participation activities during this task.

5. Develop a signal timing plan

- a. Use Synchro/SimTraffic software to assess existing conditions. These results will be the baseline for calculating benefits of the signal timing adjustments.
- b. Use Synchro/SimTraffic software to develop optimized signal timing plans that require no equipment upgrades or lane reconfigurations.
- c. Use Synchro/SimTraffic software to develop optimized signal timing plans that require minor equipment upgrades and/or decommissioned traffic signals (if applicable, per Task 4).
- d. Use Synchro/SimTraffic software to develop optimized signal timing plans that require minor equipment upgrades and/or decommissioned traffic signals and/or minor striping adjustments (if applicable, per Task 4). Any recommendations for additional turn lanes must be justified by applicable warrant procedures beyond the software analysis.

Tasks 4 and 5 should be completed within nine (9) months of contract execution.

6. Conduct meeting to review proposed improvement options with NOACA and the municipalities involved.

7. Implement the selected proposed improvements identified in Task 6 and field adjust the timings.
 - a. Coordinate timing plan implementation, equipment upgrades and/or minor striping adjustments with local municipalities.
 - b. Fine-tune the timings based on field observation.

The consultant should include, at a minimum, two public participation activities in this task.

8. Video Recording

- a. Video record real travel times for each corridor by driving the corridor during peak times, before and after signal timing adjustments are made.
- b. Edit the video to produce a simple comparison of before/after conditions, demonstrating the travel time and number of stops benefits.

9. Before/after analysis

- a. Prepare final report documenting Tasks 1 through 8.
- b. Include vehicle delay, number of stops, travel time, emissions and benefit/cost ratio in the before/after measures of effectiveness shall.
- c. Present final report including before and after analysis to the Board of Directors.

Tasks 6 through 9 should be completed within 12 months of contract execution.

4.0 COST

Proposed budget must be no more than one page and include detailed project costs by task, staff member and estimated hours. **Budget will not be considered part of the selection criteria.** Actual compensation is subject to contract negotiation. **Please submit as a separate PDF file in your email submission.**

5.0 QUALIFICATIONS

The consultant team must demonstrate experience with the tasks included in the scope of services and have valid prequalification status from ODOT for the following:

- Basic Signal Design/Traffic Signal System Design
- Bicycle Facilities & Enhancement Design
 - NHI Designing for Pedestrian Safety Course Completion
- Complex Roadway Design
- Safety Study
- Traffic and Electrical Inspector

6.0 PROCUREMENT TIMELINE

NOACA's process and timeline for selection of a consultant are as follows:

April 21, 2016, 12:00 noon: Deadline for Submittals

Submittals must be received at NOACA by the above deadline. Digital proposals are to be submitted via email to procurement@mpo.noaca.org, but NOACA assumes no responsibility for formatting or transmission errors. Submittals received after the deadline will not be considered. Please reference "STOP RFP" in the email subject line.

April 21-26, 2016: Consideration of Submittals and Selection of Interview Candidates

An evaluation team will select candidate(s) from submittals received for interview(s). This process will include review of submittals, references and other information as necessary, as well as rating of submittals.

May 2-3, 2016: Interviews with Selected Candidates (If Needed)

Interviews will provide an opportunity for NOACA and selected candidates further to gauge their fit and ability to work with each other.

Please ensure that the appropriate representative, including the designated project manager, will be available to attend an interview if selected as a finalist.

May 2016: NOACA Committee Review Process

June 10, 2016: Approval of Contract by NOACA Board of Directors

7.0 SELECTION PROCEDURES

NOACA will directly select a consultant based on the Letter of Interest (LOI) and interview. Firms that are within 10 points of the top-scoring firm will be interviewed. The requirements for the LOI and the consultant evaluation are contained in this document.

Firms interested in being considered for selection should respond by submitting one (1) copy of the Letter of Interest electronically to procurement@mpo.noaca.org by **12:00 noon on the response due date** listed above.

Responses received after 12:00 noon on the response due date will not be considered.

Please ensure that the appropriate representative, including the designated project manager, will be available to attend an interview (May 2-3, 2016) if selected as a finalist. Interviews may occur via conference call.

7.1 Requirements for Letters of Interest

- A. Instructions for Preparing and Submitting a Letter of Interest
 - 1. Provide the information requested in the Letter of Interest Content (Item B below), in the same order listed, in a letter signed by an officer of the firm. Do not send additional forms, resumes, brochures or other material.
 - 2. The Letter of Interest shall be limited to twelve (12) 8½" x 11" single-sided pages.
 - 3. Please adhere to the following requirements in preparing letters of interest:
 - a. Please use a minimum font size of 11-point and maintain margins of 1" on all four sides.
 - b. Page numbers must be centered at the bottom of each page.
 - c. Use 8½" x 11" paper only.

B. Letter of Interest Content

Firm & Staff:

- **Team Personnel:** List the project manager and other key staff members, including key sub-consultant staff. Include personnel for important disciplines, staff members who will be responsible for the work and the project responsibility of each. Address the experience of the key staff members on similar projects and the staff qualifications relative to the selection of sub-factors noted. Provide resumes of each firm/team member along with a list of major services offered by each team member.
- **Firm Experience:** Provide detail of the firm’s qualifications as well as success with projects of similar programs, budgets and/or clients. Describe the capacity of your staff and their ability to perform the work in a timely manner, relative to present workload, and the availability of the assigned staff. List significant sub-consultants, their current prequalification categories and the percentage of work to be performed by each sub-consultant.

Project Approach:

- Provide a description of your project approach, not to exceed four pages. Address your firm’s: 1) Technical approach; 2) Understanding of the project; 3) Your firm's qualifications for the project; 4) Innovative ideas; 5) Your firm's project specific plan for ensuring increased quality, reduced project delivery time and reduced project costs; and 6) Schedule for completing the tasks.

The above items must be included within the 12-page body of the LOI. Remaining space within the 12 pages may be used to provide additional information concerning general qualifications.

8.0 EVALUATION CRITERIA

Criteria	Weight %
Project Approach: Exhibit 1, Note 3	50
Demonstrated experience with similar projects-Exhibit 1, Note 2	25
Qualifications of Staff-Exhibit 1, Note 1	25
Total	100

Exhibit 1 - Consultant Selection Rating Form Notes

1. **Qualification of Staff:** The proposal must demonstrate that the consultant has the organizational capability and experience to complete the project. Identify the project team members, the role of the prime consultant and any subconsultant(s). The rankings and scores will be based on the staff’s experience on similar projects and past performance for other agencies. Differential scoring will consider the relative importance of the project manager’s role in the success of a given project. The project manager’s role in a simple project may be less important than for a complex project, and differential scoring will reflect this, with higher differentials assigned to projects that require a larger role for the project manager.

2. Demonstrated Experience with Similar Projects: The proposal must demonstrate each consultant's experience and established competence related to this procurement. Each consultant shall be ranked, with the highest-ranked consultant and proposed subconsultants receiving the greatest number of points, and lowest-ranked consultant and proposed subconsultants receiving commensurately lower scores. The rankings and scores will be based on each firm's experience on similar projects and past performance for NOACA and other appropriate agencies. The selection team will consider documented performance ratings if available, and consult other agencies as appropriate. The use of documented ratings shall place emphasis on the specific type of services requested.

3. Project Approach: Each consultant shall be evaluated based on the approach presented in the proposal to complete the project. Factors for evaluation shall include project schedules, demonstration of understanding for the project, methods and strategies to best accomplish the project, creativity, viability and implementation. Proposals should clearly describe how each task or deliverable will be completed.

9. ADMINISTRATIVE PROCEDURES AND CONDITIONS

A. It is the policy of NOACA, as required by the Federal Highway Administration (FHWA), that Disadvantaged Business Enterprises (DBEs) shall have equal opportunity to compete for contracts and/or subcontract with another consultant to perform the requested services. The consultant must use its best efforts to solicit from and to use DBE subcontractors with meaningful minority groups and female representation among their employees. The consultant must ensure that the DBE subconsultant(s) is performing a "commercially useful function" as defined in CFR 26.55. **This agreement includes a DBE Goal of 12.1%. At least this percent of the agreement shall be subcontracted to certified DBE firms. In the event the consultant is unable to meet the DBE goal placed on this project, however, a good faith effort must be demonstrated that documents the effort made to secure the services of DBE subcontractors. This documentation must be included with the proposer's submittal, which is not part of the 12-page limit.** The percentage goal may be met if the awarded consultant is DBE certified. Consultant proposals that do not include the minimum percentage of DBE participation noted above or that cannot demonstrate good faith efforts to include a DBE **WILL be rejected**. If selected, the consultant's price proposal shall reflect the required level of DBE participation or provide an explanation of how the requirement will be met in later phases of the work.

B. Consultants agree not to discriminate against any employee or applicant for employment because of race, color, religion, age, creed, sex, sexual orientation or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultants further agree to comply with all requirements of Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d et seq., 49 C.F.R. Part 21.

C. All proposals received by NOACA in response to this RFP shall remain valid for 90 days from the date of submittal.

D. An RFP does not constitute an offer or a contract. No contract may be awarded without a resolution by the NOACA Board of Directors.

E. NOACA reserves the right to cancel or reissue the RFP or to revise the timeline at any time. NOACA reserves the right to reject any and all proposals and to waive minor irregularities in the proposal process. NOACA may accept any proposal if such action is believed to be in the best interest of the agency.

F. NOACA is not liable for any cost incurred by the proposer prior to execution of a contract.

G. The contract between the successful proposer and NOACA shall include all documents mutually entered into, specifically including the contract instrument, the RFP and the response to the RFP. The contract must include, and be consistent with, the provisions stated in the RFP.

H. The prime consultant or system provider will be required to assume the responsibility for all services offered in the proposal whether or not directly performed by the prime consultant. Further, the prime consultant will be the sole point of contact for NOACA with regard to contractual matters.

I. The consultant project team shall be approved by NOACA. NOACA must approve any changes in the project team.

J. Any award of contract will be to the consultant or contractor that provides the highest value relative to costs.

K. Consultants must show proof of liability insurance.

L. NOACA reserves the right to cancel or reissue the RFP or to revise the timeline at anytime.

Suspended or Debarred Firms

Firms included on the current federal list of firms suspended or debarred are not eligible for selection.

10. QUESTIONS

For questions regarding the RFP, please contact procurement@mpo.noaca.org. All questions must be submitted by email and be submitted by noon on April 18. All answers will be publicly posted on www.NOACA.org.

11. SUBMITTALS

Submissions must be made electronically by **12:00 noon on Friday, April 21, 2016**, using a PDF or Microsoft Office format. To submit the proposal, please email the proposal to procurement@mpo.noaca.org. If the proposal is a large file (greater than 65MB), please instead request the File Transfer Protocol (FTP) site and password for posting the proposal materials.

Submit the proposed budget to procurement@mpo.noaca.org **separately labeled as STOP Program Pilot Project Cost Proposal**. If submitting by mail, submit proposed budget in a **separately sealed envelope**.

NOACA supports environmental consciousness and discourages mailed submissions for this RFP; however, for material that must be mailed, use this address:

Susanna Merlone
Senior Director Financial Planning and Performance Management
Northeast Ohio Areawide Coordinating Agency
1299 Superior Ave.
Cleveland, OH 44114