

July 6, 2010

To: Local Governments and other interested agencies in the SPC Region

Subject: Request for Projects-Regional Traffic Signal Program, 2011 Cycle

SPC anticipates that with the July 26th adoption of the 2011-2014 Transportation Improvement Program it will receive funding for the second cycle of the Regional Traffic Signal Program. The Southwestern Pennsylvania Commission (SPC) is pleased to invite you to submit applications for the second cycle of the Regional Traffic Signal Program. Successful applicants will receive assistance with traffic signal retiming and other improvements that will result in optimized operations. There are two types of traffic signal projects that are included in the program:

- 1) Signals In Coordination or "SINC" projects involve work which results in implementation of new timing and coordination plans for signals that are properly equipped; and
- 2) Signals In Coordination with Equipment Upgrades or "SINC-UP" projects involve work which results in upgrading traffic signal equipment that has a direct impact on optimized operations as well as implementation of new timing and coordination plans. "SINC-UP" projects could also involve removing traffic signals that are no longer warranted if removal results in more efficient operations.

The Program Guidelines and Application Instructions document as well as application downloads for the program (September 10, 2010 submission deadline) can be found at:

http://www.spcregion.org/trans_ops_traff.shtml

Information on projects being advanced in the first cycle of funding can be found at:

http://www.spcregion.org/trans_ops_traff2.shtml

SPC appreciates your interest in this solicitation and looks forward to receiving your applications. Please feel free to contact Domenic D'Andrea with any questions (412-391-5590 ext. 341) or at ddandrea@spcregion.org

Sincerely,

Charles M. DiPietro
Transportation Planning Director

Southwestern Pennsylvania Commission (SPC) Regional Traffic Signal Program Guidelines and Application Instructions

1. Overview

Funding for the Regional Traffic Signal Program is anticipated from the federal Congestion Mitigation Air Quality (CMAQ) Program with adoption of the 2011-2014 Transportation Improvement Program that will be effective October 1, 2010. The CMAQ Program provides funds for transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards for ozone, carbon monoxide, and particulate matter. More details about the federal CMAQ program can be found at: <http://www.fhwa.dot.gov/environment/cmaqpgs/index.htm>

2. Introduction

The Southwestern Pennsylvania Commission (SPC) is the cooperative forum for regional collaboration, planning, and public decision-making. The Commission serves as the official Metropolitan Planning Organization (MPO) for a 10-county region including the City of Pittsburgh and the counties of Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington, and Westmoreland. SPC's Regional Traffic Signal Program will be assisting local governments with implementing projects that will optimize the operations of traffic signals throughout the region.

Traffic signal coordination is a cost effective way of reducing vehicle emissions, improving mobility, and enhancing safety on the region's arterials. There are approximately 2,650 traffic signals in the Southwestern Pennsylvania region. It is estimated that over 75% of these signals have either retiming/coordination needs or equipment needs as well as retiming/coordination needs.

SPC anticipates that up to \$4,000,000 in federal funds could be available from the 2011-2014 Transportation Improvement Program to implement multiple traffic signal projects.

3. Goals of the Regional Traffic Signal Program

The goals and objectives of the Regional Traffic Signal Program are to provide the necessary funding, high quality training, technical assistance and streamlined management in order to facilitate implementation of optimized traffic signal systems through traffic signal improvements along corridors in the Southwestern Pennsylvania

region. The results of these corridor improvements would be improved safety, reduced fuel consumption, reduced vehicle stops, and reduced emissions.

4. **Project Types**

Optimizing the operations of traffic signals will be accomplished through two types of projects within the Program:

- 1) Regional Signals In Coordination (SINC) projects; and
- 2) Regional Signals In Coordination with Equipment Upgrades (SINC-UP) projects.

These projects are described as follows:

- **Regional Signals in Coordination (SINC) Projects:** SPC plans to launch a number of SINC projects providing funding and technical assistance to agencies that own, maintain, and operate traffic signals in the SPC region. This technical assistance will include improving traffic signal coordination and optimization through simulation modeling. Proposals for SINC projects involving two or more signals shall involve signals that have controller clocks that can be synchronized to a common reference (via interconnect, GPS, etc.) and are currently running in free operation or whose coordination plans have not been updated in the past three years. If this is not the case, and signals are not adequately equipped, applicant should consider applying for SINC-UP project instead of a SINC project. In addition to receiving requests for projects, SPC and its planning partners will target and select key arterial corridors in the region where SINC projects could be beneficial based on the data available. SPC's consultant tasks will include:
 - Field Reconnaissance and Data Collection: Field reconnaissance to inspect and verify field conditions and collect information on the study area required for capacity analyses. Turning movement counts during typical weekday and/or weekend peak period conditions.
 - Capacity analysis of existing conditions utilizing SYNCHRO/SIM Traffic and Highway Capacity Software (HCS). Based on the above analyses of existing conditions, the consultant will recommend short-term operational improvements such as revised signal phasing, optimized signal timings, and offsets, additional signal coordination, revised pavement markings, and revised signage. Another capacity analysis of optimized existing conditions incorporating these short term operational improvements shall also be completed.
 - A review of the accident history.

- Draft report issued.
 - Implementation and Evaluation: Assistance with implementation of new settings and timings, fine-tuning of timings in the field, recording any changes, and monitoring effectiveness of changes. Activities will include coordinating implementation with local governments and electrical contractors.
 - A final report will be prepared to include a summary of the results of the above tasks. The report will include incorporation of comments received and measures of effectiveness obtained through Synchro's built-in calculations of delay, number of stops, travel time, and emissions. The associated benefits related to these factors and the proposed operational improvements will be documented in the report. The report will also include recordation of final phasings, timings, offsets, coordination data, and any other changes on marked-up signal permit drawings.

- Regional Signals In Coordination with Equipment Upgrades (SINC-UP) Projects: SINC-UP projects provide additional support from SPC and its planning partners to agencies that own, maintain, and operate traffic signals in the SPC region. These projects implement minor traffic signal equipment upgrades that are required in order to improve traffic signal coordination and optimization. Similar to SINC projects, SPC will provide the traffic engineering support listed above (traffic counts, analyses, timing/coordination data). Preliminary engineering and design of these projects will be completed by SPC's engineering consultant. Construction of these projects will be overseen and managed by the Pennsylvania Department of Transportation. Funding will be transmitted via a reimbursement agreement between SPC and the Pennsylvania Department of Transportation (PennDOT). Design and construction reviews will be coordinated between SPC and PennDOT. Eligible traffic signal equipment upgrades will be limited to controller, communication, signal indications and other electrical components that will have a direct result in optimizing operations. Eligible projects may include traffic signal work scope that would improve progression and the operation of the signalized intersection while not impacting, disturbing, or modifying pedestrian usability such as:
 - A. Modifications to traffic signal timings.
 - B. Modifications to traffic signal phasing.
 - C. Replacement or modifications to traffic signal coordination equipment and cables.
 - D. Replacement or modifications to traffic signal controllers, controller cabinet assemblies, electrical service and related electronic

equipment.

- E. Replacement of incandescent vehicular and pedestrian signals with LED Module vehicular and pedestrian signals.
- F. Replacement or modifications to pavement markings on the roadway.
- G. Replacement or modifications to vehicular detectors and associated hardware.
- H. Replacement or modifications to traffic control signage
- I. Replacement or modifications to electrical and communication conduit and junction boxes that do not impact, disturb, or modify pedestrian usability.
- J. Replacement or modifications to traffic signal electrical cabling.
- K. Removal of existing signal installations which are no longer warranted.
- L. In-kind replacement or repair of existing sidewalks and accessible ramps only to the extent that is necessary due to the above mentioned work (areas must be less than 100 linear feet and less than 500 square feet).
- M. Maintenance and protection of traffic and other incidental items related to the above work.

Due to the fiscal constraints of the program, SINC-UP projects will not include the following signal scope items at this time:

- A. Relocation or replacement of traffic signal pole or mast structures.
- B. Signalizing intersections which are currently unsignalized.
- B. The addition of pedestrian features to an intersection where none currently exist (e.g., new sidewalks or accessible ramps where none currently exist; new pedestrian signals where none currently exist).
- C. Roadway widening.
- D. Work which will permanently impact, disturb, or modify pedestrian usability.
- E. Work which involves new right-of-way or major utility considerations.
- F. Funding of complete replacement of signal infrastructure (unless otherwise authorized by project selection committee).

Successful applicants will be required to provide minimum local match funding of 20% of total project costs. For both SINC and SINC-UP projects, tasks performed by local agencies using either in-house staff or outside contractors can be utilized by successful applicants toward achieving local match requirements. Tasks such as implementing new timing plans, assistance with traffic control, and installing new equipment could be eligible.

Allegheny County Low Interest Loan Program-Through the Authority for Improvements in Municipalities (AIM), Allegheny County is able to provide a low-interest loan to assist with the 20% match required for SINC-UP projects. The loans will be at a fixed rate for terms of up to five years. The status of 2010-2011 AIM funding for this program is uncertain at this time.

When applying, please indicate if you are interested in the AIM low interest loan program in Section 5 of the application. Allegheny County will only fund projects in Allegheny County as selected by the Southwestern Pennsylvania Commission.

5. Eligibility

Funding is available for areas that do not meet the National Ambient Air Quality Standards (nonattainment areas) as well as some former nonattainment areas that are now in compliance (maintenance areas). These areas generally include local governments that own and operate traffic signals in nine (9) of the counties within the SPC region (Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington, and Westmoreland counties). Local governments within these areas are eligible to apply to the program. Other public agencies within these areas, such as transit agencies and councils of government, are also eligible to apply if authorized (in writing) to act on behalf of the local governments that own and operate traffic signals within the proposed project limits. Multi-municipal coordination and joint applications are encouraged.

6. Program Requirements

Within a time frame designated by SPC, recipients will be required to enter into a Local Project Agreement with SPC to waive all claims and indemnify SPC and others against any third-party claims that may result from the agency's participation in the program. A sample agreement is attached for preliminary review by your agency. SPC's typical indemnification and insurance requirements with our consultants are available by request for preliminary review by your agency.

Prior to commencement of any work the executed Local Project Agreement shall:

- 1) Indicate the recipient's commitment to their responsibility for local match funding share required for the project; and
- 2) Indicate scope, schedule, budget and each agency's responsibilities for the project.

After completion of the project, recipients will be required to report the benefits of the project to their governing board and SPC, based on data that SPC provides in a final report.

7. Benefits of Participation

Retiming traffic signals is one of the most cost effective ways to alleviate congestion, eliminate unnecessary delays, improve traveler safety, and reduce customer complaints. Across the U.S., the results prove that signal timing is a very cost effective measure, providing benefit-cost ratios as high as 40:1. Benefits include reductions in travel time, fuel consumption, and mobile source emissions.

The regional program is set up to ease the burden on local government in terms of time and expertise required to optimize traffic signals by providing engineering consultants to perform as much of the work as possible. In addition to basic signal coordination services provided by SINC projects, agencies will also receive all of the new traffic data that was collected. In addition to the above benefits, SINC-UP projects provide the opportunity to upgrade specific signal equipment that will enable retiming of traffic signals in order to achieve optimized operations.

8. Anticipated Schedule for Selecting Projects from Application Requests

Receive all project applications	September 10, 2010
Review/rank applications by SPC Signal Committee	September 10-October 10, 2010
Select SINC and SINC-UP projects	October, 2010

9. How To Apply

Electronic filing of the application is preferred. This can be done by pressing the "SUBMIT" button at the end of the application which will allow you to send documents via e-mail. The "CLEAR" button will erase all data that you have entered onto the application, while the "SAVE" button will allow you to save any data that you have entered onto the application. Any electronic attachments should be submitted in .pdf format. An original signature page (Section 6) with signatures should be mailed separately to the address below. **Note that a completed application, with all attachments, as well as an original signed signature page (Section 6) must be received at SPC offices by 2:00 p.m. on Friday, September 10, 2010.** If hard copies are submitted, submit five (5) hard copies of each completed application, including all attachments. **Applications submitted after the above time and date will not be considered.** Applications can be downloaded from SPC's website at:

http://www.spcregion.org/trans_ops_traff.shtml

Applications can be submitted electronically to ddandrea@spcregion.org.

Note that there are separate applications for SINC projects and SINC-UP projects.

Applications and all inquiries should be submitted to the Program Coordinator at the address shown below. For telephone inquiries, call 412-391-5590, ext. 341 or e-mail ddandrea@spcregion.org.

Domenic A. D'Andrea
Coordinator, Regional Traffic Signal Projects
Southwestern PA Commission
425 Sixth Avenue, Suite 2500
Pittsburgh, Pennsylvania 15219-1852

10. Evaluation Factors

SPC staff will conduct an initial screening of all applications received by the above deadline to determine whether the eligibility requirements have been met. Applications that meet eligibility requirements will be reviewed and assessed by a selection committee based on potential to decrease delay, enhance mobility, improve signal system efficiency and improve air quality. Corridor evaluation factors that may be considered in the selection process include existing delay, number of intersections being coordinated, average daily traffic, transit ridership, truck traffic, accident rates, and proposed local match funding. Successful applicants will be notified in **October, 2010**.

Application Instructions for SINC and SINC-UP Projects

Section 1: Project Name

Provide a name for the project (required).

Section 2: Applicant Contact Information

Provide primary applicant's contact information: contact person's name, position title, agency, address, phone number, fax number, and e-mail address (all required).

Section 3: Other Participating Agencies

Indicate if application is being submitted on behalf of other agencies or local governments by checking "Yes" or "No" (required).

If application is being submitted on behalf of other agencies or local governments, provide the contact person's name, position title, agency, phone number, fax number, and e-mail address for each additional agency or local government.

Section 4: Project Information

- Section 4a: Check the peak periods proposed for signal coordination. Check all that apply. Checking all scenarios will not adversely affect the applicant's chances of receiving funding.
- Section 4b: For the project's physical limits, either check "One Arterial Corridor in One Jurisdiction" or "One Arterial Corridor in Multiple Jurisdictions". Separate applications must be filed for each corridor being proposed for improvements.
- Section 4c: Provide a general project description for the proposed project.
 - Include information on number of intersections, general scope of work, and goals and objectives of the project.
 - Attach a map of the project, showing project limits, jurisdictional boundaries, location of signalized intersections and any existing signal coordination system.
 - Indicate the county or the counties where the proposed project is located.
 - Indicate the major street's (corridor's) name.
Indicate whether or not the major street is a Congestion Management Program (CMP) Corridor. To find out more about CMP corridors, visit http://www.spcregion.org/trans_cong_sd.shtml

- Section 4d: Provide the total number of signalized intersections in the proposed project. In addition, in the first column, provide the minor street that intersects the major corridor for each intersection within the proposed project. In the second column, provide the following:
 - For SINC applications, provide the local agency that has operating and maintenance responsibility for the traffic signals for each intersection.
 - For SINC-UP applications, provide the potential scope items at each intersection using the letter codes shown in the application (**Letter code “A” is required for all intersections**). In addition, in the space provided at the end of this section, provide a description of any additional construction scope not covered by the letter codes.

- Section 4e: Please check any current data that is available from the applicant(s). Information such as-built traffic signal permit drawings, current timing sheets/coordination plans, any recent traffic studies that recommend retiming and recent traffic counts would be useful. Do not attach the information at this time.

- Section 4f: Please indicate whether or not all of the traffic signals that will be retimed as part of the proposed project have clocks that can be automatically synchronized to a common time reference (via interconnect, GPS, radio, etc.). If not, you may want to strongly consider filling out a SINC-UP application (instead of a SINC application) in order to apply for any required equipment. It is suggested that you consult with your signal maintainer.

- Section 4g: Please indicate “Yes” if either of these statements are true:
 - All of the traffic signals that are proposed for retiming are currently running in free operation.
 - All of the traffic signals that are proposed for retiming are coordinated, but it has been at least three (3) years since the last time the coordination plans were updated.

It is suggested that you consult with your signal maintainer.

On SINC applications, at the end of this section, please describe in the space provided any additional services being requested beyond those that are conducted for typical signal retiming/coordination projects, such as cut-through traffic and high volume unsignalized intersections. If identified, please include the location(s) along the major street.

- Section 4h (appears in SINC-UP applications only): Provide a preliminary cost estimate to implement the proposed project on Lines 1 and 2. It is suggested that you consult with your signal maintainer, public works staff, or engineer. If project is selected, this estimate will be reviewed by SPC staff and

the selection committee. A preliminary estimate of total costs should be provided for engineering and design (Line 1) and construction (line 2). Any previous dollars spent by the applicant on each of these project costs should be documented in the second column. Other project costs and totals will be automatically calculated on lines 3 through 6 based on figures entered on lines 1-2.

Section 5: Funding

This program requires a minimum 20% local match of total costs that would be the responsibility of the applicant(s).

- For SINC applications, indicate your anticipated sources of local match (check all that apply).
- For SINC-UP applications, indicate your anticipated sources of funding in the first column and the proposed funding amounts in the second column. At the end of this section, the proposed local match percentage will be automatically calculated by dividing the total local match funding amount by Total Project Costs (Line 4, first column of Section 4h). At the end of this section, if applicant(s) are local governments in Allegheny County and are interested in obtaining more information on a County low interest loan program that could assist with local match, indicate “Yes”. If not interested, indicate “No”. Status of 2010-2011 AIM funding for this program is uncertain at this time.

Section 6: Demonstration of Support, Funding, and Application Signatures

The primary applicant, as well as other applicants documented in Section 3 of the application, should review the statement, and if in agreement, sign and date the application. Other applicants can also provide letters of support for the application in lieu of signing. **Also attach executed local government resolutions and/or agreements committing local match share of Total Project Costs.**

Additional Information Sheet (optional)

If you need more space to provide any additional information regarding your proposed project, please utilize and submit as many Additional Information sheets that you determine are necessary.

Filing Application

Electronic filing of the application is preferred. This can be done by pressing the “SUBMIT” button at the end of the application which will allow you to send documents via e-mail. The “CLEAR” button will erase all data that you have entered onto the application, while the “SAVE” button will allow you to save any data that you have entered onto the application. Any electronic attachments should be submitted in .pdf format. An original signature page (Section 6) with signatures should be mailed separately to the address below. **Note that a completed**

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