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Wisconsin Department of Transportation (WisDOT)

Signals and ITS Standalone Program Project Application Form

GENERAL INSTRUCTIONS

MUNICIPAL APPLICATIONS DUE TO REGIONAL LIAISON: **April 4, 2025**

****Municipalities may submit a maximum of two applications per calendar year.****

REGIONAL APPLICATIONS DUE: **April 25, 2025**

The following application will be used to evaluate and determine award of Signals and ITS Standalone Program projects to be funded as budget permits. Each applicant requesting funds from the Signals and ITS Standalone Program must submit the following information:

- ☐ Completed Signals and ITS Standalone Program Project Application Form (one for each project request).
- ☐ Any supporting materials deemed necessary by the Region or municipalities.

Project Application Form:

1. Project Identification – Fill in the areas applicable to the proposed project.
2. Project Type – Identify the proposed project type.
3. Project Information – Describe the proposed project in as much detail as possible. Detailed descriptions explaining how the project will address the identified need(s) are essential for application review and evaluation.
4. Project Cost and Schedule – Provide the project costs in the requested fiscal year. When developing project estimates account for additional costs associated with accessible pedestrian signals (APS), traffic signal detection, and emergency vehicle preemption (EVP) systems if your project is proposing them. Provide anticipated project schedule and proposed resources to accomplish implementation. Geometric improvements must not exceed 50% of the TOTAL COST funded by this appropriation.
   ****Maximum project award is limited to $1,250,000.****
   ****Municipal projects require 10% funding commitment from the requesting agency. Requesting municipal agency will also be responsible for any project costs more than the approved appropriation funding amount asked for in this application.****
   ****Award of new SISP projects is subject to timely performance on previous awards.****
5. Additional Project Information – Answer the questions as they relate to the proposed project.
6. Contact Information and Signature – Provide contact information. Application must be signed by the WisDOT Regional Operations Chief (WisDOT managed projects only) or the Municipal Sponsor to certify application and commit funds.

Supporting Materials: Each completed application shall include the following, *if applicable*:

- Map of location or general sketch of project proposal or site photo(s). *An adequate sketch is the minimum requirement. Preliminary plan layout sheets or study reports should be provided if available.*
- Completed Project Evaluation Factor (PEF) worksheet and/or Interactive Highway Safety Design Model (IHSDM) benefit-cost analysis.
- TSMO-TIP package (one for each project request as required based on project type).
- New Traffic Signal – Warrant Documentation, required **only** for proposals to install new traffic signals (example worksheet available upon request. Ref: Manual on Uniform Traffic Control Devices [MUTCD], Chapter 4C). Approved Traffic Control Signal Approval Request ***Form DT1199*** (Required with application for all proposals to install new traffic signals on the State Trunk Highway System, including Connecting Highways and ramp terminals).
- New Pedestrian Hybrid Beacon – Warrant Documentation, required **only** for proposals to install new pedestrian hybrid beacons (example worksheet available upon request. Ref: Manual on Uniform Traffic Control Devices [MUTCD], Chapter 4F). Approved Pedestrian Hybrid Beacon Approval Request ***Form DT1196*** (Required with application for all proposals to install new pedestrian hybrid beacons on the State Trunk Highway System, including Connecting Highways).
- Systems Engineering Analysis (SEA) – *An SEA may be needed for certain types of projects funded by this Program.*

Submittal Instructions and General Questions:

Program Contact – Todd Szymkowski, PE, PTOE, PMP | Bureau of Traffic Operations| todd.szymkowski@dot.wi.gov |414-227-3125

Projects requested by a municipality should be coordinated with and submitted to their Regional liaisons (found at link below): (https://wisconsindot.gov/Pages/doing-bus/local-gov/astnce-pgms/highway/sisp.aspx).

Wisconsin Department of Transportation (WisDOT)

Signals and ITS Standalone Program

Project Application Form

1. Project Identification

PROJECT NAME (consistent with TSMO-TIP documentation if applicable) State Highway 42 (Memorial Drive) & E. Reed Avenue Signal Rehabilitation			
FUNDING REQUEST TOTAL $ 262,000			
COUNTY Manitowoc	CITY/TOWN Manitowoc	REGION Northeast	
STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP) ELIGIBLE (Is this project eligible to be integrated with an existing STIP project?)		☐ YES	☒ NO
MUNICIPAL*	☒ YES ☐ NO	MUNICIPAL PRIORITIES (If two (2) applications are submitted, select priority)	☒ 1ST ☐ 2ND
*Municipal projects require a 10% funding commitment from the requesting agency. The requesting municipal agency will also be responsible for any project costs more than the approved appropriation funding amount based on this application.			

2. Project Type

Identify the proposed project type: Check boxes that apply below.	
☐ 1. New Signal Installation*	Install new traffic signal.
☒ 2. Signal Rehabilitation*	Upgrade or replace existing signal infrastructure (poles, wiring, detection, cabinet, controller, etc.); Construct minor geometric improvements.
☐ 3. Signal Retrofit*	Install monotubes, flashing yellow arrows, or other safety improvements at existing traffic signal, Install adaptive signal systems; replacement of TS 1 cabinets, controllers, etc.
☐ 4. Signal and Ramp Meter Retiming	Collect and evaluate data; Develop timing plan; Develop and implement corridor coordination plan. ***Municipal owned signals not eligible for this project type per Form DT1199.***
☐ 5. Intersection Communication	Construct and integrate fiber communication for signals; Install and integrate wireless communication, including cellular modems and radios for signals.
☐ 6. New ITS Device Installation	Install new ITS infrastructure including cameras, backbone fiber, network equipment, etc.
☐ 7. ITS Device Rehabilitation	Upgrade, install or replace existing detection, controllers, battery backup, cameras, ramp meter LED's, etc.
☐ 8. System Software and Data	Develop, upgrade, install or replace software including ongoing licensing fees and data subscriptions.
☐ 9. Life-Cycle Replacement	Replace existing end-of-life signals and/or ITS equipment including cameras, controllers, LED's, etc. ***Municipal owned signals not eligible for this project type per Form DT1199.***
☐ 10. Crosswalk Technology Improvements*	Rectangular rapid flashing beacons (RRFB), accessible pedestrian signals (APS), and pedestrian hybrid beacons.
☐ 11. Other	Examples include: • Performance Measures Applications • Research and Development Projects • CAV Deployments and Applications • Studies, Plans, and Evaluations
*Items not covered by SISP program funds: all lighting infrastructure, decorative signal poles, decorative cabinets, and decorative signal infrastructure. Other items may also not be covered as deemed appropriate by the SISP evaluation committee.	

3. Project Information

3a. Project Description

Project description should include location specific information.

☐ See attached TSMO-TIP Application

State Trunk Highway STH 42 (Memorial Drive) is a four-lane divided roadway from IH-43 into the City of Manitowoc and on to the North to Two Rivers. Parking is not allowed on STH 42 anywhere near this intersection. Parking is allowed on the west side of the intersection along E. Reed Avenue, the Street that intersects with STH 42 to the West. This is a T-intersection. E. Reed Avenue is a two-lane urban Street with two traveled lanes and two parking lanes. The sidewalk on both sides of E. Reed Ave. terminates to a single crosswalk that crosses STH 42 to a paved Multi-Use Pathway (Mariners Trail) that extends to the North and South along Lake Michigan. There is a single left turn lane for northbound traffic that has protected-permissive left turn signal heads mounted on the island ends. The existing traffic signal was constructed in the 1970's and is in fair, but outdated condition. Therefore, a more robust or complete reconstruction is severely needed.

The project scope is to replace all above ground components of the signal to current standards. Upgrade curb ramps to include detectable warning fields. Upgrade the Cabinet to TS2 standards and move it to a better location to the West; add non-intrusive detection for advance detection on STH 42 and stop bar detection for Reed Avenue approach to the intersection; add pedestrian push buttons to all crossings; upgrade all underground raceways to PVC Conduit as the existing is steel RGC; install non-conductive pull boxes on both sides of the highway and both sides of Reed Avenue; replace all above ground equipment; install monotube structures on STH 42; add lighting into signal cabinet on signal structures and re-cable the entire intersection.

3b. Mobility Improvements

In some detail, describe the anticipated mobility improvements of the proposed project and how they will be measured (e.g., detector data will be used to determine before and after peak hour delay).

☐ See attached TSMO-TIP Application, if applicable.

Indicate your expected benefits below and provide documentation to support your analysis.

☐ Annual mobility benefits are expected to be greater than the capital cost of the project.
☐ Annual mobility benefits are expected to be greater than half of the capital cost of the project.
☐ Annual mobility benefits are expected to be greater than $0.
☐ No expected mobility improvements.

The addition of more effective detection will allow for more efficient operations during off peak times. Night flash can be eliminated. Upgraded control equipment will allow for more flexible timing plans which will increase mobility. Head per lane indications will make it easier for motorists to see where they should be.

3c. Operations and Maintenance Impacts

In some detail, describe how the proposed project is anticipated to impact operations and maintenance funds. For example, is the project replacing infrastructure that has been regularly out-of-service and has required increased maintenance?

☐ See attached TSMO-TIP Application, if applicable.

☐ There is a demonstrated history of maintenance issues that will be corrected with this project. Include specific number of knockdowns, service calls, outages, etc., below.
☐ Maintenance may be reduced due to this project.
☐ No expected operations and maintenance impacts.

Operations are expected to improve with the addition of vehicle detection and pedestrian actuation.
Upgraded signal control equipment will improve overall vehicle operations.
Eliminating underground splices and providing new cable will greatly enhance safety for maintenance personnel and shorten repair down time due to malfunction

3d. Existing Conditions

- The signal equipment is old.
- The steel standards and pedestal bases are rusty and in poor condition.
- Old steel pull boxes are in fair condition but are not grounded. Signal wire splicing has taken place in the pullboxes.
- One Type 3 Pole with a 25 foot trombone arm appears to be in good condition. The other is an older 15 foot arm on a Type 2 Pole.
- Signal indications on the multilane roadways are not head per lane.
- Pedestrian actuation exists on only one crosswalk.
- In pavement loop type vehicular detection is present, although several advance loops have failed. Nighttime flashing operation is used.
- Signal cabinet/controller is extremely old and no longer supported (Eagle EPAC M40)

3e. Energy and Environmental Impacts

In some detail, describe the anticipated energy and environmental impacts of the proposed project. For example, is the proposed project expected to replace existing infrastructure that may be accessed from a central location rather than driving to the field location for manual access?

☐ See attached TSMO-TIP Application, if applicable.

Indicate your expected benefits below.

☐ Annual energy and environmental benefits are expected to be greater than the capital cost of the project (provide documentation).
☐ Annual energy and environmental benefits are expected to be greater than $0.
☐ Project is not expected to impact the natural environment.
☐ Project is expected to negatively impact the natural environment.

More efficient traffic operations will result in less vehicle emissions. The addition of pedestrian actuation will allow the traffic signal to skip unneeded pedestrian phases which will improve traffic flow and therefore reduce vehicle emissions

3f. Safety Improvements

In some detail, describe current safety concerns and the anticipated safety improvements of the proposed project.
☐ See attached TSMO-TIP Application, if applicable.
☐ No expected safety impacts.

Head per lane signal configurations is a documented safety improvement based on federal guidelines.
Underground splicing and proper grounding will reduce personal risk during maintenance activities and malfunctions as pull boxes will be changed to non-conductive type.
The addition of detection will eliminate need for current nighttime flashing operation.

4. Project Cost and Schedule

List major construction items and associated estimates such as new traffic signal installation, intersection channelization, etc. When developing project costs account for additional costs for accessible pedestrian signals (APS), traffic signal detection, and emergency vehicle preemption (EVP) systems if your project is proposing them. Project expense is considered during the evaluation of the projects. Therefore, **ALL COSTS** (including design, utilities, and R/E) should be provided regardless of whether awarded project funds will be used for all elements of the project. **Maximum project award is limited to a total of $1,250,000.**

Cost	FY26 (07/25 – 06/26)	FY27 (07/26 – 06/27)	FY28 (07/27 – 06/28)	FY29 (07/28 – 06/29)
Design:				
WisDOT Staff Delivery/Design				
Consultant Work Order	29,000			
Real Estate: (Note: Real estate acquisition CANNOT be funded by this appropriation.) Identify funding source:				
Construction:				
Procurement: State Furnished Materials				
Procurement: Service and Installation		225,000		
LET Construction				
Other Costs: Construction Delivery		8,000		
***TOTAL PROJECT COST PER FY =**	**29,000**	**233,000**		
MUNICIPAL FUNDING COMMITMENT (10%) =	**2,900**	**23,300**		

* Awarded project funds must be encumbered during the FY identified unless coordinated with the Regional Program Liaison. Requested funds will not be increased beyond the amount asked for in this application after the award of the project.

Schedule		
Task	Months (MM/YY – MM/YY)	Anticipated Required Resources (Region Project Design Section (PDS), Region Traffic Operations, consultant, procurement contracts, etc.)
1. Design	04/25-08/25	City of Manitowoc design, and/or Consultant
2. Real Estate		
3. Procurement		
4. Construction	09/25-09/26	Bid, Procurement and Construction
5. Other		

5. Additional Project Information

5a. Performance Improvement Program Goals

Does this project help with achieving WisDOT's performance goals? Refer to http://dotnet/mapss/index.htm	Select all that apply:
– *Mobility*: Delivering transportation choices that result in efficient trips and no unexpected delays.	☒ Mobility
– *Accountability*: The continuous effort to use public dollars in the most efficient and cost-effective way.	☒ Accountability
– *Preservation*: Protecting, maintaining, and operating Wisconsin's transportation system efficiently by making sound investments that preserve and extend the life of our infrastructure, while protecting our natural environment.	☒ Preservation
– *Safety*: Moving toward minimizing the number of deaths, injuries, and crashes on our roadways.	☒ Safety
– *Service*: High quality and accurate products and services delivered in a timely fashion by a professional and proactive workforce.	☒ Service

5b. Additional Justification

Provide additional detail that should be considered during the evaluation of this project. This may include the consequences of what would happen should the project not be implemented.

This signal installation is at least 40 years old. The upgrades to the signal will increase signal visibility thus increasing motorist safety. Detection will allow for better off peak operations. Pedestrian actuation will allow for better vehicle green management when mainline traffic or conflicting traffic is waiting for pedestrian timers to expire in the absence of pedestrians. Electrical improvements will make it easier and safer for maintenance personnel to address malfunctions.
The City is flexible with regard to design and construction based on the availability of funds within the program

6. Contact Information and Signature

PRIMARY CONTACT NAME (Responsible for Project Delivery)	TITLE
Dan Koski	Director of Public Infrastructure
EMAIL ADDRESS	**TELEPHONE**
dkoski@manitowoc.org	920-686-6910
WISDOT REGIONAL LIAISON CONTACT NAME (Municipal Only)	**MUNICIPAL SPONSOR EMAIL ADDRESS**
Kimberly Bradley	WI DOT NE Region
MUNICIPAL SPONSOR SIGNATURE (Responsible for 10% funding – Municipal Only)	**DATE**
SIGNATURE OF WisDOT REGIONAL OPERATIONS CHIEF (WisDOT Projects Only)	**DATE**

REVISED 12/7/2023