



Wisconsin Department of Transportation

July 25, 2019

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

NOTICE TO ALL CONTRACTORS:

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Proposal #05: 1100-27-70, WISC 2019 578
IH 41
STH 145 To Dodge County Line
IH 41
Washington County

1100-41-70, WISC 2019 579
Milwaukee – Fond Du Lac
CTH K To N Washington County
Line
IH 41
Washington County

1107-00-71, WISC 2019 580
IH 41
USH 41/45 Split to Dodge Co Line
IH 41
Washington County

Letting of August 13, 2019

This is Addendum No. 01, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
3	Prosecution and Progress
5	Traffic
8	Utilities
32	Cable Barrier Type 1, Item 613.1100.S; Cable Barrier End Terminal Type 1 Item 613.1200.S
43	Installing County Furnished Cable Barrier End Terminal Type 1, Item SPV.0060.08
49	Partially Removing Old Structure Over Waterway with Minimal Debris Station 1446'NB'+19, Item SPV.0105.01

Added Special Provisions	
Article No.	Description
53	Portable Automated Real-Time Traffic Queue Warning System, Item 643.1200.S

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01
1100-27-70/1100-41-70/1107-00-71
July 25, 2019

Special Provisions

3. Prosecution and Progress

*Replace entire section titled **Freeway Work Restrictions – General** with the following:*

Freeway Work Restrictions - General

No full freeway closures are allowed. No peak hour lane closures.

Two lanes of traffic in each direction on IH 41 are to be maintained at all times during peak hours and special events.

Lane closures shall not open to traffic without the lanes being paved. Live traffic shall not be allowed on milled surfaces.

Active work zones and lane closures along IH 41 shall be limited to a maximum length of 2 miles at a time. Any lane closure exceeding 2 miles in length must be approved by the engineer.

5. Traffic

Add the following section:

Temporary Regulatory Speed Limit Reduction

During engineer-approved regulatory speed limit reductions, install temporary speed limit signs on the inside and outside shoulders of divided roadways to enhance visibility. On two lane two way roadways, install temporary speed limit signs on shoulders. When construction activities impede the location of a post-mounted regulatory speed limit sign, relocate the sign for maximum visibility to motorists. If work last less than 7 days, mount the regulatory speed limit sign on a portable sign support.

Post temporary regulatory speed limit signs in work zone only during continuous worker activity. During periods of no work activity or when the traffic controls are removed from the roadway, cover or remove the temporary speed limit signs.

Coordinate with Regional Traffic Section to identify the construction stages that have approved temporary regulatory speed zones documented in a Temporary Speed Zone Declaration. Primary contact phone number: 262 822-5947, Rebecca Klein.

Contact the Region Traffic Section at least 14-calendar days before installing the temporary speed zone. After installation of the temporary speed zone is complete, notify the Regional Traffic Section with field locations of temporary speed zones.

8. Utilities

Replace the entire article language with the following:

This contract comes under the provision of Administrative Rule Trans 220.
stp-107-065 (20080501)

There are utility facilities within the construction limits of this project. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities for the underground facilities in the area, as required per statutes. Take all required precautions when working within 18-inches of underground utilities. Use caution to maintain the integrity of underground utilities and maintain OSHA code clearances from overhead facilities at all times. Contact each utility company listed in the plans prior to preparing bids to obtain current information on the status of existing and any new utility relocation work.

Additional detailed information regarding the location of discontinued, relocated, and/or removed utility facilities is available in the work plan provided by each utility company or on the permits issued to them. View these documents at the region WisDOT office during normal working hours.

Due to the nature of the barrier system work, utility conflicts were not resolved with proposed post locations during design. Adjust barrier as allowed per standard detail drawings, detail drawings, and barrier system special provisions, to avoid all underground utilities as required by statute and according to the individual utility company special provision.

The following utilities have reviewed the proposed plan and concluded there were no conflicts with their existing facilities:

- AT&T Wisconsin
- ATC Management, INC
- Charter Communications
- City of Milwaukee
- Frontier Communications of WI LLC
- Village of Slinger Electricity, Sewer & Water
- Village of Germantown Road Facility
- Wisconsin Independent Network LLC
- WE Energies Electricity
- WE Energies Gas/Petroleum
- Wisconsin Department of Transportation ATR Pull Boxes

32. Cable Barrier Type 1, Item 613.1100.S; Cable Barrier End Terminal Type 1 Item 613.1200.S.

Replace entire section titled A Description with the following:

A Description

This special provision describes providing socketed high-tension TL-4 cable guard meeting the National Cooperative Highway Research Program (NCHRP) Report 350, Test Level 4.

Add the following to section titled C Construction:

Cable splices will be permitted provided that no single piece of un-spliced cable is less than 50 feet.

Cable Barrier turnbuckles should be at least 1 foot from posts prior to acceptance of the system.

43. Installing County Furnished Cable Barrier End Terminal Type 1, Item SPV.0060.08.

Replace entire section titled A Description with the following:

A Description

This special provision describes installing socketed high-tension TL 4 cable guard end terminal.

49. Partially Removing Old Structure Over Waterway with Minimal Debris Station 1446'NB'+19, Item SPV.0105.01.

Replace entire section titled E Payment with the following:

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01.	Partially Removing Old Structure Over Waterway with Minimal Debris Station 1446'NB'+19	LS

Payment is full compensation for breaking down and removing; costs associated with contractor caused damage; required salvaging, storing, and disposing of materials associated with the partial removal of structure B-66-17.

The department will pay separately for the rest of the removal of B-66-17 under bid item 203.0600.S.01, and the entire removal of B-66-22 under bid item 203.0600.S.02.

53. Portable Automated Real-Time Traffic Queue Warning System, Item 643.1200.S.

A Description

This special provision describes providing, repositioning, operating, maintaining, monitoring, calibrating, testing and removing a portable automated real-time traffic queue warning system (QWS) capable of measuring vehicular speeds at downstream sections of a roadway, and displaying the speed information on portable changeable message signs at upstream locations.

B Materials

Provide QWS components and software that is National Transportation Communications for ITS Protocol (NTCIP) compliant.

B.1 Portable Changeable Message Signs (PCMS)

Provide PCMS conforming to standard spec 643. Ensure each PCMS is integrated with a portable traffic sensor, modem, and other equipment (e.g. automated system manager) mounted on it, and acts as a single "device" for the purpose of communicating with similarly integrated "devices" and displaying real-time traffic condition information.

B.2 Portable Traffic Sensors (PTS)

Provide PTS that are non-intrusive and capable of capturing individual vehicle speed (mph) and traffic volume. Integrate each sensor with a modem to communicate with the automated system manager.

B.3 Automated System Manager (ASM)

Provide an ASM that assesses current traffic data captured by the system PTS and communicates appropriate messages to the motorists through PCMS based on predetermined speed thresholds and messages.

B.4 System Communications

Ensure QWS communications meet the following requirements:

1. Perform required configuration of the QWS's communication system automatically during system initialization.
2. Communication between the server and any individual PCMS or PTS are independent through the full range of deployed locations, and do not rely upon communications with any other PCMS or PTS.
3. Incorporate an error detection/correction mechanism into the QWS communication system to insure the integrity of all traffic condition data and motorist information messages.

B.5 System Acceptance

Submit vendor verification to the engineer that the system will adequately perform the functions specified in this special provision. 14 calendar days before the pre-construction meeting. Adequate verification includes past successful performance of the system, literature and references from successful use of the system by other agencies, and/or demonstration of the system.

Provide contact information for a designated representative responsible for monitoring the performance of the system and for making modifications to the operational settings as the engineer directs.

Provide all testing and calibration equipment.

C Construction

C.1 General

Install and reposition Portable Automated Real-Time Queue Warning System per plan with PCMS spaced every one mile starting one mile upstream of the taper or as the engineer directs. Provide plan to the engineer 14 calendar days in advance of construction.

Number the devices in chronological order so they are visible from the shoulder with 6inch white high reflective sheeting.

Provide technical personnel for all system calibration, operation, maintenance, and timely on-call support services.

Promptly correct the system within 24 hours of becoming aware of a deficiency in the operation or individual part of the system. A minimum of seven days before deployment, place the QWS and demonstrate to the department that the QWS is operational. Maintain the QWS for the duration of the project. Ensure the system operates continuously (24 hours, 7 days a week) in the automated mode throughout the duration of the project.

Remove the system upon project completion.

C.2 Reports

Provide an electronic copy of a weekly summary report of all data via email to the engineer. Ensure the report includes, at a minimum, the average speed per sensor, traffic volume, time in congestive state per sensor and number of triggers per day.

C.3 Meetings

Attend mandatory in-person pre-construction meetings with the department. Attend additional meetings the department may require on a periodic basis. These meetings may be held in person or via teleconference, as scheduled by the department.

C.4 Programming

C.4.1 General

Program the QWS to ensure that the following general operations are performed:

1. Provide a password protected login to the ASM, website and all other databases.
2. Provide real-time data from the ASM to a website with a full color mapping feature and refresh every 60 seconds. Make data on website available to the department staff at all times for the duration of the work zone activity. Ensure website includes:
 - Vehicle speeds
 - PCMS messaging
 - Device locations
 - Traffic volume
3. Archive all traffic data and PCMS messages in a Microsoft excel format with date and time stamps.
4. Configure the website to quantify system failures which includes communication disruption between any devices in the system configuration, PCMS malfunctioning, PTS malfunction, loss of power, low battery, etc.
5. Automatically generate and send an email alert any time a user specified queue is detected by the system.
6. Provide default and advisory messages automatically based on traffic conditions.
7. Ensure the system autonomously restarts in case of any power failure.
8. Provide the department access to manually override PCMS messages for a user-specified duration, after which automatic operation will resume display of messages appropriate to the prevailing traffic conditions. Document all override messages.

C.4.2 System Operation Strategy

Arrange for the vendor/manufacturer to coordinate system operation, detection, trends/thresholds, and messaging parameters with the engineer.

The sequences below are a minimum requirement and can be adjusted by the engineer at their discretion.

Free Flow:

If the current speed on a roadway section is at or above 40 mph, the upstream PCMS will display nothing except for lighting the four corners to show that it is on.

Slow Traffic:

If the current speed on any downstream section of the roadway is between the 39 mph and 20 mph (for example, 35 mph), the following two phase messages will be displayed on the upstream PCMS as shown below:

EVENT	FRAME 1	FRAME 2
Speeds 20 mph to 39 mph	SLOW TRAFFIC AHEAD	PREPARE TO STOP

Stopped Traffic:

If the current speed on a roadway section of the roadway drops below 20 mph, the following two phase messages will be displayed on the upstream PCMS as shown below:

EVENT	FRAME 1	FRAME 2
Speeds 0 mph to 19 mph	TRAFFIC STOPPED AHEAD	EXPECT DELAYS

C.5 Calibration and Testing

At the beginning of the project and monthly throughout the duration of the project perform a successful field test and calibration at the QWS location to verify the system is detecting accurate vehicle speeds and volumes, and accurately relaying the information to the ASM and the PCMS.

Send email of successful calibration and testing to the engineer.

D Measurement

The department will measure Portable Automated Real-Time Traffic Queue Warning System by the day acceptably completed, measured as each complete system per roadway.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
643.1200.S	Portable Automated Real-Time Traffic Queue Warning System	DAY

Payment is full compensation for providing, repositioning, operating, maintaining, monitoring, calibrating, testing, and removing the complete system consisting of PCMS, PTS, ASM, and system communications.

Failure to correct a deficiency to the PCMS, PTS, or AMS within 24 hours after notification from the engineer or the department will result in a one day deduction of the measured quantity for each day in which the deficiency is not corrected.

Failure to correct the website within 24 hours after notification from the engineer will result in a 10% reduction of the day quantity for each day the website is down.

It is the engineer's sole discretion to assess the deductions for an improperly working QWS.

stp-643-045 (20181119)

END OF ADDENDUM

