Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
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January 5, 2023

NOTICE TO ALL CONTRACTORS:

Proposal #02: 1016-01-62, WISC 2023135
Tomah - Portage
Camp Douglas to Seven Mile Creek
IH 90
Juneau County

Letting of January 10, 2023

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

Special Provisions:

Revised Special Provisions	
Article No.	Description
5	Traffic

Added Special Provisions	
Article No.	Description
19	Basic Queue Warning System, Item 643.1205.S

Schedule of Items:

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
643.1205.S	Basic Traffic Queue Warning System	DAYS	0	80	80

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
23	Corrected Asphalt Item (MQ sheet incorrectly called for SMA, correct item appears elsewhere)
25	Added “Basic Traffic Queue Warning System”

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
50A	SDD Traffic Control, Lane Closure, Basic Traffic Queue Warning System

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

1016-01-61

January 05, 2023

Special Provisions

5. Traffic.

Replace entire table following after sentence stating IH 90 lane closures shall be permitted as follows:

EASTBOUND	WESTBOUND
March	
Sunday 6 pm to Wednesday 2 pm	Sunday 6 pm to Wednesday 2 pm
Wednesday 5 pm to Thursday 1 pm	Wednesday 5 pm to Thursday 11 am
Thursday 6 pm to Friday 10 am	Thursday 5 pm to Friday 10 am
April (excluding Easter holiday)	
Sunday 6 pm to Wednesday 2 pm	Sunday 6 pm to Wednesday 2 pm
Wednesday 5 pm to Thursday 11 am	Wednesday 6 pm to Thursday 11 am
Thursday 6 pm to Friday 10 am	Thursday 6 pm to Friday 9 am
May (excluding Memorial Day holiday)	
Sunday 7 pm to Monday 10 am	Sunday 7 pm to Monday 10 am
Monday 6 pm to Tuesday 12 noon	Monday 5 pm to Tuesday noon
Tuesday 5 pm to Wednesday 11 am	Tuesday 5 pm to Wednesday 1 pm
Wednesday 5 pm to Thursday 10 am	Wednesday 5 pm to Thursday 9 am
Thursday 6 pm to Friday 9 am	Thursday 6 pm to Friday 8 am
June	
Sunday 7 pm to Monday 9 am	Sunday 7 pm to Monday 9 am
Monday 7 pm to Tuesday 9 am	Monday 7 pm to Tuesday 9 am
Tuesday 6 pm to Wednesday 9 am	Tuesday 6 pm to Wednesday 9 am
Wednesday 7 pm to Thursday 9 am	Wednesday 7 pm to Thursday 8 am
Thursday 7 pm to Friday 8 am	Thursday 7 pm to Friday 8 am
July (excluding Independence Day holiday)	
Sunday 7 pm to Monday 9 am	Sunday 8 pm to Monday 9 am
Monday 7 pm to Tuesday 9 am	Monday 7 pm to Tuesday 9 am
Tuesday 7 pm to Wednesday 9 am	Tuesday 6 pm to Wednesday 9 am
Wednesday 7 pm to Thursday 9 am	Wednesday 7 pm to Thursday 8 am
Thursday 7 pm to Friday 9 am	Thursday 7 pm to Friday 8 am
August	
Sunday 8 pm to Monday 9 am	Sunday 8 pm to Monday 9 am
Monday 7 pm to Tuesday 10 am	Monday 6 pm to Tuesday 10 am
Tuesday 6 pm to Wednesday 9 am	Tuesday 5 pm to Wednesday 9 am
Wednesday 7 pm to Thursday 9 am	Wednesday 6 pm to Thursday 9 am
Thursday 8 pm to Friday 9 am	Thursday 8 pm to Friday 8 am
September (excluding Labor Day holiday)	
Sunday 7 pm to Monday 9 am	Sunday 7 pm to Monday 9 am

Monday 6 pm to Tuesday 11 am	Monday 6 pm to Tuesday 12 noon
Tuesday 5 pm to Wednesday 11 am	Tuesday 5 pm to Wednesday 11 am
Wednesday 5 pm to Thursday 10 am	Wednesday 5 pm to Thursday 10 am
Thursday 7 pm to Friday 9 am	Thursday 7 pm to Friday 8 am
October	
Sunday 7 pm to Monday 10 am	Sunday 7 pm to Monday 10 am
Monday 5 pm to Tuesday 12 noon	Monday 5 pm to Tuesday 12 noon
Tuesday 5 pm to Wednesday 10 am	Tuesday 5 pm to Wednesday 10 am
Wednesday 6 pm to Thursday 10 am	Wednesday 6 pm to Thursday 9 am
Thursday 6 pm to Friday 9 am	Thursday 7 pm to Friday 9 am

19. Basic Traffic Queue Warning System, Item 643.1205.S.

A Description

This special provision describes providing, repositioning, operating, maintaining, monitoring, calibrating, testing and removing a basic traffic queue warning system (QWS) capable of measuring vehicular speeds at downstream sections of a roadway, and activating the system.

B Materials

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

B.1 Portable Traffic Sensors (PTS)

Provide PTS that are nonintrusive and capable of capturing vehicle speed in mph. Integrate each sensor with a modem to communicate with the automated system manager.

B.2 Static Traffic Control Signs with Temporary Flashing Beacon Signs (FBS)

Provide static traffic control signs with temporary flashing beacon signs conforming to standard spec 658.2(2) for Traffic Signal Faces. Ensure each FBS is integrated with a modem, and other equipment (e.g., automated system manager) mounted on it, and acts as a single device for communicating with similarly integrated devices and displaying real-time traffic conditions.

B.3 Automated System Manager (ASM)

Provide an ASM that assesses current traffic data captured by the PTS and activates/deactivates the FBS based on predetermined speed thresholds.

B.4 System Communications

Ensure Basic Traffic QWS communications meet the following requirements:

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

B.5 System Acceptance

Submit vendor verification to the engineer and Bureau of Traffic Operations (DOTBTOworkzone@dot.wi.gov) 14 calendar days before the pre-construction meeting that the system will adequately perform the functions specified in this special provision. 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 Basic Traffic Queue Warning System per plan or as the engineer directs. Provide plan to the engineer and Bureau of Traffic Operations (DOTBTOworkzone@dot.wi.gov) 14 calendar days before the pre-construction meeting.

PTS may be mounted on FBS, arrow board or other trailer devices.

Install PTS at the following locations:

1. Place first PTS within the lane closure taper.
2. Place second PTS 5,700 feet upstream of the lane closure taper or on FBS #3.
3. Place third PTS 2 miles upstream of the lane closure taper or on FBS #2.

Install FBS at the following locations, delineated by 5 drums:

1. Place first FBS (FBS #3) 5,700 feet upstream of the lane closure taper.
2. Place second FBS (FBS #2) 2 miles upstream of the lane closure taper.
3. Place third FBS (FBS #1) 3 miles upstream of the lane closure taper.

If there are more than 2 lanes or specified in the plans, place FBS on both sides of the roadway.

Number the devices in chronological order so they are visible from the shoulder with 6-inch 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 three days before deployment, place the Basic Traffic QWS and demonstrate to the Department that the Basic Traffic QWS is operational.

Maintain the Basic Traffic 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 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, 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 as deemed necessary by the department. These meetings may be held in person or via teleconference, as scheduled by the department.

C.4 Programming

C.4.1 General

Program the Basic Traffic 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. Automatic setting of the FBS to reflect current traffic flow status updated every 60 seconds for congestion. Ensure to remove a congestion message when 180 seconds of average traffic speeds above the current level are observed, or utilize a customized frequency as determined by the engineer.
3. The FBS activate based on pre-determined speed thresholds from the next downstream sensor.
    - FBS #3 shall activate based on traffic speeds at the PTS located within the lane closure taper.
    - FBS #2 shall activate based on traffic speeds at the PTS located approximately 1 mile upstream of lane closure taper, or at FBS #3.
    - FBS #1 shall activate based on traffic speeds at the PTS located 2 miles upstream of lane closure taper, or at FBS #2.
4. 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
    - FBS triggers
    - Device locations
5. Archive all traffic data in a Microsoft Excel format with date and time stamps.
6. Configure the website to quantify system failures which includes communication disruption between any devices in the system configuration, FBS malfunctioning, PTS malfunction, loss of power, low battery, etc.
7. Automatically generate and send an email alert any time a user specified queue is detected by the system.
8. Ensure the system autonomously restarts in case of any power failure.

C.4.2 System Operation Strategy

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

The sequences below are a minimum requirement, but can be adjusted at the discretion of the engineer, are as follows:

Free Flow:

If the current PTS speed on a downstream section is at or above 40 mph, the next upstream FBS will not flash.

Slow or Stopped Traffic:

If the current PTS speed on a downstream section of the roadway is between the 39 mph and 0 mph (for example, 35 mph), the next upstream FBS shall flash.

C.5 Calibration and Testing

At the beginning of the project perform a successful field test and calibration at the Basic Traffic QWS location to verify the system is detecting accurate vehicle speeds, and accurately relaying the information to the ASM and the FBS.

Send email of successful calibration and testing to the engineer.

D Measurement

The department will measure Basic 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
643.1205.S	Basic Traffic Queue Warning System	DAY

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

Failure to correct a deficiency to the FBS, PTS, or ASM 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.

The engineer will have sole discretion to assess the deductions for an improperly working Basic Traffic QWS.

stp-643-046 (20210113)

Schedule of Items
Attached, dated January 5, 2023, are the revised Schedule of Items Page 4.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 23, 25.
Added: 50A

END OF ADDENDUM

CONCRETE REPAIR SUMMARY (TOTALS)

	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	690.0250 SAWING CONCRETE LF	REMARKS
SUBTOTAL 1	382	640	276	1,423	2,097	EASTBOUND
SUBTOTAL 2	395	656	232	1,478	2,164	
SUBTOTAL 3	281	656	330	1,034	1,927	
SUBTOTAL 4	153	672	401	490	1,633	
SUBTOTAL 5	281	688	365	1,019	1,985	
SUBTOTAL 6	177	656	310	653	1,706	
SUBTOTAL 7	265	640	275	1,011	1,880	
SUBTOTAL 8	211	720	315	770	1,869	
SUBTOTAL 9	140	704	374	498	1,664	
SUBTOTAL 10	138	656	355	428	1,563	
SUBTOTAL 11	54	400	219	210	905	
SUBTOTAL 12	146	640	419	443	1,571	WESTBOUND
SUBTOTAL 13	42	640	373	70	1,327	
SUBTOTAL 14	48	656	358	187	1,430	
SUBTOTAL 15	20	672	351	62	1,370	
SUBTOTAL 16	62	640	388	163	1,413	
SUBTOTAL 17	46	656	352	101	1,371	
SUBTOTAL 18	12	640	360	0	1,298	
SUBTOTAL 19	56	656	393	171	1,400	
SUBTOTAL 20	82	656	382	163	1,459	
SUBTOTAL 21	8	688	374	0	1,348	
SUBTOTAL 22	76	672	386	249	1,480	
SUBTOTAL 23	235	672	362	848	1,825	
SUBTOTAL 24	201	640	404	728	1,660	
SUBTOTAL 25	93	656	483	233	1,484	
SUBTOTAL 26	482	832	470	764	3,669	
TOTAL 0010	4,086	17,104	9,306	13,198	43,498	

ASPHALT AND SHOULDER SUMMARY

STATION	TO	STATION	LOCATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	415.6000.S ROUT AND SEAL LF	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	460.7624 HMA PAVEMENT 4 HT 58-28 V TON	465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS LF	624.0100 WATER MGAL	REMARKS
235+11	-	697+60	EB Inside	30,800	1,000	46,249	-	4,100	-	46,249	100	
235+11	-	697+60	EB Outside	41,100	1,000	46,249	-	8,100	-	46,249	150	
235+01A	-	1107+64A	WB Inside	58,200	1,900	87,263	-	7,700	-	87,263	150	
235+01A	-	1107+64A	WB Outside	77,600	1,900	87,263	-	15,300	-	87,263	250	
574+00	-	576+00	EB ON RAMP GORE AREA	400	-	200	-	50	-	200	-	
588+50	-	591+50	EB OFF RAMP GORE AREA	570	-	300	-	60	-	300	-	
570+00A	-	577+00A	WB OFF RAMP GORE AREA	1,260	-	700	-	130	-	700	-	
590+00A	-	593+00A	WB ON RAMP GORE AREA	570	-	300	-	60	-	300	-	
1170+50A	-	1171+50A	Pavement Repair Section	500	-	-	32	-	90	200	-	
			TOTAL 0010	211,000	5,800	268,524	32	35,500	90	268,724	650	

EROSION CONTROL SUMMARY

STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	REMARKS
	UNDISTRIBUTED	100	100	100	2	2	500	0.10	2	1	3	
	TOTAL 0010	100	100	100	2	2	500	0.10	2	1	3	

Addendum No. 01
ID 1016-01-61
Revised Sheet 23
January 5, 2023

PAVEMENT MARKING SUMMARY

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.9400 MARKING REMOVAL PLOWABLE RAISED PAVEMENT MARKERS EACH	REMARKS
235+11	-	697+60	EB LT EDGELINE	46,249	-	-	YELLOW
235+11	-	697+60	EB RT EDGELINE	46,249	-	-	WHITE
235+11A	-	1107+64A	WB LT EDGELINE	87,253	-	-	YELLOW
235+11A	-	1107+64A	WB RT EDGELINE	87,253	-	-	WHITE
235+11	-	697+60	EB CL SKIPS	11,562	-	462	WHITE
235+01A	-	1107+64A	WB CL SKIPS	21,816	-	873	WHITE
			SUBTOTAL MAINLINE:	300,400	0	1,400	

PAVEMENT MARKING SUMMARY (RAMPS)

LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.9400 MARKING REMOVAL PLOWABLE RAISED PAVEMENT MARKERS EACH	REMARKS
NEW LISBON EXIT 61				
EB OFF RAMP LT	547	-	-	YELLOW
EB OFF RAMP	117	-	-	3' MINI SKIPS, WHITE
EB MAINLINE @ OFF RAMP	-	262	-	
EB OFF RAMP	-	262	-	
EB ON RAMP LT	573	-	-	YELLOW
EB RT EDGE: GORE TO GORE	1136	-	-	WHITE
EB MAINLINE @ ON RAMP	-	674	-	
EB ON RAMP	-	674	-	
WB OFF RAMP LT	657	-	-	YELLOW
WB OFF RAMP	153	-	-	3' MINI SKIPS, WHITE
WB MAINLINE @ OFF RAMP	-	261	-	
WB OFF RAMP	-	261	-	
WB ON RAMP LT	551	-	-	YELLOW
WB RT EDGE: GORE TO GORE	1239	-	-	WHITE
WB MAINLINE @ ON RAMP	-	851	-	
MAUSTON EXIT 69				
EB OFF RAMP LT	793	-	-	YELLOW
EB OFF RAMP	126	-	-	3' MINI SKIPS, WHITE
EB MAINLINE @ OFF RAMP	-	293	-	
EB OFF RAMP	-	293	-	
EB ON RAMP LT	871	-	-	YELLOW
EB RT EDGE: GORE TO GORE	1641	-	-	WHITE
EB MAINLINE @ ON RAMP	-	803	-	
EB ON RAMP	-	803	-	
WB OFF RAMP LT	475	-	-	YELLOW
WB OFF RAMP	141	-	-	3' MINI SKIPS, WHITE
WB MAINLINE @ OFF RAMP	-	237	-	
WB OFF RAMP	-	237	-	
WB ON RAMP LT	929	-	-	YELLOW
WB RT EDGE: GORE TO GORE	1493	-	-	WHITE
WB MAINLINE @ ON RAMP	-	721	-	
WB ON RAMP	-	721	-	
SUBTOTAL RAMPS:	11,500	8,300	0	
SUBTOTAL MAINLINE:	300,400	0	1,400	
TOTAL 0010	311,900	8,300	1,400	

CONSTRUCTION STAKING

LOCATION	643.1205.S BASIC TRAFFIC QUEUE WARNING SYSTEM DAY	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. TBD) LS
EASTBOUND	30		
WESTBOUND	50		
TOTAL 0010	80	141,785	1

TRAFFIC CONTROL SUMMARY

STATION	TO	STATION	LOCATION	SERVICE DAYS	643.0300 TRAFFIC CONTROL DRUMS QTY	643.0300 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III QTY	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A QTY	643.0705 DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C QTY	643.0715 DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS QTY	643.0800 DAY	643.0900 TRAFFIC CONTROL SIGNS QTY	643.0900 DAY	643.1051 TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS QTY	643.1051 DAY	643.4100.S TRAFFIC CONTROL INTERIM LANE CLOSURE EACH	REMARKS
235+11	-	697+60	EB	30	462	13,860	35	1,050	70	2,100	4	120	2	60	16	480	2	60	-	
235+01A	-	1107+64A	WB	50	873	43,650	66	3,300	132	6,600	4	200	2	100	16	800	2	100	-	
	-					-		-		-		-		-		-		-	30	DAILY SETUP/TEARDOWN (EASTBOUND)
	-					-		-		-		-		-		-		-	50	DAILY SETUP/TEARDOWN (WESTBOUND)
	-																			
			TOTAL 0010			57,510		4,350		8,700		320		160		1,280		160	80	

Addendum No. 01
ID 1016-01-61
Revised Sheet 25
January 5, 2023

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- (S) PORTABLE TRAFFIC SENSOR (PTS)
- FBS FLASHING BEACON SIGN

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS

AND NIGHTS.
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

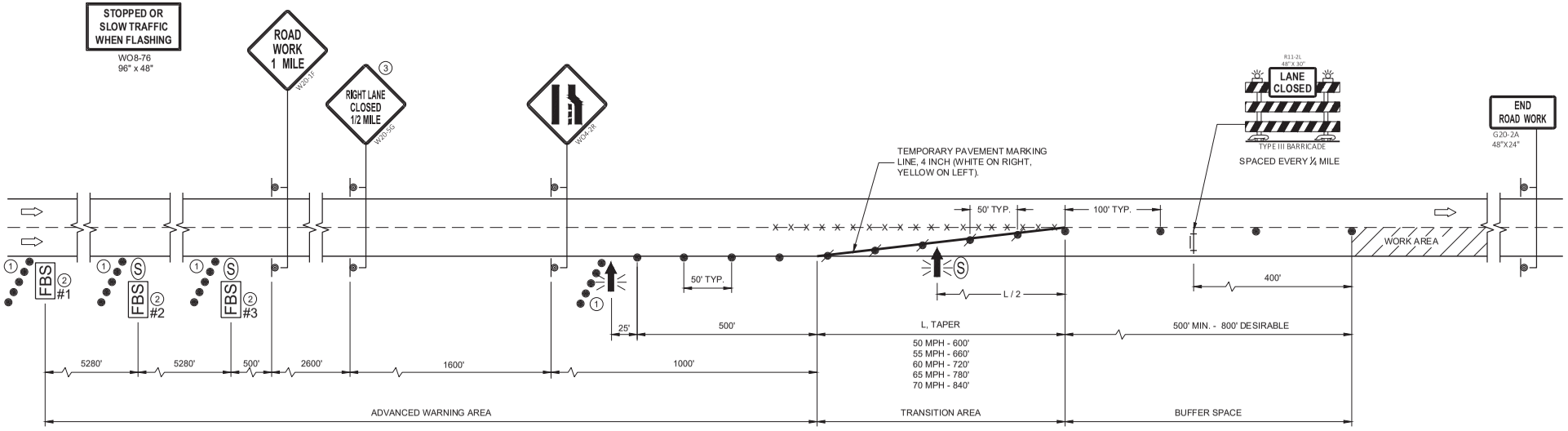
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

1. 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
2. IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.
3. IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



Addendum No. 01
ID 1016-01-61
Added Sheet 50A
January 5, 2023

TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Erin Schwark
WORK ZONE ENGINEER

FHWA

50A

SDD 15D12 - 10d

SDD 15D12 - 10d

Proposal ID: 20230110002 Project(s): 1016-01-61

Federal ID(s): WISC 2023135

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0096	643.1205.S Basic Traffic Queue Warning System	80.000 DAY	_____.____	_____.____

Section: 0001 Total: _____.____

Total Bid: _____.____