



Wisconsin Department of Transportation

Division of Transportation Systems Development

Bureau of Project Development
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July 27, 2017

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NOTICE TO ALL CONTRACTORS:

Proposal #01: 1003-10-76, WISC 2017 397
Illinois State Line – Madison
Woodman Road to STH 11
IH 39
Rock County

1003-10-81, WISC 2017 398
Illinois State Line – Madison
Hart Road to Woodman Road
IH 39
Rock County

Letting of August 8, 2017

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

Special Provisions:

Revised Special Provisions	
Article No.	Description
39	Base Aggregate Dense 1 ¼-Inch, Item 305.0120
65	Lighting Units Walkway, 659.0700; Luminaires Utility LED-A, 659.1115
110	Weigh-In-Motion System, Item SPV.0105.480

Deleted Special Provisions	
Article No.	Description
85	Clay Anti-Seepage Collar, Item SPV.0060.030

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
520.8000	Concrete Collars For Pipe	EACH	21	2	23
655.0625	Electrical Wire Lighting 6 AWG	LF	8,529	-2,899	5,630
655.0630	Electrical Wire Lighting 4 AWG	LF	80	8,456	8,536
SPV.0165.750	Longitudinal Grooving Bridge Deck	SF	63,354	14,480	77,834

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
659.0400	Luminaires High Mast Lighting	EACH	0	4	4
659.1120	Luminaires Utility LED-B	EACH	0	42	42
674.0300	Remove Cable	LF	0	8,456	8,456

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
659.1115	Luminaires Utility LED A	EACH	42	0	0
SPV.0060.030	Clay Anti-Seepage Collar	EACH	2	0	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
1003-10-76	
12	Construction Details: Remove the Clay Anti-Seepage Collar Detail
44, 52	Erosion Control: Revise Clay Anti-Seepage Collar note
183	Miscellaneous Quantities: Added note to see Additional Quantities Elsewhere
187, 188	Miscellaneous Quantities: Revise Clay Anti-Seepage Collar Title to Concrete Collars for Pipe
1003-10-81	
215-218	Lighting Plan: Changed luminaire LED type, added high mast lighting luminaire replacement, and changed wiring size based on comments from Southwest Region.
246-250	Weigh-In-Motion System Details (revised plan sheets so that WIM removal, salvage, and install items are shown correctly for bid item Weigh-In-Motion System and bid item Static Scale System Electronics
432-435	Miscellaneous Quantities: Added Rim/Invert/Depth information to Storm Sewer Structure Tables (with corresponding notes).
436-439	Miscellaneous Quantities: Added Inlet & Discharge Elevations to Storm Sewer Pipe Tables.
468-469	Miscellaneous Quantities: Lighting updates
701	Cross Section & Quantities B-53-317: Revised unit and quantity of Longitudinal Grooving Bridge Deck item
720	Cross Section & Quantities B-53-318: Revised unit and quantity of Longitudinal Grooving Bridge Deck item

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
1003-10-81	
546A	SDD – Electrical Details High Mast Lighting
546B	SDD – Electrical Details High Mast Lighting

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
1003-10-76 & 1003-10-81
July 27, 2017

Special Provisions

39. Base Aggregate Dense 1 ¼-Inch, Item 305.0120.

Replace entire article language with the following:

Revise standard spec 305.2.2.1 when base is ≥ 50% crushed gravel as follows:

Use 1 ¼-Inch base aggregate that conforms to the following gradation requirements.

SIEVE	PERCENT PASSING BY WEIGHT
1 1/4 inch	95 - 100
1 inch	---
3/4 inch	70 - 90
3/8 inch	45 - 75
No. 4	30 - 60
No. 10	20 - 40
No. 40	7 - 25
No. 200	3 - 10 ^[1]

^[1] Limited to a maximum of 8.0 percent for base placed between old and new pavement.

(SWR 305.02-08032016)

65. Lighting Units Walkway, 659.0700; Luminaires Utility LED-A, 659.1115.

Replace article title and entire article language with the following:

65. Luminaires High Mast Lighting, 659.0400; Lighting Units Walkway, 659.0700; Luminaires Utility LED-B, 659.1120

Append standard spec 659.3.3 with the following:

Remove and dispose of existing HPS luminaires on existing lighting poles and high mast poles. Existing lighting poles and high mast poles to remain in place.

Append standard spec 659.3.4 with the following:

Remove and dispose of existing walkway HPS luminaires on existing walkway poles to remain in place.

85. DELETED

110. Weigh-In-Motion System, Item SPV.0105.480

Replace entire article language with the following:

A Description

This special provision describes the work to remove the existing Weigh-In-Motion (WIM) System and install a new system to be utilized at the Beloit Safety and Weight Enforcement Facility (SWEF) to pre-weigh vehicles, sort, and provide direction to commercial vehicles in motion along northbound IH 39/90 in advance of the Beloit SWEF. Changeable Message Signs (CMS) shall be utilized along the mainline to direct vehicles to report or bypass the Weigh Station based on their perceived level of compliance as determined from the mainline pre-screening WIM system. The system shall also work with the OPEN/CLOSED Signs, the existing Weigh Station directional signals, the upgraded static scale, and bypass/static lane Variable Message Signs (VMS).

A vehicle that has been directed to enter the Weigh Station shall be screened and verified once more on the ramp. Based on the results of this verification, automatic directional signals shall direct the vehicle to either bypass or report to the static scale for further inspection.

The sorting decisions shall be based on compliance of speed, side to side balance, axle-to-axle balance within tandem, axle spacing, axle weights, axle group weights, bridge formula (front and rear), and gross vehicle weights with the pre-set tolerances and credentials.

B Materials

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B.1 Introduction

WisDOT has an existing Pre-Pass E-Screening System. In addition the 360SmartView and Drivewyze screening systems shall be added to this site by others. The WIM Vendor shall coordinate with and successfully interface with both E-Screening Systems and provide consistent messages when notifying vehicles in order to provide a fully integrated system.

The WIM System shall include various components that interact together. The components shall include the following:

- WIM quartz sensors
- Axle and loop detection
- Overview image camera
- Automatic Traffic Recorder (ATR) System
- License Plate Reading (LPR) System with optical character recognition
- Automatic USDOT Reading (AUR) System with optical character recognition
- PrePass System Interface
- 360 SmartView System Interface
- Drivewyze System Interface
- Loop detection
- Mainline CMS
- OPEN/CLOSED Sign inserts
- Weigh Station lane control directional signals
- Weigh Station Variable Message Signs (VMS)
- Weigh Station Computer system
 - Station PC
 - Virtual Graphics Display
 - Scale Manager
 - Vehicle Display
 - Override Console
 - Data Collection System
- On-site Communication System
- Cellular Modem for remote communication
- Portable static wheel load scales (2 sets)

The scope of work is to complete the following work strictly per these provisions and associated plans:

B.2 Removals

The following shall be removed:

- All electronics in the existing mainline WIM cabinet. Only power to the cabinet and communication wiring to remain. Dispose removed electronics and wiring. Existing WIM cabinet to be salvaged and re-installed at new location as part of the project.
- Existing mainline and ramp WIM scales.
- Existing overview camera, illumination, and pole. Dispose removed items.
- Existing license plate reader (camera, illumination, and pole). Dispose removed items.
- Existing first Mainline System Sort Changeable Message Sign (CMS) and structure. Existing CMS to be salvaged and stored on-site at a location to be determined as a spare. Dispose of existing structure.
- Existing second Mainline System Sort CMS and structure. CMS to be salvaged and re-installed at new location as shown in the plans. Dispose of existing structure.
- All electronics in the existing ramp WIM cabinet. Only power to the cabinet and communication wiring to remain. Dispose of removed electronics and wiring. Existing ramp WIM cabinet to be salvaged and re-installed at new location as part of the project.
- Existing USDOT reader (camera, illumination, and pole). Dispose removed items.
- Existing OPEN/CLOSED and ~~___/CLOSED~~ CMS signs to be removed from existing sign panels in a manner to preclude damage, salvaged, and delivered to the engineer.
- Existing over height detector and poles. Dispose removed items.
- Existing Variable Message sign control cabinet on pole and electronics. Dispose removed items.
- Existing WIM system electronics in the SWEF building utility room. Dispose removed electronics and wiring.
- Existing WIM system electronics in the SWEF building scale area. Dispose removed electronics and wiring.

Supply and install the following:

- WIM quartz sensors and loops as shown in the plans
- WIM electronics in existing mainline WIM cabinet
- Overview image camera, License Plate Reading (LPR) system, and Automated USDOT Reading system including support structure
- Tracking loops to activate signs/signals and monitor traffic flow
- CMS/Loop interface cabinet to be mounted on new base protected by beam guard
- New Mainline Sort System Changeable Message Sign structure. Existing Mainline Sort System CMS to be installed on new structure.
- New LED OPEN/CLOSED sign, ~~___/CLOSED~~ sign, and OPEN - TRUCKS USE RIGHT LANE/(blank) sign as specified in section B.7 along with the electronics to control the signs
- Electronics to control the existing Weigh Station lane control signals
- VMS cabinet and control electronics to be mounted on existing support structure
- New WIM electronics for the SWEF building utility room
- New WIM electronics for the SWEF building operations area including printer
- WIM system software
- New power and communications conduit and wiring as called for on plans
- On-site Communication System
- Cellular modem for remote access of system

B.3 Submittals

Prior to manufacturer approval and a subcontract being executed, the Contractor and the engineer shall arrange the following:

1. The Contractor shall furnish electronically collected accuracy performance data from the pre-existing system to the engineer. This data shall be in a common database and include WIM

records (axle and gross) and static (platforms and gross) weights that have been electronically collected (manually entered data will not be accepted). This report shall contain at least 20,000 vehicle records.

2. The Contractor shall furnish 3rd party verification of the new static scale system components passing an 80,000 amperes lightning strike test.
3. The Contractor shall arrange for the demonstration of a pre-existing SYSTEM to the engineer at least two weeks prior to the pre-construction conference.
4. The engineer may, at its option and expense, make provision for selected persons to view the demonstration.

At the pre-construction conference, the Contractor shall furnish:

1. The engineer with written documentation and information of the WIM and static scales.
 - a. Manufacturer's name
 - b. Model number, supported by descriptive material for, but not limited to, the standard package system
 - c. All accessories identified
2. Submittals shall be supported by descriptive material such as
 - a. Catalogs
 - b. Cuts
 - c. Diagrams
 - d. Other data published by the manufacturer, to demonstrate to the engineer the Contractor's intent to comply with the Technical Special Provisions and plan requirements
3. List a minimum of five Weigh Stations and provide the owner's name, address, persons to contact and telephone numbers of similar enforcement installations in the United States.

The System manufacturer shall submit the following:

1. Equipment drawings
2. General arrangements
3. Foundation requirements including camera reader pole and CMS structure. All new foundations to be stamped by a PE licensed in Wisconsin.
4. Circuit diagrams
5. Field wiring diagrams
6. Instruction manuals
7. Bill of Materials
8. Spare parts list
9. Manufacturer's product data
10. Certified test reports
11. Material certifications

The Contractor shall submit the following equipment documentation for acceptance prior to fabrication:

1. Detailed description of how the System requirements are met, including a step-by-step description of how the System would function in processing each of the following violations as well as the compliant scenario
 - a. Overweight
 - b. Manual override of the system for truck selection either programmed or random
 - c. Compliant
 - d. Over-length
 - e. King Pin Violator
 - f. Back parking lot/inspection traffic
 - g. Imbalance
 - 1) Side to side
 - 2) Axle to axle within a tandem

2. Inductive loops, according to the contract documents

The Contractor shall submit six complete sets of full size drawings. The Contractor shall:

1. Design all overhead structures and foundation supports including camera reader pole and CMS structure. All foundations to be stamped by a PE licensed in Wisconsin.
2. Submit shop drawings along with the supporting calculations to the engineer for review and approval.
3. Obtain a professional engineer licensed in the State of Wisconsin to document, sign, and seal all structural drawings.

Two weeks prior to the Continuous Operating Test (COT), the Contractor shall supply the following to the engineer for the maintenance of the System

1. Narrative description of system operation in detail.
2. Narrative technical description of the following:
 - a. Major system component interaction
 - b. Subsystem component interaction
3. Drawings:
 - a. Major system component operation/interconnection
 - b. Internal Printed Circuit Board (PCB) operation detailing what electronic function and process is being performed on that board
4. Schematics shall reveal diagrams related to troubleshooting/maintenance including:
 - a. Input and output voltage levels on WIM related PCBs
 - b. Voltage test points at various stages on the WIM process
 - c. Data sheets on any specialized proprietary Integrated Circuits (IC's) or boards in the System
 - d. Jumper and switch settings on all PCB's for normal operation
 - e. As-built drawings shall show type and location of all conduits, pull boxes, junction boxes, loops, traffic signs, and directional signals
5. Technical documentation on all accessories used in the system (OPEN/CLOSED signs, directional signals, etc.)
6. Contractor shall provide names and phone numbers of contacts that user may contact for technical help

Acceptance of bid or approval of shop drawings by the engineer does not relieve the Contractor of the responsibility or the necessity of furnishing material and/or performing work as required by the plans and these provisions, nor from the requirements of the Continuous Operating Test (COT) as contained within these provisions.

The equipment approved by the engineer shall be provided and installed according to the plans and these provisions. If the equipment proposed by the Contractor becomes unavailable, the engineer may approve in writing alternate equipment proposed by the Contractor due to the unavailability of the originally specified equipment.

B.4 WIM Systems Operational Overview

B.4.1 Mainline WIM System

Commercial vehicles approaching the Weigh Station shall be directed into the right hand lane by means of a CMS sign along with signing provided by the project. A vehicle approaching the Weigh Station shall pass over the Mainline Weigh-In-Motion (WIM) system, which is embedded in the highway prior to the Weigh Station exit ramp. All lanes of IH 39/90 shall be equipped with WIM quartz sensors that exceed ASTM E1318 Type III accuracy at site speeds. WIM electronics shall be located in the existing roadside cabinet adjacent to the WIM quartz sensors, and shall process the information collected by the in-road equipment.

The WIM system shall collect axle weight and spacing, vehicle speed, classification and other relevant data to create a vehicle record. An overview image of the passing vehicle shall be combined with the vehicle record. A USDOT and License Plate image of the passing vehicle shall also be combined with the vehicle record. Using optical character recognition the USDOT and license plate read shall be included in the vehicle record. The license plate jurisdiction shall be a part of the license plate read. The combination of USDOT, license plate number, and license plate jurisdiction shall be checked against the 360SmartView system for non-weight violations. Based on a comparison of the vehicle record to the parameters set by the Weigh Station system, the WIM system shall make a sort decision and advise the driver to either exit or bypass the Weigh Station via the Mainline Sort System Changeable Message Sign (CMS) located on the side of the road. However, the actual sorting operation can be overridden by the operator using the virtual graphics display or override control in the Weigh Station. Non-violating vehicles may be randomly selected from the mainline for visual inspection at the scale house.

An existing Automatic Vehicle Identification (AVI) detection system shall be interfaced with ability to identify PrePass vehicles. This is provided separately by PrePass, but shall be integrated into the WIM check system. The WIM system shall be such that a vehicle may be called in to report based on its PrePass or 360SmartView and Drivewyze credential check, as well as its WIM weight check.

WIM quartz sensors in the northbound center and left lane shall be installed to detect commercial vehicles bypassing the WIM quartz sensors in the right lane and not complying with signage.

The WIM quartz sensors installed in the southbound lanes of IH 39/90 shall be used for site data collection only as a part of the ATR system. The Contractor shall furnish the following for the ATR system: Loop Detector and Piezo Conduit, Loop Detector Wire and Lead In Cable, Junction Box Fittings, PVC Conduit, Quartz Sensor PVC Conduit, Concrete Control Cabinet base, Maintenance Platform, and Pull Boxes in accordance with the details shown in the plans.

The OPEN/CLOSED signs shall be controlled by a physical switch on the Override Console.

The system shall be able to collect continuous WIM data for statistical analysis. The data collection system shall save vehicle information in a compressed format complete with a date and time stamp. As a result, the information can be downloaded and, with the aid of commercially available software, the user shall be able to generate reports based on user inputs. The stored data must be remotely accessible by cellular modem communications.

All vehicle information, including violation information, shall be determined in real time and shall be displayed on the scale house operator console in vehicle display windows.

B.4.2 Enforcement Camera Systems

The enforcement camera system shall consist of an overview image camera, license plate reader, and automated USDOT reader (AUR) mounted alongside the roadway on mainline IH 39/90. The overview camera system shall capture an image of passing commercial vehicles to be linked with the vehicle record as an identifier. The camera shall be capable of full color photos during daytime operation, and black-and-white near-infrared images during nighttime operation. The camera system electronics, which shall be located with the other system electronics, shall store the image and shall link it with the correct vehicle record.

The LPR system shall capture an image of the commercial vehicles license plate to be linked with the vehicle record. The camera shall be capable of black-and-white near-infrared images during daytime and nighttime operation. The camera system electronics, which shall be located with the other system electronics, shall store the image and shall link it with the correct vehicle record.

The AUR system shall capture an image of the commercial vehicles USDOT number to be linked with the vehicle record. The camera shall be capable of black-and-white near-infrared images during

daytime and nighttime operation. The camera system electronics, which shall be located with the other system electronics, shall store the image and shall link it with the correct vehicle record.

B.4.3 Mainline Sort System

A CMS shall be used to communicate with the driver after a mainline vehicle analysis has been completed. The Mainline Sort System (MSS) shall consist of one changeable message sign and inductive loops (as determined by the vendor), which are installed along the side of the roadway downstream from the advance WIM system. The MSS system shall be controlled by electronics in an interface cabinet, which receives the sort decision from the Weigh Station Computer. The MSS system ensures that the sign ON/OFF switching is synchronized according to the detection and tracking of a vehicle passing over strategically placed loops. In this way, only the vehicle for which the message is intended shall see the illuminated sign.

The Virtual Graphics Display shall provide manual control to the Weigh Station for the operation of the Changeable Message Sign.

The WIM Vendor shall coordinate efforts with PrePass, 360SmartView, and Drivewyze to ensure that no conflict occurs to drivers, i.e., there shall be no contradictions between the roadside signs and the in-cab transponder.

Typical roadside sign messages are as follows:

Message 1: TRUCK MUST EXIT
TO WEIGH STATION

OR

Message 2: TRUCK BYPASS
WEIGH STATION

The components of the system shall provide heartbeat communications so the System health can be monitored.

B.4.4 Mainline Compliance System

A compliance system shall be located on all northbound lanes of the mainline and the SWEF entrance ramp. The compliance system electronics shall be provided in the existing roadside cabinet at the SWEF exit ramp. The system shall consist of a set of four sets of staggered WIM quartz sensors. As commercial vehicles go over the compliance system, it shall continuously and automatically verify the trucks vehicle record from the roadway upstream. The verified vehicle shall be determined to be compliant or non-compliant. Vehicles that bypass the Weigh Station in any lane of IH 39/90 shall be detected.

All vehicle information, including violation information, shall be determined in real time and shall be displayed on the scale house Vehicle Display Windows on the Weigh Station Computer.

The accuracy of the compliance system shall exceed ASTM E1318 Type III "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems. Calibration and accuracy tests shall be performed as specified below. The Contractor shall ensure the roadway meets the requirements of Section 6 of ASTM E1318.

The components of the system shall provide heartbeat communications so the System health can be monitored.

B.4.5 Ramp Lane Control System

The ramp lane control system shall consist of an existing overhead LED sign system. New electronics shall be provided to interface with it and control it from the WIM system. This sign shall

display a green arrow ↓ to an oncoming truck if it is cleared to bypass the static scale; otherwise it shall display a red X as a signal to report. Conversely, an oncoming truck shall receive a red X to bypass and a green arrow ↓ to report for the scale lane.

The system shall function under either manual or automatic control. Under automatic control, the ramp LCS shall automatically direct a suspected violator to the static scales and compliant violators to exit the Weigh Station. The virtual graphics display shall be used to control the system and shall allow the operator to direct all vehicles to either the scale or bypass lanes. The WIM system shall not be able to direct vehicles according to vehicle information collected in this mode, but shall continue to display vehicle information to the operator.

The system shall have the ability to track vehicles using in-road inductive loops while on route to the static scales.

B.4.6 Mainline WIM Settings

Using the Weigh Station Computer, the operator may set the random sort percentage. Random sorting allows the operator to require a set percentage of compliant trucks to report. This allows the enforcement officials to perform random safety checks on otherwise compliant trucks.

The Weigh Station Computer system shall receive the WIM record from the roadside WIM electronics at the mainline location. The Weigh Station Computer contains electronic records that shall be used to ascertain weight compliance. After the Weigh Station Computer creates the WIM record, it shall immediately begin to analyze the data contained in the record in order to determine whether the vehicle weights and dimensions are within local compliance regulations. If the measured vehicle weight is within the allowable limits, the driver shall be given a bypass message through the Mainline Sort System. If the vehicle is not compliant or if it is randomly selected for inspection, the driver shall receive a message to report to the Weigh Station.

The Weigh Station Computer system shall provide safety features to detect and prevent backups and unsafe conditions. These shall include:

1. An audible message to alert operators of a backup of the Weigh Station ramp
2. Automatically close the Weigh Station if a backup occurs on the exit ramp from IH 39/90. An audible message shall sound to alert operators. Once the backup has cleared the station shall automatically reopen in that direction.
3. Automatically sort all vehicles including violators to the bypass lane on static scale lane back up.

Operators shall have the capability to override the automatic close and automatic sort to bypass on static lane back up feature on the Override console.

B.4.7 Data Collection System

Vehicle information is to be collected continuously by the roadside Mainline WIM electronics for all lanes. This information shall be made available to the user and a variety of reports summarizing the data can be generated. This data can be shared between departments if the agency responsible for weight enforcement is separate from the roadway maintenance, planning and/or design departments.

B.4.7.1 Capabilities

An operator at the site may download the vehicle data directly from the roadside WIM System Electronics, or the data may be transferred to a remote location via access through a cell modem.

Manufacturer host software can be used to automatically call one or several WIM systems to obtain traffic data from the site. The user configures the frequency of the calls and the information to be obtained. Once the data has been obtained, office analysis software capable of computing various classification schemes shall be used to provide various report capabilities based on the data

collected. This system shall store at least 60 days of vehicle records (over 2 million vehicle records) in a compressed format.

B.4.7.2 Information Available

The following information shall be made available from the data collection feature of the Mainline WIM system:

- Reports over any selected time period in hourly increments, daily, weekly, or monthly
- Summary of vehicle speeds
- Summary of vehicle classification counts
- Equivalent Single Axle Load (ESAL) count
- Reports on the number of violating and non-violating axles, axle groups and gross vehicle weights
- User selected reports based on adjustable parameters such as periods and vehicle types
- Customization for generating reports for specific needs that are not available using basic parameters

B.4.7.3 Communications

Data from the Mainline WIM shall be made available via a high-speed Internet connection using a cellular modem. A new modem is to be provided as a part of this project. The monthly service and card for this is to be provided by the department.

B.5 WIM Systems Functional Requirements

B.5.1 Mainline

B.5.1.1 WIM Quartz Sensors

The accuracy of the WIM system shall exceed ASTM E1318 "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems performance requirements for a Type III system. The WIM accuracy on all vehicles loaded above 60,000 pounds and traveling between the speeds of 5 to 85 miles per hour shall be:

1. Axle weights + 15% (95% of trucks)
2. Tandem weights + 10% (95% of trucks)
3. Gross weights + 6% (95% of trucks)
4. Axle spacing + 6 inches or 5% (68% of axles), whichever is greater

Blanket grind the existing concrete pavement in the mainline drive lane beginning 200 feet prior to the WIM scale location and ending 100 feet after the WIM scale location, for a total of 300 feet, with a minimum 36 inch blanket grinder to ensure that the roadway meets the requirements of Section 6 of ASTM E1318 prior to installation of the WIM system.

The WIM quartz sensors shall have the following characteristics:

- Quartz sensors shall be capable of accurately measuring gross vehicle weight, wheel load, axle load, axle group load, speed, and axle spacing when traveling at speeds of 5 to 75 mph
- The quartz sensors shall be capable of being reground up to 0.4 inch with no loss of functionality in the event of roadway deformations and move resulting in a quartz sensor unit protruding above the surrounding pavement surface
- The quartz sensors shall have uniform and consistent sensitivity without experiencing any signal drift or phantom axles
- Shall operate without degradation in ambient air temperature ranges of -20°F to +120°F and in relative humidity ranging from 10% to 95% non-condensing
- Quartz sensor performance shall be insensitive to temperature changes (i.e., less than 1% for a temperature range of 90°F). Sensing element shall be encapsulated in an aluminium die cast housing providing a vibration proof, frost-resistant, and watertight carrier unit prior to shipment
- Be capable of being installed directly into a cut out channel in the roadway pavement using a manufacturer recommended epoxy material that encapsulates each quartz sensor unit

- The output signal of the quartz sensors shall be processed by an industrial grade charge amplifier made by the same manufacturer as the quartz sensors
- Each channel of the charge amplifier shall convert the charge output corresponding to the sum of the forces acting simultaneously on a multi-unit quartz sensor to a proportional voltage. Adjusting potentiometers for the charge amplifier shall be designed as plug-in units that eliminate the need to recalibrate when replaced
- A 15 to 20 volt DC power supply shall be provided to power the charge amplifier unit
- The height of the quartz sensor shall not exceed 44mm to minimize pavement depth cut in roadway

B.5.1.2 Detector Loops

Each detector loop shall have a minimum loop area of 6-foot x 6-foot. Detector loops shall conform to WisDOT standard specifications.

Loop wire shall be 1 conductor, 14 AWG, IMSA 51-5. Loop leads shall be 2 conductor, 14 gauge, IMSA 50-2 cable.

Loops shall not be cut directly into the existing roadway and loop sawcuts shall not be exposed to the roadway surface. In situations where the roadway is concrete pavement and is not continuously reinforced, the appropriate concrete pavement section of roadway shall be removed, loops shall be installed, and the appropriate concrete pavement section shall be replaced.

Detector loops shall be provided in order to control the sign and for the system to operate as described in these special provisions. Loop detectors shall be installed for the WIM system electronics of the mainline WIM and compliance systems. The mainline WIM and compliance systems shall use the signals from these detector loops to switch the message sign and to track vehicles. The CMS sign shall be switched in a tracking sequence to direct a sorted vehicle to enter the Weigh Station.

B.5.1.3 Compliance System

The compliance system may consist of vehicle detection loops and WIM quartz sensors in the following configuration:

"loop – right WIM quartz sensor – left WIM quartz sensor

The compliance system shall monitor vehicles signaled to bypass or report the Weigh Station. It shall be interfaced to the Weigh Station Computer.

An audible alarm shall be sounded on the Virtual graphics display in the event that a commercial vehicle does not take the lane as directed by the Mainline Sort System.

B.5.1.4 WIM Electronics

The system electronics shall be capable of receiving and analyzing the data gathered from the Mainline WIM and Compliance System locations. The electronics shall also be responsible for communicating and transmitting vehicle weight data from the WIM site to the Weigh Station Computer in the SWEF building.

The system electronics shall be capable of receiving inputs from the WIM quartz sensors and loops, as well as serial and digital devices. Output control options shall be included for a variety of serial, digital and AC power devices, such as CMS, and LCS.

The system shall be compatible with the existing automatic vehicle identification (AVI) equipment, as specified by PrePass. The system shall also interface with 360SmartView and Drivewyze. Ports and software are to be included for communication with both systems.

All quartz sensor modules shall be field replaceable and every module shall feature self-testing and built-in fault diagnosis.

The Mainline WIM system shall be all new components provided in the existing roadside cabinet to house the System Electronics and the overview image freeze frame camera equipment, the LPR equipment, the AUR equipment, and other system peripherals. The Ramp WIM cabinet shall have System Electronics, as well as the other system peripherals for the location. The electronics for the AVI reader located on the Mainline WIM section are existing and have been supplied by PrePass. The electronics and software for the 360SmartView system shall be provided by others.

All wires from quartz sensors, loops, sign control lines, shall be terminated on terminal strips or screw terminal connectors. The terminal strips shall be identified by terminal strip number and screw connection number. These terminal strips shall be readily accessible. All cables shall be long enough to easily reach these terminal strips. Terminal strips, splices, or other type of connections prior to these standard terminal strips shall not be allowed except for splicing of a loop to a shielded twisted loop lead.

All AC power connections shall be shielded to prevent electrical shock.

The System Electronics shall abide by the following requirements:

1. Communications
 - a. On-board Ethernet interface (wireless or fiber)
 - b. One RS-232 serial interface dedicated to external interface.
 - c. Local user interface for system configuration and fault diagnosis.
 - d. Remote administration via Telnet or Windows remote desktop.
 - e. Remote file download via FTP.
2. Peripherals
 - a. Non-volatile storage for vehicle information to prevent data loss during power outages:
 - b. Sensor inputs from WIM quartz sensors and loops
 - c. Output control for CMS and LCS.
3. Software
 - a. Records data logs on operational status, condition and safety system activity.
 - b. Weight Compliance and Classification with user-defined classification scheme.
 - c. Serial output compatible with PrePass and others.
 - d. Automated Mainline and Ramp Weigh Station.
 - e. Data Analysis and Reporting.

B.5.1.5 Overview Camera System

The Overview Camera System shall consist of the following system components:

1. Color and Black/White video camera
2. Illuminator system
3. Video capture system

The video system shall monitor traffic flow on the mainline. It shall capture still images of trucks having violations for identification and enforcement purposes. The images shall be displayed on an operator interface located in the scale house. Each vehicle record number shall be displayed with the vehicle image.

One camera shall be provided and installed on a pole located near the Mainline WIM location. The camera shall provide overview images of the passing commercial vehicles, detailing their cab and side. Color images shall be provided for daylight use, and black/white images shall be provided for night use.

The overview capture system shall be located in one of the System Electronics. The overview capture system shall provide control and display facility to display image outputs from one source to one monitor.

B.5.1.6 LPR System

The LPR system shall be capable of collecting, storing, and transmitting all commercial vehicle license plate images and OCR data to the Weigh Station Computer for configurable periods. The OCR read accuracy on license plates shall meet 90% of readable plates including jurisdiction at night.

B.5.1.7 Automatic USDOT Reading System

The AUR system shall be capable of collecting, storing, and transmitting all commercial vehicle license plate images and OCR data to the Weigh Station Computer for configurable periods. The OCR read accuracy shall meet 75% of readable numbers.

B.5.1.8 Mainline Sort System Changeable Message Sign (CMS)

The Mainline Sort System shall consist of the following system components:

1. One (1) existing Changeable Message Sign (CMS) relocated to new position
2. Detector loops (as determined by vendor) to track vehicle compliance.

The CMS shall direct vehicles to enter the Weigh Station or bypass the Weigh Station, based on the results of the mainline sort decision.

The CMS, under control of the Mainline WIM system, shall synchronize the sign switching upon detection of the tracked vehicle passing over or through strategically located detector loops.

The CMS, under control of the Mainline WIM system, shall also be consistent with the PrePass notification signal to the PrePass in-cab transponder. The WIM System, upon notification from PrePass, shall blank all CMS such that all messages regarding truck compliance and reporting instructions are decided by PrePass and communicated via transponder.

The CMS shall be mounted on a breakaway steel sign supports conforming to the requirements of standard spec 635 and standard spec 636. Concrete bases along the mainline shall be a minimum of 32 feet from the edge of travel lane and flush with the surrounding ground.

When not energized, the sign shall completely blank out without any ghost images.

B.5.2 Compliance/Ramp Area

B.5.2.1 WIM Quartz Sensors

The WIM quartz sensors in the compliance area shall be the same as the Mainline WIM quartz sensors and meet the requirements specified in section B.5.1.1.

B.5.2.2 Detector Loops in New Roadway

Loops in new roadway shall meet the requirements specified in section B.5.1.2.

B.5.2.3 Detector Loops in Existing Station Roadway

Each detector loop shall have a minimum loop area of 6-foot x 6-foot.

Loop wire shall be 1-conductor, 14 AWG, IMSA 51-5. Loop leads must be 2-conductor, 14 gauge, IMSA 50-2 cable.

Loops can be cut directly into the existing roadway and sealed.

B.5.2.4 Electronics

The Compliance System Interface Electronics shall be located in the existing roadside cabinet. The electronics shall be responsible for retrieving truck data and communicating it to the Weigh Station Computer in the scale house.

The electronics shall include interfaces to the following components:

1. Weigh-in-Motion quartz sensors
2. Loops
3. Lane directional signals
4. Weigh Station Computer system

The electronic system must be of a modular design to aid in system maintenance, troubleshooting and in-field servicing.

All components of the electronic system, including inductive loop detectors, shall contain necessary electrical protection to prevent damage from electrical surges, spikes, and the effects of lightning.

The system must be of a durable, industrial design and construction and enable continuous operation, with automated startup in the event of a power outage.

All quartz sensor and ancillary equipment connections must be conveniently located on the system front panel. All connections, where possible, shall be a plug-in, quick-connect style.

Where possible, all printed circuit boards and components shall be of a commercially available design. This includes, but is not limited to; the system central processing unit (motherboard) and CPU related interfaces such as digital input/output interfaces.

The specifications for the Compliance system electronics are to follow the minimum specifications as set out for the Mainline WIM Electronics.

All cutouts and openings in the electronics housing cabinet shall be vermin proofed.

All wires from WIM quartz sensors, loops, sign control lines, shall be terminated on terminal strips or screw terminal connections. The terminal strips shall be identified by terminal strip number and screw connection number. These terminal strips shall be readily accessible. All cables shall be long enough to easily reach these terminal strips. Terminal strips, splices, or other type of connections prior to these standard terminal strips shall not be allowed except for splicing of a loop to a shielded twisted loop lead. All AC power connections shall be shielded to prevent electrical shock.

B.5.2.5 Lane Control System (LCS)

The existing Ramp Lane Control System (LCS) signals and structure shall be reused and signal vehicles to the proper lane as determined by the WIM system. The system shall use signals from existing loops to switch the lane directional signals

B.5.3 Scale House

B.5.3.1 Weigh Station System Operational Overview

The Weigh Station system shall be all new and located in the scale house. It shall process data from the Mainline and Compliance WIM electronics and static scale, for central monitoring and control of the facility operation. The system shall provide two operator displays at the scale house. The operator can monitor vehicle movements, view and print reports and adjust system parameters, i.e., alter message signs, adjust random sorting %, etc.

The Weigh Station System shall be made up of the following components:

- Vehicle Display Window (displays will vary by manufacturer)
- A Virtual Graphics Display
- An Override Console
- A Weigh Station Computer
- Static Scale Manager

B.5.3.2 Vehicle Display Windows

The Vehicle Display Window shall display:

- sequence number

- time and date
- class
- speed
- gross vehicle weight
- lane-time and date
- direction of travel
- OCR read of the vehicles license plate and jurisdiction
- OCR read of the vehicles USDOT number
- violations highlighted in red
- right and left wheel weights per axle with violations highlighted in red
- individual axle weights with violations highlighted in red
- individual, front bridge, rear bridge, and full vehicle spacing
- tandem weights as measured by the WIM electronics with violations highlighted in red
- front and rear bridge weights as measured by the WIM electronics with violations highlighted in red
- thumbnail image of the vehicle from the overview camera.
- thumbnail image of the USDOT number
- thumbnail image of the vehicle license plate

A vehicle record shall be displayable in either graphic form or in text form. Another alternate shall be a tabular view of all records in the queue.

The length from axle to axle shall be shown on a linear scale with axle spacings plotted below the scale line. Red text for an axle shall indicate the location of an overweight axle or axle group.

The display of vehicle record must show the following violation information in addition to dimension and weight violations:

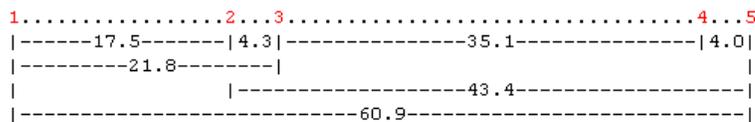
1. Vehicle speeding
2. Credential

The vehicle display windows shall allow the following options at any time without going to alternate screens or menus:

1. Freeze vehicle record
2. Print vehicle record
3. Double click on the overview thumbnail image to see a larger view

Each vehicle record shall contain a digital image of all vehicles and shall be similar to the following examples.

747 15:21:51 Class:9 Speed:36 Gross:81400 Plate:2VG154 ST:OK USDOT:1202
 AxleOverWt BridgeOverWt TndmOverWt GrossOverWt Credential

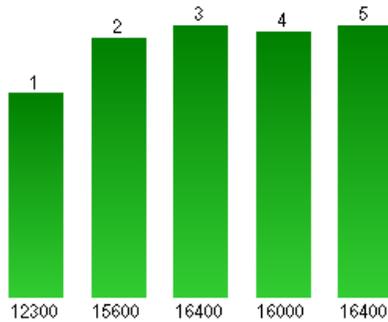
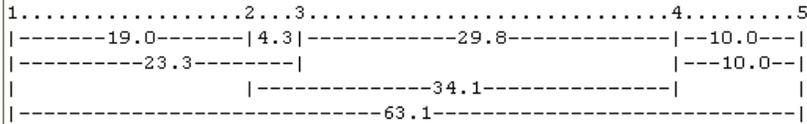


Axle	1	2	3	4	5
RGHT	5700	8200	8400	7600	10100
LEFT	6100	7800	8300	9000	10200
TOTL	11800	16000	16700	16600	20300
Tndm:		32700		36900	
InBr:	1-3	44500	2-5	69600	



740 15:16:56 Class:9 Speed:38 Gross:76700 Plate:A014978 ST:MS USDOT:237655

Credential



B.5.3.3 Virtual Graphics Display

The Virtual Graphics Display shall provide software representing the overhead layout of the Weigh Station on the Weigh Station Computer to provide control and monitoring of the Weigh Station. The graphics display must be software based. The Station Console shall provide the ability for an operator in the Weigh Station to select the control operation of the Mainline Sort System CMS and Ramp LCS manually. The graphics display shall have visual indicators to identify the mode of control of system signs and signals. In addition vehicle movement information shall be displayed using indicators on the graphical panel. It shall provide the following functions:

1. Select automatic sort control of each system or the manual control by the operator
2. In manual control of the Mainline CMS by an operator, it can be set for all vehicles to enter the Weigh Station or to bypass
3. In manual control of the Ramp LCS by an operator, it can be set for all vehicles to come to the static scale or the bypass lane
4. Real-Time monitoring of the Weigh Station operation by showing indicators when the appropriate sensors are activated and deactivated including loops
5. Graphics representing the color and status of the directional signals, graphics shall continuously display the status of the mainline message signs, overhead signals, OPEN/CLOSED signs, static scale message sign, and bypass lane message sign
6. Select automatic sort control of the bypass and static scale lane VMS's or manual control by the operator
7. Manual selection of the bypass and static scale lane VMS messages
8. The Weigh Station system must provide an audible warning for the following conditions:
 - a. WIM scale backup
 - b. Weigh Station violator
 - c. Violator in the bypass lane
 - d. Weigh Station automatically closing because ramp is backed up
 - e. Weigh Station is automatically reopening because ramp has cleared
 - f. Vehicle waiting on the static scale
9. Include a 22-inch (minimum) widescreen flat panel monitor with speakers and shall interface with the Weigh Station Computer. This monitor shall be one of the two monitors located at the Weigh Station Computer
10. Provide a graphical representation of the Weigh Station layout with symbols to indicate the function of vehicle tracking devices

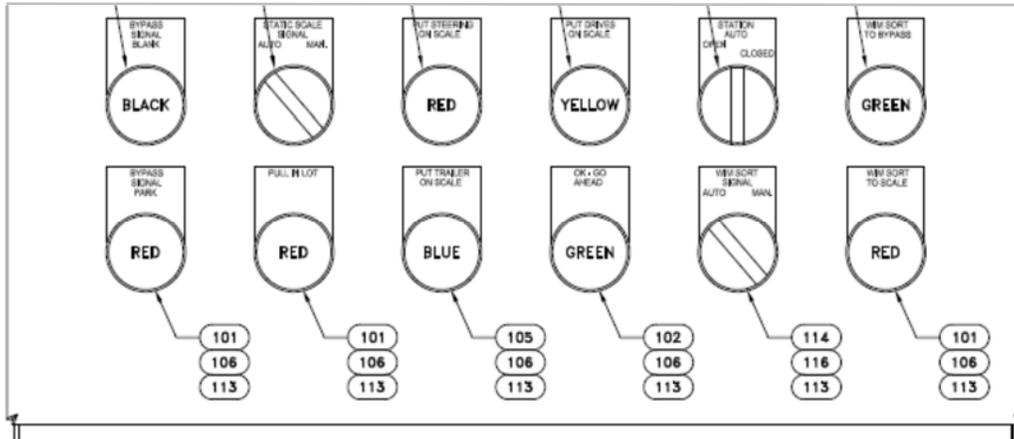
11. Allow for a true manual control of all signs
12. Shall match the image below



B.5.3.4 Manual Override Console

A Manual Override Console shall be provided as an interface that allows the operator to override the Mainline WIM and Compliance Systems in order to gain control of various system components. The console shall include control of the OPEN/CLOSED, \nearrow /CLOSED, and OPEN - TRUCKS USE RIGHT LANE/(blank) signs. The console shall also include the ability to control the static scale message sign and turn the scoreboards on/off.

The override console shall provide the ability for the operator to manually override all signals and signs. It shall be a minimum of 24" long and 10" wide with large push buttons and switches to allow officers to quickly locate and change signal controls when override is required. The Override Console must be operationally independent of the weigh-in-motion interface electronics, the Virtual Graphics Panel, and the Weigh Station Computer to control all signs and signals. The override console shall remain operational even if the Weigh Station Computer is not functioning with the exception of the Variable Message Signs.



B.5.4 Weigh Station Computer

The Weigh Station Computer shall be:

1. Be an Intel microprocessor based computer with the Microsoft Windows 8.1 or 10 operating system.
2. Have the following minimum features and configuration:
 - a. Most current PC standards for memory, hard drive, and other hardware
 - b. Two 22-inch (minimum) widescreen flat screen color monitors with non-glare screen
 - c. Keyboard
 - d. Mouse
 - e. System utilities and diagnostic software
 - f. Surge protection
 - g. System password protected lock for user access restriction
 - h. All access ports, cables and accessories to provide a working computer.

The Weigh Station Computer shall provide the following functions:

1. Perform mainline and ramp sort operation
2. Weigh all vehicles travelling in the right lane
3. Classify and weight all vehicles travelling on all instrumented lanes of the highway with WIM quartz sensors
4. Perform weight compliance analysis on vehicles in accordance with department regulations
5. Monitor safety conditions of the facility these include:
 - a. A WIM scale back up
 - b. Ramp back up
 - c. Static scale lane back up
6. Perform sorter operation in accordance with decisions based on weight compliance analysis, other violations (speeding, improper maneuver, sudden speed change, etc.), Virtual Graphics panel Override console selection, safety conditions, and operator selected action
7. Insert sequence numbers for vehicle records for tracking purposes
8. Display of vehicle record in multiple queue windows
9. Track vehicle movement in the execution of sorter operation
10. Control message display of the CMS/LCS to synchronize with the movement of a vehicle being tracked
11. Provide vehicle records for those that have been sorted to or come to the static scale
12. Automatically position each vehicle on the static scale using the static scale VMS sign
13. Provide real time display and control of the static scale
14. Allow operators to automatically sequence vehicles across the static scale or manually weigh by accumulating axles
15. Automatically determine and provide operators feedback based on whether a vehicle is actually overweight based on axle spacing, axle, axle group, gross, and front/rear bridge weights based on Wisconsin regulations
16. Automatically or manually release vehicles that are not overweight based on Wisconsin regulations and do not have other violations

17. Allow operators to print weight tickets
18. Provide audible message alarms to alert operators of conditions that may require their attention
19. Provide reports on system operation
20. Perform data collection, data storage, file management and report generation functions for collected vehicle information
21. Allow adjustment of WIM and system settings

The Weigh Station system shall have application programs to detect prolonged power failure conditions to initiate orderly shutdown operation.

B.5.5 Scale Manager

The Scale Manager shall be software located on the Weigh Station Computer, and facilitate processing vehicles that are sorted or volunteer to come to the static scale. As officers primarily focus on vehicles that are potential violators this shall be the main screen that they work with. The screen shall also give the operator the ability to control system settings and view and run reports. It shall provide the following functions:

1. Interface with the static scale indicator and WIM systems
2. Display and accumulate static scale weights and display WIM data for the vehicle that is positioned on the static scale
3. Provide adjustable thresholds to each steer axle, axle, tandem, front bridge, rear bridge and gross weight based on Wisconsin regulations for axle spacing and weight
4. Automatically check weights to thresholds and release vehicle if in auto mode or alert operator of violation with audio and visual alerts
5. Automatically or manually allow operators to control the static scale sign with buttons matching the sign messages
6. Provide the following features within the display
 - a. Selectable auto release
 - b. Display shift counts
 - c. Violations displayed in red
 - d. Zero scale
 - e. Reset scale
7. Print requirements include
 - a. Site identification
 - b. Time and date

 - c. License plate
 - d. USDOT number
 - e. Individual weights (axles and axle groups)
 - f. Gross weight
 - g. WIM axle spacing
 - h. Thumbnail image of vehicle
8. Shall continuously show updated static scale counts for each shift for the day
9. Utilities
 - a. View individual live raw counts for static scale load cells
 - b. Allow remote diagnostics access

If a vehicle is not positioned properly or is a weight violator the operator shall be notified by visual and audio alarms and the vehicle shall not be auto-released when in auto-sequencing mode.

To eliminate costly calibrations, the Weigh Station System shall electronically interface with the Mainline WIM system for auto-calibration. On a continuous basis the Weigh Station System shall ensure WIM accuracy and calibration.

Calibration of the mainline WIM shall be automatic and performed by electronic recording of WIM and static weights on 50 vehicles from the vehicle stream which are loaded to within 75% of the legal

allowable limit. Auto-calibration shall be done with different factors for speed range and vehicle class to provide more accurate results. The settings shall allow for a minimum of 10 different speed ranges and 13 different classes to be used.

Acceptance testing shall confirm the WIM accuracy performance which shall be verified in a report. This report shall be created by continuous (24/7) electronic recording of vehicles from the vehicle stream. The actual stable static weights and WIM weights shall be saved in a common database to determine WIM scale accuracy compliance, as opposed to the method described in ASTM E 1318-09. This information is to be easily accessible to state personnel in reports and shall be printed on a weekly basis throughout the continuous operating test and in everyday use of the Weigh Station afterwards.

The accuracy requirements required under the WIM scale section above exceeding ASTM E1318 for a Type III WIM shall be met.

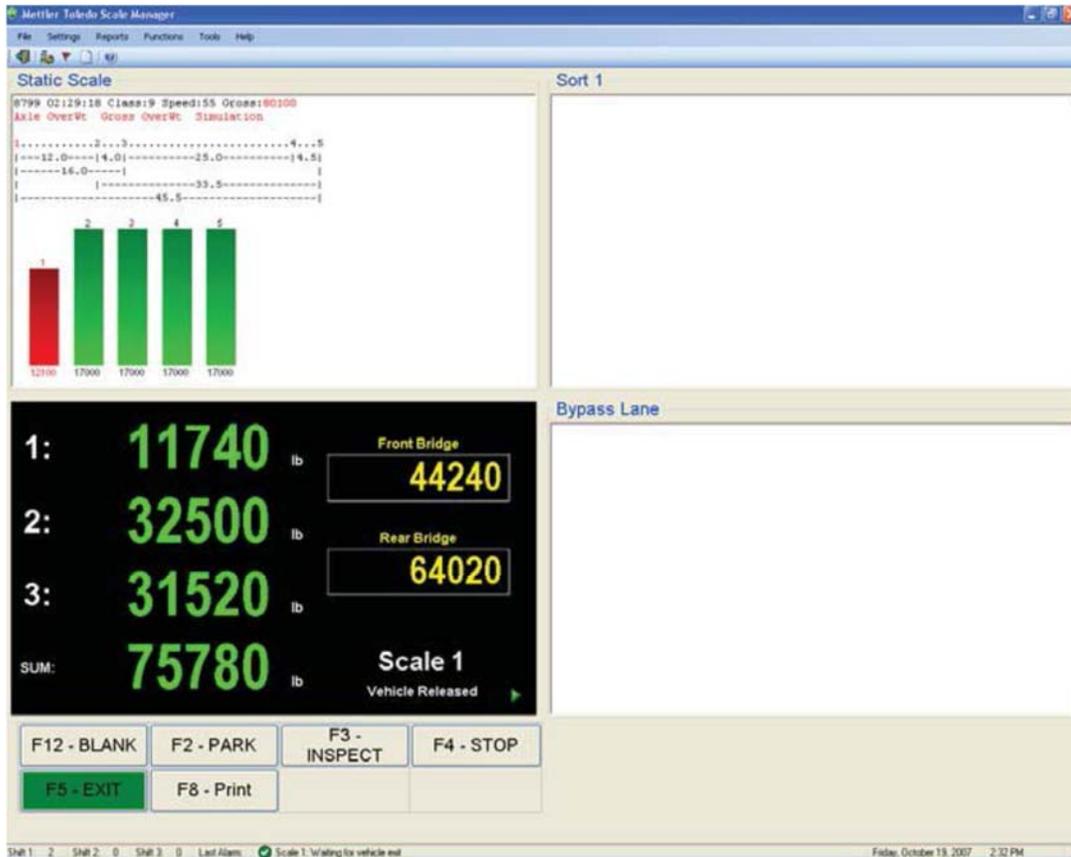
All reports shall be available from the Scale Manager for one central place to view reports. The following reports shall be available:

1. Number of vehicles per lane across the WIM by class, hour, and shift for a selected period
2. Number of trucks per lane across the WIM by hour, and shift for a selected period
3. Axle and GVW weights by class for a selected period
4. Number of vehicles per lane by weights, by class and by hour for a selected period
5. Number of vehicles across the static scale by class, hour, and shift for a selected period
6. WIM accuracy performance by class for a selected period

A selected period for report generation shall include starting date and ending date. Reports shall be generated manually by operator action. Reports shall have an option to display a chart view, and to be exported into Microsoft Office compatible formats.

The Scale Manager shall have utility programs to do the following:

1. Set up and configure the operation of the Mainline WIM system
2. Set up and configure the operation of the Mainline Sort System
3. Initiate and reset traffic counting operation of the WIM System
4. Perform maintenance functions of the Weigh Station systems



B.6 Conduit and Pull Boxes

All cables shall be in conduit unless specifically approved by the engineer. All conduit and pull boxes shall meet the requirements of standard spec 652 and 653.

All materials shall comply with the "National Electrical Code" and the current standard specifications, and special requirements by the department weigh-in-motion and automatic vehicle identification system specifications. Duct seal shall be used to seal all conduits in the cabinets and in all junction boxes. All conduits shall have a polyethylene pull string with at least 210-pound break strength left in place at completion of construction.

Separate conduits shall be used for AC/DC power and low voltage signal cables. Low voltage signal cables shall include video, digital communication, sensor signal cable, and sensor excitation cables where voltage is under +/- 20 volts DC. Conduits for video and RF cables shall be of a large enough size to accommodate the maximum bend radius using factory 90-degree "bends".

All cables shall be in conduits unless specifically approved by the engineer.

B.7 Changeable Message Signs (CMS)

Furnish and install one OPEN/CLOSED, one \nearrow /CLOSED, and one OPEN – TRUCKS USE RIGHT LANE/(blank) changeable message signs. Each unit to be 2-message, 1-way, LED blank out signs with white illumination.

Messages shall be formed by rows of white LED pixels

All letters shall be 18-inch series E formed by single rows of LED pixels and the 45-degree up arrow shall be formed by outlined rows of LED pixels

Dimming option with photocell shall be provided

120 VAC shall be required for activation of messages
2 ½-inch aluminium angle shall be provided top and bottom for mounting
Exterior of sign housings shall be wet painted, semi-gloss black enamel
Replace all wiring from Weigh Station to the OPEN/CLOSED signs
Wireless communication system shall be provided between the Weigh Station and the OPEN – TRUCKS USE RIGHT LANE/(blank) sign

B.8 Portable Static Wheel Load Scales

Furnish two sets of six scale units meeting the following specifications. The units shall be portable hydraulic/analog (mechanical) designed to weigh commercial vehicles. The unit shall be applicable for use in law enforcement of weighing the wheel-load for weighing commercial vehicles which includes large trucks and buses.

Each unit shall have a large active platform measuring a minimum of 26-inches x 15-inches to accommodate the space needs of dual and large tires. The height shall not exceed 3/4-inch in order to negate the need of ingress and egress ramp. The total physical weight of the unit shall not exceed 35 pounds. Each unit shall be completely waterproof and dustproof.

Each unit shall be able to accurately weigh up to 20,000 pounds with:

1. A rate of "+ or –" 50 pounds up to 2,500 pounds
2. A rate of "+ or –" 100 pounds between 2,500 and 10,000 pounds
3. A rate of "+ or –" 100 pounds between 10,000 and 20,000 pounds

The weight gradations shall be easily readable and must be in 50 pound or less increments. The readout system shall be capable of indicating weights from 0 to 20,000 pounds. The unit must have incorporated a simple zero adjust method to facilitate zeroing before each weighing.

Each unit shall remain within the acceptance tolerance when subjected to temperatures of 0 degrees or less to 120 degrees or more. Each unit shall be able to weigh accurately under conditions not absolutely level. Each unit shall be capable of 24 hours of continual use without need for battery recharge or external power source.

Each unit shall meet applicable technical requirements of National Institute of Standards and Technology (NIST) Handbook 44 as they pertain to specifications, tolerances, and other technical requirements for wheel load scales or Class III devices. The current NIST Handbook can be obtained at the following website: <https://www.nist.gov/>.

Each unit shall be capable of being calibrated with the portable manual test stand described below. All weighing and measuring devices are required by State law to have a NTEP Certificate. Any piece of equipment purchased for the purposes of calibrating/testing wheel load scales must have a NTEP certificate of conformance.

B.9 System Acceptance

The complete WIM System shall be accepted subject to fulfilling the following conditions:

1. System review
2. Acceptance tests (meeting WIM, LPR and AUR accuracy on a weekly basis).
3. Training

B.9.1 System Review

The potential WIM Vendor shall submit six copies of a system layout and cut sheets for each individual site prior to award of their subcontract. These layouts shall be submitted to the engineer for review. Approval shall be either from the engineer or designated representative. If the potential WIM Vendor does not fully meet the specifications the engineer may instruct the prime Contractor to select another vendor.

A preliminary on-site meeting shall be held after all of the old electronics have been removed to verify no equipment is being reused and to discuss Contractors' plans for the routing of conduits, cables, and placement of equipment.

B.9.2 Acceptance Test

The complete WIM System, all-inclusive as contracted, shall be designed, built and tested by the Vendor, and as proof of operation, the systems, overall and singularly, shall be tested at various times according to the test specifications. All field tests shall be performed by the WIM Vendor and observed by the engineer with all reports submitted to the engineer.

B.9.2.1 Factory Acceptance Tests

Prior to shipment of any equipment, Factory Acceptance Tests shall be performed for each system to verify the equipment operating as described in the contract documents and in accordance with the test specifications approved by the engineer. The Factory Acceptance Tests shall include at minimum the following:

1. A physical inspection to verify that the quality of material and workmanship satisfy specified requirements and standards and that the equipment and software under test are complete and ready for delivery.
2. A functional test to verify that the equipment and software operate as described in the contract documents.
3. A performance test to verify that the equipment satisfies performance and operation criteria.

For the purpose of these tests the equipment and software shall be configured as nearly as possible to the final configuration. Any field inputs not available at the factory test site shall be simulated to provide a close approximation to actual site conditions.

B.9.2.2 Site Acceptance Test

After all the equipment and software have been installed at the site, the Vendor shall run tests to ensure that all equipment shall operate as specified therein contract documents. These tests shall be witnessed or conducted by the engineer within one week of the manufacturer notifying the engineer that the system is ready for testing.

The camera systems shall be tested at the sites to verify that the images taken at daytime and night time are clear and integrated properly with the vehicle record from the systems. The Vendor shall collect data observed by the engineer and provide the results of the images taken for the duration of the testing during day and night time operation. Success shall be determined by images that are non-blurred, crisp, properly integrated, and correctly read with the vehicle data received by the systems.

B.9.2.3 Continuous Operating Test (COT)

Following successful completion of the Site Acceptance Test, a Continuous Operating Test shall be conducted for a period of fifty-six (56) calendar days.

System manufacturer shall perform the in-motion calibration tests of WIM subsystem after installation is completed and prior to beginning the burn-in period. Contractor shall provide the engineer one week's notice of the in-motion calibration tests.

- SYSTEM manufacturer shall provide calibration weights
- COT period begins two weeks after the completion of installation and certification of the static scale
- COT cannot begin until the static scales have been certified
- Contractor shall submit a detailed test plan to the engineer for approval no later than 90 days after notice to proceed
- For the COT period, the SYSTEM shall be fully operational under normal traffic conditions and operate trouble free (defined as any error that shall not reset by means of rebooting PC) for 24 hours each day for 7 days of each week for 56 consecutive days
- Only one reboot per shift shall be allowed

- The engineer shall check the accuracy performance by printing an accuracy report from an electronic database which is created and stored on the Weigh Station Computer
- The report for WIM accuracy must be printed from the Weigh Station Computer by the engineer and met weekly during the APT period
- WIM accuracy on all vehicles loaded above 60,000 pounds and traveling between the speeds of 5 to 85 miles per hour shall be as follows:
 - a. Axle weights + 15% (95% of trucks)
 - b. Tandem weights + 10% (95% of trucks)
 - c. Gross weights + 6% (95% of trucks)
 - d. Axle spacing + 6 inches (68% of axles), whichever is greater

This database shall be created by continuous electronic recording of vehicles from the vehicle stream, which are loaded to within 75% (60,000 lbs.) of the legal allowable limit.

The actual stable static weights and WIM weights shall be stored in this common database to determine WIM scale accuracy compliance, as opposed to the method described in ASTM E1318.

The images and OCR reads from the LPR and DOT reader shall be captured over a week and a report generated showing how each image was read and total read rate percentages for readable plates including jurisdiction and numbers. The images shall be provided for engineer verification. The read rates must exceed meet or exceed these specifications

The SYSTEM manufacturer must leave the site prior to the start of the COT and may only return if a problem is encountered or accompanied by the engineer.

If problems of any kind are encountered during the COT, the SYSTEM manufacturer shall be informed and problem(s) shall be simultaneously witnessed by the engineer and Contractor. If problem is confirmed by all, a strike shall be assessed and problem shall be corrected.

After confirmation from SYSTEM manufacturer that problems are solved and at the discretion of the engineer, the 56 day COT shall start over until 56 continuous days of trouble free operation are experienced. This re-start can only occur three times. A restart shall begin within two weeks of a strike.

The COT shall demonstrate to the satisfaction of the engineer that the weigh-in-motion/static enforcement system has been constructed and consistently meet the performance requirements of the plans and of these Special Provisions.

The continuous operation test shall be the basis for acceptance or rejection of the systems as a result of demonstrated performance. If the system is rejected and there have been more than three strikes and re-starts of the COT, the parties shall negotiate, in good faith, an acceptable resolution. Liquidated damages may be applied between strikes and restarts. Following such negotiations, if the same are unsuccessful, the engineer may execute the performance bond. Notwithstanding the foregoing, the Contractor shall retain/be entitled to receive all amounts paid or payable to the Contractor in accordance with the following payment schedule, agreed-to by the parties:

PAYMENT

- | | |
|--|-----|
| 1. Payment upon safe and secure delivery of all equipment at a storage location approved by the engineer | 20% |
| 2. Complete installation of the entire SYSTEM | 35% |
| 3. Completion of calibration and burn-in | 10% |
| 4. Completion of the COT to the satisfaction of the engineer | 35% |

The engineer shall issue a Certificate of Final Acceptance upon successful completion of the Continuous Operating Test and training program.

The WIM acceptance procedure for the Weigh Station system shall be based off of officers printing the database comparison of mainline WIM and static scale weights and the WIM accuracy meeting project specifications.

B.10 Training

The Vendor shall set up and conduct formal training programs for the State Patrol personnel on the operation, maintenance and installation of the system components of the complete WIM System. The training shall include the following:

1. Two half-day operator training sessions providing an introduction to the operation and installation of the complete Weigh Station system including the static scale and the functions to be performed. A class size of up to eight individuals per session can be expected.
2. Two one-day "hands-on" guidance sessions for operators in the operation of the systems. A class size of up to four individuals per session can be expected. This training shall occur during the first two days of the Continuous Operating Test.

The training program shall be scheduled the week following the completion of the operations test.

The cost for the first training sessions shall be included in the contract price. The department will, from time to time review any future training requirements. The WIM Vendor shall agree to provide future and additional training sessions upon receipt of requests from the department. The department will reimburse the WIM Vendor the cost of providing additional training sessions on a per diem basis and at a rate agreed upon by the department at the time of the request. The department will provide classroom space for the training session.

The vendor shall provide six hard copies and an electronic file of the WIM System Operator's Manual. The manual shall contain detailed information and instructions covering all aspects of the WIM system.

B.11 Warranties

The WIM vendor shall warrant all new subsystems and system components as supplied and installed for five (5) years from the date of issuance of the Certificate of Final Acceptance of the WIM System by the engineer. This warranty and associated maintenance work are defined and covered under a separate bid item, Weigh-In-Motion System Warranty Maintenance.

B.12 Materials

Materials for the project shall be new except where the plans and specifications explicitly state components and wiring can be reused. Materials used in the construction of this equipment shall be of good commercial quality entirely suitable for the intended purpose. Materials shall be free from all defects and imperfections that might affect serviceability of the finished product.

B.13 Standard Products

The equipment shall be constructed of standard material, so that the prompt and continuing service and delivery of spare parts may be assured. The component parts need not be products of the same manufacturer.

B.14 Lightning Protection

Ground rod(s) and lightning protection shall be provided as per manufacturer's requirements. All system components and equipment shall be properly grounded.

C (Vacant)

D Measurement

The department will measure Weigh-In-Motion System, completed in accordance to the contract and accepted, as a single complete unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.480	Weigh-In-Motion System	LS

Payment is full compensation for removal and disposal of old equipment along with furnishing and installing all material; performing all pavement grinding; installation of loops cut into existing pavement; and for furnishing all labor, supervision, equipment, calibrating and testing, training, tools and incidentals necessary to complete the contracted work.

Weigh-In-Motion System Warranty Maintenance, Sawing Asphalt, Sawing Concrete, Removing Pavement, Removing Asphalt Milling, Drilled Dowel Bars, Drilled Tie Bars, Base Aggregate Dense 1 ¼-Inch, Concrete Pavement Repair, Concrete Pavement Replacement, Concrete Pavement, HMA Pavement, and Signs Type II will be paid under separate bid items.

Schedule of Items

Attached, dated July 27, 2017, are the revised Schedule of Items Pages 9, 21, 22, and 24 – 27.

Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:

1003-10-76

Revised: 12, 44, 52, 183, 187, and 188.

1003-10-81

Revised: 215 – 218, 246 – 250, 432 – 439, 468, 469, 701, and 720

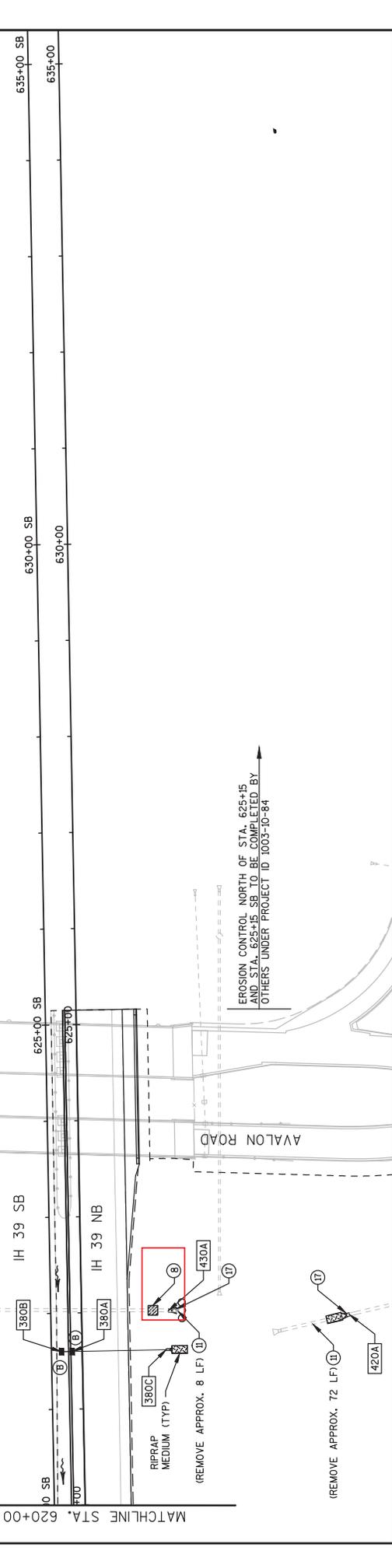
Added: 546A and 546B

END OF ADDENDUM



2

2



EROSION CONTROL LEGEND

- TEMPORARY DITCH CHECKS
- INLET PROTECTION TYPE A
- INLET PROTECTION TYPE B
- INLET PROTECTION TYPE D
- INLET PROTECTION INSTALLED IN PREVIOUS STAGE
- EROSION MAT CLASS I
- EROSION MAT CLASS II
- SILT FENCE

- SLOPE INTERCEPT
- CULVERT PIPE CHECKS
- SURFACE WATER FLOW
- TEMPORARY DITCH CHECKS INSTALLED IN PREVIOUS STAGE
- CULVERT PIPE CHECKS INSTALLED IN PREVIOUS STAGE
- TURF REINFORCEMENT MAT SYSTEM (SEE CONSTRUCTION DETAIL)

- 1 REMOVING INLETS REOD
- 2 REMOVING APRON ENDWALL REOD
- 3 REMOVING STORM SEWER 15-INCH REOD
- 4 REMOVING STORM SEWER 18-INCH REOD
- 5 REMOVING SMALL PIPE CULVERTS REOD
- 6 REMOVING STORM SEWER 12-INCH REOD
- 7 COVERING STORM SEWER REOD
- 8 CONCRETE COLLAR REOD
- 9 SEALING PIPES REOD
- 10 REMOVING STORM SEWER 24-INCH REOD
- 11 REMOVING STORM SEWER 36-INCH REOD
- 12 ABANDONING SEWER
- 13 ADJUSTING INLET COVERS REOD
- 14 SALVAGE INLET COVERS
- 15 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH
- 16 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH
- 17 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH

STORM SEWER DESCRIPTION

EROSION CONTROL NORTH OF STA. 625+15 AND STA. 625+45 SB TO BE COMPLETED BY OTHERS UNDER PROJECT ID 1003-10-84

PROJECT NO: 1003-10-76

HWY: IH 39

COUNTY: ROCK

PLAN: EROSION CONTROL - STAGE 1A, 1B, 2A, 2B

SHEET 44

FILE NAME : S:\MID\3500-3557\3557\02\CIVIL\3D\FINAL_10031076_SHEETS\PLAN\022002_ECP_2A.DWG

LAYOUT NAME - 022002.ECP_2A - 022004.ECP_2A

PLOT DATE : 7/18/2017 11:39 AM

PLOT BY : GRIME, SARA

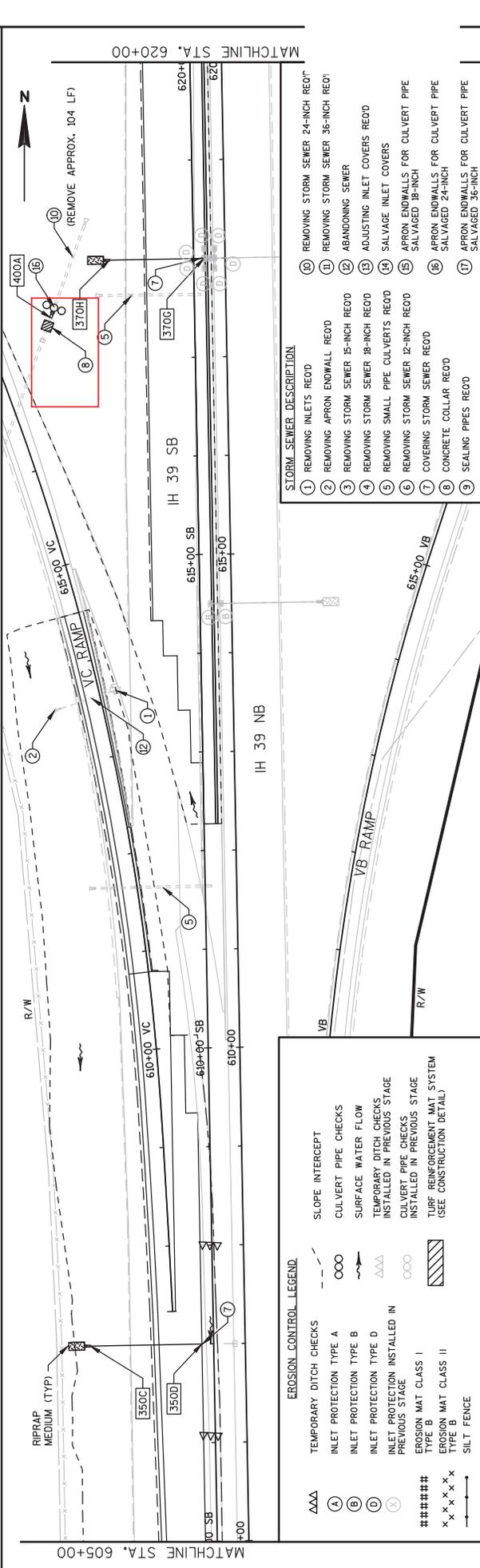
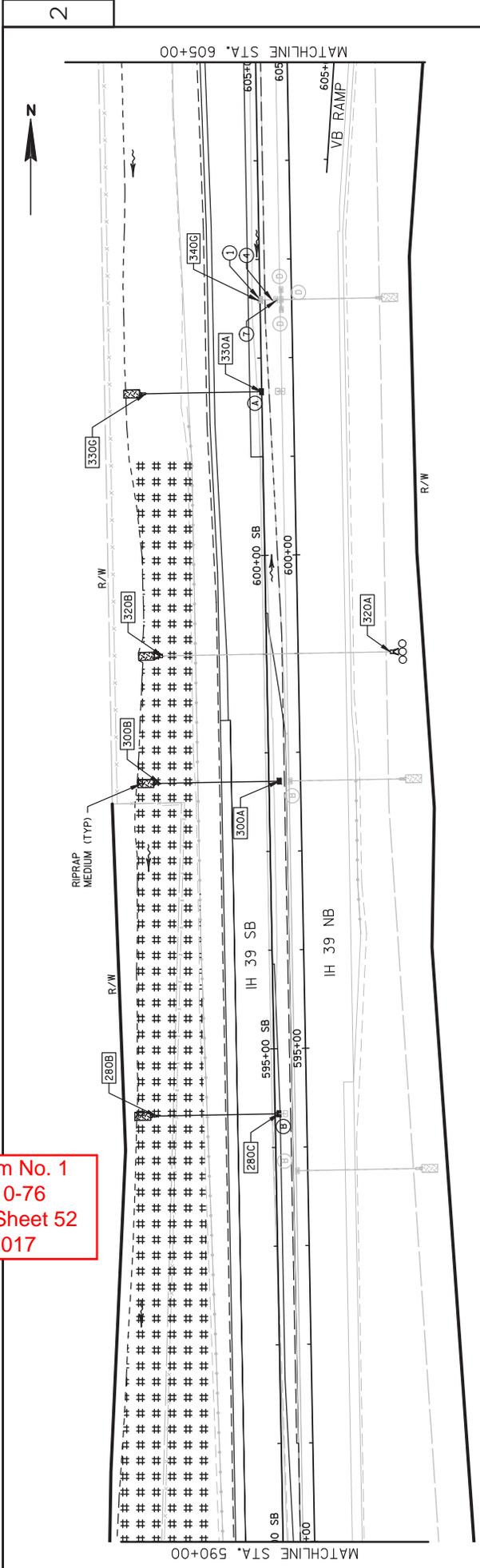
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADD SHEET 41

Addendum No. 1
ID 1003-10-76
Revised Sheet 44
July 27, 2017

Addendum No. 1
 ID 1003-10-76
 Revised Sheet 52
 July 27, 2017



EROSION CONTROL LEGEND

AAA	TEMPORARY DITCH CHECKS	---	SLOPE INTERCEPT
(A)	INLET PROTECTION TYPE A	OOO	CULVERT PIPE CHECKS
(B)	INLET PROTECTION TYPE B	---	SURFACE WATER FLOW
(C)	INLET PROTECTION TYPE C	AAA	TEMPORARY DITCH CHECKS
(D)	INLET PROTECTION TYPE D	OOO	INSTALLED IN PREVIOUS STAGE
#####	INLET PROTECTION INSTALLED IN PREVIOUS STAGE	---	CULVERT PIPE CHECKS
x x x x x	EROSION MAT CLASS I TYPE B	---	INSTALLED IN PREVIOUS STAGE
x x x x x	EROSION MAT CLASS II TYPE B	---	TURF REINFORCEMENT MAT SYSTEM (SEE CONSTRUCTION DETAIL)
x x x x x	SILT FENCE		

STORM SEWER DESCRIPTION

(1)	REMOVING INLET'S REOD	(10)	REMOVING STORM SEWER 24-INCH REOD
(2)	REMOVING APRON ENDWALL REOD	(11)	REMOVING STORM SEWER 36-INCH REOD
(3)	REMOVING STORM SEWER 15-INCH REOD	(12)	ABANDONING SEWER
(4)	REMOVING STORM SEWER 18-INCH REOD	(13)	ADJUSTING INLET COVERS REOD
(5)	REMOVING SMALL PIPE CULVERTS REOD	(14)	SALVAGE INLET COVERS
(6)	REMOVING STORM SEWER 12-INCH REOD	(15)	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH
(7)	COVERING STORM SEWER REOD	(16)	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH
(8)	CONCRETE COLLAR REOD	(17)	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH
(9)	SEALING PIPES REOD		

Addendum No. 1
ID 1003-10-76
Revised Sheet 187
July 27, 2017

CATEGORY	STAGE	STRUCTURE NUMBER	STATION	OFFSET	611.3901		611.3225		611.0610		611.0606		611.0654		611.8120.S		611.8115		611.9710			
					MEDIAN	INLETS	2X2-FT	2X2.5-FT	TYPE BW	TYPE MS	TYPE B	TYPE V	COVERING	ADJUSTING	COVERING	ADJUSTING	COVERING	ADJUSTING	COVERING	ADJUSTING	COVERING	ADJUSTING
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
1000	STAGE 2A	380A	621+60.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		380B	621+60.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370A	617+90.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370B	618+10.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370C	618+00.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370D	617+99.99 SB	16.0 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370E	617+90.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370F	618+10.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		370G	618+00.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		360A	614+49.98 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		360B	614+49.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		340A	602+48.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		340B	602+69.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		340C	602+58.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		340G	602+59.00	17.4 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		340H	599+34.00	20.3 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		320A	599+00.01	101.4 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		320B	599+00.05 SB	113.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		310A	597+70.99	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		290A	593+75.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		280A	594+34.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		270A	589+90.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		255A	587+15.00	21.8 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		250A	585+85.96	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		180A	577+99.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		180B	577+68.97	47.4 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		170B	574+99.98	170.0 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		160A	574+47.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		140A	570+94.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		120A	567+41.97	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		100A	563+88.97	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		80I	560+26.00	19.4 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		80D	560+29.49 SB	16.0 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		80E	560+15.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		80F	560+35.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		80G	560+26.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		70B	556+57.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		60B	552+98.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		50B	549+39.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		40B	545+79.98	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		30A	542+20.99 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		30B	542+20.99	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		20A	538+62.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		20B	538+62.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		10A	535+02.15 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		10B	535+02.15	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		SUBTOTALS (STAGE 2A)			4	1	32	29	6	2	1	1	1	1	1	1	1	1	1	1	1	
	STAGE 2B	350A	606+99.98	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		SUBTOTALS (STAGE 2B)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	STAGE 2D	50A	549+39.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		50B	549+39.00	10.5 LT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		60A	552+98.00 SB	5.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		60E	552+88.00 SB	10.5 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		60D	552+97.99 SB	16.0 RT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

CONT. ON NEXT PAGE

SHEET 187

MISCELLANEOUS QUANTITIES

COUNTY: ROCK

HWY: IH 39

PROJECT NO: 1003-10-76

FILE NAME : S:\MAD\3500--3599\3557\002\CIVIL\3D\FINAL_10031076_SHEETS\PLAN\30201.MXD

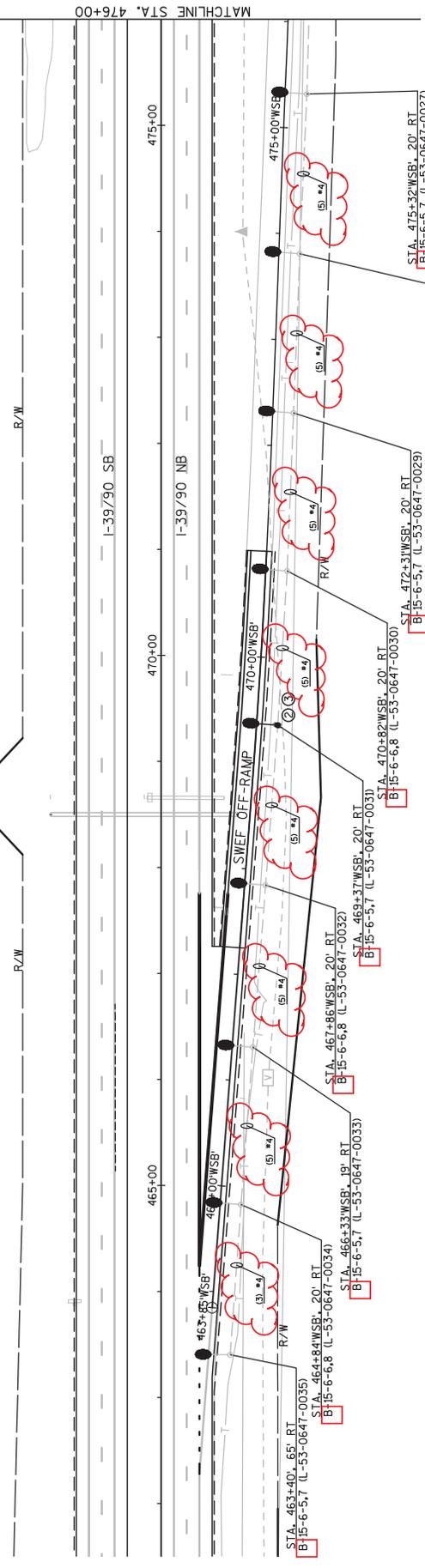
LAYOUT NAME - 050210.MXD

PLOT DATE : 7/18/2017 11:57 AM

PLOT BY : GRIME, SARA

PLOT NAME :

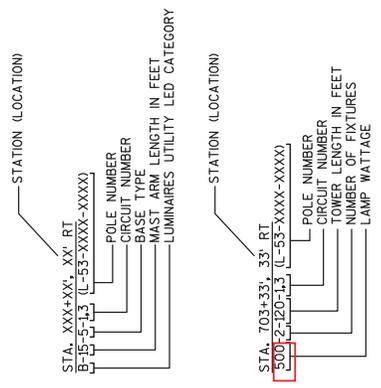
PLOT SCALE : *****



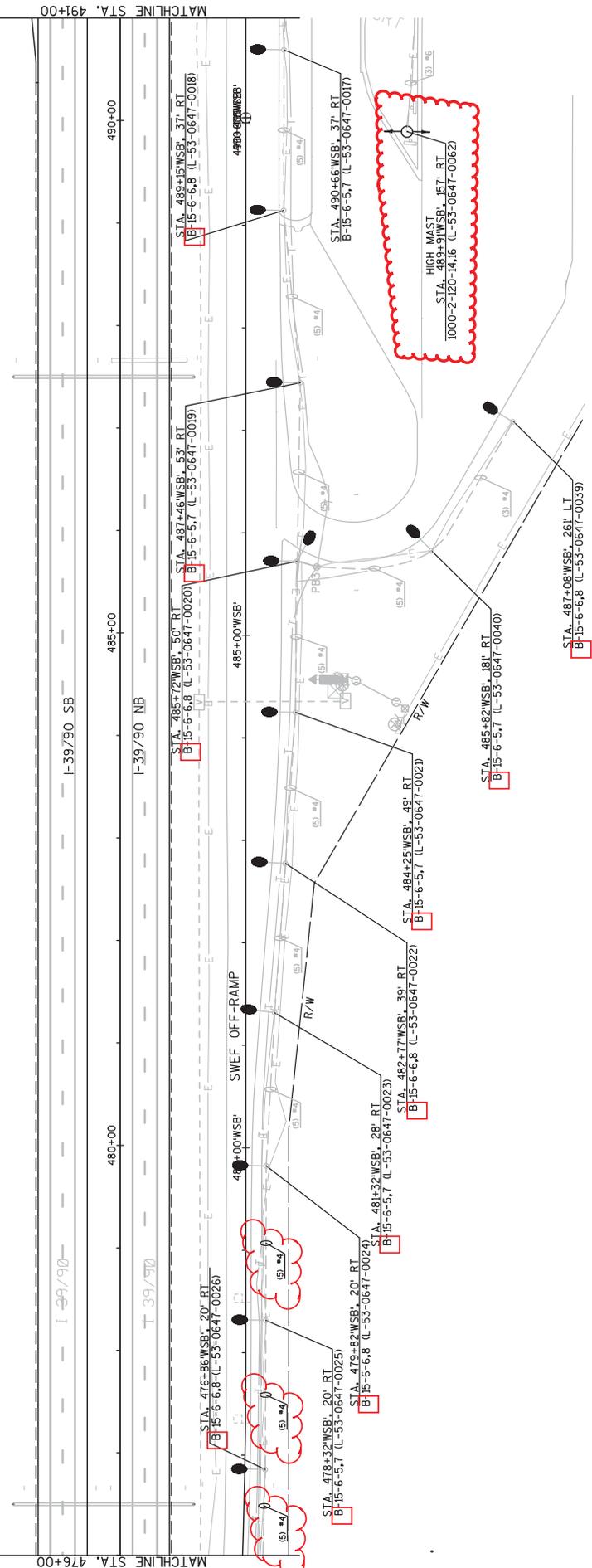
Addendum No. 1
ID 1003-10-81
Revised Sheet 215
July 27, 2017

- CONSTRUCTION NOTES:**
1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
 2. SALVAGE EXISTING LIGHTING UNIT. REMOVE EXISTING CONCRETE BASE. DISPOSE OF ALL WIRE IN LIGHT UNIT.
 3. INSTALL SALVAGED LIGHTING UNIT ON NEW CONCRETE BASE TYPE 6. FURNISH AND INSTALL LUMINAIRES UTILITY LED B.
 4. REMOVE EXISTING STREET AND WALKWAY LUMINAIRES. FURNISH AND INSTALL LED LUMINAIRES ON EXISTING STREET AND WALKWAY LIGHT POLES.
 5. REMOVE EXISTING ELECTRICAL WIRE IN CONDUIT BETWEEN L-0024 AND L-0035.

- LEGEND:**
- ☒ CONTROL CABINET
 - ☒ ELECTRICAL SERVICE
 - CONDUIT RIGID NONMETALLIC SCHEDULE 40
 - 30-FT LIGHTING UNIT-SINGLE
 - ⊕ WALKWAY LIGHTING UNIT (REPLACE LUMINAIRE ONLY)
 - ⊕ HIGH MAST LIGHT TOWER
 - ⊕ PULL BOX, 24" X 42"
 - ⊕ REMOVE OR ABANDON IN PLACE
- NOTE: GRAYSHADE REPRESENTS EXISTING

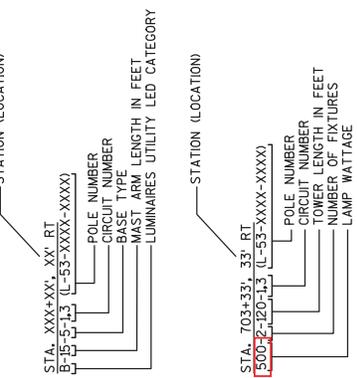


PROJECT NO: 1003-10-81 COUNTY: ROCK HWY: IH 39	LIGHTING PLAN SHEET 215 LIGHTING NO. L53-0647	HIGHWAY LIGHTING I-39/90 WB BELOIT (SWEF) TOWN OF LGPRAIRIE ROCK COUNTY	PAGE 1 OF 4
PLOT DATE : 7/21/2017 2:00 PM PLOT BY : TRACHEK, TYLER PLOT NAME :			
PLOT SCALE : 1 IN=100 FT WSDOT/CADD SHEET 42			

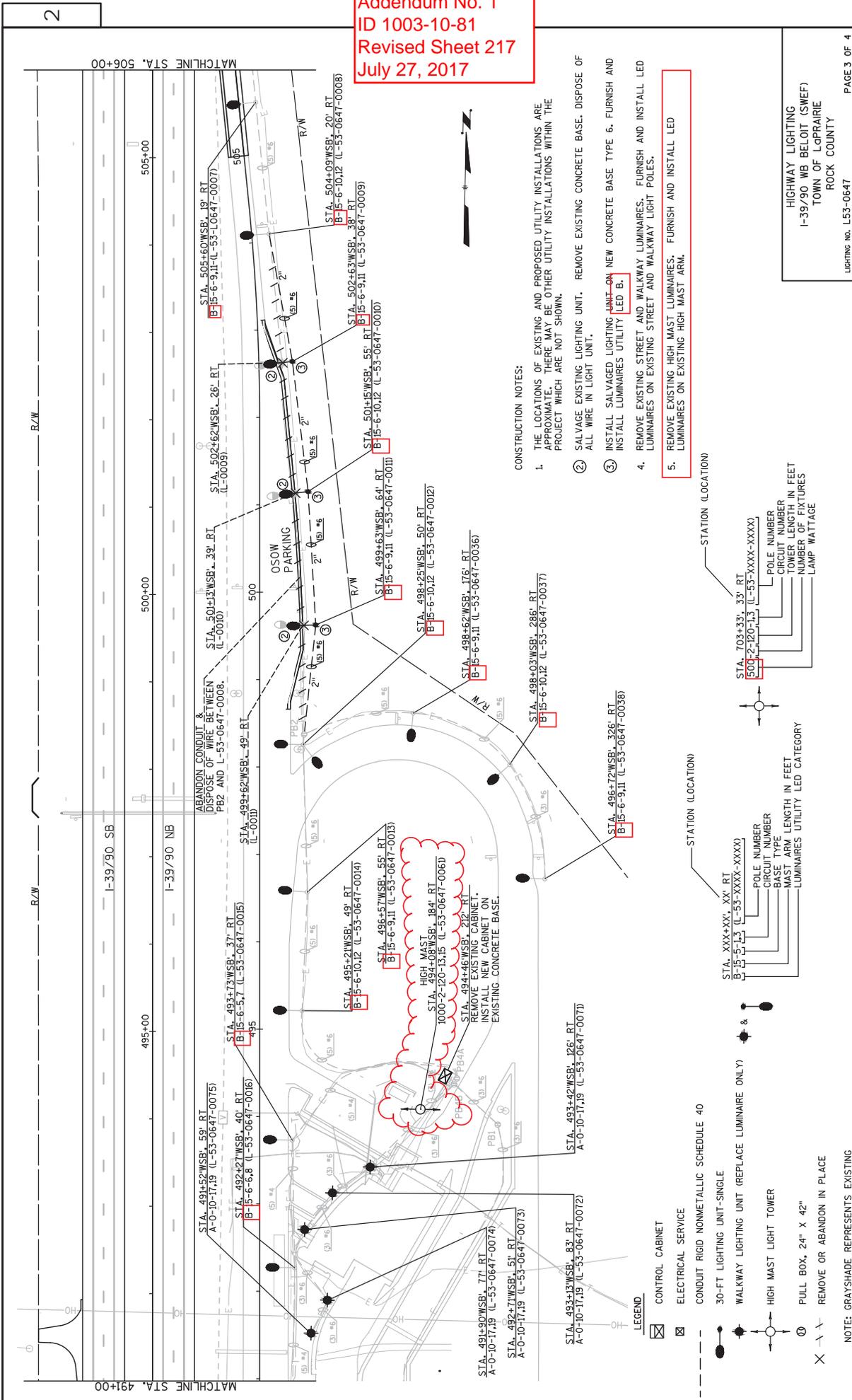


- CONSTRUCTION NOTES:
1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS APPROXIMATE. THESE MAY BE OTHER UTILITY INSTALLATIONS WHICH ARE NOT SHOWN.
 2. REMOVE EXISTING STREET AND WALKWAY LUMINAIRES. FURNISH AND INSTALL LED LUMINAIRES ON EXISTING STREET AND WALKWAY LIGHT POLES.
 3. REMOVE EXISTING HIGH MAST LUMINAIRES. FURNISH AND INSTALL LED LUMINAIRES ON EXISTING HIGH MAST ARM.
 4. REMOVE EXISTING ELECTRICAL WIRE IN CONDUIT BETWEEN L-0024 AND L-0035.

Addendum No. 1
ID 1003-10-81
Revised Sheet 216
July 27, 2017

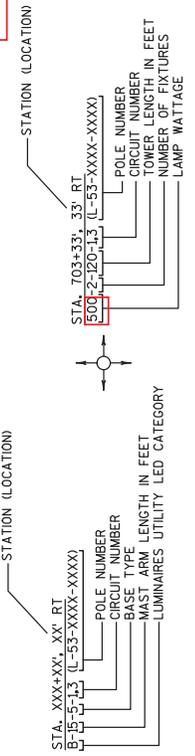


HIGHWAY LIGHTING
 I-39/90 WB BELOIT (SWEF)
 TOWN OF LGPRAIRIE
 ROCK COUNTY
 LIGHTING NO. L53-0647



Addendum No. 1
ID 1003-10-81
Revised Sheet 217
July 27, 2017

- CONSTRUCTION NOTES:**
1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
 2. SALVAGE EXISTING LIGHTING UNIT. REMOVE EXISTING CONCRETE BASE. DISPOSE OF ALL WIRE IN LIGHT UNIT.
 3. INSTALL SALVAGED LIGHTING UNIT ON NEW CONCRETE BASE TYPE 6. FURNISH AND INSTALL LUMINAIRES UTILITY LED B.
 4. REMOVE EXISTING STREET AND WALKWAY LUMINAIRES. FURNISH AND INSTALL LED LUMINAIRES ON EXISTING STREET AND WALKWAY LIGHT POLES.
 5. REMOVE EXISTING HIGH MAST LUMINAIRES. FURNISH AND INSTALL LED LUMINAIRES ON EXISTING HIGH MAST ARM.



HIGHWAY LIGHTING
 I-39/90 WB BELOIT (SWEF)
 TOWN OF LOGPRAIRE
 ROCK COUNTY

FILE NAME : L:\WORK\PROJECTS\60242867\000_CAD\001_DRAWINGS\2014\TRAFFIC\LIGHTING\SWEF_VE_SWEF_P_LIGHTING.DWG
 LAYOUT NAME - AE_SWEF_P_LIGHTING - SHEETS

PLOT BY : TRACHEK, TYLER
 PLOT NAME :
 PLOT SCALE : 1 IN=100 FT

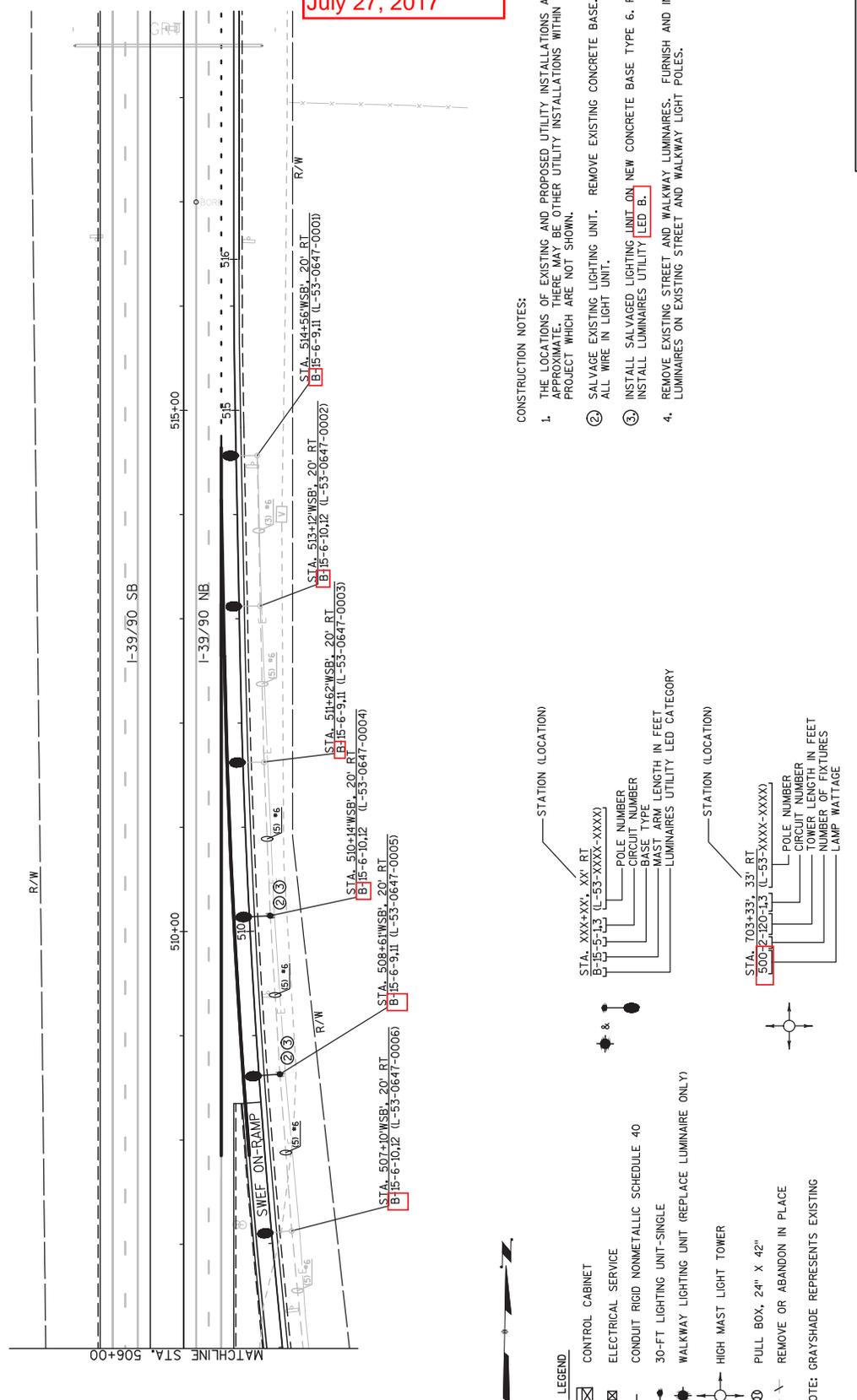
PLOT DATE : 7/21/2017 2:00 PM

COUNTY: ROCK
 LIGHTING PLAN

COUNTY: ROCK
 HWY: IH 39

NOTE: GRAYSHADE REPRESENTS EXISTING

Addendum No. 1
ID 1003-10-81
Revised Sheet 218
July 27, 2017



LEGEND

- ☒ CONTROL CABINET
- ☒ ELECTRICAL SERVICE
- CONDUIT RIGID NONMETALLIC SCHEDULE 40
- 30'-FT LIGHTING UNIT-SINGLE
- WALKWAY LIGHTING UNIT (REPLACE LUMINAIRE ONLY)
- HIGH MAST LIGHT TOWER
- PULL BOX, 24" X 42"
- REMOVE OR ABANDON IN PLACE
- NOTE: GRAYSHADE REPRESENTS EXISTING

STATION (LOCATION)

STA. XXX+XX, XX' RT
B-15-5-1.3 (L-53-XXXX-XXXX)

- POLE NUMBER
- CIRCUIT NUMBER
- BASE TYPE
- MAST ARM LENGTH IN FEET
- LUMINAIRES UTILITY LED CATEGORY

STATION (LOCATION)

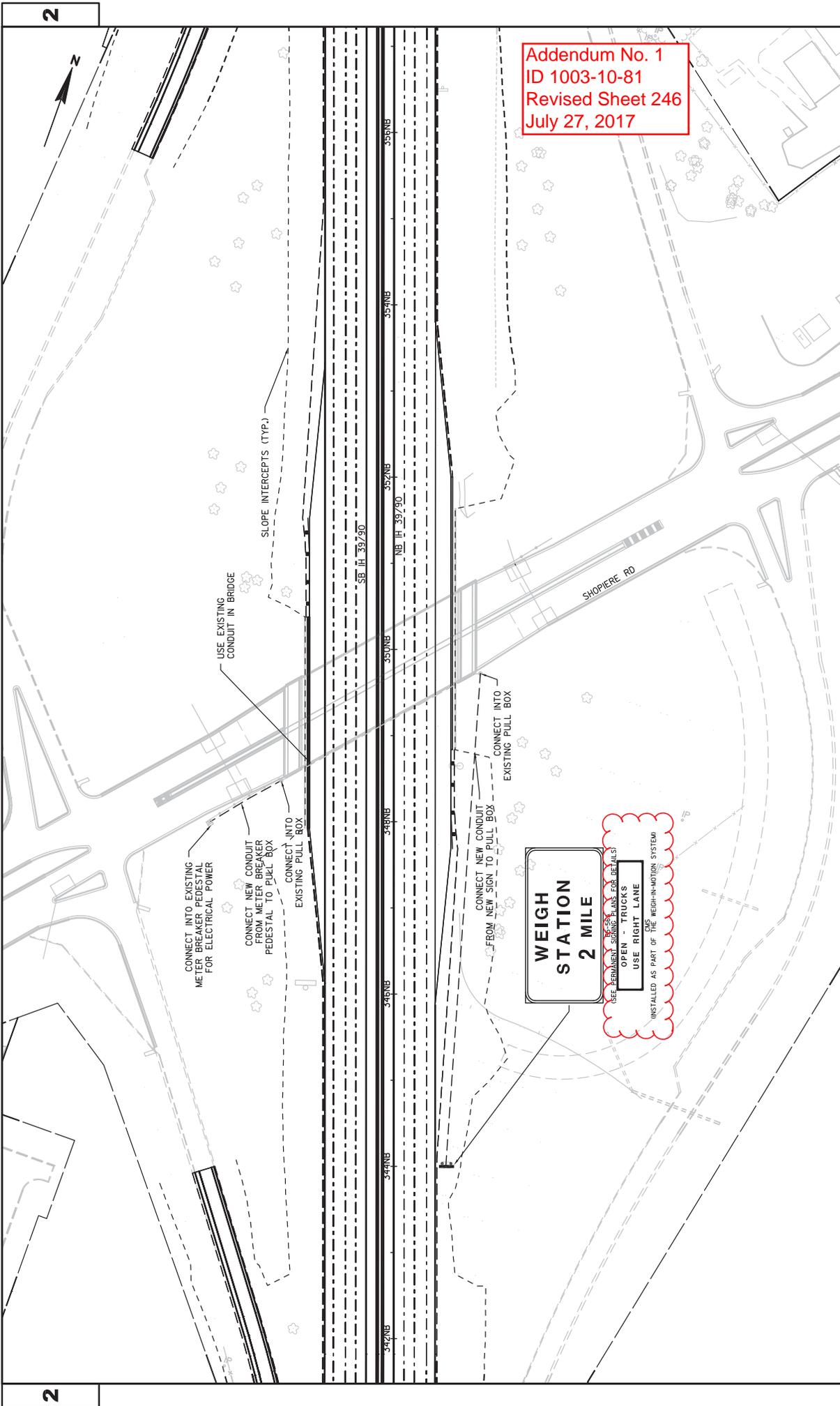
STA. 703+33, 33' RT
B-15-2-120-1.3 (L-53-XXXX-XXXX)

- POLE NUMBER
- CIRCUIT NUMBER
- TOWER LENGTH IN FEET
- NUMBER OF FIXTURES
- LAMP MATTAGE

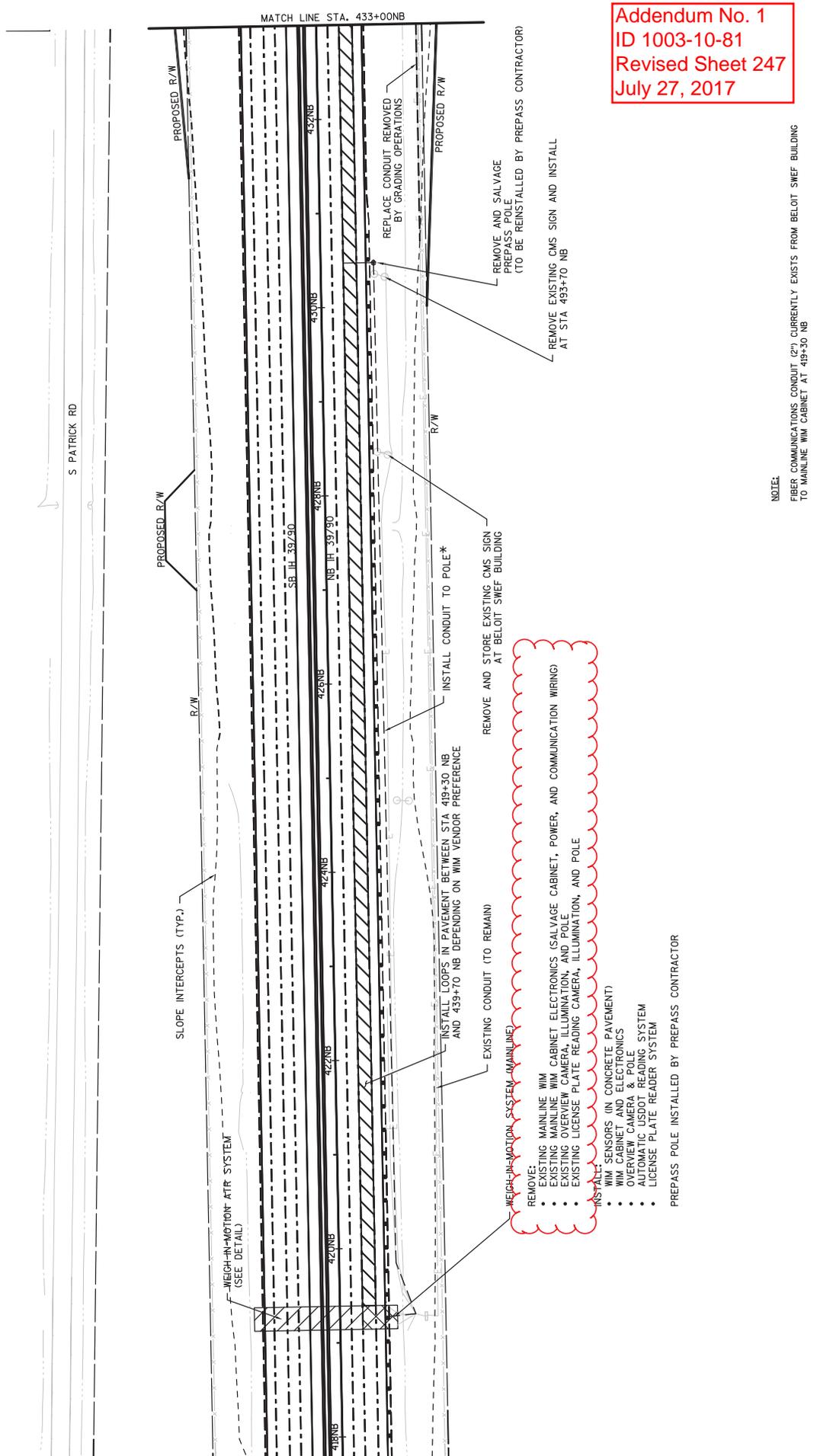
CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. SALVAGE EXISTING LIGHTING UNIT. REMOVE EXISTING CONCRETE BASE. DISPOSE OF ALL WIRE IN LIGHT UNIT.
3. INSTALL SALVAGED LIGHTING UNIT ON NEW CONCRETE BASE TYPE 6. FURNISH AND INSTALL LUMINAIRES UTILITY LED B.
4. REMOVE EXISTING STREET AND WALKWAY LUMINAIRES. FURNISH AND INSTALL LED LUMINAIRES ON EXISTING STREET AND WALKWAY LIGHT POLES.

<p>PROJECT NO: 1003-10-81</p> <p>HWY: IH 39</p> <p>COUNTY: ROCK</p> <p>LIGHTING PLAN</p> <p>PLOT BY: TRACHUK, TYLER</p> <p>PLOT DATE: 7.21.2017 2:00 PM</p> <p>PLOT NAME: L:\WORK\PROJECTS\60242867\000_CAD\001_DRAWINGS\2014\TRAFFIC\LIGHTING\SWEF_VE_SWEF_P_LIGHTING.DWG</p> <p>LAYOUT NAME - AE_SWEF_P_LIGHTING - SHEET 4</p>	<p>HIGHWAY LIGHTING</p> <p>I-39/90 WB BELOIT (SWEF)</p> <p>TOWN OF LGPRAIRE</p> <p>ROCK COUNTY</p> <p>LIGHTING NO. L53-0647</p> <p>PAGE 4 OF 4</p>	<p>SHEET 218</p> <p>WSDOT/CADD SHEET 42</p> <p>PLOT SCALE: 1" IN:100 FT</p>
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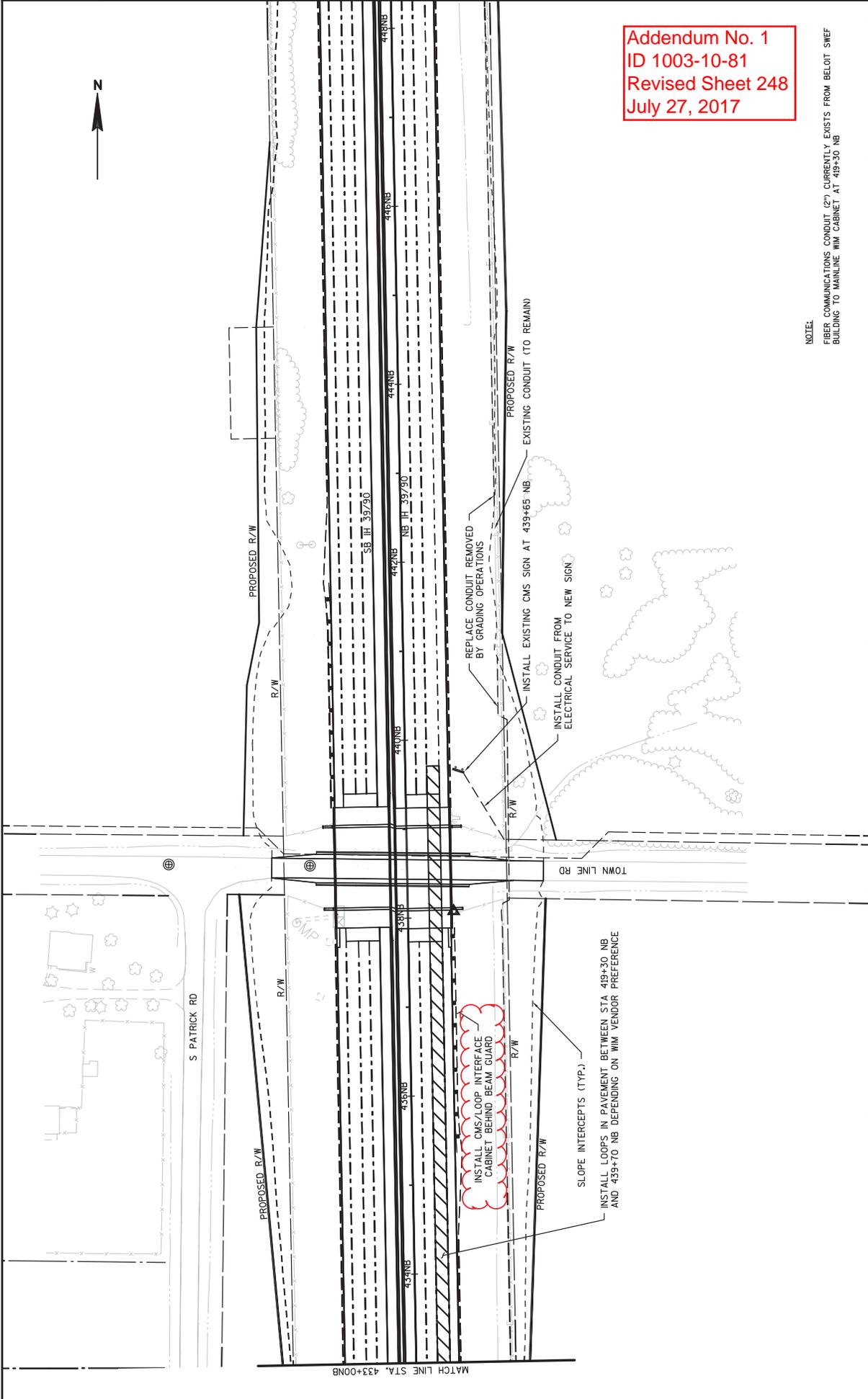
Addendum No. 1
 ID 1003-10-81
 Revised Sheet 246
 July 27, 2017



Addendum No. 1
 ID 1003-10-81
 Revised Sheet 247
 July 27, 2017

- REMOVE:**
- EXISTING MAINLINE WIM
 - EXISTING MAINLINE WIM CABINET ELECTRONICS (SALVAGE CABINET, POWER, AND COMMUNICATION WIRING)
 - EXISTING OVERVIEW CAMERA, ILLUMINATION, AND POLE
 - EXISTING LICENSE PLATE READING CAMERA, ILLUMINATION, AND POLE
- INSTALL:**
- WIM SENSORS (IN CONCRETE PAVEMENT)
 - WIM CABINET AND ELECTRONICS
 - OVERVIEW CAMERA & POLE
 - AUTOMATIC USDOT READING SYSTEM
 - LICENSE PLATE READER SYSTEM
- PREPASS POLE INSTALLED BY PREPASS CONTRACTOR

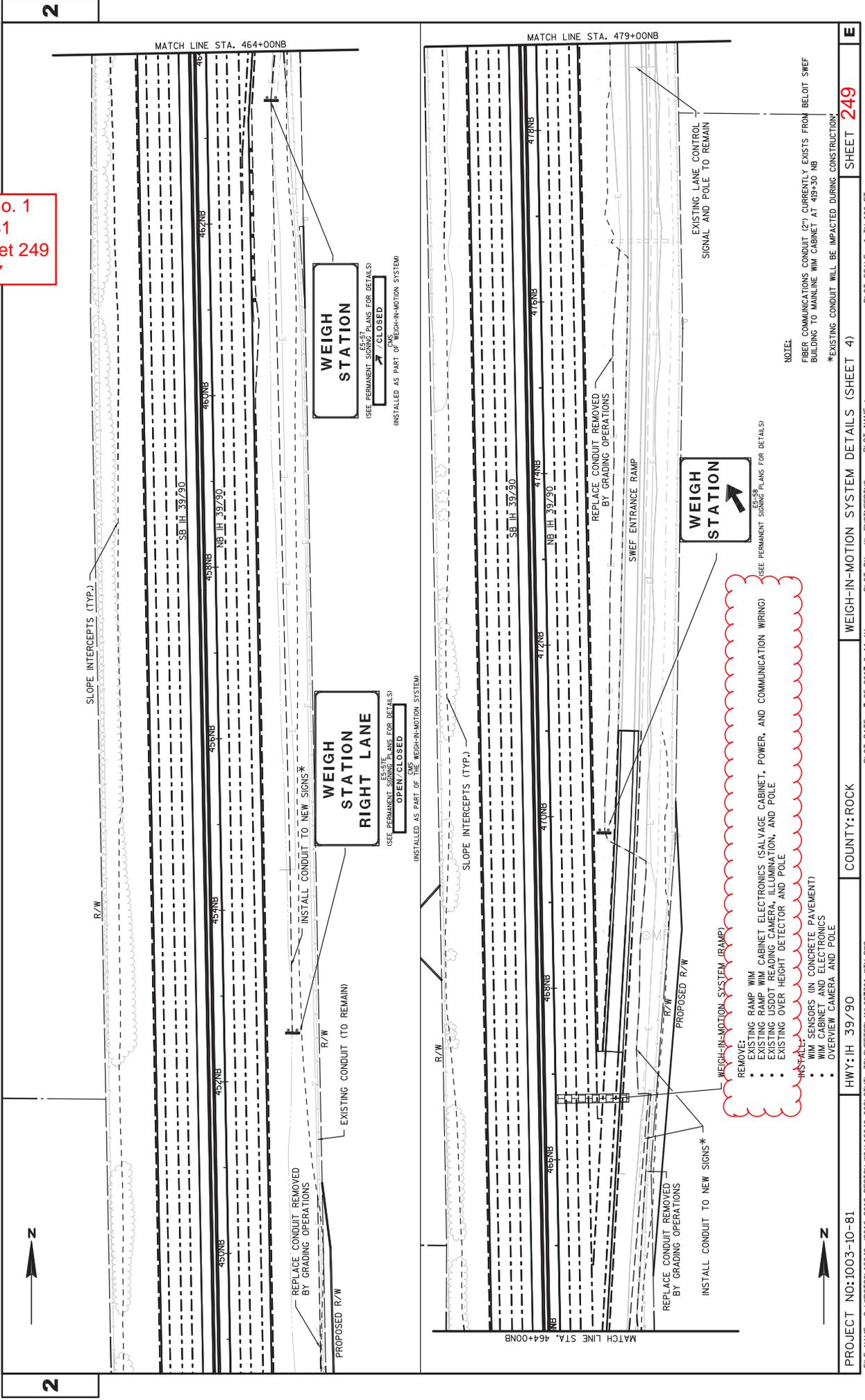
NOTE:
 FIBER COMMUNICATIONS CONDUIT (2") CURRENTLY EXISTS FROM BELOIT SWEF BUILDING TO MAINLINE WIM CABINET AT 419+30 NB
 *EXISTING CONDUIT WILL BE REMOVED DURING CONSTRUCTION



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 ID 1003-10-81
 Revised Sheet 248
 July 27, 2017

NOTE:
 FIBER COMMUNICATIONS CONDUIT (FCC) CURRENTLY EXISTS FROM BELOIT SWEET BUILDING TO MAINLINE WIM CABINET AT 419+30 NB

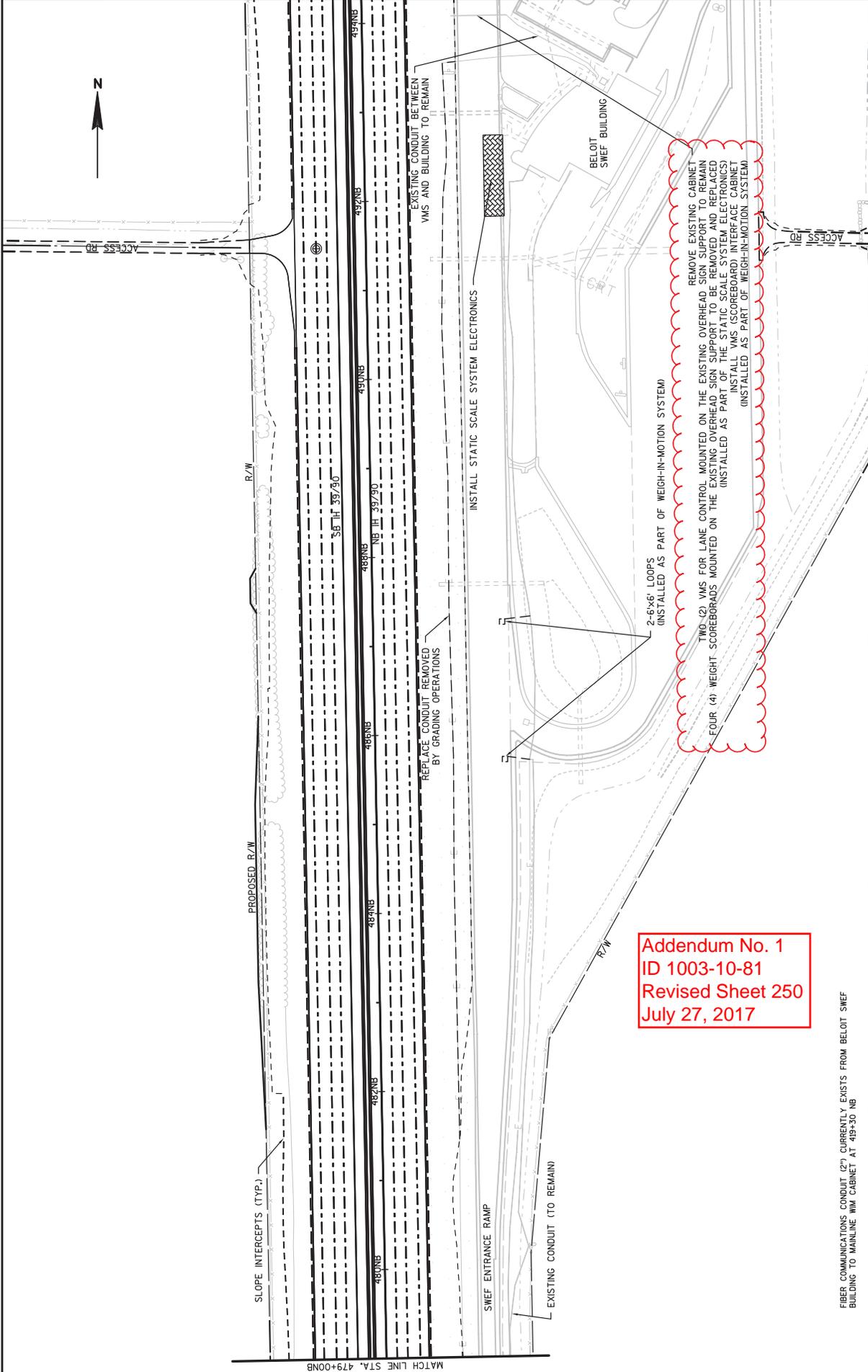
Addendum No. 1
 ID 1003-10-81
 Revised Sheet 249
 July 27, 2017



NOTE:
 FIBER COMMUNICATIONS CONDUIT (2") CURRENTLY EXISTS FROM BELOIT SWEEP BUILDING TO MAINLINE WIM CABINET AT 419+30 NB
 EXISTING CONDUIT WILL BE IMPACTED DURING CONSTRUCTION

WEIGH-IN-MOTION SYSTEM (RAMP)
 REMOVE:
 • EXISTING RAMP WIM
 • EXISTING RAMP WIM CABINET ELECTRONICS (SALVAGE CABINET, POWER, AND COMMUNICATION WIRING)
 • EXISTING USDOT READING CAMERA, ILLUMINATION, AND POLE
 • EXISTING OVER HEIGHT DETECTOR AND POLE
 INSTALL:
 • WIM SENSORS (IN CONCRETE PAVEMENT)
 • WIM CABINET AND ELECTRONICS
 • OVERVIEW CAMERA AND POLE

PROJECT NO: 1003-10-81	HWY: IH 39/90	COUNTY: ROCK	WEIGH-IN-MOTION SYSTEM DETAILS (SHEET 4)	SHEET 249
			E	
FILE NAME : G:\WISDOT\COV\16048 - 2016-2018 DESIGN \#0\16048-002\CIVIL 3D\SHEET\SPLAN\027301-WIM.DWG			PLOT SCALE : 1 IN=100 FT	
LAYOUT NAME : ****			PLOT BY : RL ENGINEERING	
PLOT DATE : 7/25/2017 8:44 AM			PLOT NAME :	



Addendum No. 1
ID 1003-10-81
Revised Sheet 250
July 27, 2017

Addendum No. 1
 ID 1003-10-81
 Revised Sheet 433
 July 27, 2017

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STORM SEWER STRUCTURES																											
STRUCTURE	STATION	OFFSET**	LOCATION	EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	INLET COVERS TYPE B	EACH	INLET COVERS TYPE BW	CATCH BASINS 4-FT DIAMETER	EACH	INLETS 2X2.5-FT	COVERING STORM SEWER	EACH	CLOSED INLET COVER	MARKERS CULVERT END	EACH	SPV.0060.010	SPV.0060.040	633.5200	RIM	ELEV.	INVERT	DEPTH	
1375-1	374+95	21.5 LT	IH-39 NB	1																			807.31	803.46	3.83		
1375-2	375+15	21.5 LT	IH-39 NB	1																			807.31	803.46	3.83		
1375-3	375+05	21.5 LT	IH-39 NB	1																			807.30	802.78	4.52		
1375-4	375+05	16' LT	IH-39 NB	1																			807.32	802.57	4.75		
1375-5	375+05	68.3 RT	IH-39 NB	1																			808.26	805.09	4.17		
1378-2	378+40	71.1 RT	IH-39 NB	1																			810.88	806.71	4.17		
1378-1	378+40	21.5 LT	IH-39 NB	1																			813.04	809.16	3.82		
1379-1	379+60	21.5 LT	IH-39 NB	1																			812.33	808.10	4.23		
1379-2	379+60	59.6 RT	IH-39 NB	1																			814.74	810.47	4.27		
1381-2	381+20	21.6 LT	IH-39 NB	1																			815.93	811.76	4.17		
1381-3	381+40	74.8 RT	IH-39 NB	1																			817.12	812.80	4.32		
1384-1	384+00	21.5 LT	IH-39 NB	1																			817.20	814.18	3.02		
1384-2	384+00	71.8 RT	IH-39 NB	1																			819.24	814.97	4.27		
1385-1	385+40	21.5 LT	IH-39 NB	1																			819.79	815.63	4.16		
1385-2	385+40	76.8 RT	IH-39 NB	1																			820.44	814.52	5.92		
1386-1	386+80	21.5 LT	IH-39 NB	1																			818.93	815.02	3.91		
1386-2	386+80	77.7 RT	IH-39 NB	1																			819.02	814.56	4.46		
1388-1	388+20	21.5 LT	IH-39 NB	1																			817.28	813.17	4.11		
1388-2	388+20	81.2 RT	IH-39 NB	1																			817.23	812.96	4.27		
1389-1	389+60	21.5 LT	IH-39 NB	1																			817.02	814.10	2.92		
1389-2	389+60	83.9 RT	IH-39 NB	1																			817.02	814.10	2.92		
1391-1	391+00	21.5 LT	IH-39 NB	1																			817.02	814.10	2.92		
1391-2	391+00	83.6 RT	IH-39 NB	1																			817.02	814.10	2.92		
1391-3	391+00	10.5 LT	IH-39 NB	1																			817.02	814.10	2.92		
1395-1	395+65	21.5 LT	IH-39 NB	1																			817.38	813.31	4.07		
1395-2	395+65	77.5 RT	IH-39 NB	1																			817.38	813.31	4.07		
1395-3	395+65	10.5 LT	IH-39 NB	1																			820.38	816.27	4.11		
1398-1	398+90	21.5 LT	IH-39 NB	1																			820.38	816.06	4.32		
1398-2	398+90	10.5 LT	IH-39 NB	1																			821.08	816.96	4.12		
1398-3	398+90	70.2 RT	IH-39 NB	1																			818.99	814.70	4.29		
1399-1	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-2	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-3	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-4	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-5	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-6	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-7	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1399-8	399+83	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1401-1	401+10	21.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1401-2	401+10	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1401-3	401+10	71.8 RT	IH-39 NB	1																			816.90	812.83	4.07		
1406-1	406+15	21.5 LT	IH-39 NB	1																			820.38	816.27	4.11		
1406-2	406+15	10.5 LT	IH-39 NB	1																			820.38	816.06	4.32		
1406-3	406+15	76.4 RT	IH-39 NB	1																			821.08	816.96	4.12		
1415-1	415+39	21.5 LT	IH-39 NB	1																			821.08	816.96	4.12		
1415-2	415+39	10.5 LT	IH-39 NB	1																			821.08	816.96	4.12		
1415-3	415+39	70.4 RT	IH-39 NB	1																			818.99	814.91	4.08		
1419-1	419+57	21.5 LT	IH-39 NB	1																			818.99	814.70	4.29		
1419-2	419+57	10.5 LT	IH-39 NB	1																			818.99	814.70	4.29		
1419-3	419+57	70.1 RT	IH-39 NB	1																			816.90	812.83	4.07		
1423-1	423+75	21.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1423-2	423+75	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1423-3	423+75	70 RT	IH-39 NB	1																			816.90	812.83	4.07		
1425-1	425+13	21.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-2	425+33	21.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-3	425+23	16 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-4	425+23	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-5	425+13	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-6	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-7	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-8	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-9	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-10	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-11	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-12	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-13	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-14	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-15	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-16	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-17	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-18	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-19	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-20	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-21	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-22	425+33	10.5 LT	IH-39 NB	1																			816.90	812.83	4.07		
1425-23	425+33	10																									

Addendum No. 1
 ID 1003-10-81
 Revised Sheet 434
 July 27, 2017

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STRUCTURE	STATION	OFFSET**	LOCATION	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	INLET COVERS TYPE B	INLET COVERS TYPE BW	CATCH BASINS 4-FT DIAMETER	INLETS 2X2.5-FT	COVERING STORM SEWER	CLOSED INLET COVER	MARKERS CULVERT END	RIM ELEV.	INVERT	DEPTH													
1425-7	425+23	10.5 LT	IH 39 NB	1					1		1			816.53	811.36	5.17													
1425-8	425+23	75.8 RT	IH 39 NB										1	820.80	810.93	9.87													
1430-1	430+25	21.5 LT	IH 39 NB											820.80	816.68	4.12													
1430-2	430+25	83.7 RT	IH 39 NB										1	820.80	816.48	4.32													
1433-1	433+75	21.5 LT	IH 39 NB											826.75	822.64	4.11													
1433-2	433+75	103.5 RT	IH 39 NB										1	826.75	822.42	4.33													
1437-1	437+24	21.5 LT	IH 39 NB										1	832.73	828.56	4.17													
1437-2	437+24	103.5 RT	IH 39 NB										1	832.74	828.35	4.39													
1440-1	440+75	21.5 LT	IH 39 NB											836.99	832.88	4.11													
1440-2	440+75	161.7 RT	IH 39 NB										1	836.99	832.83	3.97													
1440-3	440+75	103.5 LT	IH 39 NB										1	836.99	832.67	4.32													
1440-4	440+75	69.7 RT	IH 39 NB										1	836.99	832.00	4.99													
1449-1	449+50	21.5 LT	IH 39 NB											835.44	831.33	4.11													
1449-2	449+50	103.5 RT	IH 39 NB										1	835.44	831.12	4.32													
1449-3	449+50	79.9 RT	IH 39 NB										1	834.65	830.83	3.82													
1451-1	451+25	21.5 LT	IH 39 NB											834.65	830.88	3.77													
1451-2	451+25	103.5 RT	IH 39 NB										1	834.65	830.11	4.54													
1451-3	451+25	74.9 RT	IH 39 NB										1	834.65	830.05	4.60													
1451-4	451+25	161.7 RT	IH 39 NB										1	834.65	830.83	3.82													
1451-5	451+25	103.5 LT	IH 39 NB										1	834.65	830.80	3.86													
1451-6	451+25	103.5 RT	IH 39 NB										1	834.65	829.40	5.25													
1451-7	451+25	74.9 RT	IH 39 NB										1	834.65	828.38	6.27													
1452-1	452+50	21.5 LT	IH 39 NB											834.96	830.85	4.11													
1452-2	452+50	103.5 RT	IH 39 NB										1	834.96	830.64	4.32													
1452-3	452+50	73.3 RT	IH 39 NB										1	834.96	829.08	5.88													
1459-1	459+75	21.5 LT	IH 39 NB											836.79	832.68	4.11													
1459-2	459+75	103.5 RT	IH 39 NB										1	836.79	832.47	4.32													
1459-3	459+75	73.3 RT	IH 39 NB										1	836.37	832.26	4.11													
1463-1	463+50	21.5 LT	IH 39 NB											836.37	832.05	4.32													
1463-2	463+50	103.5 RT	IH 39 NB										1	836.37	830.64	6.03													
1463-3	463+50	61.8 RT	IH 39 NB										1	836.00	832.13	3.87													
1464-1	464+92	21.5 LT	IH 39 NB											836.00	831.44	4.56													
1465-1	465+00	21.5 LT	IH 39 NB											836.00	831.38	4.62													
1465-2	465+00	161.7 RT	IH 39 NB										1	836.00	832.13	3.87													
1465-3	465+00	103.5 LT	IH 39 NB										1	836.00	832.13	3.87													
1465-4	465+00	103.5 RT	IH 39 NB										1	836.00	832.13	3.87													
1465-5	465+00	73.3 RT	IH 39 NB										1	836.00	830.73	5.27													
1465-6	465+00	90.4 RT	IH 39 NB										1	836.37	832.26	4.11													
1466-1	466+50	21.5 LT	IH 39 NB											836.37	832.05	4.32													
1466-2	466+50	103.5 RT	IH 39 NB										1	836.37	830.50	5.87													
1466-3	466+50	97.1 RT	IH 39 NB										1	837.75	833.64	4.11													
1474-1	474+75	21.5 LT	IH 39 NB											837.75	833.42	4.33													
1474-2	474+75	103.5 RT	IH 39 NB										1	837.75	831.93	5.82													
1474-3	474+75	68.2 RT	IH 39 NB										1	837.44	833.57	3.87													
1475-1	475+92	21.5 LT	IH 39 NB											837.44	833.57	3.87													
1476-1	476+00	21.5 LT	IH 39 NB											837.44	833.57	3.87													
1476-2	476+00	161.7 RT	IH 39 NB										1	837.44	832.86	4.58													
1476-3	476+00	103.5 LT	IH 39 NB										1	837.44	832.82	4.62													
1476-4	476+00	73.3 RT	IH 39 NB										1	837.44	833.57	3.87													
1476-5	476+00	103.5 LT	IH 39 NB										1	837.44	833.57	3.87													
1476-6	476+00	103.5 RT	IH 39 NB										1	837.44	833.57	3.87													
1476-7	476+00	103.5 LT	IH 39 NB										13	837.43	832.17	5.26													
SUBTOTAL														10	0	39	4	39	10	0	13								

REMARKS
 * ADDITIONAL QUANTITIES LISTED ELSEWHERE
 ** STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
 *** SEE CONSTRUCTION DETAIL "COVERING STORM SEWER" FOR INSTALLATION
 **** FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE.
 ***** DEP TH = RIM ELEVATION - INVERT ELEVATION
 ALL ITEMS CATEGORY 1000 UNLESS OTHERWISE NOTED.

PROJECT NO: 1003-10-81
 COUNTY: ROCK
 HWY: IH 39
 MISCELLANEOUS QUANTITIES
 SHEET 434

Addendum No. 1
 ID 1003-10-81
 Revised Sheet 435
 July 27, 2017

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STRUCTURE	STATION	OFFSET**	LOCATION	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	611.0606 INLET COVERS TYPE B	611.0610 INLET COVERS TYPE BW	611.1004 CATCH BASINS 4 FT DIAMETER	611.3225 INLETS 2X2.5-FT	SPV.0060.010 COVERING STORM SEWER	SPV.0060.040 CLOSED INLET COVER	MARKERS CULVERT END	633.5200	RIM ELEV.	INVERT ELEV.	DEPTH FT.
1476-3	476+00	69.5 RT	H-39 NB	1											831.74	831.34	4.11
1477-1	477+25	21.5 LT	H-39 NB				1	1							837.75	833.64	4.33
1477-2	477+25	10.5 LT	H-39 NB				1	1							837.75	833.42	4.33
1477-3	477+25	68.2 RT	H-39 NB	1											831.88	831.88	0.00
1485-1	485+75	21.5 LT	H-39 NB												836.75	832.64	4.11
1485-2	485+75	10.5 LT	H-39 NB				1	1							836.75	832.42	4.33
1485-3	485+75	68.2 RT	H-39 NB	1											830.88	830.88	0.00
1487-1	487+00	21.5 LT	H-39 NB												836.44	832.57	3.87
1487-2	487+00	10.5 LT	H-39 NB				1	1							836.44	832.57	3.87
1487-3	487+00	21.5 LT	H-39 NB												836.43	831.88	4.55
1487-4	487+00	16 LT	H-39 NB												836.24	831.82	4.42
1487-5	487+00	10.5 LT	H-39 NB				1	1							836.44	832.57	3.87
1487-6	487+00	10.5 LT	H-39 NB				1	1							836.44	832.57	3.87
1487-7	487+00	10.5 LT	H-39 NB				1	1							836.43	831.17	5.26
1487-8	487+00	69.5 RT	H-39 NB	1											830.25	830.25	0.00
1488-1	488+25	21.5 LT	H-39 NB												836.75	832.64	4.11
1488-2	488+25	10.5 LT	H-39 NB				1	1							836.75	832.42	4.33
1488-3	488+25	68.2 RT	H-39 NB	1											830.65	830.65	0.00
1489-1	489+75	10.5 LT	H-39 NB												836.75	832.64	4.11
1489-2	489+75	68.2 RT	H-39 NB	1											836.75	832.42	4.33
1489-3	489+75	21.5 LT	H-39 NB												830.74	830.74	0.00
1489-4	489+75	10.5 LT	H-39 NB				1	1							836.43	832.57	3.86
1489-5	489+75	21.5 LT	H-39 NB				1	1							836.43	832.57	3.86
1489-6	489+75	68.2 RT	H-39 NB	1											831.88	831.88	0.00
1489-7	489+75	10.5 LT	H-39 NB												836.24	832.57	3.67
1489-8	489+75	10.5 LT	H-39 NB				1	1							836.24	832.57	3.67
1489-9	489+75	68.2 RT	H-39 NB	1											831.64	831.64	0.00
1489-10	489+75	10.5 LT	H-39 NB												836.43	831.36	5.07
1489-11	489+75	21.5 LT	H-39 NB												836.43	831.36	5.07
1489-12	489+75	68.2 RT	H-39 NB	1											830.80	830.80	0.00
1489-13	489+75	10.5 LT	H-39 NB												836.75	832.64	4.11
1489-14	489+75	10.5 LT	H-39 NB				1	1							836.75	832.33	4.42
1489-15	489+75	68.2 RT	H-39 NB	1											834.43	834.43	0.00
1502-1	502+84	21.5 LT	H-39 NB												838.54	834.43	4.11
1502-2	502+84	10.5 LT	H-39 NB				1	1							838.54	834.22	4.32
1502-3	502+84	71.4 RT	H-39 NB	1											833.58	833.58	0.00
1506-1	506+42	21.5 LT	H-39 NB												840.33	836.22	4.11
1506-2	506+42	10.5 LT	H-39 NB				1	1							840.33	835.80	4.53
1506-3	506+42	114.1 RT	H-39 NB	1											835.18	835.18	0.00
1513-1	513+90	21.5 LT	H-39 NB												838.86	835.84	3.02
1513-2	513+90	10.5 LT	H-39 NB				1	1							838.75	835.73	3.02
1513-3	513+90	80.2 RT	H-39 NB	1											835.00	835.00	0.00
1517-1	517+80	21.5 LT	H-39 NB												837.78	833.68	4.10
1517-2	517+80	10.5 LT	H-39 NB				1	1							837.78	833.46	4.32
1517-3	517+80	79.3 RT	H-39 NB	1											832.46	832.46	0.00
1519-1	519+17	21.5 LT	H-39 NB												837.39	833.52	3.87
1519-2	519+33	21.5 LT	H-39 NB				1	1							837.39	833.52	3.87
1519-3	519+33	21.5 LT	H-39 NB												837.39	833.52	3.87
1519-4	519+25	21.5 LT	H-39 NB												832.93	832.93	0.00
1519-5	519+25	16 LT	H-39 NB				1	1							837.19	832.88	4.31
1519-6	519+17	10.5 LT	H-39 NB				1	1							833.52	833.52	0.00
1519-7	519+33	10.5 LT	H-39 NB				1	1							837.39	833.52	3.87
1519-8	519+25	10.5 LT	H-39 NB												837.39	833.52	3.87
1519-9	519+25	76.5 RT	H-39 NB	1											832.63	832.63	0.00
1520-1	520+80	21.5 LT	H-39 NB												837.81	833.70	4.11
1520-2	520+80	10.5 LT	H-39 NB				1	1							837.81	833.49	4.32
1520-3	520+80	77.4 RT	H-39 NB	1											837.81	833.49	4.32
1520-4	520+80	21.5 LT	H-39 NB												837.25	833.14	4.11
1520-5	520+80	10.5 LT	H-39 NB				1	1							837.25	832.92	4.33
1529-1	529+55	74.4 RT	H-39 NB	1											831.06	831.06	0.00
1529-2	529+55	10.5 LT	H-39 NB				1	1							834.67	830.56	4.11
1534-1	534+70	21.5 LT	H-39 NB												834.67	830.35	4.32
1534-2	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-3	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-4	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-5	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-6	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-7	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-8	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-9	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-10	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-11	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-12	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-13	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-14	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-15	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-16	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-17	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-18	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-19	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-20	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-21	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-22	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-23	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-24	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-25	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-26	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-27	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-28	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-29	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-30	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-31	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-32	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-33	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-34	534+70	10.5 LT	H-39 NB				1	1							834.67	830.35	4.32
1534-35	534+70	10.5 LT	H														

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STORM SEWER PIPES

FROM	TO	LOCATION	LF	PIPE	REINFORCED CONCRETE CLASS III 12-INCH	608.0312	608.0315	608.0318	608.0324	608.0412	608.0415	608.0418	608.0424	LF	PIPE	REINFORCED CONCRETE CLASS IV 24-INCH	INLET ELEV.	DISCHARGE ELEV.
1386-1	-	1386-2	IH 39 NB	99												812.80	809.07	
1388-1	-	1388-2	IH 39 NB	103												814.18	809.37	
1389-1	-	1389-2	IH 39 NB	106												814.97	809.62	
1391-1	-	1391-3	IH 39 NB	11												815.63	815.52	
1391-3	-	1391-2	IH 39 NB	94												814.52	810.27	
1395-1	-	1395-3	IH 39 NB	11												815.02	814.91	
1395-3	-	1395-2	IH 39 NB	88												814.56	811.93	
1398-1	-	1398-2	IH 39 NB	11												813.17	813.06	
1398-2	-	1398-3	IH 39 NB	81												812.96	812.52	
1399-1	-	1399-3	IH 39 NB					8								814.10	814.00	
1399-2	-	1399-3	IH 39 NB					8								814.10	814.00	
1399-3	-	1399-4	IH 39 NB					8								813.41	813.36	
1399-4	-	1399-7	IH 39 NB					8								813.36	813.30	
1399-5	-	1399-7	IH 39 NB					8								814.10	814.00	
1399-6	-	1399-7	IH 39 NB					8								814.10	814.00	
1399-7	-	1399-8	IH 39 NB							80						813.22	812.42	
1401-1	-	1401-2	IH 39 NB	11												813.31	813.20	
1401-2	-	1401-3	IH 39 NB	82												813.10	812.43	
1406-1	-	1406-2	IH 39 NB	11												816.27	816.16	
1406-2	-	1406-3	IH 39 NB	87												816.06	814.59	
1415-1	-	1415-2	IH 39 NB	11												816.96	816.86	
1415-2	-	1415-3	IH 39 NB	81												816.76	816.28	
1419-1	-	1419-2	IH 39 NB	11												814.91	814.80	
1419-2	-	1419-3	IH 39 NB	81												814.70	814.26	
1423-1	-	1423-2	IH 39 NB	11												812.83	812.72	
1423-2	-	1423-3	IH 39 NB	80												812.62	812.17	
1425-1	-	1425-3	IH 39 NB	10												812.61	812.51	
1425-2	-	1425-3	IH 39 NB	10												812.61	812.51	
1425-3	-	1425-4	IH 39 NB				6									812.02	811.96	
1425-4	-	1425-7	IH 39 NB				6									811.96	811.91	
1425-5	-	1425-7	IH 39 NB	10												812.61	812.51	
1425-6	-	1425-7	IH 39 NB	10												812.61	812.51	
1425-7	-	1425-8	IH 39 NB										86			811.36	810.93	
1430-1	-	1430-2	IH 39 NB													816.68	816.58	
1430-2	-	1430-3	IH 39 NB													816.48	812.49	
1433-1	-	1433-2	IH 39 NB	11												822.64	822.52	
1433-2	-	1433-3	IH 39 NB	86												822.42	820.24	
1437-1	-	1437-2	IH 39 NB	11												828.56	828.45	
1437-2	-	1437-3	IH 39 NB	83												828.35	827.00	
1440-1	-	1440-2	IH 39 NB	6												832.88	832.83	
1440-2	-	1440-3	IH 39 NB	6												832.83	832.77	
1440-3	-	1440-4	IH 39 NB	80												832.67	832.00	
1449-1	-	1449-2	IH 39 NB	11												831.33	831.22	
1449-2	-	1449-3	IH 39 NB	90												831.12	828.00	
1451-1	-	1451-3	IH 39 NB	10												830.83	830.73	
1451-2	-	1451-3	IH 39 NB	10												830.80	830.70	
SUBTOTAL				71	1547	12	0	0	0	32	0	92	86					

REMARKS
 * ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS CATEGORY 1000 UNLESS OTHERWISE NOTED.

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STORM SEWER PIPES

FROM	TO	LOCATION	LF	608.0312	608.0315	608.0318	608.0324	608.0412	608.0415	608.0418	608.0424	INLET ELEV.	DISCHARGE ELEV.
I451-3	-	I451-4				6						830.06	830.06
I451-4	-	I451-7			6							830.00	830.00
I451-5	-	I451-7	10									830.83	830.73
I451-6	-	I451-7	10									830.80	830.70
I451-7	-	I451-8					85					829.40	828.36
I452-1	-	I452-2		11								830.85	830.74
I452-2	-	I452-3		84								830.64	829.08
I455-1	-	I455-2		11								832.68	832.57
I455-2	-	I455-3		83								832.47	831.61
I463-1	-	I463-2		11								832.26	832.15
I463-2	-	I463-3		92								832.05	830.64
I465-1	-	I465-3	8									832.13	832.03
I465-2	-	I465-3	8									832.13	832.03
I465-3	-	I465-4				6						831.44	831.38
I465-4	-	I465-7				6						831.38	831.33
I465-5	-	I465-7	8									832.13	832.03
I465-6	-	I465-7	8									832.13	832.03
I465-7	-	I465-8					101					830.73	830.10
I466-1	-	I466-2		11								832.26	832.15
I466-2	-	I466-3		108								832.05	830.50
I474-1	-	I474-2		11								833.64	833.52
I474-2	-	I474-3		79								833.42	831.93
I476-1	-	I476-3	8									833.57	833.47
I476-2	-	I476-3	8									833.57	833.47
I476-3	-	I476-4				6						832.88	832.82
I476-4	-	I476-7				6						832.82	832.77
I476-5	-	I476-7	8									833.57	833.47
I476-6	-	I476-7	8									833.57	833.47
I476-7	-	I476-8					80					832.17	831.34
I477-1	-	I477-2		11								833.64	833.52
I477-2	-	I477-3		79								833.42	831.88
I485-1	-	I485-2		11								832.64	832.52
I485-2	-	I485-3		79								832.42	830.88
I487-1	-	I487-3	8									832.57	832.47
I487-2	-	I487-3	8									832.57	832.47
I487-3	-	I487-4				6						831.88	831.82
I487-4	-	I487-7				6						831.82	831.77
I487-5	-	I487-7	8									832.57	832.47
I487-6	-	I487-7	8									832.57	832.47
I487-7	-	I487-8					80					831.17	830.25
I488-1	-	I488-2		11								832.64	832.52
I488-2	-	I488-3		79								832.42	830.65
I496-1	-	I496-2		11								832.64	832.52
I496-2	-	I496-3		79								832.42	830.74
I498-1	-	I498-3	8									832.57	832.47
SUBTOTAL			124	861	48	346	0	0	0	0	0		

REMARKS
 * ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS CATEGORY 1000 UNLESS OTHERWISE NOTED.

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STORM SEWER PIPES

FROM	TO	LOCATION	LF	REINFORCED CONCRETE	PIPE	STORM SEWER	608.0315	608.0318	608.0324	608.0412	608.0415	608.0418	608.0424
1498-2	-	1498-3	IH 39 NB	8									
1498-3	-	1498-4	IH 39 NB					6					
1498-4	-	1498-7	IH 39 NB					6					
1498-5	-	1498-7	IH 39 NB	8									
1498-6	-	1498-7	IH 39 NB										
1498-7	-	1498-8	IH 39 NB										
1499-1	-	1499-2	IH 39 NB	11									
1499-2	-	1499-6	IH 39 NB	118									
1502-1	-	1502-2	IH 39 NB	11									
1502-2	-	1502-3	IH 39 NB	82									
1506-1	-	1506-2	IH 39 NB	11									
1506-2	-	1506-3	IH 39 NB	125									
1513-1	-	1513-2	IH 39 NB	11									
1513-2	-	1513-3	IH 39 NB	91									
1517-1	-	1517-2	IH 39 NB	11									
1517-2	-	1517-3	IH 39 NB	90									
1519-1	-	1519-3	IH 39 NB	8									
1519-2	-	1519-3	IH 39 NB	8									
1519-3	-	1519-4	IH 39 NB										
1519-4	-	1519-7	IH 39 NB					6					
1519-5	-	1519-7	IH 39 NB	8									
1519-6	-	1519-7	IH 39 NB	8									
1519-7	-	1519-8	IH 39 NB										
1520-1	-	1520-2	IH 39 NB										
1520-2	-	1520-3	IH 39 NB	88									
1529-1	-	1529-2	IH 39 NB	11									
1529-2	-	1529-3	IH 39 NB	85									
1534-1	-	1534-2	IH 39 NB	11									
1534-2	-	534-MH	IH 39 NB	40									
SUBTOTAL			48	815	112	80	0	11	32	0	0	0	86
TOTALS			402	5513	178	653	0	11	32	256	0	0	86

REMARKS
 * ADDITIONAL QUANTITIES LISTED ELSEWHERE

INLET ELEV. 832.57 831.88 831.77 832.47 831.64 831.54 832.64 831.74 834.43 834.22 836.22 835.80 835.73 835.00 833.68 833.56 833.46 833.42 833.52 833.42 832.63 832.18 833.70 833.59 833.49 833.81 833.14 833.02 831.06 830.56 830.45 830.35 829.95

DISCHARGE ELEV. 832.47 831.88 831.77 832.47 831.54 830.80 832.58 831.74 834.32 833.58 836.11 835.18 835.73 835.00 833.56 833.42 833.42 833.42 832.88 833.42 833.42 832.18 833.59 832.81 833.02 831.06 830.45 829.95

ALL ITEMS CATEGORY 1000 UNLESS OTHERWISE NOTED.

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LIGHTING EQUIPMENT (CONTINUED)

BASE NO.	** LOCATION	654.0106 CONCRETE BASE TYPE 6	659.0400 LUMINAIRES HIGH MAST LIGHTING	659.0700 LIGHTING UNITS WALKWAY	659.1120 LUMINAIRES UTILITY LED-B
NO.	** LOCATION	EACH	EACH	EACH	EACH
L-0001	514+56'WSB', 20' RT	1	1	1	1
L-0002	513+12'WSB', 20' RT	1	1	1	1
L-0003	511+62'WSB', 20' RT	1	1	1	1
L-0004	510+14'WSB', 20' RT	1	1	1	1
L-0005	508+61'WSB', 20' RT	1	1	1	1
L-0006	507+10'WSB', 20' RT	1	1	1	1
L-0007	506+60'WSB', 19' RT	1	1	1	1
L-0008	504+09'WSB', 20' RT	1	1	1	1
L-0009	502+63'WSB', 38' RT	1	1	1	1
L-0010	501+15'WSB', 55' RT	1	1	1	1
L-0011	499+63'WSB', 64' RT	1	1	1	1
L-0012	498+25'WSB', 50' RT	1	2	1	1
L-0013	496+57'WSB', 55' RT	1	1	1	1
L-0014	495+21'WSB', 49' RT	1	1	1	1
L-0015	493+73'WSB', 37' RT	1	1	1	1
L-0016	492+27'WSB', 40' RT	1	1	1	1
L-0017	490+66'WSB', 37' RT	1	1	1	1
L-0018	489+15'WSB', 37' RT	1	1	1	1
L-0019	487+46'WSB', 53' RT	1	1	1	1
L-0020	485+72'WSB', 50' RT	1	2	1	1
L-0021	484+25'WSB', 49' RT	1	1	1	1
L-0022	482+77'WSB', 39' RT	1	1	1	1
L-0023	481+32'WSB', 28' RT	1	1	1	1
L-0024	479+82'WSB', 20' RT	1	1	1	1
L-0025	478+32'WSB', 20' RT	1	1	1	1
L-0026	476+86'WSB', 20' RT	1	1	1	1
L-0027	475+32'WSB', 20' RT	1	1	1	1
L-0028	473+82'WSB', 20' RT	1	1	1	1
L-0029	472+31'WSB', 20' RT	1	1	1	1
L-0030	470+82'WSB', 20' RT	1	1	1	1
L-0031	469+37'WSB', 20' RT	1	1	1	1
L-0032	467+86'WSB', 20' RT	1	1	1	1
L-0033	466+33'WSB', 19' RT	1	1	1	1
L-0034	464+84'WSB', 20' RT	1	1	1	1
L-0035	463+40, 65' RT	1	1	1	1
L-0036	498+62'WSB', 176' RT	1	1	1	1
L-0037	498+03'WSB', 285' RT	1	1	1	1
L-0038	496+72'WSB', 326' RT	1	1	1	1
L-0039	485+62'WSB', 181' RT	1	1	1	1
L-0040	487+08'WSB', 261' RT	1	1	1	1
L-0061	494+08'WSB', 184' RT	2	2	1	1
L-0062	490+91'WSB', 157' RT	2	2	1	1
L-0071	493+42'WSB', 126' RT	1	1	1	1
L-0072	493+13'WSB', 83' RT	1	1	1	1
L-0073	492+71'WSB', 51' RT	1	1	1	1

TOTAL

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654.0106 CONCRETE BASE TYPE 6

659.0400 LUMINAIRES HIGH MAST LIGHTING

659.0700 LIGHTING UNITS WALKWAY

659.1120 LUMINAIRES UTILITY LED-B

659.0400 LUMINAIRES HIGH MAST LIGHTING

659.0700 LIGHTING UNITS WALKWAY

659.1120 LUMINAIRES UTILITY LED-B

LIGHTING EQUIPMENT (CONTINUED)

BASE NO.	** LOCATION	654.0106 CONCRETE BASE TYPE 6	659.0400 LUMINAIRES HIGH MAST LIGHTING	659.0700 LIGHTING UNITS WALKWAY	659.1120 LUMINAIRES UTILITY LED-B
NO.	** LOCATION	EACH	EACH	EACH	EACH
L-0074	491+90'WSB', 77' RT	1	1	1	1
L-0075	491+52'WSB', 59' RT	1	1	1	1

TOTAL

42

654.0106 CONCRETE BASE TYPE 6

659.0400 LUMINAIRES HIGH MAST LIGHTING

659.0700 LIGHTING UNITS WALKWAY

659.1120 LUMINAIRES UTILITY LED-B

659.0400 LUMINAIRES HIGH MAST LIGHTING

659.0700 LIGHTING UNITS WALKWAY

659.1120 LUMINAIRES UTILITY LED-B

LIGHTING CONTROL CABINET

CONTROL CABINET NO.	** LOCATION	659.2130 LIGHTING CONTROL CABINET 120/240 30-INCH
NO.	** LOCATION	EACH
CB1	494+46'WSB', 212' RT	1

TOTAL

1

INSTALL CONDUIT INTO EXISTING ITEM

PULL BOX NO.	LOCATION	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
NO.	LOCATION	EACH
PB2	498+37'WSB', 51' RT	1
L-0008	504+09'WSB', 20' RT	1

TOTAL

2

REMOVING CONCRETE BASES

SIGNAL BASE NO.	LOCATION	204.0195 REMOVING CONCRETE BASES EACH
NO.	LOCATION	EACH
L-0004	510+14'WSB', 20' RT	1
L-0005	508+61'WSB', 20' RT	1
L-0009	502+62'WSB', 23' RT	1
L-0010	501+13'WSB', 40' RT	1
L-0011	499+62'WSB', 49' RT	1
L-0031	469+37'WSB', 20' RT	1

TOTAL

6

LEGEND

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 1000

LIGHTING NO. L53-0647
 I-39/90 WB BELOWIT (SWEF)

CTH S TEMPORARY LIGHTING SYSTEM
 PAGE 1 OF 2

Addendum No. 1
 ID 1003-10-81
 Revised Sheet 469
 July 27, 2017

3

LIGHTING CONDUIT & ELECTRICAL WIRE

LOC.	TO LOC.	LINEAR DISTANCE	NUMBER OF CONDUITS	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	WIRE SLACK L.F.	NUMBER OF WIRES (INCLUDING GROUND WIRE)	IN CONDUIT RUN ELECTRICAL WIRE LIGHTING 4 AWG L.F.	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG L.F.	674.0300 REMOVE CABLE L.F.	IN LIGHT POLE LENGTH OF WIRE IN POLE	NUMBER OF WIRES (INCLUDING GROUND WIRE)	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG L.F.
L-0003	L-0004	148	1	10	10	5	805	790	54	54	3	162
L-0004	L-0005	152	1	10	10	5	805	810	54	54	3	162
L-0005	L-0006	151	1	10	10	5	805	805				
L-0008	L-0009	150	1	150	10	5	800	800	54	54	3	162
L-0009	L-0010	150	1	150	10	5	800	800	54	54	3	162
L-0010	L-0011	150	1	150	10	5	800	800	54	54	3	162
L-0011	L-0012	138	1	138	27	5	825	825				
L-0024	L-0025	151	1	10	10	5	805	805	805			
L-0025	L-0026	146	1	10	10	5	780	780	805			
L-0026	L-0027	154	1	10	10	5	820	820	820			
L-0027	L-0028	151	1	10	10	5	805	805	805			
L-0028	L-0029	150	1	10	10	5	800	800	800			
L-0030	L-0031	146	1	10	10	5	795	795	795	54	3	162
L-0031	L-0032	151	1	10	10	5	805	805	805			
L-0032	L-0033	153	1	10	10	5	815	815	815			
L-0033	L-0034	149	1	10	10	5	795	795	795			
L-0034	L-0035	142	1	10	10	3	456	456	456			
TOTAL							588	8456	5630			972

TEMPORARY LIGHTING SYSTEM

LOCATION	SYSTEM EACH
CTH S INTERCHANGE	1
TOTAL	1

SALVAGE AND REINSTALL LIGHT POLE

CONTROL CABINET NO.	** LOCATION	SPV 0060.350 SALVAGE AND REINSTALL LIGHT POLE EACH
L-0004	510+14"W SSB', 20' RT	1
L-0005	508+61"W SSB', 20' RT	1
L-0009	502+62"W SSB', 23' RT	1
L-0010	501+13"W SSB', 40' RT	1
L-0011	499+62"W SSB', 49' RT	1
L-0031	469+37"W SSB', 20' RT	1
TOTAL		6

REMOVE LIGHTING CONTROL CABINET

LOCATION	L.S.
SPV.0105.350 REMOVE LIGHTING CONTROL CABINET	1
I-39/90 WB BELOIT (SWEF)	1
TOTAL	1

MISCELLANEOUS QUANTITIES

COUNTY: ROCK	HWY: IH 39/90
PROJECT NO: 1003-10-81	

LEGEND
 * ADDITIONAL ITEMS FOR QUANTITIES LISTED ELSEWHERE
 ** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 1000
 LIGHTING NO. LS3-0647
 I-39/90 WB BELOIT (SWEF)
 CTH S TEMPORARY LIGHTING SYSTEM
 PAGE 2 OF 2

3

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

IN CASES WHERE THE PLANS SHOW LINE IN/LINE OUT/ DISTRIBUTION SYSTEMS; FURNISH FEED-THROUGH LUGS IN THE CIRCUIT BREAKER ENCLOSURE.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

FIELD RECODING OF UNGROUNDED CONDUCTORS IN TYPE "50" CABLE MAY BE REQUIRED TO CONFORM TO SYSTEM COLOR CODING AS SHOWN IN THE PLANS.

CIRCUIT BREAKERS SHALL BE MINIMUM 14 KAIC AT THE VOLTAGE SHOWN.

LOADBREAK DISCONNECTS SHALL BE MELTRIC TYPE "DR", 30 AMP, 600 VOLT. DO NOT SUBSTITUTE. FURNISH "FDP"-FINGER/PALM DRAW PLATES (APPLIES TO THE PLUG AND RECEPTACLE ONLY, NOT TO THE APPLIANCE INLET). FURNISH "LP"-MOISTURE PROTECTION (APPLIES TO THE PLUG ONLY, NOT TO THE RECEPTACLE OR THE APPLIANCE INLET).

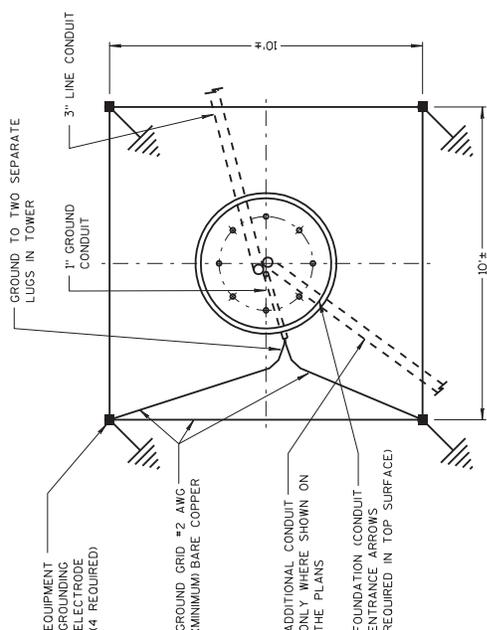
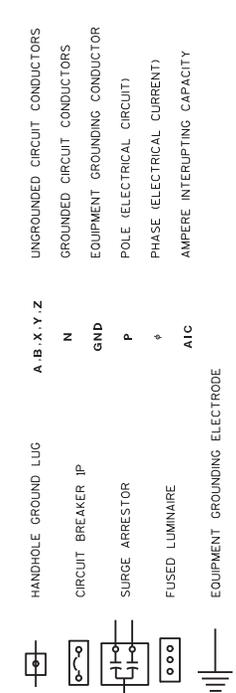
SURGE ARRESTORS SHALL BE 650 VAC, 2P OR 3P AS REQUIRED.

CIRCUIT BREAKER ENCLOSURES SHALL BE NEMA 1, 100 AMP, 600 VOLT, 2P OR 3P AS REQUIRED, SURFACE MOUNT. IN ALL SYSTEMS, FURNISH A MINIMUM 4-TERMINAL GROUND BUS. IN ISOLATED NEUTRAL SYSTEMS, ADDITIONALLY FURNISH A MINIMUM 1-TERMINAL NEUTRAL BUS. BUSSES SHALL BE RATED FOR NO. 10 AWG THROUGH NO. 2 AWG CU.

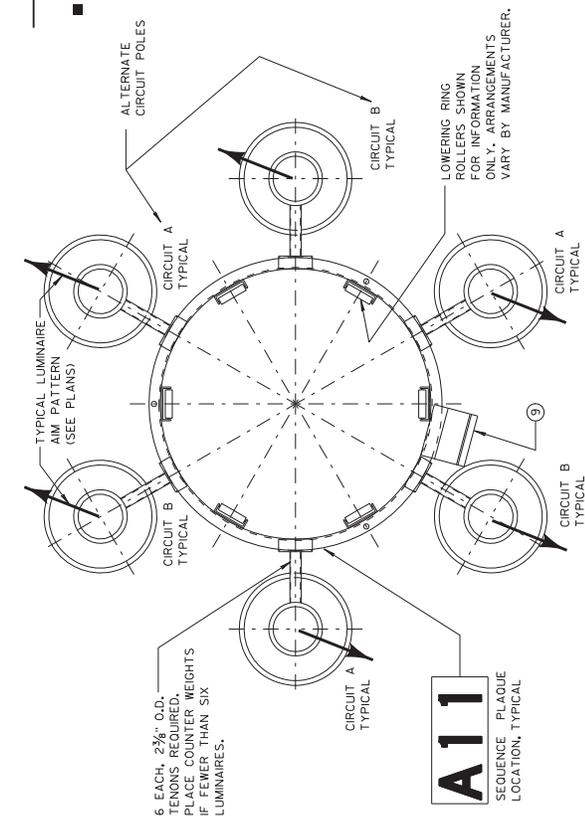
OVER CURRENT AND POWER CORD SCHEDULE

LINE VOLTAGE	HAND HOLE BREAKERS	INDIVIDUAL LUMINAIRE FUSES	POWER CORD	PRONGS ON LOAD BREAK DISCONNECT
1- ϕ 120/240VAC; 3 WIRE	2-30A, 1P, 277VAC	20A	10-3 + GND "50"	A, B, N, GND
1- ϕ 240/480VAC; 3 WIRE	2-30A, 1P, 277VAC	10A	10-3 + GND "50"	A, B, N, GND
3- ϕ 480Y/277VAC; 4 WIRE	3-30A, 1P, 277VAC	10A	10-4 + GND "50"	X, Y, Z, N, GND
3- ϕ 208Y/120VAC; 4 WIRE	3-30A, 1P, 277VAC	20A	10-4 + GND "50"	X, Y, Z, N, GND
1- ϕ 480VAC; 2 WIRE	1-20A, 2P, 600VAC	5A	10-3 + GND "50"	A, B, N, GND

LEGEND



EQUIPMENT GROUNDING GRID AND FOUNDATION ELECTRICAL DETAILS



LOWERING RING OPTICS PLAN
1- ϕ CASE SHOWN: 3- ϕ CASE SIMILAR

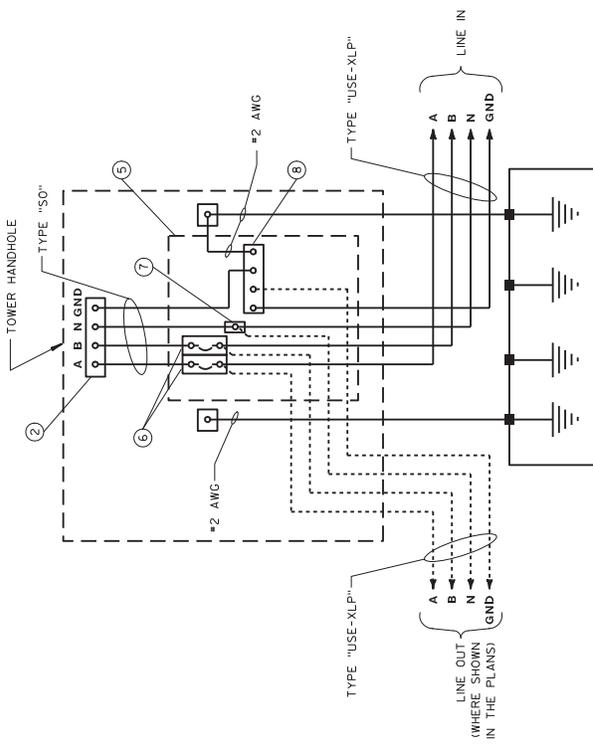
A11
SEQUENCE PLAOUE LOCATION, TYPICAL

- 1) LOADBREAK DISCONNECT - MALE PLUG
- 2) LOADBREAK DISCONNECT - FEMALE RECEPTACLE
- 3) LOADBREAK DISCONNECT - MALE APPLIANCE INLET
- 4) SURGE ARRESTOR - 2P OR 3P AS REQUIRED
- 5) CIRCUIT BREAKER ENCLOSURE
- 6) CIRCUIT BREAKER
- 7) CIRCUIT BREAKER ENCLOSURE NEUTRAL BUS
- 8) CIRCUIT BREAKER ENCLOSURE EQUIPMENT GROUNDING BUS
- 9) LOWERING RING JUNCTION BOX (WEEP HOLE REQUIRED)
- 10) TERMINAL STRIP

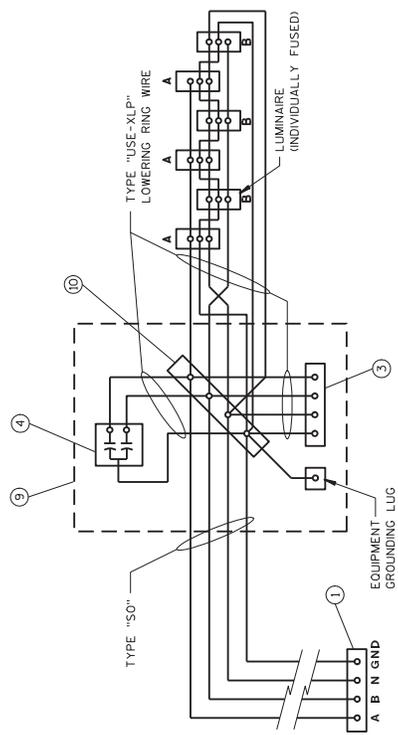
Addendum No. 1
ID 1003-10-81
Added Sheet 546A
July 27, 2017

ELECTRICAL DETAILS
HIGH MAST LIGHTING

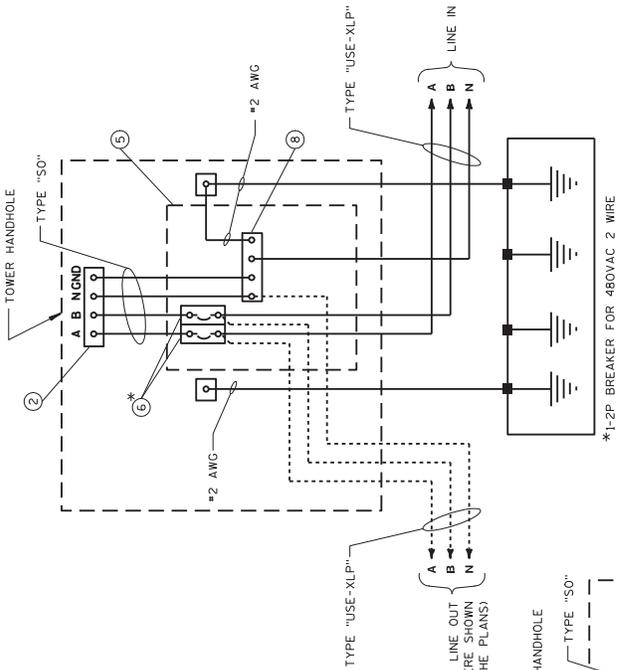
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



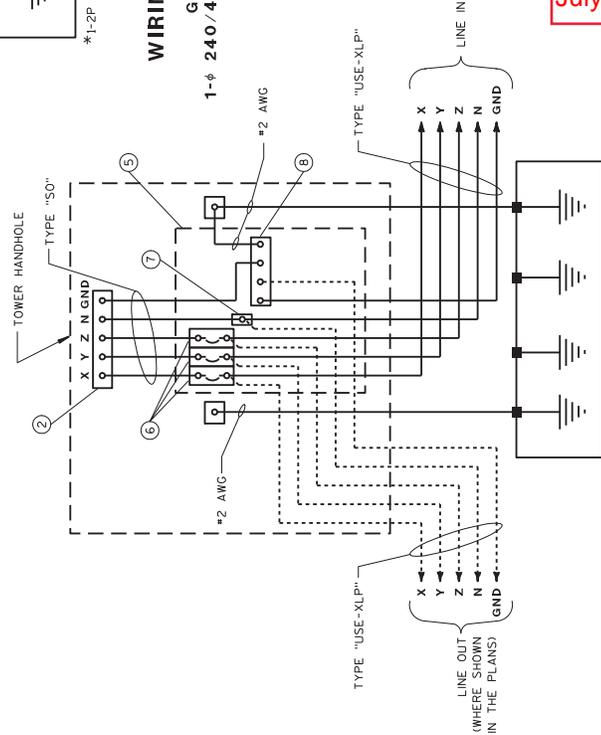
TYPICAL WIRING DIAGRAM - HANDHOLE
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE



LOWERING RING JUNCTION BOX WIRING DIAGRAM
TYPICAL 1-φ CASE SHOWN; 3-φ CASE SIMILAR



TYPICAL WIRING DIAGRAM - HANDHOLE
GROUNDED NEUTRAL SYSTEM
1-φ 240/480VAC 3 WIRE OR 480VAC 2 WIRE

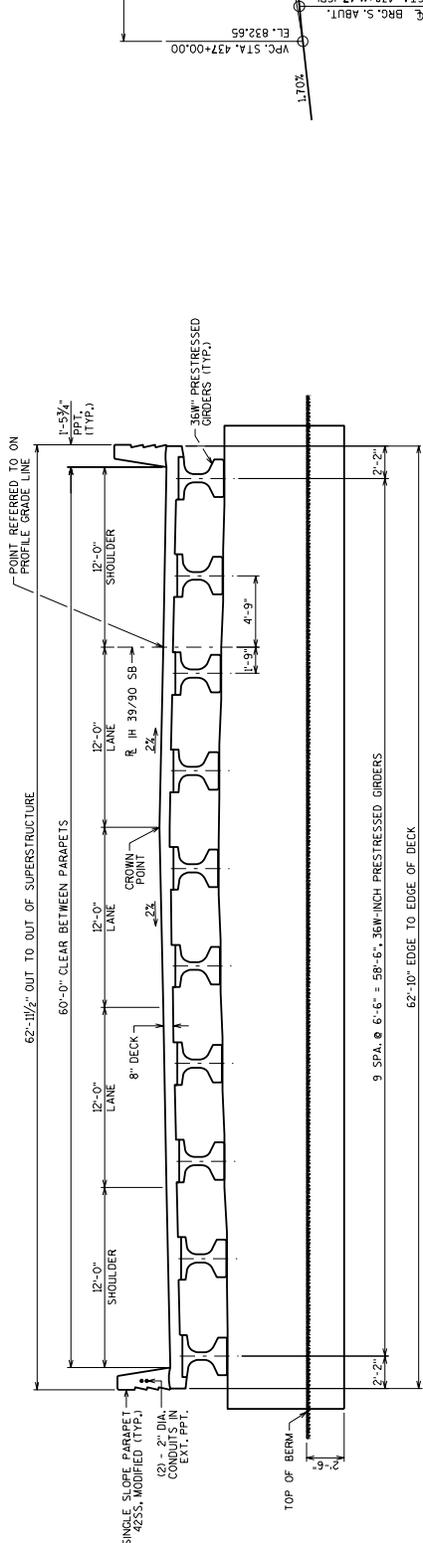


TYPICAL WIRING DIAGRAM - HANDHOLE
ISOLATED NEUTRAL SYSTEM
3-φ 480Y/277VAC 4 WIRE
OR 3-φ 208Y/120VAC 4 WIRE

ELECTRICAL DETAILS HIGH MAST LIGHTING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	/S/ JOHN CORBIN
DATE	10/25/2009
STATE ELECTRICAL ENGINEER FOR HWYS	
PHWA	

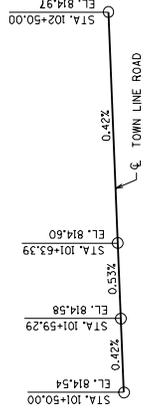
Addendum No. 1
ID 1003-10-81
Added Sheet 546B
July 27, 2017

STATE PROJECT NUMBER
1003-10-81

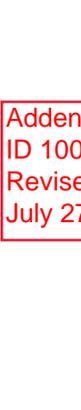


CROSS SECTION THRU ROADWAY
LOOKING UPSTATION

PROFILE GRADE LINE - IH 39/90 SB



PROFILE GRADE LINE - TOWN LINE ROAD



Addendum No. 1
ID 1003-10-81
Revised Sheet 701
July 27, 2017

7/13/17
William C. Decker

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SOUTH APPROACH	SUPER.	NORTH ABUT.	NORTH APPROACH	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 438+55 SB	LS	---	---	---	---	1
206.0000	EXCAVATION FOR STRUCTURES BRIDGES B-53-317	LS	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	340	---	340	---	680
305.0120	BASE AGGREGATE DENSE 1-1/4 INCH	TON	215	---	215	---	430
501.0000.5	ICE HOT WEATHER CONCRETING	CY	638	1,868	615	638	4,374
502.0100	CONCRETE MASONRY BRIDGES	CY	17	---	82	17	99
502.3200	PROTECTIVE SURFACE TREATMENT	SY	134	---	637	134	905
502.3220	PIGMENTED SURFACE SEALER	SY	20	95	---	20	135
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	---	940	---	---	940
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	4,670	---	---	9,340
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	12,540	38,010	660	12,540	64,410
505.0800.5	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	---	---	1,090	---	2,180
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	---	20	---	---	20
506.4000	STEEL DIAPHRAGMS B-53-317	EACH	---	18	---	---	18
511.2000	TEMPORARY SHORING B-53-317	SF	---	125	---	---	250
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	15	---	---	30
550.2108	PILING CIP CONCRETE 10 3/4 X 0.50-INCH	LF	---	1,650	---	---	3,225
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	---	201	---	---	402
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	100	---	---	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	---	---	1	2
652.0225	CONDUIT RIGID METALLIC 2-INCH	LF	6	12	---	6	24
652.0225	CONDUIT RIGID METALLIC SCHEDULE 40 2-INCH	LF	38	179	---	38	255
653.0222	JUNCTION BOXES BX12X6-INCH	EACH	---	2	---	---	2
SPV.0035	HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES	CY	68	249	---	68	385
SPV.0055	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,206	5,713	---	1,206	8,145
SPV.0195	EXCAVATION, HAULING AND DISPOSAL OF CONTAMINATED SOIL	TON	---	---	---	---	10
	NON-BID ITEMS						
	FILLER	SIZE					
							1/2", 3/4", 1/2"

TYPICAL SECTION THRU ABUTMENT
▲ BACKFILL PAY LIMITS: BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE BASE AGGREGATE DENSE 1/4" INCH AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEET.
- ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
- THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK AND APPROACH SLAB SURFACES.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 17 AND THE ABUTMENT DETAILS.
- THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS 2" SHEET.
- THE PARAPETS IN THE ABUTMENTS ARE INCLUDED WITH THE BID ITEM "CONCRETE MASONRY BRIDGES".
- THE REINFORCEMENTS AT THE BACK FACE OF THE PARAPETS ARE INCLUDED WITH THE BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

NO.	DATE	REVISION	BY
1	07/17	CHANGED LONGITUDINAL GROOVING UNIT FROM SF TO SF	MWB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
STRUCTURE B-53-317
DRAWN BY: MJB/CDB/MWB
CHECKED BY: MJB/CDB/MWB
SHEET 2
701



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1200	520.4115 Culvert Pipe Class IV 15-Inch	4.000 LF	_____.	_____.
1210	520.4118 Culvert Pipe Class IV 18-Inch	477.000 LF	_____.	_____.
1220	520.8000 Concrete Collars for Pipe	23.000 EACH	_____.	_____.
1230	521.1012 Apron Endwalls for Culvert Pipe Steel 12-Inch	7.000 EACH	_____.	_____.
1240	521.1015 Apron Endwalls for Culvert Pipe Steel 15-Inch	1.000 EACH	_____.	_____.
1250	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	18.000 EACH	_____.	_____.
1260	521.1615 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 15-Inch 10 to 1	2.000 EACH	_____.	_____.
1270	522.0115 Culvert Pipe Reinforced Concrete Class III 15-Inch	68.000 LF	_____.	_____.
1280	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	664.000 LF	_____.	_____.
1290	522.0130 Culvert Pipe Reinforced Concrete Class III 30-Inch	346.000 LF	_____.	_____.
1300	522.0136 Culvert Pipe Reinforced Concrete Class III 36-Inch	511.000 LF	_____.	_____.
1310	522.0148 Culvert Pipe Reinforced Concrete Class III 48-Inch	237.000 LF	_____.	_____.
1320	522.0548 Culvert Pipe Reinforced Concrete Class V 48-Inch	304.000 LF	_____.	_____.
1330	522.1015 Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	53.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3010	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch **P**	3,138.000 LF	_____	_____
3020	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch **P**	3,073.000 LF	_____	_____
3030	652.0615 Conduit Special 3-Inch	228.000 LF	_____	_____
3040	652.0700.S Install Conduit into Existing Item	13.000 EACH	_____	_____
3050	653.0222 Junction Boxes 18x12x6-Inch	12.000 EACH	_____	_____
3060	653.0900 Adjusting Pull Boxes	4.000 EACH	_____	_____
3070	653.0905 Removing Pull Boxes	11.000 EACH	_____	_____
3080	654.0105 Concrete Bases Type 5	3.000 EACH	_____	_____
3090	654.0106 Concrete Bases Type 6	6.000 EACH	_____	_____
3100	655.0615 Electrical Wire Lighting 10 AWG	972.000 LF	_____	_____
3110	655.0625 Electrical Wire Lighting 6 AWG	5,630.000 LF	_____	_____
3120	655.0630 Electrical Wire Lighting 4 AWG	8,536.000 LF	_____	_____
3130	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. ITS Cabinet	LS	LUMP SUM	_____
3140	657.0255 Transformer Bases Breakaway 11 1/2- Inch Bolt Circle	1.000 EACH	_____	_____
3150	657.0322 Poles Type 5-Aluminum	1.000 EACH	_____	_____
3160	659.0700 Lighting Units Walkway	5.000 EACH	_____	_____



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3180	659.2130 Lighting Control Cabinets 120/240 30-Inch	1.000 EACH	_____.	_____.
3190	670.0100 Field System Integrator	LS	LUMP SUM	_____.
3200	670.0200 ITS Documentation	LS	LUMP SUM	_____.
3210	671.0132 Conduit HDPE 3-Duct 2-Inch **P**	30,477.000 LF	_____.	_____.
3220	671.0232 Conduit HDPE Directional Bore 3-Duct 2-Inch **P**	620.000 LF	_____.	_____.
3230	672.0100 Base ITS Controller Cabinet	1.000 EACH	_____.	_____.
3240	674.0200 Cable Microwave Detector	90.000 LF	_____.	_____.
3250	675.0300 Install Mounted Controller Microwave Detector Assembly	2.000 EACH	_____.	_____.
3260	675.0400.S Install Ethernet Switch	1.000 EACH	_____.	_____.
3270	678.0500 Communication System Testing	LS	LUMP SUM	_____.
3280	690.0150 Sawing Asphalt	19,904.000 LF	_____.	_____.
3290	690.0250 Sawing Concrete	4,734.000 LF	_____.	_____.
3300	715.0415 Incentive Strength Concrete Pavement	129,041.600 DOL	1.00000	129,041.60
3310	715.0502 Incentive Strength Concrete Structures	45,684.000 DOL	1.00000	45,684.00
3320	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	2,000.000 HRS	5.00000	10,000.00



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3480	SPV.0060 Special 020. Cover Plates	2.000 EACH	_____.	_____.
3490	SPV.0060 Special 025. Reinforced Concrete Endwalls and Grates, 24x38-Inch	2.000 EACH	_____.	_____.
3500	SPV.0060 Special 026. Reinforced Concrete Endwalls and Grates 29x45-Inch	2.000 EACH	_____.	_____.
3510	SPV.0060 Special 027. Reinforced Concrete Endwalls and Grates 38x60-Inch	2.000 EACH	_____.	_____.
3520	SPV.0060 Special 028. Reinforced Concrete Endwalls and Grates 48x76-Inch	2.000 EACH	_____.	_____.
3540	SPV.0060 Special 031. Temporary Concrete Barrier Gate	3.000 EACH	_____.	_____.
3550	SPV.0060 Special 032. Reinstall Temporary Concrete Barrier Gate	3.000 EACH	_____.	_____.
3560	SPV.0060 Special 040. Closed Inlet Cover	3.000 EACH	_____.	_____.
3570	SPV.0060 Special 350. Salvage and Reinstall Light Pole	6.000 EACH	_____.	_____.
3580	SPV.0060 Special 401. Fiber Tracer Marker Post	16.000 EACH	_____.	_____.
3590	SPV.0060 Special 402. Pull Box Non-Conductive 24X42-Inch	7.000 EACH	_____.	_____.
3600	SPV.0060 Special 403. Remove Electrical Service Meter Breaker Pedestal	1.000 EACH	_____.	_____.
3610	SPV.0060 Special 404. Salvage and Reinstall Microwave Detector Assembly	2.000 EACH	_____.	_____.
3620	SPV.0060 Special 405. Install IP Wireless 5.8 GHz Radio/Antenna	2.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3630	SPV.0060 Special 406. Communication Vault-Round	16.000 EACH	_____.	_____.
3640	SPV.0090 Special 001. Compost Tube	1,525.000 LF	_____.	_____.
3650	SPV.0090 Special 002. Reinstall Temporary Snow Fence	12,825.000 LF	_____.	_____.
3660	SPV.0090 Special 016. Concrete Pavement Joint Sealing	17,440.000 LF	_____.	_____.
3670	SPV.0090 Special 017. Pipe Boring & Jacking 36-Inch	232.000 LF	_____.	_____.
3680	SPV.0090 Special 018. Pipe Boring & Jacking 48-Inch	623.000 LF	_____.	_____.
3690	SPV.0090 Special 020. Furnishing Snow Fence	1,000.000 LF	_____.	_____.
3700	SPV.0090 Special 021. Installing Snow Fence	1,000.000 LF	_____.	_____.
3710	SPV.0090 Special 022. Concrete Barrier Temporary Precast Left In Place	1,472.000 LF	_____.	_____.
3720	SPV.0090 Special 030. Drain Slotted Longitudinal Temporary	608.000 LF	_____.	_____.
3730	SPV.0090 Special 203. Traffic Control Gawk Screen Furnished	1,650.000 LF	_____.	_____.
3740	SPV.0090 Special 204. Traffic Control Gawk Screen Installed	1,650.000 LF	_____.	_____.
3750	SPV.0105 Special 001. Survey Project 1003-10-76 with Optional AMG for Conc Pavement & Base Course	LS	LUMP SUM	_____.



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3760	SPV.0105 Special 002. Survey Project 1003-10-81 with Optional AMG for Conc Pavement & Base Course	LS	LUMP SUM	_____.
3770	SPV.0105 Special 003. Concrete Pavement Joint Layout	LS	LUMP SUM	_____.
3780	SPV.0105 Special 010. Traffic Control For Turtle Creek Recreational Vehicles	LS	LUMP SUM	_____.
3790	SPV.0105 Special 350. Remove Lighting Control Cabinet	LS	LUMP SUM	_____.
3800	SPV.0105 Special 351. Temporary Lighting System CTH S Interchange	LS	LUMP SUM	_____.
3810	SPV.0105 Special 401. Salvage and Reinstall ITS Field Cabinet	LS	LUMP SUM	_____.
3820	SPV.0105 Special 402. Salvage and Reinstall Hardwired Bluetooth Sensor	LS	LUMP SUM	_____.
3830	SPV.0105 Special 403. Temporary Open/Closed Sign System	LS	LUMP SUM	_____.
3840	SPV.0105 Special 480. Weigh-In-Motion System	LS	LUMP SUM	_____.
3850	SPV.0105 Special 481. Weigh-In-Motion System Warranty Maintenance	LS	LUMP SUM	_____.
3860	SPV.0105 Special 482. Static Scale System Electronics	LS	LUMP SUM	_____.
3870	SPV.0105 Special 483. Static Scale System Warranty Maintenance	LS	LUMP SUM	_____.
3880	SPV.0165 Special 701. Temporary Shoring Railroad	2,650.000 SF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20170808001 Project(s): 1003-10-76, 1003-10-81

Federal ID(s): WISC 2017397, WISC 2017398

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3890	SPV.0165 Special 750. Longitudinal Grooving Bridge Deck **P**	77,834.000 SF	_____.	_____.
3900	SPV.0180 Special 002. Roadside Infiltration Ditch Compost	6,465.000 SY	_____.	_____.
3910	SPV.0180 Special 005. Concrete Truck Apron 8- Inch	74.000 SY	_____.	_____.
3920	SPV.0180 Special 010. Emulsified Asphalt Median Treatment	220.000 SY	_____.	_____.
3930	SPV.0195 Special 740. Excavating, Hauling & Disposal of Contaminated Soil	580.000 TON	_____.	_____.
3940	659.0400 Luminaires High Mast Lighting LED	4.000 EACH	_____.	_____.
3950	659.1120 Luminaires Utility LED B	42.000 EACH	_____.	_____.
3960	674.0300 Remove Cable	8,456.000 LF	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.