**Special Provisions**

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**STSP’S Revised November 19, 2018**

**SPECIAL PROVISIONS**

1. General.

Perform the work under this construction contract for Project 1009-30-16, Sign Bridge Replacement, Regionwide Various Routes SW, Var Hwy, Dane County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2019 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20181119)

1. Scope of Work.

The work under this contract shall consist of repairing existing sign bridges on various highways in various counties and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

1. Prosecution and Progress.

Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the time frame for construction of the project within the 2019 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

To revise the time frame, submit a written request to the engineer at least two weeks before the beginning of the intended time frame. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department’s scheduled resources.

Begin work by Monday, September 16th,2019.

1. Traffic.

Shoulder closures are preferable to lane closures whenever possible.

At no time, perform any repairs or lift or erect signs over live traffic lanes. All repair work is to be perform

utilizing traffic control under the area currently be repaired.

Do not perform any work requiring lane or ramp during the peak traffic periods. All lane and shoulder closures shall be entered in the Wisconsin Lane Closure System (LCS) prior to any work. See Wisconsin Lane Closure System Advance Notification section for LCS entry instructions.

**Traffic Control & Work Restrictions**

A detailed table of structure by structure work restrictions and traffic control inspections is included in the plans.

**Traffic Control: S-23-0002**

US Highway 11 will be closed during the removal and installation of traffic signal monotube, S-23-0002. Utilize local law enforcement to stop traffic and temporarily close all traffic under the structure for a maximum of 20 minutes during the monotube removal and reinstallation.

**Freeway Work Restrictions**

All lanes of the freeway shall be entirely clear and open to traffic at all times except for approved Night Time Hours or Off-Peak Hour closures as approved by the engineer. Dual lane operation is permitted during Night Time Hours and Off-Peak Hours pending approval of the engineer. Single lane operation is only permitted during Night Time Hours pending approval of the engineer. Lane closures shall be in accordance to the standard detail drawings (SDD) and have the approval of the engineer and the Region Work Zone Engineer.

System to system ramp closures shall only be allowed during nighttime work hours.

No two consecutive on or off ramps shall be closed at the same time.

All lanes of on, off, and directional interchange ramps shall be completely free of traffic control devices during restricted hours. During off peak hours, ramps may be reduced to one 12-foot lane. Ramps may be closed during off peak hours with the prior approval of the engineer and only for the minimum time required to complete the work. It is required to post the ramps with signs as required above.

During periods of no construction, the full width of all freeway mainline and ramp pavements shall be open to traffic.

To the extent possible, confine work operations to an off highway or shoulder location without encroachment on traffic lanes and in such a manner as to interfere as little as possible with freeway traffic.

Coordinate the work schedule in the northeast region with special events such as Green Bay Packer Home Games and other Lambeau Field events with anticipated attendance of 30,000+. No work is allowed within areas affected by special events. No lane closures allowed on any of the roadways in Brown County starting 5 hours prior to the event start time until 8 hours of the start time of the event.

Do not use flag persons to direct, control or stop freeway traffic.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as shown on the plans. Submit this plan ten (10) days prior to the preconstruction conference.

**Portable Changeable Message Signs – Message Prior Approval**

After coordinating with Department construction field staff, notify the appropriate region Traffic Section 3 business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The Region Traffic Unit will review the proposed message and either approve the message or make necessary changes. Contact SW Region Traffic as listed in the plans for prior message approval.

Structures that will need PCMS installed 3 business days prior to the lane closures are as follows: S-13-0060, S-13-0064, S-13-0071, S-13-0258, S-13-0279, S-13-0280, S-13-0282, and S-56-0008. Required PCMS are incidental to the Item SPV.0060.19 Traffic Control – Ramp Closure.

Wisconsin Lane Closure System Advance Notification

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

|  |  |
| --- | --- |
| Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16’) | MINIMUM NOTIFICATION |
| Lane and shoulder closures | 7 calendar days |
| Full roadway closures | 7 calendar days |
| Ramp closures | 7 calendar days |
| Detours | 7 calendar days |
| Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥16’) | MINIMUM NOTIFICATION |
| Lane and shoulder closures | 3 business days |
| Ramp closures | 3 business days |
| Modifying all closure types | 3 business days |

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

1. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying mainline traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 25th,2019 to 6:00 AM Tuesday, May 28th,2019 Memorial Day;

- From noon Wednesday, July 3rd,2019 to 6:00 AM Monday, July 8th,2019 Independence Day;

- From noon Friday, August 30th,2019 to 6:00 AM Tuesday, September 3rd,2019 Labor Day.

stp-107-005 (20181119)

1. Railroad Insurance and Coordination - Wisconsin and Southern Railroad Company

A Description

Comply with standard spec 107.17 for all work affecting Wisconsin and Southern Railroad Company property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Wisconsin and Southern Railroad Company.

Notify evidence of the required coverage, and duration to Amanda Haggerty, Office Administrator; 1890 E Johnson Street, Madison, WI 53704; Telephone (608) 620-2048; E-mail: ahaggerty@watcocompanies.com.

Also send a copy to the following: Jared Kinziger, NE Region Railroad Coordinator; 944 Vanderperren Way, Green Bay, WI 54304; Telephone (920) 492-7713; E-mail: jared.kinziger@dot.wi.gov.

Include the following information on the insurance document:

- Project ID: 1009-30-16

- Work Performed: Traffic control

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | Route Name | City/County | Crossing ID | RR Subdivision | RR Milepost |
| 1 | USH 12/18 Beltline near John Nolen Dr.  | Madison/Dane | 391711W | Madison | 136.66 |
| 2 | USH 12/18 Beltline near Park St. | Madison/Dane | 177871Y | Evansville | 135.57 |

A.2 Train Operation

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| # | PassengerTrain Volume | PassengerTrain Speed | FreightTrainVolume | FreightTrainSpeed | Frequency | Switch TrainComment\* |
| 1 | 0 | 0 | 4 | 40 | Daily | No switch trains |
| 2 | 0 | 0 | 1 | 10 | Monthly | No switch trains |

\* Switch trains are in addition to freight and passenger trains.

A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination

Construction Contact

Roger Schaalma, Superintendent of Maintenance of Way, Wisconsin and Southern Railroad Co.; 1890 East Johnson Street, Madison, WI 53704; Telephone (608) 620‑2044; E-mail rschaalma@watcocompanies.com for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

Flagging Contact

See Construction Contact. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

Cable Locate Contact

In addition to contacting Diggers Hotline, contact Amanda Haggerty, Office Administrator; Telephone (608) 620-2048; E-mail ahaggerty@watcocompanies.com at least five working days before the locate is needed. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

WSOR will only locate railroad owned facilities located in the railroad right-of-way. The railroad does not locate any other utilities.

A.4 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor. None

A.5 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

stp-107-026 (20170615)

1. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

107-065 (20080501)

Due to the nature of this work, utility conflicts were not identified or resolved during design. Locate all utility facilities within the project limits prior to construction. Notify the engineer of any potential utility conflicts within three (3) business days prior to construction. Coordinate all utility relocations or adjustments necessary to accomplish the work of this project.

1. Other Contracts.

The following projects are expected to be constructed during the same time as this project. Coordinate lane, ramp, and roadway closures on USH 12 with Josh Koebernick (WisDOT) at least 2-weeks in advance of a closure.

Email: Joshua.koebernick@dot.wi.gov

Cell: 608-516-6542

1206-06-78 Madison – Cambridge, Seminole Highway to IH 39/90, USH 12, Dane County

5300-00-71 Sauk City-Madison, Mineral Point Rd to Whitney Way, USH 12, Dane County

1. Lane Rental Fee Assessment.

A General

The contract designates some lane closures to perform the work. The contractor will not incur a Lane Rental Fee Assessment for closing lanes during the allowable lane closure times. The contractor will incur a Lane Rental Fee Assessment for each lane closure outside of the allowable lane closure times. If a lane is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane restrictions and discourage unnecessary closures.

The allowable lane closure times are shown in the Traffic article.

Submit the dates of the proposed lane, ramp, and roadway restrictions to the engineer as part of the progress schedule.

Coordinate lane, ramp, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project. If other projects are in the vicinity of this project, coordinate lane closures to run concurrent with lane closures on adjacent projects when possible. When lane closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

B Lane Rental Fee Assessment

The Lane Rental Fee Assessment incurred for each lane closure, each ramp closure, and each full closure of a roadway, per direction of travel, is as follows:

* S-56-0008: $562.50 per lane, per direction of travel, per hour broken into 15 minute increments
* S-13-0036 (see chart below)
* S-13-0037 (see chart below)
* S-13-0040 (see chart below)
* S-13-0060 (see chart below)
* S-13-0061 (see chart below)
* S-13-0064 (see chart below)
* S-13-0071 (see chart below)
* S-13-0153 (see chart below)
* S-13-0248 (see chart below)
* S-13-0258 (see chart below)
* S-13-0279 (see chart below)
* S-13-0280 (see chart below)
* S-13-0283 (see chart below)
* S-13-0377 (see chart below)

|  |  |  |
| --- | --- | --- |
| Closure Outside Allowed Time Period | 15-minute Lane Rental Fee (per lane) | Cumulative Lane Rental Fee (per lane) |
| 0 - 15 minutes | $750 | $750 |
| 15 - 30 minutes | $1,500 | $2,250 |
| 30 - 45 minutes | $2,250 | $4,500 |
| > 45 minutes | $3,000\* | $7,500 and up |

(\*) Lane rental fees will continue to be assessed at this rate per 15 minutes.

Ramp closures

|  |  |  |
| --- | --- | --- |
| Closure Outside Allowed Time Period | 15 minute Lane Rental Fee (per lane) | Cumulative Lane Rental Fee (per lane) |
| 0 - 15 minutes | $750 | $750 |
| 15 - 30 minutes | $750 | $1,500 |
| 30 - 45 minutes | $1,500 | $3,000 |
| > 45 minutes | $1,500\* | $4,500 and up |

(\*) Lane rental fees will continue to be assessed at this rate per 15 minutes.

The Lane Rental Fee Assessment represents a portion of the cost of the interference and inconvenience to the road users for each closure. All lane, roadway, or ramp closure event increments 15 minutes and less will be assessed as a 15-minute increment.

The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

Lane Rental Fee Assessments will not be assessed for closures due to crashes, accidents, or emergencies not initiated by the contractor.

The department will assess Lane Rental Fee Assessment by the dollar under the administrative item Failing to Open Road to Traffic. The total dollar amount of Lane Rental Fee Assessment will be computed by multiplying the Lane Rental Assessment Rate by the number of 15-minute increments of each lane closure event as described above.

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance. If interim completion time or contract time expires before the completion of specified work in the contract, additional liquidated damages will be assessed as specified in standard spec 108.11 or as specified within this contract.

1. Temporary Regulatory Speed Limit Reduction.

A reduction of the posted regulatory speed limit from 65 mph (or 70 mph) to 55 mph is required when any of the following conditions are created within the project limits: 1. Lane(s) closed and workers are present and active in close proximity to an open lane. 2. Lane(s) narrowed to less than 12 feet and adjacent shoulder width is reduced. 3. Traffic is shifted partly or completely onto a shoulder and/or temporary pavement and shoulder width is reduced. At all other times the posted regulatory speed limit shall be 65 mph (or 70 mph).

During periods when traffic conditions do not require a Temporary Regulatory Speed Reduction, speed limit signs shall be changed to the permanent posted speed limit. This may require posted speed sign changes twice a day or more. Changing temporary and existing/permanent signs between 65 mph (or 70 mph) and 55 mph shall be considered incidental to the item Traffic Control.

No portion of sign text shall be visible when not in use, regardless if it is temporary or permanent regulatory speed limit sign.

During approved temporary regulatory speed limit reductions, install regulatory speed limit signs on the inside and outside shoulders of the roadway at the beginning of the reduced regulatory speed zone, after all locations where traffic may enter the highway segment or every 1/2 mile within the reduced regulatory speed zone. Signs shall be installed at the end of the temporary regulatory speed zone to designate the end of the temporary regulatory speed zone and inform drivers the posted regulatory speed limit reverts back to 65 mph (or 70 mph). To minimize possible confusion to the traveling public and to ensure appropriate speed enforcement, enhanced attention to placement and changing of speed limit signs is required.

Coordinate with department construction field staff to notify the Northeast Region Traffic Section with field location(s) of the temporary regulatory speed zone. Primary contact phone number: 920-492-5652 (secondary contact number is 920-492-7165). Contact the Northeast Region Traffic Section at least 14 calendar days before installation of the temporary regulatory speed zone. After notification, Northeast Region Traffic will create a “Temporary Speed Zone Declaration” to meet statutory requirements, allowing enforcement of this temporary regulatory speed limit.

When construction activities impede the location of a post mounted regulatory speed limit sign, mount the regulatory speed limit sign on portable supports that meet the "crashworthy" definition and height criteria in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD).

1. Traffic Control.

Perform this work conforming to standard spec 643, and as the plans show, or as the engineer approves, except as follows.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as the plans show. Submit this plan ten (10) days before the preconstruction conference.

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed. The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made therefore.

Supply the name and telephone number of a local contact person for traffic control repair before starting work.

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic during the construction operations.

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

Obtain prior approval from the engineer for the location of egress and ingress for construction vehicles to prosecute the work.

Cover existing signs which conflict with traffic control as the engineer directs.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

Do not park or store any vehicle, piece of equipment, or construction materials on the right of way, unless otherwise specified in the traffic control article or without approval of the engineer.

All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.

Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

ner-643-065 (20171213)

1. Signs Type I and II.

Furnish and install mounting brackets per approved product list for type II signs on overhead sign supports incidental to sign. For type II signs on sign bridges use aluminum vertical support beams incidental to sign.

*Modify 637.2.4 of the standard specifications with the following:*

Use stainless steel bolts, washers and nuts for type I and type II signs mounted on sign bridges or type I signs mounted on overhead sign supports. Use clips on every joint for Sign Plate A 4-6 when mounted on a sign bridge or overhead sign support. Inspect installation of clips and assure bolts and nuts are tightened to manufacturers recommended torque values.

Use aluminum vertical sign support beams that have a 5-inch wide flange and weigh 3.7 pounds per foot, if the L-brackets are 4 inches wide then use 4-inch-wide flange beams weighing 3.06 pounds per foot. Measure the width of the L-brackets on existing structures of determine the width needed for sign support beams

Use beams a minimum of six feet in length or equal to the height of the sign to be supported, whichever is greater. Use U-bolts that are made of stainless steel, one-half inch diameter and of the proper size to fit the truss cords of each sign bridge. Install vertical sign support beams on each sign and use new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss.

For type II signs on overhead sign supports follow the approved product list for mounting brackets.

*Replace 637.2.4.1(2)2 of the standard specifications with the following:*

Clips may be either stainless steel or ASTM B 108, aluminum alloy, 356.0-T6.

*Append 637.3.3.2(2) of the standard specifications with the following:*

Install Type I Signs at the offset stated in the plan, which shall be the clear distance between the edge of mainline pavement right edge line and the near edge of the sign.

*Append 637.3.3.3(3) of the standard specifications with the following:*

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I signs on overhead sign supports incidental to sign.

1. Tension Anchor Rod, Item SPV.0060.01.

**A Description**

This special provision describes re-tensioning loose anchor rod nuts as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance with the pertinent provisions of section 641 of the standard specifications and as shown in the plans.

**C Construction**

Use construction methods that are in accordance with the pertinent provisions of section 641 of the standard specifications and as shown in the plans. This work will consist of re-tensioning all loose anchor rod nuts as specified in the plans. The contractor shall follow the re-tensioning procedure outlined herein:

1. The contractor shall verify the grade of the anchor rod. If an anchor rod grade cannot be verified, the Department shall be contracted for direction. Note that A36 rods have different tensioning requirements.
2. The contractor shall field verify the size and number of nuts required to be replaced. Note that if one or more are found to be loose, all are required to be replaced.
3. Remove all jam nuts1.
4. The contractor shall furnish flat washers and heavy hex nuts conforming to Section 641.2.2.3. Existing jam nuts1 may be reused.
5. Remove rodent screen1.
6. Remove and dispose of the grout pad1 in accordance to standard spec 509.3.4.
7. Tighten all nuts that are loose to snug tight (leveling and top nut). Reference the Department’s Form DT2321 for snug tight torque values.
8. Contact the department for direction of the top nut is not fully snugged and cannot be turned.
9. Once all nuts are snug, remove one and only one top nut at a time and follow the remaining procedure. Top nuts, flat washers, and locking washers (if applicable) shall be discarded, the leveling nuts shall remain, and jam nuts1 may be reused.
10. Remove rust and dirt, from anchor rod and base plate with a wire brush.
11. Apply one light coat of fast drying zinc rich primer or spray-on cold galvanized (if rust is present) to the full length of the anchor bolt and at damaged base plates. Repair any damaged galvanized coating incidental to the re-tensioning process.
12. Apply wax-based lubricant to the anchor rod.
13. Install top nut to snug tight. Reference the Department’s form DT2321 for snug tight torque values.
14. Repeat steps 3 thru 12 in this specification until all washers and nuts have been replaced.
15. Tension the anchor rod nuts. Follow the Department’s Form DT2321 procedure steps 5 thru 7 and record the tensioning process.
16. Clean, lubricate and install jam nut1 per step 8 of Form DT2321.
17. Apply two coats of zinc rich primer to any damaged areas of the structure base plates and used jam nuts.
18. Reinstall the rodent screen1.
19. Complete Form DT2321 for each structure and submit to Jason Zemke (262-548-8734) for transmittal to Bureau of Structures and inclusion in HSIS.

Note1 – Only for structures that have jam nuts, grout, or rodent screens.

All work for this item, including site clean-up, shall be completed in one shift. If it is a cantilever structure with a connection which has 6 or less bolts, the truss or mastarm shall be supported by a crane during bolt replacement. In lieu of a supporting crane, the contractor may instead submit a structural analysis of the structure addressing proposed constructability which ensure the stability and safety of workers and the traveling public. Analysis computation and support document shall be signed, sealed and dated by a professional engineer licensed in Wisconsin, and shall be submitted to the project engineer and BOS for permanent record.

**D Measurement**

The department will measure Tension Anchor Rod as each individual anchor rod acceptably completed.

**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.0060.01 Tension Anchor Rod Each

Payment is full compensation for tensioning loose anchor rod nuts; for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair; for fabricating, handling, transporting, and erecting.

1. Remove Debris and Regrade, Item SPV.0060.02.

**A Description**

This special provision describes removing debris and grading around the foundation as shown on the plans, and as hereinafter provided.

**B (Vacant)**

**C Construction**

Remove debris and dispose of it in accordance with section 202 of the standard specifications. Grade the area around the foundation to drain in accordance with section 213 of the standard specification.

**D Measurement**

The department will measure Remove Debris and Regrade as each foundation location acceptably completed.

**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.0060.02 Remove Debris and Regrade Each

Payment is full compensation for removing and disposing of the debris; grading to the foundation; restoration; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

1. Replace Foundation, Item SPV.0060.03.

**A Description**

This special provision describes removing and replacing the foundation as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance to the pertinent provisions of standard spec 636, 641 and as shown in the plans.

**C Construction**

Use construction methods that are in accordance to the pertinent provisions of standard spec 636, 641 and as shown in the plans. The existing post, cantilever truss and signs are to be removed and reinstalled on the new foundation. The contractor is responsible for storing the structure and for any damage that occurs during removal, storage or reinstallation of the structure. The existing foundation is to be removed in accordance with standard spec 204.

**D Measurement**

The department will measure Replace Foundation as each foundation location acceptably completed.

**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.0060.03 Replace Foundation Each

Payment is full compensation for removing, temporarily storing, and reinstalling existing pole and arms; for providing concrete; for providing and removing casing; for excavating and backfilling; for providing and placing anchor rods; for providing and installing steel reinforcement; for providing and installing any nuts, bolts, washers or other hardware necessary to remove and reinstall the existing post, cantilever truss and signs on the new foundation; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials.

1. Remove Grout Pad, Item SPV.0060.04.

**A Description**

This special provision describes removing grout pads under base plates as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish cold-applied galvanizing in accordance to “Tension Anchor Rod” Article.

Furnish rodent screen and wire to secure the rodent screen in accordance to the “Replace Rodent Screen” Article.

**C Construction**

Remove and dispose of the grout pad use air chippers or breakers that weigh no more than 35 pounds and are equipped with flat, chisel-type points with a cutting edge not less than 3/4 inch or greater than 3 inches wide. After reaching the edge of the anchor rods, do not use hammers heavier than 15 pounds within one inch of the steel. Dispose of old concrete and asphaltic patching removed away from the bridge site. Implement necessary procedures to minimize debris dropping into the stream, streambed, roadway, or right-of-way below. If the foundation spalls during removal of grout pad, repair according to 509.3.7 of the standard specification. If excessive areas begin to spall, contact BOS for guidance.

Measure distance from top of concrete to bottom of leveling nut. If the distance is greater than the diameter of the anchor rod, contract the department for further instruction.

Thoroughly clean the existing anchor rods and leveling nuts below the base plate, roughen the surface on the anchor rods and apply cold-galvanizing to the anchor rods and leveling nuts.

Install a rodent screen in accordance to the Replace Rodent Screen Article if electrical devices are installed on the structure.

**D Measurement**

The department will measure Remove Grout Pad by each unit, acceptably completed.

**E Payment**

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0060.04 | Remove Grout Pad | Each |

Payment is full compensation for removing and disposing of the grout pad; cleaning and applying cold-galvanizing; and for providing and installing a rodent screen.

1. Tension Structural Connection Bolt (Friction), Item SPV.0060.05.

A Description

This special provision describes replacing splice, post-to-truss, truss gusset, post to mastarm and any other tensioned structural connection high strength bolt as shown on the plans, and as hereinafter provided.

B Materials

Furnish materials that are in accordance to the pertinent provisions of standard spec 641, 657 and as shown in the plans.

C Construction

Use construction methods that are in accordance to the pertinent provisions of standard spec 641, 657 and as shown in the plans. The contractor shall follow the re-tensioning procedure outlined herein:

1. Each bolt to be tensioned shall be replaced with a new bolt to properly tension the bolt. The new bolt installed will follow the below procedure.
2. The contractor shall field verify the size and number of bolts, nuts, flat washers, and DTI washers at each structure to be replaced. Note that since the DTI’s are to be utilized, the number of washers may change and the lengths of the bolts may need to be increased.
3. Lock washers shall **not** be used in connections. Washers are **not** to be placed between faying surfaces. If present, lock washers and washers between faying surfaces must be removed and discarded.
4. The contractor shall furnish bolts, flat washers, heavy hex nuts, shims, and DTI’s conforming to standard spec 641.
5. Perform the pre-installation test in accordance to the department’s form DT2322.
6. Tighten all nuts that are loose to snug tight. Note that this is to be done for stability purposes.
7. Once all nuts are snug, remove one and only one bolt at a time and follow the remaining procedure. Existing bolts, nuts washers, and shims shall be discarded.
8. Install the new bolt to snug tight.
9. Repeat steps 7 and 8 until all bolts have been replaced. Ensure there are no gaps in the faying surface after all bolts have been replaced. If gaps are present, contact central office contact on DT form.
10. Follow the department’s Form DT2322 installation procedure for tensioning of the replacement bolts.
11. Complete Form DT2322 for each structure and submit to the regional ancillary structure engineer for transmittal to BOS and inclusion in HSIS.

All work under this item, including site cleanup, shall be completed within one shift. If it is a cantilever structure or a connection which has 6 or less bolts, the truss or mastarm shall be supported by a crane during bolt replacement. In lieu of a supporting crane, the contractor may instead submit a structural analysis of the structure addressing proposed constructability which ensure the stability and safety of workers and the traveling public. Analysis computation and support document shall be signed, sealed and dated by a professional engineer licensed in Wisconsin, and shall be submitted to the project engineer and BOS for permanent record.

D Measurement

The department will measure Tension Structural Connection Bolt (Friction) as each individual bolt, acceptably completed

E Payment

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0060.05 | Tension Structural Connection Bolt (Friction) | Each |

Payment is full compensation for replacing all necessary splice, post-to-truss, truss gusset, post to mastarm and any other tensioned structural connection high strength bolts; for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair.

1. Secure/ Replace Cap, Item SPV.0060.06.

**A Description**

This special provision describes securing or replacing missing or deteriorated chord, post and miscellaneous caps and securing them as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance with the pertinent provisions of sections 641 and 657 of the standard specifications and as shown in the plans. Contractor to field verify size of chord, post and miscellaneous caps to be replaced.

**C Construction**

Use construction methods that are in accordance with the pertinent provisions of section 641 and 657 of the standard specifications and as shown in the plans. Miscellaneous hardware required to securely install the end cap will be considered incidental to this item.

**D Measurement**

The department will measure Secure/ Replace Cap as each individual cap acceptably completed.

**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.0060.06 Secure/ Replace Cap EACH

Payment is full compensation for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair; for fabricating, handling, transporting, and erecting.

1. Slotted Hole Repair On Sign Support Bracket, Item SPV.0060.07.

**A Description**

This special provision describes repairing the slotted holes in vertical sign support brackets as shown in the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance with the pertinent provisions of sections 641 of the standard specifications and as shown in the plans.

**C Construction**

Field verify the length of the aluminum plate needed for the existing aluminum I-beam with the slotted holes and field verify the U-bolt size and diameter. Remove all existing U-bolt connection and hardware. Install new stainless-steel U-bolts, stainless steel nuts, washers and aluminum plates as shown on the plans. Repair work must be done on only one connection at a time.

**D Measurement**

The department will measure Slotted Hole Repair on Sign Support Bracket as each individual aluminum I-beam acceptably completed.

**E Payment**

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

ITEM NUMBER DESCRIPTION UNIT

SPV.0060.07 Slotted Hole Repair on Sign Support Bracket Each

Payment is full compensation for field verifying existing aluminum I-beam needing repair; for furnishing all materials and miscellaneous items to complete all required repairs at each individual I-beam; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

1. Replace Sign Connection Clamp, Item SPV.0060.08.

**A Description**

This special provision describes replacing the cracked or missing sign connection clamp as shown on the plans, and as hereinafter provided

**B Materials**

Furnish connection materials for overhead-mounted signs that are in accordance to the standard spec 637 and which are on the department’s approved product list and as shown in the plans. Furnish sign connection clamps as required to be replaced as shown in the plans.

**C Construction**

Use construction methods that are in accordance to standard specs 637 and 641 and as shown in the plans. All bolts, nuts, washers or miscellaneous items required to replace the cracked or deteriorated sign connection hardware will be considered incidental to this item.

**D Measurement**

The department will measure Replace Sign Connection Clamp as each individual sign which has hardware replaced, acceptably completed.

**E Payment**

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0060.08 | Replace Sign Connection Clamp | Each |

Payment is full compensation for replacing sign connection clamp; for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair; and for handling, transporting, and erecting. Approved products do not require contractor to fabricate parts.

1. Replace U-Bolt, Item SPV.0060.09.

**A Description**

This special provision describes furnishing and replacing damaged or loose U-bolts as shown on the plans, and as hereinafter provided.

**B Materials**

Stainless steel U-bolts and lock washers shall conform to ASTM 304. Stainless steel hex nuts shall conform to ASTM A276.

**C Construction**

Use construction methods that are in accordance with the pertinent provisions of section 641 of the standard specifications, WisDOT Sign Plate Manual Detail A4-7 and as shown in the plans.

**D Measurement**

The department will measure Replace U-bolt as each individual U-bolt acceptably completed.

**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.0060.09 Replace U-bolt Each

Payment is full compensation for furnishing and replacing U-bolts, nuts and lock washers; for removing and properly disposing of existing materials; for furnishing all materials and miscellaneous items to complete the repair; for fabricating, handling, transporting, and erecting; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

1. Install ID Plaque, Item SPV.0060.10.

**A Description**

This special provision describes installing sign, signal and high mast light ID plaques as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance with SDD 10A4-3 and/or SDD 12A4-3 as required by structure type.

**C Construction**

Install the sign bridge ID plaque in accordance with SDD 10A4-3 and/or SDD 12A4-3 as required by structure type. Miscellaneous hardware required to securely install the ID plaque will be considered incidental to this item.

**D Measurement**

The department will measure Install ID Plaque as each individual sign bridge ID plaque acceptably completed.

**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.0060.10 Install ID Plaque Each

Payment is full compensation for installing sign bridge ID plaque; for removing and properly disposing of existing materials being replaced; for furnishing and installing all materials and miscellaneous items to complete the installation; and for fabricating, handling, transporting, and erecting.

1. Install Sign Panel Connector, Item SPV.0060.11.

**A Description**

This special provision describes furnishing and installing sign panel connectors and removing and replacing existing defective or damaged sign panel connectors as shown in the plans, and as hereinafter provided.

**B Materials**

Provide sign panel connectors, bolts, nuts and washers meeting the requirements of section 637.2.4 of the standard specifications and Sign Plate A5-2. Connectors shall be aluminum alloy 356-T6 , bolts shall be stainless steel, flat washer shall be 3/8” x .091 stainless steel, and stop nuts shall be stainless steel.

**C Construction**

Use construction methods that are in accordance with the pertinent provisions of section 637 of the standard specifications and as shown in the plans.

Remove and properly dispose of defective or damaged existing sign panel connectors.

Tighten the bolts and nuts to the manufacturer’s recommended torque value.

**D Measurement**

The department will measure Install Sign Panel Connector as each individual sign panel connector acceptably completed.

**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.0060.11 Install Sign Panel Connector Each

Payment is full compensation for furnishing and installing sign panel connectors, bolts, nuts and washers; for removing and properly disposing of existing defective or damaged sign panel connectors; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

1. Adjust Vertical Clearance, Item SPV.0060.12.

A Description

This special provision describes adjusting sign or signal placement as shown on the plans, and as hereinafter provided.

B Materials

Furnish materials that are in accordance with sections 637 and 658 of the standard spec.

C Construction

Adjust sign and support brackets to position and vertical clearance to meet section 637.3.3.2 of the standard spec and as shown in the plans.

Adjust signal and support brackets to position and vertical clearance to meet the pertinent details in Series 9 of the Standard Detail Drawings and as shown in the plans.

All bolts, nuts, washers or miscellaneous items required to adjust the position of the sign or signal will be considered incidental to this item.

D Measurement

The department will measure Adjust Vertical Clearance by each unit, acceptably completed.

E Payment

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0060.12 | Adjust Vertical Clearance |  Each |

Payment is full compensation for field verifying existing conditions; for furnishing and installing all connection hardware and adjusting vertical position of signs; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

1. Replace Handrail Hinge Pins, Item SPV.0060.13.

**A Description**

This special provision describes replacing and aligning handrail hinge locking pins as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance to standard spec 641 and as shown in the plans.

**C Construction**

Use construction methods that are in accordance to standard spec 641 and as shown in the plans.

Align pin such that the existing railing operates correctly.

**D Measurement**

The department will measure Replace Handrail Hinge Pins as each individual handrail hinge pin replacement and alignment acceptably completed.

**E Payment**

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0060.13 | Replace Handrail Hinge Pins | Each |

Payment is full compensation for field verifying existing conditions; for furnishing and installing materials; and for aligning the locking pin so the handrail can be used properly.

1. Replace Safety Chain, Item SPV.0060.14.

**A Description**

This special provision describes replacing catwalk safety chains as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance standard spec 641 and as shown in the plans.

**C Construction**

Use construction methods that are in accordance to standard spec 641 and as shown in the plans.

Field verify the length of safety chain required and the diameter of existing eyebolts.

Provide new eye bolts, nuts and washers for the safety chain. If the new eyebolts cannot be installed in the existing connection holes, drill the existing connection holes large enough to accept the new eyebolts.

Remove and properly dispose of the existing safety chain being replaced.

**D Measurement**

The department will measure Replace Safety Chain as each individual safety chain, acceptably completed

**E Payment**

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0060.14 | Replace Safety Chain | Each |

Payment is full compensation for field verifying existing conditions; for removing and properly disposing of the existing safety chain and connection hardware; and for furnishing and installing the new safety chain and connection hardware, including drilling connection holes.

1. Install Conduit Plug, Item SPV.0060.15.

**A Description**

This special provision describes replacing missing conduit plugs as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance with section 652 of the standard specifications and as shown in the plans.

**C Construction**

Use construction methods that are in accordance with section 652 of the standard specifications and as shown in the plans.

Field verify the size of the conduit plug required. Lubricate the conduit plug threads with an approved anti-seize compound.

**D Measurement**

The department will measure Install Conduit Plug as each individual conduit plug acceptably completed.

**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.0060.15 Install Conduit Plug Each

Payment is full compensation for field verifying existing conditions; for furnishing and installing the new conduit plug, including anti-seize compound.

1. Secure/ Replace Handhole Cover, Item SPV.0060.16.

**A Description**

This special provision describes replacing or securing handhole covers as shown on the plans, and as hereinafter provided.

**B Materials**

Furnish materials that are in accordance with the pertinent provisions of standard specification sections 641 and 659 and as shown in the plans.

**C Construction**

Use construction methods that are in accordance with the pertinent provisions of section 641 and 659 and as shown on plans. Replace missing handhole covers. Drill and tap bolt holes as required.

**D Measurement**

The department will measure Secure/ Replace Handhole Cover Bolt as each individual handhole cover acceptably completed.

**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.0060.16 Secure/ Replace Handhole Cover Each

Payment is full compensation for replacing or tightening handhole cover bolts; for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair; for fabricating, handling, transporting, and erecting.

1. Traffic Control – Single Lane Closure, Item SPV.0060.17.

**A Description**

This special provision describes providing traffic control by closing a lane to traffic to perform the necessary repairs for each structure.

**B Materials**

Furnish materials that are in accordance to the pertinent provisions of standard spec 643 and as shown in the plans and listed in Section 4 – Traffic and Section 11 – Traffic Control. Furnishing of signs, channelizing devices (barrels, cones, etc.) and vehicles for performing traffic control shall be considered incidental to this item. All work performed utilizing a shoulder closure in lieu of a lane closure shall also be considered incidental.

**C Construction**

Use construction methods that are in accordance to the pertinent provisions of standard spec 643 and as shown in the plans.

**D Measurement**

The department will measure Traffic Control – Single Lane Closure as each individual lane closed and reopened to traffic, acceptably completed.

**E Payment**

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

ITEM NUMBER DESCRIPTION UNIT

SPV.0060.16 Traffic Control – Single Lane Closure Each

Payment is full compensation for furnishing all required signs and materials for proper traffic control and for deploying and removal of all materials.

1. Traffic Control – Double Lane Closure, Item SPV.0060.18.

**A Description**

This special provision describes providing traffic control by closing two lanes to traffic to perform the necessary repairs for each structure. Traffic control plans shall be submitted to the engineer for acceptance at least ten (10) working days prior to performing the closure.

**B Materials**

Furnish materials that are in accordance to the pertinent provisions of standard spec 643 and as shown in the plans and listed in Section 4 – Traffic and Section 11 – Traffic Control. Furnishing of signs, channelizing devices (barrels, cones, etc.) and vehicles for performing traffic control shall be considered incidental to this item.

**C Construction**

Use construction methods that are in accordance to the pertinent provisions of standard spec 643 and as shown in the plans.

**D Measurement**

The department will measure Traffic Control – Double Lane Closure as each double lane closure performed and reopened to traffic, acceptably completed.

**E Payment**

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

ITEM NUMBER DESCRIPTION UNIT

SPV.0060.16 Traffic Control – Double Lane Closure Each

Payment is full compensation for furnishing all required signs and materials for proper traffic control and for deploying and removal of all materials.

1. Traffic Control – Ramp Closure, Item SPV.0060.19.

**A Description**

This special provision describes providing traffic control by closing a ramp to traffic to perform the necessary repairs for each structure. Traffic control plans shall be submitted to the engineer for acceptance at least ten (10) working days prior to performing the closure.

**B Materials**

Furnish materials that are in accordance to the pertinent provisions of standard spec 643, as shown in the plans, and listed in Section 4 – Traffic and Section 11 – Traffic Control. Furnishing of signs, channelizing devices (barrels, cones, etc.) and vehicles for performing traffic control shall be considered incidental to this item.

**C Construction**

Use construction methods that are in accordance to the pertinent provisions of standard spec 643 and as shown in the plans.

**D Measurement**

The department will measure Traffic Control – Ramp Closure as each individual ramp closed and reopened to traffic, acceptably completed.

**E Payment**

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

ITEM NUMBER DESCRIPTION UNIT

SPV.0060.19 Traffic Control – Ramp Closure Each

Payment is full compensation for furnishing all required signs and materials for proper traffic control and for deploying and removal of all materials.

1. Repair Galvanized Coating, Item SPV.0165.01.

**A Description**

This special provision describes providing surface cleaning and painting the galvanized posts at locations specified in the plans, and as hereinafter provided.

**B Materials**

Supply specific product data sheets to the engineer prior to starting work. Material is to be approved by the Engineer prior to being installed.

**C Construction**

Repair all zinc coating that is chipped or damaged or as otherwise noted by plans or the engineer by metallizing according to ASTM A780. Thoroughly clean the places receiving coating before applying the new coating.

**D Measurement**

The department will measure Repair Galvanized Coating by the square foot acceptably completed with a minimum quantity of one (1) square foot at each repair location.

**E Payment**

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

|  |  |  |
| --- | --- | --- |
| ITEM NUMBER | DESCRIPTION | UNIT |
| SPV.0165.01 | Repair Galvanized Coating | SF |

Payment is full compensation for cleaning; for protecting traffic and property; for furnishing all materials and miscellaneous items to complete the replacement; for handling, transporting, and erecting; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.