Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 9200-10-71/72, Shawano – Green Bay, CTH VV Interchange, Brown 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, 2020 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 (20191121)

2. Non-Mandatory Pre-Bid Meeting.

Add the following to standard spec 102.3.1:

Prospective bidders are invited to attend a non-mandatory pre-bid meeting at XXXXXXX, 2020 at WisDOT Northeast Region Office, 944 Vanderperren Way, Green Bay, WI 54304-5344.

No meeting minutes will be prepared. Issues discovered at the meeting will be handled by addendum.

3. Scope of Work.

The work under this contract shall consist of concrete pavement/sidewalk removals, excavation common, borrow, select borrow, base aggregate dense, select crushed material, HMA pavement, concrete pavement, concrete structures, storm sewer, concrete curb and gutter, concrete sidewalks, pavement markings, landscaping, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

4. Prosecution and Progress.

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

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. 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.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

Prior to beginning operations under this contract, submit in writing the proposed schedule of operations to the engineer for approval.

Indicate on the proposed schedule of operations that a large force and adequate equipment will be needed to assure that the work will be complete within the established contract time.

Twenty-four hours prior to weekly construction meetings, submit a detailed proposed two-week look-ahead traffic closure schedule to the engineer. Enter information into a spreadsheet (or other approved format) such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general two-month look-ahead closure information.

Winter weather work, excavation of frozen ground, high ground water, dewatering during winter months, and mitigation efforts for high water table elevations shall not be considered adverse weather delays to construction. Cost for dewatering is considered incidental to construction.

Anticipate cold weather and fall concrete paving and ancillary concrete work. Plan to heat aggregates and water for mixes, and that the heating of the aggregate and water is considered incidental to those concrete items. There will be no adverse weather delay for cold weather construction.

The contractor is advised that there may be multiple mobilizations for such items as traffic control, signing items, pavement markings and other incidental items related to the staging. The department will make no additional payment for said mobilizations.

Schedule of Operations and Construction Staging

Conform to the schedule of operations described below and as described under the “Construction Staging” and “Traffic” article, unless modifications are approved in writing by the engineer.

Comply with all local ordinances that apply to construction operations. Furnish any ordinate variance issued by the municipalities or any other required permits to the engineer, in writing before performing such work.

WIS 29 maybe reduced to a single 12 feet lane (16 feet min overall width) in each direction, during the non-peak periods described below.

Do not begin or continue any work that closes the freeway. Work may be performed, provided such work operations do not include ingress and egress of vehicles and equipment which would obstruct the flow of traffic on the freeway, during peak traffic periods. Do not ingress to or egress from WIS 29/32 unless approved by the department. Submit proposed ingress/egress procedure to the engineer at least two weeks prior to use.

Northeast Region Traffic Section (primary contact: (920) 492-5641; secondary contact: (920) 492-7719) must approve the procedure prior to use. Payment for coordinating and construction ingress/egress points is considered incidental to the contract.

Freight width restriction

WIS 29/32 is a designated WisDOT Freight Network Route. Maintain a width restriction no less than 16 feet at all times in each direction. Movement of OSOW freight is scheduled to occur during this construction project that will require a minimum of 16 feet of horizontal clearance.

Enter in the correct minimum width restriction in Wisconsin Lane Closure System.

ner-900-030 (20171213)

Hauling across WIS 29 will be allowed with single lane inside closure on WIS 29, due to overhang concerns of scrapers and dump trucks within the median. With the assistance of flaggers on each side of the haul road and lighted intersections, the hauling can take place between the hours of 8pm-5am. Flaggers should only be directing the hauling aspect and NOT mainline WIS 29 traffic.

Project cannot start until March 29, 2021

Stage 2A or 2B cannot be started until July 5, 2021

Stage 2A and Stage 2B can be run concurrently.

Stage 2C cannot be started until Stage 2A and Stage 2B are completed.

Stage 3A can not start until November 1, 2021.

Stage 4A or 4B can not start until March 28, 2022.

Stage 4B can be started before stage 4A.

Stage 5A or 5B cannot be started until stage 4B is completed.

Stage 6A cannot be started until stage 5A and stage 5B are completed.

Stage 6B cannot be started until Ramp C is open.

Stage 6C cannot be started until adjacent project 9269-00-71, Marley Street (Millwood Court – Glendale Avenue is complete which is anticipated being October 1, 2022.

Stage 7B cannot start until September 7, 2021

Northern Long-eared Bat *(Myotis septentrionalis)*

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

In accordance to the final 4(d) rule issued for the NLEB, the department has determined that the proposed activity may affect, but will not result in prohibited take of the NLEB. The activity involves tree removal, but will not occur within 0.25 miles of a known hibernacula, nor will the activity remove a known maternity roost tree or any other tree within 150 feet of a known maternity roost tree.

If additional trees need to be removed, no Clearing shall occur without prior approval from the engineer, following coordination with the WisDOT REC. Additional tree removal beyond the area originally specified will require consultation with the United States Fish and Wildlife Service (USFWS) and may require a bat presence/absence survey. Notify the engineer if additional Clearing cannot be avoided to begin coordination with the WisDOT REC. The WisDOT REC will initiate consultation with the USFWS and determine if a survey is necessary.

Submit a schedule and description of Clearing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

Interim Liquidated Damages

At the beginning of Stage 2A operations, start daily lane closures to Milltown Road/Connection Road for a maximum of 21 calendar days. At completion of 21 maximum days the following work must be completed on Connection Road from Station 705+25 to Station 709+55: Excavation common, base aggregate dense, and HMA pavement.

If the contractor fails to complete the work necessary to reopen Connection Road to traffic without lane closures within 21 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 21 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of Stage 2C operations, close Milltown Road to through traffic for a maximum of 14 calendar days. Do not reopen until completing the following work: Excavation common, borrow, storm sewer, base aggregate dense, HMA pavement, salvaged topsoil, landscaping, erosion control, signing, pavement marking, and incidentals.

If the contractor fails to complete the work necessary to reopen Milltown Road to traffic within 14 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar

day the contract work remains incomplete beyond 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

0009 (20151210)

Complete construction operations on Stage 2A, 2B, and 2C to the stage necessary to open it to through traffic prior to 12:01 AM November 1, 2021. Do not open until completing the following work: Excavation common, borrow, storm sewer, base aggregate dense, HMA pavement, salvaged topsoil, landscaping, erosion control, signing, pavement marking, and incidentals.

If the contractor fails to complete the work necessary to complete work in Stage 2A, 2B, and 2C to through traffic prior to 12:01 AM November 1, 2021, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the roadways remain closed and the detention ponds are not completed after 12:01 AM, November 1, 2021. An entire calendar day will be charged for any period of time within a calendar day that the roadways remain closed and the detention ponds are not completed beyond 12:01 AM.

Complete construction operations on Stage 3A prior to 12:01 AM November 20, 2021.

If the contractor fails to complete the work necessary to complete Stage 3A prior to 12:01 AM November 20, 2021, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains not completed after 12:01 AM, November 20, 2021. An entire calendar day will be charged for any period of time within a calendar day that the work remains not completed beyond 12:01 AM.

Complete construction operations on Stage 4A to the stage necessary to open WIS 29/32 shoulders to traffic prior to 12:01 AM April 16, 2022. Do not reopen until completing the following work: Excavation common, steel thrie beam bullnose terminal, steel thrie beam, salvaged topsoil, landscaping, erosion control, and incidentals.

If the contractor fails to complete the work necessary to reopen Stage 4A to through traffic prior to 12:01 AM April 16, 2022, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, April 16, 2022. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of Stage 4B operations, close Triangle Drive from CTH U to 700 feet west of North Overland Road to through traffic for a maximum of 90 calendar days. Do not reopen until completing the following work: Excavation common, borrow, storm sewer, base aggregate dense, HMA pavement, salvaged topsoil, landscaping, erosion control, signing, pavement marking, and incidentals.

If the contractor fails to complete the work necessary to reopen Triangle Drive from CTH U to 700 feet west of North Overland Road to traffic within 90 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 90 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of Stage 5B operations, close Triangle Drive/WIS 29/32 Intersection to through traffic for a maximum of 14 calendar days to construct Ramp B.

If the contractor fails to complete the work necessary to open Ramp B to traffic within 14 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the

contract work remains incomplete beyond 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Complete construction operations on Stage 5A and 5B to the stage necessary to open CTH VV, Marley Street, Ramp A, B, and D to through traffic prior to 12:01 AM August 13, 2022. Do not open until completing the following work: Excavation common, borrow, storm sewer, base aggregate dense, HMA pavement, salvaged topsoil, landscaping, erosion control, signing, pavement marking, and incidentals.

If the contractor fails to complete the work necessary to open CTH VV, Marley Street, Ramp A, B, and D to through traffic prior to 12:01 AM August 13, 2022, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, August 13, 2022. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of Stage 6A operations, close temporary roadway connecting WIS 29/32 to Connection Road to through traffic for a maximum of 14 calendar days to construct Ramp C.

If the contractor fails to complete the work necessary to open Ramp C to traffic within 14 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Complete construction operations on Stage 7A and 7B by 12:01 AM November 20, 2021.

If the contractor fails to complete the work necessary to complete Stage 7A and 7B prior to 12:01 AM November 20, 2021, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the stages remains uncompleted after 12:01 AM, November 20, 2021. An entire calendar day will be charged for any period of time within a calendar day that the stages remains uncomplete beyond 12:01 AM.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to standard spec 108.11.

5. Construction Staging.

A general description of the construction staging plan as follows:

Stage 1

Begin construction of the following:

- Soil mitigation, borrow, and salvaged topsoil for overpass structure and associated ramps to limits shown in staging plans.
- Evergreen Avenue
- CTH TS
- Connection Road
- Evergreen Avenue Detention Pond
- CTH VV Detention Pond
- CTH TS Detention Pond

Storm sewer, base aggregate, and pavement is not allowed for CTH VV, Marley Street south of Evergreen roundabout, or ramps.

Stage 2A

Begin construction of the following:

- Marley Street/Evergreen Avenue roundabout
- Marley Street from Evergreen Avenue roundabout north

Continue construction of the following:

- Soil mitigation, borrow, and salvaged topsoil for overpass structure and associated ramps to limits shown in staging plans.
- CTH TS
- Evergreen Avenue
- Evergreen Avenue Detention Pond
- CTH VV Detention Pond
- CTH TS Detention Pond

Complete the following construction:

- Connection Road

Storm sewer, base aggregate, and pavement is not allowed for CTH VV, Marley Street south of Evergreen roundabout, or ramps.

Stage 2B

Continue construction of the following:

- Soil mitigation, borrow, and salvaged topsoil for overpass structure and associated ramps to limits shown in staging plans.
- CTH TS
- Evergreen Avenue
- Evergreen Avenue Detention Pond
- CTH VV Detention Pond
- CTH TS Detention Pond

Complete the following construction:

- Evergreen Avenue from Marley Street roundabout to Connection Road.
- Marley Street/Evergreen Avenue roundabout
- Marley Street from Evergreen Avenue roundabout north

Storm sewer, base aggregate, and pavement is not allowed for CTH VV, Marley Street south of Evergreen roundabout, or ramps.

Stage 2C

Continue construction of the following:

- Soil mitigation, borrow, and salvaged topsoil for overpass structure and associated ramps to limits shown in staging plans.
- CTH TS

Complete the following construction:

- Evergreen Avenue from Connection Road to Milltown Road
- Evergreen Avenue Detention Pond
- CTH VV Detention Pond

- CTH TS Detention Pond
- CTH TS Detention Pond

Storm sewer, base aggregate, and pavement is not allowed for CTH VV, Marley Street south of Evergreen roundabout, or ramps.

Stage 3A

Begin construction of the following:

- Structure B-05-416

Complete construction of the following:

- Soil mitigation, borrow, and salvaged topsoil for overpass structure and associated ramps to limits shown in staging plans.

Stage 3B

Continue construction of the following:

- Structure B-05-416

Stage 4A

Begin construction of the following:

- Remaining work on fill areas constructed in 2021 for overpass structure and associated ramps including storm sewer, base aggregate, and pavement.

Continue construction of the following:

- Structure B-05-416

Complete construction of the following:

- Median around structure pier and structure slope paving/shoulder work.

Stage 4B

Continue construction of the following:

- Remaining work on fill areas constructed in 2021 for overpass structure and associated ramps including storm sewer, base aggregate, and pavement.
- Structure B-05-416

Complete construction of the following:

- CTH VV from west project limits to CTH VV/CTH TS roundabout
- CTH VV/CTH TS roundabout
- CTH TS

Stage 5A

Begin construction of the following:

- Ramp A and D match into WIS 29/32

Continue construction of the following:

- Remaining work on CTH VV and Marley including storm sewer, base aggregate, and pavement
- Structure B-05-416

Stage 5B

Complete construction of the following:

- Remaining work on CTH VV and Marley including storm sewer, base aggregate, and pavement
- Structure B-05-416
- Ramp A, B, and D.
- Triangle Drive cul de sac
- Removal of existing CTH VV/Triangle Drive

Stage 6A

Begin construction of the following:

- Old 29 Road

Complete construction of the following:

- Ramp C
- Removal of temporary roadway connecting WIS 29/32 to Connection Road.

Stage 6B

Begin construction of the following:

- Removal of intersection restrictions at CTH VV
- Removal of east RCUT
- Removal of existing CTH U intersection restrictions
- Removal of existing CTH U south of WIS 29/32

Continue construction of the following:

- Old 29 Road
- Removal of existing Old 29 Road

Stage 6C

Complete construction of the following:

- Old 29 Road
- Removal of existing Old 29 Road
- Removal of existing CTH U intersection restrictions
- Removal of existing CTH U south of WIS 29/32
- Obliteration of existing CTH U north of WIS 29/32 to Glendale Avenue
- Removal of intersection restrictions at CTH VV
- Removal of east RCUT

Stage 7A

Begin construction of the following

- Broadband fiber optic cable Station 0+00 – Station 331+18 and Station 367+00 – Station 437+00

Stage 7B

Complete construction of the following:

- Broadband fiber optic cable Station 0+00 – Station 331+18 and Station 367+00 – Station 437+00
- Broadband fiber optic cable Station 331+18 – Station 437+00

6. Traffic – Project 9200-10-71.

Complete the construction sequence and the associated traffic control and detours as detailed on the plans and as follows:

Expressway / Freeway Traffic Control Meeting

The contractor shall conduct a traffic control meeting before:

- Initial traffic control set up.
- Intermediate traffic switches.
- Reopening of the highway to traffic.

Notify the Northeast Region Traffic Work Zone Engineer at 920-366-8033 (secondary contact number is 920-360-3107) 7-business days before setting up the meeting.

ner-643-015 (20180529)

Detours

Detour traffic for WIS 29/32 West RCUT and CTH VV closures as shown on the plans. Install required traffic control and detour signs as shown on the plans.

WIS 29 Mainline

Lane closures on WIS 29 within the project limits are permitted in non-peak hours as noted below. WIS 29/32 is to remain open to through traffic at all times during peak hours.

Peak Hours

- Westbound WIS 29/32
    - 2:00 PM – 6:00 PM Monday – Wednesday
    - 1:00 PM – 6:00 PM Thursday
    - 10:00 AM – 7:00 PM Friday
    - 10:00 AM – 2:00 PM Saturday
- Eastbound WIS 29/32
    - 6:00 AM – 9:00 AM Monday – Wednesday
    - 3:00 PM – 5:00 PM Monday – Wednesday
    - 6:00 AM – 9:00 AM Thursday
    - 3:00 PM – 6:00 PM Thursday
    - 6:00 AM – 6:00 PM Friday
    - 11:00 AM – 5:00 PM Sunday

Off-Peak Hours

All other times not listed above

Rolling Closures

For setting the girders of Structure B-5-402, WIS 29/32 may be closed for periods not to exceed 20 minutes, between the hours of 8:00 PM to the following morning at 5:00 AM. Allow all vehicle backups to clear the project area prior to setting up the next road closure during the above timeframe. Coordinate with the engineer at least two weeks prior to a planned closure and confirm the closure with the engineer 72 hours prior to the closure.

Temporary Regulatory Speed Limit Reduction

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

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

A reduction of the posted regulatory speed limit from 65 mph to 55 mph is required when any of the following conditions are created within the project limits:

- Lane(s) closed
- Workers are present within 12 feet of the open lane.

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 the original posted speed limit. 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: 920-366-4747 (secondary contact number is 920-366-8033). 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 finalize 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).

Temporary Work Zone Clear Zone Working Restrictions.

The temporary work zone clear zone for this project is 18-feet from the edge of traveled way. If auxiliary lanes are present, clear zone is from the outside edge of the auxiliary lane.

Do not perform work in the median at any time unless protected by concrete barrier temporary precast in both directions except as allowed during lane closure periods.

Do not perform work within the clear zone unless protected by concrete barrier temporary precast or a lane closure during the allowed closure periods.

Park equipment and store materials, including stockpiles, a minimum of 30-feet from the edge of the traveled way. Equipment may be parked and material stored in the median if it meets the minimum distance requirement from both traveled ways or if it is protected by concrete barrier temporary precast.

If unsure whether an individual work operation will meet the safety requirements for working within the clear zone, review the proposed work operation with the engineer before proceeding with the work.

Replace standard specification 305.3.3.3(2) with the following:

If the roadway remains open to through traffic during construction and a 2-inch or more drop-off occurs within the clear zone, eliminate the drop-off prior to completing that day's work. Unless the special provisions specify otherwise, provide aggregate shoulder material compacted to a temporary 3:1 or flatter cross slope from the surface of the pavement edge.

ner-104-001 (20181017)

Staged Traffic Control

A general description of the construction staging traffic as follows:

Stage 1

All roadways are to remain open.

Shoulder closures are allowed along CTH VV and Marley.

Lane closures are not allowed along WIS 29.

West RCUT must remain open. Fill material for south abutment to be stopped at edge of roadway.

Stage 2A

Close Marley Street from Milltown Road to Millwood Court to all traffic. There will not be a posted detour.

Close Marley Street from Millwood Court to north project limits. Maintain local access at all times. There will not be a posted detour.

Complete Connection Road under lane closures with flagging.

Close Milltown Road from the east to through traffic. Maintain local access at all times. There will not be a posted detour.

Shoulder closures are allowed along CTH VV.

Lane closures are not allowed along WIS 29.

West RCUT must remain open. Fill material for south abutment to be stopped at edge of roadway.

Stage 2B

Continue closure of Marley Street from Milltown Road to Millwood Court to all traffic. There will not be a posted detour.

Continue closure of Marley Street from Millwood Court to north project limits. Maintain local access at all times. There will not be a posted detour.

Shoulder closures are allowed along CTH VV.

Lane closures are not allowed along WIS 29.

West RCUT must remain open. Fill material for south abutment to be stopped at edge of roadway.

Stage 2C

Close Milltown Road to complete the connection of Evergreen Avenue. Maintain local access at all times. There will not be a posted detour.

Shoulder closures are allowed along CTH VV.

Lane closures are not allowed along WIS 29.

West RCUT must remain open. Fill material for south abutment to be stopped at edge of roadway.

Stage 3A

Maintain access from WIS 29/32 to Connection Road via existing Milltown Road/WIS 29/32 connection.

Shoulder closures are allowed along CTH VV.

Close west RCUT. Sign detour for eastbound WIS 29/southbound WIS 29 traffic.

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Stage 3B

Maintain access from WIS 29/32 to Connection Road via existing Milltown Road/WIS 29/32 connection.

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Employ Rolling Closures along WIS 29/32, as described herein, when placing girders and formwork over the highway.

Stage 4A

Maintain access from WIS 29/32 to Connection Road via existing Milltown Road/WIS 29/32 connection.

Close CTH VV from west project limit to North Overland Road. Maintain local access at all times. Sign detour for CTH VV traffic.

Maintain Triangle Drive traffic from North Overland Road to WIS 29/32.

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Stage 4B

Continue closure of CTH VV from west project limit to North Overland Road.

Maintain Triangle Drive traffic from North Overland Road to WIS 29/32.

Stage 5A

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Stage 5B

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Close Triangle Drive/WIS 29/32 intersection. There will not be a posted detour.

Close Triangle Drive at North Overland Road intersection. Maintain local access at all times. There will not be a posted detour.

Stage 6A

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Close Old 29 Road within project area. Maintain local access at all times. There will not be a posted detour.

Stage 6B

Continue closure of Old 29 Road within project area. Maintain local access at all times. There will not be a posted detour.

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Close CTH U from south project limits to WIS 29/32. Maintain local access at all times. There will not be a posted detour.

Stage 6C

Continue closure of Old 29 Road within project area. Maintain local access at all times. There will not be a posted detour.

Maintain two lanes of traffic in each direction along WIS 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along WIS 29/32 during off-peak and nighttime hours. Do not close lanes if work is not being performed on the shoulders.

Close CTH U from WIS 29/32 to Glendale Avenue. Maintain local access at all times. There will not be a posted detour.

Stage 7A and 7B

Lane closures with flagging is allowed.

Shoulder closures are allowed.

Maintain local access at all times. There will not be a posted detour route.

Opening Roundabouts

Do not open a roundabout to through traffic until the roundabout is completed including lighting, signing, pavement marking and all finishing items.

Portable Changeable Message Signs - Message Prior Approval

After coordinating with department construction field staff, notify the Northeast Region Traffic Section at 920-366-8033 (secondary contact number is 920-360-3107) 3 business days before deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

PCMS boards must be deployed 7 days before the closure of roadways.

ner-643-035 (20171213)

Protection of Bridge Pier Columns

Bridge pier columns are to remain protected at all times throughout construction. Construction of the new bridge pier shall be done concurrently with the placement of the temporary concrete barrier so that the bridge pier columns remain protected at all times. Placement of new beamguard shall be completed to a point to provide protection for the pier columns before the temporary concrete barrier is removed.

Private Driveways

Maintain access to all business driveways and private residence driveways on a minimum of base aggregate dense surface at all times except as follows. Close driveways for a maximum of 7 calendar days due to roadway curb and gutter. Close driveways for a maximum of 2 calendar days for grading and placement of base aggregate and paving for each driveway. Notify each business and/or each residence on the property a minimum of 7 days prior to any driveway closures.

Snowplowing

The staging shown in the plans, and described herein, accounts for segments of local roads to be closed to through traffic during winter months. Brown County Highway Department, Village of Howard, Village of Hobart will perform snow removal operations along segments of their respective roads during construction. Provide for snow removal in all areas closed to through traffic as required to facilitate safe construction activities and to provide access to properties within the work area. Maintain all traffic control devices and adjust as needed. Excess snow may not be piled up within the clear zone of the adjacent roadway.

Winter Maintenance

During winter months park equipment at a safe distance (at a minimum of 30 feet from the edge of the travel lane, equipment may be parked in the median if it meets the minimum 30 feet from both traveled ways or if it is protected by concrete barrier) from the active travel lanes to prevent damage to equipment from snow plowing operations. Do not store equipment or materials within the work zone which may interfere with horizontal sight distances along STH 29/32.

Snow may be plowed from the traveled roadway into the work site by the maintaining authority. The contractor is responsible for any snow removal from the work site that may be required to continue work operations.

Plow any areas which may need to be cleared of snow or ice to accommodate changes in traffic control and to facilitate construction staging during winter months. Costs associated with such work is considered incidental to the contract. Brown County or the local maintaining authority will not provide snow plowing operations in areas outside of the active traveled lanes.

Re-install or adjust any traffic control devices that may be damaged, removed, or shifted as part of normal winter maintenance operations. Clean and maintain traffic control devices as necessary or as directed by the engineer.

Snow plowing, ice removal including any road salt which may be required, maintenance and cleaning of traffic control devices, and other winter maintenance activities are incidental the item traffic control project under this contract.

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 less than 16 feet)	**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 feet or greater)	**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.

7. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying WIS 29/32 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 28, 2021 to 6:00 AM Tuesday, June 1, 2021 for Memorial Day;
- From noon Friday, July 2, 2021 to 6:00 AM Tuesday, July 6, 2021 for Fourth of July;
- From noon Friday, September 3, 2021 to 6:00 AM Tuesday, September 7, 2021 for Labor Day;
- From noon Friday, November 19, 2021 to 6:00 AM Monday, November 22, 2021 for Opening Deer Gun Hunting;
- From noon Wednesday, November 24, 2021 to 6:00 AM Monday, November 29, 2021 for Thanksgiving;
- Lambeau Field event for any expected attendance over 30,000 people, from five hours prior to event until 8 hours after the start of the event.
- From noon Friday, December 24, 2021 to 6:00 AM Monday December 27, 2021 for Christmas;
- From noon Friday, December 31, 2021 to 6:00 AM Monday January 3, 2022 for New Years;
- From noon Friday, May 27, 2022 to 6:00 AM Tuesday, May 31, 2022 for Memorial Day;
- From noon Friday, July 1, 2022 to 6:00 AM Tuesday, July 5, 2022 for Fourth of July;
- From noon Friday, September 2, 2022 to 6:00 AM Tuesday, September 6, 2022 for Labor Day.

8. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.

stp-107-065 (20080501)

Utility Coordination is still in process. Utility work plans are due on March 20, 2020.

9. Work by Others.

At the intersection of STH 29 (EB & WB) & CTH VV the Wisconsin Department of Transportation Northeast Region Electrical Unit will perform the following work:

- Provide and install the lighting control cabinets at new ramp terminals
- Terminate all electrical wire in the existing lighting control cabinets
- Remove J-Turn lighting cabinet
- Coordinate with WPS to disconnect service at J-Turn

10. Other Contracts.

The following projects will be under construction concurrently with the work under this contract. Coordinate trucking activities, detours, work zone traffic control, roadway and lane closures, and other work items as required with other contracts.

Marley Street

Project 9269-00-71, V Howard, Marley Street (Millwood Ct – CTH C) Work under this contract is anticipated to start in May of 2022 and be completed by October 1, 2022.

Inquire with the Village of Howard, Village of Hobart, Town of Pittsfield, Brown County, Outagamie County, and the department for any additional projects anticipated to be under construction near the project area or along proposed hauls routes.

11. Hauling Restrictions.

Do not haul materials of any kind on any local roads without approval of the local maintaining authority and the department. Any proposals to haul on local roads will be by a written agreement with the respective maintaining authority. Submit the agreement to the department from the maintaining authority prior to hauling. Contact the respective maintaining authority prior to bidding for approval of haul routes.

12. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Matt Ternes at 920-366-3028.

stp-107-054 (20080901)

13. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Matt Ternes at 920-366-3028. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

14. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels before being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all

equipment that has come into contact with potentially infested waters. Guidelines from the Wisconsin Department of Natural Resources for disinfection are available at:

http://dnr.wi.gov/topic/invasives/disinfection.html

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
    4.1. Washing with ~212 F water (steam clean), or
    4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

stp-107-055 (20130615)

15. Environmental Protection, Phragmites

Phragmites, an invasive species plant, is known to exist within the project limits and in areas that ground disturbance or excavation work is shown in the plans. All soils containing plant or root fragments that will be excavated or salvaged as part of the work within the contract shall be salvaged and used as topsoil within the immediate area of the work or deposited at an engineer approved waste site within the existing (Location) right of way within the project limits. All waste sites are subject to review and approval by the department and shall be suitable for the waste of material containing Phragmites. Waste material shall be placed in upland locations in the general area where the plan currently exists. For all equipment that comes into contact with Phragmites infested areas, use the following guidelines for inspection and cleaning of equipment before leaving the project site.

Known Phragmites locations include:

(Location)
(Location)
(Location)

Locations to be verified by engineer in the field.

Ensure that all equipment that has been in contact with Phragmites infested areas or potentially infested areas has been decontaminated. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources) for disinfection:

Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possible contain exotic invasive species;

Clean all equipment with hot water of 105°F to 110°F for a period of 30 minutes or hot water of 140°F for a period of five minutes. After cleaning, dry all equipment in a sunny location for at least three days.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

ner-107-060 (20171213)

16. Environmental Protection.

Supplement standard spec 107.18 as follows:

Wetlands

Do not disturb nor store materials or topsoil within the nearby wetlands as shown in the plan unless areas are designated to be filled or impacted as permitted in the project's U.S. Army Corps of Engineers Section 404 Permit. The work area shall be separated from the wetlands by silt fence, as shown on the plans, to avoid siltation and inadvertent fill into the wetland areas. Place stockpiled spoil material on an upland site an adequate distance from wetland and any open water areas, as approved by the engineer.

Dewatering

Supplement standard spec 107.18 as follows:

If dewatering is required, treat the water to remove suspended sediments by filtration, settlement or other appropriate best management practice prior to discharge. The means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity prior to treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Construction Technical Standards, Dewatering Code #1061, "Dewatering". This document can be found at the WisDNR website: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items the work is associated.

17. Environmental Protection, Dust Control

Supplement standard spec 107.18 as follows:

Control dust during construction. Use of bid items of Dust Control Surface Treatment and Water for minimizing dust levels.

In addition, guidance on dust control can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Construction Technical Standards, Dust Control On Construction Sites #1068. This document can be found at the WisDNR website: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

18. Erosion Control.

Perform the work under this item in accordance to the requirements of standard spec 107.20 and supplemented as follows:

Coordinate a pre-erosion control implementation plan (ECIP) meeting with representatives of WisDOT and DNR. Schedule this meeting as soon as the project is awarded and prior to submitting the ECIP. Discuss matters related to schedule of operations, construction staging, protection of resources, and other matters related to the project's erosion control measures. In the ECIP, stage the project in a manner to minimize the area of exposed area during grading operations.

Take adequate precautions to install and maintain necessary erosion and sediment control during grading and construction operations at curbs and gutters, and at other locations as determined by the engineer. For newly constructed inlets, install inlet protection measures on the same day that the inlet is completed.

19. Erosion Control, Winterization.

Submit an erosion control implementation plan (ECIP) to the WISDOT Northeast Region Environmental Section and the WDNR at least 14 days prior to the pre-construction meeting. In addition to the normal permanent erosion control items, the ECIP shall contain a detailed staged plan for placing temporary and permanent landscaping items to provide for winterization of the project extending into 2022 construction. Immediately after the grading operations, complete permanent landscaping unless the engineer authorizes temporary erosion control measures. Seed and/or temporarily seed exposed and topsoiled areas not to be graded until the spring of 2022 prior to October 15, 2021. In all areas where seeding occurs after October 15, 2021, apply Soil Stabilizer, Type B, and all other erosion control measures as determined necessary by the engineer.

Check silt fence and inlet protection after each snowfall. Fix any damage to erosion control measures due to snowfall. Inlet protection and silt fences shall at a minimum be inspected weekly and within 24 hours after every precipitation event that produces 0.5 inches of rain or more during a 24 hour period. Damaged or decomposed fences, undercutting, or flow channels around the end of barriers to be repaired or corrected due to winter precipitation.

During the spring weekly check all erosion control measures. Spring conditions bring fluctuating temperatures which can result in heavy snow melt and ice buildups. In addition to weekly checks, if it is anticipated/forecast that spring rains are predicated, check all erosion control measures within 24 hours before and within 24 hours after the weather event. Spring rains with snow still covering the ground can cause major flood problems and failures to erosion control measures.

20. Endangered Resources.

There are State Threatened wood turtle within the project area. Provide 10-day business notice to the department (Mike Helmrick, WisDOT, (920) 492-7738) prior to start of any construction activity. The department will field review and remove any turtle, if found within the project area. The department will monitor and remove turtle if necessary throughout the construction period.

The State Threatened Wood Turtle (Glyptemys insculpta) is a known inhabitant to the waterways and riparian corridors throughout the project area. Wood turtles may be present at the site, or near the site, therefore; The project construction must protect the perimeter of the area to be disturbed with properly trenched-in silt fence prior to March 15th to discourage the turtles from entering the area. The silt fence installation must meet both the department's specifications and the approval of the Department of Natural Resources.

If the project construction area cannot be silt fenced prior to March 15, the trenched-in silt fence must be installed prior to construction activities and the area behind the silt fence must be surveyed to ensure no turtles have ventured into the construction site. Contact Mike Helmrick for additional measures if any Wood Turtles are in the construction limits. Any turtles that are found in the project site, during construction season, must be removed prior to any site disturbance and shall continue throughout the construction period to ensure no turtles are harmed during construction.

21. Native American Hiring.

Pre-Bid

Before bid submittal, contact the Oneida Nation to provide information on hiring procedures and future employment opportunities, and gather information on the tribal work force.

Oneida Nation tribal labor office contact information:

James Petitjean, Community Development Area Manager
N7332 Water Circle Place, PO Box 365, Oneida, WI 54155
Office: (920) 869-4574
Cell: (920) 606-8909
Email: jpetitje@oneidanation.org

Maintain documentation of all efforts made to communicate with James Petitjean. Pre-bid, submit documentation in conjunction with the Proposal Request Form to the Bureau of Project Development at:

DOTDTSDHighwayConstructionContractors@dot.wi.gov

The Eligible Bidders list will not be updated until this documentation is received. Include the following information in documentation:

- Proposal number/route number/termini/county
- Persons contacted
- Method of communication (phone, email, written, in person)
- Information exchanged (hiring procedures, available positions, referrals received, employee performance, etc.)

After Execution

At a minimum of three days before the tribal coordination meeting, contact the Oneida Nation to provide the following information regarding available employment opportunities for prime and subcontractors:

- Job classification/trade
- Job qualifications and required skills
- Employment period
- Wage
- Copy of job application

After receiving employment opportunities, the Oneida Nation will within two business days provide employment referrals or provide other recruitment sources to obtain qualified referrals.

Document all efforts made to communicate job opportunities and the results of hiring activities throughout the life of the contract. At any time during the life of the contract, provide Oneida Nation communication documentation within five business days of request by the department.

Tribal Coordination Meeting

Between execution of contract and the project preconstruction conference, setup and coordinate a meeting with the Tribal officials and leaders at Oneida Nation and notify and invite the WisDOT StatewideTribal Liaison, 4822 Madison Yards Way, 4th Floor South, Madison, WI 53705, sandy.stankevich@dot.wi.gov, (715) 365-5784. The prime contractor and all subcontractors shall attend this meeting. Discuss available employment opportunities and other tribal areas of interest such as scope of work, Tribal regulations, borrow sites, waste sites, and available aggregate.

Project Completion

As a part of the document submittals required under standard spec 109.7, submit documentation summarizing communications regarding job opportunities throughout the life of the contract. Provide final report to the tribe and Statewide Tribal Affairs compiling the results of hiring activities for the prime contractor as well as for subcontractors at all tiers.

stp-107-200 (20191121)

22. Public Convenience and Safety.

Revise subsection 107.8(6) of the standard specifications as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment.

Delete subsection 107.8 (4) of the standard specifications and replace with the following:

Notify the following organizations and departments at least 72 hours before road closures or detours are put into effect:

Brown County Public Safety Communications on duty supervisor, (920) 391-7440

Wisconsin State Patrol, (920) 929-3700

Brown County Sheriff's Department, (920) 448-4200,

Green Bay Fire Department, (920) 448-3280,

Green Bay Police Department, (920) 448-3200,

Green Bay Area Public School District, (920) 448-2000,

Village of Hobart Fire Department, (920) 655-3719

Village of Hobart Police Department, (920) 869-3800

Village of Howard Fire Department, (920) 434-4666,

Village of Howard Police Department, (920) 434-4640,

Howard-Suamico School District, (920) 662-7878,

Oneida Tribal Police Department, (920) 869-2239,

Oneida Tribal School District, (920) 869-4600,

Pulaski School District, (920) 822-6000,

Pulaski Tri-County Fire Department, (920) 822-5392,

The Brown County Public Safety Communications 911 dispatches all area police, fire and ambulance services, and will relay any notification given by the contractor in the event of an emergency.

23. Coordination with Businesses and Residents.

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week before the start of work under this contract and hold one meeting per month thereafter. The contractor shall arrange for a suitable location for meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meetings. The contractor shall schedule meetings with at least 2 weeks prior notice to the engineer to allow for these notifications.

stp-108-060 (20141107)

24. 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.

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:

- $375 per lane, per direction of travel, per hour broken into 15 minute increments

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.

stp-108-065 (20161130)

25. Notice to Contractor, Geodetic Survey Control Station Green Bay GPS

Preserving and Maintaining Geodetic Survey Control Station

GREEN BAY GPS [name] (PN1345) [federal point identifier] is a geodetic survey control station that is incorporated in the Wisconsin Geodetic Survey Control Network with a data sheet published in the National Spatial Reference System (NSRS) database managed by NOAA's National Geodetic Survey (NGS).

The Wisconsin Department of Transportation (WisDOT) Facilities Development Manual (FDM) 9-5-1 defines a geodetic survey control station as the following:

"A survey monument with either a precise latitude and longitude used for horizontal control, or a precise elevation used for vertical control, or both that has been determined by the most rigorous of surveying methods to meet the specifications set forth by NGS."

GREEN BAY GPS is a High Accuracy Reference Network (HARN) station consisting of a primary GPS base station with a high order leveled elevation.

As noted in WisDOT Construction and Materials Manual (CMM) 7-85.2.1, the estimated cost to replace GREEN BAY GPS is approximately $25,000.

The approximate location of GREEN BAY GPS is STA 403+50, 70' RT.

WisDOT Central Office Geodetic Surveys Unit staff shall install 24-inch diameter precast concrete risers and cover over GREEN BAY GPS prior to December 31, 2019.

Ensure that the precast concrete risers and cover over GREEN BAY GPS are not damaged, disturbed, bumped or moved throughout the duration of the project.

Notify Jacob Rockweiler, P.E., WisDOT Wisconsin Height Modernization Program Manager whose phone number is (608) 243-5992 and email is jacob.rockweiler@dot.wi.gov if the concrete risers or cover over GREEN BAY GPS are damaged, disturbed, bumped or moved during the project.

For additional information regarding geodetic survey control stations, please refer WisDOT CMM 7-85:

https://wisconsindot.gov/rdwy/cmm/cm-07-85.pdf

26. Notice to Contractor, Geodetic Survey Control Station Green Bay GPS AZ MK.

Preserving and Maintaining Geodetic Survey Control Station

GREEN BAY GPS AZ MK [name] (DL2579) [federal point identifier] is a geodetic survey control station that is incorporated in the Wisconsin Geodetic Survey Control Network with a data sheet published in the National Spatial Reference System (NSRS) database managed by NOAA's National Geodetic Survey (NGS).

The Wisconsin Department of Transportation (WisDOT) Facilities Development Manual (FDM) 9-5-1 defines a geodetic survey control station as the following:

"A survey monument with either a precise latitude and longitude used for horizontal control, or a precise elevation used for vertical control, or both that has been determined by the most rigorous of surveying methods to meet the specifications set forth by NGS."

GREEN BAY GPS AZ MK is a bench mark with a high order leveled elevation.

The approximate location of GREEN BAY GPS AZ MK is STA 516+40 'RD', 50' RT outside of the limits of proposed work.

The contractor shall install a safety fence around the three white witness posts surrounding GREEN BAY GPS AZ MK prior to substantial construction activities beginning on site as directed by the engineer.

Keep construction equipment at least five feet away from GREEN BAY GPS AZ MK.

Ensure that GREEN BAY GPS AZ MK is not damaged, disturbed, bumped or moved throughout the duration of the project.

The contractor shall remove the safety fence around the three white witness posts surrounding GREEN BAY GPS AZ MK when the station is no longer in danger of being damaged, disturbed, bumped or moved by construction activities as directed by the engineer.

Notify Jacob Rockweiler, P.E., WisDOT Wisconsin Height Modernization Program Manager whose phone number is (608) 243-5992 and email is jacob.rockweiler@dot.wi.gov if GREEN BAY GPS AZ MK is damaged, disturbed, bumped or moved during the project.

For additional information regarding geodetic survey control stations, please refer WisDOT CMM 7-85:

https://wisconsindot.gov/rdwy/cmm/cm-07-85.pdf

27. Notice to Contractor – Geotechnical Investigation.

For a copy of geotechnical investigations within the project area contact WisDOT Project Manager, Matt Ternes at 920-366-3028.

28. Notice to Contractor – United States Postal Service.

The United States Postal Service (USPS) maintains deliveries within the project limits. The Green Bay and Oneida USPS offices are responsible for coordinating postal deliveries. Two weeks in advance of the project start and two weeks before staging changes notify them about changes in access.

Green Bay Post Office, 300 Packerland Dr, Green Bay, WI 54303 - 920-498-3892

Oneida Post Office, N7310 Red Willow Pkwy, Oneida, WI 54155 - 920-869-3710

29. Notice to Contractor – Garbage and Recycling Pickup.

Coordinate with the garbage haulers prior to starting construction to determine access to properties for garbage and recyclables pickups. Allow access to properties for collection or provide alternate access through coordination with the haulers. Contact two weeks prior to the start of construction.

- Village of Howard – Harters – Phone 888-804-8556
- Village of Hobart – Advanced Disposal – Phone 920-983-3341

30. Notice to Contractor – Material Storage.

Materials of any kind are to not be stored or stockpiled under American Transmission Company's (ATC) lines at any time.

31. Timely Decision Making Manual.

Use the Timely Decision Making Manual (TDM) on this contract. Coordinate with the department to modify the various published tools as necessary to meet the particular project needs and determine how to implement those tools under the contract. Ensure the full participation of the contractor and its principal subcontractors throughout the term of the contract.

Forms and associated guidance are published in the TDM available at the department's Highway Construction Contract Information (HCCI) web site at:

http://wisconsindot.gov/rdwy/admin/tdm.doc

stp-105-005 (20151210)

32. Removing Apron Endwalls, Item 204.9060.S.01

A Description

This special provision describes removing Apron Endwalls conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Apron Endwalls in each acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Apron Endwalls	Each

stp-204-025 (20150630)

33. Removing Underdrain Apron Endwalls, Item 204.9060.S.02

A Description

This special provision describes removing Underdrain Apron Endwalls conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Underdrain Apron Endwalls in each acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Underdrain Apron Endwalls	Each

stp-204-025 (20150630)

34. Abandoning Sewer, Item 204.0291.S.

A Description

This special provision describes abandoning existing sewer by filling it with cellular concrete as the plans show and conforming to standard spec 204 and standard spec 501as modified in this special provision.

B Materials

Provide cellular concrete meeting the following specifications: 1 part cement, 1 part fly ash, 8 parts sand, or an approved equal, and water. Provide cement meeting the requirements of standard spec 501.2.1 for Type 1 Portland Cement. Provide sand meeting the requirements of standard spec 501.2.5.3 Provide water meeting the requirements of standard spec 501.2.4.

C Construction

Fill the abandoned sewer pipe with cellular concrete as the engineer directs. In the event that the sewer cannot be completely filled from existing manholes, tap the sewer where necessary and fill from these locations.

D Measurement

The department will measure Abandoning Sewer in volume by the cubic yard as specified in standard spec 109.1.3.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.

stp-204-050 (20080902)

35. Select Borrow.

Conform to standard spec 208 as modified in this special provision.

Material

Furnish and use material that consists of granular material meeting the following requirements: No more than 25% P-200 of that portion of the #4 sieve.

stp-208-005 (20031103)

36. Backfill Coarse Aggregate Size No 1, Item 209.0300.S.01

A Description

This special provision describes furnishing and placing coarse aggregate backfill as the plans show.

B Materials

Provide clean concrete aggregate graded in accordance with the requirements as specified under standard spec 501.2.5.4.5. The soundness and wear requirements are deleted from this material.

C Construction

Construct the coarse aggregates in accordance with standard spec 209.3.

D Measurement

The department will measure Backfill Coarse Aggregate Size No 1 in volume by the cubic yard in the vehicle.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
209.0300.S01	Backfill Coarse Aggregate Size No. 1	CY

Payment is full compensation for furnishing and installing the aggregate.

stp-209-030 (20161130)

37. Concrete Pavement Joint Layout, Item 415.5110.S.

A Description

This special provision describes providing a concrete pavement or concrete base joint layout design for intersections and marking the location of joints in the field

B (Vacant)

C Construction

Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete to prevent uncontrolled cracking. Submit a joint layout design to the engineer at least 7 calendar days before paving each intersection. Do not lay out joints until the engineer has reviewed the joint layout design. Mark the location of concrete joints in the field. Follow the plan details for joints in concrete making adjustments as required to fit field conditions.

D Measurement

The department will measure Concrete Pavement Joint Layout as a single lump sum unit for all joint layout designs and marking 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
415.5110.S	Concrete Pavement Joint Layout	LS

Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

stp-415-020 (20170615)

38. Protection of Concrete.

Add to standard spec 415.3.14:

The contractor shall provide for a minimum of one concrete finisher to remain on the project site after final finishing of all concrete surfaces until the concrete has hardened sufficiently to resist surface scarring caused by footprints, handprints, or any other type of imprint, malicious or otherwise. The finisher shall actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above.

The cost for providing the finisher(s), the necessary equipment, and materials is incidental to the contract.

ner-415-015 (20180326)

39. QMP HMA Pavement Nuclear Density.

A Description

Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 except as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:

1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures.

http://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

http://www.atwoodsystems.com/

B Materials

B.1 Personnel

(1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 8-15.

B.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Conform to CMM 8-15.10.4 for test duration and gauge placement.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges according to CMM 8-15.2.

(2) Furnish nuclear gauges from the department's approved product list at

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

B.3.2 Comparison of Nuclear Gauges

B.3.2.1 Comparison of QC and QV Nuclear Gauges

(1) Compare QC and QV nuclear gauges according to CMM 8-15.7.

B.3.2.2 Comparison Monitoring

(1) Conduct reference site monitoring for both QC and QV gauges according to CMM 8-15.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.1.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.2.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay as specified in standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be as specified in standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge comparison according to B.3.2.1.

(2) The testers may use comparison monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-compared gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives as specified in standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) The department will administer density incentives as specified in standard spec 460.5.2.3.

stp-460-020 (20181119)

40. Bar Steel Reinforcement HS Stainless Structures, Item 505.0800.S.

A Description

This special provision describes furnishing and placing stainless steel reinforcing bars and associated stainless steel bar couplers.

Conform to standard spec 505 as modified in this special provision.

B Materials

B.1 General

Furnish stainless steel reinforcing bars conforming to ASTM A955 and to one of the following Unified Numbering System (UNS) designations: S31653, S31803, S32205, or S32304. Supply grade 60 bars, all of the same UNS designation. Conform to the chemical composition specified for the given UNS designation in ASTM A276 table 1.

Supply bars that are free of dirt, mill scale, oil, and debris by pickling to a bright or uniform light finish. The department may reject bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface.

Furnish chairs or continuous supports made of stainless steel or recycled plastic to support high-strength stainless bar steel reinforcement subject to the plastic chair restriction stated in standard spec 505.3.4(1).

Furnish couplers made from one of the UNS alloys allowed for bar steel.

Furnish tie wire made from one of the UNS alloys allowed for bar steel or from an engineer-approved plastic or nonmetallic material. Ensure that stainless steel tie wire is dead soft annealed.

B.2 Fabrication

Before fabrication, supply test results from an independent testing agency certifying that the reinforcement meets the requirements of Annex A1 of ASTM A955.

Bend bars conforming to standard spec 505.3.2 and according to ASTM A955. Bend and cut bars using equipment thoroughly cleaned or otherwise modified to prevent contamination from carbon steel or other contaminants. Use tools dedicated solely to working with stainless steel.

B.3 Control of Material

Identify reinforcement bars delivered to the project site with tags bearing the identification symbols used in the plans. Include the UNS designation, heat treat condition, heat number, grade corresponding to minimum yield strength level, and sufficient documentation to track each bar bundle to a mill test report.

Provide samples for department testing and acceptance according to CMM 8-50 Exhibit 1 requirements for concrete masonry reinforcement for uncoated bar steel.

Provide mill test reports for the project that do the following:

1. Verify that sampling and testing procedures and test results conform to ASTM A955, ASTM A276 table 1, and these contract requirements.
2. Include a chemical analysis with the UNS designation, heat lot identification, and the source of the metal.
3. Include tensile strength, yield strength, and elongation tests results conforming to ASTM A955 for each size furnished.
4. Certify that the bars have been pickled to a bright or uniform light finish.

C Construction

C.1 General

Ship, handle, store, and place the stainless steel reinforcing as follows:

1. Separate from regular reinforcement during shipping. Pad points of contact with steel chains or banding, or secure with non-metallic straps.
2. Store on wooden cribbing separated from regular reinforcement. Cover with tarpaulins if stored outside.
3. Handle with non-metallic slings.
4. Do not flame cut or weld. Protect from contamination when cutting, grinding, or welding other steel products above or near the stainless steel during construction.
5. Place on plastic or stainless steel bar chairs. If placing stainless steel chairs on steel beams, use chairs with plastic-coated feet.
6. Tie with stainless steel wire or an engineer-approved plastic or nonmetallic material.

Do not tie stainless steel reinforcing bars to, or allow contact with, uncoated reinforcing bars or galvanized steel. Maintain at least 1 inch clearance between stainless steel bars or dowels and uncoated or galvanized steel. Where 1 inch clearance is not possible, sleeve bars with a continuous polyethylene or

nylon tube at least 1/8 inch thick extending at least 1 inch in each direction and bind with nylon or polypropylene cable ties. Sleeves are not required between stainless steel bars and shear studs. Stainless steel bars can be in direct contact with undamaged epoxy-coated bars.

Cut flush with the top flange or remove uncoated fasteners, anchors, lifting loops, or other protrusions into a bridge deck before casting the deck on prestressed concrete beams.

C.2 Splices

Splice as the plans show. Provide stainless steel couplers conforming to the minimum capacity, certification, proof testing, and written approval requirements of standard spec 550.3.3.4. The contractor may substitute stainless steel couplers for lap slices the plans show if the engineer approves in writing.

If increasing or altering the number or type of bar splices the plans show, provide revised plan sheets to the engineer showing the reinforcement layout, type, length, and location of revised bar splices and revised bar lengths. Obtain engineer approval for the location of new lap splices or substitution of mechanical bar couplers before fabrication. Ensure that new lap splices are at least as long as those the plans show.

D Measurement

The department will measure Bar Steel Reinforcement HS Stainless Structures by the pound acceptably completed, computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB

Payment for Bar Steel Reinforcement HS Stainless Structures is full compensation for furnishing and placing stainless steel reinforcing bars, including supports. Where the plans specify bar couplers, the department will pay for the length of bars as detailed with no deduction or increase for installation of the coupler.

stp-505-005 (20190618)

41. Concrete Staining Multi-Color B-5-416, Item 517.1015.S.

A Description

This special provision describes providing a multi-color concrete stain on the exposed concrete surfaces of the structure as the plan details show.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products
	Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied according to manufacturer's recommendations:

Acrylic Bonding Admixture:	TK-225 by TK Products
	Achro 60 by Thoro Products
	Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Sheen Concrete Surfacer, Smooth by TK Products

Tri-Sheen Acrylic by TK Products

TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products

Safe-Cure & Seal EPX by Chem Masters

H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials according to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish as specified in standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45º F or higher, or as given by the manufacturer.

The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Before applying stain to the structure, apply the stain to sample panels measuring a minimum of 48 inches x 48 inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining. Submit color samples to the department before staining the sample panels. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between stones produced by the form liner. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces according to the plan.

D Measurement

The department will measure Concrete Staining Multi-Color (Structure) in area by the square foot of surface, acceptably prepared and stained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S	Concrete Staining Multi-Color B-5-416	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.

stp-517-115 (20140630)

42. Concrete Staining Multi-Color B-5-416, Item 517.1015.S.

A Description

This special provision describes providing a multi-color concrete stain on the exposed concrete surfaces of the structure as the plan details show.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products
	Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied according to manufacturer's recommendations:

Acrylic Bonding Admixture:	TK-225 by TK Products
	Achro 60 by Thoro Products
	Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Sheen Concrete Surfacer, Smooth by TK Products

Tri-Sheen Acrylic by TK Products

TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products

Safe-Cure & Seal EPX by Chem Masters

H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials according to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish as specified in standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45º F or higher, or as given by the manufacturer.

The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Before applying stain to the structure, apply the stain to sample panels measuring a minimum of 48 inches x 48 inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining. Submit color samples to the department before staining the sample panels. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between stones produced by the form liner. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces according to the plan.

D Measurement

The department will measure Concrete Staining Multi-Color (Structure) in area by the square foot of surface, acceptably prepared and stained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S	Concrete Staining Multi-Color B-5-416	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.

stp-517-115 (20140630)

43. Architectural Surface Treatment B-5-416, Item 517.1050.S.

A Description

This special provision describes providing a concrete masonry architectural surface treatment on the exposed concrete surfaces of structures as the plan details show.

B Materials

Use form liners that attach easily to the forming system, and do not compress more than 1/4 inch when poured at a rate of 10 vertical feet/hour.

Use a release agent that is compatible with the form liner and coloring materials.

Wall ties shall have set "break-backs" at a minimum of 3/4 inches from the finished concrete surface.

C Construction

C.1 Equipment

Equipment and tools necessary for performing all parts of the work shall be satisfactory as to design, capacity, and mechanical condition for the purposes intended. Repair, improve, replace, or supplement all equipment that is not maintained in full working order, or which is proven inadequate to obtain the results prescribed.

C.2 Form Liner Preparation

Clean the form liner before each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than 1/4 inch from each other, attach liner securely to forms according to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.4 Surface Finishing

Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

D Measurement

The department will measure Architectural Surface Treatment (Structure) in area by the square foot of architectural surface 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
517.1050.S	Architectural Surface Treatment B-5-416	SF

Payment is full compensation for producing the proposed architectural surface treatment including: preparing the foundation; finishing and protecting the surface treatment; and for properly disposing of surplus material.

stp-517-150 (20110615)

44. Storm Sewer Composite.

Supplement standard spec 608.2.1 with the following:

Furnish composite pipe made from polyvinyl chloride (PVC).

45. Inlet Covers Type T, Item 611.0562.

Supplement standard spec 611.2 (4) with the following:

Furnish rubber adjustment rings off the WisDOT approved project list.

Replace standard spec 611.3.3 (1) with the following:

Set inlet cover Type T on rubber adjustment riser ring. Use approved mastic adhesive between the ring and the inlet structure. Use an approved polyurethane adhesive with a flexible set between the ring and the inlet cover. Use two 5/16-inch beads of adhesive placed 1 inch and 2 inches in from the outside edge of the ring. If multiple adjustment rings are necessary, a maximum of two adjustment rings can be used. A maximum of 3-inch adjustment is allowed. Use polyurethane adhesive with a flexible set to join the two rings. If the adjustment rings must be cut, the joints must be staggered and a polyurethane adhesive used to reattach the cut ends. No concrete adjustment rings or mortar is to be placed between the top of the structure and the inlet cover Type T.

46. Pipe Grates, Item 611.9800.S.

A Description

This special provision describes providing pipe grates on the ends of pipes.

B Materials

Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel pipe conforming to the requirements of standard spec 506.2.3.6.

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction

Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged according to the requirements of AASHTO M36M.

D Measurement

The department will measure Pipe Grates in units of work, where one unit is one grate completed and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	EACH

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.

stp-611-010 (20030820)

47. Pipe Underdrain

Delete sections 612.2.2, 612.2.4, and 612.2.7.

Supplement 612.3.3 with the following:

Install underdrain into inlets as shown in plans.

Supplement 612.5(2) with the following:

Payment for the Pipe Underdrain bid items is full compensation for providing the underdrain and rubber gaskets; for coring holes into inlet structures; and for excavating and backfilling. The department will pay separately for open-graded trench backfill under the Base Aggregate Open Graded bid item. The department will pay for geotextile separately.

48. Crash Cushions Temporary.

Supplement subsection 614.3.4 of the standard specifications with the following:

Locate the manufacturer's foundation pad adjacent to the existing paved shoulder. Provide a transition foundation pad section using a 15:1 taper rate after the required manufacturer's crash cushion pad following the manufacturer's recommended dimensions. Construct this transition piece using identical materials and depths used for the foundation pad. Place aggregate base course behind the transition pad section to blend to existing slopes.

49. Fence Safety, Item 616.0700.S.

A Description

This special provision describes providing plastic fence at locations the plans show.

B Materials

Furnish notched conventional metal "T" or "U" shaped fence posts.

Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction

Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement

The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts 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
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.

stp-616-030 (20160607)

50. Landmark Reference Monuments.

Supplement standard spec 621.3.1 with the following.

After installation of monuments and before removal of existing section corners Brown County Surveyor will tie section corner to newly installed monuments. Contact Ryan Duckart, 920-448-4493 after new monuments are installed and at least 5 working days prior to needing the section corners tied off.

At the completion of construction Brown County will re-establish section corners.

Replace standard spec 621.3.2.1(1) with the following:

Under the Landmark Reference Monuments bid item construct cast in place Type A monuments in holes excavated in the ground.

51. Salvaged Topsoil.

Place salvaged topsoil a minimum of 6-Inches thick and a maximum of 24-Inches thick on all slopes.

52. Furnishing and Planting Plant Materials

A Description

Perform the work under this item according to the plans, standard spec 632 and as hereinafter provided.

B Materials

B.1 Plant Materials

Add the following to standard spec 632.2.2:

All plants shall be grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois, Indiana or Ohio located within Zone 5 of the “Plant Hardiness Zone Map” produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January 1990, unless otherwise approved by the engineer.

B.2 Plant Approval

Add the following to standard spec 632.2.2.8:

Furnish a list of sources for plants according to standard spec 632.2.2.8 before planting begins for fall-planted plants and before March 15 for spring-planted plants. All sources will be subject to verification by the engineer.

B.3 Mulch

Replace standard spec 632.2.6 as follows:

Mulch all plants with 3” double shredded hardwood mulch that is substantially free of noxious weed seeds and objectionable foreign material. Obtain the engineer's approval for the mulch prior to installation.

C Construction

C.1 Planting

Replace sentence 4 of standard spec 632.3.7, paragraph 3 with the following:

Remove the burlap and other wrapping materials including, but not limited to, twine, wire baskets, and plastic ribbon, from the entire root ball of B&B plants.

C.2 Excavation of Planting Holes

Add the following to standard spec 632.3.4:

The minimum horizontal measurement of the plant hole shall be no less than 24 inches (600mm) greater than the diameter of the ball, container, or root mass for the full depth of the planting hole.

Ensure that the bottom of the hole is adequately compacted to guard against settling. Tamp or water as necessary to create a condition by which plants will not settle in the planting beds. The bottom of the root ball shall be in direct contact with the bottom of the hole.

C.3 Plant Establishment Period

Replace standard spec 632.3.18.1.1 with the following:

A plant establishment period of 1 year shall follow the completion of planting.

53. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $500 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

stp-632-005 (20070510)

54. Pond Liner Clay, Item 640.1303.S.

A Description

This special provision describes providing low permeable clay in areas the plans show.

B Materials

For each source, before excavating and hauling the low permeable clay to the project, submit the results of the laboratory tests described in Table 1. The laboratory testing shall document that the clay from the source meets or exceeds the requirements.

The sample for the hydraulic conductivity test shall be remolded clay at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test AASHTO T-99 and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test AASHTO T-99. Conduct the laboratory source testing at the frequency listed in Table 1. Submit the test results to the engineer for review, two weeks before construction.

C Construction

C.1 Low Permeable Clay Placement

C.1.1 Subgrade

Compact the subgrade to a minimum density as defined in standard spec 207.3.6.2, Standard Compaction, or as otherwise specified in the contract requirements.

C.1.2 Erosion Protection

Do not place the low permeable clay until after all adjacent site grading has been completed and only after silt fence has been installed completely around the area of low permeable clay placement.

C.1.3 Low Permeable Clay Placement

After the fine grading is complete, place and compact low permeable clay in completed 6-inch lifts. Place each lift of low permeable clay in one continuous lift. See plans for low permeable clay construction limits. Measure the thickness of the low permeable clay the plans show perpendicular to the surface.

Notify the engineer at least three days before starting construction of low permeable clay.

Table 1

Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC[12]
AASHTO[1]	T99-01	Moisture –Density Relationships of Soils Using a 2.5-kg (5.5 lb) Rammer a 305 mm (12-in.) Drop (Standard Proctor)	NA[11]	1/source	NA
AASHTO	T-88-00	Particle Size Analysis of Soils	P200[3] $\geq$ 50%	2/source	1/lift
AASHTO	T-89-02	Determining the Liquid Limit of Soils	LL[4] $\geq$ 22%	2/source	1/lift
AASHTO	T-90-00	Determining the Plastic Limit and Plasticity Index of Soils	PI[5] $\geq$ 12%	2/source	1/lift
AASHTO	T310-03	In-Place Density and Moisture Content of Soils and Soil-Aggregates by nuclear Methods (Shallow Depth)	DD[6] $\geq$ 95% of the MDD[7]	NA	100'x100' Grid/lift
ASTM[2]	D5084-03	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	K[8] $\leq 1 \times 10^{-7}$ cm/sec	1/source[9]	1/site[10]

Notes:

1. AASHTO = American Association of State Highway and Transportation Officials
2. ASTM = American Society of Testing and Materials
3. P200 = Percent by weight passing the #200 sieve (%)
4. LL = Liquid Limit (%)
5. PI = Plasticity Index (%)
6. DD = Dry Density (pcf)
7. MDD = Maximum Dry Density (pcf) as determined by the Standard Proctor Test
8. K = Hydraulic Conductivity (cm/sec)
9. The sample for the test shall be remolded at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test.
10. An undisturbed sample from a thinned walled sampler (Shelby tube)
11. NA = Not applicable
12. QA/QC = Quality Assurance / Quality Control

Compact the low permeable clay to a minimum of 95% Standard Proctor AASHTO T-99 Maximum Dry Density with a footed compaction equipment having feet at least as long as the loose lift height. As needed, clay shall be disked or otherwise mechanically processed before compaction to break up clods and allow moisture content adjustment. Clod size shall be no greater than 4 inches. All compaction equipment utilized shall have a minimum static weight of 30,000 pounds.

Provide all equipment necessary to adjust low permeable clay to the proper moisture content for compaction.

Make sufficient number of passes of the compaction equipment over each lift of clay to ensure complete remolding of the clay.

Do not proceed with placement of additional lifts until all required low permeable clay testing and documentation has been completed for the previous lift.

During placement of the low permeable clay the minimum moisture content shall be as defined by the testing performed in the source evaluation and with the following limits:

- No drier than the optimum moisture content as determined by the Standard Proctor test.

If the in-place low permeable clay fails to meet the requirements of Table 1, then remove and replace or rework any portion of the low permeable clay not meeting the project requirements until project specifications are met. There shall be no compensation for removing, replacing and reworking low permeable clay not meeting the requirements in Table 1.

C.1.4 QA/QC Testing of the Low Permeable Clay

The department will perform the QA/QC testing at the frequency shown in Table 1. The department will record the thickness of low permeable clay on a 100 foot x 100 foot grid pattern.

Provide the following:

- Access for on-site testing, inspection, and documentation.
- Machinery required to grade/blade density test locations.
- Machinery required to collect undisturbed clay samples (i.e., with Shelby tubes).
- Replace and recompact clay material removed for testing purposes.

D Measurement

The department will measure Pond Liner Clay in volume by the cubic yards 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
640.1303.S	Pond Liner Clay	CY

Payment is full compensation for dewatering areas of site where the low permeable clay is to be placed; for furnishing, placing and compacting the low permeable clay; and for performing all tests.

stp-640-016 (20130615)

55. 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.

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.

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 (20190410)

56. Construction Staking Slope Stakes, Item 650.9920.

Add the following to standard spec 650.3.13:

Provide plan horizontal and vertical locations for the back edge of sidewalk at each slope stake location.

57. Electrical Service for WisDOT Roundabout Lighting at STH 29 (EB & WB) & CTH VV.

A Description

Work under this item shall be in accordance with Section 656 of the Standard Specifications with the following addition.

B (vacant)

C Construction

The Contractor is responsible for making early application for the installation of the electric service lateral.

Contact the local electric company to make application and request a time of use meter. The future monthly invoices can go to the following address:

STH 29 EB & CTH VV to:
Wisconsin Dept of Transportation
Expenditure Acct (L05-2025)
P.O. Box 7366
Madison, WI 53707-7366

STH 29 WB & CTH VV to:
Wisconsin Dept of Transportation
Expenditure Acct (L05-2045)
P.O. Box 7366
Madison, WI 53707-7366

D (vacant)

E Payment

The Contractor shall pay the utility company promptly for the electric service lateral installation cost.

58. Optimized Aggregate Gradation Incentive, Item 715.0710.

Description

This special provision describes optional contractor optimized aggregate gradation, optional optimized mixture designs, and associated additional requirements for class 1 concrete used in concrete pavements. Conform to standard specification part 7 and as follows:

Optimized Aggregate Gradation

Replace standard spec 715.2.2 with the following:

A Job Mix Formula (JMF) contains all of the following:

- Proportions for each aggregate fraction conforming to table 1.
- Individual gradations for each aggregate fraction.
- Composite gradation of the combined aggregates including working ranges on each sieve in accordance with table 2.

Submit the target JMF and aggregate production gradation test results to the engineer for review 10 business days before initial concrete placement.

TABLE 1 TARANTULA CURVE GRADATION BAND

SIEVE SIZES	PERCENT RETAINED
2 in.	0
1 1/2 in.	≤5
1 in.	≤16
3/4 in.	≤20
1/2 in.	4-20
3/8 in.	4-20
No. 4	4-20
No. 8[1]	≤12
No. 16[1]	≤12
No. 30[1] [2]	4-20
No. 50 [2]	4-20
No. 100 [2]	≤10
No. 200 [2]	≤2.3

[1] Minimum of 15% retained on the sum of the #8, #16, and #30 sieves.

[2] Conform to 24-34% retained of fine sand on the #30-200 sieves.

TABLE 2 JMF WORKING RANGE

SIEVE SIZES	WORKING RANGE[1] (PERCENT)
2 in.	+/- 5
1 1/2 in.	+/- 5
1 in.	+/- 5
3/4 in.	+/- 5
1/2 in.	+/- 5
3/8 in.	+/- 5
No. 4	+/- 5
No. 8	+/- 4
No. 16	+/- 4
No. 30	+/- 4
No. 50	+/- 3
No. 100	+/- 2
No. 200	≤ 2.3

[1] Working range limits of composite gradation based on moving average of 4 tests.

Replace standard spec 710.5.6 with the following:

Determine the complete gradation, including P200, using a washed analysis for both fine and coarse aggregates. Test each stockpile for each component aggregate once per 1,500 cubic yards during concrete production.

Take samples by one of the following sampling methods:

1. At the belt leading to the weigh hopper.
2. Working face of the stock piles at the concrete plant if approved by the engineer.

The department will take independent QV samples using the same sampling method the contractor uses for QC sampling. QV samples may be taken by the contractor's QC personnel if witnessed by the department's QV personnel. The department will split each QV sample and retain half for all dispute

resolutions. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

If, during concrete production, the moving average of four for any sieve fall outside the allowable JMF working range do the following:

1. Notify the engineer of the test results within 1 business day from the time of sampling.
2. Make immediate adjustments to the JMF, within the limits specified in Table 3;
3. Review JMF adjustments with the engineer. Both the contractor and engineer will sign the adjusted JMF if the adjustments comply with Table 3.
4. If the moving average of four falls outside the adjusted allowable working range, stop production and provide a new mix design including JMF to the engineer.

TABLE 3 ALLOWABLE JMF ADJUSTMENTS

SIEVE SIZES	ALLOWABLE ADJUSTMENT (PERCENT)
>= No. 4	+/- 5
No. 8 – No. 30	+/- 4
No. 50	+/- 3
No. 100	+/- 2

Dispute Resolution

The department will resolve disputes as specified in standard spec 106.3.4.3.5 using QV split samples.

Sublot and Lot Size

A sublot consists of up to 1,500 cubic yards. A lot consists of two sublots.

Optimized Concrete Mixtures

The contractor may use a reduced cementitious content for concrete pavement placed if the contractor does the following:

1. Use an optimized aggregate gradation as defined in this special provision.
2. Conform to the additional testing requirements for flexural strength as specified in the contract special provisions.
3. Submit aggregate gradation result records no more than 2 years old when developing the mix design.
4. Determine the volume of voids in the optimized aggregates using ASTM C29.
5. Download and follow the instructions tab of the Optimized Gradation and Mix Design Spreadsheet located at:

   https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/qmp/default.aspx
6. Design an appropriate paste content based upon the Performance-based PCC Mix Design Guide located at:

   https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/qmp/default.aspx
7. Provide a minimum Vpaste/Vvoids of 1.25. (Paste/Void ratio equals the volume of paste divided by the volume of voids.).
8. Evaluate workability of trial batches by following section 6.8 of AASHTO Draft Performance Engineered Concrete Pavement Mixtures Specifications located at:

   https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/qmp/default.aspx
9. Submit trial batch workability results when submitting the mix design.
10. Submit the CP Tech center computer spreadsheet concrete mix design to the engineer for review at least 3 business days before producing concrete.
11. Provide a minimum cement content of 520 pounds per cubic yard, except if using type I, IL, or III cement in a mix where the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials, provide a minimum cement content of 660 pounds per cubic yard.
12. The contractor may use class C fly ash or grade 100 or 120 slag as a partial replacement for cement. For binary mixes use up to 30% fly ash or slag. For ternary mixes use up to 30% fly ash plus slag in combination. Replacement values are in percent by weight of the total cementitious material in the mix.
13. See CMM 8-70.2.2.3 for additional guidance.

Measurement

The department will measure Optimized Aggregate Gradation Incentive by the dollar, for each combined averaged lot of QC test results meeting Table 1.

Payment

The department will pay incentive of 3 percent of the contract unit price for concrete pavement under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
715.0710	Optimized Aggregate Gradation Incentive	DOL

stp-715-005 (20191121)

59. Flexural Strength for Concrete Mix Design.

This special provision describes optional testing requirements for flexural strength during the mix design process. Conform to standard spec part 7 as modified in this special provision.

Add the following to standard spec table 701-2:

TEST	TEST STANDARD
Flexural Strength of Concrete	AASHTO T97

Replace 715.2.3.1(1) with the following:

(1) Provide both compressive and flexural strength information to demonstrate the strength of the proposed mix design. Use either laboratory strength data for new mixes or field strength data for established mixes as follows:

1. Use at least 5 pairs of cylinders for compressive strength. Demonstrate that the 28-day compressive strength will equal or exceed the 85 percent within limits criterion specified in 715.5.2.
2. Use at least 5 pairs of beams for flexural strength. Demonstrate that the 28-day flexural strength will equal or exceed 650 psi.

stp-715-010 (20170615)

60. Planting Soil Mixture, Item SPV.0035.01.

A Description

This special provision describes furnishing and installing Planting Soil Mixture at the locations shown on the plans and according to the requirements of standard spec 632, the plans, and as hereinafter provided.

B Materials

Furnish planting soil mix conforming to standard spec 632.2.3.4

C Construction

Remove compacted base from within 6 inches of curbs and pavement of planting beds. Loosen subgrade of planting beds to a minimum depth of 12”. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter. Thoroughly blend planting soil mix off-site before spreading. Do not spread frozen, muddy, or excessively wet planting soil or subgrade. Spread approximately one-third the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 6 inches of subgrade. Spread planting soil mix, in maximum of 6 inch lifts, to a minimum depth of 12” but not less than required to meet finish grades after natural settlement. Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades

D Measurement

The department will measure Planting Soil Mixture by the cubic yard, 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.0035.01	Planting Soil Mixture	CY

Payment is full compensation for furnishing and placing all materials, including excavation, disposal, hauling, placing, grading.

61. Manholes 10-FT Diameter, Item SPV.0060.01.

A Description

This special provision describes the constructing a 10-foot manhole as shown on plans and directed by the engineer and as hereinafter provided.

B Materials

Furnish materials according to standard spec 611.2.

Provide drawings stamped by a professional engineer registered in the State of Wisconsin for steel reinforcing design.

C Construction

Construct according to standard spec 611.3.

D Measurement

The department will measure Manholes 10-FT Diameter as each individual 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.0060.01	Manholes 10-FT Diameter	Each

Payment is full compensation for providing materials, including masonry, sewer connections, steps, and other fittings; for excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

62. Inlets 6-FT Diameter, Item SPV.0060.02.

A Description

This special provision describes the constructing a 6-foot diameter inlet as shown on plans and directed by the engineer and as hereinafter provided.

B Materials

Furnish materials according to standard spec 611.2.

C Construction

Construct according to standard spec 611.3.

D Measurement

The department will measure Inlets 6-FT Diameter as each individual 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.0060.02	Inlets 6-FT Diameter	Each

Payment is full compensation for providing materials, including masonry, sewer connections, steps, and other fittings; for excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

63. Apron Endwalls for Culvert Pipe Steel 10-Inch, Item SPV.0060.03.

A Description

This special provision describes providing and installing apron endwalls as shown on plans and directed by the engineer and as hereinafter provided.

B Materials

Furnish materials according to standard spec 521.2.

C Construction

Construct according to standard spec 521.3.

D Measurement

The department will measure Apron Endwalls for Culvert Pipe Steel 10-Inch as each individual 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.0060.03	Apron Endwalls for Culvert Pipe Steel 10-Inch	Each

Payment is full compensation for providing all materials; and for excavating, constructing the foundation, disposing of surplus material, and backfilling.

64. Outfall Structure 2x2-FT, Item SPV.0060.04; Outfall Structure 3x3-FT, Item SPV.0060.05; Outfall Structure 3x6-FT, Item SPV.0060.06.

A Description

This special provision describes the constructing pond outlet structure as shown on plans and directed by the engineer and as hereinafter provided.

B Materials

Furnish materials according to standard spec 611.2.

Provide drawings stamped by a professional engineer registered in the State of Wisconsin for steel reinforcing design.

C Construction

Construct according to standard spec 611.3.

D Measurement

The department will measure Outfall Structure (type) as each individual 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	Outfall Structure 2x2-FT	Each
SPV.0060.05	Outfall Structure 3x3-FT	Each
SPV.0060.06	Outfall Structure 3x6-FT	Each

Payment is full compensation for providing materials, including masonry, trash grates, sewer connections, steps, and other fittings; for excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

65. Rock Crib CTH TS Pond, Item SPV.0060.07; Rock Crib CTH VV Pond, Item SPV.0060.08, Rock Crib Evergreen Ave Pond, Item SPV.0060.09

A Description

This special provision describes the constructing pond rock crib as shown on plans and directed by the engineer and as hereinafter provided.

B Materials

Furnish materials according to standard spec 645.2.

Furnish PVC underdrain with hole size and location as shown plan and meeting ASTM D3034 Sewer SDR35.

Furnish clean, washed, sound, hard, dense, durable, field or quarry stone which is free from seams, cracks, or other structural defects. It shall be angular material from shot rock (blasted) or crushed rock having a majority (90%) of faces, which have resulted from artificial crushing meeting the following gradation:

Sieve Size	% Passing by Weight
7”	100
6”	90
4”	75
3”	10

C Construction

Excavate rock crib area, place geosynthetic type DF, and then place stone and underdrain, including cleanouts as shown in plans. Rock crib should be encapsulated with geosynthetic type DF.

Construct according to standard spec 645.3.

D Measurement

The department will measure Rock Crib (location) as each individual 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.0060.07	Rock Crib CTH TS Pond	Each
SPV.0060.08	Rock Crib CTH VV Pond	Each
SPV.0060.09	Rock Crib Evergreen Ave Pond	Each

Payment is full compensation for providing materials, including underdrain and cleanouts; for excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

Castings Type J-S, salvaged topsoil, and finishing items will be paid for separately under pertinent bid items.

66. Construction Staking Pond Layout, Item SPV.0060.10.

A Description

This work describes staking for each pond according to the pertinent requirements of standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction

Set and maintain construction stakes or marks necessary in order to establish the horizontal and vertical features of the pond construction according to the plans.

D Measurement

The department will measure Construction Staking Pond Layout as each individual unit of work, 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.0060.10	Construction Staking Pond Layout	Each

Payment is according to standard spec 650.5 and includes full compensation for staking each pond; for resetting damaged or missing construction stakes; and for protecting and reestablishing stakes.

67. Utility Line Openings, Item SPV.0060.11.

A Description

This special provision describes excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the drawings and directed by the engineer and as hereinafter provided.

B (Vacant)

C Construction

The excavation will be done in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

The utility line openings will be performed as soon as possible and at least 10 days in advance of proposed construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Utility line openings will include a trench up to 10 feet long as measured at the trench bottom and of any depth required to locate the intended utility.

All utility line openings will be approved and coordinated with the engineer. Notify the utility engineers or their agents of this work a minimum of 3 days prior to the work so they can be present when the work is completed.

D Measurement

The department will measure Utility Line Opening as each individual opening, 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.0060.11	Utility Line Openings	Each

Payment is full compensation for furnishing, hauling and placing of all materials; and for excavation, backfilling and disposing of excess material.

Concrete curb and gutter, and concrete sidewalk removals necessary to facilitate utility line openings will be measured and paid for separately.

Place 6-inches of Base Aggregate Dense 1¼-inch on surface of utility opening. Base Aggregate Dense 1¼-inch will be measured and paid for separately.

68. Cable Splice, Item SPV.0060.20.

A Description

This special provision describes providing Individual fusion splice fiber optic cable strand that includes splice case, tray, heat shrink protector and testing.

B Materials

Furnish Commscope/TYCO FOSC600-D series case FOSC-600-D8B-NT-0-DOV, Splice Tray FOSC-ACC-D-TRAY-72 and Splice protection sleeve with steel reinforcing rod AFL S015915 or approved equal).

C Construction

Install cables into splice case per manufacturer requirements at locations identified on plans.

Fusion Splice the fiber optic cables at each of the splice points identified on the plans. All cable strand splicing will be performed using a fusion splice machine that is capable of splicing within a 0.1dB loss tolerance and equipped with either live monitoring or a Local Injection Detection (LID) testing system, thus ensuring the splice quality while the splice is set up in the machine.

All splices will be protected with appropriate fusion splice sleeves fitted with steel-reinforcing rod(s) (provided by the Contractor).

Following the splicing and termination procedures test each spliced strand using an Optical Time Domain Reflectometer (OTDR) at 1310nm and 1550nm. OTDR event thresholds must be set to show all events greater than 0.01db to will allow the inspector to review all splices or anomalies that register greater than 0.01 along the trace. Prior to the OTDR testing the Contractor must provide a copy of the OTDR viewing software that is capable of allowing a user to electronically review the test results. Following the OTDR testing provide the project engineer with one electronic copy of each test performed. Prior to testing, the Contractor will be provided with the strand identification and labeling plan, the electronic copies of the test results must match the labeling scheme provided. All tests must be saved with origination point, end point, and strand number identified within the trace name. Abbreviations for sites are recommended.

D Measurement

The department will measure Cable Splice by the each 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.0060.20	Cable Splice	UNIT

Payment is full compensation for providing for providing all materials and equipment for cable splicing; and for all required testing and providing test results.

69. Handhole, Item SPV.0060.21.

A Description

This special provision describes providing and installing flush mount handhole, ground rod, locate post, and ground wire.

B Materials

Furnish the following:

- Handhole Quazite PG3048BB36 case and Quazite PG3048HH21 ANSI Tier 22 2-piece cover
- 5-foot x 1/2-Inch copper bonded ground rod vNent Erico 615880 or approved equal.
- Locate Post Pro-Mark Utility Supply Inc.'s Pro-Mark Model PM-TS3 or approved equal.
- Furnish materials that are according to the requirements of standard spec 628.2.
- Furnish materials that are according to the requirements of standard spec 630.2.

C Construction

Handholes must sit parallel with adjacent streets, buildings, or other structures and must be flush with all surrounding surfaces, and if installed on a slope or grade the handhole must follow the contour of the grade as much as possible.

The installed handholes must sit atop a 12-Inch bed of 3/4-Inch washed, crushed stone for drainage. Pea gravel or other stone smaller than 3/4-Inch is not allowed as base for drainage. All fill around the handhole must be mechanically compacted in 12-Inch layers to within 8" from the top to prevent settling.

Inside each new handhole install a single 5-foot long by 1/2-inch diameter copper clad ground rod. The ground rod must not protrude more than 3-inches above the surface of the crushed stone bed. After ground rod installation, equip the top with a conductor clamp that will tie the locate post ground wire to the end.

Install above grade locate posts adjacent to handhole identified on the plan. The locate post will be used to access the locate wires for future locating purposes. Between the handhole and locate post install a short length of 1-1/4" corrugated innerduct. This will facilitate the installation of the locate wires into the station from the handhole. At no time will a locate station be installed in a location where it impedes or can be damaged by the removal of the handhole lid. All locate wires must be routed into the locate post and secured to the posts' s insulating lugs via a crimp-on spade connector. The outer lugs are for use with locate wires that run in either direction from the locate post, while the center lug is used to for the ground wire routed in from the ground rod located inside the adjacent handhole.

Stake locations of all handholes before installation for engineer approval on exact locations.

D Measurement

The department will measure Handhole by the each 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.0060.21	Handhole	Each

Payment is full compensation for all staking; providing handhole, ground road, locate post, crushed stone, and all required materials; and for excavating, backfilling, and restoring the grade.

70. Luminaires Utility LED A Black, Item SPV.0060.30.

A Description

This work shall be in accordance with the requirements of standard spec 659, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Use materials according to standard spec 659.2.

Furnish all luminaires with black colored housing.

C Construction

Construct according to standard spec 659.3.

D Measurement

The department will measure Luminaires Utility LED A Black as each individual unit, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.30	Luminaires Utility LED A Black	Each

Payment is full compensation according to standard spec 659.5

71. Luminaires Utility LED B Black, Item SPV.0060.31.

A Description

This work shall be in accordance with the requirements of standard spec 659, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Use materials according to standard spec 659.2.

Furnish all luminaires with black colored housing.

C Construction

Construct according to standard spec 659.3.

D Measurement

The department will measure Luminaires Utility LED B Black as each individual unit, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.31	Luminaires Utility LED B Black	Each

Payment is full compensation according to standard spec 659.5

72. Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT Black, Item SPV.0060.32.

A Description

This work shall be in accordance with the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Use materials according to standard spec 657.2.

Replace standard spec 657.2.4.1(3) with the following:

Make luminaire arms out of extruded aluminum. Ensure that the arms are clean with a manufacturer applied black anodized finish. Arms anodized after purchase from the manufacturer will not be accepted without approval from the Engineer. Brackets, fitters and associated materials shall have a matching anodized finish.

C Construction

Construct according to standard spec 657.3.

D Measurement

The department will measure Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT Black as each individual unit, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.32	Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT Black	Each

Payment is full compensation for providing all materials, including all hardware, fittings, mounting clamps, shims if required; for providing an anodized finish, and all attachments necessary to completely install the luminaire arm.

73. Poles Type 5-Aluminum Black, Item SPV.0060.33.

A Description

This work shall be in accordance with the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Use materials according to standard spec 657.2.

Replace standard spec 657.2.1.4(2) with the following:

Construct poles of aluminum materials having sufficient rigidity that, with all material installed and in place as the plans show, the centerline of the shaft appears vertical. Include vibration dampers in all poles.

Amend standard spec 657.2.1.4 with the following:

Furnish all poles with a manufacturer applied black anodized finish. Poles anodized after purchase from the manufacturer will not be accepted without approval from the Engineer. Pole cap, nut covers, and associated materials shall have a matching anodized finish.

C Construction

Construct according to standard spec 657.3.

D Measurement

The department will measure Poles Type 5-Aluminum Black as each individual unit, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.33	Poles Type 5-Aluminum Black	Each

Payment is full compensation for providing all materials, including poles, all hardware and fittings necessary to install the pole; for providing an anodized finish; and for all labor, tools, and equipment.

74. Transformer Bases Breakaway 11 1/2-Inch Bolt Circle Black, Item SPV.0060.34.

A Description

This work shall be in accordance with the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Use materials according to standard spec 657.2.

Replace standard spec 657.2.6(1) with the following:

Furnish cast aluminum alloy transformer bases from the department's approved products list and meeting the design criteria specified in 657.2.2.1.2. Ensure that castings are true to pattern in form and dimensions and free from pouring faults, sponginess, cracks, sharp edges, blow holes, and other defects in positions affecting strength or service life. Furnish all bases with a manufacturer applied black anodized finish. Bases anodized after purchase from the manufacturer will not be accepted without approval from the Engineer.

C Construction

Construct according to standard spec 657.3.

D Measurement

The department will measure Transformer Bases Breakaway 11 1/2-Inch Bolt Circle Black as each individual unit, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.34	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle Black	Each

Payment is full compensation for providing the transformer base, mechanical grounding connector, and related hardware; for leveling shims if required; and for providing an anodized finish.

75. Concrete Control Cabinet Base NER Type 10, Item SPV.0060.35.

A Description

This work shall be in accordance with the requirements of standard spec 654, the plans, and as hereinafter provided.

B Materials

Use materials according to standard spec 654.2.

C Construction

Construct according to standard spec 654.3.

D Measurement

The department will measure Concrete Control Cabinet Base NER Type 10 as each individual unit, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.35	Concrete Control Cabinet Base NER Type 10	Each

Payment is full compensation according to standard spec 654.5

76. Grasses, Feather Reed Grass, CG, #1, Item SPV.0060.40; Perennials, Russian Sage, CG, #1, Item SPV.0060.41; Perennials, Professor Kippenbeg Aster, CG, #1, Item SPV.0060.42; Perennials, Purple Gas Plant, CG, #1, Item SPV.0060.43; Perennials, Butterfly Flower, CG, #1, Item SPV.0060.44; Perennials, 'Bravado' Coneflower, CG, #1, Item SPV.0060.45; Perennials, 'Fireball' Monarda, CG, #1, Item SPV.0060.46; Perennials, 'Autumn Fire' Sedum, CG, #1, Item SPV.0060.47; Perennials, 'Stella D' Oro' Daylilly, CG, #1, Item SPV.0060.48; Perennials, 'Autumn Joy' Sedum, CG, #1, Item SPV.0060.49; Perennials, Moonshine Yarrow, CG, #1, Item SPV.0060.50;

A Description

This special provision describes providing perennial plantings at locations the plans show. Conform to standard spec 632 and as follows.

B Materials

Provide Perennial Plants, as shown on plan, and complying with American Standard for Nursery Stock (ANSI Z60.1-2004) for type, shape, and height.

Plant Materials. All plants shall be grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois, Indiana or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January, 1990, unless otherwise approved by the engineer.

Furnish a list of sources for plants as specified in standard spec 632.2.2.8 before planting begins for fall-planted plants and before March 15 for spring-planted plants. All sources will be subject to verification by the engineer.

Provide type B fertilizer.

C Construction

Ensure that Planting Mixture has been placed according to the standard specifications.

Stake out location of plantings for approval by supervising engineer.

Ensure that the bottom of the hole is adequately compacted to guard against settling. Tamp or water in as necessary to create a condition by which plants will not settle in the planting beds. The bottom of the rootball shall be in direct contact with the bottom of the hole.

Install Perennial Plants and mulching as the plans show.

D Measurement

The department will measure Perennials, (Type), (Size) by the unit acceptably complete in place.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.40	Grasses, Feather Reed Grass, CG, #1	Each
SPV.0060.41	Perennials, Russian Sage, CG, #1	Each
SPV.0060.42	Perennials, Professor Kippenbeg Aster, CG, #1	Each
SPV.0060.43	Perennials, Purple Gas Plant, CG, #1	Each
SPV.0060.44	Perennials, Butterfly Flower, CG, #1	Each
SPV.0060.45	Perennials, 'Bravado' Coneflower, CG, #1	Each
SPV.0060.46	Perennials, 'Fireball' Monarda, CG, #1	Each
SPV.0060.47	Perennials, 'Autumn Fire' Sedum, CG, #1	Each
SPV.0060.48	Perennials, 'Stella D' Oro' Daylilly, CG, #1	Each
SPV.0060.49	Perennials, 'Autumn Joy' Sedum, CG, #1	Each
SPV.0060.50	Perennials, Moonshine Yarrow, CG, #1	Each

Payment is full compensation for providing, transporting, handling, storing, pruning, placing, and replacing plant materials; for excavating all plant holes, salvaging topsoil, mixing, and backfilling; for providing and applying all required fertilizer, weed barrier fabric, mulch, water, wrapping, guys and braces, rodent protection, herbicides and anti-desiccant spray; and for removing guys and braces.

Payment for the Planting Mixture bid item used in planting and Shredded Hardwood Bulk Mulch will be paid for separately.

77. Planting Pod, Item SPV.0060.60.

A Description

This special provision describes installing planting pods as shown on the plans and as hereinafter provided.

B Materials

B.1 Welded Wire Mesh

Furnish woven wire fabric composed of 11-gauge line and stay wires with an opening size of 2"x4". Provide steel conforming to standard spec 616.2.2.1(2). Furnish fittings and fasteners that meet the requirements of standard spec 616.2.2.

B.2 Framework

Provide hardwood posts that meet the requirements of standard spec 616.2.2.6.

Replace 616.2.2.6 (1) with the following:

Furnish 2"x2" wood posts manufactured from one of the wood species listed in 614.2.5.

B.3 Polytwine

Furnish polytwine material that is new and free of imperfections.

C Construction

Construct planting pods in accordance with the detail drawing provided in the plans and following manufacturer's recommendations. The wire mesh shall be installed and pulled taught to provide a smooth and uniform appearance free from sag.

Assemble the planting pods prior to placing around wetland vegetation and install pods after planting of the wetland vegetation. The installation shall be completed on the same day of the plantings and shall not damage the newly planted vegetation. Pods that are not installed on the same day of plantings will not be paid.

Monitor and maintain planting pods from the time of planting until final acceptance of work. Remove and dispose of planting pods after acceptance of wetland plantings.

D Measurement

The department will measure Planting Pod as each individual planting pod 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.0060.60	Planting Pod	EACH

Payment is full compensation for furnishing and installing planting pods; for maintaining the pods until final acceptance; and for removing the planting pods after final acceptance.

78. Submergent Wetland Plantings, Item SPV.0060.61; Emergent Wetland Plantings, Item SPV.0060.62.

A Description

This special provision describes installing submergent and emergent wetland plantings as shown on the plans and as hereinafter provided.

B Materials

All plants shall be guaranteed to be true to species. Plant only Wisconsin native species.

B.1 Submergent Zone (18-30" Water Depth)

Binomial Names	Common Names	Plant* Height	Maximum** Water Depth	Comments
Nymphaea sp.	Yellow waterlily		30"	Class C Weed
Nymphaea odorata	White waterlilly		60"	Class C Weed

* Plant height is plant height above and below water line.

** Maximum water depth at which plant can be planted.

B.2 Shallow Emergent Zone Plants (0-10" Water Depth)

Binomial Names	Common Names	Plant* Height	Maximum** Water Depth	Comments
Scirpus Fluviatilis	River bulrush	24-60"	4"	
Acorus calamus	Sweet flag	12"	6"	
Eleocharis obtusa	Three blunt spike rush	12"	6"	
Peltandra virginica	Arrow arum	18"	6"	
Vernonia Arkansas	Iron Weed	---	---	
Alisma L.	Water plantain	8-36"	6"	
Iris Versicolor	Blueflag iris	24-36"	6"	
Juncus effuses	Soft rush	36"	6"	
Scirpus cyperinus	Wool grass	36"	6"	

* Plant height is plant height above and below water line.

** Maximum water depth at which plant can be planted.

B.3 Deep Emergent Zone Plants (0-18" Water Depth)

Binomial Names	Common Names	Plant* Height	Maximum** Water Depth	Comments
Calla palustris	Water Arum	24"	12"	
Sagitarria latifolia	Arrowhead	32"	12"	
Sparganium eurycarpum	Gian burred	48"	12"	
Sirpus americanus	Three square bulrush	60"	12-18"	
Carex lurida	Bottlebrush sedge	36"	12-20"	
Pontederia cordata	Pickerelweed	36-48"	12-20"	
Scirpus validus	Softstem bulrush	3-9'	12-20"	
Schoenoplectus acutus	Hard stem bulrush	3-9'	12-20"	
Asclepias incarnata	Marsh milkweed	48"	24"	

* Plant height is plant height above and below water line.

** Maximum water depth at which plant can be planted.

C Construction

The contractor shall provide staff that is thoroughly familiar with wetland planting. Installation shall take place between May 1 and June 30 of calendar year 2021. Installation shall not take place when the ground is frozen and when conditions are otherwise unsatisfactory.

The method for access to the planting areas must be approved by the engineer prior to implementation.

C.1 Submergent Wetland Plantings

The submergent plants shall be planted in the submergent zone adjacent to the planting pods as indicated on the plans. These plantings are not to be protected with pods. Plant the top of the tuber flush with the sediment and secure it into the ground with a one foot long wire staple. The contractor may draw down the water level to facilitate the planting process with the approval of the engineer.

Only one species of submergent plants is to be planted. Submergent zone species shall be planted parallel to the shoreline at a rate of 1 plant per 1 ½ feet. The quantity shall be evenly distributed adjacent to the planting pods.

C.2 Emergent Wetland Plantings

The emergent wetland plants shall be planted in the shallow emergent zone and the deep emergent zone as indicated. The plants are to be surrounded by the planting pods immediately after planting.

Emergent zone species shall be planted in groups of 40 plants in each pod at a density of one plant every 4 square feet. A minimum of three varieties of the shallow and deep emergent zone plants shall be planted in each pod. No one species shall make up more than 50% of either emergent zone.

C.3 Maintenance

Properly care for all plants from the time of planting until final acceptance of work.

C.4 Warranty

Provide a one-year warranty period for the adequate establishment of submergent and emergent vegetation. The submergent and emergent plant zones should produce 70% survival of the planting area at the end of the one-year warranty period. Survival shall be determined by a stem count.

Re-plant areas that to not produce 70% survival. Use the same materials and method of replacement planting specified for the original planting. The department will not charge contract time during the plant establishment period or when making replacements, unless other contract operations are in progress during the same period.

D Measurement

The department will measure Wetland Plantings as each individual planting 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.0060.61	Submergent Wetland Plantings	EACH
SPV.0060.62	Emergent Wetland Plantings	EACH

Payment is full compensation for furnishing and installing wetland plants, and for maintaining the plantings until final acceptance.

79. Concrete Curb & Gutter 24-Inch Type D, Item SPV.0090.01.

A Description

This special provision describes the installation of Concrete Curb & Gutter 24-Inch Type D, as shown on the plans, directed by the engineer, and as hereinafter provided.

B Materials

Furnish materials that are according to the requirements of standard spec 601.2.

C Construction

Construct according to the requirements of standard spec 601.3 and as shown on the plans.

D Measurement

The department will measure Concrete Curb & Gutter 24-Inch Type D according to standard spec 601.4.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Concrete Curb & Gutter 24-Inch Type D	LF

Payment is full compensation according to standard spec 601.5.

80. Fence Chain Link Polymer-Coated 6-Ft., Item SPV.0090.02.

A Description

This special provision describes furnishing and installing a new polymer-coated fence system on structures in conforming to the pertinent plan details and as directed by the Engineer. The color of all components in this fence system shall be the same and shall be as specified on the plans.

B Materials

All materials for this fence system shall be new stock, free from defects impairing strength, durability, and appearance. Fabric shall be produced by methods recognized as good commercial practice. Wire used in the manufacture of the fabric shall be capable of being woven into fabric without the polymer-coating cracking or peeling. Pipes used in framework shall be straight, true to section and free of defects. All burrs at the ends of pipes shall be removed before galvanizing. The polymer-coating shall be a dense impervious covering, applied without voids, tears or cuts that reveal the substrate. Excessive roughness, bubbles, blisters and flaking in the polymer-coating will be a basis for rejection.

B.1 Fabric

Provide steel chain link fence fabric conforming to the requirements of ASTM F668, Class 2b, a polymer-coating fused and adhered to wire that is zinc-coated. Provide fabric woven from 9-gage wire using plan specified mesh size, diamond pattern, with both the top and bottom selvages knuckled. The minimum breaking strength of the wire shall be 1290 lbs. The color of polymer-coating shall conform to the requirements of ASTM F934.

B.2 Framework

Provide steel rails, posts and post sleeves conforming to the requirements of ASTM F1083, Standard Weight Pipe (Schedule 40) of the size (O.D.) and weight as shown on the plans. The minimum yield strength shall be 30,000 psi and the minimum tensile strength shall be 48,000 psi. These components shall be zinc-coated inside and outside by the hot-dip process as stated in ASTM F1083. Provide polymer-coating over zinc-coating conforming to ASTM F1043. The color of polymer-coating shall

conform to the requirements of ASTM F934, and match the color of the other fence components. Weld base plate to posts or post sleeves and complete any additional welding of components before galvanizing.

B.3 Fittings

Provide end post caps, line post caps, top rail sleeves, rail ends, line rail clamps, brace bands, tension bands, tension bars, and tie wires that are steel and conform to the requirements of ASTM F626. Tie wires shall be round and 9-gage wire. These components (excluding tie wires) shall be zinc-coated by the hot-dip process as stated in ASTM F626. Provide polymer-coating over zinc-coating on components (excluding tie wires) that conforms to the requirements of ASTM F626. For tie wires, provide polymer-coating on wire that is zinc-coated using the same procedure as used for the wires in the fence fabric. End post caps and line post caps shall fit tightly over posts to prevent moisture intrusion. Supply dome style caps for end posts and loop type caps for line posts. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components.

B.4 Bolts

All bolts are to be supplied with lock washers and nuts. Use galvanized steel bolts, nuts and washers per plan details.

B.5 Tests

B.5.1 Fabric and Tie Wire

Breaking Strength:	ASTM A370
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM F668
Adhesion:	ASTM F668
Accelerated Aging Test:	ASTM F668, D1499
Mandrel Bend Test:	ASTM F668

B.5.2 Framework

Tensile and Yield Strength:	ASTM E8
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM E376
Adhesion:	ASTM F1043
Accelerated Aging Test:	ASTM F1043, D1499

B.5.3 Fittings

Zinc-Coating Requirements		
Weight of Zinc-Coating:	ASTM A90	
Polymer-Coating Requirements		
Thickness of Polymer-Coating:	ASTM F626	
Adhesion:	ASTM F1043	(same test as for framework)
Accelerated Aging Test:	ASTM F1043, D1499	(same test as for framework)

B.6 Submittals

In addition to the engineer, send submittals listed in this section to the name below for informational purposes:

David Nelson
WisDOT (Bureau of Structures)
4822 Madison Yards Way
Madison, WI 53705

B.6.1 Shop Drawings

Submit shop drawings showing the details of fence construction. Show the fence height, post spacing, rail location, and all dimensions necessary for the construction of the chain link fence. Label the end posts, line posts, rails, post sleeves, top rail sleeves, bolts and fittings. State the polymer-coating type used on the fabric, framework and fittings and the Class of coating used on the fabric. State the color of polymer-coating to be used on the fence components. For the fabric, state the wire gage, mesh size, and type of

selvages used. For the framework, state the size (O.D.) and unit weight for the posts and rails. For the fittings, state the size for top rail sleeves, brace bands, tension bands, tension bars, line rail clamps, size and type of bolts, and the tie wire gage. State the material type used for fabric, framework, and fittings. Also give the breaking strength for the fabric wire and the tensile and yield strength properties for the framework.

B.6.2 Specification Compliance

Submit certification of compliance with material specifications. Provide material certification and test documentation for fabric, framework, fittings and hardware that shows that all materials meet or exceed the specifications of this contract and the tests in section B5 of this specification. This document shall provide the name, address and phone number of the manufacturer, and the name of a contact person.

C Construction

C.1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and condition of materials is in conformance with these specifications. If polymer-coating is damaged, Contractor shall repair or replace components as necessary to the approval of the Engineer at no additional cost to the Owner. Carefully store material off the ground to ensure proper ventilation and drainage and to provide protection against damage caused by ground moisture. Handle all polymer-coated material with care.

C.2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to polymer-coated surfaces, touch-up the finish conforming to the manufacturer's recommendations. Provide touch-up coating such that repairs are not visible from a distance of 6-feet. If damage is beyond repair, the fencing component shall be replaced at no additional cost to the Owner. The Contractor shall provide the Engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

C.3 General

Install the chain link fence conforming to ASTM F567 and the manufacturer's instructions. The Contractor shall provide staff that is thoroughly familiar with the type of construction involved and materials and techniques specified. Chain link fabric shall be installed on the side of the posts indicated on the plans. Fabric shall be attached to the end posts with tension bars and tension bands. It shall be attached to rails, and posts without tension bands, with tie wires. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Install top rail to pass through line post caps and form a continuous brace between end posts. Minimum length of top rail between splices shall be 20-feet. Splice top rail at joints with sleeves for a rigid connection. Locate splices near 1/4-point of post spacing. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement

The department will measure Fence Chain Link Polymer-Coated 6-Ft. by the linear foot acceptably furnished and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Fence Chain Link Polymer-Coated 6-Ft.	LF

Payment is full compensation for fabricating, galvanizing and polymer-coating all fence components, and transporting to jobsite; and for erecting components to create a polymer- coated fence system, including any touch-up and repairs.

81. Steel Casing Pipe 20-Inch, Item SPV.0090.03.

A Description

This special provision describes furnishing and installing a Steel Casing Pipe with pipe end caps under CTH VV. Complete this work in accordance with the pertinent subsections of standard spec 520, as shown in the plans and construction details, and as hereinafter provided; or as directed by the engineer.

B Materials

Furnish pipe made of steel that has a plain end and pipe end caps, a minimum thickness of 0.281”, minimum yield strength of 35,000 psi, and conforms to ASTM A106 Grade B or ASTM A252 Grade 2. Furnish pipe that has welded joints, is in at least 18 feet long sections (except for the last section, if a shorter length is needed to obtain the total length).

Exterior coating shall be bituminous asphalt, minimum 3-5 MDFT. All damaged or disturbed surfaces shall be field repaired with specified coating.

Welding requirements shall be in accordance with ANSI/AWWA C206. Welding shall be done by a skilled welder, welding operators, and tackers who have had adequate experience in the type of materials to be used. Welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the casing or pipeline. Machine and electrodes similar to those used in the work shall be used in qualification tests.

Furnish backfill material and shown in the plans and conforming standard spec 209.2.

C Construction

Supplement standard spec 520.3 with the following:

Install Smooth Steel Casing Pipe 20-Inch without bends and butt-weld all joints between pipe lengths with a smooth non-obstructing joint inside.

Install welded steel pipe end caps to both ends of the casing pipe.

D Measurement

The department will measure Steel Casing Pipe 20-Inch by the linear foot, acceptably completed, measured along the centerline of the pipe from end of the pipe to end of the pipe.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Steel Casing Pipe 20-Inch	LF

Payment is full compensation for furnishing and installing steel pipe and pipe end caps including butt-welding; performing all excavating and backfilling; for constructing the foundation; for associated dewatering.

82. HDPE Conduit 1.25-Inch and 2-Inch Directional Bored, Item SPV.0090.20.

A Description

This special provision describes providing and directional bore installed HDPE conduit.

B Materials

Furnish orange, smooth wall, high-density polyethylene (HDPE) conduit according to the following:

- 1.25-Inch manufactured by Carlon, part number A6C6N1JNNA or approved equal.
- 2-Inch manufactured by Carlon, part number A13C6N1JNNA or approved equal.

Furnish tracer wire consisting of 12 AWG high-density polyethylene (HDPE) jacketed, steel core copper clad wire, Pro-Trace HDD-CCS-PE45 or approved equal.

Furnish materials that are according to the requirements of standard spec 628.2.

Furnish materials that are according to the requirements of standard spec 630.2.

C Construction

All ducts must maintain a minimum horizontal clearance zone of 18” when paralleling other underground utilities with the exception of water and sewer (storm and sanitary) mains where parallel runs must maintain minimum municipal clearances. All underground ducts must be placed a minimum of 36” below finished grade possible. Municipal depth requirements must be maintained when crossing roadways. Minimum depth of 60" must be maintained when crossing waterways.

Install locate wire with the duct. Locate wire can be placed outside of the duct.

Provide and maintain instrumentation which will accurately locate bore hole position in X, Y, and Z axis relative to ground surface. Provide access to this data at all times during the operation to the engineer.

At a minimum surround bore pit and splice pit areas with silt fence.

Control sediment filled water from leaving the work area by the use of rock bags, erosion bales, inlet protection, or any other engineer approved device.

Restore all disturbed areas with seed mixture #20 and cover with Class I Type B erosion mat.

Install erosion control devices in accordance with standard spec 628.3.

Seed in accordance with standard spec 630.3.

All grass/softscape restorations must be completed within 5 working days of the completion of excavations in the immediate area.

It is advised to videotape each area of construction just prior to the work being performed to document all pre-existing conditions.

Expose existing utilities as necessary to conduct conduit installation operations.

D Measurement

The department will measure HDPE Conduit 1.25-Inch and 2-Inch Directional Bored by the lineal foot 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.0090.20	HDPE Conduit 1.25-Inch and 2-Inch Directional Bored	LF

Payment is full compensation for providing, hauling, and installing materials including conduit and tracer wire; for pullwires or ropes; for providing all erosion control and planting materials; for excavating, bedding, backfilling, and restoration of ground to original condition including covering with seed and erosion mat; for exposing any existing utilities; and for making inspections.

83. HDPE Conduit 1.25-Inch and 2-Inch Vibratory Plowed, Item SPV.0090.21.

A Description

This special provision describes providing and vibratory plowed HDPE conduit.

B Materials

Furnish orange, smooth wall, high-density polyethylene (HDPE) conduit according to the following:

- 1.25-Inch manufactured by Carlon, part number A6C6N1JNNA or approved equal.
- 2-Inch manufactured by Carlon, part number A13C6N1JNNA or approved equal.

Furnish tracer wire consisting of 12 AWG high-density polyethylene (HDPE) jacketed, steel core copper clad wire, Pro-Trace HDD-CCS-PE45 or approved equal.

C Construction

All ducts must maintain a minimum horizontal clearance zone of 18” when paralleling other underground utilities with the exception of water and sewer (storm and sanitary) mains where parallel runs must maintain minimum municipal clearances. All underground ducts must be placed a minimum of 36” below finished grade possible. Municipal depth requirements must be maintained when crossing roadways. Minimum depth of 60" must be maintained when crossing waterways.

Install locate wire with the duct. Locate wire can be placed outside of the duct.

At a minimum surround any splice pit areas with silt fence.

Control sediment filled water from leaving the work area by the use of rock bags, erosion bales, inlet protection, or any other engineer approved device.

Seed with #20 mixture and cover with erosion mat class 1 type B any disturbed area as the result of splice pits.

Install erosion control devices in accordance with standard spec 628.3.

Seed in accordance with standard spec 630.3.

All grass/softscape restorations must be completed within 5 working days of the completion of excavations in the immediate area.

It is advised to videotape each area of construction just prior to the work being performed to document all pre-existing conditions.

Expose existing utilities as necessary to conduct conduit installation operations.

D Measurement

The department will measure HDPE Conduit 1.25-Inch and 2-Inch Vibratory Plowed by the lineal foot 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.0090.21	HDPE Conduit 1.25-Inch and 2-Inch Vibratory Plowed	LF

Payment is full compensation for providing, hauling, and installing materials including conduit and tracer wire; for pullwires or ropes; for providing all erosion control and planting materials; for excavating, bedding, backfilling, and restoration of ground to original condition including covering with seed and erosion mat; for exposing any existing utilities; and for making inspections.

84. 432 Strand Fiber Optic Cable, Item SPV.0090.22.

A Description

This special provision describes providing and installing 432 stand fiber optic cable.

B Materials

Furnish OS2 Singlemode Loose Tube All-dielectric outdoor rated fiber optic cable - 432 Strands.

Furnish Panduit PST-FO labels or approved equal.

C Construction

Install the fiber optic cable by hand or with the use of pneumatic/hydraulic installation equipment. However, the means of installation, care must be taken to not exceed the cable's maximum pulling tension (typically 600lbs). When using a mechanical tugger provide the ability to monitor the pulling tensions to ensure the maximum is not exceeded at any time during the installation.

Utilize multiple breakaway/swivel devices while installing the fiber optic cables. Employ steel pulling sleeves/guides at the duct entry point to protect the duct and cable from damage during the installation process.

At each handhole store a minimum of 100 feet of cable slack (unless otherwise noted on the plans) neatly coiled in the handhole and labeled at each end with a permanent label, identifying the Cable Owner and the Strand Count.

Prior to cable installation, perform "pre-acceptance testing" with an Optical Time Domain Reflectometer (OTDR) on each fiber optic cable strand. The pre-acceptance testing will verify the performance of the cable prior to it being installed. Pre-acceptance testing must be performed on every cable strand at 1310nm and 1550nm only from the exposed end of the cable. Test results must be provided to the Project Engineer at least 5 working days prior to the cable installation.

D Measurement

The department will measure 432 Strand Fiber Optic Cable by the linear foot 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.0090.22	432 Strand Fiber Optic Cable	LF

Payment is full compensation for providing fiber optic cable and labeling tags; for providing all materials and equipment for cable installation; and for all required testing and providing test results.

85. 216 Strand Fiber Optic Cable, Item SPV.0090.23.

A Description

This special provision describes providing and installing 216 stand fiber optic cable.

B Materials

Furnish OS2 Singlemode Loose Tube All-dielectric outdoor rated fiber optic cable - 216 Strands.

Furnish Panduit PST-FO labels or approved equal.

C Construction

Install the fiber optic cable by hand or with the use of pneumatic/hydraulic installation equipment. However, the means of installation, care must be taken to not exceed the cable's maximum pulling tension (typically 600lbs). When using a mechanical tugger provide the ability to monitor the pulling tensions to ensure the maximum is not exceeded at any time during the installation.

Utilize multiple breakaway/swivel devices while installing the fiber optic cables. Employ steel pulling sleeves/guides at the duct entry point to protect the duct and cable from damage during the installation process.

At each handhole store a minimum of 100 feet of cable slack (unless otherwise noted on the plans) neatly coiled in the handhole and labeled at each end with a permanent label, identifying the Cable Owner and the Strand Count.

Prior to cable installation, perform "pre-acceptance testing" with an Optical Time Domain Reflectometer (OTDR) on each fiber optic cable strand. The pre-acceptance testing will verify the performance of the cable prior to it being installed. Pre-acceptance testing must be performed on every cable strand at 1310nm and 1550nm only from the exposed end of the cable. Test results must be provided to the Project Engineer at least 5 working days prior to the cable installation.

D Measurement

The department will measure 216 Strand Fiber Optic Cable by the linear foot 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.0090.23	216 Strand Fiber Optic Cable	LF

Payment is full compensation for providing fiber optic cable and labeling tags; for providing all materials and equipment for cable installation; and for all required testing and providing test results.

86. Remove RCUT Lighting, Item SPV.0105.01.

A Description

This work shall consist of removing the existing RCUT lighting equipment from the intersection on STH 29 & CTH VV and returning it to the WisDOT NE Region Facility at 944 Vanderperren Way, Green Bay, WI as shown in the plans and in accordance with the requirements of standard spec 657 and 658, standard detail drawings, and as hereinafter provided..

B (Vacant)

C Construction

After coordination with the NE Region Electrical Unit, disconnect the existing lighting equipment from the concrete bases and transported off site to the WisDOT facility.

D Measurement

The department will measure Traffic Control Project 9200-10-71 by the lump sum 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.0105.20	Traffic Control Project 9200-10-72	LS

Payment is full compensation for providing, constructing, assembling, painting, hauling, erecting, re-erecting, maintaining, restoring, and removing traffic signs, drums, barricades, and similar control devices, including arrow boards, unless provided otherwise; and for partially or fully covering or uncovering signs..

87. Traffic Control Project 9200-10-72, Item SPV.0105.20.

A Description

This special provision describes providing, maintaining, repositioning, and removing temporary traffic control devices according to standard spec 643, as shown in the plans, and as directed by the engineer.

B Materials

Furnish according to standard spec 643.2.

C Construction

Conform to standard spec 643.3..

D Measurement

The department will measure Traffic Control Project 9200-10-71 by the lump sum 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.0105.20	Traffic Control Project 9200-10-72	LS

Payment is full compensation for providing, constructing, assembling, painting, hauling, erecting, re-erecting, maintaining, restoring, and removing traffic signs, drums, barricades, and similar control devices, including arrow boards, unless provided otherwise; and for partially or fully covering or uncovering signs..

88. Shredded Hardwood Bulk Mulch, Item SPV.0180.01.

A Description

Furnish and install mulch at the locations shown on the plans and according to the requirements of standard spec 632, the plans, and as hereinafter provided.

B Materials

Provide Shredded Hardwood Bark Mulch, as shown on plan and according to standard spec 632.2.6.

Shredded Hardwood Bark Mulch shall be finely shredded hardwood bark mulch and shall be the product of a mechanical chipper, hammermill or tub grinder. The material shall be fibrous and uniformly dark brown in color, free of large wood chunks, and shall be substantially free of mold, dirt, sawdust, and foreign material. No portion of the material shall be in an advanced state of decomposition. The material shall not contain chipped up manufactured boards or chemically treated wood, including but not limited to wafer board, particle board, and chromated copper arsenate (CCA) or penta-treated wood. The material shall contain no bark of the black walnut tree. The material, when air dried, shall all pass a 4-inch screen and no more than 20 percent by mass of the material shall pass a 0.10-inch sieve. Unattached bark or greenleaf composition, either singly or combined, shall not exceed 20 percent each by mass. The maximum length of individual pieces shall not exceed 4-inches.

C Construction

Install mulch according to standard spec 632.3.9 to a depth of 3 inches.

Place the hardwood bark mulch in such a manner as to not damage plants already in place.

D Measurement

The department will measure Shredded Hardwood Bark Mulch by the square yard, 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.0180.01	Shredded Hardwood Bark Mulch	SY

Payment is full compensation for furnishing and installing all materials.

(NER11-0208)