

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 5496-00-74, STH 35 – STH 27, STH 35 – Teter Lane, CTH N, Crawford County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2019 Edition, as published by the department, and these special provisions.

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

100-005 (20180628)

2. Scope of Work.

The work under this contract shall consist of clearing and grubbing, grading, excavation common, excavation rock, select borrow, base aggregate dense, breaker run, concrete sidewalk, concrete driveway, HMA pavement, storm sewer placement, culvert pipe replacement, concrete curb and gutter, guardrail, permanent signing, pavement marking, traffic control, removing old structure C-12-776, Structure C-12-062, Structure R-12-051, stone gabion, articulated concrete block flume, riprap, and geogrid reinforcement, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. 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.

Give a written notice to the engineer seven days prior to the start of work.

Fourteen days prior to preconstruction meeting submit, as required under standard spec 108.4, in writing a satisfactory schedule of operations to the engineer. Include proposed methods of handling STH 35 traffic including drawings indicating traffic signs and markings to be used during box culvert replacement activities. Submit revisions in traffic handling to the engineer for approval at least 48 hours in advance of making any changes in traffic operations.

Add the following to standard spec 108.9.2:

Once work has started on STH 35, work continually until the contract work is complete. The contract will not be considered complete until the following items are completed: excavation common, structure C-12-062, removing old structure, breaker run, base aggregate dense, storm sewer, concrete curb and gutter, permanent signing, pavement marking, extra heavy rip rap and finishing items.

If the contractor desires to work on Saturday, Sunday, or nationally recognized legal holidays, obtain approval from the engineer at least 24 hours in advance. If scheduling changes after approval has been obtained, notify the engineer as soon as possible, but not later than 3:00 PM of the prior day.

Complete all work on STH 35 prior to 12:01 AM July 3, 2019.

If the contractor fails to complete all work on STH 35 and reopen the entire STH 35 roadway for traffic prior to 12:01 AM, July 3, 2019, the department will assess the contractor \$1,700 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, July 3, 2019. An entire calendar day will be charged for any period of time within the calendar day that the work remains incomplete and the roadway remains closed beyond 12:01 AM.

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.

4. Traffic.

Close CTH N to through traffic during construction operations. Do not provide a detour route. Alternate routes are available for CTH N. No alternate routes are available for Slama Lane and Demanes Lane. Maintain access to Slama Lane and Demanes Lane during roadway and intersection construction. Maintain access to commercial, private, and field entrances located within the project limits during construction.

Keep STH 35 open to traffic throughout construction of structure C-12-062 and roadway work on STH 35 using temporary traffic signals. Limit traffic to one lane within the work zone to allow for staged construction of structure C-12-062, removal of existing structure and roadway reconstruction work on STH 35. Upon completion of these construction activities, remove temporary traffic signals and resume normal operations on STH 35. Complete all work on STH 35 by July 2, 2019. Staging operations will consist of the following:

Stage 1: Close the southbound lane of STH 35 to allow for construction of the west side of structure C-12-062. Match traffic patterns as shown on Traffic Control – Stage 1 details. Construct the portion of structure C-12-062 as shown on the Traffic Control – Stage 1 detail sheet of the plans. Perform Stage 1 construction activities on STH 35 as shown on Traffic Control – Stage 1 including piling steel sheet temporary, excavation common, structure C-12-062, breaker run, base aggregate dense, storm sewer and rip/rap heavy/extra heavy rip rap. Maintain access to Lakeshore Drive (Sta. 305+77, Lt.) and the existing STH 35/CTH N intersection (Sta. 307+00, Rt.) during STH 35 construction. Install a stop sign at Lakeshore Drive and a temporary traffic signal at the existing STH 35/CTH N intersection. Maintain drainage of the large drainage swale within the project limits underneath STH 35 through existing structure C-12-776.

Stage 2: Close the northbound lane of STH 35 to allow for construction of the east side of structure C-12-062 and removal of the east side of existing structure C-12-776. Match traffic patterns as shown on Traffic Control – Stage 2 details. Construct the portion of structure C-12-062 as shown on the Traffic Control – Stage 2 detail sheet of the plans. Once structure C-12-062 is constructed, regrade ditching of large drainage swale upstream/downstream of structure C-12-062 as shown on the plans to drain the large drainage swale through structure C-12-062. Remove the portion of structure C-12-776 as shown on the Traffic Control – Stage 2 detail sheet of the plans. Perform Stage 2 construction activities on STH 35 as shown on Traffic Control – Stage 2 including piling steel sheet temporary, excavation common, structure C-12-062, removing old structure, breaker run, base aggregate dense, storm sewer, concrete curb and gutter, and extra heavy rip rap. Maintain access to Lakeshore Drive (Sta. 305+77, Lt.) and the existing STH 35/CTH N intersection (Sta. 307+00, Rt.) during STH 35 construction. Maintain stop sign at Lakeshore Drive and temporary traffic signal at the existing STH 35/CTH N intersection.

Stage 3: Close the southbound lane of STH 35 to allow for removal of the west side of structure C-12-776. Match traffic patterns as shown on Traffic Control – Stage 3 details. Remove the portion of existing

structure C-12-776 as shown on the Traffic Control – Stage 3 detail sheet of the plans. Perform Stage 3 construction activities on STH 35 as shown on Traffic Control – Stage 3 including excavation common, removing old structure, breaker run, and base aggregate dense. Maintain access to Lakeshore Drive (Sta. 305+77, Lt.) and the existing STH 35/CTH N intersection (Sta. 307+00, Rt.) during STH 35 construction. Maintain stop sign at Lakeshore Drive and temporary traffic signal at the existing STH 35/CTH N intersection. Once Stage 3 construction activities (removal of existing structure C-12-776 and STH 35 roadway work) are complete remove the existing STH 35/CTH N intersection as shown on Traffic Control - Stage 3 details. Perform grading/ditching and final restoration activities.

Paving, shouldering, and pavement marking activities will be conducted using flagging operations.

Wisconsin Lane Closure System Advance Notification

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

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

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

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

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 35 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 24, 2019 to 6:00 AM Tuesday, May 28, 2019 for Memorial Day;
- From noon Wednesday, July 3, 2019 to 6:00 AM Friday, July 5, 2019 for Independence Day;
- From noon Friday, August 30, 2019 to 6:00 AM Tuesday, September 3, 2019 for Labor Day.

stp-107-005 (20050502)

6. Utilities.

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

stp-107-066 (20080501)

There are underground and overhead utility facilities located within the project limits. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Scenic Rivers Energy Cooperative overhead electric line enters the construction limits along the eastern side of STH 35 running in a north-south direction to a power pole located at Station 303+77, Rt. then changes direction heading to the northwest crossing the STH 35 centerline at Station 306+11 to a power pole located at Station 306+38, Lt. The overhead electric line continues to the north along the west side of STH 35 traveling outside of the construction limits. An overhead electric line branches off of the power pole located at Station 303+77, Rt. heading to the west crossing the STH 35 centerline at Station 303+77 to a power pole located at Station 303+76, Lt. A second and third overhead line branch

off from the power pole located at Station 305+77, Rt.; one heads to the northeast to a power pole located at Station 11+38, Lt. that services the restaurant and motel; the other overhead line branches out to the east traveling along the north side of the realigned CTH N corridor to a power pole located at Station 23+71, Lt. The overhead line crosses the finished CTH N centerline at Station 25+35 to a power pole located at Station 26+24, Rt. and traveling east to a power pole located at Station 28+87, Rt. The overhead line changes direction traveling to the southeast to a power pole located at Station 31+36, Rt. The overhead line travels east along the south side of CTH N to a power pole located at Station 42+84, Rt. The overhead line changes direction traveling north and east crossing the finished CTH N centerline at Station 43+28 and connecting to a power pole located at Station 45+28, Lt. The overhead line continues east to a power pole located at Station 51+93, Lt. The overhead line travels along the north side of CTH N to a power pole located at Station 68+52, Lt. The overhead line continues northeast crossing the CTH N centerline at Station 70+83 and Station 74+04 connecting to a power pole located at Station 77+01, Lt. Three lines branch off of this power pole; one heads to the northwest along Slama Lane in a northwest direction crossing the finished Old CTH N (west) at Station 400+68 and Slama Lane at Station 201+99 traveling along the west side of Slama Lane outside of the construction limits; another crosses Old CTH N (west) at Station 400+95 traveling to the north to service a residential dwelling located in the northeast quadrant of the CTH N/Slama Lane intersection; the third overhead line branches out to the east to a power pole located at Station 81+99, Lt. Three overhead lines branch out from this power pole; one to the north to service a residential dwelling north of Old CTH N (east); a second to service a residential trailer located between Old CTH N (east) and CTH N; the third line travels to a power pole located at Station 83+90, Lt. The electric line continues to the east underground traveling along the south side of CTH N outside of the project limits. A service line branches out from the power pole located at Station 13+33, Lt. traveling to the south crossing the CTH N centerline at Station 13+17 continuing outside of the project limits. An overhead line branches off of the power pole located at Station 75+11, 21' Lt. and travels southeast crossing the finished Demanes Lane centerline at Station 101+21. Power poles are located at Station 303+77, 42' Rt., Station 303+76, 78' Lt., Station 305+77, 56' Rt., Station 306+38, 43' Lt., Station 11+38, 187' Lt., Station 13+33, 58' Lt., Station 15+69, 55' Lt., Station 18+98, 40' Lt., Station 21+46, 39' Lt., Station 23+71, 52' Lt., Station 26+24, 15' Rt., Station 28+87, 15' Rt., Station 31+36, 23' Rt., Station 34+10, 16' Rt., Station 36+38, 22' Rt., Station 39+29, 28' Rt., Station 42+84, 6' Rt., Station 45+28, 29' Lt., Station 48+49, 23' Lt., Station 51+93, 47' Lt., Station 65+59, 111' Lt., Station 68+52, 49' Lt., Station 72+18, 13' Rt., Station 75+11, 21' Lt., Station 77+01, 58' Lt., Station 79+47, 72' Lt., Station 81+99, 67' Lt., Station 83+90, 25' Lt., Station 102+07, 51' Lt., Station 203+02, 13' Lt., and Station 400+75; 66' Lt.

Conflicts with construction activities include those power poles located at Station 18+98, 40' Lt., Station 21+46, 39' Lt., Station 23+71, 52' Lt., Station 26+24, 15' Rt., Station 28+87, 15' Rt., Station 31+36, 23' Rt., Station 34+10, 16' Rt., Station 36+38, 22' Rt., Station 39+29, 28' Rt., Station 42+84, 6' Rt., Station 45+28, 29' Lt., Station 48+49, 23' Lt., Station 72+18, 13' Rt., Station 75+11, 21' Lt., Station 77+01, 58' Lt., Station 83+90, 25' Lt., Station 102+07, 51' Lt., Station 203+02, 13' Lt. Overhead lines in conflict include finished roadway centerline crossings at Station 303+77, Station 10+76, Station 13+17, Station 25+35, Station 43+28, Station 70+83, Station 74+03, Station 75+01, Station 200+38, Station 201+99, Station 400+67, and Station 400+95. Additional overhead conflicts include the aerial facility located in the area of box culvert construction (structure C-12-062) at Station 304+77, 48' Rt. and the overhead crossing of the retaining wall construction (structure R-12-051) at Station 13+03, 48' Rt.

Scenic Rivers Energy Cooperative will relocate their facilities in conflict throughout the project area. Once complete Scenic Rivers Energy Cooperative facilities during construction will consist of the following: the existing overhead electric enters the construction limits along the eastern side of STH 35 running in a north-south direction to a power pole located at Station 303+77, 42' Rt. then changes direction heading to the west crossing the STH 35 centerline at Station 303+76 and connecting to a power pole located at Sta. 303+76, 78' Lt. A new temporary line will be installed connecting the existing power poles located at Sta. 303+76, 78' Lt. and Sta. 306+38, 43' Lt. The existing overhead line will continue to the north along the west side of STH 35 continuing outside of the construction limits. The existing overhead crossing connecting power poles located at Sta. 306+38, 43' Lt. to Sta. 305+77, 56' Rt. to Sta. 13+33, 58' Lt. will remain (service to motel). Existing overhead crossings in the area of box culvert construction (structure C-12-062) at Station 304+77, 48' Rt. and the overhead crossing of the retaining wall construction (structure R-12-051) at Station 13+03, 48' Rt. will be removed. No aerial facilities will be located between Sta. 13+33 to Sta. 48+49, 23' Lt. Existing aerial facilities will remain between the power pole located at Sta. 48+49, 23' Lt. to Sta. 68+52, 49' Lt. The existing facilities will be removed from Sta. 68+52, 49' Lt. to the end of project. The existing overhead facilities located on Demanes Lane and Slama Lane located within the construction limits will be removed. Scenic Rivers Energy Cooperative will install a temporary overhead electric line traveling from north to south along the north and east sides of the proposed Slama

Lane and Demanes Lane. Power poles are located Sta. 100+00, 19' Rt. and Sta. 101+76, 58' Rt. Temporary power poles are located at Sta. 103+50, 53' Rt., Sta. 104+98, 65' Rt., and Sta. 201+66, 53' Rt. Temporary overhead crossings will be located on CTH N at Sta. 76+65 and Slama Lane at Sta. 203+10. Existing power poles located at Station 18+98, 40' Lt., Station 21+46, 39' Lt., Station 23+71, 52' Lt., Station 26+24, 15' Rt., Station 28+87, 15' Rt., Station 31+36, 23' Rt., Station 34+10, 16' Rt., Station 36+38, 22' Rt., Station 39+29, 28' Rt., Station 42+84, 6' Rt., Station 45+28, 29' Lt., Station 48+49, 23' Lt., Station 72+18, 13' Rt., Station 75+11, 21' Lt., Station 77+01, 58' Lt., Station 83+90, 25' Lt., Station 102+07, 51' Lt., and Station 203+02, 13' Lt. will be removed. Existing underground electric lines to be retired will be discontinued in place. Scenic Rivers Energy Cooperative will relocate their facilities in conflict prior to April 23, 2019.

CenturyLink underground telephone lines are located along the east side of STH 35 within the construction limits running in a north/south direction. The underground line connects to a pedestal at Station 305+63, Rt. Multiple telephone lines branch off of the primary line located on STH 35; one underground line travels south to a power pole located at Station 303+78, Rt. and continues west as an overhead facility crossing STH 35 at Station 303+77 connecting to a power pole located at Station 303+76, Lt.; a second underground telephone line branches to a power pole located at Station 305+65, Rt. and continues northeast to service a motel; a third underground telephone line travels northwest crossing the STH 35 centerline at Station 306+00 connecting to a power pole located at Station 306+38, Lt. The telephone line continues overhead traveling south to a power pole located at Station 305+39, 87' Lt. The telephone converts back to an underground facility to a power pole located at Station 303+75, 78' Rt. The telephone line changes direction traveling west as an overhead facility traveling outside of the construction limits. An underground telephone line provides service to the restaurant from the motel at Station 11+38, 108' Lt. to Station 11+52, 184' Lt. An underground telephone line is located on the north side of CTH N and continues east beginning at a pedestal located at Station 51+58, Lt. The underground line travels east crossing Slama Lane at Station 201+02 and connects to a pedestal located at Station 400+75, 46' Lt. Multiple underground line branch out from this pedestal; one travels to the north along the east side of Slama Lane continuing outside of the construction limits; another extends to the south crossing Old CTH N (west) at Station 400+96 and then east to a pedestal located at Station 402+59, Rt. From this pedestal located at Station 402+59, Rt. multiple underground telephone lines branch out; one traveling west along the north side of CTH N (south side of Old CTH N (west)) crossing the Old CTH N (west) centerline at Station 200+43 and CTH N at Station 75+08 traveling along the east side of Demanes Lane continuing outside of the construction limits; the second underground telephone line travels along the south side of Old CTH N (north side of CTH N) east crossing the centerline of CTH N at Station 85+38 continuing along the south side of CTH N traveling outside of the project limits. Pedestals are located at Station 305+63, 40' Rt., Station 51+58, 43' Lt., Station 56+35, 19' Lt., Station 68+67, 82' Lt., Station 74+61, 87' Lt., Station 81+74, 74' Lt., Station 85+29, 8' Lt., Station 400+75, 46' Lt., Station 402+59, 18' Rt. Power poles are located at Station 303+78, 42' Rt., Station 303+75, 78' Lt., Station 303+76, 79' Lt., Station 305+39, 87' Lt., Station 305+65, 41' Rt., Station 306+38, 43' Lt.

Conflicts include: the underground telephone located from Station 301+65 to Station 307+31, Rt. (including the power pole located at Station 305+65, 41' Rt. and pedestal located at Station 305+63, 40' Rt.) with box culvert replacement (structure C-12-062), concrete curb and gutter, storm sewer, and ditching activities; underground telephone from Station 51+55 to Station 67+48, Lt (including the pedestal located at Station 56+35, 19' Lt.) with grading/earthwork activities; underground telephone located at Station 69+64 to Station 78+75, Lt. (including the pedestal located at Station 74+61, 87' Lt.) with grading/earthwork activities, storm sewer and ditching activities; underground telephone located at Station 82+75, Lt. to Station 89+00, Rt. (including the pedestal located at Station 85+29, 8' Lt.) with grading, culvert pipe, and ditching activities; underground telephone located at Station 100+00, Rt. to Station 105+39.14, Lt. with grading activities; underground telephone located at Station 200+17 to Station 205+00, Rt. with grading/ditching activities; and underground telephone located at Station 400+11.56 to Station 402+75, Lt. (including the pedestal located at Station 400+75, 46' Lt. and Station 402+59, 18' Rt.) with grading/ditching activities.

CenturyLink will relocate their facilities overhead on Scenic Rivers Energy Cooperative power poles beginning at the construction limits along the eastern side of STH 35 running in a north-south direction to a power pole located at Station 303+77, 42' Rt. then change direction heading to the west crossing the STH 35 centerline at Station 303+76 and connecting to a power pole located at Sta. 303+76, 78' Lt. The overhead telephone line will continue north to a power pole located at Sta. 306+38, 43' Lt. The overhead line will change direction heading to the east to power poles located at Sta. 305+77, 56' Rt. to Sta. 13+33, 58' Lt. (service to motel). Existing underground facilities between Sta. 13+33 to Sta. 48+49 will be discontinued in place. Telephone will be located aerially on Scenic Rivers Energy Cooperative's power

poles traveling east from the power pole located at Sta. 48+49, 23' Lt. to Sta. 68+52, 49' Lt. The telephone will change from an aerial facility to an underground facility beginning at the power pole located at Sta. 68+52, 49' Lt. and continuing to the end of project (Sta. 89+00). The underground telephone line will be located outside of the slope intercepts, but 1-foot inside of the proposed right-of-way (Sta. 68+52 to Sta. 89+00, Lt.). At the Slama Lane intersection the underground telephone line will be relocated outside of the side road slope intercepts 1-foot inside the proposed right-of-way crossing the Slama Lane centerline at Sta. 205+00. Pedestals are located at Station 56+35, 19' Lt., Station 74+61, 87' Lt., Station 85+29, 8' Lt., Station 400+75, 46' Lt., Station 402+59, 18' Rt. will be removed. CenturyLink will relocate their facilities by April 23, 2019.

7. Railroad Insurance and Coordination - BNSF Railway Company

A Description

Comply with standard spec 107.17 for all work affecting BNSF Railway Company property and any existing tracks.

A.1 Railroad Insurance Requirements

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

Notify evidence of the required coverage, and duration to Contact Calvin Nutt, Manager of Public Projects; 80 44th Avenue NE, Minneapolis, MN 55421; Telephone (763) 782-3495; E-mail calvin.nutt@BNSF.com to determine the applicable railroad rules and regulations. Once determined send the RPLI policy to Select from drop-down. Approval of the policy will not take place until the Manager of Public Projects has been contacted.

Also send a copy to the following: Scott Willinger, SW Region Railroad Coordinator; 3550 Mormon Coulee Road, La Crosse, WI 54601; Telephone (608) 792-1360; E-mail: gene.willinger@dot.wi.gov.

Include the following information on the insurance document:

- Project ID: 5496-00-74
- Project Location: Prairie du Chien, Wisconsin
- Route Name: CTH N / STH 35, Crawford County
- Crossing ID: South of 079 852A
- Railroad Subdivision: Aurora Subdivision
- Railroad Milepost: ~244.45
- Work Performed: Grading, excavation common, base aggregate dense, breaker run, HMA pavement, removing old structure C-12-776, Structure C-12-062, riprap, and geogrid reinforcement.

A.2 Train Operation

Approximately 44 through freight trains operate daily at up to 55 mph. There are no switching movements currently noted at this location.

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

Construction Contact

Calvin Nutt, Manager of Public Projects; 80 44th Avenue NE, Minneapolis, MN 55421; Telephone (763) 782-3495; E-mail Calvin.Nutt@BNSF.com for consultation on railroad requirements during construction.

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

Flagging Contact

Notify the Construction Contact above a minimum of 40 working days in advance to arrange for a railroad flagger. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

Cable Locate Contact

In addition to contacting Diggers Hotline, contact the BNSF Communications Network Control Center at (800) 533-2891, five working days before the locate is needed. Reference Wisconsin Milepost 244.45 on Line Segment 0003.

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

A.4 Work by Railroad

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

A.5 Temporary Grade Crossing

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

A.6 Rail Security Awareness and Contractor Orientation

Prior to entry on railroad right-of-way, the contractor shall arrange for on-line security awareness and contractor orientation training and testing, and be registered through "e-RAILSAFE" for all contractor and subcontractor employees working on railroad right-of-way. See e-railsafe.com "Information". The security awareness and contractor orientation training is shown under the railroad's name.

The department has secured right of entry to railroad property; neither the contractor nor subcontractors or their employees will be required to sign a right of entry form.

The security awareness and contractor orientation certification is valid for 2 year(s) and must be renewed for projects that will carry over beyond the 2 year period. Contractor and subcontractor employees shall wear the identification badge issued by e-RAILSAFE when on railroad right-of-way. Costs associated with training and registration are incidental to other items in the contract.

stp-107-026 (20170615)

8. 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 Aleigha Burg at (608) 317-9083.

stp-107-054 (20080901)

9. Environmental Protection.

Special precautions for oak wilt and emerald ash borer apply to this project.

Crawford County will cut/prune all oak tree and ash tree species prior to April 1st. Trees will be removed from project site, but stumps will remain (i.e. grubbing required).

See the DNR webpage at: <http://dnr.wi.gov/topic/foresthealth/oakwilt.html>

Do not move or transport ash material, the emerald ash borer, or hardwood debris (firewood) from Emerald Ash Borer (EAB) quarantined areas to a non-quarantined area without a compliance agreement issued by Wi Department of Agriculture, Trade, and Consumer Protection. Regulated items include cut hardwood (non-coniferous) firewood, ash logs, ash mulch or bark fragments larger than one inch in diameter, or ash nursery stock (DATCP statute 21).

For more information regarding the EAB and quarantine areas please follow the links below.

<http://datcpservices.wisconsin.gov/eab/article.jsp?topicid=20>

<http://datcpservices.wisconsin.gov/eab/articleassets/Recommendations%20to%20reduce%20the%20spread%20of%20EAB.pdf>

Protect and adequately restore all disturbed bank areas as soon as feasible.

10. Environmental Protection, Threatened and Endangered Species.

The project is located in the southern point of the high potential zone for the rusty patched bumble bee and contains suitable habitat including the drainage ditch along the south side of the CTH N corridor and woodland areas. Use Seeding Mixture No. 70 (permanent native seeding mixture) on all vegetated side slopes west of Station 48+00.

11. 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 John Bainter at (608) 785-9729. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

12. Erosion Control Structures.

Within seven calendar days after beginning work on the bridge superstructure, place all permanent erosion control devices, including riprap, erosion mat, ditch checks, seed, fertilizer, mulch, soil stabilizer, or any other item required by the contract or deemed necessary by the engineer. These devices shall be in place in the area under the bridge and on both sides of the roadway, from the waterway to a point 100-feet behind the backwall of the abutment. Within said limits, place these devices to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as the engineer directs. Before initial construction operations, place turbidity barriers, silt screens, and other temporary erosion control measures as the plans show, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

In the event that construction activity does not disturb the existing ground below the Q2 elevation, the above timing requirements for permanent erosion control shall be waived.

stp-107-070 (20030820)

13. 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)

14. Removing Old Structure (01. Sta. 305+18), Item 203.0200.

Supplement standard spec 203.5.3 with the following:

(4) Payment includes saw cutting concrete as required on the existing structure C-12-776 required to conform to traffic staging on STH 35 as indicated in the plans.

15. Removing Steel Gate, Item 204.9105.S.

A Description

This special provision describes removing Steel Gate conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Steel Gate in lump sum acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S	Removing Steel Gate	LS

stp-204-025 (20150630)

16. Removing Retaining Wall, Item 204.9090.S.

A Description

This special provision describes removing Retaining Wall conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Retaining Wall in lump sum acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S	Removing Retaining Wall	LS
stp-204-025 (20150630)		

17. Select Borrow, Item 208.1100.

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: Maximum particle size of 12 inches when measured from any face. The material passing the No. 4 sieve shall have a maximum of 20% by weight passing the No. 200 sieve.

stp-208-005 (20031103)

18. Seeding Nurse Crop, Item 630.0400.

Contact WDNR prior to applying seeding nurse crop. WDNR may adjust application depending on the time of year applied.

19. Foundation Drilling 30-Inch Diameter, Item 636.0050.S.

A Description

This special provision describes drilling holes for the H pile posts for retaining walls.

B (Vacant)

C Construction

Submit the proposed method for foundation drilling before beginning construction.

Drill holes to the diameter and depth the plans show. If necessary, use casing or alternative engineer-approved methods to maintain an open hole. If bentonite or other slurry is used to maintain an open hole, prevent spillage of the slurry into adjacent waterways. Locate the holes within the following tolerances:

Horizontal Location:	3 inches
Vertical Location:	1 inch
Vertical Alignment:	1/8 inch per foot

D Measurement

The department will measure the Foundation Drilling bid items by the linear foot acceptably completed, measured from the bottom of the hole to the top of the foundation footing.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
636.0050.S	Foundation Drilling (diameter)	LF

Payment is full compensation for drilling holes; for furnishing casing or alternative drilling methods; and, if rock is encountered, for coring rock.

stp-636-010 (20140630)

20. Removing Signs Type II, Item 638.2602; Removing Small Sign Supports, Item 638.3000.

Salvage material removed under bid items “Removing Signs type II” and “Removing Small Sign Supports” to Crawford County. Carefully remove and stockpile signs and sign supports outside the slope intercepts inside the right-of-way. Contact the Crawford County Highway Department to coordinate pick-up. Dennis Pelock, Commissioner at (608) 734-9500 or dpelock@crowfordcountywi.org.

21. Temporary Portable Rumble Strips, Item 643.0310.S.

A Description

This special provision describes providing, relocating, maintaining, and removing temporary portable rumble strips.

B Materials

Furnish RoadQuake2 or Roadquake2F temporary portable rumble strips, by Plastic Safety Systems. Do not use alternate products or methods without preapproval by the Bureau of Traffic Operations.

C Construction

C.1 Placement

Provide rumble strips where the plans show or the engineer directs as follows:

1. Before placing rumble strips, clean the roadway of sand and other materials that may cause slippage.
2. Place one end of the rumble strips 6 inches from the roadway centerline. Extend the strips perpendicular to the direction of travel. Ensure strips lay flat on the roadway surface.
3. Only one series of rumble strips, placed before the first work zone, is required per direction of travel for multiple work zones spaced 1 mile or less apart. Work zones spaced greater than 1 mile apart require a separate series of rumble strips.

C.2 Maintenance

Maintain rumble strips as follows:

1. If rumble strips slide, become out of alignment, or are no longer in the wheel path of approaching vehicles during the work period, thoroughly clean both sides of the rumble strips and reset on a clean roadway.
2. Repair or replace damaged rumble strips immediately.

D Measurement

The department will measure temporary portable rumble strips as a single lump sum 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
643.0310.S	Temporary Portable Rumble Strips	LS

Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary portable rumble strips.

stp-643-020 (20161130)

22. Temporary Traffic Signals for Bridges (01. C-12-062) Item 661.0100

The following timing plan is required as a part of the installation. Timing is based on pre-timed operation. Signal timing subject to change at pre-construction conference depending on the type of temporary signal that the contractor plans to use.

Stage 1 / Stage 3:

INTERVAL	SIGNAL SEQUENCE			
	SB/WB	NB/EB	SIDE	Seconds
1	G	R	R	20.4
2	Y	R	R	5.5
3	R	R	R	1.0
4	R	R	G	5
5	R	R	Y	3.4
6	R	R	R	10.8
7	R	G	R	13.6
8	R	Y	R	5.5
9	R	R	R	10.8

Cycle length = 76.0

Stage 2:

INTERVAL	SIGNAL SEQUENCE			
	SB/WB	NB/EB	SIDE	Seconds
1	G	R	R	20.4
2	Y	R	R	5.5
3	R	R	R	1.0
4	R	R	G	5
5	R	R	Y	3.4
6	R	R	R	13.6
7	R	G	R	13.6
8	R	Y	R	5.5
9	R	R	R	13.6

Cycle length = 81.6

Any changes to the timing plan need to be approved by the Regional Traffic Engineer prior to be implemented in the field.

Contact Jeff Vollmar at least 3 business days prior to turning on temporary signals at 608-789-5542.

Contact Joe Schneider, P.E. (WisDOT) a minimum of 7 days prior to turning on temporary signals at (608) 789-5959 to check the timing when the temporary traffic signals are installed.

23. Stone Gabion Wall, Item SPV.0035.01.**A Description**

This special provision describes furnishing materials and constructing a stone gabion wall as shown on the plans. The wall shall be soundly constructed of rectangular baskets made of polyvinyl chloride (PVC) coated and heavily galvanized steel wire mesh filled with rock as indicated on the plans.

B Materials

Provide wire mesh gabion baskets that are manufactured from welded wire mesh according to the requirements of ASTM A974 or from twisted/woven mesh according to the requirements of ASTM A975. The wire mesh gabion baskets shall have a mesh opening of not less than 9 square inches for gabions and not less than 4.5 square inches for mattresses, and shall meet the following requirements:

1. All wire mesh will be formed from wire having a minimum diameter of 0.105 inches for gabions and a minimum diameter of 0.086 inches for mattresses with fuse-bonded PVC coating and galvanizing that is in accordance to the applicable requirements of ASTM A974 and ASTM A975.
2. Additionally coat all galvanized steel wire with gray polyvinyl chloride that shall resist destructive effects of immersion in acidic, salt or polluted water, and exposure to ultra-violet light and abrasion, when subjected to 20,000 hours of testing according to ASTM specification B-117-73.
3. All other aspects of the wire mesh and fastening systems, including the galvanizing and PVC coating, shall meet the pertinent requirements of ASTM A974 and A975.

Provide lacing and stay wires for gabion diaphragms and for securing tops according to the wire specifications for the mesh, except the diameter shall not be less than 0.086 inch. Mechanical fasteners made of galvanized steel with zinc coating (as described above) or stainless steel and supplied by the gabion manufacturer may be used in lieu of the lacing wire, with the approval of the project engineer.

Provide rock, which will be used inside of the gabions, that is hard durable gravel or stone and is free of organic matter, lumps of clay, shale or other deleterious substances. Provide rock that is graded in size between 4 inches and 8 inches.

C Construction

Tightly close mechanical fasteners and space the fasteners as recommended by the manufacturer, the spacing between fasteners shall not exceed 6 inches.

Securely fasten individual gabions to adjacent gabions along the top, bottom, and vertical edges, and fill and place stone inside of the gabions in such a manner that conforms to specifications and details shown in the plan. Carefully place the stone in layers and densely pack the stone into the gabions. Layers of stone shall be approximately 12 inches thick. Use internal connecting wires between each stone layer to stiffen the basket and to ensure rectangular basket configurations after filling. Use a minimum of two internal connecting wires per stone layer for each 3 linear feet of wall length. Uniformly overfill the top layer of stone in each basket 1 to 2 inches to compensate for future rock settlement; allow for proper closing of the lid and for providing an even surface that is uniform in appearance. After closing, securely attach the lid to the surrounding baskets.

Prior to beginning wall construction, the engineer shall inspect the compacted wall foundation soils to determine if the foundation is adequate for the intended loads. Any required foundation improvements will be paid for at the appropriate bid prices for the items. Place the wall units to the lines, elevations and batter shown in the plans. Place wall units in horizontal layers, unless otherwise specified in the plan. Stagger basket-to-basket end joints in relation to adjacent layer basket end joints. Maintain the design wall face batter as wall construction proceeds. Do not place subsequent layers of baskets until the backfill has been placed and compacted behind all lower basket layers. Backfill with homogeneous soils previously excavated. Compact all backfill behind the wall in 6-inch lifts.

D Measurement

The department will measure Stone Gabion Wall for payment in volume by the cubic yard of wall completed according to the contract 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
SPV.0035.01	Stone Gabion Wall	CY

Payment is full compensation for excavating and preparing the bed; furnishing, hauling, and placing the gabion baskets and rock; filling baskets with rock; backfilling and compacting around stone gabion wall with homogeneous material, and disposing of unnecessary excavated material.

Geotextile Type HR will be paid for under the Geotextile Type HR bid item.

24. Temporary Stone Ditch Checks, Item SPV.0035.02.

A Description

This special provision describes furnishing and installing temporary stone ditch checks for erosion control purposes as shown on the plans or as directed by the engineer, or both, and as hereinafter provided.

B Materials

Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap in accordance to the standard spec 501.2.5.4.4. Railroad ballast or breaker run stone conforming to the following applicable gradations may also be used:

Railroad Ballast	
Sieve Size	Percent by Weight Passing
2 Inch	100
1 Inch	20 – 55
3/8 Inch	0 -5

Breaker Run Stone	
Sieve Size	Percent by Weight Passing
5 Inch	100
1½ Inch	0 – 50
3/8 Inch	0 - 5

Incorporate stone or rock in the ditch checks that is hard, sound, and durable, and meets the approval of the engineer.

C Construction

Place temporary stone ditch checks immediately after concrete curb and gutter placement is completed. Place stone or rock ditch checks at 60° angles to the direction of flow and construct to the dimensions and in accordance to the details shown in the plans.

Remove sediment from behind the temporary stone ditch checks when it has accumulated to one half of the original height of the dam.

Remove temporary stone ditch checks prior to final grading of base course and HMA pavement placement.

D Measurement

The department will measure Temporary Stone Ditch Checks in volume by the cubic yard of material incorporated in the work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.02	Temporary Stone Ditch Checks	CY

Payment is full compensation for furnishing, producing, crushing, loading, hauling, placing, shaping and maintaining, and removal/disposal of Temporary Stone Ditch Checks.

Sediment removed shall be included in Temporary Stone Ditch Check bid item.

25. Inlet Safety Bars, Item SPV.0060.01.

A Description

This special provision describes furnishing and installing steel safety bars for inlets as shown on the plans and as hereinafter provided.

B Materials

Furnish steel pipe conforming to ASTM A53, Grade B, Schedule 40.

Furnish structural steel hardware conforming to ASTM A36.

Galvanize all steel and hardware after fabrication in accordance with the requirements of ASTM A123.

C Construction

Check dimensions of each inlet structure to determine lengths of structural steel required for each safety bar.

Repair pipes, angles and brackets on which the galvanized coating has been damaged in accordance with the requirements of AASHTO M36M.

D Measurement

The department will measure Inlet Safety Bars by each inlet safety bar 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	Inlet Safety Bars	Each

Payment is full compensation for furnishing and installing all materials; drilling and connecting bars to inlets; and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.

26. Inlet Protection Special, Item SPV.0060.02.

A Description

This special provision describes furnishing and installing inlet protection as shown on the plans or as directed by the engineer, or both, and as hereinafter provided.

B Materials

Provide materials conforming to temporary ditch checks and sand bags as specified in subsection 628.2 of the standard specifications.

C Construction

Construct the Inlet Protection Special in accordance with the plan details and the requirements of subsection 628.3 of the standard specifications.

D Measurement

The department will measure Inlet Protection Special as each inlet protection 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	Inlet Protection Special	Each

Payment for Inlet Protection Special is full compensation for furnishing all materials; for delivering, assembling, placing, maintaining, and removing temporary ditch checks and sand bags; and for removing and disposing or spreading of the accumulated sediment to form a suitable surface for seeding.

The department will pay separately for any required topsoil, seed, fertilizer, mulch or erosion mat required under the applicable bid items.

27. Precast Panels for Soldier Pile Walls, Item SPV.0165.01.

A Description

This special provision describes fabricating, furnishing, transporting and erecting precast concrete panels for soldier pile walls.

B Materials

B.1 General

Furnish precast panels that conform to the details shown on the plans.

Furnish steel reinforcement conforming to standard spec 505.

Furnish Grade A, A-FA, A-S, A-T, A-IS, or A-IP air-entrained concrete conforming to standard spec 501.

B.2 Plant Certification

Obtain all precast concrete panels from fabrication plants that comply with the department's plant certification program in standard spec 106.3.3.3.1.

C Construction

C.1 General

Prior to fabricating panels, verify that no field modifications were made to the top of footing elevations. Field modifications will require adjustments to the panel heights listed on the plans.

C.2 Placing Concrete

Handle and place the concrete conforming to standard spec 502.3.5.

C.3 Curing

Cure the concrete panels by any of the methods specified in standard spec 502.3.8.

C.4 Transportation, Storage, and Erection

Transport, handle, store, and erect precast panels in a way that prevents cracking or other damage to the panels. Discard and replace units damaged by improper handling or storing.

D Measurement

The department will measure Precast Panels for Soldier Pile Walls by the square foot acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Precast Panels for Soldier Pile Walls	SF

Payment for Precast Panels for Soldier Pile Walls is full compensation for furnishing all materials, including leveling blocks for fabrication; for all handling, hauling and erecting; and for discarding and replacing units damaged by improper handling or storage.

28. Geogrid Reinforcement, Item SPV.0180.01.

A Description

This special provision describes furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications in accordance with the plans, section 645 of the standard specifications, and as hereinafter provided.

B Materials

Provide geogrid that consists of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The polymer shall consist of polyester, polypropylene, polyamide, or polyethylene. The grid shall maintain dimensional stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. Minimum geogrid width shall be 6.0 feet.

Provide geogrid that complies with the following physical properties:

Test	Method	Value ⁽¹⁾
Tensile Strength at 5% Strain, Both Principal Directions (lb/ft)	ASTM D 4595 (2)	450 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 (3)	150,000 min.
Aperture Area (in ²)	Inside Measurement (4)	5.0 max.
Aperture Dimension (in)	Inside Measurement (4)	0.5 min.

⁽¹⁾ All numerical values represent minimum/maximum average roll values, i.e. the average minimum test results on any roll in a lot should meet or exceed the minimum specified value.

⁽²⁾ The tensile strength (T) of a joined multi-layered geogrid shall be computed using the following equation:

$$T = n(f)t$$

where

n = the number of individual layers in the joined multi-layered geogrid,

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595, and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation $f=1.00 - [0.04(n - 1)]$.

(3) Values shall be determined by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches \pm 0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to 1 element plus $\frac{1}{2}$ the aperture width on both sides of that element. An element is defined as the minimum number of parallel strands that form a distinguishable repeating pattern.

(4) Aperture Area and Aperture Dimension for joined multi-layer geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. The geogrid rolls shall be clearly marked to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least 10 days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required lines, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items that may cause damage to the geogrid during placement or covering.

Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure it using pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a minimum overlap of 6 inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by using ties, straps, clips, or other devices to develop a secure joint that meets the approval of the engineer. No vehicles or construction equipment shall be permitted to operate directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid; secure the additional geogrid in place so that it overlaps the damaged area by at least 3 feet in all directions. Remove and replace geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer. All costs to repair or replace damaged or defective geogrid shall be the responsibility of the contractor.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the standard specifications or special provisions except that the initial lift of material placed on the geogrid must be at least 4 inches. Place, spread, and compact the required backfill material so that the geogrid is not displaced or damaged. The engineer may require changes in equipment and/or operations to prevent such damage or displacement.

D Measurement

The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed 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
SPV.0180.01	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid; furnishing and installing all devices and materials necessary to join or secure the geogrid in place; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

29. Articulated Concrete Block Type C, Item SPV.0180.02.

A Description

This special provision describes furnishing and installing articulated concrete block type C as shown on the plans and as hereinafter provided.

B Materials

Provide concrete block meeting a compressive strength of 4,000 psi using ASTM-C-140 for dry cast products and ASTM-C-39 for wet cast products. Cast concrete blocks shall conform to ASTM-C-1262 in a 3% saline solution at forty (40) cycles and do not exceed 1% loss of its initial weight, or conform to ASTM C 666, the block shall retain 80% of the relative dynamic modulus with no more than 1% loss of initial weight. Compliance with these procedures shall be accomplished by certification from an AMRL (AASHTO Material Registered Laboratory) certified plant. This Certification shall be done when a change is incurred in the mix design, supplying plant, and/or source materials in addition to yearly recertification.

Provide articulated concrete block type C system tested in accordance with FHWA -RD-88-181 or FHWA-RD-89-199 and a minimum slope of 2:1.

Furnish articulated concrete block revetment system including revetment cables with a minimum service life of 50 years. A minimum factor of safety of 5 shall be applied to the cables for lifting and placing purposes.

Concrete or grout used in between mat to mat connections shall meet a minimum compressive strength of 4,000 psi.

C Construction

Excavate areas of articulated concrete block flume as shown on the plans. Line the excavated swale limits of the flume with geotextile type HR fabric. Place articulated concrete block mats in flume as shown on the plans. Abut mats and grout connection between mats as shown on plans and as described in these specifications.

Ensure that the articulated concrete block system is installed as tested and recommended by the manufacturer.

D Measurement

The department will measure Articulated Concrete Block Type C by the square yard 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.0180.02	Articulated Concrete Bloc Type C	SY

Payment is full compensation for excavating the swale (including excavation rock if required); furnishing, hauling, and placing the articulated concrete block type C; furnishing and installing concrete or grout for mat to mat connections, and disposing of unnecessary excavated material.

Geotextile Type HR will be paid for under the Geotextile Type HR bid item.