UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
MIDWEST, REGION
Division of Engineering
5600 American Boulevard West
Bloomington, Minnesota 55437-1458

Station Name/Address:

SHERBURNE NATIONAL WILDLIFE REFUGE

17076 293 Avenue, Zimmerman, MN 55398

Project Name:

AUTOTOUR REHAB. – SOUTH LOOP

PROJECT MANUAL

PART III, SECTION J

LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

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PART 1 - GENERAL

1.1 Project Title: Sherburne National Wildlife Refuge
Autotour Rehabilitation – South Loop

1.2 Work Under These Specifications

A. Contractor shall furnish materials, labor and equipment for the work described below. Measurement and payment shall be as defined below and as indicated in the project plans and specifications. All work items that are not specifically called out below for payment are considered incidental and no direct compensation will be provided.

B. Base Bid

Route 011 (Prairie's Edge Wildlife Drive)

1. Item 1 – Mobilization and Demobilization. This work includes, but is not limited to, project mobilization and demobilization, project management, oversight, traffic control plans, permitting, site restoration, shoulder grading, seeding, erosion & sediment control and cleanup.

   This item will not be measured for separate payment and will be paid for on a lump sum basis.

2. Item 2 – Testing and Inspection. This work includes, but is not limited to, all proof rolling, testing, and inspection work required to execute the construction of this contract.

   This item will not be measured for separate payment and will be paid for on a lump sum basis.

3. Item 3 – Additional Authorized Excavation. This work includes but is not limited to, the removal of all unsuitable soil materials not identified in the drawings in areas and to a depth as directed by the Government, hauling and disposing

of excavated materials off-site, surveying all areas of additional authorized excavation to determine the volume removed, proof rolling, furnishing & placement of any geotextile fabric for ground stabilization as recommended by Contractor's Independent 3rd Party Testing Agency, and backfilling excavation by furnishing, placing, and compacting **impervious** embankment material as recommended by the Contractor's Independent 3rd Party Testing Agency. Use/location of Additional Authorized Excavation shall be recommended by Contractor's Independent 3rd Party Testing Agency in writing with verification of recommendation to be provided by Government once written recommendation is received. The Government must authorize any work under this item prior to the work occurring or payment may not be provided for the work.

Measurement for payment for Additional Authorized Excavation will be made by field measurement of the volume in cubic yards of Additional Authorized Excavation acceptably approved and performed. The Contractor shall perform the surveying required for the measurement including line, grade, and calculating total volume of the excavated area. Measurement will be made to the nearest one-tenth of a cubic yard. Measurement must be made prior to backfilling of the excavation and the Government and Contractor must be in agreement on the measured volume prior to backfilling. The Government will not pay for excavation over the unit price quantities provided in the Bid Schedule unless agreed to prior to excavation through the formal modification process.

4. Item 4 – Aggregate Surface. This work includes, but is not limited to furnishing and placing the aggregate, compaction, testing, shaping, proof rolling, traffic control, water for compaction and dust control.

Measurement for payment for Aggregate Surface will be made by weight on a ton basis of material acceptably delivered, placed and compacted as described in the project documents. The pay weights for aggregates will be the scale weight of the material delivered. Weight tickets shall be provided to the Government at the end of each day's operations. The Government will not pay for material placed over the unit price quantities provided in the Bid Schedule unless agreed to prior to placement of the material through the formal Modification process.

5. Item 5 – Wooden Deck/Pull Off No. 4 Demolition. This work includes, but is not limited to, the demolition of the wooden deck, demolition of the deck foundations, removal of the aggerate pull off, grading, site restoration and disposal of demolished items.

   This item will not be measured for separate payment and will be paid for on a lump sum basis.

1.3 Location and Inspection Of Site

A. The work site is located at Sherburne National Wildlife Refuge near Zimmerman, MN. The mailing address is shown on the Solicitation, Offer, and Award (Standard Forms 1442 or, 18 block 9) as attached to this Invitation. The Station Manager may be contacted for further information at the above referenced address or by telephone at (763) 340-0467.

B. All prospective bidders/quoters, contractors, subcontractors, and related persons are encouraged to visit the site(s) of the proposed Work and to assess the location(s) and extent of the Work prior to submitting bids/quotes. Persons may inspect the site by contacting the Station Manager.

1.4 Specifications and Drawings for Construction

A. Exact location of all affected utilities will be the responsibility of the contractor. Drawings may not completely show all utilities. Site verification is required in addition to contacting any local authorities and utility companies to determine exact locations of utilities.

B. In case of difference between drawings and specifications, the specifications shall govern.

1.5 Work Not Included In This Contract

A. All items indicated **"NIC"** on drawings or in specifications are items not included in this contract.

B. Work in place is generally shown as "Existing" on the Contract Drawings.

C. Work to be performed under other contracts and not included as part of this contract is generally shown as "By Others" on the Contract Drawings.

1.6 Items Provided By The Government

A. Work to be accomplished by the Government or manufactured items to be provided by the Government are generally shown as "By Government" on the Contract Drawings.

1. Unless specifically provided herein, no materials or equipment shall be furnished by the Government under this Contract.

1.7 Engineering Services:

A. The Government has not established a baseline nor a benchmark for this project. The Contractor shall furnish and place all stakes, marks, and templates required for the performance and completion of the

work. Any baseline and/or survey work needed to perform the work shall be provided by the Contractor at their expense.

1.8 Temporary Facilities

A. Maintain and restore all government roads, service areas and utilities used to pre-construction condition.

B. The Contractor shall provide, and maintain, temporary toilet facilities at the project site for the duration of the project.

1.9 Site Access and Right of Way

A. The construction access limits on Government property will be established by the Government and the Contractor shall be responsible for complying with these limits and governing all work accordingly. All temporary access roads shall be removed following work completion unless directed otherwise by the Contracting Officer.

B. All bidders are reminded that they are responsible for contacting the local entity such as township, county, or state having jurisdiction in the project vicinity to insure bidders/quoters are aware of any requirements of the local entity. These requirements are between the entity and the bidder. Load limits and other restrictions shall be obeyed. If the Contractor proposes to cross private property, permission must be obtained from the owner to use private property or roads in the conduct of the Work.

C. Work scheduled on Saturdays, Sundays, Federal Holidays or other than normal working hours shall be approved in advance by the Government.

1.10 Safety - In addition to FAR 52.236-13 Accident Prevention

A. Contractor shall fill out and submit the "Preconstruction Safety Checklist" to the Contracting Officer (CO) prior to beginning construction. The Contractor shall work with the COR and refuge staff on safety requirements throughout the duration of the Contract.

B. The contractor shall designate a safety officer to ensure a safe work site. The safety officer shall perform daily work site inspections to assure compliance with all safety regulations and standards.

C. The Contractor's Safety Plan shall be available on-site. The Contractor shall provide Safety Data Sheets (SDS) for all hazardous materials brought on-site. SDS shall be made available in a conspicuous location.

D. All equipment and work activities shall comply with OSHA Regulations and all accidents incidental to work performed under this contract shall be reported in accordance with OSHA reporting requirements. Additionally a copy of the accident report shall be provided to the Contracting Officer.

E. The contractor shall provide and install barricades, signs, or other warning devices to delineate the construction area and restrict public access to the construction site. Follow Manual of Uniform Traffic Control Devices (MUTCD).

F. Provide at least one non-freezing-type fire extinguisher in each workshop and shed used for storage of materials on the premises. Place in location readily accessible to workers.

G. Provide at least one non-freezing-type fire extinguisher of the appropriate class for each group of workers performing flammable procedures.

H. Provide and maintain a basic first aid kit for use of workers.

(a) Provide first aid supply commensurate with size of project with items necessary for first aid treatment of all injuries. The first aid supply shall include items identified on SDS (see paragraph B of this section) in applicable locations.

(b) Advise all workers of the location of first aid supplies.

(c) Post telephone numbers of nearest hospital or ambulance service and fire station in conspicuous location. Advise all workers of location of telephone numbers.

I. Provide necessary Personnel Protective Equipment (PPE) as identified by SDS and OSHA regulations. Provide documentation, workers have been trained in use of PPE prior to individual use.

J. The contractor shall locate all utilities prior to performing any excavation operations. The contractor shall contact Gopher State One Call to assist in these locates.

1.11 Equipment Cleaning

A. The Contractor shall clean all equipment prior to equipment coming on site to prevent the transport and spread of invasive species.

1.12 EXISTING ROADWAYS AND OTHER ITEMS

A. Contractor shall provide equipment of sufficient size/weight to not damage existing infrastructure. Existing roadways or other infrastructure items that are damaged due to the Contractor’s operations shall be repaired by the Contractor at their expense.

1.13 WASTE REDUCTION PLANS

A. Contractor shall provide a Waste Reduction Plan (FAR Clause 52.223-10) for demolition and construction to promote cost-effective waste reduction in all operations covered by this Contract/Task Order, if required.

B. Materials that can be recycled shall be recycled.

1.14 HAZARDOUS MATERIALS

A. The Contractor shall not use any products containing asbestos, cadmium, chromium, or lead. If products installed are found to contain any of these items, the Contractor shall be responsible for removing and replacing these items with products not containing asbestos, cadmium, chromium, or lead at the Contractor's expense.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

(END OF SECTION 01100)

PART 1 - GENERAL

1.1 Jobsite Administration - Superintendence, Subcontract administration and Quality Control, is the responsibility of the Contractor.

A. Final decisions relative to items in conflict shall be made by the Contracting Officer.

B. The Government shall have the authority to temporarily suspend the Work for such time as necessary because of the failure on the part of the Contractor to perform any of the provisions of the Contract. No extension of contract performance time will be permitted until the Government determines that the deficiencies in performance, which caused the temporary suspension, have been corrected.

C. The Contractor shall have responsible superintendence on site during all project operations. Contractor shall notify Government of any changes of superintendents.

D. The Contractor shall notify the COR at least ten (10) days prior to the anticipated date of completion of all Work specified herein. Upon completion of the Work, the COR shall proceed with the final inspection which shall be completed as promptly as practicable. The time required for such inspection and for performing any corrective Work shall be included in the contract performance time.

1.2 Modification/Change Order procedures

A. In the event of the need for a Change Order, the Contractor will receive a letter requesting a price quote for proposed changes to the Contract.

B. For evaluation purposes, the Contractor's quote shall be broken down to show the costs of labor and materials for each proposed category of Work included

with the change, along with the total cost for Contractor's overhead, profit, and bond for the proposed changes.

C. All Contract time extensions required as a result of a proposed change must be justified and supported in detail at the time of the proposal.

1.3 Preconstruction Conference

A. Soon after award of the Contract and prior to commencing construction, the Contractor and any subcontractors shall attend a preconstruction conference with representatives of the Government. Timely notification of the meeting will be given to the Contractor. Time, date, and place of the conference will be determined by the Contracting Officer. Requirements pertaining to Contract administration, construction operations and the project schedule will be discussed. The project schedule shall be in accordance with Section 01330. The Preconstruction Safety Checklist shall be submitted for review during this conference.

1.4 Progress Meetings

A. Periodic general project meetings will be conducted with a representative of the Contractor at the project site or by telephone by the Government's representative for the purpose of coordinating, expediting, and assessing the work progress.

B. The Contractor shall provide reports of progress on the project, discuss the work schedule for the coming period and present all conflicts, discrepancies or other difficulties for resolution.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (not Applicable)

(END OF SECTION 01310)

PART 1 - GENERAL

1.1 General:

A. Refer to submittal register or technical specifications for all submittals required.

B. When specifically requested by the Contracting Officer (CO), Contractor's Officer's Representative (COR) or the Government's Construction Inspector, the Contractor shall provide copies of manufacturer's written installation instructions and/or recommendations for review and approval prior to accomplishing equipment installation.

1.2 Submittal Register:

A. A submittal register, listing items requiring submittals under this solicitation, is provided as an attachment to this document. The Contractor shall provide all required submittals to the COR within 30 days of award except for items noted otherwise on the submittal register.

B. The Contractor shall provide a Submittal Schedule detail when each submittal will be provided to the Government for review. Contractor shall coordinate Submittal Schedule with Construction Schedule to allow sufficient time for review, and corrections before scheduled activity.

B. Furnish digital submittals or hard copy submittals. If hard copy submittals are provided, furnish a minimum of four copies of all required submittals. Three copies will be retained by the Government. The remaining copies will be returned to the Contractor.

C. The approval of submittals shall not relieve the Contractor to comply with the terms and conditions of the Contract Drawings and Specifications. The Contractor shall be responsible to determine correct

dimension, design, connection, detail and satisfactory construction of all Work.

1.3 Project Schedule: Contractor shall provide as required by Federal Acquisition Regulation (FAR) clauses.*

In addition to the schedule requirements noted in the FAR, the Contractor shall provide the COR a schedule at the Pre Construction Meeting. If the schedule changes from the previously submitted schedule, the Contractor shall promptly provide an updated schedule to the COR.

1.4 Price Breakdown - Lump Sum Items: Contractor shall provide as required by FAR clauses. *

1.5 Subcontractor's List

A. Submit a list of subcontractors who will be working on the project.

1.6 Submittal of Progress Payment Certificate: Contractor shall provide as required by FAR clauses. *

1.7 Guarantees, Warranties And Certificates: Refer to Section 01770

1.8 Operating And Maintenance Instruction: Refer to Section 01770

1.9 Delivery Tickets

A. The Contractor shall submit to the Government's on site representative, one legible copy of each delivery ticket for all material delivered to the construction site.

B. The delivery ticket shall show brand name, catalog number, and number/quantity of items received and other relevant information as described in specific sections of these specifications.

C. If Government Representative is not on site, all material tickets for the week shall be collected by the Contractor and provided to the COR (at the COR's office in Bloomington, Minnesota) by the following Tuesday.

1.10 Waste Manifests and Disposal Tickets

A. The Contractor shall submit copies of all waste manifests as well as waste disposal tickets.

B. Manifests shall state type of waste (i.e., construction debris, hazardous asbestos, etc.), quantity of material disposed, location of disposal, landfill designation, EPA registration of landfill, and EPA registration for transportation of any hazardous wastes.

C. Waste disposal tickets shall state the type of waste, location of disposal, landfill designation, and quantity of material disposed.

1.11 Testing Reports: The Contractor shall submit all testing reports as described in specific sections of these specifications.

1.12 Traffic Control Plan: Contractor shall prepare a traffic control plan and apply for, and receive, (from any Jurisdictions with Authority) any required approvals/permits prior to onsite operations and prior to submitting said plan to the Government.

Contractor shall submit a traffic control plan to demonstrate to the Government how they anticipate handling traffic during the course of construction. This plan shall be submitted by the Contractor prior to any site disturbance. This plan shall be reviewed by the Government and all changes requested by the Government shall be made by the Contractor.

The Prairie Wetland Wildlife Drive – South Loop can be closed during on-site construction operations. If the Contractor elects to close this road, the Contractor shall include in his/her traffic Control Plan details on how the Contractor will manage the public traffic for the Prairie Wetland Wildlife Drive – North Loop, which will remain open during Construction.

All Traffic Control shall be paid for by the Contractor.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (not Applicable)

* The applicable FAR clauses will be provided in full text to the resultant contractor at the pre-construction conference.

(END OF SECTION 01330)

PART 1 - GENERAL

1.1 Regulatory Requirements

A. All work shall be accomplished in strict accordance with OSHA and all other regulations, codes, and laws in effect at the time the work is performed for the location where it is to be performed.

1.2 Means and Methods

A. Means and methods used in the performance of this Contract must be in accordance with all applicable Federal Acquisition Regulations in addition to OSHA regulations, 29 Code of Federal Regulations, acceptable industry practices as recognized by societies, associations, building codes, manufacturers' specifications and any applicable state safety and health requirements.

1.3 Permits

A. All permits required to support construction activities such as road permits for oversize, overweight vehicles and equipment, bridge permits, erosion & control/NPDES permits, utility hookup permits, etc. shall be obtained and paid for by the Contractor.

B. The Contractor shall obtain all Erosion and Sediment Control permits as required by Federal, State, County and Local regulations and laws. The Contractor shall prepare the SWPP plan and update the SWPP throughout the entire length of Construction as required by the Jurisdiction with Authority.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (not Applicable)

(END OF SECTION 01420)

PART 1 - GENERAL

1.1 Manufacturer's Specifications

A. The installation of manufactured products and equipment, together with all associated parts, shall be in conformance with the manufacturer's recommendations, and code requirements. All installations shall be complete and ready for immediate use, and every part required for proper operation of the manufacturer's equipment shall be provided. Following the completion of the Work under this Contract, all installed equipment shall be tested for proper operation and compliance with the Contract.

1.2 Final Inspection

A. The Contractor shall request a final inspection in writing at least ten (10) days prior to the anticipated date of completion.

B. Work will not be considered ready for final inspection until all the Work has been completed and the Contractor has certified that all items are properly operating and in strict compliance with all Contract terms and conditions.

C. The Contractor or the project supervisor shall be at the job site during the final inspection.

1.3 Tests

A. Complete all tests required to prove actual operating performance of equipment, systems and materials incorporated into the project.

B. Submit reports of all tests to the Contracting Officer prior to final payment.

C. Provide any regulatory acceptance documents in cases of cleanup.

1.4 Maintenance and Operating Instructions

A. Submit three (3) final copies of all operating, maintenance instructions and parts lists for all equipment and systems that require adjustment, servicing, and attention for proper operation. Include all information necessary for proper operation of equipment. Use simple, non-technical language where possible. Provide all necessary diagrams and schematics required by repairmen. Any hazards likely to occur in operation of equipment shall be pointed out to avoid improper operation of any equipment that might result in damage or danger to equipment, building or personnel.

B. Final copies of all maintenance and operating information shall be submitted in bound form as a "Manual of Operating Instructions" with items grouped by sections of Work. Append each manual with name, address, telephone number of Contractor, subcontractor and companies or individuals providing service for equipment used.

C. Provide competent personnel to meet with the Government representative to fully explain and familiarize the Government personnel with all equipment and its operation and maintenance.

1.5 Record Drawings:

The Contractor shall provide and maintain in proper order and in good, clean condition, at the project site, one (1) complete set of full size prints of all Drawings. On this set, with red pencil or ink, the Contractor will neatly inscribe all changes in Work. At time of final acceptance, and prior to final payment, these corrected prints will be presented to the COR. The Contractor will note all data and changes on these record drawings in sufficient detail and clarity to provide information necessary for preparation of "as built" drawings by the Government.

1.6 Guarantees, Warranties and Certificates

A. The Contractor will submit all guarantees, warranties and certificates to the Government prior to final payment.

B. The Government requires a 100% warranty for a period of one full year after final acceptance. Items of Work found defective during the warranty period will be replaced at no cost to the Government and the warranty for that particular part of the Work shall automatically extend for one full year beyond the completion date of repairs.

C. If a manufacturer or supplier offers a guarantee in excess of the one year requirement outlined herein, then the longer guarantee period will apply for those particular items. If a longer guarantee and/or warranty is noted to be provided elsewhere in the project documents (plans, specifications, contract), the longer guarantee and/or warranty shall be provided.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (not Applicable)

(END OF SECTION 01770)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract and Division 1 Specification Sections, apply to this Section.

B. Minnesota Department of Transportation Standard Specifications for Construction, 2025 Edition, hereafter referred to as MNDOT Standard Specifications. The method of measurement and basis of payment portions do not apply.

1.2 Summary

A. Work covered under this Section includes providing all materials, equipment and labor to prepare the Site for construction, including but not limited to:

1. Clearing and grubbing those portions of the construction site as needed to perform the work.

2. Constructing temporary erosion control measures as required by the Jurisdiction with Authority and as necessary to prevent the erosion of soils and transport of silt, mud and other debris off of the site or to other areas of the site where damage might result or that might otherwise be required by Laws and Regulations. Contractor shall obtain all necessary permits, perform all maintenance, and management of said permits and erosion control measures.

3. Maintaining access roads on an as-needed basis to repair any wear or damage caused by Contractor’s activities.

B. Related Sections:

1. Division 2 Section "Earthwork" for excavating, backfilling, and site grading.

2. Division 2 Section "Dewatering" for dewatering systems for excavations.

3. Division 2 Section "Excavation Support and Protection" for shoring, bracing, and sheet piling of excavations.

1.3 Sequencing

A. Contractor shall schedule its operations to minimize the potential for erosion by minimizing the disturbed areas on-site at any given time and completing operations and restoring the site in the shortest time possible.

1.4 References

A. Minnesota Department of Transportation Standard Specifications for Construction, 2025 Edition, hereafter referred to as MNDOT Standard Specifications.

1.5 Utilities

A. The Contractor shall be responsible for verifying the location of existing utilities. Any damage incurred to existing utilities will be repaired by the Contractor at his expense to the satisfaction of the GOVERNEMNT.

B. The Contractor shall contact local authorities, utility companies and Gopher State One Call to determine exact location of utilities prior to commencing any excavation.

1.6 Submittals

A. No submittal required for this section.

PART 2 - PRODUCTS

2.1 General

A. Temporary erosion controls may include, but are not limited to, silt fences, straw bales, geotextiles, terracing, riprap, temporary drainage piping, sedimentation basins, vegetative cover, and any other construction required to prevent erosion and sediment transport

2.2 Silt Fencing (and other required Temporary Sediment Control)

A. Silt fencing and other required Temporary Sediment Control shall conform to MNDOT Standard Plan 5-297.405.

PART 3 - EXECUTION

3.1 Clearing and Grubbing

A. Clearing and grubbing of the work area shall consist of the complete removal of all obstructions above the ground surface and removal of stumps, roots, buried logs, broken

concrete and other objectionable matter as noted on the drawings and as required to perform the work. Any and all tree removal, not noted on the drawings to be removed, necessary to accommodate the work to be performed needs to be approved by the Station Manager prior to removal.

B. Protecting all trees and vegetative materials not noted on the drawings to be removed and/or cleared & grubbed as well as trees and vegetative materials meant to remain undisturbed as directed by the Government.

C. Appropriately disposing of vegetative materials cleared and grubbed from the site in accordance with Laws and Regulations.

3.2 Temporary Erosion Controls

A. Temporary Sediment Control shall be installed as required by the Jurisdiction with Authority.

B. Temporary Sediment Control moved to allow access to the excavation area shall be replaced at the end of each construction day.

C. Remove and dispose of all temporary sediment controls at the completion of the work.

D. If soil and debris from the site accumulates in low areas, roadways, ditches, or other areas where in Jurisdictions with Authority's determination it is undesirable, Contractor shall remove the accumulation and restore the area to its original condition without additional compensation.

3.3 Disposition of Material

A. Cleared and grubbed materials must be disposed of off-site. Contractor shall comply with all federal, state, county, and local laws and regulations when removing and disposing of cleared and grubbed materials. Excess soil and/or aggregate shall also be disposed of off-site in accordance with all federal, state, and local laws and regulations.

3.4 Construction Survey and Staking

A. Contractor shall provide construction surveying and staking, as needed.

(END OF SECTION 02100)

SECTION 02240 - DEWATERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes construction dewatering.

B. Related Sections:
1. Division 2 Section "Site Work" for excavating, backfilling, site grading, and for site utilities.
2. Division 2 Section "Earthwork" for excavating, backfilling, site grading, and for site utilities
3. Division 2 Section "Excavation Support and Protection" for shoring, bracing, and sheet piling of excavations.

1.3 DEWATERING REQUIREMENTS

A. The Contractor is solely responsible for determining if dewatering will be required for his or her operations.

B. The Contractor is solely responsible for designing, furnishing and maintaining a dewatering system if the Contractor determines one is necessary for his/her operations.

C. The Contractor is solely responsible for obtaining any and all permits that may be required for the installation of a dewatering system. The Contractor shall follow all requirements of governing authorities related to a dewatering system.

D. The Contractor shall coordinate dewatering locations, schedule, timing, duration, and peak flows and amounts with Refuge Staff.

1.4 PERFORMANCE REQUIREMENTS

A. Dewatering Performance: If Contractor determines dewatering is necessary for his/her operations, design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.

1. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.
2. Prevent surface water from entering excavations by grading, dikes, or other means.
3. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.
4. Remove dewatering system when no longer required for construction.

1.5 SUBMITTALS

A. Other Informational Submittals:

1. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by dewatering operations prior to the start of construction operations.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer that has successfully designed and installed at least five dewatering systems.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.7 PROJECT CONDITIONS

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Notify Government no fewer than five (5) days in advance of proposed interruption of utility.

2. Do not proceed with interruption of utility without Government's written permission.

B. Project-Site Information: A geotechnical report has not been been prepared for this Project.

1. Make test borings and conduct exploratory operations necessary for dewatering.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, trails, roadways, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.

1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.

2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.

B. If Contractor determines that dewatering is necessary for his/her work, install dewatering system to ensure minimum interference with roads, trails, and other adjacent occupied and used facilities.

1. Do not close or obstruct roadways, trails, or other adjacent occupied or used facilities without

permission from the Government. Provide alternate routes around closed or obstructed trafficways.

C. Provide temporary grading to facilitate dewatering and control of surface water.

D. Monitor dewatering systems as needed.

E. Promptly repair damages to adjacent facilities caused by dewatering.

F. Protect and maintain temporary erosion and sedimentation controls during dewatering operations.

3.2 INSTALLATION

A. If the Contractor determines that dewatering is necessary for his/her operations, install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.

1. Space well points or wells at intervals required to provide sufficient dewatering.
2. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.

B. If the Contractor determines that dewatering is necessary for his/her operations, place system into operation to lower water levels. Operate system continuously until construction operations are complete and dewatering is no longer required.

C. If the Contractor determines that dewatering is necessary for his/her operations, provide an adequate system to lower and control ground water to permit excavation, and placement of fill materials on dry subgrades.

1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.

D. If the Contractor determines that dewatering is necessary for his/her operations, dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner

that avoids inconvenience to others. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.

E. If the Contractor determines that dewatering is necessary for his/her operations and if dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged foundation soils at no additional expense to Government.

1. Remove dewatering system from Project site and refuge on completion of dewatering. Plug or fill well holes with sand or cut off and cap wells a minimum of 36 inches below overlying construction.

F. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

3.3 FIELD QUALITY CONTROL

A. Provide observation to ensure that subsurface soils are not being removed by the dewatering operation.

(END OF SECTION 02240)

SECTION 02260 – EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes temporary excavation support and protection systems.

B. Related Sections:
   1. Division 2 Section "Dewatering" for dewatering system for excavations.
   2. Division 2 Section “Site Work” for excavation and earthwork.
   3. Division 2 Section “Earthwork” for excavation and earthwork.

1.3 EXCAVATION SUPPORT AND PROTECTION REQUIREMENTS

A. The Contractor is solely responsible for determining if excavation support and protection will be required for his/her construction operations.

B. The Contractor is solely responsible for designing, furnishing and maintaining excavation support and protection if the Contractor determines it is necessary for his/her operations.

C. The Contractor shall follow all requirements of governing authorities related to excavation support and protection including, but not limited to, the requirements of OSHA 29 CFR, Part 1926, subpart P “Excavations and Trenches”. This document states that excavation safety is the sole responsibility of the Contractor.

1.4 PERFORMANCE REQUIREMENTS

A. If Contractor determines that excavation support and protection is needed for his/her construction operations, design, furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and of resisting soil and hydrostatic pressure and superimposed and construction loads.

1. Prevent surface water from entering excavations by grading, dikes, or other means.
2. Install excavation support and protection systems without damaging existing structures, and site improvements adjacent to excavation.

1.5 SUBMITTALS

A. Informational Submittals:

1. Photographs or Videotape: Show existing conditions of adjacent construction and site improvements that might be misconstrued as damage caused by the absence of, the installation of, or the performance of excavation support and protection systems. Submit before Work begins.

1.6 PROJECT CONDITIONS

A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by the Government or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:

1. Notify the Government no fewer than five (5) days in advance of proposed interruption of utility.
2. Do not proceed with interruption of utility without the Government’s written permission.

B. Project-Site Information: A geotechnical report has not been prepared for this Project.

1. Make test borings and conduct exploratory operations necessary for excavation support and protection.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials that are either new or in serviceable condition.

PART 3 - EXECUTION

3.1 PREPARATION

A. If Contractor determines that excavation support and protection is required for his/her construction operations, protect structures, utilities, trails, roadways, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation support and protection system operations.

B. If Contractor determines that excavation support and protection is required for his/her construction operations, install excavation support and protection systems to ensure minimum interference with roads, trails, and other adjacent occupied and used facilities.

1. Do not close or obstruct roadways, trails, or other adjacent occupied or used facilities without permission from the Government. Provide alternate routes around closed or obstructed trafficways.

C. If Contractor determines that excavation support and protection is required for his/her construction operations, monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage, or other evidence of movement to ensure that excavation support and protection systems remain stable.

D. Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

3.2 REMOVAL AND REPAIRS

A. If Contractor determines that excavation support and protection is required for his/her construction

operations, remove excavation support and protection systems when construction has progressed sufficiently to support excavation and bear soil and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils or damaging structures, roadways, facilities, and utilities.

1. Fill voids immediately with approved fill, compacted to density specified in Division 2 Section "Earthwork."
2. Repair or replace, as approved by Government, adjacent work damaged or displaced by removing excavation support and protection systems.

(END OF SECTION 02260)

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract and Division 1 Specification Sections, apply to this Section.

B. Minnesota Department of Transportation Standard Specifications for Construction, 2025 Edition, hereafter referred to as MNDOT Standard Specifications. The method of measurement and basis of payment portions do not apply.

1.2 SUMMARY

A. This Section includes the following:

1. Preparing subgrades and existing surfaces for aggregate placement.
2. Aggregate Surface placement.

B. Related Sections include the following:

1. Division 2 Section "Site Work" for temporary erosion & sedimentation control measures and clearing & grubbing.
2. Division 2 Section “Dewatering” for dewatering systems for excavations.
3. Division 2 Section “Excavation Support and Protection” for shoring, bracing, and sheet piling of excavations.
4. Division 2 Section "Lawns and Grasses" for finish grading, including preparing & placing topsoil and seeding.

1.3 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.

2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Existing Aggregate Surface Course: Course of existing aggregate to remain in place.

C. Proposed Aggregate Surface Course: Course of proposed aggregate to be placed on top of existing aggregate to remain in place, and to be shaped/compacted.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by the Government. Authorized additional excavation and replacement material will be paid for according to Contract provisions.
2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by the Government. Unauthorized excavation, as well as remedial work directed by the Government, shall be without additional compensation.

F. Fill: Soil materials used to raise existing grades.

G. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. (0.57 cu. m) or more in volume that exceed a standard penetration resistance of 100 blows/2 inches (97 blows/50 mm) when tested by an independent geotechnical testing agency, according to ASTM D 1586.

H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

I. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

A. Test Reports: From CONTRACTOR's Independent 3rd Party Testing Agency indicating and interpreting test results for compliance with the following Contract requirements:

1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed.

2. Results of Proof rolls.

3. Results of Proctor Tests to be performed on fills and aggregates to be placed.

4. Results of In-Place Compaction Density Tests.

B. Test Agency Qualifications.

1.5 QUALITY ASSURANCE

A. Blasting: Not allowed

B. CONTRACTOR's Independent 3rd Party Testing Agency qualifications: Independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by the Government or others unless permitted in writing by Government and then only after arranging to provide temporary utility services according to requirements indicated.

1. Notify Government not less than two (2) days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Government's written permission.
3. Contact utility-locator service for area where Project is located before excavating.

1.7 PAYMENT FOR ADDITIONAL MATERIALS

A. The Government will not pay for material (including aggregate, etc.) placed over the unit price quantities provided in the Bid Schedule unless agreed upon prior to placement of the material through the formal Modification process.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GC, GM, SW, SP, SC, SM, and CL or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

C. Unsatisfactory Soils: Soil Classification Groups ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Aggregate Surface Course: Artificially graded mixture of crushed gravel, crushed stone, and crushed sand; Class 2, MNDOT Specification Section 3138.

E. Chat Course: Small, angular particles of rock that are smaller than gravel but larger than sand. Particle size between 1/16 inch to 1/4 inch in diameter. Color to match Aggregate Surface Course.

F. Engineered Fill: Artificially graded mixture of crushed gravel, crushed stone, and crushed sand; Class 5, MNDOT Specification Section 3138.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Preparation of existing aggregate surfaces for earthwork operations as specified in Division 2 Section "Site Work."

C. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Site Work," during earthwork operations.

D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXISTING AGGRAGATE SURFACE INSPECTION

A. If Government determines that unsatisfactory soil is present, excavate and replace with compacted suitable materials as directed and in accordance with the Authorized Additional Excavation procedures. Suitable materials (fills, aggregates, etc.) shall be included in the bid item for Authorized Additional Excavation.

B. Proof-roll aggregate base with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Contractor to notify the COR five (5) business days prior to proof roll of existing aggregate surfaces. Notification shall include the location of the proof roll and the date/time it will be conducted. Contractor's Independent 3rd Party Testing Agency shall observe all Proof Rolls. Contractor's Independent 3rd Party Testing Agency shall recommend areas to be corrected, if any, and shall include the recommended corrections to the Contractor. A Testing/Observation Report shall be prepared by the Contractor's Independent 3rd Party Testing Agency and shall be submitted to the COR. If the Contractor believes a Modification is required to correct the work, the Contractor would need to contact the CO.

1. Completely proof-roll aggregate in one direction. Limit vehicle speed to 3 mph (5 km/h).
2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing approximately fifteen (15) tons (13.6 tonnes).
3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Government, and replace with suitable materials as directed. Materials used to fill the voids created by excavation of soft spots, unsatisfactory soils and areas of excessive pumping shall be impervious material below the aggregate roadway adequate to support the anticipated loading.

C. Reconstruct subbases damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Government, without additional compensation.

3.5 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.6 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Removing trash and debris.
2. Removing temporary shoring and bracing, and sheeting.
3. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.7 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.8 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.9 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Under pavements or aggregate surfaces, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Within embankments, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.

3.10 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Lawn or Unpaved Areas: Plus or minus 1 inch.
2. Pavements or aggregate surfaces: Plus or minus 1/2 inch.

3.11 PROPOSED AGGREGATE SURFACE COURSE

A. Place on existing aggregate surfaces which has been prepared to receive new aggregate and is free of mud, frost, snow, or ice.

B. On prepared existing aggregate surfaces, place proposed aggregate surface course as follows:

1. Place new aggregate material on prepared existing aggregate surface which has passed proof roll and prepared to receive proposed aggregate.
2. Shape newly placed material to required crown elevations and cross-slope grades.
3. Place in a single compacted lift for lift less than 6 inches.
4. Place courses that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
5. Compact at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

C. Shoulders: Place shoulders along edges of aggregate surface course to prevent lateral movement. Construct shoulders, at least 24 inches wide, of planting soil materials and compact simultaneously with each.

3.12 PROPOSED AGGREGATE SURFACE INSPECTION

A. If Government determines that unsatisfactory soil/aggregate is present, excavate and replace with compacted suitable materials (Class 2) as directed and at Contractor's expense.

B. Proof-roll placed/compacted aggregate surface with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Contractor to notify the COR five (5) business days prior to proof roll of placed/compacted aggregate surface. Notification shall include the location of the proof roll and the date/time it will be conducted. Contractor's Independent 3rd Party Testing Agency shall observe all Proof Rolls. Contractor's Independent 3rd Party Testing Agency shall recommend areas to be corrected, if any, and shall include the recommended corrections to the Contractor. A Testing/Observation Report shall be prepared by the Contractor's Independent 3rd Party Testing Agency and shall be submitted to the COR. If the Contractor believes a Modification is required to correct the work, the Contractor would need to contact the CO.

1. Completely proof-roll aggregate in one direction. Limit vehicle speed to 3 mph (5 km/h).
2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing approximately fifteen (15) tons (13.6 tonnes).
3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Government, and replace with suitable materials as directed.

3.13 FIELD QUALITY CONTROL

A. Contractor must engage a qualified Independent 3rd Party Test Agency to perform field quality-control testing. This testing inspector shall be a licensed Engineer registered in the State in which the work is occurring, or shall be overseen by a licensed Engineer registered in the State in which the work is occurring, who has the appropriate experience necessary to properly provide inspection services for this project.

1. Contractor shall provide a submittal to the Government describing the qualifications of the independent third party inspector to perform the services required in these specifications. Qualifications shall consist of the following:
   a. Company has a minimum 5-years' experience completing third party inspection services.
   b. Individual performing the services has a minimum of 3-years of experience completing third party inspection services.

B. Allow Contractor's Independent 3rd Party Test Agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Testing agency must test compaction of soils and aggregates in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Proctor testing shall be provided by Contractor as needed. Tests will be performed at the following locations and frequencies:
   1. Newly Installed/Placed Aggregate Surfaced Areas: At each compacted layer, at least one (1) test for every five hundred (500) feet of newly installed/placed aggregate surface.
   2. Trench Backfill: At each compacted backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than 2 tests per lift.

D. Contractor's Independent 3rd Party Test Agency shall perform two (2) separate proof roll operations. The first on the Existing Aggregate Surface in place (prior to placing the new aggregate) as described in Part 3.4 of this Specification Section. The second on the newly placed/compacted Aggregate Surface Course as described in Part 3.12.

E. Contractor's Independent 3rd Party Test Agency shall provide Government with recommendation where deviations from Specifications occur or conditions are considered undesirable.

F. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction

specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

G. Provide the Government with copies of all test reports within one week of the completion of the test being performed.

3.14 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace soil material to depth as directed by Government; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.15 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Government's property. Comply with all federal, state, county and local laws and regulations when removing, transporting and disposing surplus soil material, unsuitable topsoil, obstructions, demolished materials including trash and debris off Government’s property. Provide tarps or covers on trucks hauling surplus soils and waste.

3.16 TOPSOIL AND SEEDING

Upon completion of construction, CONTRACTOR shall restore disturbed areas with topsoil, seed, mulch, etc. as noted in Section 02920, Lawns and Grasses.

(END OF SECTION 02300)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract and Division 01 Specification Sections, apply to this Section.

B. Minnesota Department of Transportation Standard Specifications for Construction, 2025 Edition, hereafter referred to as MNDOT Standard Specifications. The method of measurement and basis of payment portions do not apply.

1.2 SUMMARY

A. Section Includes:

1. Seeding.

B. Related Sections:

1. Division 2 Section "Site Work" for excavation, filling and backfilling.
2. Division 2 Section "Earthwork" for excavation, filling and backfilling, and rough grading.

1.3 DEFINITIONS

A. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.

B. Finish Grade: Elevation of finished surface of planting soil.

C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

D. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

E. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

F. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

G. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.

H. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

I. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.4 SUBMITTALS

A. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

B. Maintenance Instructions: Recommended procedures to be established for maintenance of turf during a two-calendar year period. Submit before expiration of required initial maintenance periods.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and

indication of conformance with state and federal laws, as applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, trails and roadways, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

1.6 PROJECT CONDITIONS

A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion.

1. Spring Planting: April 15 through June 1.
2. Fall Planting: September 20 through October 20.
3. Or as recommended by seed manufacture.

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.7 MAINTENANCE SERVICE

A. Initial Turf Maintenance Service: Provide full maintenance by skilled employees of Contractor. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable turf is established but for not less than the following periods:

1. Seeded Turf: Two (2) years from date of planting completion.

a. When initial maintenance period has not elapsed before end of planting season, or if turf is not

fully established, continue maintenance during next planting season.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Furnish the seed mix referenced in the appendix section of this document (Mesic Prairie Mix).

2.2 PLANTING SOILS

A. Properties of Imported Topsoil or Manufactured Topsoil: Screened and free of stones 1 inch or larger in any dimension; free of roots, plants, sod, clods, clay lumps, pockets of coarse sand, paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials harmful to plant growth; free of obnoxious weeds and invasive plants including quackgrass, Johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and bromegrass; not infested with nematodes, grubs, other pests, pest eggs, or other undesirable organisms and disease-causing plant pathogens; friable and with sufficient structure to give good tilth and aeration. Continuous, air-filled, pore-space content on a volume/volume basis shall be at least 15 percent when moisture is present at field capacity. Soil shall have a field capacity of at least 15 percent on a dry weight basis.

2.3 MULCHES

A. Loose Mulch, MNDOT Type 3: Provide loose mulch per MNDOT 3882.

2.4 EROSION CONTROL BLANKET

A. Erosion Control Blanket: Erosion control blankets to be wildlife friendly and of natural fiber netting, 100% biodegradable materials with loose weave, non-welded, movable joint netting (leno or gauze). The short-term

double net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. The blanket shall be of a consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a 100% biodegradable woven natural fiber netting. The netting shall consist of machine directional strands formed from two intertwined yarns with cross directional strands interwoven through the twisted machine strands (commonly referred to as a Leno weave) to form an approximate 0.50 x 1.0 inch mesh. The blanket shall be sewn together on 1.5o inch centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches from the edge) as an overlap guide for adjacent mats. The blanket shall meet Type 2.D specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

Material Content

Matrix	100% Straw Fiber	0.5 lbs/sq yd
Netting	Top and Bottom, Leno woven 100% biodegradable organic jute	Top: 9.35 lb/1000 sq ft Bottom: 7.7 lb/1000 sq ft
Thread	Biodegradable	

Index Property	**Test Method**	**Typical**
Thickness	ASTM D6525	0.23 in.
Resiliency	ECTC Guidelines	80.5%
Water Absorbency	ASTM D1117	428%
Mass/Unit Area	ASTM D6475	8.71 oz/sy
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes

Stiffness	ASTM D1388	6.23 oz-in
Light Penetration	ASTM D6567	15.3%
Tensile Strength-MD	ASTM D6818	188.4 lbs/ft
Elongation-MD	ASTM D6818	11.2%
Tensile Strength-TD	ASTM D6818	157.2 lbs/ft
Elongation-TD	ASTM D6818	13.5%
Biomass Improvement	ASTM D7322	

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination and replace with new planting soil.

3.2 PREPARATION

A. Protect structures, utilities, trails, roadways, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
   1. Protect grade stakes set by others until directed to remove them.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust.

3.3 TURF AREA PREPARATION

A. Limit turf subgrade preparation to areas to be planted.

B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches. Remove stones larger than 2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them as directed by the Government.

   1. Spread topsoil, apply fertilizer on surface, and thoroughly blend planting soil.

      a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.

   2. Spread planting soil to a depth of 6 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.

      a. Spread approximately 1/2 the thickness of planting soil over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil.

C. Unchanged Subgrades: If turf is to be planted in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:

   1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.

2. Loosen surface soil to a depth of at least 6 inches. Apply fertilizers according to planting soil mix proportions and mix thoroughly into top 6 inches of soil. Till soil to a homogeneous mixture of fine texture.
3. Remove stones larger than 1 inch in any dimension and sticks, roots, trash, and other extraneous matter.
4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.

D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.

E. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

F. Before planting, restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 PREPARATION FOR EROSION CONTROL BLANKET

A. Install mulch blanket per manufacturer’s instruction. Use wooden stakes to secure blanket.

3.5 SEEDING

A. Prepare seedbed, sow seed, and protect seeded areas per MNDOT Standard Specifications for Construction.

B. Protect seeded areas with slopes steeper than 1:3 with Erosion Control Blanket installed with wooden stakes according to manufacturer's written instructions.

C. Protect seeded areas with slopes 1:3 and less steep by spreading Type 3 Mulch per MNDOT Standard Specifications for Construction.

3.6 TURF RENOVATION

A. Renovate existing turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.

1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
2. Install new planting soil as required.

B. Remove topsoil containing foreign materials such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.

C. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides. All herbicides must be approved by the Station Manager prior to application.

D. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose off-site.

E. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.

F. Install new planting soil to fill low spots and meet finish grades.

G. Apply seed and protect as required for new turf.

H. Water newly planted areas and keep moist until new turf is established.

3.7 TURF MAINTENANCE

A. Maintain and establish turf by watering, replanting, and performing other operations as required to establish healthy, viable turf. Replant bare or eroded areas and remulch to produce a uniform turf. Provide materials and installation the same as those used in the original installation.

1. Replace materials and turf damaged or lost in areas where turf establishment has not occurred.
2. In areas where mulch or blanket has been disturbed by wind or maintenance operations, add new mulch or

blanket and anchor as required to prevent displacement.

3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Keep turf uniformly moist to a depth of 4 inches.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch.
2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

3.8 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by the Government:

1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, with coverage exceeding 80 percent over any 10 sq. ft. area.

B. Use specified seed to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

3.9 MAINTENANCE PERIOD

A. The Contractor shall maintain turf vegetation for a period of two (2) years. At the end of the maintenance period, turf conditions shall comply to Section 3.8 Satisfactory Turf. If turf does not comply, the contractor shall, at no expense to the Government, maintain the turf for an additional year or until satisfactory turf is attained at the determination of the COR or Refuge Staff.

3.10 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents in accordance with requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Government's operations and others in proximity to the

Work. Notify Government before each application is performed.

B. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

C. All pesticides and herbicides must be approved by the Station Manager prior to application.

3.11 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

C. Remove nondegradable erosion-control measures after grass establishment period.

(END OF SECTION 02920)

ATTACHMENTS

SUBMITTAL REGISTER

SUBMITTAL REGISTER

DATE

SHOP DRAWINGS, EQUIPMENT DATA, AND MATERIAL SAMPLES

CONTRACT NO:

CONTRACTOR:

CONST. MANAGER:

PROJECT: Autotour Resurfacing

ADDRESS:

LOCATION: Sherburne NWR

SPECIFICATION SECTION NO.	DESCRIPTION	DATE SUBMITTED	TRANS. NO.	REVIEWED BY	DATE ACT. TAKEN	ACTION CODE	DATE RESUBM.	ACTION CODE	COMMENTS
01100	Preconstruction Safety Checklist								
01330	Progress Schedule								
01330	Subcontractor List								
01330	Price Breakdown								
01330	Progress Payment Certificates								
01330	Delivery Tickets								
01330	Waste Manifests/Disposal Tickets								
01330	Testing Reports								
01330	Traffic Control Plan								
01770	Test Reports								
01770	O&M Instructions								
01770	Record Drawings								
01770	Guarantees, Warrantoes and Certificates								
02240	Photos/Videotapes								
02260	Photos/Videotapes								
02300	Material Testing Reports								
02300	Results of Proof Rool Reports								
02300	Field Quaility Control Test Results								
02300	Testing Agency Qualifications								
02920	Seed Certifications								
02920	Maintenance Instructions								

Action Codes

A - Approved as Submitted

B - Approved Except As Noted - Resubmission Not Required

C - Approved Except As Noted - Resubmission Required

D - No Action Taken - See Comments

E - Disapproved - See Comments - Resubmission Required

PRECONSTRUCTION SAFETY CHECKLIST

PRECONSTRUCTION SAFETY CHECKLIST

PROJECT TITLE:	CONTRACT NUMBER:	PROJECT LOCATION:
PRECONSTRUCTION MEETING DATE:	NAME AND ADDRESS OF CONTRACTOR:	NAME OF CONTRACTOR SUPERINTENDENT/FOREMAN
NAME OF SERVICE CONTRACTING OFFICER:	NAME OF CONTRACTOR'S COMPETENT PERSON (PER 29 CFR	PROPOSED CONSTRUCTION START DATE:

The Fish and Wildlife Service (FWS) places safety and health as a top priority at all Service contracted construction sites (360 FW 4). The contractor has ultimate responsibility for safety during construction until final completion and acceptance of the project by FWS.

This checklist serves as an assurance tool/guide in assessing safety program preparations of the contractor, and is not all-inclusive. As tasks change and new risks and hazards are introduced, you may need to address additional safeguards and corrective measures.

The contractor and subcontractor(s) must comply with all Occupational Safety and Health Administration (OSHA) regulations applicable to the construction project, including requirements set forth within solicitation provisions and contract clauses (e.g., FAR 52.236-13 "Accident Prevention" with Alternate I and Special Provisions). It is the responsibility of the contractor/subcontractor(s) to adhere to regulations found at 29 CFR 1910, 1926, and 1928. (See page 5 for Table of Contents of OSHA Construction Safety Standards.) Each contractor/subcontractor must initiate and maintain an effective safety program that provides adequate systematic policies, procedures, and practices to protect their employees from, and allow them to recognize, job-related safety and health hazards. The program must include provisions for the systematic identification, evaluation, and prevention/control of general work site hazards, specific job hazards, and potential hazards that may arise from foreseeable conditions, as well as providing a competent person to conduct frequent and regular inspections. The contractor must instruct each employee to recognize and avoid unsafe conditions and the regulations applicable to the work environment.

The contractor will address the following items prior to and/or during the Preconstruction Conference (the Contracting Officer/Contracting Officer's Representative will record these items)**:**

1. The contractor has read and understands his/her responsibilities for compliance with contractual safety language - FAR 52.236-13, Accident Prevention, Alternate I and applicable safety provisions? YES ___ NO ___

2. Has contractor prepared a Safety Plan that analyzes anticipated hazards of the project and indicates how the hazards will be controlled? Contractor must identify specific procedures for controlling hazardous operations such as crane use, scaffolding, excavation/trenching, hot work/welding, etc,. YES ___ NO ___ N/A

3. How will contractor/subcontractor address the four leading hazards of construction work: falls, struck by, caught in/betw nd electrical?

4. The "Designated Competent Person" (responsible for the project's safety and health performance) is knowledgeable in applicable OSHA regulations and capable of identifying existing/predictable hazards, and has the authority to prompt corrective measures? YES ___ NO ___

5. Do contractor and subcontractor employees know what to do in the event of an emergency (e.g., injury, fire, accident, hazardous material spill, etc.) with regard to the following actions? YES NO ___

   a. Notification of Department, FWS Facility Manager, CO, COR, CI, etc.
   b. Means of communication with contact numbers (e.g., radio, cellular, pager, etc.).
   c. Availability of first-aid/medically-trained contractor personnel with appropriate medical supplies.
   d. Personnel (including subcontractors) knowledge of location for immediate aid (e.g., first-aid, etc.).
   e. Evacuation routes, signals, and procedures are provided to all on-site personnel.
   f. Safety and health information disseminated to all site personnel (e.g., contractor and subcontractor employees).

6. Will a contractor/subcontractor trailer be brought on site and its hook-up/placement coordinated with COR/CI? YES ___ NO ___ (If no, skip to # 7)

   a. Location and type of trailer (office or equipment).
   b. Telephone hook-up.
   c. Electrical hook-up.
   d. Vehicle parking arrangement (adequate space).
   e. Propane used for heating? YES ___ NO ___
   f. Serve as first-aid station? YES ___ NO ___

7. Is contractor aware that he/she must ensure construction area is clearly delineated and posted with appropriate warning signs (e.g., "Hard Hat Area", "Construction Site – CLOSED", "Area Closed to Public", etc.), and that instructional signs (e.g., designated parking area, etc.) and flagmen or barriers may be required? Yes No

8. Housekeeping - Is contractor/subcontractor aware that they must ensure that following acceptable housekeeping standards are practiced from project's start to finish? YES NO

   a. Form/scrap lumber with protruding nails and all other debris shall be kept clear from work areas.
   b. Combustible scrap and debris shall be removed at regular/frequent intervals.
   c. Materials shall be stored with regard to their fire characteristics with effective fire protection and prevention measures used.
   d. An enclosed chute shall be used whenever materials are dropped more than 20 feet to an exterior point of a building.
   e. Aisles, exits, and passageways shall be kept clear and in good repair.

9. Is contractor aware of following Environmental and Personal Controls standards? YES NO

   a. Potable water provided.
   b. Restroom facilities provided.
   c. Washing facility provided for employees engaged in operations involving harmful substances.
   d. Intoxicating beverages, controlled substances, and/or firearms are not permitted under any circumstances on the construction site.
   e. All activities in or around water bodies must be in compliance with regulations for worker safety, including personal flotation devices or buoyant work vests, lifelines, ring buoys and guardrails while working over or adjacent to water hazards, and from barges, boats, and/or launches.

10. Is contractor/subcontactor aware that following employee training considerations may need to be addressed? YES NO

a. Confined Space.
b. Scaffolding.
c. Fall Protection.
d. Hazard Communication.
e. Lockout/Tagout.
f. Respiratory Protection.
g. First Aid.

11. Contractor/subcontractor is responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions or where the need is indicated for using such equipment to reduce the hazard to their employee(s). The contractor/subcontractor is also responsible for ensuring that personnel using protective equipment shall be trained and medically qualified to do so. Such personal protective equipment may include the following: Discussed with contractor? YES NO

a. Eye and face protection (safety goggles, safety glasses, welding goggles, face shields, etc.).
b. Protective footwear (safety shoes, boots).
c. Protective gloves (leather, rubber, insulated).
d. Respirators (dust, half-face, full-face, etc.).
e. Hearing protection (ear plugs, muffs, etc.).
f. Coast Guard-approved PFD/buoyant vest.
g. Fall protection equipment.

12. Tools (hand, electric, pneumatic) Standards: Discussed with contractor? YES NO

a. Hand tools, power tools, and jacks are maintained in safe operating condition and used only for the purpose for which they were designed.
b. Electric power-operated tools must be either approved double-insulated, or be properly grounded (see Item #13 “Electrical” for additional considerations).

13. Electrical Standards:

a. Ground Fault Circuit Interrupters (GFCIs) or an assured equipment-grounding conductor program must be used to protect employees from ground-fault hazards.
b. Electrical cords/insulation must be in good condition (not frayed or damaged).
c. All ground plugs must be on electrical cords, if so designed by the manufacturer.
d. Workspace, walkways, and similar locations shall be kept clear of electrical cords.
e. All electrical extension cords must be of the three-wire type.
f. Contractor/subcontractor must determine need and implement an appropriate Lock-out/Tag-out program.

14. Will motor vehicles, cranes, and/or heavy equipment be used? YES NO __ (If no, skip to #15)

a. Crane and derrick use must comply with applicable standards.
b. Rollover protection as required.
c. Back-up alarms or observer signals as required.
d. No crawler type vehicles are allowed on an improved road.
e. All utilities must be located prior to excavating soil.

15. Excavating and Trenching work? YES ___ NO ___ (If no, skip to #16)

a. All excavating/trenching must be in accordance with applicable safety standards.
b. All utilities must be located prior to excavating.

16. Elevated Work? YES ___ NO ___ (If no, skip to #17)

a. Ladders and their use must conform to standards.
b. Aerial lift usage must meet applicable requirements.
c. Fall protection needs must be assessed per standards.
d. Scaffold work must conform to standards.
e. Stair design, construction, and use must meet applicable requirements.
f. Toeboards, when used to protect workers from falling objects, must be erected along the edge of the overhead walking/working surface.
g. Safety net use must comply with standards.
h. Railing must conform to standards.

17. Contractor is aware of and understands the need to incorporate applicable requirements for concrete and masonry construction. YES ___ NO ___ N/A ___

18. Contractor is aware of and understands the need to incorporate welding and cutting operations that comply with applicable safety requirements (e.g., compressed gas cylinders are protected from vehicle traffic, valve caps secured, etc.). YES ___ NO ___ N/A ___

19. Contractor is aware of and understands the need to manage hazardous materials/waste appropriately (e.g., paints, solvents, fuels, etc.) including the following: YES NO N/A ___

a. Use and storage of flammable/combustible liquids.
b. Aboveground fuel storage tanks properly managed/contained.
c. Compressed gases and cylinders managed correctly (e.g., secured and protected from damage, etc.).
d. Procedures for managing use, storage, and disposal of hazardous materials properly established.
e. Excess/waste product(s) and containers properly disposed of per environmental regulations.
f. Hazards of product use and the need for protective measures (e.g., personal protective equipment, etc.) conveyed to employees.
g. Asbestos work conforms to applicable standards.
h. Exposure to toxic gases, vapors, fumes, dusts, and mists managed correctly.
i. Lead, laser, and any other hazardous components managed per the applicable standard.
j. Contract employees must conduct hazardous waste operations work within the parameters of a written safety & health plan.

20. Comments, notes, additional requirements:

The contractor has the ultimate responsibility for safety on the project site at all times until final completion and acceptance of the project.

The contractor's signature below indicates the above information was discussed and understood.

Contractor signature: _____ **Date:** _____

_____ **Date:** _____

Contracting Officer/Contracting Officer's Representative

OSHA CONSTRUCTION SAFETY STANDARDS - 29 CFR 1926:
(Following standards can be accessed at http://www.osha.gov):

Subpart A (1926.1 - 1926.5) - General
Subpart B (1926.10 - 1926.16) - General Interpretations
Subpart C (1926.20 - 1926.35) - General Safety and Health Provisions
Subpart D (1926.50 - 1926.66) - Occupational Health and Environmental Controls
Subpart E (1926.95 - 1926.107) - Personal Protective and Life Saving Equipment
Subpart F (1926.150 - 1926.155) - Fire Protection and Prevention
Subpart G (1926.200 - 1926.203) - Signs, Signals and Barricades
Subpart H (1926.250 - 1926.252) - Materials Handling, Storage, Use and Disposal
Subpart I (1926.300 - 1926.307) - Tools - Hand and Power
Subpart J (1926.350 - 1926.354) - Welding and Cutting
Subpart K (1926.400 - 1926.449) - Electrical
Subpart L (1926.450 - 1926.454) - Scaffolds
Subpart M (1926.500 - 1926.503) - Fall Protection
Subpart N (1926.550 - 1926.555) - Cranes, Derricks, Hoists, Elevators and Conveyors
Subpart O (1926. 600 - 1926.606) - Motor Vehicles, Mechanized Equipment and Marine Operations
Subpart P (1926.650 - 1926.652) - Excavations
Subpart Q (1926.700 - 1926.706) - Concrete and Masonry Construction
Subpart R (1926.750 - 1926.752) - Steel Erection
Subpart S (1926.800 - 1926.804) - Underground Construction, Caissons, Cofferdams and Compressed Air
Subpart T (1926.850 - 1926.860) - Demolition
Subpart U (1926.900 - 1926.914) - Blasting and the Use of Explosives
Subpart V (1926.950 - 1926.960) - Power Transmission and Distribution
Subpart W (1926.1000-1926.1003)- Rollover Protective Structures; Overhead Protection
Subpart X (1926.1050 -1926.1060)- Stairways and Ladders
Subpart Y (1926.1071 -1926.1092)- Diving
Subpart Z (1926.1100 -1926.1152)- Toxic and Hazardous Substances

SEED MIX

SEED MIX

Mesic Prairie Mix

	Scientific Name	Common Name	% of Mix	Seeds/ Sq Ft	PLS lbs/ac	Bloom Season
Grasses:	Andropogon gerardii	Big Bluestem	7.00	3.09	0.84	
	Bouteloua curtipendula	Side-oats Grama	14.00	6.14	1.68	
	Bromus kalmii	Prairie Brome	2.50	0.88	0.30	
	Elymus canadensis	Canada Wild Rye	5.25	1.20	0.63	
	Elymus trachycaulus	Slender Wheat Grass	6.00	1.82	0.72	
	Elymus virginicus	Virginia Wild Rye	5.50	1.02	0.66	
	Panicum virgatum	Switchgrass	3.50	2.16	0.42	
	Schizachyrium scoparium	Little Bluestem	18.00	11.90	2.16	
	Sorghastrum nutans	Indian Grass	11.00	5.82	1.32	
	Sporobolus compositus	Rough Dropseed	2.00	2.64	0.24	
	Sporobolus heterolepis	Prairie Dropseed	0.25	0.18	0.03	
Forbs:	Achillea millefolium	Yarrow	0.05	0.39	0.01	Summer
	Agastache foeniculum	Fragrant Giant Hyssop	0.20	0.79	0.02	Summer
	Amorpha canescens	Leadplant	1.20	0.85	0.14	Summer
	Asclepias syriaca	Common Milkweed	0.75	0.13	0.09	Summer
	Asclepias incarnata	Rose Milkweed	0.30	0.06	0.04	Summer
	Astragalus canadensis	Canada Milk Vetch	1.75	1.31	0.21	Summer
	Dalea candida	White Prairie Clover	2.70	2.26	0.32	Summer
	Dalea purpurea	Purple Prairie Clover	4.00	2.64	0.48	Summer
	Desmodium canadense	Showy Tick-trefoil	2.90	0.70	0.35	Summer
	Drymocallis arguta	Prairie Cinquefoil	0.25	2.53	0.03	Summer
	Eryngium yuccifolium	Rattlesnake Master	1.00	0.33	0.12	Summer
	Glycyrrhiza lepidota	Wild Licorice	0.25	0.04	0.03	Summer
	Helianthus maximiliani	Maximillian's Sunflower	0.60	0.34	0.07	Fall
	Heliopsis helianthoides	Common Ox-eye	1.50	0.42	0.18	Summer
	Liatris ligulistylis	Meadow Blazing Star	0.75	0.33	0.09	Summer
	Liatris pycnostachya	Prairie Blazing Star	0.65	0.32	0.08	Summer
	Monarda fistulosa	Wild Bergamot	0.40	1.23	0.05	Summer
	Pycnanthemum virginianum	Mountain Mint	0.10	0.97	0.01	Summer
	Ratibida pinnata	Yellow Coneflower	0.80	1.06	0.10	Summer
	Rudbeckia hirta	Black-eyed Susan	1.30	5.27	0.16	Summer
	Solidago rigida	Stiff Goldenrod	0.85	1.54	0.10	Fall
	Solidago speciosa	Showy Goldenrod	0.20	0.84	0.02	Fall
	Symphyotrichum laeve	Smooth Blue Aster	0.25	0.61	0.03	Fall
	Symphyotrichum novae-angliae	New England Aster	0.30	0.87	0.04	Fall
	Symphyotrichum oolentangiense	Sky-blue Aster	0.35	1.23	0.04	Fall
	Verbena hastata	Blue Vervain	0.40	1.64	0.05	Summer
	Veronicastrum virginicum	Culver's Root	0.10	3.53	0.01	Summer
	Zizia aptera	Heart-leaved Alexanders	0.10	0.05	0.01	Spring
	Zizia aurea	Golden Alexanders	1.00	0.48	0.12	Spring
			100.00	69.63	12.00	

Seeds/sq ft:	70.00
Grass Species:	11
Forb Species:	29

SELECT SITE PHOTOS

(Existing Gravel Parking Lot-RTE924)

SELECT SITE PHOTOS

(Existing Gravel PullOff No.4)