6

DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF TRANSPORTATION

NOTICE TO CONTRACTORS,

PROPOSAL, SPECIAL PROVISIONS,

CONTRACT AND CONTRACT BOND

FOR

INSTALL DYNAMIC MESSAGE BOARDS

FEDERAL PROJECT NO. CR 000S(462)
(PCN 09L5)

INTERSTATE HIGHWAYS 90, 29, 229, US HGIHWAY 12, SD HIGHWAYS 34, 37 & 50

IN AURORA, BEADLE, BROWN, CLAY, GRANT, LAKE, LINCOLN, MINNEHAHA, ROBERTS, YANKTON COUNTIES

May 20, 2026

NOTICE TO ALL BIDDERS

TO REPORT BID RIGGING ACTIVITIES, CALL: 1-800-424-9071

THE U.S. DEPARTMENT OF TRANSPORTATION (DOT) OPERATES THE ABOVE TOLL-FREE "HOTLINE" MONDAY THROUGH FRIDAY, 8:00 A.M. TO 5:00 P.M., EASTERN TIME. ANYONE WITH KNOWLEDGE OF POSSIBLE BID RIGGING, BIDDER COLLUSION, OR OTHER FRAUDULENT ACTIVITIES SHOULD USE THE "HOTLINE" TO REPORT SUCH ACTIVITIES.

THE "HOTLINE" IS PART OF THE DOT'S CONTINUING EFFORT TO IDENTIFY AND INVESTIGATE HIGHWAY CONSTRUCTION CONTRACT FRAUD AND ABUSE AND IS OPERATED UNDER THE DIRECTION OF THE DOT INSPECTOR GENERAL.

ALL INFORMATION WILL BE TREATED CONFIDENTIALLY, AND CALLER ANONYMITY WILL BE RESPECTED.

*** * * ***

PLANS, PROPOSALS AND ADDENDA

AFTER AWARD OF CONTRACT, THE LOW BIDDER WILL RECEIVE TEN (10) COMPLIMENTARY SETS OF PLANS, PROPOSALS, PROJECT Q & A FORUM, AND ADDENDA FOR FIELD AND OFFICE USE. AN ELECTRONIC COPY WILL ALSO BE PROVIDED. ANY ADDITIONAL COPIES REQUIRED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

*** * * ***

Project Number: CR 000S(462)

Revised 10/8/25
PCN 09L5

NOTICE TO CONTRACTORS

Bid proposals for this project will be prepared, transmitted, and received electronically by the South Dakota Department of Transportation (SDDOT) via the South Dakota Electronic Bid System until 10 A.M. Central time, on May 20, 2026, at which time the SDDOT will open bids. All bids will be checked for qualifications with results posted on the SDDOT website. The South Dakota Transportation Commission will consider all bids at a scheduled Commission meeting.

The work for which proposals are hereby requested is to be completed within the following requirement(s):

FIELD WORK COMPLETION: **JUNE 25, 2027**

The project category is Category I
The project type is Structural
The geographic zone is Zone 6

THE DBE GOAL FOR THIS PROJECT IS: **N/A**

WORK TYPE FOR THIS PROJECT IS: **WORK TYPE 10**

Bidding package for the work may be obtained at:
http://apps.sd.gov/hc65bidletting/ebslettings1.aspx#no-back-button

The South Dakota Standard Specifications for Roads and Bridges, 10-1-25 Version, may be obtained at https://dot.sd.gov/doing-business/contractors/standard-specifications/ .

The electronic bid proposal must be submitted by a valid bidder as designated by their company's https://apps.sd.gov/HC65C2C/EBS/BidAdminAuthorizationForm.pdf. A bidding administrator will have privileges in the SDEBS to prepare bids, submit bids, and authorize additional company employees to prepare and submit bids. Additionally, a bidding administrator will be responsible for maintaining the list of authorized bidders for the company and will have the ability to add employees, remove employees, and set-up bidder identifications and passwords within the SDEBS. Bidding Administrator authorization will remain in full force and effect until written notice of termination of this authorization is sent by an Officer of the company and received by the Department.

A bidder identification and password, coupled with a company identification previously assigned by the Department, will serve as authentication that an individual is a valid bidder for the company.

Contact information to schedule a preconstruction meeting prior to commencing with the work on this project.

Harry Johnston
5316 W 60th St N
Sioux Falls, SD 57107
Phone: 605/367-5680

PROPOSAL

Revised 8/10/11

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION, STATE OF SOUTH DAKOTA:

Ladies / Gentlemen:

The following proposal is made on behalf of the undersigned and no others. It is in all respects fair and is made without collusion on the part of any other person, firm or corporation not appearing in the signature to this proposal.

The undersigned certifies that she / he has carefully examined the plans listed herein, the Specifications hereinbefore referred to, the Special Provisions and the form of contract, both of which are attached hereto. The undersigned further certifies that she / he has personally inspected the actual location of the work, together with the local sources of supply and that she / he understands the conditions under which the work is to be performed, or, that if she / he has not so inspected the actual location of the work, that she / he waives all right to plea any misunderstanding regarding the location of the work or the conditions peculiar to the same.

On the basis of the plans, Specifications, Special Provisions and form of contract proposed for use, the undersigned proposes to furnish all necessary machinery, tools, apparatus and other means of construction, to do all the work and furnish all the materials in the manner specified, to finish the entire project **within the contract time specified** and to accept as full compensation therefore the amount of the summation of the products of the actual quantities, as finally determined, multiplied by the unit prices bid.

The undersigned understands that the quantities as shown in the Bid Schedule are subject to increase or decrease, and hereby proposes to perform all quantities of work, as increased or decreased, in accordance with the provisions of the specifications, and subject to any applicable special provisions, and at the unit prices bid.

The undersigned understands that the "Total or Gross Amount Bid" as immediately hereinbefore set forth is not the final amount which will be paid if this proposal is accepted and the work done, but that such amount is computed for the purpose of comparison of the bids submitted and the determination of the amount of the performance bond.

The undersigned further proposes to perform all extra work that may be required on the basis provided in the specifications, and to give such work personal attention in order to see that it is economically performed.

The undersigned further proposes to both execute the contract agreement and to furnish a satisfactory performance bond, in accordance with the terms of the specifications, within twenty (20) calendar days after the date of Notice of Award from the South Dakota Department of Transportation that this proposal has been accepted.

CERTIFICATION REGARDING LOBBYING

I certify, to the best of my knowledge and belief, that: No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement. If any funds other than Federal appropriated funds have been paid or will be paid to any of the above mentioned parties, the undersigned shall complete and submit Standard Form LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty or not less than $10,000 and not more than $100,000 for each such failure.

REV 2/25/26

INDEX OF SPECIAL PROVISIONS

PROJECT NUMBER(S): CR 000S(462) PCN: 09L5

TYPE OF WORK: INSTALL DYNAMIC MESSAGE BOARDS

COUNTIES: AURORA, BEADLE, BROWN, CLAY, GRANT, LAKE, LINCOLN, MINNEHAHA, ROBERTS, YANKTON

The following clauses have been prepared subsequent to the Standard Specifications for Roads and Bridges and refer only to the above described improvement, for which the following Proposal is made.

The Contractor's attention is directed to the need for securing from the Department of Environment & Natural Resources, Foss Building, Pierre, South Dakota, permission to remove water from public sources (lakes, rivers, streams, etc.). The Contractor should make his request as early as possible after receiving his contract, and insofar as possible at least 30 days prior to the date that the water is to be used.

Ashley Glaspell, Devon Bartscher, Sara Garbe, Kristal McKee, Robin Wallum, Jim Baltzer, Lisa Johnson, Lacey Johnson is the official in charge of the Aberdeen, Mitchell, Sioux Falls, Vermillion, Huron, Madison, Watertown Career Center for Aurora, Beadle, Brown, Clay, Grant, Lake, Lincoln, Minnehaha, Roberts, Yankton Counties.

THE FOLLOWING ITEMS ARE INCLUDED IN THIS PROPOSAL FORM:

Special Provision for Contract Time, dated 4/17/26.

Special Provision for Contractor Staking, dated 4/15/26.

Special Provision for Cylindrical Concrete Footings, dated 7/22/25.

Intelligent Transportation System Special Provision, 4/6/26.

List of Utilities.

Special Provision for Price Schedule for Miscellaneous Items, dated 2/18/26.
Special Provision for American Security Drone Act, dated 12/15/25.
Special Provision for Steel Beam Guardrail AASHTO M 180 Designation, dated 10/1/25.
Special Provision for Acknowledgment and Certification Regarding Article 3, Section 12 of the South Dakota Constitution, dated 8/24/23.
Fuel Adjustment Affidavit, DOT form 208 dated 11/25.
Standard Title VI Assurance, dated 3/1/16.
Special Provision For EEO Affirmative Action Requirements on Federal and Federal-Aid Construction Contracts, dated 2/5/24.
Special Provision For Required Contract Provisions Federal-Aid Construction Contracts, Form FHWA 1273 (Rev. October 23, 2023), dated 10/18/23.

Required Contract Provisions Federal-Aid Construction Contracts, Form FHWA 1273 (Rev. 10/23/23).

Special Provision Regarding Minimum Wage on Federal-Aid Projects, dated 10/24/19.

Wage and Hour Division US Department of Labor Washington DC. - US Dept. of Labor Decision Number SD20260001, dated 1/30/26.

Special Provision Regarding Stormwater Discharges to Waters of the State, dated 11/5/25.

General Permit Authorizing Stormwater Discharges Associated with Construction Activities, dated 11/1/23.
https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/StormWaterConstruction.aspx

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACT TIME

PROJECT CR 000S(462), PCN 09L5
AURORA, BEADLE, BROWN, CLAY, GRANT, MINNEHAHA, LAKE, LINCOLN, ROBERTS, & YANKTON COUNTY

APRIL 17, 2026

November 6, 2026 Aberdeen Region Interim Completion Requirement

The Contractor will complete all work in the Aberdeen region portion of the project, excluding attaching the dynamic message signs to the sign bridges by the November 6, 2026 interim completion date.

If the Contractor does not complete the work by the interim completion requirement, the Department will make a disincentive assessment in the amount of $500 per working day. A contract item for incentive/disincentive pay is included in the bid schedule for the Department's use in assessing disincentive. The Department will use a negative quantity of days for assessing disincentives. The Department will count working days in accordance with Section 8.7 C.

December 4, 2026 Mitchell Region Interim Completion Requirement

The Contractor will complete all work in the Mitchell region portion of the project, excluding attaching the dynamic message signs to the sign bridges by the December 4, 2026 interim completion date.

If the Contractor does not complete the work by the interim completion requirement, the Department will make a disincentive assessment in the amount of $500 per working day. A contract item for incentive/disincentive pay is included in the bid schedule for the Department's use in assessing disincentive. The Department will use a negative quantity of days for assessing disincentives. The Department will count working days in accordance with Section 8.7 C.

Field Work Completion

The Contractor will complete the project by the June 25, 2027 field work completion date.

The Contractor will complete all work on the project prior to the field work completion requirement. If the Contractor does not complete all work by the field work completion requirement, the Department will assess liquidated damages in accordance with Section 8.9. The Department will assess liquidated damages for each working day the work (project) is late until the Contractor completes all field work.

In the event the Contractor does not complete all field work on time, the Department will count working days in accordance with Section 8.7 C.

* * * * *

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR STAKING

PROJECT CR 000S(462), PCN 09L5
AURORA, BEADLE, BROWN, CLAY, GRANT, MINNEHAHA, LAKE, LINCOLN, ROBERTS, & YANKTON COUNTY

APRIL 15, 2026

Delete Section 5.8 of the specifications and insert the following:

SECTION 5.8
CONSTRUCTION STAKES, LINES AND GRADES
CONTRACTOR GRADE STAKING

A. DESCRIPTION

The Contractor will perform all construction staking. The staking work includes, but is not limited to, establishing or re-establishing the project centerline; establishing control points and benchmarks as needed; setting additional benchmarks as needed; taking original and final cross sections of all Contractor secured borrow sources and State designated borrow sources; taking cross sections of all topsoil stockpiles; and staking right-of-way, easements, and fence.

The Contractor will perform all construction layout and reference staking necessary for the accurate control and completion of all grading, paving, drainage, median crossovers, signing, pavement marking, permanent benchmarks, detours, fence, and all other appurtenances required for the complete construction and acceptance of the work. The layout will include, but is not limited to, staking easement line, staking clearing line, and performing the miscellaneous staking as described in the plans and in this specification.

Horizontal and vertical control has been established as shown on the plans. Each horizontal and vertical control point will be preserved or reset out of the work limits and available during and after construction is complete. Prior to the Department's final acceptance of the project, the Contractor will replace or reset any control that is disturbed during the construction of the project. The Contractor will provide the Department a list of the in-place control points, including coordinates and elevations relevant to the project control, at the end of the project.

The Contractor will perform the staking work in accordance with the Department's Survey Manual, except as modified by this specification.

B. MATERIALS

The Contractor will furnish all staking materials of adequate quality for the purpose intended including all stakes, stake chasers, paint, field note books, and all other materials and equipment necessary to perform the required work.

C. CONSTRUCTION REQUIREMENTS

1. **General:** The Contractor will perform all staking work under the supervision of a qualified surveyor or engineer who is experienced and competent in road and bridge construction surveying and staking. The surveyor or engineer will be available to review work, resolve problems, and make decisions in a timely manner. A crew chief, competent to perform all required surveying duties, will supervise the staking in the absence of the surveyor or engineer from the project. The Contractor will submit the qualifications and work experience history of the surveyor or engineer who will supervise the construction survey work to the Engineer for review at least 14 calendar days prior to beginning the staking work.

   The Contractor will also submit the proposed starting date of the staking and the anticipated surveying work schedule.

   The Contractor will furnish, set, and properly reference all stakes, references, lines, grades, and batter boards required. Minimum reference notations will be for type, location, and alignment (when there are multiple alignments in the same area). The Contractor will perform the survey and staking work in a manner consistent with standard engineering practices and approved by the Engineer.

   The Contractor is solely responsible for the accuracy of the survey and staking work. The Contractor will notify the Engineer of any errors and discrepancies found in previous surveys, plans, specifications, or special provisions prior to proceeding with the survey work.

   The Contractor will be responsible for the supervision of the construction staking personnel. The Contractor will correct any deficient survey or staking work that results in construction errors at no additional cost to the Department.

   The Contractor will keep field notes in conventional handwritten notebooks or in a computerized form acceptable to the Engineer in a clear, orderly, and neat manner. The notebooks will become the property of the Department upon completion of the project. The notebooks will provide enough information such

that quantity measurements are verifiable by the Department. Field notes are subject to inspection by the Engineer at any time.

The Contractor is required to submit any remaining required quantity calculations and notes to the Engineer no later than 60 calendar days after completion of the survey and staking work.

The Department will set reference control points. The Contractor is responsible for the preservation of ties and references to all control points necessary for the accurate re-establishment of all base lines and centerlines shown in the plans, whether established by the Contractor or found on or adjacent to the project. The Department will also establish benchmark elevations. It is the responsibility of the Contractor to verify the accuracy of the benchmark elevations prior to use on the project.

The Contractor will furnish stakes of sufficient length to provide a solid set in the ground. Stakes set not meeting these requirements will be reset at the Contractors expense. The Contractor will replace stakes damaged, destroyed, illegible, or made unusable at no additional expense to the Department.

The Engineer may check the accuracy and control of the Contractor's survey and staking work at any time. The checks performed by the Engineer will not relieve the Contractor of the responsibility for the accuracy of the survey layout or the construction work. If the random checks show the grade is out of tolerance, the Engineer may require the Contractor to set additional stakes, at the discretion of the Engineer, at no additional cost to the Department. If the Engineer orders additional stakes, the Contractor will perform the additional staking until the Contractor can show the staking operations achieve the specified grade tolerances.

Prior to any project staking, the Contractor will run a level circuit to check the plan benchmarks the full length of the project.

2. **Construction Staking:** Construction staking will consist of all staking for miscellaneous stakes in accordance with the following:

    a. **Miscellaneous Staking:** Miscellaneous staking includes the following work:

        1) Easement line for items including, but not limited to, setting temporary fence, utility relocation, and landowner reference and property use;
        2) Clearing line for items identified by the clearing contract unit item when provided in the plans;
        3) Approach road staking and all tie-in checks. The Contractor will submit profiles and elevations of all approach roads and other tie-ins

throughout the project to the Engineer at least 3 business days prior to staking;

4) Topsoil measurement and computation of quantities;
5) Special ditch staking;
6) Staking of signs, delineators, pavement markings, guardrail, curb & gutter, light poles, conduit, junction boxes, and related items (Staking is for all aspects, i.e. detours, temporary and permanent);
7) Right-of-way staking including fence post panels;
8) Pipe and storm sewer staking including drop inlets, manholes, cattle passes, and related items. If additional pipe, storm sewer, drop inlets, manholes, or cattle passes are required which are not shown on the plans, the staking will be paid for at the contract unit price per hour for Engineer Directed Surveying/Staking;
9) Mark limits of removal items (trees, foundations, curb & gutter, sidewalk, etc.);
10) Detours, roadway diversions, and crossovers. (This work includes all design and staking notes required to design and stake the detour, roadway diversion, or crossover in accordance with the plan requirements. The Contractor will submit the completed design including profile and alignment and staking notes to the Engineer at least 3 business days prior to staking.);
11) Final and original cross sections of Contractor and State furnished borrow pits and computations. The Contractor will perform earthwork computations by the average end area method, surface-to-surface method, or alternate computation method approved by the Engineer;
12) Resetting horizontal and vertical control, if disturbed;
13) Approach slab and sleeper slab staking;
14) Staking of sidewalks and curb ramps; and,
15) Staking of steps and wheel chair ramps.

The Contractor will perform the pipe staking so the pipe will fit the field conditions. The plans show only approximate pipe locations and grades. The Contractor will not install pipe prior to gaining the Engineer's approval of minor location and grade adjustments necessary for proper staking of the pipe.

The Contractor will stake the slope catch points to determine the inlet and outlet locations, set reference stakes for the inlet and outlet locations, and stake ditches and special inlet and outlet grades to ensure proper drainage. The staking of manholes and drop inlets will be included in pipe and storm sewer staking. The Contractor will stake precast cattle passes similar to drainage pipes.

The horizontal tolerance for the pipe and storm sewer staking is ±0.05 foot and the vertical tolerance is ±0.03 foot.

The Contractor will keep pipe staking notes on a DOT Form 214.

3. **Engineer Directed Surveying/Staking:** The use of the engineer directed surveying/staking contract item is intended for surveying/staking not included in the plan notes and this special provision. The Contractor may use a survey crew to perform additional survey/staking work caused or required by the Department. The Engineer will use a written order to authorize the hourly engineer directed surveying/staking item and describe the surveying/staking work required of the Contractor.

D. METHOD OF MEASUREMENT

Refer to the Table of Contractor Staking in the plans for more detail on how quantities were calculated.

1. **Construction Staking:** The Department will not measure construction staking.

2. **Engineer Directed Surveying/Staking:** The Department will measure engineer directed surveying/staking to the nearest 0.1 hour with the following restrictions:

   The use of engineer directed surveying/staking will be for the work ordered by the Engineer. The measured quantity will be the actual time the survey crew is working on the project, physically performing the field survey/staking work and office time dedicated to the work specific to engineer directed surveying/staking. The Department will not include travel time for the survey crew in the measurement.

   The Contractor will provide the Engineer documentation, such as an invoice, showing the actual days/hours worked.

E. BASIS OF PAYMENT

Payment for all of the survey items will be considered full compensation for furnishing all necessary personnel, vehicles, surveying equipment, supplies, materials, recording fees, transportation, and incidentals to accurately and satisfactory complete the work.

The Department reserves the right to omit any of these bid items without providing compensation to the contractor if the Department deems the bid prices are unreasonable.

1. **Construction Staking:** The Department will pay construction staking at the lump sum price. The Department will make partial payment as follows:

a. Upon submission of the name, experience, and qualifications of the surveyor or engineer who will supervise the staking, the proposed starting date, and the staking schedule, the Department will pay the Contractor 25 percent of the plan quantity for the construction staking.

b. The Department will make intermediate payments based on the amount of the staking work completed.

c. The Department will make full payment at the plan quantity for construction staking upon completion of all surveying and staking and when the Contractor has furnished all field notebooks and records to the Engineer.

The Department will not adjust the contract unit price or plan quantity for construction staking due to overruns or under runs in the other contract items.

2. **Engineer Directed Surveying/Staking:** The Department will pay engineer directed surveying/staking on an hourly basis as per the Price Schedule for Miscellaneous Items. The value listed in the Price Schedule for Miscellaneous Items includes salaries, travel time, equipment, staking supplies, payroll additive, and all incidental expenses related to providing the survey crew.

* * * * *

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CYLINDRICAL CONCRETE FOOTINGS

PROJECT CR 000S(462), PCN 09L5
AURORA, BEADLE, BROWN, CLAY, GRANT, MINNEHAHA, LAKE, LINCOLN, ROBERTS, & YANKTON COUNTY

JULY 22, 2025

I. DESCRIPTION

This work consists of all labor, materials, equipment, and services required in the construction of cylindrical concrete footings.

II. MATERIALS

A. Concrete: Concrete will be A45 Drilled Shaft and conform to the requirements of Section 460, except as modified by this section.

B. Concrete Reinforcing: Section 1010.

C. Temporary Casing: Casing will be of sufficient thickness to withstand handling and installation stresses. Casing material may consist of Sono tube, corrugated metal pipe, PVC, smooth metal pipe, or other material as approved by the Engineer.

D. Permanent Casing: Casing will be smooth steel of sufficient thickness to withstand handling stresses, concrete pressure, and surrounding earth and fluid pressures. The casing will be of the diameter specified and will have teeth at the bottom to facilitate proper seating of the casing to plans specified depth.

III. CONSTRUCTION REQUIREMENTS

A. Concrete Quality and Proportioning: The Contractor will design and be responsible for the performance of the concrete mix. The concrete mix will have the following characteristics:

1. Minimum cementitious content of 750 pounds per cubic yard. The maximum cementitious content (total cement, fly ash, and other cementitious

admixture) content will be 800 pounds per cubic yard. The Contractor will substitute a portion of the cement with Class F modified fly ash in accordance with Section 605. The amount of cement to be replaced will be 20% to 25% by weight. The ratio of substitution of fly ash to cement will be 1:1 by weight.

2. Coarse aggregate will conform to Section 820 and be either size #1, #1A, or #15.

3. Minimum 28-day compressive strength of 4500 psi.

4. Slump at time of placement will be between 6 and 8 inches for concrete that is placed with free-fall or tremie method. Slump at time of placement will be between 7 and 9 inches for concrete that is placed with a pump line.

5. Entrained air content of 6.5% with an allowable tolerance of +1% to -1.5%.

6. The mix design will establish a maximum water cementitious material ratio for the concrete mix (never to exceed 0.44).

The use of a water reducer will be required to achieve the above properties. Water reducers conforming to AASHTO M 194 Type C (Accelerating) and Type E (Water-Reducing and Accelerating) will not be permitted.

B. **General Requirements:** The Contractor will perform the excavation for the footings through the various types of materials that are encountered. The excavation will be to the depth, dimensions, and locations as shown in the plans.

Contractor methods and equipment will be suitable for the intended purpose and materials encountered. The following equipment is required to be always available for use on the project site during footings construction:

1. Tremie and concrete pump line (if used) of sufficient length to reach the bottom of the footings.

2. T-bar for installing casing.

3. Cleanout bucket of the proper size.

4. Graduated measuring device to determine excavation and water depth.

5. A pump of sufficient discharge rate for filling the excavation with water when required due to caving or water bearing soils and to remove the displaced water during underwater placement of concrete.

6. Water tank(s), water truck(s), or on-site water source of at least 2 times the volume of the footing.

Unless otherwise specified on the plans, the Contractor will begin footing excavation using the dry construction method. If caving or water bearing soils is encountered the Contractor will be required to continue using the wet construction method.

Upon completion of the excavation of the footings, a cleanout bucket will be used to remove all loose material from the bottom of the shaft.

C. **Dry Construction Method:** The dry construction method consists of drilling the footings, removing loose material from the excavation, and placing the concrete in a relatively dry excavation. If, during dry excavation, the Contractor encounters caving or water bearing soils, the Contractor will stop drilling and fill the hole with water to a point above the ground water elevation and continue with the wet construction method. For dry construction to continue the Engineer must be able to inspect the sides and bottom of the excavation before placing the reinforcing steel cage and concrete.

D. **Wet Construction Method:** If caving or water bearing soils are encountered, it may be necessary to use water, or other drilling fluid, or a temporary casing to maintain an open excavation. If practical, a positive 10-foot head of water will be maintained above the ground water elevation. When necessary, a drilling fluid other than water or temporary casing may be required to achieve this head pressure. Once a method to stop the caving and water intrusion is applied, the excavation will be advanced to the depth required in the plans. A sufficient head pressure will be maintained during the drilling operation, reinforcement placement, and concrete placement.

1. The concrete will be placed in the footings according to the underwater concrete placement section. Any contaminated water or drilling fluid will be disposed of as approved by the Engineer.

2. If a temporary casing is used, as concrete is placed simultaneously extract the casing and tremie, or pump line, at a slow uniform rate. Maintain 5-feet of embedment for the tremie or pump line with a sufficient head of concrete above the bottom of the casing to overcome the hydrostatic pressure outside the casing.

E. **Permanent Casing Construction Method:** The permanent casing construction method will be used only when specified on the plans or approved by the Engineer. This method consists of placing a casing to a prescribed depth before excavation begins. A T-bar will be used to twist the permanent casing to the specified depth.

F. Reinforcing Steel Cage Construction and Placement: The reinforcing steel cage (consisting of longitudinal bars, spirals, or tie bars) will be completely assembled and placed as a unit into the excavated footings. Placement of the reinforcing steel cage will take place immediately before concrete placement.

The reinforcing steel cage will be tied and supported in the footings so the cage will remain within the specified tolerances.

G. Concrete Placement: Concrete placement will be continuous until the footing is full and uncontaminated concrete flows out of the top of the footing, as determined by the Engineer.

H. Underwater Placement of Concrete:

1. **Tremie:** The tremie pipe will be a minimum of 0.25-inch-thick wall steel pipe, with a minimum inside diameter of 6 inches. The tremie pipe will be watertight, smooth inside and out, and thoroughly cleaned of any hardened concrete, rust, and all other contaminants.

   Starting/Restarting of the concrete placement by tremie will begin by sealing the bottom of the tremie with a watertight seal. The watertight seal will prevent water from entering the tremie yet will be dislodged when concrete flow is initiated. The sealed tremie pipe will be lowered to the bottom of the footings and filled with concrete. The tremie will be slowly lifted 6 inches off the bottom to start concrete flow. The concrete supply will be continuous as the tremie is lifted slowly maintaining 5-foot of embedment. At no time will the concrete be allowed to fall through water.

   All vertical movements of the tremie will be made slowly and will be carefully controlled to prevent loss of seal. If loss of seal occurs, placement through that tremie will be halted immediately. The tremie will be removed, resealed, and restarted as directed above.

   Concrete placement will be continuous until the footing is full and uncontaminated concrete flows out of the top of the footing, as determined by the Engineer.

2. **Concrete Pump:** Concrete pumps can be used for underwater concrete placement.

   No reducers will be allowed from the pump truck to the tremie. The portion of the pump line that penetrates the deposited concrete will be a rigid steel line (pipe) at least the same diameter as the pump line. The rigid steel line (pipe) will have a minimum thickness of 3/16 inch.

An approved plug will be inserted into the pump line, near the pump, in such a way that there is fresh concrete against the plug, with no air or water between the plug and concrete.

Placement will be continuous and begin with the pump line within 6 inches of the bottom of the footings. After pumping begins the pump line may be raised with the rising column of concrete as long as the end of the pump line remains embedded 5-feet in the concrete. At no time will the concrete be allowed to fall through water.

If the pump line is allowed to come out of or is removed from the concrete once placement has begun, restarting will require a tremie.

Concrete placement will be continuous until the footing is full and uncontaminated concrete flows out of the top of the footing, as determined by the Engineer.

I. Construction Tolerances: The following tolerances apply to the footings:

The footings will be drilled to the plan shown length.

The top of the footings will be finished level.

Excavation equipment and methods will be designed so the completed footing excavation will have a relatively flat bottom.

IV. METHOD OF MEASUREMENT

Cylindrical Concrete Footing: For each type and size footing specified in the plans, the plan quantity length will be the quantity paid for unless a change is ordered in writing. If a change is ordered, measurement will be according to length specified in the change with additional length computed to the nearest 0.1 foot.

V. BASIS OF PAYMENT

Cylindrical Concrete Footing: Payment will be paid for at the contract unit price per foot for the type and size footing specified in the plans.

Payment will be full compensation for furnishing labor and Materials including but not limited to, A45 drilled shaft concrete, reinforcing steel, water or other drilling fluid, temporary casing, permanent casing, excavation, disposal of all excavated material, surplus material, backfill, labor, equipment, and all incidentals necessary to complete this item of work.

* * * * *

1 PROJECT OVERVIEW

The South Dakota Department of Transportation (SDDOT) is undertaking project 09L5 to expand its network of dynamic message signs (DMS). The signs, strategically placed along key highways and Interstates, provide timely information on road conditions, weather advisories, traffic incidents, and construction updates to motorists.

Key components of the project include:

- electrical services
- sign foundations
- supporting structures
- dynamic message signs
- communication cabinets or enclosures
- guardrail
- closed circuit television cameras (at some locations)
- vehicle radar detectors (at some locations)
- cellular communications

1.1 DMS LOCATIONS

Three DMS sizes will be used depending on the location and roadway configuration.

PCN 09L5					
Highway	**Direction**	**MRM**	**Approximate Location**	**Support Structure**	**DMS Size**
I-29	SB	74	North of 271st Street	Overhead	29’-2” x 7’-11”
I-29	SB	76	North of I-229	Overhead	29’-2” x 7’-11”
I-29	NB	206	South of US12	Pole	21’-7” x 7’-11”
I-29	SB	209	North of US12	Pole	21’-7” x 7’-11”
I-90	EB	307	West of Plankinton	Pole	21’-7” x 7’-11”
I-90	EB	399	West of I-229	Overhead	29’-2” x 7’-11”
I-90	WB	312	East of Plankinton	Pole	21’-7” x 7’-11”
I-90	WB	403	East of Veterans Parkway	Pole	21’-7” x 7’-11”
I-90	EB	405	East of Veterans Parkway	Pole	21’-7” x 7’-11”
I-229	NB	2	South of Minnesota Ave Exit 3	Overhead	29’-2” x 7’-11”
I-229	SB	9	North of Rice Street Exit 7	Overhead	29’-2” x 7’-11”
SD34	EB	389	East of Madison	W-Beam Posts	15’-8” x 7’-10”
SD37	SB	125	South of Huron	W-Beam Posts	15’-8” x 7’-10”
SD50	EB	388	East of Yankton	W-Beam Posts	15’-8” x 7’-10”
SD50	EB	412	East of Vermillion	W-Beam Posts	15’-8” x 7’-10”
US12	EB	295	East of Aberdeen	W-Beam Posts	15’-8” x 7’-10”

One sign, along with its supporting pole, camera, and cellular communications, will be provided by SDDOT. The sign was renovated and removed from I-29 under previous construction contracts and will be reinstalled at I-90 MRM 403 in project PCN 09L5. No electronic upgrades will be required.

1.2 COMMUNICATIONS

SDDOT’s Active Traffic Management System (ATMS), established separately from this project, will monitor and control the roadside devices constructed in project PCN 09L5. Communication to roadside ITS devices will be through cellular modems provided by SDDOT and installed and configured by SDDOT and the South Dakota Bureau of Information and Telecommunications (SDBIT).

1.3 ITS SUBSYSTEMS

This Special Provision includes separate sections for the major ITS subsystems used on Project PCN 09L5:

- Section 2 describes requirements for Dynamic Message Signs.
- Section 3 lists requirements for high resolution pan, tilt, and zoom (PTZ) Closed Circuit Television Cameras for surveillance of road and traffic conditions at some sign locations.
- Section 4 lists requirements for Communication Cabinets and Enclosures to house cellular modems and other ancillary equipment at locations identified in the plans.
- Section 5 lists requirements for Vehicle Radar Detectors to monitor traffic speed and volume at some sign locations.
- Section 6 describes Testing requirements for equipment at the unit subsystem levels and for final acceptance.

2 DYNAMIC MESSAGE SIGNS

2.1 DESCRIPTION

Sixteen dynamic message signs (DMS) will be deployed within SDDOT Aberdeen and Mitchell Regions.

Project PCN 09L5 will furnish and install 15 full color matrix DMS along with foundations, structures, hardware, electronics, cabinets, power, and communication infrastructure:

- Five signs will be installed in a center-mounted "butterfly" configuration on pole-mounted structures off the right shoulder of 2-lane Interstate highways.
- Five signs will be installed on overhead sign structures over 3-lane Interstate highways.
- Five signs will be installed on W-beam posts off the right shoulder of other highways.

Project PCN 09L5 will also reinstall one sign along with its supporting pole, camera, and cellular communications furnished by SDDOT. The sign, formerly located on I-29, is already fitted with a full color matrix display identical to those specified in this project. It is stored at SDDOT's Sioux Falls Area maintenance yard pending reinstallation at I-90 MRM 403. No electronic upgrades will be required.

2.2 DMS LOCATIONS

2.2.1 The Contractor will install Dynamic Message Signs (DMS) at locations indicated in the plans.

2.2.2 Three distinct DMS configurations will be used depending on the location and highway configuration.

PCN 09L5					
Highway	**Direction**	**MRM**	**Approximate Location**	**Support Structure**	**DMS Size**
I-29	SB	74	North of 271st Street	Overhead	29'-2" x 7'-11"
I-29	SB	76	North of I-229	Overhead	29'-2" x 7'-11"
I-29	NB	206	South of US12	Pole	21'-7" x 7'-11"
I-29	SB	209	North of US12	Pole	21'-7" x 7'-11"
I-90	EB	307	West of Plankinton	Pole	21'-7" x 7'-11"
I-90	EB	399	West of I-229	Overhead	29'-2" x 7'-11"
I-90	WB	312	East of Plankinton	Pole	21'-7" x 7'-11"
I-90	WB	403	East of Veterans Parkway	Pole	21'-7" x 7'-11"
I-90	EB	405	East of Veterans Parkway	Pole	21'-7" x 7'-11"
I-229	NB	2	South of Minnesota Ave Exit 3	Overhead	29'-2" x 7'-11"
I-229	SB	9	North of Rice Street Exit 7	Overhead	29'-2" x 7'-11"
SD34	EB	389	East of Madison	W-Beam Posts	15'-8" x 7'-10"
SD37	SB	125	South of Huron	W-Beam Posts	15'-8" x 7'-10"
SD50	EB	388	East of Yankton	W-Beam Posts	15'-8" x 7'-10"
SD50	EB	412	East of Vermillion	W-Beam Posts	15'-8" x 7'-10"
US12	EB	295	East of Aberdeen	W-Beam Posts	15'-8" x 7'-10"

2.2.3 The Contractor will transport the SDDOT-furnished DMS, pole, camera, and communications equipment from storage at the SDDOT Sioux Falls Area maintenance yard at 5316 W 60th Street N, Sioux Falls, SD to its installation location at I-90 MRM 403.

2.2.3.1 The Contractor will replace and pay for any equipment damaged while transporting and installing the DMS, pole, and camera.

2.3 INSTALLATION

2.3.1 The Contractor will install all equipment in accordance with DMS manufacturer's specifications and installation instructions.

2.3.2 The Contractor will install each DMS with on-site supervision of a qualified representative of the DMS manufacturer and SDDOT Intelligent Transportation Systems Program staff.

2.3.3 The Contractor will notify the SDDOT Intelligent Transportation Systems Program at least 10 days prior to installation of each DMS.

2.3.4 The Contractor will be responsible for any damage to equipment furnished by SDDOT under this project until the equipment has been installed as specified, inspected, and accepted by SDDOT.

2.4 MANUFACTURER QUALIFICATIONS

2.4.1 The DMS manufacturer will have been in the business of manufacturing large outdoor permanently mounted LED-based message signs used to manage roadway traffic for at least 10 years prior to the contract bid date.

2.4.2 The DMS manufacturer will have been in business under the same corporate name for at least ten (10) years prior to the contract bid date.

2.4.3 The DMS manufacturer will have in operation as of the contract bid date at least ten independently owned and operated DMS systems, each containing at least 10 permanently mounted signs using the National Transportation Communications ITS Protocol (NTCIP) as their primary communication protocol.

2.4.4 The DMS manufacturer will have in place a Quality Management System certified to ISO 9001:2008 or the latest released standard of ISO 9001.

2.4.5 The DMS manufacturer will have a customer service department that provides technical support and services, staffed from 8 am to 5 pm Central Time at a minimum.

2.4.6 The DMS manufacturer will offer bench-level repair services for failed components and will stock major components for replacement.

2.4.7 The DMS manufacturer will offer extended warranty, service, and maintenance plans.

2.5 MATERIALS

2.5.1 The Contractor will provide all the materials and services necessary to install new display and control electronics and associated equipment that fully comply with these specifications, including incidental items that may have been inadvertently omitted.

2.5.2 All equipment and materials, including any furnished by other manufacturers, will be new, of latest design, and currently in production.

2.5.3 Where allowed, approved equals must be approved by the SDDOT's Intelligent Transportation Systems Program in writing prior to installation.

2.5.4 Pole mounted DMS will be Daktronics VF-2020-96x288-20-RGB DMS or approved equal.

2.5.4.1 The DMS will have walk-in access with a side-entry door.

2.5.4.2 The DMS will be capable of displaying messages of at least 3 lines of at least 15 characters.

2.5.5 Post mounted DMS will be VF-2420-96x224-20-RGB DMS or approved equal.

2.5.5.1 The sign will have front access.

2.5.5.2 The sign will be capable of displaying messages of at least 3 lines of at least 12 characters.

2.5.6 DMS mounted on overhead sign structures will be Daktronics VF-2020-96x400-20-RGB DMS or approved equal.

2.5.6.1 The sign will have walk-in access with a side-entry door.

2.5.6.2 The sign will be capable of displaying messages of at least 3 lines of at least 21 characters.

2.5.7 The signs will have a full color and full matrix display.

2.5.8 The sign displays will have 20mm pixel pitch.

2.6 FUNCTIONAL REQUIREMENTS

2.6.1 All components will operate throughout the temperature range of 30°F to +165°F and a relative humidity range of 0 to 99% non-condensing and will not be damaged by storage or temporary operational exposure to a temperature range of -40°F to +185°F.

2.6.2 The DMS will meet the environmental requirements defined in the National Electrical Manufacturers Association (NEMA) Standards Publication TS 4, Hardware Standards for Dynamic Message Signs.

2.6.3 The DMS and all associated equipment and enclosures will be listed by the Underwriters Laboratories (UL) and will bear the UL mark on the outside of the DMS enclosure. Control equipment and enclosures will conform to UL 1433 Standard for Control Centers for Changing Message Type Electric Signs.

2.6.4 The DMS will be designed in accordance with Federal Communications Commission (FCC) Part 15, Subpart B as a “Class A” digital device.

2.6.5 All printed circuit boards will be sealed with acrylic conformal coating.

2.7 SIGN SUPPORTS

2.7.1 At signs located on the roadside along an Interstate highway, the Contractor will furnish and install a single pole structure to support the DMS in a center-mounted “butterfly” configuration as shown in the plans.

2.7.2 At signs located on the roadside along a state highway, the Contractor will furnish and install a W-beam post structure to support the DMS as shown in the plans.

2.7.3 At signs located over traffic lanes of an Interstate highway, the Contractor will furnish and install a quad chord sign truss to support the DMS as shown in the plans.

2.7.3.1 Overhead sign structures will be equipped with a walkway to allow maintenance staff to safely walk from the shoulder to the DMS door without impeding traffic in accordance with OSHA Standard 1910.

2.7.3.2 Overhead sign structures will be equipped with a folding safety handrail along the length of the walkway. The safety handrail must have a top rail 39 to 45 inches above the walkway and a mid-rail halfway between the walkway and the top rail.

2.7.3.3 Overhead sign structures will be equipped with a fixed, caged access ladder to allow maintenance staff to access the walkway from the ground without a bucket truck in accordance with OSHA Standard 1917.118.

2.7.3.4 Overhead sign structures will be equipped with a fixed, caged access ladder, of the same material as the DMS structures, to allow maintenance staff to access the walkway from the ground without a bucket truck in accordance with OSHA Standard 1917.118.

2.7.3.4.1 The access ladder will be fitted with a security cover (ladder guard) approximately 6 feet above the ground with a lock operated with a Corbin #2 key.

2.7.3.4.2 Access ladder rungs will be spaced 12-inch center to center typical spacing, with the first rung no more than 18 inches above the ground.

2.7.4 A Professional Engineer registered in the State of South Dakota will develop the complete DMS structural design, including the support structure, cabinet, mounting brackets, and lifting eyebolts, and mounting hardware provided by the DMS manufacturer, and certify that the DMS complies with the applicable requirements of AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals

2.7.5 The analysis will include but will not be limited to:

- material, dimension, and attachment specifications for the support structure
- attachment of the support structure to the foundation
- the quantity and type of lifting eyebolts to be provided
- the quantity and type of mounting brackets to be provided
- the quantity and type of hardware (nuts, bolts, washers) used to attach the mounting brackets to the DMS
- verification that no dissimilar metals problem will exist and/or affect the structural integrity of the DMS-to-bracket attachment points
- the recommended number of attachment points and locations that the Contractor should use when mounting the DMS to its support structure

2.7.6 The DMS and sign structures will meet WL9 wind load requirements.

2.7.7 The Contractor will install the sign structures in accordance with the plans and Section 982.2 of the South Dakota Standard Specifications for Roads and Bridges.

2.7.8 The Contractor will verify that the foundations specified in these plans are adequate for all sign structures that are designed.

2.8 DISPLAY CABINET

2.8.1 The Contractor will furnish and install a display cabinet that protects internal components from rain, ice, dust, and corrosion.

2.8.2 The display cabinet will provide service access for all LED display modules, electronics, environmental control equipment, wiring, and other internal DMS components.

2.8.3 The display cabinet will comply with type 3R enclosure criteria as described in the latest revision of NEMA Standards Publication 250, Enclosures for Electrical Equipment (1000 Volts Maximum).

2.8.4 The display cabinet will be designed and constructed to comply with all applicable sections of AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, as well as the fatigue resistance requirements of NCHRP Report 412, Fatigue-Resistant Design of Cantilevered Signal, Sign, and Light Supports.

2.8.5 The display cabinet will be designed, fabricated, welded, and inspected in accordance with the latest revision of ANSI/AWS D1.2 Structural Welding Code-Aluminum.

2.8.6 The display cabinet structural frame will consist of aluminum extrusions made from 6061-T6 and/or 6063-T6 aluminum alloy. All sides of the display cabinet exterior, except the front, will be covered with thick aluminum sheets made from 5052-H32 aluminum alloy permanently attached to each other with structural rivets or chemically bonded structural adhesive.

2.8.7 DMS structural assembly hardware (nuts, bolts, washers, and direct tension indicators) will be galvanized A325 high-strength steel and will be appropriately sized for the application.

2.8.8 All sides of the display cabinet exterior, except the front of the LED modules, will be 0.125-inch thick aluminum alloy 5052-H32 sheet attached to the structural framework with structural fasteners or chemically bonding structural adhesive.

2.8.9 The aluminum skin will be welded to the display cabinet structural frame. All exterior sheet seams will be continuously seam-welded to the structural frame to form a single structure. Stitch welding will be used on the interior of the cabinet to attach the aluminum skin sheets to the frame.

2.8.10 External DMS component hardware (nuts, bolts, screws, standoffs, rivets, fasteners, etc.) will be fabricated from hot dipped or mechanically galvanized steel, stainless steel, aluminum, nylon, or other durable corrosion-resistant materials suitable for the roadway signage application.

2.8.11 Display cabinet right, left, and rear walls will be vertical. The top and bottom sides will be horizontal. The front DMS wall will be built with a permanent forward tilt angle of three (3) degrees, so LED display modules are tilted three (3) degrees forward toward viewing motorists and use of the legible LED viewing area is optimized.

2.8.12 All external surfaces on the rear and sides of the display cabinet, including access doors and mounting brackets, will be natural mill-finish aluminum.

2.8.13 The display cabinet bottom side will contain weep holes, screened to prevent the entrance of insects and small animals, to drain water that accumulates due to condensation.

2.8.14 The display cabinet will be equipped with a level, non-slip aluminum walkway at least 24 inches wide running the entire length of the cabinet.

Mounting Brackets

2.8.15 Multiple mounting brackets in the form of Z-bar extrusions will be bolted to structural frame members at the display cabinet exterior rear wall to attach the DMS to the support structure.

2.8.16 Mounting brackets will be extruded from aluminum alloy 6061-T6.

2.8.17 Brackets will be attached to the DMS using mechanically galvanized A325 high-strength steel bolts and direct tension indicators to verify that mounting hardware is tightened with the proper amount of force.

2.8.18 All bracket-to-DMS attachment points will be sealed and watertight.

2.8.19 Brackets will be designed and fabricated such that the Contractor can drill into them without penetrating the display cabinet and compromising the cabinet's watertightness.

Lifting Hardware

2.8.20 Multiple galvanized steel lifting eyebolts will be attached directly to the display cabinet structural frame at the DMS factory.

2.8.21 Lifting hardware and the cabinet frame will be designed so the DMS can be shipped, handled, and installed on its support structure without damage or excessive stress.

2.8.22 All eyebolt mounting points will be sealed to prevent water from entering the display cabinet.

2.8.23 The lifting eyebolts will be easily removed by one person without opening or entering the display and without risk of compromising water tightness.

Doors (Pole-Mounted and Overhead Signs)

2.8.24 The display cabinet will include an 80" vertically hinged, outward opening access door at each end of the display cabinet (two doors per sign total).

2.8.25 Each doorframe will be double flanged on all sides to shed water.

2.8.26 Each door will close around the flanged doorframe and compress against a closed-cell foam gasket bonded to the door.

2.8.27 Each door will latch to its doorframe with a three-point draw-roller mechanism with internal handle and release lever to prevent service personnel from becoming trapped in the sign.

2.8.28 Each door will be equipped with a sensor to detect whether the door is open or closed.

2.8.29 Each door will be equipped with a lock keyed to a Corbin #2 lock.

2.8.30 Each door will be equipped with a stop that securely retains the door in a 90-degree open position in a 40-mph wind.

2.8.31 The display cabinet will be equipped with OSHA-compliant safety rail assembly at each door to prevent service personnel from falling through an open door.

2.8.32 The display cabinet will be equipped with an OSHA-compliant anchor point just inside each door for connection of a personal fall arrest system.

Environmental Control (Pole-Mounted and Overhead Signs)

2.8.33 The display cabinet will contain systems for cabinet ventilation, face panel fog prevention, and safe over-temperature shutdown.

2.8.34 The display cabinet will contain an electronically controlled ventilation system and a failsafe thermostat designed to keep internal components safe when the outdoor ambient temperature is +115°F or less.

2.8.35 The ventilation system will include multiple air intake ports, each covered with a filter that removes airborne particles measuring 500 microns in diameter and larger and equipped with one or more ball bearing-type fans that positively pressure the DMS cabinet.

2.8.36 Fans and air filters will be removable and replaceable from inside the display cabinet.

2.8.37 Each primary ventilation fan will contain a sensor to monitor and report its rotational speed to the sign controller.

2.8.38 One exhaust port, screened to prevent the entrance of insects and small animals, will be provided for each air intake port.

2.8.39 An aluminum hood attached to the rear wall of the DMS will cover each air intake and exhaust port and be thoroughly sealed to prevent water from entering the DMS.

2.8.40 A timer switch adjustable from zero (0) to four (4) hours will be located just inside the access door to manually activate the ventilation system.

2.8.41 For regions identified that experience regular high ambient temperatures, the addition of pixel fans will be incorporated into the design to prevent thermal dimming of the modules.

2.8.42 The display cabinet will contain an automatically controlled system to keep the front face polycarbonate panel free of fog and condensation when the internal relative humidity approaches condensation levels.

2.8.43 The display cabinet will contain timer-controlled lighting that meets requirements of NEMA TS4-2016 section 3.2.8.3 Nighttime Service Lighting.

2.9 DISPLAY

2.9.1 The full-color matrix display will display messages that are continuous, uniform, and unbroken in appearance.

2.9.2 The pixel matrix will be able to display alphanumeric characters at least 12” high in accordance with the definition by NEMA TS 4 Hardware Standards for Dynamic Message Signs Standards.

2.9.3 The DMS will be able to display messages comprising any combination of alphanumeric text, punctuation symbols, and graphic images across multiple frames.

2.9.4 The LED display will be legible within a distance range of 300 feet when mounted according to the manufacturer's instructions.

2.9.5 The LED display will be legible 24 hours per day, including dawn and dusk hours when sunlight shines directly on the display face or the sun is directly behind the sign, and in commonly encountered weather conditions.

Front Face

2.9.6 The DMS front face will be constructed with multiple rigid panels, each of which supports and protects a full-height section of the LED display matrix. The panels will be fabricated using aluminum sheeting on the exterior and polycarbonate sheeting on the interior of the panel.

2.9.7 Front face panels will provide a high-contrast background for the DMS display matrix. The aluminum mask of each panel will be painted black and will contain an opening for each pixel. Openings will be large enough to not block any portion of the viewing cones of the LEDs.

2.9.8 Front face panels and front face border pieces will be coated with semi-gloss black polyvinylidene fluoride (PVDF) applied in accordance with American Architectural Manufacturers Association (AAMA 2605) which has an expected outdoor service life of 10 to 15 years.

2.9.9 Each face panel will have a single polycarbonate sheet containing UV inhibitors attached securely to the inside of the aluminum panel to cover all the pixel openings and prevent water and other elements from entering the DMS.

2.9.10 Face panels will be attached to each other using stainless steel hardware. Seams that separate adjacent panels will be sealed. Panels will not be welded or otherwise permanently mounted to the display cabinet.

2.9.11 Each LED display module will be mounted to the rear of the display's front face panels using durable non-corrosive hardware. No tools will be required for module removal and replacement.

2.9.12 In wind, the front face will not distort in a manner that adversely affects message legibility.

LED Modules

2.9.13 Each LED driver board will be microprocessor-controlled and will communicate with the sign controller on a wire or fiber optic communication network using an addressable network protocol. The microprocessor will process commands from the sign controller to display data, perform diagnostic tests, and report pixel and diagnostic status.

2.9.14 LED pixels will be driven using pulse width modulation of the drive current to control display intensity. The drive current pulse will be modulated at a frequency high enough to provide flicker-free operation and at least 200 brightness levels.

2.9.15 The failure of an LED string or pixel will not cause the failure of any other LED string or pixel.

2.9.16 The DMS will contain LED display modules mounted adjacently in a two-dimensional array to form a continuous LED pixel matrix.

2.9.17 All LED modules will be manufactured and designed to IPC Standards

2.9.18 The distance between centers of adjacent pixels, both horizontal and vertically, will be 0.81 inches (20 mm).

2.9.19 Each display pixel will comprise red, green, and blue LEDs. Other pixel technologies, such as fiber optic, flip disk, combination flip disk-fiber optic, combination flip disk-LED, liquid crystal, LED lenses, and incandescent lamp will not be accepted.

2.9.20 Each pixel will contain the number of discrete LEDs needed to output white colored light at a luminous intensity of at least 12,400 candelas per square meter.

2.9.21 Pixels will be constructed with discrete LEDs manufactured by a reputable manufacturer such as Avago Technologies (formerly Agilent Technologies), Nichia Corporation, OSRAM, CREE or EOI.

2.9.22 All LEDs will be from the same manufacturer and of the same part number, except for the variations in the part number due to the intensity and color.

2.9.23 LEDs will be rated by the LED manufacturer to have a minimum lifetime of 100,000 hours of continuous operation while maintaining at least 50% of the original brightness.

2.9.24 Constant current LED driver integrated circuits will limit forward current to the manufacturer's recommended forward current for 100,000-hour lifetime.

2.9.25 The LED manufacturer will sort LEDS into bins by color and light intensity. Each color of LEDs will be obtained from no more than two (2) consecutive color or intensity bins as defined by the LED manufacturer.

2.9.26 LEDs from the LED color and intensity bins will be distributed evenly throughout the sign and will be consistent from pixel to pixel.

2.9.27 LED packages will be fabricated from UV light resistant epoxy.

2.9.28 LEDs will have a nominal viewing cone of 30 degrees with a half-power angle of 15 degrees measured from the longitudinal axis of the LED. Viewing cone tolerances will be as specified in the LED manufacturer's product specifications and will not exceed ± 5 degrees.

2.9.29 All exposed metal on both sides of each printed circuit board, except connector contacts, will be protected from water and humidity exposure by a thorough application of conformal coating.

2.9.30 The LED display will be constructed of multiple display modules placed adjacently in a two-dimensional matrix.

2.9.31 LED display module power and signal connections will be a quick-disconnect locking connector type. Removal of a display module from the DMS will not require a soldering operation.

2.9.32 Display modules and internal components will be removable and replaceable by a single technician.

2.9.33 Display modules will be environmentally sealed to an IP67 rating.

2.9.34 Addressing of each LED display module will be configured via the communication wiring harness and connector without on-board addressing jumpers or switches.

2.9.35 Mounting a display module upside-down or in another incorrect position within the display matrix will not be possible.

2.9.36 All display modules will be identical and interchangeable throughout the sign.

2.9.37 Removal or failure of any display module will not affect the operation or structural integrity of any other module or sign component.

Sensors

2.9.38 Three (3) electronic sensors that measure outdoor ambient light levels at the DMS site will be mounted in line with the display cabinet walls. Two of the sensors will be placed to measure ambient light levels striking the front and rear of the DMS. The third sensor will be mounted to the floor of the display cabinet and face the ground.

2.9.39 At least one (1) ambient temperature sensor will be mounted to the rear wall or bottom of the display cabinet such that it is never in direct sunlight.

2.9.40 The DMS will contain at least one (1) internal temperature sensor that measures the temperature of the air in the cabinet over the range of -40°F to +176°F.

2.9.41 The DMS will contain one (1) sensor that measures the relative humidity of the air inside the DMS cabinet over the range of 0 to 100%.

2.10 SIGN CONTROLLER

2.10.1 Each DMS will be controlled and monitored by its own microprocessor-based sign controller not requiring continuous communication with external control software to perform most control functions.

2.10.2 The sign controller's front panel will include a menu-driven architecture, keypad, and a graphical screen.

2.10.3 The sign controller will:

- perform diagnostic testing of system components including pixels, power systems, and sensors
- activate, create, preview, and delete messages stored in memory
- blank the sign
- start and stop scheduled messages
- configure display parameters, including display size and color technology
- configure date and time
- configure communications port settings and NTCIP options
- configure level of password protection per user
- select automatic or manual brightness mode of operation

2.10.4 The sign controller will natively support National Transportation Communications for ITS protocol (NTCIP) 1203 V03 without external protocol converter or translator devices.

2.10.5 The sign controller will activate a sign message when:

- an operator instructs a particular message to be activated using the front panel interface or external control software
- the internal time-based scheduler activates a message at a date and time previously configured using the control software
- an event activates a pre-configured message

2.10.6 The sign controller will display a message on the sign until:

- the scheduled message duration expires
- the sign controller receives a command to change the message
- the sign controller receives a command to blank the sign
- the schedule stored in the sign controller's memory indicates that it is time to activate a different message
- an event triggers a different message

2.10.7 The sign controller will be able to assign a priority level to any message and override any non-priority message.

2.10.8 The sign controller will support changing or replacing preinstalled fonts from external control software.

2.10.9 The sign controller will automatically adjust LED brightness to match ambient light levels.

2.10.10 The sign controller will change the display brightness to one of at least 100 selectable levels of the display matrix manually via the front panel interface or external control software.

2.10.11 The sign controller will report sign brightness mode and level to the front panel interface and to the external control software.

2.10.12 The sign controller will have non-volatile electronically changeable memory that retains messages and schedules in memory for at least 30 days following a power loss.

2.10.13 The sign controller will contain a battery-backed-up computer-readable clock that is accurate to within one (1) minute per month and automatically adjusts for daylight savings time and leap year.

2.10.14 The sign controller will monitor and report the status of all light, temperature, and humidity sensors installed in the display cabinet.

2.10.15 The sign controller will monitor a temperature sensor on each LED display module and automatically shut down the module if the temperature exceeds a configurable threshold, which may be overridden for high priority or emergency messages.

2.10.16 The sign controller will monitor the open/closed status of the access door.

2.10.17 The sign controller will monitor the status of sign components and subsystems and report it via the front panel interface and via NTCIP to control software upon request.

2.10.18 The sign controller will monitor and display the currently active message, including graphics, in a WYSIWYG format.

2.10.19 Automatically and upon command from the front panel interface or external control software, the sign controller will test all the LED pixels without disrupting the message being displayed.

2.10.20 The sign controller will automatically shut down the LED modules to prevent damaging the LEDs if the measured internal cabinet air temperature exceeds a maximum temperature threshold.

2.10.21 The sign controller will automatically report via front panel interface and external control software the occurrence of events and subsystem failures, including over-temperature shutdown, controller restart, power loss, power system failure, door open, and communication loss.

2.10.22 The sign controller will provide cybersecurity measures, including password protection, to limit access to authorized users.

2.10.23 The sign controller will transmit and receive data packets to and from the DMS via dedicated fiber optic cables. This network will communicate with all sensors, drivers, and other devices utilizing a CAN (controller area network) bus network running throughout the DMS.

2.10.24 Data transferred will include pixel states, sensor values, and I/O readings from various devices, such as door sensors and power supply monitors. Pixel data will include the states displayed on the sign face as well as diagnostic data retrieved from the LED drivers.

2.10.25 The sign controller will control the LED drivers in a manner that causes the desired message to display on the DMS sign. At a minimum, the sign controller will support the following features as described in the DMS specification:

- selection of character fonts style
- horizontal alignment of text on the display, including left, center, and right justification
- vertical alignment of text on the display, including top, middle, and bottom justification
- adjusting the spacing horizontally between characters or vertically between lines of text
- alternating between pages of a multiple-page message

- display of graphic bitmaps of various sizes ranging to very small to the size of the entire DMS matrix

2.10.26 The sign controller will enable the DMS to display messages using the following types of effects:

- static message (the selected message is displayed continuously on the sign face until the sign controller blanks the sign or causes the display of another message)
- multiple-page message (at least 2 pages of information, each filling the entire pixel matrix, with user-programmable display times from 0.1 to 25.5 seconds, in increments of 0.1 seconds)

2.10.27 The sign controller will support the storage and use of at least twenty (20) font sets with which messages can be formatted and displayed. Each font will support up to 255 characters. All text font files will include the following characters:

- the letters “A” through “Z”, in both upper and lower case
- decimal digits “0” through “9”
- blank spaces
- eight (8) directional arrows
- punctuation marks, such as: . , ! ? – ‘ ’ “ ” : ;
- special characters, such as: # & * + / ( ) [ ] < > @

2.10.28 Upon command from either the front panel control interface or via NTCIP from remote control software, the sign controller will direct the LED modules to perform diagnostic tests of all their pixels. The controller will then collect and report the results of the pixel testing.

2.10.29 The sign controller will be able to automatically detect and report in real-time the on/off status of each of the display’s pixels without interfering with the display of data on the DMS face.

2.10.30 The sign controller will monitor and report the functional status of regulated DC power supplies located in the DMS by monitoring diagnostic outputs on the supplies. The controller will monitor the output voltage of each power supply and the status of each output. The power supply voltages will be measured, and the status will be indicated as pass or fail.

2.10.31 The sign controller will be able to automatically inform a maintenance operator (via the local LCD panel) and a central control system (via NTCIP communication) of the occurrence of important events and subsystem failures.

2.10.32 The sign controller will continuously monitor the display cabinet’s temperature sensors and will automatically shut down the DMS if the internal cabinet temperature exceeds a safety threshold.

2.10.33 If the temperature approaches the threshold the sign controller will reduce the brightness of the sign face. If the temperature continues to increase and exceeds that threshold, the sign controller will trigger a warning notification event and blank the face of the sign until the temperature begins to drop. As the temperature drops, the sign controller will gradually increase the brightness of the display face, eventually returning to full brightness.

2.10.34 The sign controller will employ an algorithm with hysteresis to control brightness to ensure that the display face does not visibly flicker as the temperature changes.

2.11 CONTROL SOFTWARE

2.11.1 The Contractor will provide manufacturer-supplied control software to fully operate the DMS in lieu of an agency-operated Advanced Traffic Management System.

2.11.2 The DMS manufacturer will provide a control software license key to prevent unauthorized or unlicensed copies of the software to be installed on non-agency computers.

2.11.3 The control software will:

- operate on desktop and laptop computers with at least 1.5GHz processor, 1 GB RAM, and 2GB of free hard drive space.
- support Windows 10, Windows 11, and Windows Server 2016 operating systems with all critical updates installed.
- be written using Microsoft-certified software development tools
- support 32-bit and 64-bit processors and operating systems
- provide a user-friendly multi-color graphical user interface
- support at least 250 dynamic message signs
- support communications via any combination of dedicated hardwired serial network, fiber-optic network, dial-up telephone lines, leased phone lines, dialup cellular modem, IP cellular modem, spread spectrum radio, and Ethernet
- support control, monitoring, and diagnostic functions
- control DMS both remotely from a central location and locally at the DMS site using a laptop computer
- be accompanied by an easy-to-use software installation utility
- contain a context-sensitive online help system with documentation for each software feature
- comply fully with NTCIP communications protocols

2.11.4 The control software will require the use of usernames and passwords.

2.11.5 The control software will enable creation of usernames and passwords for up to 100 users.

2.11.6 The control software will enable definition of requirements for password lengths and alphanumeric combinations.

2.11.7 The control software will support at least four (4) distinct user authorization levels to control DMS, create and modify messages, configure control software, and modify DMS settings.

2.11.8 The control software will include a server module to handle DMS communication and store configuration data, messages, schedules, communications settings, DMS status, and other data.

2.11.9 The control software will include multiple client modules that issue requests to and receive responses from the server over any TCP/IP-based network, including LANs and WANs.

2.11.10 The control software client applications will enable:

- user access to system with username and password
- display of communications, system status, and diagnostics
- creation of DMS messages
- creating time and date schedules for activating messages
- system configuration and administration

2.11.11 The control software will allow users to organize DMSs into groups by region, roadway, or user-specified category.

2.11.12 The control software will display DMS in both list and graphical map formats.

2.11.13 The control software will list the following information about each DMS:

- DMS ID number
- DMS name

- message name or description of the message being displayed on the DMS
- date and time of last communication between the control software and the sign controller
- error and warning status, including pixel errors, power failures, communication error, etc.
- graphical representation (WYSIWYG) of current message displayed

2.11.14 The control software graphical map interface will include:

- configurable bitmaps to show some or all DMS geographically
- message name or description of message displayed on DMS
- icons for each sign located on the map
- icon color changes to indicate the status of the DMS
- date and time of last communication between the control software and the sign controller
- display of sign name when the mouse hovers over a DMS icon
- graphical representation of current message when the mouse hovers over a DMS icon

2.11.15 The control software will allow users to:

- send and activate stored messages from the libraries
- blank the display
- activate ad-hoc messages created immediately, not loaded from a library
- define and activate schedules
- retrieve messages from the sign
- perform diagnostics of subsystems, power supplies, sensors, climate control devices, etc.
- perform pixel testing and report locations of any failed pixels

2.11.16 The control software will be able to poll DMS at predefined intervals or time of day to retrieve and display the most recent status information.

2.11.17 The control software will enable creation of scenarios to automate a series of repeated actions including:

- sending and activating stored messages from the libraries
- blanking the display
- sending and activating schedules
- diagnostics of DMS subsystems
- pixel tests

2.11.18 The control software will save scenarios to libraries where system operators may schedule or activate them through the graphical user interface.

2.11.19 The control software will be able to monitor and display the contents of any communications in progress with DMS.

2.11.20 The control software will be able to control any NTCIP-compatible DMS regardless of the manufacturer, with functionality limited to NTCIP standard MIB objects.

2.11.21 The control software will include a message editor and graphics editor that enable the operator to create, edit, name, and store sign message files.

2.11.22 The message editor will present a scaled image of the display matrix in a WYSIWYG format, including a complete and accurate representation of the display matrix type and the number of display pixels, while a new message is being created or an existing message is being edited.

2.11.23 The control software message editor will enable the operator to:

- enter, modify, remove, or insert text
- select font per character

- set flashing text and variable flashing rates per character
- insert special characters such as arrows
- select fonts ranging in size and boldness for improved legibility of message
- adjust interline spacing in number of pixels
- justify message horizontally including left, center, and right
- justify messages vertically including top, middle, and bottom
- make text scrollable per line, including direction and scroll rate
- change spacing between individual characters
- change text foreground and background color per character
- insert NTCIP standard real-time fields

2.11.24 The control software message editor will enable the operator to:

- compose messages at least 2 pages long
- set on and off times for each page
- check spelling
- adjust message priority status per message
- prevent a list of prohibited words from being used
- cut, copy, and paste
- undo and redo actions
- rearrange page order for multiple page messages
- duplicate pages
- preview a message as it would run on the display
- zoom in and out within the editing area
- list messages most recently edited for quick access
- support default options when creating new messages

2.11.25 The control software graphics editor will enable the operator to:

- insert text anywhere on the matrix display
- insert graphic images files into the message editing area
- move graphic text and images within the message editing area
- insert common MUTCD symbols into graphic images
- insert true type font text
- enable anti-aliasing of font text
- resize images
- layer images and text and change their order
- move shapes to the front or back
- insert shapes including lines, rectangles, ellipse, triangles, spheres, and diamonds
- control shape fill, line color, fill color, and brush width
- support at least 32K colors for full RGB color displays
- set time with AM/PM or am/pm

2.11.26 The control software will enable the operator to create a message library with the following functionality:

- create multiple levels of folders to store messages
- organize folders by sign type and size
- rename files and folders
- delete files and folders

- save messages for future use
- edit a saved message
- open an existing message and save it as a new message

2.11.27 The control software will enable the operator to create, delete, edit, and rename message schedules to run specific messages at pre-determined times and dates.

2.11.28 The control software will be able to schedule messages by:

- month of the year (January, February, etc.)
- day of the week (Monday, Tuesday, etc.)
- day of the month (1,2, ….31)
- time of the day

2.11.29 The control software schedule editor will contain a calendar to view schedules by week, month, or year.

2.11.30 The control software will be able to store schedule files in both the DMS control computer memory and the sign controller memory.

2.11.31 For each model of DMS the control software will support at least twenty (20) configurable fonts selectable from a library of at least twenty (20) fonts provided by the software vendor.

2.11.32 The control software will allow the operator to create new fonts or modify existing fonts by graphically editing each character pixel-by-pixel.

2.11.33 The control software will be able to download to the DMS any of the fonts provided by the software vendor or created or modified by the administrator.

2.11.34 The control software will log all significant system events, including:

- user login/logout
- communication failures
- configuration changes
- message and schedule activation or display blanking
- diagnostics test results
- warning events sent from the sign
- other system errors

2.11.35 The control software will log the following information for each system event:

- event ID number
- operator that initiated the event
- time and date the event occurred
- event description
- source of the event
- additional relevant data

2.11.36 The control software will enable the operator to view, sort by category, and print the event log file at any time.

2.11.37 The control software will allow messages to be assigned a priority classification of:

- emergency
- high
- normal
- low
- minimal

2.11.38 The control software will allow a numeric priority range to be assigned to each priority classification, such that two different message files may be assigned the same classification, but within that classification, one message can be identified as higher priority.

2.11.39 The control software will allow authorized users to configure system parameters and functions including:

- sign models and individual signs
- communication networks
- NTCIP profiles to enable/disable MIB objects
- system error/warning alarms
- user security rights
- system maps and sign icon placement
- default system option settings
- default message parameters
- message priority settings
- prohibited word list

2.11.40 The control software will configure each sign with the following parameters:

- sign viewing area height and width (for full-matrix signs)
- color capabilities (amber, tricolor, full-color)
- site name
- DMS ID number
- network address
- communication parameters
- time zone and daylight savings time settings

2.11.41 The control software will configure the following communication network parameters:

- network type (direct serial, dial-up, Ethernet)
- communication port (i.e., COM4)
- baud rate (ranging from 1,200 to 115,200)
- hardware handshaking
- NTCIP subnetwork and transport protocols
- communication retries and timeouts
- IP address and port

2.11.42 The control software will automatically use the following default settings during the creation of new message files:

- pixel spacing between adjacent lines of text
- pixel spacing between adjacent text characters
- display duration of a given message page
- beacon activation status
- effect to be applied to text
- message priority classification
- horizontal text justification supporting left, center, or right
- vertical text justification supporting top, middle, and bottom
- default font
- spell check on message save
- force text to uppercase

- disable scrolling

2.12 NTCIP CONFORMANCE

2.12.1 The Contractor will provide all the software, firmware, and services necessary to operate a dynamic message sign (DMS) system that fully complies with the specified NTCIP functional requirements, including incidental items that may have been inadvertently omitted.

2.12.2 Each NTCIP device covered by these specifications will implement the latest version of the standard listed in the NTCIP library at www.ntcip.org.

Subnetwork Profiles

2.12.3 Each Ethernet port will comply with NTCIP 2104 sub network profile.

2.12.4 The NTCIP device(s) may support additional Subnet Profiles at the manufacturer's option. At any one time, only one subnet profile will be active on a given port of the NTCIP device. All response datagram packets will use the same transport profile used in the request. The NTCIP device will be configurable to allow a field technician to activate the desired subnet profile and will provide a visual indication of the currently selected subnet profile.

Transport Profiles

2.12.5 Each serial or modem port on each NTCIP device will be configurable to support both NTCIP 2201 and NTCIP 2202.

2.12.6 Each RS232 port will support NTCIP 2101 (PMPP) and either NTCIP 2201 (Null) or NTCIP 2202 (Internet) transport profiles.

2.12.7 Each Ethernet port will comply with NTCIP 2202 Internet transport profile.

2.12.8 The DMS may support additional transport profiles at the manufacturer's option. Response datagrams will use the same transport profile used in the request. The DMS will support the receipt of datagrams conforming to any of the supported transport profiles at any time.

Application Profiles

2.12.9 Each port will comply with NTCIP 2301 application profile and will meet the requirements for Conformance Level 1.

2.12.10 The DMS may support additional application profiles at the manufacturer's option. Responses will use the same application profile used by the request. The DMS will support the receipt of application data packets at any time allowed by the subject standards.

Object Support

2.12.11 The DMS will support all mandatory objects of all mandatory conformance groups as defined in NTCIP 1201 and NTCIP 1203.

2.13 COMMUNICATION

2.13.1 The DMS controller will connect to a cellular modem for remote data transmission and control.

2.13.2 The cellular modem, modem power supply, antenna, and antenna cables will be furnished and configured by SDDOT.

2.13.3 At sites with a ground-mounted communication cabinet, the Contractor will install the modem and DMS controller inside the communication cabinet.

2.13.4 At sites with a post-mounted communication enclosure, the Contractor will install the modem inside the communication enclosure.

2.13.5 At sites with no communication cabinet or communication enclosure, the Contractor will install the modem inside the DMS sign and the antenna on top of the DMS sign.

2.13.6 Ethernet communication will be by NTCIP 2202 Internet transport profile and the NTCIP 2104 Ethernet subnetwork profile using TCP/IP and UDP/IP protocols.

2.13.7 NTCIP 2104 (Ethernet) networks will use a static IP address configurable via the front panel interface.

2.13.8 The Ethernet communication port will be protected with internally integrated surge protection between each signal line and ground.

2.13.9 All remote communication ports will be NTCIP-compatible.

2.13.10 The sign controller will be able to receive instructions from and provide information to a computer containing control software using the following communication modes:

- remotely via direct or dial-up communications with a remotely located computer
- locally via direct connection with a laptop computer that is connected directly to the sign controller using an RS232 null modem connection

2.13.11 The sign controller will contain at least three (3) RS232 communication ports that. support multiple communication interfaces, including direct null-modem, dial-up and leased-line modems, radio systems, cellular modems, and fiber optic modems.

2.13.12 Each RS232 port will support all typical serial baud rates from 1200 to 115,200 baud.

2.13.13 The sign controller will contain at least one (1) 10/100Base-T Ethernet communication port with a standard RJ45 connector.

2.13.14 The DMS controller addressing scheme will be configurable through the front panel user interface.

2.13.15 NTCIP 2101 (PMPP) networks will be configured with an address in the range 1 to 255 with a default address of 1. NTCIP 2104 (Ethernet) networks will use a static IP address. Both the IP address and subnet will be configurable.

2.13.16 The Ethernet communication ports in the sign controller will be protected with surge protection between each signal line and ground. This surge protection will be integrated internally within the sign controller.

2.13.17 The Contractor will furnish and install fiber optic communication cable from the sign controller to the display with the following specifications:

- 50.0/125 µm diameter
- LC-style connectors
- rated for indoor/outdoor use
- UL-rated
- PVC outer jacket
- tight buffer inner jacket
- operating temperature range: –40°F to +185°F

2.13.18 The Contractor will leave 5 feet of slack at each end of the fiber optic cable connecting a DMS controller in a ground-mounted communication cabinet to a DMS display.

2.14 ELECTRICAL

2.14.1 The DMS will operate from a 120/240 VAC, 60Hz, single-phase power source, including neutral and earth ground (3 wire plus ground).

2.14.2 Operating input voltage range will be at least 90 to 264 VAC.

2.14.3 All power and communication cable conduit will enter the DMS via watertight connections.

2.14.4 The DMS will contain a power panel board and circuit breakers with short circuit ratings of 22,000 amps and 10,000 amps for the main and branch circuits, respectively.

2.14.5 The AC power feed for all equipment in the sign cabinet will be protected at the panel board by a parallel-connection surge suppresser rated for peak 100,000-ampere surge current, 40kA line-to-neutral, 40kA line-to-ground.

2.14.6 AC power demand will not exceed 5000 watts when sign controller and ventilation system are operational and 100% of display matrix LEDs are lit.

2.14.7 AC power demand will not exceed 1500 watts when sign controller and ventilation system are operational and 40% of display matrix LEDs are lit.

2.14.8 DMS and sign controller components will be 100% solid-state, except for the environmental control fans and thermostats. All high voltage electrical components (exceeding 24 VDC) will be UL (Underwriters Laboratories) listed and meet all local NEC codes applicable to DMS applications.

2.14.9 High-voltage components and circuits (120 VAC and greater) will be designed, wired, and color-coded per the National Electric Code.

2.14.10 Wiring for LED display module control, environmental control circuits, and other internal DMS components will be installed in the display cabinet in a neat and professional manner. Wiring will not impede the removal of display modules, power supplies, environmental control equipment, and other sign components. Wires will not contact or bend around sharp metal edges. All wiring will conform to the National Electrical Code, local ordinances, and local utility company rules.

2.14.11 All power, signal, and communication cables will be identified by durable labels securely attached near the cables' termination.

2.14.12 All power, signal, and communication lines will be equipped with surge protection devices.

2.14.13 The DMS manufacturer will provide one earth ground lug that is electrically bonded to the display cabinet.

2.14.14 All bonding and grounding will be in accordance with the National Electrical Code and with the manufacturers' instructions. Grounding and surge protection will be installed following the recommendations set forth by IEEE Std 1422, NFPA 780, and Motorola R56 which specify a design goal for ground resistance of 5 ohms or less for sensitive electrical equipment.

2.14.15 The presence of ambient radio signals and magnetic or electromagnetic interference, including those from power lines, transformers, and motors, will not impair the performance of the DMS system.

2.14.16 The DMS system will not radiate electromagnetic signals that adversely affect any other electronic device, including those located in vehicles passing underneath or otherwise near the DMS and its sign controller.

2.14.17 The display cabinet will contain a utility outlet circuit consisting of at least three (3) 15-A NEMA 15-R, 120 VAC duplex outlets with ground-fault circuit interrupters. One outlet will be located at the end of display cabinet interior by the control equipment.

Internal Wiring

2.14.18 The display cabinet will contain redundant regulated switching power supplies to power all electronic sign components.

Pixel Drive Circuitry

2.14.19 The LED pixel display modules will be powered with auto-ranging regulated switching power supplies that convert the incoming AC to DC.

2.14.20 Each power supply will receive 120VAC power from a separate circuit on a separate circuit breaker, such that a single tripped breaker will not disconnect power from more than one supply.

2.14.21 The power supplies will be sufficient to maintain the appropriate LED display intensity throughout the entire operating input voltage range.

2.14.22 Maximum output power rating will be maintained over the temperature range of –30°F to +140°F.

2.14.23 Power supplies will be redundant and rated such that if one supply fails, the remaining supply(s) will be able to operate 100% of the pixels in that display region at 100% brightness when the internal DMS air temperature is +140°F (60°C) or less.

2.14.24 Power supplies used to power the LED pixel modules will be identical and interchangeable throughout the DMS.

2.14.25 Power supplies used to power the LED pixel modules will have an application of conformal coating to protect from the environmental elements and will be either UL listed or recognized.

2.14.26 Power supplies will automatically shut down and restart if the power supply overheats or one of the following output faults occurs: over-voltage, short circuit, or over-current.

2.15 SYSTEM TESTING

2.15.1 The Contractor will follow procedures set for unit, subsystem, and acceptance testing specified in Section 6 of these special provisions.

2.16 DOCUMENTATION

2.16.1 The Contractor will provide required documents to the SDDOT Intelligent Transportation Systems Program in Portable Document File (PDF) format and, as applicable, spreadsheet or design drawing file formats.

2.16.2 Within 30 days of contract execution, the Contractor will provide drawings of the DMS structural design (section 2.7.4), including details of the attachment of the support pole to the foundation.

2.16.3 At least 30 days prior to installation, the Contractor will provide for approval by the SDDOT Intelligent Transportation Systems Program cut sheets and shop drawings that describe the components to be installed, list their published specifications, describe their manufacturers' installation instructions, and show how they will be integrated.

2.16.4 At least 30 days prior to installation, the Contractor will provide for approval by the SDDOT Intelligent Transportation Systems Program a comprehensive Final Testing Plan describing a combination of factory and on-site testing, to be performed by the Contractor to demonstrate required functionality and conformance with physical and performance standards and specifications of the display, controller, and control software.

2.16.5 At least 30 days prior to installation, the Contractor will submit the DMS manufacturer's self-certification, including a statement of conformance and copies of test reports, documenting successful testing using industry accepted test tools such as the NTCIP Exerciser, Trevilon's NTester, Intelligent Devices' Device Tester, and/or Frontline's FTS for NTCIP, of the following NTCIP standards:

- NTCIP 1201: NTCIP Global Object Definitions

- NTCIP 1203: Object Definitions for Dynamic Message Signs (including Amendment 1)
- NTCIP 2101: Point to Multi-Point Protocol Using RS-232 Subnetwork Profile

2.16.6 Prior to installation, the Contractor will provide documentation indicating that the DMS product has been tested to the following standards:

- NEMA Standards Publication TS 4, Hardware Standards for Dynamic Message Signs (DMS), with NTCIP Requirements – Section 2, Environmental Requirements. Test report will detail results of mechanical vibration and shock, electrical noise and immunity, temperature, and humidity.
- Underwriters Laboratories (UL), UL 1433 Standard for Control Centers for Changing Message Type Electric Signs. The UL report number(s) for all DMS and control equipment manufactured by the DMS manufacturer will be submitted and the products will bear the UL mark.

2.16.7 The testing may be performed on scale-sized versions of the DMS provided that the test unit is functionally and structurally equivalent to the full size DMS. The Contractor will provide a record of each test performed, including the test results, a record of the test report, and the signature of the test lab's representative that witnessed the tests.

2.16.8 Upon each installation, the Contractor will furnish user manuals covering installation, operation, and maintenance of each active component of the DMS.

2.16.9 Upon each installation, the Contractor will furnish documentation of the on-site testing specified in the Final Testing Plan.

2.16.10 Within 30 days of SDDOT's acceptance of each installation, the Contractor will furnish a list of all components, including model names and numbers, serial numbers, and network addressing information.

2.16.11 Within 30 days of SDDOT's acceptance of each installation, the Contractor will furnish as-built schematic diagrams depicting all components and power, signal, and communication lines for each installation.

2.17 WARRANTY

2.17.1 The Contractor will certify the continued availability of electrical and mechanical components for at least 15 years.

2.17.2 The Contractor will furnish a warranty description, including the procedure for obtaining warranty service.

2.17.3 The Contractor will warrant all equipment supplied, including equipment from other manufacturers, against defective materials and workmanship. The minimum warranty will be as follows:

> During the first two (2) years following SDDOT's final acceptance of all installations provided in this contract, all repairs, including factory labor and materials necessary to correct any failures, will be made at the Contractor's sole cost.

2.17.4 If the Contractor's normal warranty exceeds the warranty terms specified in this section, the Contractor will furnish a copy of the warranty with submission of the shop drawings (Section 2.16.3).

2.17.5 The Contractor will assign all warranties and guarantees offered by electrical and mechanical equipment manufacturers to SDDOT upon Final Acceptance.

2.17.6 The warranty requirements will not apply to equipment that has been subjected to misuse, negligence, or accident by other parties.

2.17.7 The Contractor will inform the SDDOT Intelligent Transportation Systems Program of any failures, preventive and corrective maintenance activity, and calibrations performed under warranty.

2.17.8 The Contractor will offer for consideration by SDDOT options for extended warranty, service, and maintenance plans for at least 15 years.

2.18 BASIS OF PAYMENT

2.18.1 Payment will be staged with the first payment upon installation, the second upon installation and field acceptance, and the third upon final acceptance, including demonstration of full functionality for 30 consecutive days.

2.18.2 Payment for each item furnished, installed, and integrated to fulfill requirements will represent full compensation for all work done as specified in this Section. Payment will be made under the following items:

Bid Item Number	Item	Basis of Payment	Upon Installation	Upon Successful Unit Testing	Upon Successful Acceptance Testing
635E6210	Install Dynamic Message Sign with Pole	Each	40%	70%	100%
635E6220	Pole Mounted Dynamic Message Sign	Each	40%	70%	100%
635E6230	Overhead Dynamic Message Sign	Each	40%	70%	100%
635E6240	Post Mounted Dynamic Message Sign	Each	40%	70%	100%

2.18.3 All hardware, cables, and other materials used to install Pole Mounted DMS will be incidental to the contract unit price per each for 635E6220 Pole Mounted Dynamic Message Sign.

2.18.4 All hardware, cables, and other materials used to install Post Mounted DMS will be incidental to the contract unit price per each for 635E6240 Post Mounted Dynamic Message Sign.

2.18.5 All hardware, cables, and other materials used to install Overhead Mounted DMS will be incidental to the contract unit price per each for 635E6230 Overhead Mounted Dynamic Message Sign.

2.18.6 All costs for labor and material, transporting to site, installing the pole mounted DMS and camera, miscellaneous cabling, installing the DMS controller in the Communications Cabinet, and testing the Pole Mounted Dynamic Message Sign at 90-403, and camera as called out on the plans and as specified in the special provisions will be incidental to the contract unit price per each for 635E6210 Install Pole Mounted Dynamic Message Sign.

3 CLOSED CIRCUIT TELEVISION CAMERAS

3.1 DESCRIPTION

Closed Circuit Television Cameras (CCTV) will provide video surveillance of road and traffic conditions along the highway. The pan, tilt, zoom cameras will feed live video and still images to SDDOT's Active Traffic Management System and write still images to SDDOT's secure file transfer protocol (SFTP) web site for transfer to SDDOT's 511 Traveler Information System.

3.2 FUNCTIONAL REQUIREMENTS

3.2.1 The Contractor will furnish, install, and integrate Closed Circuit Television Cameras (CCTV) at each location identified in the plans.

3.2.2 The CCTV will be at least 1920 x 1080 (HDTV 1080p) resolution.

3.2.3 The CCTV will provide 60 frames per second at all resolutions.

3.2.4 The CCTV will provide streaming video in H.254, H.265, and Motion JPEG formats.

3.2.5 The CCTV will provide video snapshots in JPEG format.

3.2.6 The CCTV will provide shutter speeds spanning the range of 1/100,000 second to 1/2 second.

3.2.7 The CCTV will provide color images at illumination levels of 0.09 lux at 50 IRE, F1.36.

3.2.8 The CCTV will provide black and white images at illumination levels of 0.008 lux at 50 IRE, F1.36.

3.2.9 The CCTV will provide integral infrared illumination to a distance of at least 300 meters for nighttime images.

3.2.10 The CCTV will provide 360° endless pan function at rates from 0.05° per second to at least 500° per second.

3.2.11 The CCTV will provide tilt of +20° to -90° at rates from 0.05° per second to at least 500° per second.

3.2.12 The CCTV will provide at least 30x optical zoom, 12x digital zoom, and 360x total zoom.

3.2.13 The CCTV will switch between any two zoom levels in less than 1 second.

3.2.14 The CCTV will provide a horizontal field of view spanning the range of 2° to 60°.

3.2.15 The CCTV will provide a vertical field of view spanning the range of 1.1° to 36.5°.

3.2.16 The CCTV will provide at least 200 preset positions.

3.2.17 The CCTV will support at least 100 guard tours.

3.2.18 The CCTV will provide password protection.

3.2.19 The CCTV will provide IP address filtering.

3.2.20 The CCTV will provide HTTPS encryption.

3.2.21 The CCTV will support secure HTTPS and SFTP communication protocols.

3.2.22 The CCTV will operate throughout the temperature range of -58° F to +122° F (-50° C to +50° C).

3.2.23 The CCTV will operate throughout the humidity range of 10 to 100% relative humidity (condensing).

3.2.24 The CCTV will upload images or videoclips on scheduled and recurring events with pre-alarm and post-alarm video and image buffering.

3.2.25 The CCTV will report device status, including: below, within, or over operating temperature; fan failure; network loss; average bit rate degradation; IP address change; PTZ malfunctions; recording ongoing; day/night mode.

3.2.26 The CCTV will support NTCIP 1205 communication protocols.

3.3 MATERIALS

3.3.1 All equipment and materials will be new.

3.3.2 Where allowed, equivalents must be approved by the SDDOT's Intelligent Transportation Systems (ITS) Program in writing prior to installation.

3.3.3 The CCTV will be an Axis Q6355-LE PTZ Network Camera or equivalent.

3.3.4 The CCTV will include a 90-watt Power-Over-Ethernet module with integral optical fiber to Ethernet media converter, Axis TU8003 90W Midspan or equivalent.

3.3.5 The CCTV will connect to the Power-Over-Ethernet module with outdoor rated CAT6E cable.

3.3.6 The CCTV will attach to its supporting structure using manufacturer-supplied brackets and hardware, Axis TQ5001-E or equivalent, with marine-grade stainless steel SS 316L straps, Axis TX30 or equivalent, as needed.

3.4 INSTALLATION

3.4.1 The Contractor will install the CCTV in accordance with the manufacturer's instructions and the plans.

3.4.2 Prior to installation, the Contractor will configure the CCTV in collaboration with the SDDOT Intelligent Transportation Systems Program.

3.4.3 All power, control, and communication cables will be identified by durable labels securely attached near the cables' termination.

3.4.4 All power, control, and communication lines will be equipped with surge protection devices.

3.5 ELECTRICAL

3.5.1 All wiring and connections will conform to the National Electrical Code, local ordinances, and local utility company rules.

3.5.2 The CCTV will operate using line power with a nominal input voltage ranging from 90 VAC to 135 VAC.

3.6 COMMUNICATIONS

3.6.1 The CCTV will connect to a switch via 10/100 Base-T Ethernet at the ITS cabinet for remote data transmission and control.

3.6.2 Communication addresses will be programmable by the SDDOT.

3.6.3 The CCTV will provide an Ethernet connector.

3.7 SYSTEM TESTING

3.7.1 The Contractor will follow procedures set forth for unit, subsystem, and acceptance testing specified in Section 6 "ITS Testing".

3.8 DOCUMENTATION

3.8.1 The Contractor will provide required documents to the SDDOT Intelligent Transportation Systems Program in Portable Document File (PDF) format and, as applicable, spreadsheet or design drawing file formats.

3.8.2 Prior to installation, the Contractor will provide the SDDOT Intelligent Transportation Systems Program cut sheets and shop drawings that describe the components to be installed, list their published specifications, describe their manufacturers' installation instructions, and show how they will be integrated.

3.8.3 Upon installation, the Contractor will supply user manuals covering installation, operation, and maintenance of each active component of the system.

3.8.4 The Contractor will supply the test documentation required in Section 6 "ITS Testing".

3.8.5 Prior to final acceptance, the Contractor will supply a list of all components and sensors, including model names and numbers, serial numbers, and network addressing information.

3.8.6 Prior to final acceptance, the Contractor will supply as-built wiring diagrams depicting all components, sensors, and power, signal, and communication lines for each installation.

3.9 WARRANTY

3.9.1 The Contractor will certify the continued availability of electronic components for at least 5 years.

3.9.2 The Contractor will supply a warranty description, including the procedure and providers of warranty service.

3.9.3 The Contractor will warrant all equipment supplied, including equipment from other manufacturers, against defective materials and workmanship. The minimum warranty will be as follows:

> During the first year (365) days following Final Acceptance by SDDOT, all repairs, including factory labor and materials necessary to correct any failures, will be made at the Contractor's sole cost.

3.9.4 The manufacturer's warranty for the CCTV camera will be at least 5 years.

3.9.5 The Contractor will inform the SDDOT Intelligent Transportation Systems Program of any failures, preventive and corrective maintenance activity, and calibrations performed under warranty.

3.9.6 If the Contractor's normal warranty exceeds the warranty terms specified in this section, the Contractor will supply a copy of the warranty with submission of the shop drawings.

3.9.7 The Contractor will assign all warranties and guarantees offered by manufacturers to SDDOT upon Final Acceptance.

3.9.8 The warranty requirements will not apply to equipment that has been subjected to misuse, negligence, or accident by other parties.

3.10 BASIS OF PAYMENT

3.10.1 Payment will be staged with the first payment upon installation, the second upon successful unit testing, and the third upon successful acceptance testing.

3.10.2 Payment for each item furnished, installed, and integrated to fulfill requirements will represent full compensation for all work done as specified in this Section. Payment will be made under the following bid items:

Bid Item Number	Item	Basis of Payment	Upon Installation	Upon Successful Unit Testing	Upon Successful Acceptance Testing
635E5600	Surveillance Camera	Each	40%	70%	100%

3.10.3 The unit of measurement will be “each”, covering all components, furnishing, placement, testing, supplies, tools, labor, operational software and firmware, training, shop drawings, warranty, documentation, and incidental costs required for full compliance to these specifications.

3.10.4 All hardware, cables, and other materials used to mount and install the CCTV will be incidental to the contract unit price per each for Surveillance Camera.

4 COMMUNICATION CABINETS & ENCLOSURES

4.1 DESCRIPTION

Communication Cabinets and Communication Enclosures will house ITS devices and connect them to power and communications.

Communication Cabinets will include components such as a 19-inch EIA rack, adjustable shelves and pull-out drawer, fan and thermostat assemblies, lights, power distribution units, generator plug, and terminal strips. The Communication Cabinets will be ground mounted and house ITS electronics such as dynamic message sign controllers, power supplies, cellular modems, etc.

Communication Enclosures will be post-mounted and house ITS device electronics such as cellular modems, power supplies, etc.

4.2 MATERIALS

4.2.1 Where allowed, approved equals must be approved by the SDDOT's Intelligent Transportation Systems (ITS) Program in writing prior to installation.

4.2.2 All materials and equipment will be new and comply with the details shown on the plans, the requirements of this special provision, and the pertinent requirements of the following SDDOT Standard Specs:

- Item 480, "Reinforcing Steel"
- Item 635, "Traffic Signals and Roadway Lighting - Conduits"
- Item 635, "Traffic Signals and Roadway Lighting - Electrical Power Cables"
- Item 635, "Traffic Signals and Roadway Lighting - Concrete Footings"
- Item 750, "Portland Cement"
- Item 972, "Bolts"

4.2.3 The Cabinets will be Enclose Manufacturing ENC-2025B or approved equal.

4.2.4 The Enclosures will be Enclose Manufacturing ENC-6029-3 or approved equal.

4.2.5 Cabinets will be identical in size, shape, and quality for each type specified in the plans.

4.2.6 Enclosures will be identical in size, shape, and quality for each type specified in the plans.

4.2.7 Cabinets will have a modular design and allow equipment to be installed in the mounting configurations shown in the plans.

4.2.8 The equipment, design, and construction of Cabinets will use industry standard techniques with a minimum number of different parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality.

4.2.9 Equipment will be designed for ease of maintenance, with components readily accessible for inspection and maintenance.

4.2.10 Cabinets and Enclosures will have a smooth unpainted aluminum finish.

4.2.11 Cabinets and Enclosures will be constructed of welded sheet aluminum at least 0.125 in. thick meeting NEMA 3R standards.

4.2.12 Cabinets and Enclosures will conform to the requirements of ASTM B209M-21a for 5052-H32 aluminum sheet.

4.2.13 All exterior Cabinet and Enclosure door seams will be continuously welded with edges filled to a radius of 0.03125 inches minimum and exterior welds will be smoothed.

4.2.14 Welding on aluminum Cabinets and Enclosures will be by gas metal arc (MIG) or gas tungsten arc (TIG) process using bare aluminum welding electrodes that conform to the requirements of the American Welding Society (AWS) A5.10 for ER5356 aluminum alloy bare welding electrodes.

4.2.15 Procedures, welding machines, and welding machine operators for welding on aluminum will be qualified and conform with the requirements of AWS B3.0, "Welding Procedures and Performance Qualification" and to the practices recommended in AWS C5.6.

4.2.16 Wood, wood fiber products, or flammable products will not be used in the Cabinets and Enclosures.

4.2.17 The Cabinet and Enclosure structure will be sealed to prevent the entry of rain, dust, dirt, insects, and rodents.

4.2.18 Aluminum lifting eyes or ears will be attached to the top of Cabinets to permit lifting the Cabinet with a sling. Lifting eyes may be permanently fabricated to the Cabinet frame if they do not interfere with the construction and operation of the sunshield.

4.2.19 Cabinets will be equipped with one EIA 19-inch rack sized to the full height of the Cabinet.

4.2.20 Cabinets will have a side panel for mounting auxiliary equipment.

4.2.21 Cabinets will be mounted on a base stand 10 inches high, Enclose ENC8974-10 or approved equal, to improve cable access.

Doors

4.2.22 Cabinet and Enclosure doors will be torsionally rigid.

4.2.23 Cabinet and Enclosure doors will overlap and substantially cover the face of the Cabinet.

4.2.24 Cabinet and Enclosure doors and hinges will withstand a 100 pounds per vertical foot force applied to the outer edge of the door when open without permanent deformation or impairment of the door or Cabinet body when the load is removed.

4.2.25 Cabinet and Enclosure door and door stop mechanisms will withstand a wind load of 5 pounds per square foot applied to both inside and outside surfaces without failure, permanent deformation, or compromising of door position.

4.2.26 The Cabinet and Enclosure door will be fitted with a gasket made of non-absorbent material that will maintain its resiliency after long term exposure to the outdoor environment to act as a permanent and weather-resistant seal.

4.2.26.1 The gasket will be at least 0.25 inches thick and placed in a channel either on the Cabinet or on the door. An "L" bracket is acceptable instead of a channel if the gasket is fitted snugly against the bracket to ensure a uniform dust- and weather-resistant seal around the entire door facing.

4.2.27 Cabinet doors will be attached by a minimum of 3 heavy duty hinges or full-length hinges with stainless steel hinge pins.

4.2.28 Enclosure doors will be attached by a continuous hinge assembly.

4.2.29 Cabinet and Enclosure doors will have a catch mechanism to hold the door open at preset positions.

4.2.30 Cabinet and Enclosure doors will be fitted with an aluminum or chrome-plated handle with at least a 0.375-inch drive pin and a 3-point latch designed so the handle cannot be released until the lock is released.

4.2.31 Cabinet and Enclosure doors will be fitted with number 2 locks.

Cabinet Ventilation

4.2.32 Cabinets will have louvered air intake vent openings located on the lower portion of both doors.

4.2.33 Cabinets will satisfy all functional requirements during and after exposure to any combination of the following conditions:

- ambient temperature range of -30° to 165°F
- temperature shock of 30°F per hour, during which the relative humidity does not exceed 95%
- relative humidity range of 95% over the temperature range of 40° to 110°F
- moisture condensation on all surfaces caused by temperature changes

4.2.34 Intake vents will be fully covered inside with a commercially available disposable 3-layer pleated filter at least 16 inches high, 16 inches wide and 1 inch thick, securely mounted so any air entering the Cabinet will pass through the filter.

4.2.35 Exhaust vents will be screened with screen openings no larger than 0.0125 square inches to prevent entry of insects.

4.2.36 Each Cabinet will be vented and cooled by electric fans.

4.2.37 Fans will be thermostatically controlled with an adjustment range of 70° to 110°F.

4.2.38 Fans will be equipped with a press-to-test switch to test the operation of the fan.

4.2.39 Fans will have a UL listed quick disconnect connector to remove/replace fan or accessing equipment under fan mounting plate.

Cabinet Lighting

4.2.40 Cabinets will be equipped with LED light fixtures with a clear, shatterproof lens inside and above both doors.

4.2.41 Enough light fixtures will be installed to illuminate all the equipment in the Cabinet.

4.2.42 Light fixtures will be positioned to illuminate the equipment in the Cabinet and not a technician's eyes.

Hardware

4.2.43 Each 19-inch equipment rack will be fitted with one adjustable shelf as shown in the plans to support electronic equipment in Cabinets.

4.2.44 At least 2 inches will be provided between the back and front edges of the shelf and Cabinet doors to allow room for cables and connectors.

4.2.45 Each Cabinet will be fitted with a slide-out drawer at least 1.75 inches high, 16 inches wide, and 14 inches deep with a hinged lid and telescoping drawer guides that allow full extension from the rack frame.

4.2.46 Each Cabinet will have a recessed panel with DIN rail to front face rail mounted equipment as shown on plans.

4.2.47 Cabinets will be equipped with a 10-inch riser to provide adequate space at the bottom of the Cabinet for cable access and routing.

4.2.48 Cabinets will be equipped with wire raceways running vertically in each corner to accommodate cable routing and organization.

4.2.49 All external screws, nuts, and locking washers will be stainless steel.

4.2.50 No self-tapping screws will be used unless specifically approved by the SDDOT ITS Program.

4.2.51 All parts will be made of corrosion resistant material, such as plastic, stainless steel, aluminum, or brass.

4.2.52 All materials will be resistant to fungus growth and moisture deterioration.

4.2.53 Dissimilar metals will be separated by an inert dielectric material.

4.2.54 Contractor will install two DIN rails in Enclosures for mounting electric and communication equipment.

4.3 ELECTRICAL

4.3.1 All electrical work associated with the Cabinet and Enclosure, including wiring, grounding, terminations, overcurrent protection, and device installation, will be performed in accordance with all applicable codes and standards, including the National Electrical Code (NEC), local and state electrical codes, NEMA Enclosure requirements, and all manufacturer installation instructions.

4.3.2 All wiring methods, conductor routing, overcurrent protection, and outdoor receptacle installations will meet the minimum requirements of NEC Articles 300 (General Requirements for Wiring Methods), 312 (Cabinets and Enclosures), 250 (Grounding and Bonding).

Power Distribution Unit (PDU)

4.3.3 Cabinets will include a rack-mounted, switched power distribution unit (PDU) APC (Schneider Electric) AP7902B or approved equal.

4.3.4 The PDU will be a switched, single phase 120V 30Amp Input, with (16) NEMA 5-20R outlets that have two (2) circuit breakers, one for each row of outlets (8 per row).

4.3.5 The PDU will have line rated current of 24 Amps and a load capacity of 2880 VA.

4.3.6 The PDU will be capable of remote monitoring and switching of each outlet individually via Ethernet connection to a communication network.

4.3.7 The PDU will be rack-mounted.

4.3.8 The PDU will be UL listed.

General Purpose Outlets

4.3.9 The Cabinet will have (1) 120 VAC NEMA Type 5-15R and (1) 5-15R GFCI duplex receptacles, protected by a circuit breaker, in an isolated location sufficiently recessed to avoid interference with Cabinet doors.

4.3.10 The Enclosure will have (1) 120 VAC NEMA Type 5-20R duplex receptacle, installed in a DIN rail mounted outlet box and protected by a circuit breaker.

4.3.11 The Cabinet and Enclosure receptacles will have a removable cover made of transparent thermoplastic material 0.125-inch thick to cover each duplex receptacles and installed to not interfere with the functional operation within the Cabinet.

External Generator Service

4.3.12 The Cabinet will have a 30A 125/250V AC, 3 pole, 4 wire grounding, watertight reverse service flange inlet for future connection and use.

Circuit Breakers

4.3.13 Equipment will contain readily accessible, manually resettable or replaceable circuit protection devices such as circuit breakers or fuses for equipment and power source protection.

4.3.14 Circuit breakers or fuses will be sized so no wire, component, connector, PC board or assembly is subjected to sustained current exceeding its design limits upon failure of any single circuit element or wiring.

4.3.15 The Contractor will furnish circuit breakers, which are in addition to any auxiliary fuses, for main, accessory, spare, and equipment circuits, to protect ITS equipment as shown on the plans.

4.3.16 Circuit breakers will be Underwriters Laboratories (UL) 489 listed, capable of operating in accordance with Section 2, "Environmental Standards and Test Procedures" of NEMA TS2-2003, or most current version, with an interrupt capacity of 5,000 A. and insulation resistance of 100 megohms at 500 VDC.

4.3.17 The main circuit breaker will be sized so the load of all branch circuits is less than the main circuit breaker ampere rating in accordance with the most current version of the National Electrical Code (NEC).

Wiring

4.3.18 All wiring will be rated for at least 600 V.

4.3.19 All wiring will be identified with insulated pre-printed sleeving slipped over the wire before attaching a lug or making a connection.

4.3.20 All wires will be cut to the proper length before assembly and ensure that no wires are doubled back to take up slack.

4.3.21 Cable harnesses will be covered with braided cable sleeves.

4.3.22 Cables will be secured with nylon cable clamps and ties.

4.3.23 Service loops will be provided to facilitate removal and replacement of assemblies, panels, and modules.

4.3.24 Wiring containing line voltage AC will be routed and bundled separately from low voltage circuits.

4.3.25 All conductors, live terminals, or parts that could be hazardous to maintenance personnel will be covered with suitable insulation.

4.3.26 All wiring will be colored in accordance with the most current version of the NEC.

4.3.27 Equipment that requires grounding will have ground conductors and will not use conduit for grounding.

4.3.28 All line voltage wiring will be at least 14 AWG or larger as shown in the plans.

4.3.29 All wires that leave the Cabinet or Enclosure will be legibly labeled using permanent ink with identifiers indicating the cable's destination.

4.3.30 The Cabinet and Enclosure will include a wire management product to keep all wiring neatly organized and secured in bundles. Wire management components will be installed to ensure orderly routing of cables, prevent strain on terminations, and maintain clear access to equipment for maintenance activities.

Terminations

4.3.31 Connections of signal wires, sign control wires, and any other wires required to complete connections for an operational system will be terminated on terminal blocks.

4.3.32 Termination panels will properly interconnect all Cabinet wiring related to the specific complement of equipment shown on the plans.

4.3.33 All connections to and from the electronic equipment will terminate at an intermediate inter-wiring block.

4.3.34 All termination connection lugs/blocks will be rated for 90° C / 194° F

4.3.35 Properly terminated cable harnesses will be provided for each electronic component, including any furnished by SDDOT.

4.3.36 Terminal strips will be installed in accessible locations on the panel such that inspection or connection does not require removal of electronic equipment.

4.3.37 Terminal blocks will be 2-position, multiple-pole barrier type.

4.3.38 No electrically energized components or connectors will extend beyond the protection afforded by the barriers.

4.3.39 Shorting bars and an integral marking strip will be provided in each position.

4.3.40 Terminal blocks will not interfere with the entrance, training, and connection of incoming conductors.

4.3.41 All terminals will be identified by labels permanently affixed to the terminal blocks.

4.3.42 No more than 3 conductors will be brought to any terminal screw.

4.3.43 Conductor strands will not be trimmed to fit wiring into the breaker or terminal block.

4.3.44 Terminals used for field connections to equipment will secure conductors by means of a 10-32 nickel- or cadmium-plated brass binder head screw.

4.3.45 Terminals used for inter-wiring connections will secure conductors by means of a 5-32 nickel-plated brass binder head screw.

Internal Grounding

4.3.46 The Cabinet internal ground will consist of at least one busbar permanently affixed to the Cabinet and connected to the grounding electrode.

4.3.47 The Enclosure internal ground will tie to grounding terminal block, grounding lug and connected to the grounding electrode

4.3.48 Bare stranded 4 AWG copper wire will connect busbars and grounding electrodes.

4.3.49 Each copper ground busbar or terminal block will have at least 14 connection points, each capable of securing bare conductors ranging in size from 4 AWG to 14 AWG.

4.3.50 AC neutral and equipment ground wiring will be returned to the busbars.

AC Power Surge Protection Device (SPD)

4.3.51 An SPD will be installed in accordance with manufacturers' recommendations at the termination point closest to where the supply circuit enters the Cabinet, on the load side of the Cabinet power distribution panel breakers and ahead of all electronic devices.

4.3.52 The SPD Voltage Protection Rating (VPR) will not exceed 700 V on any mode (L-N, L-G, and N-G).

4.3.53 The SPD Maximum Continuous Operating Voltage (MCOV) will not exceed 150 V.

4.3.54 The SPD Surge Current Rating will equal or exceed 40kA per mode (L-N), (L-G), (N-G).

4.3.55 The SPD Short Circuit Current Rating will equal or exceed 50 kA, or the available short circuit current, whichever is higher.

4.3.56 The SPD will have directly connected Metal Oxide Varistors at least 32 mm in diameter, with thermal safety disconnectors. Gas tube and spark gap SPD will not be permitted.

4.3.57 Each MOV's operational status will be capable of being monitored via visual indicator, including N-G mode.

4.3.58 The SPD will have one set of Normally Open (NO) and Normally Closed (NC) Form C contacts for remote monitoring.

4.3.59 The SPD used for AC power will not dissipate any energy or provide any series impedance during standby operation.

4.3.60 The SPD will return to its non-shunting mode after the passage of any surge and will not allow the shunting of AC power.

4.3.61 Leads will be as short as possible with all conductor bends formed to the maximum possible radius.

4.3.62 SPD ground leads will be connected directly to the ground bus. Use of wire nuts is prohibited.

4.4 INSTALLATION

4.4.1 Cabinets and Enclosures will be installed as indicated on the plans.

4.4.2 The Contractor will stake Cabinet foundations and underground conduit entering the foundation before installation and secure SDDOT ITS Program approval before installing the foundation. Cabinet location may vary from the plans to accommodate field conditions with approval from the Engineer.

4.4.3 Cabinets and Enclosures will be mounted plumb in all directions.

4.4.4 Appropriately sized mounting plates, anchor bolts, and other necessary hardware will be furnished as recommended by the manufacturer to mount the Cabinet to the foundation.

4.4.5 The Cabinet and Enclosure will be grounded with sufficient ground rods and grounding conductors to achieve less than 5 ohms resistance as measured in accordance with IEEE 81. Additional ground rods and grounding conductors will be incidental if needed to meet grounding specifications.

4.4.6 A continuous bead of polyurethane sealant to seal the Cabinet base will be installed to the foundation immediately before mounting the Cabinet on the foundation.

4.4.7 Any space between conduit entering the Cabinet and the foundation will be sealed with polyurethane caulk or approved sealant compound.

4.4.8 Conduits will be installed as shown on the plans or as directed and in accordance with Item 635, “Traffic Signals and Roadway Lighting - Conduits”.

4.4.9 Wiring will be installed in a neat and orderly manner grouped together with nylon tie-downs.

4.4.10 After wiring is installed, the inside ends of conduits terminated in the Cabinet foundation will be sealed with a duct seal or other approved sealant to prevent moisture, dirt, insects, and rodents from entering the conduits.

4.5 TESTING

4.5.1 The Contractor will follow procedures set forth for unit, subsystem, and acceptance testing specified in Section 6 of these special provisions.

4.6 DOCUMENTATION

4.6.1 The Contractor will provide required documents to the SDDOT Intelligent Transportation Systems Program in Portable Document File (PDF) format and, as applicable, spreadsheet or design drawing file formats.

4.6.2 Prior to installation, the Contractor will provide the SDDOT Intelligent Transportation Systems Program cut sheets and shop drawings that describe the components to be installed, list their published specifications, describe their manufacturers’ installation instructions, and show how they will be integrated.

4.6.3 Upon installation, the Contractor will supply user manuals covering installation, operation, and maintenance of each active component of the Cabinet and Enclosure.

4.6.4 The Contractor will supply the test documentation required in Section 5 “ITS Testing”

4.6.5 Prior to final acceptance, the Contractor will supply a list of all components and sensors, including model names and numbers, serial numbers, and network addressing information.

4.6.6 Prior to final acceptance, the Contractor will supply as-built wiring diagrams in Portable Document File (PDF) format depicting all components, sensors, and power, signal, and communication lines for each installation.

4.7 WARRANTY

4.7.1 The Contractor will certify the continued availability of sensors and electronic components for at least 10 years.

4.7.2 The Contractor will supply a warranty description, including the procedure and providers of warranty service.

4.7.3 The Contractor will warrant all equipment supplied, including equipment from other manufacturers, against defective materials and workmanship. The minimum warranty will be as follows:

> During the first year (365 days) following Final Acceptance by SDDOT, all repairs, including factory labor and materials necessary to correct any failures, will be made at the Contractor’s sole cost.

4.7.4 The Contractor will inform the SDDOT Intelligent Transportation Systems Program of any failures, preventive and corrective maintenance activity, and calibrations performed under warranty.

4.7.5 If the Contractor’s normal warranty exceeds the warranty terms specified in this section, the Contractor will supply a copy of the warranty with submission of the shop drawings.

4.7.6 The Contractor will assign all warranties and guarantees offered by electrical and mechanical equipment manufacturers to SDDOT upon Final Acceptance.

4.7.7 The warranty requirements will not apply to equipment that has been subjected to misuse, negligence, or accident by other parties.

4.8 BASIS OF PAYMENT

4.8.1 Payment for Communication Cabinets will be staged with the first payment upon installation, the second upon successful unit testing, and the third upon successful acceptance testing.

4.8.2 Payment for each item furnished, installed, and integrated to fulfill requirements will represent full compensation for all work done as specified in this Section. Payment will be made under the following bid items:

Bid Item Number	Item	Basis of Payment	Upon Installation	Upon Successful Unit Testing	Upon Successful Acceptance Testing
635E5461	Type 1 Communication Cabinet	Each	40%	70%	100%

4.8.3 The unit of measurement will be “each”, covering all components, furnishing, placement, testing, supplies, tools, labor, operational software and firmware, training, shop drawings, warranty, documentation, and incidental costs required for full compliance to these specifications.

4.8.4 Payment for Communication Enclosures will be incidental to item 635E6240, Post Mounted Dynamic Message Sign.

5 VEHICLE RADAR DETECTORS

5.1 DESCRIPTION

Vehicle radar detectors (VRD) will be placed at select locations to measure traffic volume and speed in all roadway lanes.

5.2 VRD LOCATIONS

5.2.1 The Contractor will furnish and install a Houston Radar SpeedLane™ Pro vehicle detector, or approved equal, at the following Dynamic Message Sign locations:

PCN 09L5				
Highway	**Direction**	**MRM**	**Approximate Location**	**Support Structure**
I-29	SB	74	North of 271st Street	Overhead
I-29	SB	76	North of I-229	Overhead
I-229	NB	2	South of Minnesota Ave Exit 3	Overhead
SD34	EB	389	East of Madison	Post
SD37	SB	125	South of Huron	Post

5.3 FUNCTIONAL REQUIREMENTS

5.3.1 The VRD will operate from roadside for non-intrusive traffic data collection.

5.3.2 The VRD will simultaneously measure all vehicles in up to 16 user-defined lanes.

5.3.3 The VRD will have a detection range of at least 250 feet.

5.3.4 The VRD will operate in the 24.020 GHz to 24.230 GHz band.

5.3.5 The VRD must be FCC and CE approved for full 250MHz operation.

5.3.6 The VRD will operate in all weather and lighting conditions.

5.3.7 The VRD will operate over the temperature range of -40°F to +185°F.

5.3.8 The VRD will operate in relative humidity up to 95% non-condensing.

5.3.9 The VRD will detect lane, speed, and classification of individual vehicles.

5.3.10 The VRD will provide lane-by-lane vehicle counts, vehicle counts by user-defined speed bins, length-based class by user-defined length bins, average and 85th percentile speeds, occupancy, headway, and gap measurements.

5.3.11 The VRD will measure the average speed of vehicle in each lane and direction to an accuracy of ±1% error.

5.3.12 The VRD will measure volume in each direction to an accuracy of at least 95% and in each direction to an accuracy of at least 90%.

5.3.13 The VRD will measure vehicle length within +/-5.7ft or 15%, whichever larger, for 90% of vehicles.

5.3.14 All traffic measurements will be available in real time.

5.3.15 The VRD will store speed, lane, and class for up to 1 million individual vehicles in device memory.

5.3.16 The VRD will include a 1.3-megapixel sighting camera with 60° field of view.

5.3.17 The VRD will be capable of capturing 1280x960, 800x600, 640x480, 320x240 snapshots and 800x600 10fps video.

5.3.18 The VRD will indicate tilt and level to ease setup and aiming.

5.4 MATERIALS

5.4.1 All equipment and materials will be new.

5.4.2 Where allowed, equivalents must be approved in writing by SDDOT's Intelligent Transportation Systems Program prior to installation.

5.4.3 The VRD must satisfy FCC, CE, IC, NEMA TS2, NCC, IEC 61000-4-5:2005 Level 4 (Surge), and IP66 certification.

5.4.4 The VRD will be a dual beam, low power Frequency-Modulated Continuous-Wave (FMCW) side-fire radar, Houston Radar SpeedLane™ Pro or equivalent.

5.4.5 The VRD will include cabling and connectors, Houston Radar KIT-SLP-003 or equivalent, to provide a secure, watertight connection to the CAT-6 cable from the PoE.

5.4.6 The VRD will attach to the Contractor-designed mounting system with vendor-supplied hardware consistent with the structural shape to which it is attached, such as Houston Radar KIT-SLP-007 or equivalent for rectangular tubing.

5.5 ELECTRICAL

5.5.1 The VRD will operate via Power over Ethernet (PoE) 12 to 24 VDC.

5.5.2 The VRD will be reverse power protected with auto-resettable fuse.

5.5.3 The Contractor will furnish and install an industrial gigabit passive 24V PoE injector hardened PoE Adapter with 12-24 VDC input and 24 VDC 18-watt PoE Output, POE Texas Model GPOE-1 or approved equivalent.

5.5.4 At sites with ground-mounted traffic cabinets with switched power distribution unit, the Contractor will furnish and install a 24 VDC, 2.5 amp DIN mount power supply, Mean Well USA model MDR-60-24 or approved equivalent, to power the PoE.

5.5.5 At sites without switched power distribution units, the PoE will be powered from the 24 VDC power supply supplied by SDDOT to power the cellular modem.

5.5.6 All detector cabling must be protected by routing inside conduits or DMS structures wherever possible and must include a drip loop of not less than six (6) inches in diameter.

5.6 COMMUNICATION

5.6.1 The VRD will include a Companion Windows application Graphical User Interface to set all configuration parameters, display real time plots of targets, and view snapshots & streaming HD video.

5.6.2 The VRD will include an app for Android smartphone or tablet ver. 4.0.3 and higher for field setup and maintenance.

5.6.3 The VRD will support Bluetooth Ultra-low power 800+ feet Class I 2.1+ EDR 460KB baud rate for setup, download and camera.

5.6.4 The VRD will support 100Base-T IEEE 802.3u Ethernet.

5.6.5 The VRD will support static IP addressing.

5.6.6 Prior to installation, the Contractor will configure the VRD network addressing in collaboration with the SDDOT Intelligent Transportation Systems Program.

5.7 INSTALLATION

5.7.1 The Contractor will install the VRD in accordance with the manufacturer's instructions and the plans.

5.7.2 The Contractor will design a mounting system that attaches to the DMS support structure and positions the VRD at the correct height, orientation, distance from roadway, and distance from DMS cabinet in accordance with manufacturer's instructions.

5.7.3 The Contractor will submit the mounting system design to the SDDOT ITS Program for approval prior to installation.

5.7.4 The Contractor will furnish and install mounting hardware for each detector.

5.7.5 All mounting hardware shall attach to the DMS support structure using clamps or other non-penetrating attachment device.

5.7.6 The mounting system must permit adjustment of VRD position and orientation after initial installation.

5.7.7 The Contractor will aim the VRD in collaboration with the SDDOT Intelligent Transportation Systems Program.

5.8 SYSTEM TESTING

5.8.1 The Contractor will follow procedures set forth for unit, subsystem, and acceptance testing specified in Section 6 of these special provisions.

5.9 DOCUMENTATION

5.9.1 The Contractor will provide required documents to the SDDOT Intelligent Transportation Systems Program in Portable Document File (PDF) format and, as applicable, spreadsheet or design drawing file formats.

5.9.2 Prior to installation, the Contractor will provide to the SDDOT Intelligent Transportation Systems Program cut sheets and shop drawings that describe the components to be installed, list their published specifications, describe their manufacturers' installation instructions, and show how they will be integrated.

5.9.3 Upon installation, the Contractor will supply user manuals covering installation, operation, and maintenance of each active component of the system.

5.9.4 The Contractor will supply the test documentation required in Section 6 "ITS Testing".

5.9.5 Prior to final acceptance, the Contractor will supply a list of all components and sensors, including model names and numbers, serial numbers, and network addressing information.

5.9.6 Prior to final acceptance, the Contractor will supply as-built wiring diagrams depicting all components, sensors, and power, signal, and communication lines for each installation.

5.10 WARRANTY

5.10.1 The Contractor will certify the continued availability of electronic components for at least 5 years.

5.10.2 The Contractor will supply a warranty description, including the procedure and providers of warranty service.

5.10.3 The Contractor will warrant all equipment supplied, including equipment from other manufacturers, against defective materials and workmanship. The minimum warranty will be as follows:

During the first year (365) days following Final Acceptance by SDDOT, all repairs, including factory labor and materials necessary to correct any failures, will be made at the Contractor's sole cost.

5.10.4 The manufacturer's warranty of the VRD will be at least 1 year.

5.10.5 The Contractor will inform the SDDOT Intelligent Transportation Systems Program of any failures, preventive and corrective maintenance activity, and calibrations performed under warranty.

5.10.6 If the Contractor's normal warranty exceeds the warranty terms specified in this section, the Contractor will supply a copy of the warranty with submission of the shop drawings.

5.10.7 The Contractor will assign all warranties and guarantees offered by manufacturers to SDDOT upon Final Acceptance.

5.10.8 The warranty requirements will not apply to equipment that has been subjected to misuse, negligence, or accident by other parties.

5.11 BASIS OF PAYMENT

5.11.1 Payment will be staged with the first payment upon installation, the second upon successful unit testing, and the third upon successful acceptance testing.

5.11.2 Payment for each item furnished, installed, and integrated to fulfil requirements will represent full compensation for all work done as specified in this Section. Payment will be made under the following bid items:

Bid Item Number	Item	Basis of Payment	Upon Installation	Upon Successful Unit Testing	Upon Successful Acceptance Testing
635E5590	Vehicle Radar Detector	Each	40%	70%	100%

5.11.3 The unit of measurement will be "each", covering all components, furnishing, placement, testing, supplies, tools, labor, operational software and firmware, training, shop drawings, warranty, documentation, and incidental costs required for full compliance to these specifications.

5.11.4 All hardware, cables, and other materials used to mount and install the VRD will be incidental to the contract unit price per each for Radar Vehicle Detector.

6 ITS TESTING

Each installation of each ITS subsystem defined in Sections 2 through 5 of these special provisions will undergo unit, subsystem, and acceptance testing to verify compliance with the specifications. Testing will be conducted and documented using worksheets supplied by the South Dakota Department of Transportation's Intelligent Transportation Systems Program.

- Unit testing will verify that components have been installed and operate in accordance with plans and specifications. Unit testing will consist of a combination of product submittals and standalone testing without network communications.
- Subsystem Testing will verify that subsystems operate as intended when controlled remotely via network communications.
- Acceptance Testing will begin after successful Subsystem Testing to verify that subsystems successfully operate connected to network communications for a 30-day period.

Because subsystems will be tested individually, multiple 30-day acceptance periods may occur simultaneously. The Contractor may combine testing of multiple subsystems and sites when feasible. Demonstration testing (Section 6.5.3) will be performed in the presence of an SDDOT representative, who will document testing and must approve each testing phase before the next testing phase can begin. If a subsystem fails any stage of testing, the issue causing the failure will be corrected at no additional cost to SDDOT and re-tested.

6.1 UNIT TESTING

6.1.1 For each subsystem installation, the Contractor will establish that every ITS device and ancillary component complies with all specifications, is properly installed, is in sound condition and working order, and performs its required functions.

6.1.2 Functional testing will be performed on the device side of the communication switch.

6.1.3 Unit testing of a subsystem installation will be deemed successful when conformance of each ITS device and ancillary component has been established.

6.2 SUBSYSTEM TESTING

6.2.1 After successful unit testing of the subsystem installation and after the SDDOT and SDBIT have installed, configured, and tested the necessary communication switches, the Contractor will verify that the complete installation satisfies the specifications of the subsystem.

6.2.2 Functional testing will be performed using vendor-supplied software on the network side of the communication switch to ensure that all subsystem components, power management devices, and communication devices operate successfully.

6.2.3 Subsystem testing is deemed successful when conformance of the complete subsystem installation has been established.

6.2.4 SDDOT reserves the right to recheck the performance of the subsystem at any time during the life of this contract.

6.3 ACCEPTANCE TESTING

6.3.1 Upon successful subsystem testing of each subsystem installation and after SDDOT and SDBIT have installed, configured, and tested the necessary switches, the Contractor will conduct an acceptance test constituting thirty consecutive days during which no remedial action is required to maintain the level of performance established during the Subsystem Test.

6.3.2 Each acceptance test will be performed in its actual operational environment using previously installed and tested system hardware and software.

6.3.3 Testing will be performed using vendor-supplied software at the network side of the communication switch to ensure that the complete subsystem installation—including at ITS devices and associated power management and communication components—successfully performs all required control, monitoring, and communication functions end-to-end from field devices to the Internet external to the project.

6.3.4 The acceptance test will be conducted by trained personnel and will be observed by a representative of SDDOT's Intelligent Transportation Systems Program.

6.3.5 If any element of the acceptance test fails, the 30-day period for the individual subsystem installation will restart.

6.4 ACTIVE TRAFFIC MANAGEMENT SYSTEM TESTING

6.4.1 In addition to unit, subsystem, and acceptance testing, SDDOT may verify that its Active Traffic Management System (ATMS) can communicate with, monitor, and control all the devices and subsystems installed in this project.

6.4.2 While this project is active, SDDOT may request the Contractor to repeat unit or subsystem testing of components that fail to function properly in active traffic management system testing.

6.5 VERIFICATION METHODS

The Contractor will use one or more of the following techniques to verify conformance to each specification, as appropriate to the specification being verified:[1]

6.5.1 Inspection: Direct observation of requirements such as construction features, workmanship, dimensions, other physical characteristics, and software language.

6.5.2 Test: Direct measurement of system operation, often using instrumentation. Inputs are defined and outputs are measured to verify that the requirements have been met. Tests are commonly used to exercise and verify component-level capabilities.

6.5.3 Demonstration: Witnessing system operation in the expected or simulated environment without need for measurement data. For example, a requirement that an alarm is issued under certain conditions could be verified through demonstration. Demonstrations are more prevalent in subsystem-level verification when subsystems or the complete system is available to demonstrate end-to-end operational capabilities.

6.5.4 Analysis: Verification using logical, mathematical, or graphical techniques. Analysis can be appropriate when verification by test or demonstration would be infeasible or prohibitively expensive. For example, a requirement that a website support up to 1,000 simultaneous users would normally be verified through analysis.

6.5.5 Documentation: Verification based on review of manufacturers' published documentation or certified test results. Component certification is appropriate when testing or demonstration—for example, to verify operation over wide range of environmental conditions—is infeasible within the project setting.

[1] The first four techniques are described in Systems Engineering for Intelligent Transportation Systems, Federal Highway Administration, FHWA-HOP-07-069, January 2007, p62. The fifth is added to allow verification based on review of manufacturers' specification documents and certified test results.

6.6 SUBSYSTEM VERIFICATION PLANS

6.6.1 The Contractor will use SDDOT-supplied Excel worksheets similar to Figure 1 and Figure 2 to test and document the testing for each installed ITS subsystem. Base worksheets are included as an attachment to these bid documents with suggested test or demonstration methods.

6.6.2 The SDDOT-supplied worksheet will identify the subsystem to be covered by the test plan and the level of testing (unit testing, subsystem testing, or acceptance testing).

6.6.3 The SDDOT-supplied worksheet will list the specification number and specification statement of every specification of the subsystem to be verified.

6.6.4 For each specification listed in the worksheet, the Contractor will propose the verification method(s) to be used to establish conformance. Suggested verification methods are included in the worksheets. The Contractor may propose a different verification method for any requirement when submitting forms to the SDDOT.

6.6.5 If more than one method will be used to verify a specification the Contractor will insert a separate worksheet row for each additional method.

6.6.6 If a specification is to be verified through test or demonstration, the Contractor will also describe:

- procedures specifying how to verify that the component or subsystem functions as intended
- test cases defining inputs, execution conditions, and expected results

6.6.7 The Contractor will submit the Subsystem Verification Plan to SDDOT's Intelligent Transportation Systems Program for approval prior to performing the tests described in the plan.

6.6.8 If SDDOT's Intelligent Transportation Systems Program does not approve the Subsystem Verification Plan, the Contractor will revise it and resubmit it for approval.

6.6.9 The Contractor may not modify any part of an approved Subsystem Verification Plan without the approval of SDDOT's Intelligent Transportation Systems Program.

6.7 SUBSYSTEM VERIFICATION RESULTS

6.7.1 The Contractor will verify each installation of each ITS subsystem at the unit testing, subsystem testing, and acceptance testing levels.

6.7.2 The Contractor will report subsystem verification results using the SDDOT-supplied worksheet.

6.7.3 For each specification, the verification worksheet will document, at a minimum:

- specification number
- specification statement
- the verification method used to establish conformance, as defined in the approved Subsystem Verification Plan
- acknowledgement of conformance with the specification or, in the case of nonconformance, a description of the deviation from the specification
- a description of the needed corrective action in the case of nonconformance
- the name of the person who performed the verification
- the date of the verification

Project Name:	I-29 Variable Speed Limit			Project Number:	CR 0294(74)114	PCN:	080D	Verification Level:	Unit	
Subsystem:	Variable Speed Limit Signs			Device Designation:	VSL1-VSL22	Location:	All signs along I-29			
Number	Specification Statement	Verification Method(s)	Test or Demonstration Method	Pass/ Fail	Notes		Corrective Action	Verified By		Date
	General									
2.2.1	The Contractor will furnish and install electronic variable speed limit (VSL) signs at locations indicated in the design plans.	Inspection		Pass				John Doe		6/1/2024
2.2.2	The Contractor will supply two VSL signs as spares. Both VSL signs will be tested and made functional and then provided to the SDDOT Intelligent Transportation Systems Program.	Inspection	Spare signs will undergo and pass all unit testing items before delivery to SDDOT	Fail	1 of 2 spare signs had several pixels not functioning upon delivery. Contacted manufacturer who will send replacement.		Manufacturer was contacted & will send replacement	John Doe		6/9/2024
				Pass	Replacement sign arrived and passed all unit			John Doe		7/20/2024
2.2.3	The VSL sign will consist of a static MUTCD-compliant reflective sign panel and a full matrix LED display	Certification		Pass				John Doe		6/9/2024
2.2.4	The VSL sign will include an integral sign controller with front panel LCD	Inspection		Pass				John Doe		6/1/2024
	Static Sign Panel									
2.2.5	The static sign panel will display the words "SPEED LIMIT" in FHWA Series E, 8" upper case black letters against white reflective sheeting as shown in the design plans	Inspection		Pass				John Doe		6/9/2024
	LED Display									
2.2.6	The LED display will be legible within a distance range of 150 feet to 1000 feet when mounted according to the manufacturer's instructions	Demonstration	Messages posted on sign will be viewed from 150' to 1000' upstream	Pass				John Doe		6/9/2024
2.2.7	The LED display will be legible 24 hours per day, including dawn and dusk hours when sunlight shines directly on the display face or the sun is directly behind the sign, and in most normally encountered weather conditions.	Demonstration	Messages will be posted during the day, at dawn, dusk, and night	Pass				John Doe		6/9/2024
2.2.8	The LED display will display two-digit speed limits comprising any combination of numeric digits and three-digit speed limits comprising a leading one followed by any combination of numeric digits.	Demonstration	Messages that display integers 1-9 for each digit will be posted	Pass				John Doe		6/9/2024
2.2.9	The LED display will display speed limit digits 18" high	Inspection		Pass				John Doe		6/9/2024
2.2.10	The LED display will display speed limit digits in either white on black or black on white.	Inspection		Pass				John Doe		6/9/2024
	Sign Controller									
2.2.11	Each VSL sign will be controlled and monitored by its own microprocessor-based sign controller not requiring continuous communication with external control software to perform most control functions.	Certification		Pass				John Doe		6/9/2024
2.2.12	The sign controller will mount within the sign housing.	Inspection		Pass				John Doe		6/9/2024
2.2.13	The sign controller's firmware will monitor all external and internal sensors and communication inputs and control the display modules as directed by external control software and the front panel interface.	Demonstration	Internal sensor and communication information will be shown on the front panel interface	Pass				John Doe		6/9/2024
2.2.14	The sign controller will natively support National Transportation Communications for ITS protocol (NTCIP) 1203 V03 without external protocol converter or translator devices.	Certification		Pass				John Doe		6/9/2024
2.2.15	The sign controller will activate a sign message when: - an operator using the front panel interface or NTCIP-compatible control software instructs a particular message to be activated - the internal time-based scheduler activates a message at a date and time previously configured using the control software per the NTCIP 1201 and NTCIP 1203 standards - an event activates a pre-configured message	Test	Configuration for messages will be done via the front panel interface	Pass				John Doe		6/19/2024

Figure 1: Unit Verification Plan (Example Only)

Project Name:	I-29 Variable Speed Limit			Project Number:	CR 0294(74)114	PCN:	080D	Verification Level:	Subsystem
Subsystem:	Variable Speed Limit Signs			Device Designation:	VSL1-VSL22	Location:	All signs along I-29		

Specification		Verification Method(s)	Test or Demonstration Method	Pass/ Fail	Notes	Corrective Action	Verified By	Date
Number	Statement							
2.2.13	The sign controller's firmware will monitor all external and internal sensors and communication inputs and control the display modules as directed by external control software and the front panel interface.	Demonstration	Internal sensor and communication information will be shown on external control software	Pass			John Doe	8/10/2024
2.2.15	The sign controller will activate a sign message when: - an operator using the front panel interface or NTCIP-compatible control software instructs a particular message to be activated - the internal time-based scheduler activates a message at a date and time previously configured using the control software per the NTCIP 1201 and NTCIP 1203 standards - an event activates a pre-configured message	Test	Configuration for messages will be done via the external control software	Fail	Message did not appear at pre-scheduled time.	Determine cause of error and replace components as necessary	John Doe	8/10/2024
				Pass	Clock was set to Eastern Standard Time. Changed settings and pre-scheduled message appeared at correct time.		John Doe	8/12/2024
2.2.27	The sign controller will monitor and display the currently active message in a WYSIWYG format.	Demonstration	Create and post a test message using DMS remote control software	Pass			John Doe	8/10/2024
2.2.28	Automatically and upon command from the front panel interface or external control software, the sign controller will test all the LED pixels without disrupting the message being displayed.	Demonstration	Command to test LED pixels will be given from the external control interface	Pass			John Doe	8/10/2024
2.2.29	The sign controller will automatically report via front panel interface and external control software the occurrence of events and subsystem failures, including over-temperature shutdown, controller restart, power loss, power system failure, and communication loss.	Test	Contractor will simulate controller restart, power loss, power system failure, and communication loss. Alerts will be visible on external control interface	Pass			John Doe	8/10/2024

Approvals - Subsystem Testing

Contractor Representative: _____ *Signature* _____ *Date*

SDDOT Representative: _____ *Signature* _____ *Date*

Subsystem Test Notes: *The VSL Sign subsystem passed all tests on 8/10, with the exception of 2.2.15. The clock was reset and this requirement was re-tested on 8/12. The subsystem passed this test, and the 30-Day Acceptance Test began on 8/12/2024*

30-Day Acceptance Testing

30-Day Acceptance Testing Start Date: _____ *Date*

30-Day Acceptance Testing End Date: _____ *Date*

SDDOT Representative: _____ *Signature*

30-Day Acceptance Testing Notes: *Power failure on 8/24/2024 was not reported in external control interface. After contacting manufacturer, the cause of this error was revealed to be a software update that disrupted reporting functions. 30-day acceptance testing component was restarted on 8/27/2024 and was closed on 9/27/2024 after no further incidents occurred.*

Figure 2: Subsystem Verification Plan (Example Only)

6.7.4 If a subsystem installation includes more than one device of the same type, the verification worksheet will include a separate line for each device and uniquely identify the individual device. For example, specifications related to the pavement sensors of a Road/Weather Information System will be listed four times, once for each sensor installed in the four lanes.

6.7.5 If an item requires corrective action—which may involve repeating the test, revising the test case, repairing the system, replacing a component, or revising the specification—the Contractor will insert another worksheet row immediately beneath the non-conforming line to describe the corrective action taken and record the results of reverification.

6.7.6 The Contractor will not revise a specification statement without approval of SDDOT's Intelligent Transportation Systems Program.

EQUIPMENT FAILING TESTING

6.7.7 When any subsystem, device, or ancillary component fails to meet specifications, the Contractor will correct the deficiency by repair or replacement at no expense to the SDDOT.

6.7.8 The Contractor will promptly bring any defects or malfunctions to the attention of the SDDOT's Intelligent Transportation Systems Program.

6.7.9 The Contractor will conduct or repeat unit testing and document results in the System Verification Plan of any repaired or replaced device or component to ensure compliance with specifications.

6.7.10 The Contractor will conduct or repeat subsystem testing and document results in the System Verification worksheet to ensure that the subsystem installation containing any repaired or replaced device or component meets subsystem specifications.

6.8 BASIS OF PAYMENT

Testing will be incidental to the respective ITS subsystems installed in this project.

THE FOLLOWING UTILITY COMPANIES ARE INVOLVED ON

PROJECT CR 000S(462), Aurora, Beadle, Brown, Clay, Grant, Lake, Lincoln, Minnehaha, Roberts, Yankton County, PCN 09L5

The contractor shall contact the following utilities in a sufficient amount of time prior to starting work. The companies will identify their facilities, and it is the responsibility of the contractor and the company to coordinate their work to avoid damage to existing facilities and to allow for relocation of facilities as may be required for grading work:

The following utilities were determined to be involved and were formally notified on February 5, 2026, that if their facility is located within the existing public right-of-way, any adjustment of their facility would have to be accomplished at no cost to the State, **within 90 days from receipt of the notice, unless other arrangements are made with the Area Engineer.**

Alliance Communications Cooperative, Inc.
1400 E Aspen Blvd
Brandon, SD 57005
CONTACT: Jeff Hove, PHONE: 605-582-6311, CELL: 605-941-7035

Big Sioux Community Water System, Inc.
PO Box 158
Egan, SD 57024
CONTACT: Chad Kneebone, PHONE: 605-864-0214

Bluepeak
5100 S Broadband Rd
Sioux Falls, SD 57108
CONTACT: Jordan Huber, PHONE: 605-498-4922, CELL: 605-366-1360

B-Y Water District
31039 428th Ave
Tabor, SD 57063
CONTACT: Terry Wootton, CELL: 605-463-2531

City of Brandon
304 Main Ave
Brandon, SD 57005
CONTACT: Tami Jansma, PHONE: 605-582-6515

City of Huron
239 Wisconsin Ave
Huron, SD 57350
CONTACT: Chad Bogh, PHONE: 605-353-8502

City of Madison
412 Union Ave S

Madison, SD 57042
CONTACT: Tess Nelson, PHONE: 605-256-7521

City of Sioux Falls
224 W 9th St
Sioux Falls, SD 57104
CONTACT: Matt Rock, PHONE: 605-367-8000, CELL: 605-367-8668

City of Tea
600 E 1st St
Tea, SD 57064
CONTACT: Thad Konrad, PHONE: 605-498-5194, CELL: 605-940-8504

City of Vermillion
25 Center St
Vermillion, SD 57069
CONTACT: Shane Griese, PHONE: 605-677-7056

Clay Rural Water System
30376 SD Hwy 19
Wakonda, SD 57073
CONTACT: Steve Muilenburg, PHONE: 605-267-2088

Clay Union Electric Corporation
31321 SD Hwy 19
Vermillion, SD 57069
CONTACT: Alan Gauer, PHONE: 605-624-2673

Consolidated Telecommunications
2730 3rd Ave
Mankato, MN 56002
CONTACT: Justin Grev, CELL: 701-483-7362

East River Electric Power Cooperative
211 S Harth Ave
Madison, SD 57042
CONTACT: Jordan Brown, PHONE: 605-256-8231, CELL: 605-291-9302

Golden West Communications
525 E 4th St
Dell Rapids, SD 57022
CONTACT: Ryan Cuny, PHONE: 605-428-1125, CELL: 605-864-0613

Interstate Telecommunications Cooperative
312 4th St W
Clear Lake, SD 57226
CONTACT: Jerome Salanoa, CELL: 605-874-8324

Lake Madison Sanitary District
23493 457th Ave
Madison, SD 57042
CONTACT: Scott Johnson, CELL: 605-270-2344

Lewis & Clark Regional Water
46986 Monty St
Tea, SD 57064
CONTACT: Clint Koehn, PHONE: 605-368-2400

Lincoln County Rural Water System
27066 Henry Pl
Sioux Falls, SD 57108
CONTACT: Robin Dykstra, PHONE: 605-767-2966

Magellan Midstream Partners LP
One Williams Center
Tulsa, OK 74172
CONTACT: Cynthia Pierce, CELL: 918-344-7472
LOCAL CONTACT: Craig Weber, CELL: 605-201-7862

MCI / Verizon
1200 N Washington Ave
Minneapolis, MN 55401
CONTACT: Dan Schmidt, PHONE: 612-326-7649

MidAmerican Energy Company
1200 S Blauvelt Ave
Sioux Falls, SD 57105
CONTACT: Nicolle Rasmusson, PHONE: 605-373-6081

Midcontinent Communications
1305 N Terry Ave
Sioux Falls, SD 57107
CONTACT: Al Mullinix, PHONE: 605-231-0388

Minnehaha Community Water Corporation
47381 248th St
Dell Rapids, SD 57022
CONTACT: Scott Buss, PHONE: 605-910-5870

Northern Electric Cooperative
PO Box 457
Bath, SD 57427
CONTACT: Jerry Weber, PHONE: 605-225-0310, CELL: 605-380-3937

Northern Natural Gas Company
1120 Centre Point Dr, Ste 400
Mendota Heights, MN 55120
CONTACT: Jason Godwin, CELL: 651-456-1711

Northern Valley Communications
2211 8th Ave NE
Aberdeen, SD 57401
CONTACT: Pat Schumacher, PHONE: 605-725-1065, CELL: 605-715-7065

NorthWestern Energy
3210 Douglas Ave
Yankton, SD 57078
CONTACT: Robert Gehm, CELL: 605-760-7402

NuStar Energy LP
8111 West Chester Dr
Dallas, TX 75225
CONTACT: Brandon Sermak, CELL: 701-471-6570

RC Technologies
PO Box 197
New Effington, SD 57255
CONTACT: Scott Bostrom, PHONE: 605-637-5211

SDN Communications
2900 W 10th St
Sioux Falls, SD 57104
CONTACT: Ryan Smith, PHONE: 605-978-1059, CELL: 605-209-2338

Sioux Valley – Southwestern Electric Cooperative, Inc.
PO BOX 216, 23491 491st Ave
Colman, SD 57017
CONTACT: Michele Nielson, PHONE: 605-582-2185

Southeastern Electric Cooperative
47077 276th St
Lennox, SD 57039
CONTACT: John Euchner, PHONE: 800-333-2859

Town of Summit
Summit, SD 57266
CONTACT: Travis Benthin, PHONE: 605-398-6244

WEB Water Development
38462 US Hwy 12

Aberdeen, SD 57401
CONTACT: Shane Phillips, PHONE: 605-229-4749

Whetstone Valley Electric Cooperative
PO Box 512
Milbank, SD 57252
CONTACT: Jon Christensen, PHONE: 605-432-5331

Windstream Communications
5100 S Broadband Ln
Sioux Falls, SD 57108
CONTACT: Alan Garf, CELL: 515-829-7390

Xcel Energy
500 W Russell St
Sioux Falls, SD 57104
CONTACT: Aaron Bickett, PHONE: 605-339-8315, CELL: 605-261-1354

Known utility facilities are distributed across several project locations. The following section identifies each location, the utility companies with facilities present, and a description of those facilities based on available information.

Hwy-MRM 90-307

SDN Communications
SDS Communications indicated they do not have any facilities within the project area. No impacts or adjustments are anticipated.

Golden West Communications
Golden West Communications indicated they do not have any facilities within the project area. No impacts or adjustments are anticipated.

Hwy-MRM 90-312

SDN Communications
SDN Communications indicated on a plan sheet their fiber optic line is located just south of the existing right-of-way fence on the north side of Interstate 90 at an approximate depth of 3.5 to 4 feet. They anticipate no relocation or adjustment will be necessary**.** If any adjustments are required they will be accomplished during construction.

Golden West Communications
Golden West Communications has existing fiber optic facilities within the project area. Their BF024 fiber line is located on the north side of Interstate 90, approximately 90 feet north of the centerline of the westbound lane. Based on a review of the project plans, the proposed new power installation will cross their fiber line. Golden West has indicated that no relocation or adjustment of their facilities will be required due to this single crossing.

Hwy-MRM 37-125

City of Huron

City of Huron has indicated that there is streetlight and traffic signal wiring within the project area. These facilities were installed by SDDOT and are currently maintained by the City. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Midcontinent Communications

Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

NorthWestern Energy

NorthWestern Energy has indicated that they have existing overhead facilities in the vicinity of the project area that do not require adjustments. No impacts are anticipated.

SDN Communications

SDS Communications indicated they do not have any facilities within the project area. No impacts or adjustments are anticipated.

Stoney Run Sanitary District

Stoney Run Sanitary District indicated that they have infrastructure within the right-of-way and within the project limits. They have a sanitary force main not located on the topographic survey; however, they indicated to us that it is approximately 2' west of the fiber optic lines in the ditch. They have indicated that their facilities will not need to be adjusted to accommodate the proposed infrastructure.

Lumen

Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 90-399

MidAmerican Energy Company Inc.

MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Xcel Energy

Xcel Energy indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Bluepeak

Bluepeak indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

City of Sioux Falls
The City of Sioux Falls indicated that the roadway lighting and fiber optic facilities were drawn accurately on the plans. The City of Sioux Falls indicated that some of the footing locations are close to their facilities, but no relocation should be necessary.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 90-403
Alliance Communications
Alliance Communications has indicated that they have no existing facilities within the limits of this site. No conflicts with the proposed construction are anticipated and no relocation or adjustment will be required.

Consolidated Communications Inc. (Fidium Fiber)
Consolidated Telecommunications Company has indicated that they have existing facilities in the vicinity of the project area. They have infrastructure in the right-of-way north of Interstate 90 running parallel to the interstate. Any required relocation or adjustment of their facilities will be evaluated during construction.

MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Minnehaha Community Water
Minnehaha Community Water has indicated that they have existing facilities in the vicinity of the project area. However, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Xcel Energy
Xcel Energy indicated they have overhead transmission infrastructure located along the right-of-way at this project site. The SDDOT has coordinated with Xcel Energy, who provided guidelines that will be followed during construction. Please find the complete **General Transmission Line Guidelines and Consent – 345kV** attached to this document. The contractor will be required to limit excavation to no closer than 20 feet from any Xcel transmission line structure. Filling around or above power poles will not be permitted. Crane operations shall comply with all OSHA requirements, including maintaining a minimum approach distance for equipment of 20 feet from transmission lines. At this time, Xcel Energy has indicated that no adjustment or relocation of their facilities is anticipated; however, additional coordination will be required during construction.

City of Sioux Falls
The City of Sioux Falls indicated that the roadway lighting and fiber optic facilities were drawn accurately on the plans. The City of Sioux Falls indicated that no relocation should be necessary.

Sioux Valley Energy
Sioux Valley Energy indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 90-405
Alliance Communications
Alliance Communications has indicated that they have no existing facilities within the limits of this site. No conflicts with the proposed construction are anticipated and no relocation or adjustment will be required.

City of Brandon
The City of Brandon has indicated that they have watermain crossings within project limits. The city has indicated that they do not anticipate any relocation or adjustment will be necessary for this project.

Consolidated Communications Inc. (Fidium Fiber)
Consolidated Telecommunications Company has indicated that they have existing facilities in the vicinity of the project area. They have infrastructure in the right-of-way south of Interstate 90 running parallel to the interstate. At this time, any required relocation or adjustment of their facilities will be evaluated during construction.

East River Electric Power Cooperative
East River Electric Power Cooperative indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Minnehaha Community Water
Minnehaha Community Water has indicated that they have existing facilities in the vicinity of the project area. However, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Xcel Energy
Xcel Energy indicated they have overhead transmission infrastructure located along the right-of-way at this project site. The SDDOT has coordinated with Xcel Energy, who provided guidelines that will be followed during construction. Please find the complete **General Transmission Line Guidelines and Consent – 345kV** attached to this document. The contractor will be required to limit excavation to no closer than 20 feet from any Xcel transmission line structure. Filling around or above power poles will not be permitted. Crane operations shall comply with all OSHA requirements, including maintaining a minimum approach distance for equipment of 20 feet from transmission lines. At this time, Xcel Energy

has indicated that no adjustment or relocation of their facilities is anticipated; however, additional coordination will be required during construction.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be made during construction.

Hwy-MRM 29-74
Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no infrastructure crossing near the project areas and that it runs parallel with the interstate. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Lincoln County Rural Water System Inc.
Lincoln County Rural Water System, Inc. has indicated that they do not have existing facilities within or near the project limits. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of their facilities will be required.

Lewis and Clark Regional Water
Lewis & Clark Regional Water System has indicated that they do not have facilities within the immediate project area shown on the plans. They have indicated that they do have infrastructure located near the water tower, approximately 500 feet north of the project limits, but do not believe they are in conflict with the proposed work. Based on the information provided, no relocation or adjustment of their facilities is anticipated.

Southeastern Electric Cooperative Inc.
Southeastern Electric Cooperative Inc. indicated they have infrastructure outside of the DOT right-of-way serving power to a billboard in the vicinity of the project area. However, they indicated that the service is not in the way of construction. Based on the information provided, no relocation or adjustment of their facilities is anticipated.

MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Xcel Energy
Xcel Energy indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

NorthWestern Energy
NorthWestern Energy indicated they do not have any facilities within the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

SDN Communications
SDS Communications indicated they do not have any facilities within the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

City of Sioux Falls
The City of Sioux Falls indicated that the roadway lighting and fiber optic facilities were drawn accurately on the plans. The City of Sioux Falls indicated that some of the footing locations are close to their facilities, but they do not anticipate the need for relocation.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

City of Tea
City of Tea indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 29-76
MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Xcel Energy
Xcel Energy indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no infrastructure crossing near the project areas and that it runs parallel with the interstate. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

SDN Communications
SDS Communications indicated they do not have any facilities within the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

City of Sioux Falls
The City of Sioux Falls indicated that the roadway lighting and fiber optic facilities were drawn accurately on the plans. The City of Sioux Falls indicated that some of the footing locations are close to their facilities, but they do not anticipate the need for relocation.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 229-2
MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Xcel Energy
Xcel Energy indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Northern Natural Gas HP
Northern Natural Gas indicated their nearest infrastructure is located approximately ¼ mile to the southwest of the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no infrastructure crossing near the project areas and that it runs parallel with the interstate. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

SDN Communications
SDS Communications indicated their fiber optic line is located between the edge of roadway and the existing fence line at an approximate depth of 3.5 to 4 feet. At this time, it is anticipated that no relocation or adjustment will be necessary. If any adjustments are later determined to be required, SDN requests to be notified at least two weeks in advance to coordinate work.

City of Sioux Falls
The City of Sioux Falls indicated that the roadway lighting and fiber optic facilities were drawn accurately

on the plans. The City of Sioux Falls indicated that some of the footing locations are close to their facilities, but they do not anticipate the need for relocation.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

NuStar Energy LP HP
NuStar Energy LP HP indicated that they have an existing 6" production gas pipeline crossing Interstate 229 east of the proposed DMS. They have identified the westerly of the two gas pipelines shown on the plan sheet. This pipeline is 57 feet from the overhead DMS structural support in the right-of-way ditch of Interstate 229. NuStar Energy has requested to coordinate field operations with local staff during construction. They have indicated that they do not anticipate any adjustment or relocation of their existing infrastructure. Additional coordination during construction is anticipated.

Magellan Midstream Partners, LP
Magellan Midstream Partners, LP has indicated that they operate a 6-inch high-pressure petroleum products pipeline in the vicinity of the project crossing I-229 east of the proposed DMS. Based on their review, relocation of their facilities is not anticipated at this time. However, additional coordination during construction is anticipated. Magellan's local representative is Craig Weber (605) 201-7862.

Hwy-MRM 229-9
MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

MCI/Verizon
MCI/Verizon indicated they have facilities near the project area running parallel with the interstate near the right-of-way line. The proposed power will be crossing their infrastructure; however, no conflicts with the proposed construction are anticipated, and no relocation of these facilities is expected to be required. If adjustments are needed, they will be accomplished during construction.

Xcel Energy
Xcel Energy indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no

infrastructure crossing near the project areas and that it runs parallel with the interstate. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

SDN Communications
SDS Communications indicated they do not have any facilities within the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

City of Sioux Falls
The City of Sioux Falls indicated that the roadway lighting and fiber optic facilities were drawn accurately on the plans. The City of Sioux Falls indicated that some of the footing locations are close to their facilities, but they do not anticipate the need for relocation.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 34-389
Big Sioux Community Water System Inc.
Big Sioux Community Water System Inc. indicated they have facilities in the project area. The proposed conduit installation will cross the Big Sioux Community Water infrastructure. The contractor will coordinate with Big Sioux Community Water System during construction; however, no existing infrastructure relocation or adjustment should be required.

East River Electric Power Cooperative
East River Electric Power Cooperative indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Interstate Telecommunications Cooperative Inc.
Interstate Telecommunications Cooperative Inc. indicated they do not have any facilities within the project area. No impacts or adjustments are anticipated.

Lake Madison Sanitary District
Lake Madison Sanitary District indicated they do not have any facilities within the project area. No impacts or adjustments are anticipated.

City of Madison Electric
City of Madison indicated that the project area is right off the edge of their boundary. They have

facilities near the project location, but no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

NorthWestern Energy
NorthWestern Energy has indicated that they have existing overhead facilities in the vicinity of the project area; however, these are outside the construction limits. At this time, no impacts or adjustments are anticipated.

Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no infrastructure crossing near the project areas and that it runs parallel with the project. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

SDN Communications
SDS Communications indicated they do not have any facilities within the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Sioux Valley Energy
Sioux Valley Energy indicated they have facilities near the project limits. However, none of these facilities will conflict with the proposed construction. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 50-388
B-Y Water District
B-Y Water District has existing facilities that parallel and cross Highway 50 in the vicinity of the project site. However, these facilities do not conflict with the proposed construction. Based on the information provided, it does not appear that the proposed project will require any adjustment or relocation of B-Y Water District's facilities.

Clay Union Electric Corporation
Clay Union Electric Corporation indicated that they have an existing infrastructure running east and west approximately 5 to 10 feet to the north side of the boundary fence. However, they indicated that their infrastructure is not in the way of construction. Based on the information provided, no relocation or

adjustment of their facilities is anticipated.

MidAmerican Energy Company Inc.
MidAmerican Energy Company indicated they have no facilities near the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no infrastructure crossing near the project areas and that it runs parallel with the interstate. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

SDN Communications
SDS Communications indicated their fiber optic line is located just north of the existing fence line on the south side of Highway 50 at an approximate depth of 3.5 to 4 feet. At this time, it is anticipated that no relocation or adjustment will be necessary. If any adjustments are later determined to be required, SDN requests to be notified at least two weeks in advance to coordinate work.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 50-412
Clay Rural Water System Inc.
Clay Rural Water System Inc. indicated that they have a waterline located south of the right-of-way at this project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Clay Union Electric Corporation
Clay Union Electric Corporation indicated that they have an existing infrastructure running east and west approximately 5 to 10 feet to the north side of the boundary fence. However, they indicated that their infrastructure is not in the way of construction. Based on the information provided, no relocation or adjustment of their facilities is anticipated.

Bluepeak
Bluepeak indicated they have facilities near the project limits. Bluepeak also indicated that they have no infrastructure crossing near the project areas and that it runs parallel with the interstate. They have indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Midcontinent Communications
Midcontinent Communications indicated that they have existing facilities in the vicinity of the project area. At this time, Midcontinent Communications believes their facilities do not require adjustment; however, if any adjustments are required, they will be done during construction.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

City of Vermillion
City of Vermillion indicated they do not have any facilities within the project area. No impacts or adjustments are anticipated.

Hwy-MRM 29-206
RC Technologies
RC Technologies indicated they have existing fiber optic facilities within the project limits. At this time, their facilities are expected to remain in place, and no adjustments are anticipated as part of this project.

Town of Summit
Town of Summit indicated that they do not have any facilities within the project area. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 29-209
RC Technologies
RC Technologies indicated they have existing fiber optic facilities within the project limits. At this time, their facilities are expected to remain in place, and no adjustments are anticipated as part of this project.

Whetstone Valley Electric Cooperative Inc.
Whetstone Valley Electric Cooperative Inc. indicated their nearest infrastructure was about 800 feet away. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

Hwy-MRM 12-295
Northern Electric Cooperative Inc.
Northern Electric Cooperative, Inc. indicated they have existing underground electrical facilities within the project limits. Northern Electric noted an underground wire located in private easement that crosses beneath U.S. 12 near proposed DMS location 12-295. They have stated this infrastructure will be clear of construction and will not be impacted by the project**.** Based on the information provided, no relocation or adjustment of their facilities is anticipated.

Northern Valley Communications
Northern Valley Communications indicated they do not have facilities within the project limits. Their existing utilities are located along the north side of U.S. 12 and are outside of the project area. No impacts or adjustments are anticipated.

Lumen
Lumen indicated that they have facilities in the construction limits; however, they should not be in conflict with construction. Lumen will protect in place all crossings on this project. Based on the information provided, no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

WEB Water Development
WEB Water Development indicated they have facilities near the project location. However, they indicated that no conflicts with the proposed construction are anticipated, and no relocation or adjustment of these facilities is expected to be required.

The requirements relating to Cooperation Between Contractors, as set forth in Section 5.7 of the Standard Specifications for Roads and Bridges, 10-1-25 Version, shall prevail throughout the limits of this project.

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
PRICE SCHEDULE FOR MISCELLANEOUS ITEMS

FEBRUARY 18, 2026

Delete the Flagging and Pilot Car rows from the table in Section 4.4 and replace them with the following:

Specification Section Number	Specification Section Name	Item Name	Price per Item
634.5	Temporary Traffic Control	Flagging	$43.36/Hour
634.5	Temporary Traffic Control	Pilot Car	$58.77/Hour

* * * * *

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
AMERICAN SECURITY DRONE ACT

DECEMBER 15, 2025

By submitting a bid proposal for this contract, the bidder certifies and agrees the following information is correct for the bidder and all subcontractors (all tiers):

> The bidder understands and acknowledges the American Security Drone Act (ASDA), Pub. L. No. 118-31, §§ 1821-32 (41 U.S.C. § 3901 note) (2023) and the United States Office of Management and Budget memorandum M-26-02. The bidder certifies its performance of work will comply with the ASDA.

The Contractor will maintain all records and documents pertinent to the requirements for not less than five (5) years from Final Acceptance by the Department. The Contractor will furnish or make available copies of these records and documents for inspection and verification by the Department and FHWA upon request.

* * * * *

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
STEEL BEAM GUARDRAIL
AASHTO M 180 DESIGNATION

OCTOBER 1, 2025

Section 630.2 B. – Delete and replace with the following:

B. Beam Guardrail:

For all projects let prior to January 1, 2027 the following shall apply:

Beam guardrail will conform to AASHTO M 180-18, Type I, or AASHTO M 180-23, Type I, unless the plans specify another type.

For all projects let January 1, 2027 and after the following shall apply:

Beam guardrail will conform to the most recent, at the time of the letting, version of AASHTO M 180, Type I, unless the plans specify another type.

Section 630.2 C. – Delete and replace with the following:

C. Bolts, Nuts, and Washers:

For all projects let prior to January 1, 2027 the following shall apply:

Bolts, nuts, and washers will be as specified in AASHTO M 180-18 or AASHTO M180-23.

For all projects let January 1, 2027 and after the following shall apply:

Bolts, nuts, and washers will be as specified in the most recent, at the time of the letting, version of AASHTO M 180.

* * * * *

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ACKNOWLEDGEMENT AND CERTIFICATION REGARDING
ARTICLE 3, SECTION 12
OF THE SOUTH DAKOTA CONSTITUTION

AUGUST 24, 2023

In accordance with the State of South Dakota Office of the Governor Executive Order 2023-13, the following will apply to all contracts:

The Contractor acknowledges and certifies that the following information is correct:

CERTIFICATION OF NO STATE LEGISLATOR INTEREST:

Contractor (i) understands neither a state legislator nor a business in which a state legislator has an ownership interest may be directly or indirectly interested in any contract with the State that was authorized by any law passed during the term for which that legislator was elected, or within one year thereafter, and (ii) has read South Dakota Constitution Article 3, Section 12 and has had the opportunity to seek independent legal advice on the applicability of that provision to this contract. By signing this contract, Contractor hereby certifies that this contract is not made in violation of the South Dakota Constitution Article 3, Section 12.

It is understood and agreed that, if this certification is false, such false certification will constitute grounds for the Department to terminate the contract.

The Contractor further agrees to provide immediate written notice to the Department if during the term of the contract it no longer complies with this certification and agrees such noncompliance may be grounds for contract termination.

* * * * *

DOT-208
(11/25)

FUEL ADJUSTMENT AFFIDAVIT

Project Number _____
PCN _____
County _____

For projects let using the SDEBS) and in accordance with Section 9.10, the bidder is not required to notify the Department at the time of submitting bids whether the Contractor will or will not participate in the fuel cost adjustment program. Prior to execution of the contract, the successful bidder must submit this completed form to the Department for approval. The Fuel Adjustment Affidavit will include the anticipated fuel cost of subcontractors.

Does your company elect to participate in a fuel adjustment for this contract for the fuels that do not have a fixed price? No adjustments in fuel prices will be made if "No" is checked.

☐ Yes ☐ No

If yes, provide the total dollars for each of the applicable fuels. No adjustments in fuel price will be made for the fuel types that are left blank or completed with a $0.00 value.

Diesel (x) $_____

Unleaded (y) $_____

Burner Fuel (z) $_____ Type of Burner Fuel Used: _____

Sum (x + y + z) = $_____

Note: The sum of the x, y, and z must not exceed 15% of the original contract amount.

The following must be completed regardless of whether the Contractor elects to participate in the fuel adjustment affidavit

Under the penalty of law for perjury or falsification, the undersigned, _____,
(Printed Name)

_____ of _____,
(Title) *(Contractor)*

hereby certifies that the documentation is submitted in good faith, that the information provided is accurate and complete to the best of their knowledge and belief, and that the monetary amount identified accurately reflects the cost for fuel, and that they are duly authorized to certify the above documentation on behalf of the company.

I hereby agree that the Department or its authorized representative will have the right to examine and copy all Contractor records, documents, work sheets, bid sheets, and other data pertinent to the justification of the fuel costs shown above.

Dated _____ Signature _____

Notarization is required only when the Contractor elects to participate in the fuel adjustment affidavit

Subscribed and sworn before me this _____ day of _____ , 20___.

_____ _____
Notary Public *My Commission Expires*

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STANDARD TITLE VI / NONDISCRIMINATION ASSURANCES APPENDIX A & E

MARCH 1, 2016

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations**: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination**: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment**: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports**: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance**: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions**: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or

is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

****

SPECIAL PROVISION FOR EEO AFFIRMATIVE ACTION REQUIREMENTS ON FEDERAL AND FEDERAL-AID CONSTRUCTION CONTRACTS

FEBRUARY 5, 2024

Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the “Equal Opportunity Clause” and the “Standard Federal Equal Employment Specifications” set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade

Aurora	0.8%	Fall River	7.9%	Marshall	1.3%
Beadle	0.8%	Faulk	1.3%	Meade	3.4%
Bennett	7.9%	Grant	1.3%	Mellette	7.9%
Bon Homme	1.2%	Gregory	0.8%	Miner	0.8%
Brookings	0.8%	Haakon	7.9%	Minnehaha	1.2%
Brown	1.3%	Hamlin	1.3%	Moody	0.8%
Brule	0.8%	Hand	0.8%	Oglala Lakota	7.9%
Buffalo	7.9%	Hanson	0.8%	Pennington	3.4%
Butte	7.9%	Harding	7.9%	Perkins	7.9%
Campbell	7.9%	Hughes	7.9%	Potter	7.9%
Charles Mix	0.8%	Hutchinson	0.8%	Roberts	1.3%
Clark	1.3%	Hyde	7.9%	Sanborn	0.8%
Clay	1.2%	Jackson	7.9%	Spink	1.3%
Codington	1.3%	Jerauld	0.8%	Stanley	7.9%
Corson	7.9%	Jones	7.9%	Sully	7.9%
Custer	7.9%	Kingsbury	0.8%	Todd	7.9%
Davison	0.8%	Lake	0.8%	Tripp	7.9%
Day	1.3%	Lawrence	7.9%	Turner	0.8%
Deuel	1.3%	Lincoln	0.8%	Union	1.2%
Dewey	7.9%	Lyman	7.9%	Walworth	7.9%
Douglas	0.8%	McCook	0.8%	Yankton	1.2%
Edmunds	1.3%	McPherson	1.3%	Ziebach	7.9%

Goals for female participation in each trade

Statewide 6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this

second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR part 60–4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60–4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR part 60–4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is shown by county designation on the Title Sheet of the plans.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:

a. “Covered area” means the geographical area described in the solicitation from which this contract resulted;

b. “Director” means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. “Employer identification number” means the Federal Social Security number used on the Employer’s Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. “Minority” includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60–4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall

document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

D. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60–3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the

Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60–4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

*****

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION FOR
REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA 1273 (OCTOBER 23, 2023)

OCTOBER 18, 2023

The following are amendments to the above contract provisions.

Section I.4.

Delete this section and replace with the following:

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a Federal-aid construction project unless it is labor performed by convicts who are on parole, supervised release, or probation.

Section IV.

Delete the first three sentences of the first paragraph and replace with the following:

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway and to all portions of Transportation Alternatives Program (TAP) funded projects.

Section IV.3.b.(1)

Delete this section and replace with the following:

The Contractor and each related subcontractor must submit weekly, for each week in which any contract work is performed, an electronic certified weekly payroll report. The Contractor is responsible for the submission of certified payroll reports by all subcontractors. The payroll report must be submitted electronically to the Elation System website. The Contractor must submit a legally valid electronic signature. The Elation System website can be accessed by logging onto the State of South Dakota's single sign-on website at https://mysd.sd.gov/ or can also be accessed at https://elationsys.com/. First time users will need to use the Promotion Code SDDOT-19. The payroll report must be submitted within fourteen (14) calendar days after the end of the workweek.

Section IV.3.b.(2)

Delete the third sentence.

Section IV.3.b.(3)

Delete the first paragraph and replace with the following:

Each certified weekly payroll report must include the most recent South Dakota Department of Transportation (SDDOT) Statement of Compliance Form, signed by the Contractor or related subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract. The Instructions for the SDDOT Statement of Compliance Form are found at https://dot.sd.gov/doing-business/contractors/labor-compliance/certified-payrolls-let-after-6/5/19. The SDDOT will not accept any payroll report which does not include the most recent SDDOT Statement of Compliance Form. The SDDOT Statement of Compliance Form must certify the following:

Section IV.3.b.(4)

Delete this paragraph and replace with the following:

The weekly submission of a properly executed SDDOT Statement of Compliance Form shall satisfy the requirement for submission of the "Statement of Compliance Form" required by paragraph 3.b.(3) of this section.

Section IV.4.a.(1)

Delete the first sentence and replace with the following:

Apprentices will be permitted to work at less than the predetermined rate for the work they perform, but not less than the Common Laborer wage rate contained in the bid documents, when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA.

* * * * *

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to *DBAconformance@dol.gov*. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION REGARDING
MINIMUM WAGE ON FEDERAL-AID PROJECTS

OCTOBER 24, 2019

This proposal contains a copy of the most recent United States Department of Labor (USDOL) Davis-Bacon Act Wage Decision.

The Contractor and each related subcontractor will pay their respective employees not less than the USDOL minimum wage for each work classification an employee actually performs at the site of the work.

The Contractor and each related subcontractor must submit weekly, for each week in which any contract work is performed, an electronic certified weekly payroll report. The payroll report must be submitted electronically to the Elation System website. The Elation System website can be accessed by logging onto the State of South Dakota's single sign-on website at https://mysd.sd.gov/ or can also be accessed at https://elationsys.com/. First time users will need to use the Promotion Code SDDOT-19. The payroll report must be submitted within fourteen (14) calendar days after the end of the workweek. The payroll reports submitted shall set out accurately and completely all the information required to be maintained under 29 C.F.R. 5.5(a)(3)(i). Weekly transmittals must include an individually identifying number for each employee, such as the last four digits of the employee's social security number, but these weekly transmittals must not include full social security numbers or home addresses. The Contractor is responsible for the submission of certified payroll reports by all subcontractors.

Each certified weekly payroll report must include the most recent South Dakota Department of Transportation (SDDOT) Statement of Compliance Form, signed by the Contractor or related subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract. The Instructions for the SDDOT Statement of Compliance Form are found at https://dot.sd.gov/doing-business/contractors/labor-compliance/certified-payrolls-let-after-6/5/19. The SDDOT will not accept any payroll report which does not include the most recent SDDOT Statement of Compliance Form.

* * * * *

Wage and Hour Division
U.S. Department of Labor (DOL)
200 Constitution Avenue, N.W.
Washington, DC 20210

Davis-Bacon Act Wage Decision
State: South Dakota
Construction Types: Heavy and Highway
Counties: South Dakota Statewide

Agency: U.S. DOL
Wage Decision Number: **SD20260001 SD1**
Counties: SD Statewide
Wage Decision Date: **01/30/2026 (Mod-0)**

***SASD2025-001 12/12/2024**

	Rates	Fringes
LABORERS		
Group GL1		
Air Tool Operator; Common Laborer; Landscape Worker; Flagger; Pilot Car Driver; Trucks under 26,000 GVW; Materials Checker, Special Surface Finish Applicator	**26.93**	**0.00**
Group GL2		
Mechanic Tender; Pipe Layer (except culvert); Form Builder Tender	**26.96**	**0.00**
Group GL3		
Asphalt Plant Tender; Pile Driver Leadsman; Form Setter; Oiler/Greaser	**28.97**	**0.00**
Group GL5		
Carpenter; Form Builder	**31.94**	**0.00**
Group GL6		
Concrete Finisher; Grade Checker	**29.81**	**0.00**
POWER EQUIPMENT OPERATORS		
Group G01		
Tractor (farm type with attachments, including loaders but excluding Backhoe); Self Propelled Broom; Concrete Routing Machine; Paver Feeder; Pugmill; Skid Steer	**30.16**	**0.00**
Group G02		
Concrete Paving Cure Machine; Concrete Paving Joint Sealer; Bull Dozer 80 HP or less; Front End Loader 1.25 CY or less; Self Propelled Roller (except Hot Mix); Sheepsfoot/Pneumatic Roller; Pneumatic Tired Tractor or Crawler (includes Water Wagon and Power Spray units); Wagon Drill (Air Trac – Trac Drill); Truck Type Auger; Concrete Paving Saw; Concrete Grooving	**31.73**	**0.00**
Group G03		
Asphalt Distributor; Bull Dozer over 80 HP; Backhoes/ Excavators 20 tons or less; Crusher (may include internal screening plant); Front End Loader over 1.25 CY; Rough Motor Grader; Self Propelled Hot Mix Roller; Push or Pull Tractor; Off-Highway Haul Trucks; Material Spreader or Placer; Rumble Strip Machine; Pavement Marking Grinding Equipment	**31.56**	**0.00**
Group G04		
Concrete Paving Finishing Machine; Asphalt Paving Machine Screed; Asphalt Paving Machine; Cranes/Derricks/ Draglines/Pile Drivers/Shovels 30 to 50 tons; Backhoes/Excavators 21 to 40 tons; Maintenance Mechanic; Scrapers (wheel or tracks); Concrete Pump Truck	**32.49**	**0.00**
Group G05		
Asphalt Plant; Concrete Batch Plant; Backhoes/Excavators over 40 Tons; Cranes/ Derricks/Draglines/Pile Drivers/Shovels over 50 tons; Heavy Duty Mechanic; Finish Motor Grader; Automatic Fine Grader; Milling Machine; Bridge Welder	**34.96**	**8.36**
TRUCK DRIVERS		
Group GT1		
Tandem Truck without trailer or pup; Single Axle Truck over 26,000 GVW with Trailer	**30.01**	**0.00**
Group GT2		
Semi-Tractor and Trailer; Tandem Truck with Pup or Trailer	**32.07**	**8.42**

Wage and Hour Division
U.S. Department of Labor (DOL)
200 Constitution Avenue, N.W.
Washington, DC 20210

Davis-Bacon Act Wage Decision
State: South Dakota
Construction Types: Heavy and Highway
Counties: South Dakota Statewide

Agency: U.S. DOL
Wage Decision Number: **SD20260001 SD1**
Counties: SD Statewide
Wage Decision Date: **01/30/2026 (Mod-0)**

***SASD2025-001 12/12/2024**

	Rates	Fringes
ELECTRICIANS		
Group E01		
Electrician	**35.43**	**8.69**
IRON WORKERS		
Group I01		
Position and secure steel bars or mesh in concrete for reinforcement, steel tiers, saw. Carrying, placing, tying, reinforcing steel under supervision, cutting. Placing steel or prefabricated reinforcement assembly for placement in concrete forms.	**26.93**	**0.00**
Group I02		
Erect, place and join steel girders, columns, structural framework, air wrenches, spud bars, grinders, drills, sledgehammers, tag lines, plumb bobs, lasers, levels, bolts, wire, welds, shears, rod-bending machines, torches.	**28.97**	**0.00**
PAINTERS		
Group P01		
Line striping machine, paint trucks, epoxy trucks, thermoplastic trucks, cold applied plastic/and preformed thermoplastic pavement marking equipment. Operate pavement marking equipment to include epoxies, paints, primers, sealers, cold applied tapes, thermoplastics used for traffic marking purposes.	**26.96**	**0.00**
Group P02		
Painting or protective coating bridges, apply varnish, anti-rust materials, prepare steel or other surfaces with primer or sandblasting, paints structural framework of bridges, guardrails and cables of bridges and other structures.	**29.81**	**0.00**

WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award, pursuant to 29 CFR 5.5(a)(1)(ii); contractors are responsible for requesting SDDOT to secure necessary additional work classifications and rates.

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R. 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

For SDDOT Defined Work Classifications, please visit: https://dot.sd.gov/doing-business/contractors/labor-compliance

A COPY OF THIS DOCUMENT, COLORED **GREEN**, **MUST** BE CONSPICUOUSLY POSTED AT THE PROJECT SITE

Davis-Bacon Act Wage Decision
State: South Dakota
Construction Types: Heavy and Highway
Counties: South Dakota Statewide

SD20260001 SD1 01/30/2026 (Mod-0)

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

   a) a survey underlying a wage determination
   b) an existing published wage determination
   c) an initial WHD letter setting forth a position on a wage determination matter
   d) an initial conformance (additional classification and rate) determination

   On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

   Branch of Wage Surveys
   Wage and Hour Division
   U.S. Department of Labor
   200 Constitution Avenue, N.W.
   Washington, DC 20210

   Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

   Branch of Construction Wage Determinations
   Wage and Hour Division
   U.S. Department of Labor
   200 Constitution Avenue, N.W.
   Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

   Wage and Hour Administrator
   U.S. Department of Labor
   200 Constitution Avenue, N.W.
   Washington, DC 20210

   The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

   Administrative Review Board
   U.S. Department of Labor
   200 Constitution Avenue, N.W.
   Washington, DC 20210.

END OF GENERAL DECISION

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
REGARDING
STORMWATER DISCHARGES
TO WATERS OF THE STATE

NOVEMBER 5, 2025

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD), Article 74:52, the State of South Dakota has been issued Permit No. SDR10#### "GENERAL PERMIT AUTHORIZING STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES". This permit authorizes the discharge of storm water in accordance with the conditions and requirements set forth in the permit.

The Contractor, by signing the CONTRACTOR AUTHORIZATION FORM and submitting a bid or proposal, certifies the following:

> "I certify under penalty of law that I understand and will comply with the terms and conditions of the Surface Water Discharge General Permit for Stormwater Discharges Associated with Construction Activities for the project identified above."

A copy of the full version of the General Permit Authorizing Stormwater Discharges Associated with Construction Activities, dated 11/01/2023, must be available on the job site. The permit is available for downloading and printing from the SD DANR website:

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/StormWaterConstruction.aspx

The Contractor may also obtain a printed copy of the permit from the SDDOT Project Development office or from the SDDOT Area Office assigned to this project.

* * * * *