DEPARTMENT OF TRANSPORTATION

Planning & Engineering
Office of Project Development
700 E Broadway Avenue
Pierre, South Dakota 57501-2586
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dot.sd.gov

October 15, 2026

ADDENDUM NO. 1

RE: Item #3, October 21, 2026 Letting - P 0025(105)149, PCN 06DX, Clark County - Asphalt Concrete Surfacing

TO WHOM IT MAY CONCERN:

The following addenda to the plans shall be inserted and made a part of your proposal for the referenced project.

SPECIAL PROVISIONS: Please remove the Index of Special Provisions and replace with the attached Index of Special Provisions revised 10/15/26.

Please remove the "Special Provision for Contractor Staking", dated 8/17/26 and replace with the "Special Provision for Contractor Staking", dated 10/15/26.

SDEBS BID PROPOSAL: *The electronic bid proposal for this contract has been revised to include the changes associated with this addendum. Bidders must log in to the SDEBS to retrieve and incorporate these changes into their bid.*

Bid Items were added:
Bid Item 009E3230 "Grade Staking"
Bid Item 009E3270 "Centerline Offset Staking"

Bid Items were removed:
Bid Item 009E3210 "Construction Staking"

PLANS: Please destroy sheets A1, F2, F4 & F7 and replace with the enclosed sheets, dated 10/15/26.

Sheets A1 & F2: Section F – Surfacing

Bid Items were added:
Bid Item 009E3230 "Grade Staking"
Bid Item 009E3270 "Centerline Offset Staking"

Bid Items were removed:
Bid Item 009E3210 "Construction Staking"

Sheet F4: FLEXIBLE PAVEMENT SMOOTHNESS note was revised.

Sheet F7: TABLE OF CONSTRUCTION STAKING was revised.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/gp

CC: Mark Peterson, Aberdeen Region Engineer
Brad Letcher, Huron Area Engineer

REV 10/15/26

INDEX OF SPECIAL PROVISIONS

PROJECT NUMBER(S): P 0025(105)149 PCN: 06DX

TYPE OF WORK: ASPHALT CONCRETE SURFACING

COUNTY: CLARK

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.

Lisa Johnson is the official in charge of the Watertown Career Center for Clark County.

THE FOLLOWING ITEMS ARE INCLUDED IN THIS PROPOSAL FORM:

Special Provision for Contractor Staking, dated 10/15/26.

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 Equal Employment Opportunity Requirements for Highway Construction Contracts, dated 10/7/26.
Special Provision for Contract Provisions for Federal-Aid Construction Contracts, Form FHWA 1273 (Rev. June 25, 2026), dated 10/7/26.
Contract Provisions for Federal-Aid Construction Contracts, Form FHWA 1273 (Rev. 6/25/26).
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.

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR STAKING
WITH MACHINE CONTROL GRADING OPTION

PROJECT P 0025(105)149, PCN 06DX
CLARK COUNTY

OCTOBER 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 Contractor may elect to use grading equipment with an automated machine control system for Machine Control Grading (MCG) provided the equipment and methods used provide the same results in the finished work as conventional construction staking. The Engineer may require the Contractor to revert to conventional staking methods for all or part of the work at any point during construction if, in the Engineer's own opinion, the MCG produces unacceptable results.

The Contractor may use MCG as a substitute for conventional construction staking for grade staking and centerline offset staking but will not use MCG for slope staking and slope stake reference hubs, paving hub staking, structure staking, miscellaneous staking, or final cross section surveying.

The staking work includes, but is not limited to, establishing or re-establishing the project centerline; placing an offset line to re-establish the project centerline throughout the entire project length prior to placement of asphalt surfacing; establishing control points and benchmarks as needed; setting additional benchmarks as needed; perform measurement and volume calculations of all Contractor secured borrow sources, State designated borrow sources, and topsoil stockpiles; and staking right-of-way, easements, and fence. The Contractor will perform measurement and volume computations by the average end area method

at the slope stake stations and plus stations, surface-to-surface method, or alternate measurement and computation method approved by the Engineer.

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 lines, staking clearing line, grade staking (blue tops), and performing the miscellaneous staking as described in the plans and in this specification.

The Department has established horizontal and vertical control 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 Department will provide a MCG packet to all prospective bidders consisting of a XML file containing the original surface Digital Terrain Model (DTM) and 4 design files for each new alignment on the project. The electronic design files will include, a XML file containing mainline alignment data, a XML file containing mainline design surface DTM, a DGN file containing triangles for mainline surface, and a DWG file containing triangles for mainline surface. The MCG packet will be available on the Department's electronic bid letting website when the project is advertised for bid letting.

The Contractor will convert the electronic information provided by the Department into the format required by the Contractor's MCG system. The Department makes no guarantee the information provided is directly compatible with the Contractor's MCG system.

The information shown in the plans will govern over the provided electronic information. The Contractor assumes the risk of error if the information is used for any purpose for which the information was not intended. The Contractor assumes all risk of any assumptions made regarding the electronic information.

The Contractor bears all costs, including but not limited to the cost of actual reconstruction of work, that may be incurred due to errors in application of MCG techniques. Grade elevation errors, rework resulting from errors or failures of the MCG system, and associated quantity adjustments resulting from the Contractor's activities are at no cost to the Department. Delays due to late submittals or satellite reception of signals to operate the MCG system will not result in adjustment to any contract unit prices or be justification for granting contract extensions.

The electronic information is not to be considered a representation of actual conditions to be encountered during construction. Providing the Contractor this information does not relieve the Contractor from the responsibility of making an investigation of conditions to be encountered, including but not limited to, site visits and basing the bid on information obtained from these investigations and the Contractor's professional interpretations and judgment. The Contractor assumes the risk of error if the information is used for any purposes for which the information was not intended. Any assumptions the Contractor makes from this electronic information or manipulation of the electronic information is at the Contractor's own risk.

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

If the Contractor elects to use MCG, the Contractor will submit a comprehensive written MCG work plan to the Engineer for review prior to scheduling the preconstruction meeting. The Department will review the plan to determine if the plan conforms to the requirements of the contract.

The Contractor will include in the MCG work plan how MCG will be incorporated into other technologies used on the project. The Contractor's MCG work plan will include, but is not limited to, the following:

1. A designation of which portions of the subgrade will be completed using MCG and which portions, if any, will be completed using conventional subgrade staking methods.
2. A description of the manufacturer, model, and software version of all MCG equipment.
3. Information on the qualifications of the Contractor's staff including, but not limited to, formal training and field experience.
4. A designation of a single person as the primary contact for MCG technology issues.
5. A description of site calibration procedures.
6. A description of site calibration and checking frequency and procedures for documenting site calibration and checking.
7. A description of the Contractor's quality control procedures including procedures for checking, mechanical calibration, and maintenance of equipment.
8. A description of the frequency and types of checks the Contractor will perform to ensure the constructed subgrade conforms to the contract requirements.

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 Department will set 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 Engineer may check the accuracy and control of the Contractor's survey, staking work, and MCG 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.

   The Contractor will perform all staking and MCG work under the supervision of a qualified surveyor or engineer who is experienced and competent in road and bridge construction surveying, staking, and MCG procedures. 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 and MCG work to the Engineer for review at least 14 calendar days prior to beginning the staking or MCG work.

   a. **Conventional Construction Staking:** 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 Contractor will furnish stakes and wooden hubs or steel pins of sufficient length to provide a solid set in the ground. The Contractor will place half-length lath stakes or stake chasers or an alternate, acceptable to the Engineer, adjacent to or on the blue top hubs for guards. 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.

b. Machine Control Grading: If the Contractor elects to use MCG as a substitute for conventional staking for grade staking, the Contractor will confirm the design surface DTM agrees with the contract plans, make adjustments to the design surface DTM as approved by the Engineer, and will maintain the design surface DTM for all areas of the project where MCG is used. The Contractor will also provide constructed surface DTM information to the Department in LandXML or other Engineer approved format.

The Contractor will notify the Department of any errors or discrepancies in Department provided information. The Department will determine what

revisions may be required. The Department will revise the contract plans, if necessary, to address errors or discrepancies the Contractor identifies. The Department will provide the best available information related to those contract plan revisions.

The Contractor will revise the design surface DTM as required to support construction operations and to reflect any contract plan revisions the Department makes. The Contractor will perform checks to confirm the revised design surface DTM agrees with the contract plan revisions. The Contractor will provide a copy of the resultant revised design surface DTM to the Engineer in LandXML. The Department will pay for costs incurred to incorporate contract plan revisions as extra work.

The Contractor will designate a set of control points, including a total of at least 6 horizontal and vertical points or 2 per mile, whichever is greater, for site calibration for the portion of the project employing MCG. The Contractor will incorporate the Department provided control framework used for the original survey and design.

The Contractor will calibrate the site by determining the parameters governing the transformation of satellite information into the project coordinate system. The Contractor will use the control points provided by the Department for the initial site calibration. The Contractor will provide the resulting site calibration file to the Engineer before beginning subgrade construction.

In addition to the site calibration, the Contractor will perform site calibration checks at individual control points not used in the initial site calibration. At a minimum, the Contractor will check the calibration at the start of each day as described in the contractor's MCG work plan. The Contractor will report out-of-tolerance checks to the Engineer. The measured position must match the established position at each individual control point within the horizontal tolerance of ±0.1 foot and the vertical tolerance of ±0.05 foot.

The Contractor will construct the subgrade as the Contractor’s MCG work plan indicates and in accordance with the contract requirements. The Contractor will update the plan as necessary during construction of the subgrade. The Contractor will perform periodic sensor calibrations, checks for blade wear, and other routine adjustments as required to ensure the final subgrade conforms to the contract requirements.

The Department may use Department supplied GPS rover and data collector (GPS inspection equipment) to aid in the inspection of the work. The Department supplied GPS inspection equipment will require a connection to the Contractor’s Machine Control Grading (MCG) system, through the Contractor’s base station, used for MCG equipment.

The Contractor will configure the radio settings of the base station to allow the Department's rover to receive corrections directly from the Contractor's base station. The radio settings must be configured properly to ensure continuous communication across multiple brands of GPS equipment. The radio settings will be as follows:

- Frequency: 461.050 to 464.750 MHz
- Narrow Bandwidth: 12.5 kHz
- Protocol: PDL or PDL Tx
- Modulation: 4fSK
- Forward Error Correction (FEC): On
- Scrambler: Off
- Free Channel Scan (FCS): On

The connection of the Department's GPS inspection equipment will allow the Engineer the ability to positively and efficiently determine plan station, offset, and elevations in all MCG sections.

The Department will not make payment for the ability to connect or the connection to the Contractor's MCG system.

2. **Centerline Offset Staking:** The Contractor will perform all survey work necessary to establish offset points to be used for re-establishment of centerline on the entire project prior to placement of asphalt surfacing. The Contractor will place a nail and lath on one side of the roadway at an offset from centerline so as to not interfere with construction work. Once established, this offset will remain constant throughout the project length. Place the nail and lath at even 200 foot intervals throughout the entire length of the project in tangent sections. Place the nail and lath at even 100 foot intervals throughout all horizontally curved sections. Clearly mark stationing with a permanent marker on each lath placed. The Contractor is solely responsible for the accuracy of this work.

   The Contractor will use a surveying instrument to set the offset nails at a true offset from actual centerline. A tolerance of 0.04' will be allowed on the offset nails. Original construction plans showing locations of alignment points are available at the Area Office or the MCG packet.

   The Contractor is hereby advised that spiral curves may be present along some South Dakota Highway routes, and if found will need to be duplicated as well as normal simple curves when staking this offset line. Any deficient work which may result in staking errors shall be corrected by the Contractor at no additional expense to the Department. All costs associated with this work will be paid under the bid item construction staking.

3. **Grade Staking:** In accordance with the requirements of this provision, the Contractor may elect to use MCG equipment or may use conventional construction staking methods for all or part of the grade staking work, excluding paving hub staking.

    a. **Conventional Blue Tops:** The Contractor will set grade finishing stakes (blue tops) for grade elevations and horizontal alignment on the roadway centerline and at each shoulder at the top of the base course in all areas where surface preparation is required. Where additional lanes or turnouts are to be constructed, The Contractor will set blue tops at centerline, the normal shoulder distance, and the extended shoulder distance or outside the additional lane edge.

    The transverse distance between blue tops will not exceed 20 feet. The Contractor will be required to set intermediate blue tops when the transverse distance is greater than 20 feet. When intermediate blue tops are required, The Contractor will set the intermediate blue tops at locations approved by the Engineer.

    The blue top grade stakes will be set at 100-foot intervals on tangents and 50-foot intervals on horizontal curves. The horizontal tolerance for blue tops is ±0.2 foot and the vertical tolerance is ±0.02 foot.

    Contractor will set grade stakes based on the information included in the MCG files provided by the Department.

    The Contractor will retain the shoulder blue tops and guards through placement of the granular material.

    b. **Machine Control Grading:** The Contractor will set conventional construction staking grade finishing stakes (blue tops) for grade elevations and horizontal alignment on the roadway centerline and at each shoulder at the top of the base course in all areas where surface preparation is required at a minimum of 500 foot intervals on mainline or at least one location for sections less than 500 foot long; at least two locations on side roads, side streets, and ramps; and at least one location within 100 feet of each bridge end. In addition, the Contractor will set blue tops for grade elevations and horizontal alignment on the roadway centerline and at each shoulder at the top of the base course at critical transition points including, but not limited to, PC’s, PT’s, super elevations transition points, and other critical points required for the construction of drainage and roadway structures. The Contractor will also provide conventional construction staking grade finishing stakes (blue tops) at additional locations designated by the Engineer.

The Contractor will establish these grade staking (blue top) grades using the information included in the MCG files provided by the Department, plan typical sections, and cross sections. The Contractor will use these stakes to check the accuracy of the MCG during construction. The Contractor will notify the Engineer at least 3 calendar days before making subgrade checks to allow the Engineer to observe the process.

The Contractor will ensure at least four of any five consecutive conventional construction staking grade finishing stakes (blue tops) locations are within the horizontal and vertical tolerances specified in Section 120.3. The Contractor will notify the Engineer if more than one of any five consecutive conventional construction staking grade finishing stakes (blue tops) locations is not within the horizontal or vertical tolerance.

The Department may conduct periodic independent subgrade checks. The Department will notify the Contractor if any individual check is not within the horizontal or vertical tolerance.

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

   a. Easement line for items including, but not limited to, setting temporary fence, utility relocation, and landowner reference and property use;
   b. Clearing line for items identified by the clearing contract unit item when provided in the plans;
   c. 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;
   d. Topsoil measurement and computations of quantities
   e. Special ditch staking;
   f. Staking of signs, delineators, pavement markings, rumble strips/stripes, guardrail, curb & gutter, light poles, conduit, mailboxes, junction boxes, and related items (Staking is for all aspects, i.e. detours, temporary and permanent);
   g. Right-of-way staking including fence post panels;
   h. 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 in accordance with the bid item Engineer Directed Surveying/Staking;
   i. Mark limits of removal items (trees, foundations, curb & gutter, sidewalk, etc.);
   j. 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.);

k. 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;
l. Resetting horizontal and vertical control, if disturbed;
m. Approach slab and sleeper slab staking;
n. Staking of sidewalks and curb ramps; and,
o. Staking of steps and wheel chair ramps.

The Contractor will perform all survey work necessary to establish offset points to be used for re-establishment of centerline on the entire project prior to placement of asphalt surfacing. The Contractor will place a nail and lath on one side of the roadway at an offset from centerline so as to not interfere with construction work. Once established, this offset will remain constant throughout the project length. Place the nail and lath at even 200 foot intervals throughout the entire length of the project in tangent sections. Place the nail and lath at even 100 foot intervals throughout all horizontally curved sections. Clearly mark stationing with a permanent marker on each lath placed. The Contractor is solely responsible for the accuracy of this work.

The Contractor shall use a surveying instrument to set the offset nails at a true offset from actual centerline. A tolerance of 0.04' will be allowed on the offset nails. Original Construction plans showing locations of alignment points are available at the Pierre Area Office.

The Contractor is hereby advised that spiral curves may be present along some South Dakota Highway routes, and if found will need to be duplicated as well as normal simple curves when staking this offset line. Any deficient work which may result in staking errors shall be corrected by the Contractor at no additional expense to the Department. All costs associated with this work will be paid under the bid item miscellaneous staking.

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.

5. **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. **Centerline Offset Staking:** The Department will not measure centerline offset staking. The Department will pay the plan quantity as the final quantity unless the Engineer orders additional centerline offset staking in writing.

2. **Grade Staking:** The Department will measure grade staking to the nearest 0.001 mile for all surface preparation areas. The plan's quantity is an estimate. The Department will not pay for grade staking work that isn't required by the Engineer. The Department will make no adjustment to the plan quantity of grade staking regardless if the Contractor elects to use MCG on all or part of the project.

   The Department will consider a two-lane roadway as one set of grade stakes. The Department will proportionately increase the plan quantity for multi-lane roadways in excess to two-lanes as shown in the table of construction staking (lane factor). For example, a three-lane roadway is equivalent to 1.5 times the quantity for a two-lane roadway. On projects requiring grade staking on ramps, the Department will consider ramps as a two-lane roadway for measurement as shown in the table of construction staking. The Department will not consider Acceleration/deceleration lanes and turning lanes for intersecting roads, and median crossovers as an additional roadway. All cost for additional grade staking for acceleration/deceleration lanes, turning lanes, intersecting roads, grade adjustments, and median crossovers will be incidental to the contract unit price for grade staking. All additional grade staking for intersections and medians will be incidental to the roadway grade staking. Any additional staking the Contractor feels necessary to complete the grade staking work is the responsibility of the contractor and will be incidental to the contract unit price for grade staking.

3. **Miscellaneous Staking:** The Department will not measure miscellaneous staking. The Department will pay the plan quantity as the final quantity.

4. **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 survey items will be considered full compensation for furnishing all necessary personnel, vehicles, surveying equipment, software, 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. **Centerline Offset Staking:** The Department will pay centerline offset staking at the contract unit price per mile.

2. **Grade Staking:** The Department will pay grade staking at the contract unit price per mile.

3. **Miscellaneous Staking:** The Department will pay miscellaneous staking at the contract unit price per mile.

   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 miscellaneous 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 miscellaneous 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 miscellaneous staking due to overruns or under runs in the other contract items.

4. **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.

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(105)149	A 1	A3

INDEX OF SHEETS

A1	Estimate of Quantities for - Sections C,D, F & M
A2 to A3	Environmental Commitments

Revised: 10-15-2026 LLA

Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	700.0	Hour
634E0020	Pilot Car	225.0	Hour
634E0110	Traffic Control Signs	539.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	45.0	Mile

Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
734E0010	Erosion Control	Lump Sum	LS

Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E1350	Restoration of Stockpile Site	Lump Sum	LS
009E3230	Grade Staking	2.500	Mile
009E3250	Miscellaneous Staking	9.001	Mile
009E3270	Centerline Offset Staking	9.001	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
120E0100	Unclassified Excavation, Digouts	459	CuYd
120E6200	Water for Granular Material	135.2	MGal
210E1005	Surface Preparation	2.500	Mile
260E1010	Base Course	1,366.0	Ton
260E2010	Gravel Cushion	9,630.2	Ton
260E2080	Gravel Cushion, Salvaged, State Furnished	250.0	Ton
320E0032	PG 58H-34 Asphalt Binder	1,966.4	Ton
320E1202	CLASS Q2R HOT MIXED ASPHALT CONCRETE	42,274.2	Ton
320E4000	Hydrated Lime	417.2	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	18.0	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	8.5	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	0.5	Mile
330E0010	MC-70 Asphalt for Prime	140.6	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	95.2	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	37.8	Ton
330E1000	Blotting Sand for Prime	194.0	Ton
330E2000	Sand for Flush Seal	502.8	Ton
600E0300	Type III Field Laboratory	1	Each
900E0022	Remove and Reset Mailbox	2	Each
900E1980	Storage Unit	1	Each

Section M – Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0030	Cold Applied Plastic Pavement Marking, 24"	25	Ft
633E1200	High Build Waterborne Pavement Marking Paint, White	405	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow	160	Gal
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	25	Ft

SECTION F ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E1350	Restoration of Stockpile Site	Lump Sum	LS
009E3230	Grade Staking	2.500	Mile
009E3250	Miscellaneous Staking	9.001	Mile
009E3270	Centerline Offset Staking	9.001	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
120E0100	Unclassified Excavation, Digouts	459	CuYd
120E6200	Water for Granular Material	135.2	MGal
210E1005	Surface Preparation	2.500	Mile
260E1010	Base Course	1,366.0	Ton
260E2010	Gravel Cushion	9,630.2	Ton
260E2080	Gravel Cushion, Salvaged, State Furnished	250.0	Ton
320E0032	PG 58H-34 Asphalt Binder	1,966.4	Ton
320E1202	CLASS Q2R HOT MIXED ASPHALT CONCRETE	42,274.2	Ton
320E4000	Hydrated Lime	417.2	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	18.0	Mile
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	8.5	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	0.5	Mile
330E0010	MC-70 Asphalt for Prime	140.6	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	95.2	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	37.8	Ton
330E1000	Blotting Sand for Prime	194.0	Ton
330E2000	Sand for Flush Seal	502.8	Ton
600E0300	Type III Field Laboratory	1	Each
900E0022	Remove and Reset Mailbox	2	Each
900E1980	Storage Unit	1	Each

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

TYPE III FIELD LABORATORY

The Contractor will provide high-speed broadband internet connection to the field lab. The multiport internet connection may be hardwired, through a cellular method, or other approved service that allows Wi-Fi connection. Prior to obtaining the internet connection, the Contractor will submit the internet connection's technical data to the Area Office to check for compatibility with the state's computer equipment. The Contractor's personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer. The internet service will be incidental to the contract unit price per each for "Type III Field Laboratory".

SURFACING THICKNESS DIMENSIONS

The plans shown spread rates will be applied even though the thickness may vary from that shown on the plans.

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Base Course.

Included in the Estimate of Quantities are 50 cubic yards of Unclassified Excavation, Digouts per mile for the removal of asphalt and unstable material throughout the project.

Included in the Estimate of Quantities are 100 tons of Base Course per mile for backfill of Unclassified Excavation, Digouts.

The digouts will be extended through the shoulder and backfilled with granular material that will daylight to the inslope to allow water to escape the subsurface.

SURFACE PREPARATION

Prior to placement of the Class Q2R Hot Mixed Asphalt Concrete, the Contractor will be required to prepare the existing surface according to the Surface Preparation specifications provided in Section 210, at locations determined by the Engineer.

The locations provided on the typical sections for Asphalt Surface Treatment, In Place, represent the locations where an asphalt surface treatment is anticipated to be in place at the time of construction. The Contractor is advised that locations and dimensions of actual Asphalt Surface Treatment, In Place, may vary from that given on the typical sections. There will be no increase in the payment for Surface Preparation based on the actual surface treatment in place at the time of construction.

Quantities for Surface Preparation, MC-70 Asphalt for Prime, and Blotting Sand for Prime have been provided for 2.5 miles of the asphalt surfacing project. Actual limits to receive Surface Preparation, MC-70 Asphalt for Prime, and Blotting Sand for Prime ahead of Class Q2R Hot Mixed Asphalt Concrete placement will be limited to particular project conditions and will be subject to approval by the Engineer. In no case will Surface Preparation operations ahead of Class Q2R Hot Mixed Asphalt Concrete placement operations exceed fourteen calendar days.

The Contractor will ensure excess in place granular material is removed at locations (end of project, bridges, intersecting roads and entrances) to achieve the required elevation for the placement of the asphalt concrete. Payment for the removal of excess in place granular material will be incidental to the contract unit price per mile for "Surface Preparation". This material may be reused as Gravel Cushion at the discretion of the Engineer. The salvaged granular material must meet the requirements of Gravel Cushion, Salvaged.

CHECKING SPREAD RATES

The Contractor will be responsible for checking the Class Q2R Asphalt Concrete and Gravel Cushion spread rates and taking the weigh delivery tickets as the surfacing material arrives on the project and is placed onto the roadway.

The Contractor will compute the required spread rates for each typical surfacing section and create a spread chart prior to the start of material delivery and placement. The Engineer will review and check the Contractor's calculations and spread charts. The station to station spread will be written on each ticket as the surfacing material is delivered to the roadway.

At the end of each day's shift, the Contractor will verify the following:

- All tickets are present and accounted for,
- The quantity summary for each item is calculated,
- The amount of material wasted if any,
- Each day's ticket summary is marked with the corresponding 'computed by',
- The ticket summary is initialed and certified that the delivered and placed quantity is correct.

All daily tickets and the summary by item will be given to the Engineer no later than the following morning.

If the checker is not properly and accurately performing the required duties, the Contractor will correct the problem or replace the checker with an individual capable of performing the duties to the satisfaction of the Engineer. Failure to do so will result in suspension of the work.

The Department will perform depth checks. The Contractor will be responsible for placement of material to the correct depth unless otherwise directed by the Engineer. If the placed material is not within a tolerance of ±1/2 inch of the plan shown depth, the Contractor will correct the problem at no additional cost to the Department. Excess material above the tolerance will not be paid for. Achieving the correct depth may require picking up and moving material or other action as required by the Engineer.

All costs for providing the Contractor furnished checker and performing all related duties will be incidental to the contract lump sum price for the "Checker". No allowances will be made to the contract lump sum price for "Checker" due to authorized quantity variations unless the quantities for the material being checked vary above or below the estimated quantities by more than 25 percent. Payment for the Checker will then be increased or decreased by the same proportion as the placed material quantity bears to the estimated material quantity.

Plot Scale - 1:200

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CENTERLINE RUMBLE STRIPES – ASPHALT FOR FLUSH SEAL

Asphalt for Flush Seal will be applied after the centerline rumble stripes have been installed. The application width will extend 1 ft beyond the centerline of the roadway in each direction to create a total application rate of 0.10 gal./sq.yd on the centerline rumble stripes. That width will be 2 ft more than the application width shown above.

In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply asphalt for flush seal to the newly installed centerline rumble stripes at a width of 24" and a rate of 0.10 Gal/SqYd. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

STORAGE UNIT

The Contractor will provide a storage unit such as a portable storage container or a semi-trailer meeting the minimum size requirements from the table below:

Project Total Asphalt Concrete Tonnage	Minimum Internal Size (Cu Ft)	Minimum External Size (L x W x H)
Less than 50,000 ton	1,166	20' x 8' x 8.6' std
More than 50,000 ton	2,360	40' x 8' x 8.6' std
All Gyratory Controlled QC/QA Projects	2,360	40' x 8' x 8.6' std

The storage unit is intended for use only by the Engineer for the duration of the project. The QC lab personnel or the Contractor will not be allowed to use the storage container while it is on the project, without permission of the Engineer.

The storage unit will be on site and operational prior to asphalt concrete production. Upon completion of asphalt concrete production, the Engineer will notify the Contractor when the storage unit can be removed from the project. The storage unit use will not exceed 30 calendar days from the completion of asphalt concrete production. The storage unit will remain the property of the Contractor.

The storage unit will be weather proof and will be set in a level position. The storage unit will be able to be locked with a padlock.

The storage unit will be placed adjacent to the QA lab, as approved by the Engineer.

The following will apply when the storage unit provided on the project is a portable storage container:

1. The portable storage container will be constructed of steel.
2. The portable storage container will be set such that it is raised above the surrounding ground level to keep water from ponding under or around the storage container.

The following will apply when the storage unit provided on the project is a semi-trailer:

1. A set of steps and hand railings will be provided at the exterior door.
2. If the floor of the semi-trailer is 18 inches or more above the ground, a landing will be constructed at the exterior door. The minimum dimensions for the landing will be 4 feet by 5 feet. The top of the landing will be level with the threshold or opening of the doorway.
3. The semi-trailer may be connected to the QA lab by a stable elevated walkway. The walkway will be a minimum of 48 inches wide and contain handrails installed at 32 inches above the deck of the walkway. The walkway will be constructed such that it is stable and the deck does not deform during use and allows for proper door operation. Walkway construction will be approved by the Engineer.

All cost for furnishing, maintaining, and removing the storage unit including labor, equipment, and materials including any necessary walkways, landings, stairways, and handrails will be included in the contract unit price per each for "Storage Unit".

FLEXIBLE PAVEMENT SMOOTHNESS

IRI & ALR pavement smoothness will be tested in accordance with Section 320.3.H.3 and will be evaluated as 2 opportunity.

INTERSECTING ROADS AND ENTRANCES

Intersecting roads and entrances will be satisfactorily cleared of vegetation, shaped and compacted prior to placement of mainline surfacing. This work will be considered incidental to other contract items. Separate measurement and payment will not be made.

MAILBOXES

Mailboxes will be moved and adjusted to the correct height and location by resetting the posts in accordance with Standard Plate 900.01 and 900.02. The local Postmaster will determine the recommended mounting height. The Contractor will coordinate with the Engineer on the proper postal representative to contact. The cost of removing and resetting existing mailboxes will be paid for at the contract unit price per each for "Remove and Reset Mailbox".

TABLE OF REMOVE & RESET MAILBOX

Station	L/R	Single (Each)	Double (Each)
335+30	R	1	
353+30	L	1	
Totals:		2	0

RESTORATION OF STOCKPILE SITE

The Contractor will be responsible for the removal of any remaining stockpiled material at the state furnished stockpile site.

The Contractor will remove the entrance (including pipe) used for access and clean up the stockpile site. The Contractor will scarify, replace and blade smooth the upper six inches of topsoil in the stockpile site upon completion of the project.

All costs associated with this work will be incidental to the lump sum unit price bid for "Restoration of Stockpile Site".

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0025(105)149	F7	F12

Plotting Date: 10/15/2026

Revised: 10-15-2026 LLA

Plot Scale - 1:200

LOCATION OF INTERSECTING ROADS and FARM ENTRANCES

INTERSECTING ROADS	FARM ENTRANCES			
28' Intersecting Roads	24' Farm Entrances		32' Farm Entrances	40' Farm Entrances
(14 each)	(39 each)		(7 each)	(8 each)
Sta. 54+11 Lt.& Rt.	Sta. 8+77 Lt.&Rt.	Sta. 212+21 Rt. & 201" Ah.	Sta. 94+46 Lt.&Rt.	Sta. 80+36 Lt.
Sta. 106+76 Lt.& Rt.	Sta. 17+98 Lt.&Rt.	Sta. 252+99 Rt.	Sta. 230+46 Rt.	Sta. 238+43 Lt.&Rt.
Sta. 212+21 Lt.& Rt.	Sta. 34+96 Lt.&Rt.	Sta. 264+66 Rt.& 250' Ah.	Sta. 335+00 Lt.&Rt.	Sta. 291+10 Lt.&Rt.
Sta. 264+66 Lt.&Rt.	Sta. 45+46 Lt.&Rt.	Sta. 305+00 Lt.	Sta. 388+63 Lt.&Rt.	Sta. 397+29 Lt.&Rt.
Sta. 317+40 Lt.&Rt.	Sta. 54+11 Rt.& 143' Ah.	Sta. 353+64 Lt.&Rt.		Sta. 463+06 Lt.
Sta. 370+99 Lt.&Rt.	Sta. 72+56 Lt.&Rt.	Sta. 360+55 Lt.		
Sta. 423+60 Lt.	Sta. 115+00 Lt.&Rt.	Sta. 370+99 Rt.& 250' Ah.&Bk.		
Sta. 436+40 Rt.	Sta. 121+71 Rt.	Sta. 414+22 Lt.&Rt.		
	Sta. 133+47 Lt.&Rt.	Sta. 423+60 Rt.		
	Sta. 159+42 Lt.&Rt.	Sta. 436+40 Lt.		
	Sta. 166+97 Lt.&Rt.	Sta. 441+00 Lt.		
	Sta. 178+42 Rt.	Sta. 449+91 Rt.		
	Sta. 186+16 Rt.	Sta. 471+98 Rt.		
	Sta. 212+21 Lt.& 199' Ah.			

TABLE OF CONSTRUCTION STAKING

(See Special Provision for Contractor Staking)

					Grade Staking					
Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Length (Mile)	Lane Factor	*Sets of Stakes	Grade Staking Quantity (Mile)	Miscellaneous Staking Quantity (Mile)	Centerline Offset Staking Quantity (Mile)
SD 25 Mainline	0+85.92	476+13.02	2	47,527.10	9.001				9.001	9.001
SD 25 Mainline Surface Preparation Staking					2.500	1	1	2.500		
							Totals:	2.500	9.001	9.001

* 1 = Blue Top Stakes Only (Asphalt Concrete Pavement)

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