



Planning & Engineering  
Office of Project Development  
700 E Broadway Avenue  
Pierre, South Dakota 57501-2586  
O: 605.773.3275 | F: 605.773.2614  
dot.sd.gov

November 26, 2025

**ADDENDUM NO. 1**

**RE: Item #3, December 3, 2025 Letting - NH-P 0042(89), PCN 07NU, Butte, Harding County -  
Structure (12x12 CIP RCBC) & Approach Grading, Replace RCBC Aprons**

**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 11/25/25.

Please remove the "Special Provision for Contractor Staking", dated 10/20/25 and replace with the "Special Provision for Contractor Staking with Machine Control Grading Option", dated 11/18/25.

**SDEBS BID PROPOSAL:** NO CHANGE

**PLANS:** NO CHANGE

Sincerely,

Sam Weisgram  
Engineering Supervisor

SW/gp

CC: Todd Seaman, Rapid City Region Engineer  
John Matthesen, Belle Fourche Area Engineer

**REV 11/25/25**

**INDEX OF SPECIAL PROVISIONS**

**PROJECT NUMBER(S):** NH-P 0042(89) **PCN:** 07NU

**TYPE OF WORK:** STRUCTURE (12X12 CIP RCBC) & APPROACH GRADING, REPLACE RCBC APRONS

**COUNTIES:** BUTTE, HARDING

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.

Jonathan England is the official in charge of the Spearfish Career Center for Butte, Harding Counties.

**THE FOLLOWING ITEMS ARE INCLUDED IN THIS PROPOSAL FORM:**

**Special Provision Regarding Section 404 of the Clean Water Act, dated 6/25/25.**

**Fact Sheet #23.**

**Special Provision for Contractor Staking with Machine Control Grading Option, dated 11/18/25.**

**List of Utilities.**

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 SD20230032, dated 3/10/23.

Special Provision Regarding Storm Water Discharge, dated 5/8/18.

General Permit for Storm Water Discharges Associated with Construction

Activities, dated 4/1/18

<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/StormWaterConstruction.aspx>

**STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION  
FOR  
CONTRACTOR STAKING  
WITH MACHINE CONTROL GRADING OPTION**

**PROJECT NH-P 0042(89), PCN 07NU  
BUTTE & HARDING COUNTY**

**NOVEMBER 18, 2025**

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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 Department will not allow the Contractor to use MCG as a substitute for conventional construction staking for slope staking and slope stake referencing, 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; 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 structures, 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 clearing line, slope staking and slope stake referencing, grade staking (blue tops), structure staking, 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. At structure sites, the circuit will include two benchmarks, one on each end of the structure.

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, or made unusable at no additional expense to the Department.

- b. Machine Control Grading:** If the Contractor elects to use MCG, 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  $\pm 0.1$  foot and the vertical tolerance of  $\pm 0.05$  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. Slope Staking:** The Contractor will set slope stakes at the catch points. The slope stake reference hubs will be offset behind the slope stake. The Contractor will place slope stake reference hubs behind the slope stakes at a set distance, at the right-of-way line, or at the easement line, as approved by the Engineer.

The slope stakes will be set at 100-foot intervals on tangents and at 50-foot intervals in horizontal curves. The horizontal tolerance is  $\pm 0.2$  foot and the vertical tolerance is  $\pm 0.1$  foot. The Contractor will reference the subgrade shoulders with slope stake reference hubs set with a horizontal tolerance of  $\pm 0.2$  foot and a vertical tolerance of  $\pm 0.05$  foot.

The Contractor will retain the slope stakes and hub references until the final survey computations are completed and accepted by the Department.

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

- 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 subgrade. 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  $\pm 0.2$  foot and the vertical tolerance is  $\pm 0.02$  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.

The Contractor will not be required to set grade stakes at the top of the base course. If the Contractor deems it necessary to place grade stakes to achieve typical section as per section 260.3 A of the specifications, the staking will be incidental to the contract unit price for base course.

- 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 subgrade (and gravel cushion for PCC paving projects) at a minimum of 500 foot intervals on mainline and slide repairs 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 subgrade (and gravel cushion for PCC paving projects) 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. Structure Staking:** The Contractor will stake and reference bridges and box culverts to ensure adequate horizontal and vertical control of the substructure and superstructure components. The Contractor will stake and reference the bridge chord or the bridge tangent and centerline of each pier, bent, and abutments for bridges. The Contractor will stake the box culvert centerline(s) in both longitudinal and transverse directions.

When the work requires bridge rehabilitation work, the structure staking will include all surveying and staking required for completion of the project. The staking work may include, but not be limited to, setting the rail for the deck overlay. The plans will indicate the grade line for the deck overlay; and if necessary, the Engineer may modify the grade line.

When staking retaining walls (except Type C), the Contractor will survey and record the original ground profile along the front face of the proposed wall at the elevation break points. The Contractor will supply the wall designer the original ground profile data prior to the wall designer performing the design. Set adequate stakes and references for horizontal and vertical control during construction.

For structures and retaining walls, the horizontal tolerance is  $\pm 0.04$  foot and vertical tolerance is  $\pm 0.02$  foot.

The Contractor is responsible for all notes required to stake structures including bridges, box culverts, and walls.

- 5. Miscellaneous Staking:** Miscellaneous staking includes the following work:
  - a. 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;
  - b. Perform measurement and computation of topsoil quantities. The Contractor will perform volume computations by the average end area method, surface-to-surface method, or alternate computation method approved by the Engineer;

- c. Special ditch staking;
- d. 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);
- e. Right-of-way staking including easement lines and fence post panels;
- f. 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;
- g. Mark limits of removal items (trees, foundations, curb & gutter, sidewalk, etc.);
- h. 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.);
- i. Perform measurement and computation of quantities of Contractor and State furnished borrow pits. The Contractor will perform volume computations by the average end area method, surface-to-surface method, or alternate computation method approved by the Engineer;
- j. Resetting horizontal and vertical control, if disturbed;
- k. Approach slab and sleeper slab staking;
- l. Staking of sidewalks and curb ramps; and,
- m. 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  $\pm 0.05$  foot and the vertical tolerance is  $\pm 0.03$  foot.

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

- 6. 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. Slope Staking:** The Department will not measure slope staking. The Department will pay the plan quantity as the final quantity unless the Engineer orders additional slope staking in writing.

The Department will consider all combinations of roadway widths as one set of slope stakes. On projects with ramps, the Department will consider ramps as roadway and include the ramps in the slope staking quantity. All additional slope staking for intersections will be incidental to the contract unit price for slope staking.

- 2. Grade Staking:** The Department will not measure grade staking. The Department will pay the plan quantity as the final quantity unless the Engineer orders additional grade staking in writing. 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. Structure Staking:** The Department will measure structure staking by the each for bridges, box culverts, and retaining walls.

4. **Miscellaneous Staking:** The Department will not measure miscellaneous staking. The Department will pay the plan quantity as the final quantity.
5. **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. The Department will not include travel time for the survey crew in the measurement.

The Engineer will issue a DOT 75 ticket for the hours authorized for engineer directed surveying/staking.

## **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 satisfactorily 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. **Slope Staking:** The Department will pay slope 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. **Structure Staking:** The Department will pay structure staking at the contract unit price per each.
4. **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.

- 5. 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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