



Department of Transportation

Office of Project Development

700 E Broadway Avenue

Pierre, South Dakota 57501-2586 605/773-3268

FAX: 605/773-2614

February 26, 2016

ADDENDUM NO. 1

RE: Item #1, March 2, 2016 Letting - P 7668(05), PCN 04AE, Meade County - Grading, Storm Sewer, Curb & Gutter, Sidewalk, AC Surfacing, Lighting, Mill & AC Overlay

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 Special Provisions checklist and replace with attached Special Provisions checklist revised 2/26/16.

Please remove the "Special Provision for Contract Time", dated 2/5/16 and replace with the "Special Provision for Contract Time", dated 2/25/16.

Please remove the "Special Provision for Contractor Staking", dated 2/2/16 and replace with the "Special Provision for Contractor Staking", dated 2/25/16.

BID ITEM FILE: *Bidders must log in to retrieve the addendum bid item file that must be loaded into the SDEBS to incorporate the revisions listed here.*

Bid Items were added:

Bid Item 634E2000 "Longitudinal Pedestrian Barricades"

Bid Item 634E2020 "Temporary Curb Ramp"

Bid Item 634E2050 "Temporary Sidewalk"

Quantities for Bid Items were changed:

Bid Item 009E3230 "Grade Staking" changed from 0.511 to 1.022 Mile

Bid Items were removed:

Bid Item 009E3210 "Construction Staking"

Bid Item 634E2025 "Longitudinal Pedestrian Channelizer"

PLANS: Please destroy sheets A2, A3, A4, B2, B11, C2, C3, and C7 and replace with the enclosed sheets, dated 2/16/16. Sheets C3A and C7A were added.

Sheets A2, A3, & A4: **Bid Items were added:**

Bid Item 634E2000 "Longitudinal Pedestrian Barricades"

Bid Item 634E2020 "Temporary Curb Ramp"

Bid Item 634E2050 "Temporary Sidewalk"

Tables and note placement were adjusted.

Quantities for Bid Items were changed:

Bid Item 009E3230 "Grade Staking" changed from 0.511 to 1.022 Mile

Bid Items were removed:

Bid Item 009E3210 "Construction Staking"
Bid Item 634E2025 "Longitudinal Pedestrian Channelizer"

Sheet B2: Quantities for Bid Item 009E3230 "Grade Staking" changed from 0.511 to 1.022 Mile and Bid Item 009E3210 "Construction Staking" was removed.

Sheet B11: TABLE OF CONSTRUCTION STAKING FOR PROJECT P 76689(05) PCN 04AE was revised.

Sheet C2: **Bid Items were added:**

Bid Item 634E2000 "Longitudinal Pedestrian Barricades"
Bid Item 634E2020 "Temporary Curb Ramp"
Bid Item 634E2050 "Temporary Sidewalk"

Bid Items were removed:

Bid Item 634E2025 "Longitudinal Pedestrian Channelizer"

SEQUENCE OF OPERATIONS note was revised.

Sheet C3: LONGITUDINAL PEDESTRIAN CHANNELIZERS, PEDESTRIAN CROSSINGS, and PROTECTION OF PEDESTRIANS notes were removed.

LONGITUDINAL PEDESTRIAN BARRICADE, SNOW REMOVAL ON PEDESTRIAN PATH, TEMPORARY PEDESTRIAN ACCESS ROUTE, TEMPORARY PEDESTRIAN SIDEWALK, and TEMPORARY CURB RAMP notes were added.

Sheet C3A: Tables placement was adjusted.

Sheet C7: SPECIAL PEDESTRIAN ACCESS DETAIL was revised.

Sheet C7A: SPECIAL DETAILS was added.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Todd Seaman, Rapid City Region Engineer
Mike Carlson, Rapid City Area Engineer

REV. 2/26/16

SPECIAL PROVISIONS

PROJECT NUMBER(S): P 7668(05) PCN: 04AE

TYPE OF WORK: GRADING, STORM SEWER, CURB & GUTTER, SIDEWALK, AC SURFACING, LIGHTING, MILL & AC OVERLAY

COUNTY: MEADE

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 Spearfish Career Center for Meade County.

THE FOLLOWING ITEMS ARE INCLUDED IN THIS PROPOSAL FORM:

Special Provision for Contract Time, dated 2/25/16.

Special Provision for Prosecution and Progress, dated 1/20/15.

Special Provision Regarding Combination Bids, dated 2/5/16.

Special Provision for Subletting of Contract, dated 2/2/16.

Special Provision for Contractor Staking, dated 2/25/16.

Special Provision for Contractor Administered Preconstruction Meeting, dated 4/18/13.

Fuel Adjustment Affidavit, DOT form 208 dated 7/15.

Standard Title VI Assurance, dated 7/14/08.

Special Provision For Disadvantaged Business Enterprise, dated 5/20/15.

Special Provision For EEO Affirmative Action Requirements on Federal and Federal-aid Construction Contracts, dated 9/1/97.

Special Provision For Required Contract Provisions Federal-aid Construction Contracts, Form FHWA 1273 (Rev. May/1/12), dated 4/30/13.

Required Contract Provisions Federal-aid Construction Contracts, Form FHWA 1273 (Rev. 5/1/12).

Special Provision for Cargo Preference Act, dated 1/20/16.

Special Provision Regarding Minimum Wage on Federal-Aid Projects, dated 4/30/13.

Wage and Hour Division US Department of Labor Washington DC.

- US Dept. of Labor Decision Number SD150001, dated 10/9/15.
Special Provision for Price Schedule for Miscellaneous Items, dated 10/14/15.

Special Provision Regarding Storm Water Discharge, dated 5/3/13.
General Permit for Storm Water Discharges Associated with Construction
Activities, dated 2/1/10. <http://denr.sd.gov/des/sw/IPermits/ConstructionGeneralPermit2010.pdf>

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**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION
FOR
CONTRACT TIME**

**PROJECT P 7668 (05); PCN 04AE
MEADE COUNTY**

FEBRUARY 25, 2016

Work Restriction

The Contractor may work on Segment 1 at any time except as limited by Sturgis Events and Seasonal Traffic Restrictions below.

The Contractor may not begin work in Segments 2A or 2B prior to September 5, 2016.

The Contractor may work on no more than any two of segments 2A, 2B, 2C, 2D at the same time.

June 29, 2016 Interim Completion Requirement and Sturgis Events and Seasonal Traffic Restrictions

If the Contractor begins work on any portion of Segments 1, 2C, or 2D prior to June 29, 2016, the Contractor will complete all work within that segment of the project, including but not limited to final surfacing, sidewalk, and roadway lighting, by the June 29, 2016 interim completion date.

The Contractor will open all lanes to unimpeded vehicular and pedestrian traffic and the Department will not allow work on the project from June 30, 2016 to September 5, 2016 (inclusive) due to Sturgis Events and Seasonal Traffic. The Department will not grant time extensions for the Sturgis Events and Seasonal Traffic restrictions for any reason.

If the Contractor does not complete the work by the interim completion requirement, the Department will make a disincentive assessment in the amount of \$4,000 per calendar day. The Department will count calendar days in accordance with Section 8.6 B.

End of 2016 Construction Season Requirements

When weather during the winter of 2016/2017 prevents further work, the Contractor will place temporary gravel for vehicular traffic and parking in accordance with final plans layouts. The Contractor will also provide temporary pedestrian routes in accordance with plan notes. Payment for placement of these items will be made utilizing plans bid

items. Maintenance of all temporary surfacing and drainage will be the responsibility of the Contractor.

The Engineer in his or her sole discretion will determine the end of the 2016 construction season based on Contractor input, construction conditions, and forecasted weather conditions.

Field Work Completion

The Contractor will complete the project by the June 30, 2017 field work completion requirement.

The Department wants to accelerate the project by offering an incentive to the Contractor. The Department will make an incentive payment in the amount of \$4,000 per working day to the contract for each working day the Contractor completes the work prior to the required field work completion requirement. The Department will make a disincentive assessment in the amount of \$4,000 per working day to the contract for each working day the work is not completed beyond the required field work completion requirement. The Department will count calendar days in accordance with Section 8.6 B.

The maximum incentive for this portion of the project is limited to \$120,000. There is no maximum disincentive.

Time Extensions

In order to avoid or reduce liquidated damages and disincentive assessments or to increase incentive payments, the Contractor may request a time extension for the field work completion requirement. The Department will consider these time extension requests using the same considerations that apply when granting an extension of contract time under Section 8.7, except extra work or an increase in quantities will not qualify for an automatic extension of time based on a proportional increase in the contract amount.

Work Remaining after June 30, 2017

If the Contractor does not complete all work on the project by the original June 30, 2017 field work completion requirement, the Department may place limits on the extent and duration (time frame) the remaining work may be completed.

If the Department grants a time extension for the field work completion requirement, the Department will allow the Contractor to continue to complete work until the new field work completion requirement as extended by a formally approved time extension except that work will not be allowed to continue from July 22, 2017 to September 4, 2017 (inclusive). In this case, the Department will make payment for any temporary surfacing needed for this timeframe.

In the absence of a formally approved time extension request for the field work completion requirement, the Department will allow the Contractor to continue to complete work except that work will not be allowed to continue from July 22, 2017 to September 4, 2017 (inclusive). In this case, the Department will not make payment for any temporary surfacing needed for this timeframe.

Failure to Complete on Time

The Contractor will complete all work on the project prior to the field work completion requirement or the field work completion requirement as amended by formally approved time extension. If the Contractor does not complete all work by the field work completion requirement or the field work completion requirement as amended by formally approved time extension, the Department will assess liquidated damages in accordance with Section 8.8 in addition to the disincentive assessment for field work completion. 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 8.6 C.

Expected Adverse Weather Days

The Department has provided Attachment 1 for information purposes only as a guide to bidders. This table depicts the typical number of adverse weather days expected for any given month, based on historical records. The Department will consider this project a grading project in Zone 2.

The Department will consider expected adverse weather days cumulative in nature over the time period when the Contractor is actively pursuing completion of the work. The Department will not consider adverse weather days during an extended period of time when the Contractor is not pursuing completion of the work. When considering a time extension for field work completion of the project, the Engineer will compare the total number of expected adverse weather days against the total number of actual adverse weather days for the time period during which the work was being completed.

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ATTACHMENT 1

Figure A - Expected Adverse Weather Days for South Dakota

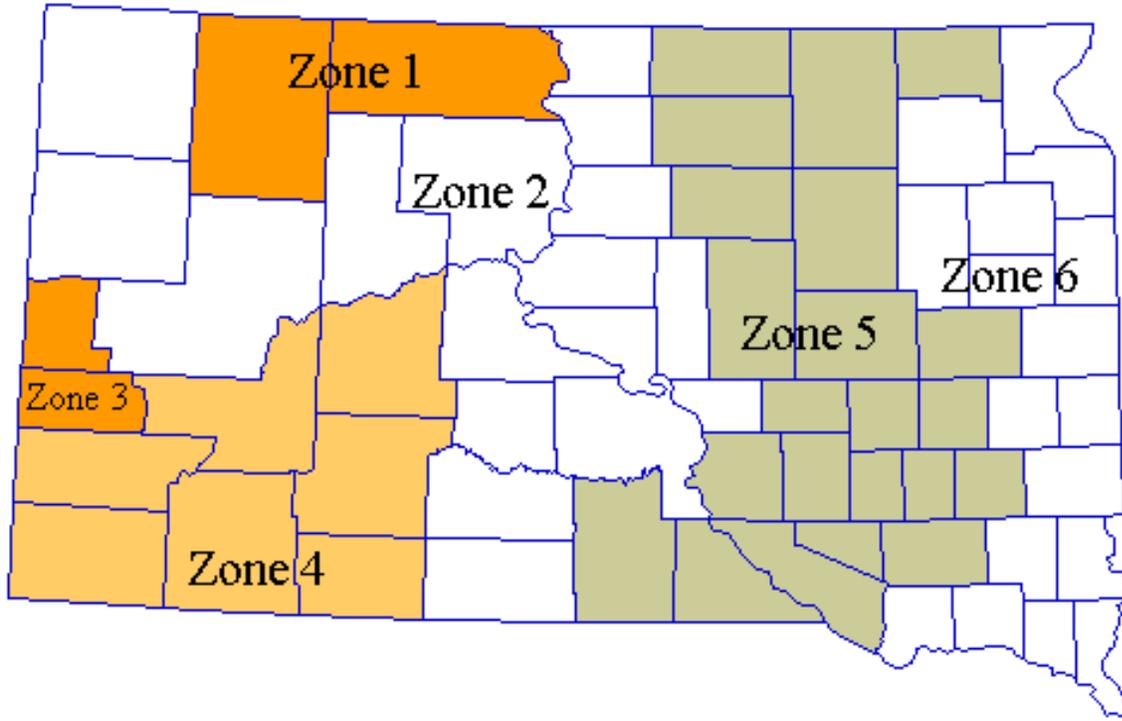


Table 1 - Expected Adverse Weather Days for South Dakota

	Grading Projects						Surfacing and Structural Projects					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Jan	18	18	16	16	22	24	18	18	15	16	21	23
Feb	19	18	12	14	19	21	19	18	12	14	19	21
Mar	12	10	9	8	11	13	12	10	9	8	10	12
Apr	6	5	8	5	6	6	5	4	6	4	4	4
May	6	6	8	6	6	6	5	5	6	4	4	5
Jun	7	6	7	6	7	8	5	5	5	4	5	6
Jul	5	5	6	5	6	7	4	4	5	3	4	5
Aug	4	4	5	4	5	6	3	3	4	3	4	4
Sep	3	3	4	3	4	5	2	2	3	2	3	4
Oct	4	3	5	3	4	4	3	3	4	2	3	3
Nov	11	9	8	7	10	12	11	9	8	7	10	11
Dec	21	19	15	14	20	22	21	19	15	14	20	22

NOTE: Includes Holidays and Weekends.

**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION
FOR
CONTRACTOR STAKING**

**PROJECT P 7668(05); PCN 04AE
MEADE COUNTY**

FEBRUARY 25 2016

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 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 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 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.

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, and grade 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. Grade Staking:** 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 and base course. 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.

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

The Department will provide grade staking (blue top) notes. The Department will not provide top of granular material blue top notes. The Contractor is responsible for generating the top of granular material grades from the blue top notes.

3. Miscellaneous Staking: Miscellaneous staking includes the following work:

- a. Approach road staking;
- b. Topsoil measurement and computation of quantities;
- 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 Three Man Survey Crew;
- g. Mark limits of removal items (trees, foundations, curb & gutter, sidewalk, etc.);
- h. Detours, roadway diversions, and crossovers (The Contractor will furnish all notes required.);
- i. 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;
- j. Resetting horizontal and vertical control, if disturbed;
- k. Approach slab and sleeper slab staking; and,
- l. Staking of sidewalks and curb 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.

- 4. Three Man Survey Crew:** The use of the three-man survey crew is intended for surveying not included in the plan notes and this special provision. The Contractor may use a three man survey crew to perform additional survey work caused or required by the Department. The Engineer will use a written order to authorize the hourly three man survey crew item and describe the 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. 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 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.

When two sets of blue top stakes are required, the Department will base and calculate the plan quantity to include each set of grade staking as a separate set of stakes.

2. **Miscellaneous Staking:** The Department will not measure miscellaneous staking. The Department will pay the plan quantity as the final quantity.
3. **Three Man Survey Crew:** The Department will measure three man survey crew by the hour with the following restrictions:

The use of a three-man survey crew 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 work. The Department will not include travel time for the survey crew in the measurement.

The Contractor may use a two-man survey crew with the Engineer's prior approval. When a two-man survey crew is used, measurement for payment will be at 75 percent of the hours for a three-man crew. For example: 8 hours of two-man survey crew will result in 6 hours measured for payment as three-man survey crew time.

The Contractor may use a one-man survey crew with the Engineer's prior approval. When a one-man survey crew is used, measurement for payment will be at 50 percent of the hours for a three-man crew. For example: 8 hours of a one-man survey crew will result in 4 hours measured for payment as three-man survey crew time.

The Engineer will issue a DOT 75 ticket for the hours authorized for three-man survey crew.

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

2. **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.

3. **Three Man Survey Crew:** The Department will pay three man survey crew 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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Grading – Section B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	1.022	Mile
009E3250	Miscellaneous Staking	0.511	Mile
009E3300	Three Man Survey Crew	120	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
100E0020	Clear and Grub Tree	6	Each
110E0300	Remove Concrete Curb & Gutter	54	Ft
110E0400	Remove Drop Inlet	14	Each
110E0530	Remove Storm Sewer Pipe	556	Ft
110E1010	Remove Asphalt Concrete Pavement	4134.6	SqYd
110E1100	Remove Concrete Pavement	9898.4	SqYd
110E1110	Remove Concrete Approach Pavement	265.4	SqYd
110E1140	Remove Concrete Sidewalk	4382.7	SqYd
120E0010	Unclassified Excavation	11669	CuYd
120E2000	Undercutting	6005	CuYd
120E6100	Water for Embankment	101	Mgal
250E0010	Incidental Work	Lump Sum	LS
380E3520	6" PCC Approach Pavement	68.3	SqYd
380E4010	6" PCC Fillet Section	367.9	SqYd
450E0123	18" RCP Class 3, Furnish	1786	Ft
450E0130	18" RCP, Install	1786	Ft
450E0143	24" RCP Class 3, Furnish	390	Ft
450E0150	24" RCP, Install	390	Ft
450E0223	60" RCP Class 3, Furnish	20	Ft
450E0230	60" RCP, Install	20	Ft
450E0408	18" RCP Bend, Furnish	2	Each
450E0409	18" RCP Bend, Install	2	Each
450E0700	RCP Tee, Furnish	12	Each
450E0701	RCP Tee, Install	12	Each
451E0004	4" PVC Pipe Encasement	826	Ft
451E0518	8" PVC Pipe	14	Ft
451E3008	8" Pipe Bend	1	Each
462E0100	Class M6 Concrete	26.0	CuYd
480E0100	Reinforcing Steel	3205	Lb
650E0060	Type B66 Concrete Curb and Gutter	3946	Ft
650E4660	Type P6 Concrete Gutter	311	Ft
650E6060	6" Concrete Valley Gutter	149	Ft
651E0050	5" Concrete Sidewalk	31829	SqFt
651E0150	5" Reinforced Concrete Sidewalk	60	SqFt
651E0550	5" Colored Concrete Sidewalk	13676	SqFt
651E5000	Sidewalk Drain	41	Ft
651E7000	Type 1 Detectable Warnings	646	SqFt
670E1200	Type B Frame and Grate Assembly	34	Each
671E1048	48" Manhole	3	Each
671E1060	60" Manhole	1	Each
671E6007	Type A7 Manhole Frame and Lid	4	Each
671E7010	Adjust Manhole	1	Each
831E0300	MSE Geotextile Fabric	7028	SqYd
900E6828	Remove and Replace Brick	1044	Each

Traffic Control – Section C

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	80	Hour
634E0110	Traffic Control Signs	932	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0260	Type 3 barricade, 6' Single Sided	6	Each
634E0265	Type 3 barricade, 6' Double Sided	2	Each
634E0280	Type 3 Barricade, 8' Single Sided	36	Each
634E0285	Type 3 Barricade, 8' Double Sided	4	Each
634E2000	Longitudinal Pedestrian Barricades	4000	Ft
634E2020	Temporary Curb Ramp	24	Each
634E2050	Temporary Sidewalk	10000	SqFt

Erosion and Sediment Control – Section D

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	13	CuYd
110E1695	Remove Sediment Filter Bag	1484	Ft
110E1697	Remove Triangular Silt Barrier	90	Ft
110E1700	Remove Silt Fence	1044	Ft
230E0010	Placing Topsoil	3	CuYd
733E0100	Sodding	26	SqYd
734E0180	Sediment Filter Bag	1484	Ft
734E0425	Triangular Silt barrier	90	Ft
734E0604	High Flow Silt Fence	1044	Ft
734E0620	Repair Silt Fence	140	Ft
734E0845	Sediment Control at Inlet With Frame and Grate	33	Each
734E5005	Dewatering	Lump Sum	LS
734E5010	Sweeping	200	Hour
900E1320	Construction Entrance	4	Each

Structures – Section E

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3300	Three Man Survey Crew	10	Hours
110E1790	Remove Concrete Vault Lid	980	SqFt
420E0400	Structure Excavation, Miscellaneous	67	CuYd
430E0300	Granular Bridge End Backfill	213	CuYd
460E0100	Class A45 Concrete, Miscellaneous	41	CuYd
460E0380	Install Dowel in Concrete	199	Each
480E0200	Epoxy Coated Reinforcing Steel	4878	Lb

Surfacing – Section F

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
120E6200	Water for Granular Material	101	MGal
260E1010	Base Course	10673	Ton
320E3000	Compaction Sample	3	Each
330E0100	SS-1h or Ccs-1h Asphalt for Tack	5.4	Ton
330E0210	SS-1h or Ccs-1h Asphalt for Flush Seal	3.0	Ton
330E2000	Sand for Flush Seal	54.6	Ton
332E0010	Cold Milling Asphalt Concrete	3057	SqYd
380E0200	Colored Nonreinforced PCC Pavement	485.8	SqYd
600E0200	Type II Field Laboratory	1	Each
900E1350	Temporary Surfacing	9134	SqFt

Surfacing – Section F – Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0007	PG 64-28 Asphalt Binder	211.0	Ton
320E1050	Class E Asphalt Concrete	3637.8	Ton

Surfacing – Section F – Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0008	PG 64-28 Asphalt Binder	186.8	Ton
320E1050	Class E Asphalt Concrete	3736.1	Ton



Landscaping – Section H

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
* 110E7060	Remove MSE Segmental Modular Wall for Reset	918	SqFt
230E0020	Placing Contractor Furnished Topsoil	300	CuYd
* 462E0100	Class M6 Concrete	5.3	CuYd
* 480E0100	Reinforcing Steel	392	Lb
* 530E0411	Reset MSE Segmental Block Wall	918	SqFt
635E5310	Special Electrical Junction Box	4	Each
635E5400	Electrical Service Cabinet	5	Each
635E5680	Pedestal Mounted Receptacle with Concrete Base	13	Each
635E6200	Miscellaneous, Electrical	Lump Sum	LS
635E8108	0.75" Rigid Conduit, Schedule 40	400	Ft
635E8112	1.25" Rigid Conduit, Schedule 40	1400	Ft
635E8210	1" Rigid Conduit, Schedule 80	1000	Ft
635E8215	1.5" Rigid Conduit, Schedule 80	250	Ft
635E9012	1/C #2 AWG Copper Wire	6550	Ft
635E9020	1/C #10 AWG Copper Wire	150	Ft
635E9022	1/C #12 AWG Copper Wire	1850	Ft
635E9024	1/C #14 AWG Copper Wire	2050	Ft
650E3200	Special Concrete Curb	334	Ft
735E0110	1 Gallon Perennial Plant, Furnish and Plant	460	Each
735E1210	2 Gallon Deciduous Shrub, Furnish and Plant	180	Each
735E2240	4" Caliper Deciduous Tree, Furnish and Plant	13	Each
735E5020	2 Gallon Ornamental Grass, Furnish and Plant	324	Each
831E0200	Woven Geotextile Separator	850	SqYd
900E5152	Weed Barrier Fabric	731	SqYd
900E5156	3" Depth Shredded Bark Mulch	619	SqYd
900E5190	Planter Rail	1246	Ft
900E5420	Irrigation System	6	Each
900E5430	Irrigation System	Lump Sum	LS

* Non-Participating Bid Item



Signal and Lighting – Section L

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1540	Remove Luminaire Pole Footing	24	Each
110E5100	Salvage Luminaire Pole	25	Each
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	9	Each
635E0900	Decorative Luminaire Pole	36	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	9	Each
635E3810	Decorative Luminaire, LED	36	Each
635E5020	2' Diameter Footing	261.0	Ft
635E5302	Type 2 Electrical Junction Box	11	Each
635E5303	Type 3 Electrical Junction Box	4	Each
635E5304	Type 4 Electrical Junction Box	8	Each
635E6200	Miscellaneous, Electrical	Lump Sum	LS
635E8120	2" Rigid Conduit, Schedule 40	6,470	Ft
635E8220	2" Rigid Conduit, Schedule 80	620	Ft
635E8230	3" Rigid Conduit, Schedule 80	220	Ft
635E9014	1/C #4 AWG Copper Wire	26,745	Ft
635E9020	1/C #10 AWG Copper Wire	4,585	Ft
635E9024	1/C #14 AWG Copper Wire	2,480	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	1,385	Ft
635E9924	24 Strand Fiber Optic Cable	4,670	Ft

Pavement Marking – Section M

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0030	Cold Applied Plastic Pavement Marking, 24"	319	Ft
633E0062	Cold Applied Plastic Pavement Marking, Symbol	9	Each
633E1400	Pavement Marking Paint, 4" White	6683	Ft
633E1405	Pavement Marking Paint, 4" Yellow	4016	Ft
633E1420	Pavement Marking Paint, 12" White	1200	Ft
633E1430	Pavement Marking Paint, 24" White	1399	Ft
633E1460	Pavement Marking Paint, Symbol	12	Each
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	319	Ft
633E5037	Grooving for Cold Applied Plastic Pavement Marking, Symbol	9	Each
633E8000	Curb Painting	1611	Ft
634E0575	Remove Pavement Marking, Area	201	SqFt

Permanent Signing – Section S

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	55	Each
110E5020	Salvage Traffic Sign	13	Each
632E1320	2.0" x 2.0" Perforated Tube Post	88.0	Ft
632E3203	Flat Aluminum Sign, Non removable Copy High Intensity	38.3	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	43	Each
900E2030	Miscellaneous Work	1	Site

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT C: WATER SOURCE

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance.

Action Taken/Required:

The DENR and the US Environmental Protection Agency (EPA) have issued separate general permits for the discharge of storm water runoff. The DENR permit applies to discharges on state land and the EPA permit applies to discharges on federal or reservation land. The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project start by the DOT Environmental Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start. The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

COMMITMENT E: STORM WATER (continued)

A major component of the storm water construction permits is development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is a joint effort and responsibility of the SDDOT and the Contractor. Erosion control measures and best management practices will be

implemented in accordance with the SWPPP. The SWPPP is a dynamic document and is to be available on-site at all times.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT:
<http://sddot.com/transportation/highways/environmental/stormwater/Default.aspx>

DENR: <http://www.denr.sd.gov/des/sw/stormwater.aspx>

EPA: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Contractor Certification Form:

The "Department of Environmental and Natural Resources – Contractor Certification Form" (SD EForm – 2110LDV1-ContractorCertification.pdf) shall be completed by the Contractor or their certified Erosion Control Supervisor after the award of the contract. Work may not begin on the project until this form is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

The online form can be found at:
<http://denr.sd.gov/des/sw/eforms/E2110LDV1-ContractorCertification.pdf>

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

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The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental

Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.



SECTION B ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	1.022	Mile
009E3250	Miscellaneous Staking	0.511	Mile
009E3300	Three Man Survey Crew	120	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
100E0020	Clear and Grub Tree	6	Each
110E0300	Remove Concrete Curb & Gutter	54	Ft
110E0400	Remove Drop Inlet	14	Each
110E0530	Remove Storm Sewer Pipe	556	Ft
110E1010	Remove Asphalt Concrete Pavement	4134.6	SqYd
110E1100	Remove Concrete Pavement	9898.4	SqYd
110E1110	Remove Concrete Approach Pavement	265.4	SqYd
110E1140	Remove Concrete Sidewalk	4382.7	SqYd
120E0010	Unclassified Excavation	11669	CuYd
120E2000	Undercutting	6005	CuYd
120E6100	Water for Embankment	101	Mgal
250E0010	Incidental Work	Lump Sum	LS
380E3520	6" PCC Approach Pavement	68.3	SqYd
380E4010	6" PCC Fillet Section	367.9	SqYd
450E0123	18" RCP Class 3, Furnish	1786	Ft
450E0130	18" RCP, Install	1786	Ft
450E0143	24" RCP Class 3, Furnish	390	Ft
450E0150	24" RCP, Install	390	Ft
450E0223	60" RCP Class 3, Furnish	20	Ft
450E0230	60" RCP, Install	20	Ft
450E0408	18" RCP Bend, Furnish	2	Each
450E0409	18" RCP Bend, Install	2	Each
450E0700	RCP Tee, Furnish	12	Each
450E0701	RCP Tee, Install	12	Each
451E0004	4" PVC Pipe Encasement	826	Ft
451E0518	8" PVC Pipe	14	Ft
451E3008	8" Pipe Bend	1	Each
462E0100	Class M6 Concrete	26.0	CuYd
480E0100	Reinforcing Steel	3205	Lb
650E0060	Type B66 Concrete Curb and Gutter	3946	Ft
650E4660	Type P6 Concrete Gutter	311	Ft
650E6060	6" Concrete Valley Gutter	149	Ft
651E0050	5" Concrete Sidewalk	31829	SqFt
651E0150	5" Reinforced Concrete Sidewalk	60	SqFt
651E0550	5" Colored Concrete Sidewalk	13676	SqFt
651E5000	Sidewalk Drain	41	Ft
651E7000	Type 1 Detectable Warnings	646	SqFt
670E1200	Type B Frame and Grate Assembly	34	Each
671E1048	48" Manhole	3	Each
671E1060	60" Manhole	1	Each
671E6007	Type A7 Manhole Frame and Lid	4	Each
671E7010	Adjust Manhole	1	Each
831E0300	MSE Geotextile Fabric	7028	SqYd
900E6828	Remove and Replace Brick	1044	Each

GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste. The estimated quantity of Water for Embankment is 101 MGal.

UNSTABLE SUBGRADE

Some areas of unstable subgrade may be exposed after the removal of the existing pavement and undercut. If, in the opinion of the Engineer, the area will not stabilize by backfilling with the undercut material, MSE Geotextile fabric and granular material may be used. Stabilization will be accomplished by placing a layer of MSE Geotextile Fabric at the bottom of the undercut. The undercut will then be backfilled with granular material and compacted. Contact the Geotechnical Engineering Activity (605-773-3725) for assistance should the use of geotextile become necessary.

7,028 sq. yds. of MSE Geotextile Fabric have been included in the materials quantities for bidding purposes. This quantity is assumed to cover 6,111 sq. yds. of subgrade (55' wide x 1000' long). The bid quantity has been increased by 15% to account for overlaps. 3,850 tons of granular material have been included in the Base Course bid item for use as backfill. Refer to Section F for Base Course bid item quantities, notes, and specifications. These quantities can be adjusted or eliminated by CCO, depending on field conditions.

The top of the subgrade shall be prepared by smoothing the surface of the subgrade to minimize any ruts, ridges, and depressions. Any rocks or other protrusions that might damage the geotextile will be removed. The geotextile will be unrolled perpendicular to the centerline and overlapped a minimum of 2 feet.

The geotextile will be placed as taut as possible with minimal wrinkles. Placement will be done so that subsequent granular cover material does not shove, wrinkle or distort the in place geotextile. The overlaps will be shingled in a manner that assures granular material will not be forced under the geotextile during backfilling operations. The geotextile may be held in place with small piles of granular material or staples. No traffic will be allowed on the uncovered geotextile.

Granular material will be dumped at least 20 feet behind the leading edge of the backfill and pushed into place with a loader or dozer from the covered areas to the uncovered areas. The granular material will be placed in 8 inch lifts or as directed by the Engineer. The granular material will be compacted to 95% maximum dry density as determined by the Specified Density Method. A copy of the Soils Report is available for review from the Local Government Assistance Office in the SDDOT Central Office in Pierre.

UTILITIES

The Contractor shall be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor shall contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided on sheet B10.

CONDUIT INSTALLATION

Each end of each conduit shall be marked with a ½-inch dia. x 12-inch long reinforcing bar driven flush with the finished grade, except when the conduit end terminates inside a junction box. The ends of each conduit run shall be capped to prevent water and soil from entering. This work shall be done by the Lighting Contractor and shall not be disturbed by the Grading Contractor.

SHRINKAGE FACTOR: Embankment +20%

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to	Station	Excavation (CuYd)	*Undercut (CuYd)	Total Exc (CuYd)	**Waste (CuYd)
99+00	117+82.70	5302	5580	10882	226
123+85.32	125+20.41	362	425	787	362
Totals:		5664	6005	11669	588

The quantities for these items are in the Estimate of Quantities under their respective bid items.

** The quantities for these items are for information only.

"Unclassified Excavation" and "Undercutting" will be paid for based on the quantities shown in the "Estimate of Quantities". No field measurement will be taken. If a change is necessary during construction which affects the quantities, the area in which the change was made will be measured and the affected quantities will be adjusted accordingly.

The table of Excavation Quantities includes all earthwork to be completed for the mainline alignment and for all side streets

TABLE OF UNCLASSIFIED EXCAVATION

Excavation	5664 CuYd
Undercut	6005 CuYd
Total	11669 CuYd



TABLE OF CONSTRUCTION STAKING FOR PROJECT P 76689 (05) PCN 04AE
 (See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	*Number of Lanes	Length (Ft)	Grade Staking			Miscellaneous Staking Quantity (Mile)	
					Length (Mile)	Lane Factor	**Sets of Stakes		
							***Grade Staking Quantity (Mile)		
MAIN STREET (2 Lanes AC Pavement)	99+42	117+83	2	1,841	0.349	1	2	0.698	0.349
MAIN STREET (2 Lanes AC Pavement)	123+85	125+20	2	135	0.026	1	2	0.052	0.026
4th STREET NORTH (2 Lanes AC Pavement)	300+00	300+75	2	75	0.014	1	2	0.028	0.014
4th STREET SOUTH (2 Lanes AC Pavement)	201+08	201+69	2	61	0.012	1	2	0.024	0.012
3rd STREET (2 Lanes AC Pavement)	400+97	402+50	2	153	0.029	1	2	0.058	0.029
2nd STREET (2 Lanes AC Pavement)	500+52	502+05	2	153	0.029	1	2	0.058	0.029
1st STREET (2 Lanes AC Pavement)	600+64	602+18	2	154	0.029	1	2	0.058	0.029
MIDDLE STREET (2 Lanes AC Pavement)	800+64	801+84	2	120	0.023	1	2	0.046	0.023
Totals:								1.022	0.511

* Note that Main Street has widened lanes to accommodate parking, there will be no additional costs associated with staking the full width of the roadway.

** 2 = Blue Top (Subgrade and Base Course)

*** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)



SECTION C-ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
634E0010	Flagging	80	Hour
634E0110	Traffic Control Signs	932	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0260	Type 3 Barricade, 6' Single Sided	6	Each
634E0265	Type 3 Barricade, 6' Double Sided	2	Each
634E0280	Type 3 Barricade, 8' Single Sided	36	Each
634E0285	Type 3 Barricade, 8' Double Sided	4	Each
634E2000	Longitudinal Pedestrian Barricade	4000	Ft
634E2020	Temporary Curb Ramp	24	Each
634E2050	Temporary Sidewalk	10000	SqFt

TRAFFIC CONTROL - GENERAL NOTES

The intent of the plan sequence of operations is to have the least amount of impact on the traveling public and adjacent businesses. Requests to deviate from the sequence of operations shall be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet the Department's intent for traffic control and sequencing of the work. Contractor proposed deviation(s) to the sequence shall be submitted for review a minimum of two weeks prior to the Pre-construction meeting or potential implementation date.

The Contractor shall provide documentation that all breakaway sign supports comply with NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the Pre-construction meeting for all breakaway sign support assemblies.

Parking of equipment during non-working hours shall be in locations that do not hinder the visibility of accesses to adjacent businesses. Storage of vehicles and equipment shall be as near to the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State or City, and to the satisfaction of the Engineer.

Permanent traffic control items shall be installed prior to opening the completed roadway to traffic.

SEQUENCE OF OPERATIONS

The following Segments can be constructed in any sequence in accordance with the Special Provisions for Contract Time as long as vehicle access across Main Street at 1st, 2nd, 3rd and 4th is maintained at all times. One lane of traffic across Main Street will be allowed with the use of flagging during intersection construction. Junction Avenue shall remain open at all times during the project.

Segment 1

Work between Junction Avenue and Middle Street from Sta. 118+02.59 to Sta. 125+65.44

See traffic control plan sheets.

1. Install traffic control devices per plan sheets.
2. Install erosion control devices.
3. Remove curb and pavement at Middle Street and Main Street.
4. Remove existing curb ramps at Junction Avenue and Main Street and install ADA compliant ramps.
5. Mill remaining pavement between Junction Avenue and Middle Street in preparation for Asphalt overlay.
6. Install storm sewer and irrigation lines at the intersection of Middle Street and Main Street.
7. Grade and pave Asphalt Concrete pavement, curb and gutter and sidewalk.
8. Install landscaping, pavement markings and signage.

Segment 2A

Main Street from beginning of project, Sta.101+00.00 (Fourth Street) to Sta. 104+63.54 (Third Street).

1. Install traffic control devices per plan sheets.
2. Install erosion control devices.
3. Remove pavement and curb.
4. Remove sidewalk and establish pedestrian access to businesses.
5. Install water main and storm sewer, Contractor shall verify location of private services prior to this work. Interruption of service to any business shall be kept to a minimum and the Contractor shall coordinate with the city of Sturgis and landowner/owners prior to shutting off water supply.
6. Grade and install curb, sidewalk, approach pavement and Asphalt Concrete pavement.

Segment 2B

Main Street from Sta. 104+63.54 (Third Street) to Sta. 108+35.25 (Second Street).

1. Install traffic control devices per plan sheets.
2. Install erosion control devices.
3. Remove pavement and curb.
4. Remove sidewalk and establish pedestrian access to businesses.
5. Install water main and storm sewer, Contractor shall verify location of private services prior to this work. Interruption of service to any business shall be kept to a minimum and the Contractor shall coordinate with the city of Sturgis and landowner/owners prior to shutting off water supply.
6. Grade and install curb, sidewalk, approach pavement and Asphalt Concrete pavement.

Segment 2C

Main Street from Sta. 108+35.25 (Second Street) to Sta. 112+05.51(First Street).

1. Install traffic control devices per plan sheets.
2. Install erosion control devices.
3. Remove pavement and curb.
4. Remove sidewalk and establish pedestrian access to businesses.
5. Install water main and storm sewer, Contractor shall verify location of private services prior to this work. Interruption of service to any business shall be kept to a minimum and the Contractor shall coordinate with the city of Sturgis and landowner/owners prior to shutting off water supply.
6. Grade and install curb, sidewalk, approach pavement and Asphalt Concrete pavement.

Segment 2D

Main Street from Sta. 112+05.51 (First Street) to Sta. 118+02.59 (Junction Avenue).

1. Install traffic control devices per plan sheets.
2. Install erosion control devices.
3. Remove pavement and curb.
4. Remove sidewalk and establish pedestrian access to businesses.
5. Install water main and storm sewer, Contractor shall verify location of private services prior to this work. Interruption of service to any business shall be kept to a minimum and the Contractor shall coordinate with the city of Sturgis and landowner/owners prior to shutting off water supply.
6. Grade and install curb, sidewalk, approach pavement and Asphalt Concrete pavement.

TEMPORARY SURFACING

The Contractor shall have the option to install Class E, Type 1 Asphalt Concrete or Class M6 Concrete at a minimum thickness of 4" as temporary surfacing at the following locations:

- Sta. 99+40 – 101+18 Intersection Main/Fourth
- Sta. 104+45 – 104+82 Intersection Main/Third
- Sta. 108+07 – 108+62 Intersection Main/Second
- Sta. 111+83 – 112+28 Intersection Main/First

Temporary surfacing may also be used in areas, upon approval by the Engineer, where the Contractor will be completing tie-ins for water or sanitary sewer.

When Class M6 Concrete is used as temporary surfacing, the concrete shall achieve a minimum compressive strength of 3000 psi before opening the roadway to traffic. If M6 Concrete is used as temporary surfacing, it shall be measured and paid for at the contract unit price per square foot for "Temporary Surfacing."

Class E, Type 1 Asphalt Concrete shall be installed in two 2" lifts and the Mineral Aggregate and Asphalt Binder shall be as specified in Section F of these plans.

The material beneath the temporary surfacing shall consist of 10" of Base Course paid at the contract unit price per Ton.

For informational purposes only it is estimated that 9,134 S.F. of Temporary Surfacing will be needed. All labor, equipment, and materials necessary to install temporary surfacing including the maintenance and repair of the areas, and removal of the temporary surfacing prior to placement of the permanent surfacing shall be included in the contract unit price per square foot for "Temporary Surfacing" - See Section F.



LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal Pedestrian Barricades should not be used to provide positive protection for pedestrians.

Barricade rail supports may not project into pedestrian routes more than 4 inches from the face of the barricade. To prevent any tripping hazard to pedestrians, ballast shall be located behind or internal to the device.

When Longitudinal Pedestrian Barricades are combined in a series, the maximum gap between devices that do not interlock shall be one inch. Joints between devices that do interlock shall be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, Longitudinal Pedestrian Barricade must run the entire width of the sidewalk. Longitudinal Pedestrian Barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6F.68 of the MUTCD.

Longitudinal Pedestrian Barricade shall have continuous bottom and top surfaces. A gap height or opening from the walkway surface up to a maximum of 2 inches is allowed for drainage purposes. The top edge of the bottom portion shall be a minimum of 8 inches above the walkway. The top of the top portion shall be between 34 and 38 inches above the walkway. The top surface shall be smooth to allow safe hand trailing. Both upper and lower surfaces shall share a common vertical plane.

All costs shall be incidental to the contract unit price per foot for LONGITUDINAL PEDESTRIAN BARRICADE.

When pedestrian barricades are specified, the Contractor shall furnish and install only one of the products listed in the Pedestrian Barricades table, or approved equal.

Pedestrian Barricades

<u>Product</u>	<u>Manufacturer</u>
ADAcade Detectable Edge Barricade	Three D Traffic Works 430 N Varney St Burbank, CA 91502 818-954-8453 http://www.trafficwks.com/
Safety Wall	Plastic Safety Systems 2444 Baldwin Road Cleveland, OH 44104 800-662-6338 http://pss-innovations.com/

SNOW REMOVAL ON PEDESTRIAN PATH

The Contractor shall be responsible for snow removal on all existing, temporary and new pedestrian paths within the work zones of each segment of work until all work within each segment is complete. Snow removal shall be in accordance with City of Sturgis Ordinance Title 15.03. All costs associated with Snow Removal on Pedestrian Path shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

TEMPORARY PEDESTRIAN ACCESS ROUTE

A Temporary Pedestrian Access Route (TPAR) shall be provided when crosswalks, sidewalks, or other pedestrian facilities are blocked, closed, or relocated. A TPAR may consist of a combination of existing and/or temporary pedestrian facilities. The TPAR shall be kept free of any obstructions and hazards, such as holes, debris, mud, snow, construction equipment, traffic control signing, stored materials, etc.

The Contractor shall notify the Engineer at least 72 hours prior to start of any construction operation that will necessitate a change in pedestrian access. Pedestrian traffic signal displays controlling a crosswalk that is closed shall be covered or removed

SAWING IN EXISTING PAVEMENT

During those portions of the project when traffic is carried on the existing pavement and adjacent surfacing is removed, the edge of the existing pavement shall be defined by a full depth saw cut. All costs associated with completion of full-depth saw cuts shall be included in the contract unit price for "Remove Concrete Pavement" or "Remove Asphalt Concrete Pavement" - See Section F.

MAINTENANCE OF BUSINESS ACCESS

The Contractor shall be responsible for maintaining pedestrian access to all businesses throughout the duration of the project. The Contractor shall coordinate with property owners to meet their requirements for access to their facilities. Alternate access locations may be used with written permission from the landowner and Engineer at least 7 days prior to the scheduled closure. Accesses shall be a minimum of 12 feet wide or one-half the existing approach width, whichever is greater. At locations where pedestrian crossings are adjacent to business accesses, the minimum width shall be increased to include a 4 foot wide pedestrian path and barricades to protect pedestrians from the traffic. Temporary access locations are noted below:

Sta. 106+95 - R First Interstate Bank Drive-Through Maintain 12 foot (min.) wide lane whenever work is not being done adjacent their property.

Sta. 117+23 - R Wells Fargo Drive-Through Maintain 12 foot (min.) wide lane whenever work is not being done adjacent their property.

Salvaged asphalt millings shall be used as temporary material for maintaining vehicular accesses. The temporary material shall consist of 4 inches minimum thickness with top surface constructed to tie into existing and new adjacent surfaces. The material shall be compacted to the satisfaction of the Engineer. Grades of accesses shall allow normal vehicular movement.

Cost of furnishing, hauling, placing, compacting, maintaining, removing and disposing of temporary material for accesses shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous."

It may be necessary to temporarily omit curb and gutter and provide temporary gravel ramps to maintain streets and approaches. Temporary gravel ramps are not acceptable for pedestrian movements. All costs to perform ½ width construction on approaches and streets shall be included in the various associated contract bid items.

TEMPORARY PEDESTRIAN SIDEWALK

Temporary Pedestrian Sidewalk shall be a smooth, continuous, non-slip, hard surface. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use.

Temporary Pedestrian Sidewalk shall have a minimum width of 48", with 60" recommended. The Contractor shall try to provide boulevard sidewalk whenever possible for Temporary Pedestrian Sidewalk that is 48" in width. Temporary Pedestrian Sidewalk less than 60" wide shall provide for a 60"x60" passing space at intervals not to exceed 200 ft. Temporary Pedestrian Sidewalk shall have a maximum cross slope of 2%. The maximum grade shall be 5% where the Temporary Pedestrian Sidewalk does not follow the grade of the road.

All costs associated with installing and maintaining Temporary Pedestrian Sidewalk, including all materials, gravel, labor, and incidental work, shall be included in the contract unit price per square foot for TEMPORARY SIDEWALK.

Permanent sidewalks shall be complete before the Contractor moves into the next Segment of construction.

Sidewalk construction shall be coordinated so that access to the adjacent businesses is impacted as little as possible. Contractor shall coordinate with the City of Sturgis and the land owner/owners to provide access to the building entrances.

TEMPORARY CURB RAMP

Temporary Curb Ramps should be firm, stable, and have a non-slip surface. They shall not warp or buckle, and should be made of materials strong enough to support a weight of 800 pounds. Temporary Curb Ramps shall also be color contrasting and contain marked edges so they are noticeable by pedestrians who have visual impairments. Lateral joints or gaps between surfaces shall be a maximum of 0.5 inches in width. Temporary Curb Ramps shall include detectable warning panels.

Temporary Curb Ramps shall be the full width of the temporary pedestrian access route, with a recommended width of 60" and a minimum width of 48". Temporary Curb Ramps shall have a maximum slope of 1:12, and have free draining surfaces with a maximum cross slope of 2 percent. Handrails on Temporary Curb Ramps are not required unless the curb ramp has a rise exceeding 6" and a length exceeding 72".

All costs shall be incidental to the contract unit price per each for TEMPORARY CURB RAMP.

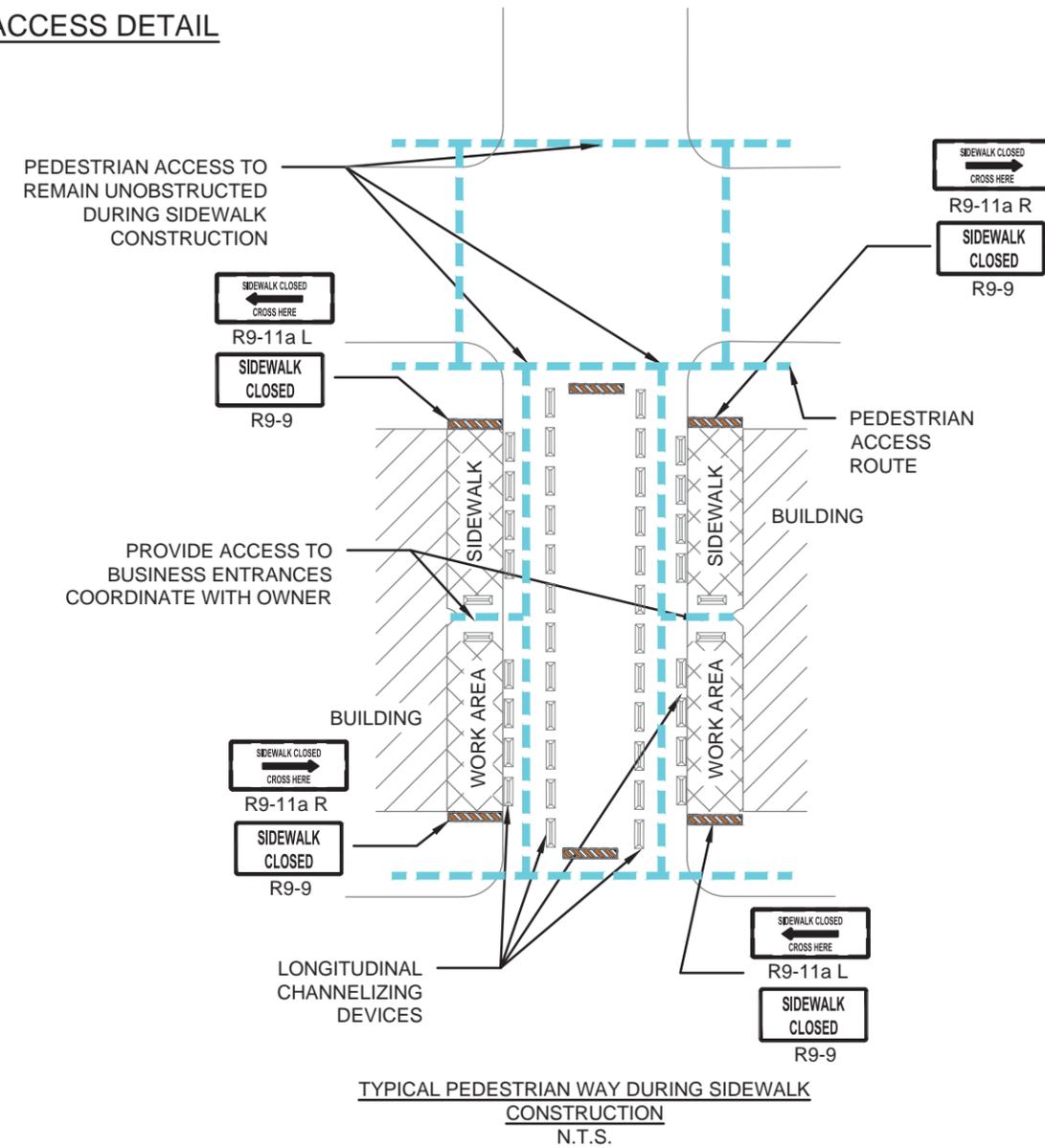
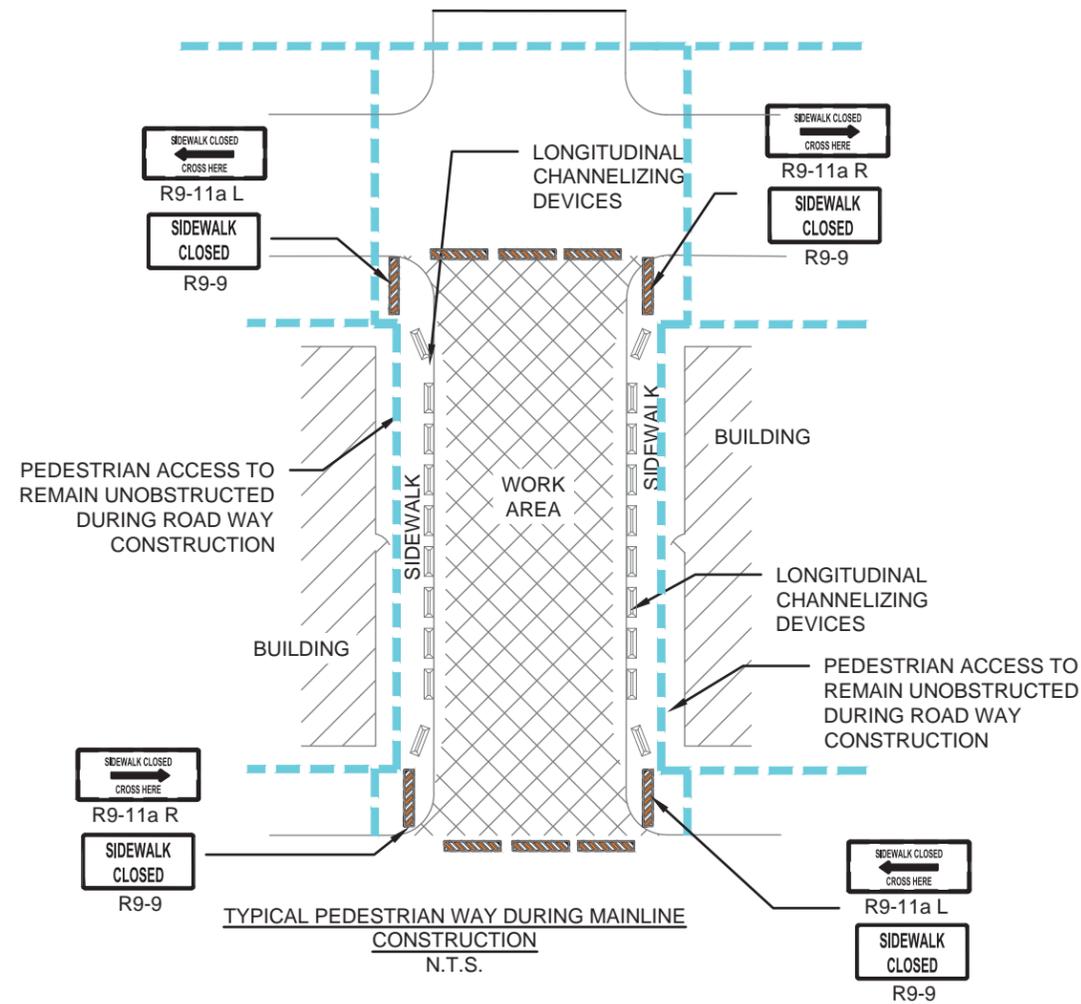


ITEMIZED LIST FOR TRAFFIC CONTROL

SIGN CODE	DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
G20-2	END ROAD WORK	14	36" x 18"	5	70
M4-8	DETOUR	5	24" X 12"	2	10
M4-9	DETOUR with ARROW (L or R)	9	24" X 30"	5	45
M6-3	DIRECTION ARROW - Vertical Single Head	4	21" X 15"	2	8
M6-4	DIRECTION ARROW - Horizontal Double Head	1	21" X 15"	2	2
R9-9	SIDEWALK CLOSED	2	24" X 12"	2	4
R9-11a	SIDEWALK CLOSED with ARROW (L or R) CROSS HERE	4	24" X 12"	2	8
R11-2	ROAD CLOSED	12	48" x 30"	10	120
R11-4	ROAD CLOSED TO THRU TRAFFIC	4	60" x 30"	13	52
W1-3	REVERSE TURN (L or R)	4	48" X 48"	16	64
W8-1	BUMP	2	48" x 48"	16	32
W11-2	PEDESTRIAN (symbol)	13	36" x 36"	9	117
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6	48
W20-1	ROAD WORK AHEAD	14	48" x 48"	16	224
W20-3	ROAD CLOSED AHEAD	6	48" x 48"	16	96
W20-7	FLAGGER (symbol)	2	48" x 48"	16	32
TOTAL SQFT					932



SPECIAL PEDESTRIAN ACCESS DETAIL



ONLY THE TRAFFIC CONTROL DEVICES CONTROLLING PEDESTRIAN FLOWS ARE SHOWN. OTHER DEVICES MAY BE NEEDED TO CONTROL TRAFFIC ON THE STREETS. USE LANE CLOSURE SIGNING OR ROAD NARROWS SIGNS, AS NEEDED.

SIGNS MAY BE PLACED ALONG A TEMPORARY DIVERSION TO GUIDE OR DIRECT PEDESTRIANS. EXAMPLES INCLUDE KEEP RIGHT AND KEEP LEFT SIGNS.

ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.

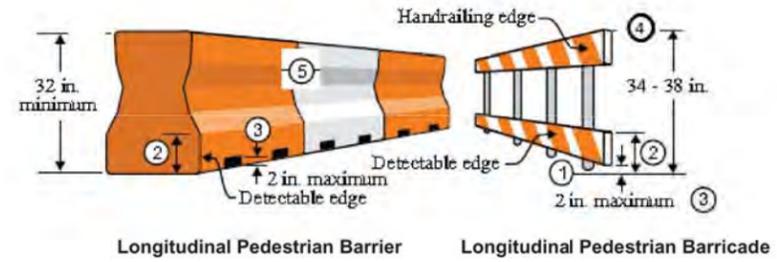
FOR NIGHTTIME CLOSURES, TYPE A FLASHING WARNING LIGHTS MAY BE USED ON BARRICADES SUPPORTING SIGN AND CLOSING SIDEWALKS. TYPE C STEADY-BURN LIGHTS MAY BE USED ON CHANNELIZING DEVICES SEPARATING THE TEMPORARY PEDESTRIAN DIVERSION FROM VEHICULAR TRAFFIC.

TEMPORARY STREET LIGHTING SHOULD BE CONSIDERED.

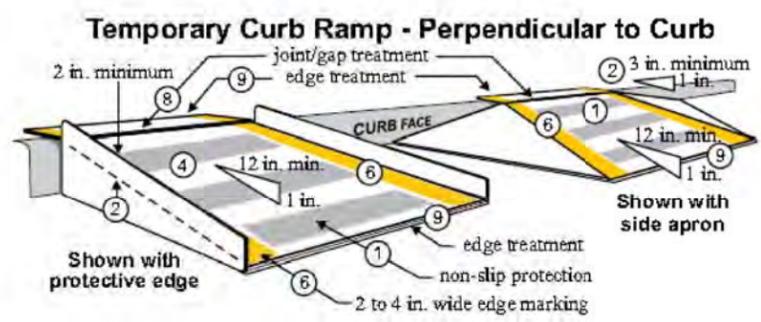
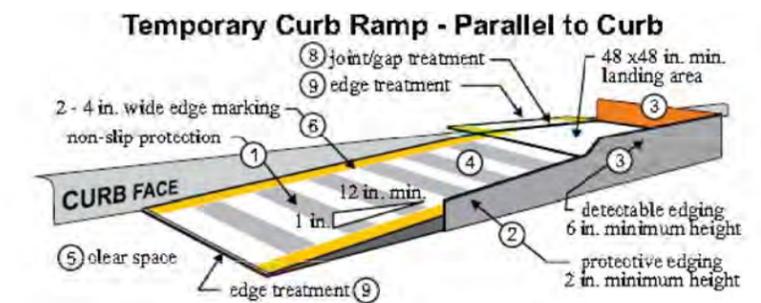
 TYPE 3 BARRICADE



SPECIAL DETAILS



1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
2. The top edge of the bottom portion shall be a minimum of 8 inches above the walkway.
3. Devices shall not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
4. The top edge of the Longitudinal Pedestrian Barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
5. Longitudinal Pedestrian Barrier used to provide positive protection from traffic to pedestrians should be crashworthy.
6. When either device is combined in a series, the maximum gap between devices that do not interlock shall be 1 inch. Joints between devices that do interlock should be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing.



NOTES:

1. Curb ramps shall be 48 inch minimum width with a firm, stable, and non-slip surface.
2. Protective edging with a 2 inch minimum height shall be installed when the curb ramp or landing platform has a vertical drop of 6 inches or greater or has a side apron slope steeper than 1:33 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3 inches or more.
3. Detectable edging with 6 inches minimum height and contrasting color shall be installed on all curb ramp landings where the walkway changes direction (turns).
4. Curb ramps and landings should have a 1:50 (2%) maximum cross slope.
5. A minimum clear space of 48 inch x 48 inch minimum shall be provided above and below the curb ramp, with a 60 inch x 60 inch clear space preferred.
6. The curb ramp walkway edge shall be marked with a contrasting color 2 to 4 inch wide marking. The marking is optional where color contrasting edging is used.
7. Water flow in the gutter system shall have minimal restriction.
8. Lateral joints or gaps between surfaces shall be less than 0.5 inches in width.
9. Changes between surface heights should not exceed 0.5 inches. Lateral edges should be vertical up to 0.25 inches in height, and beveled at 1:2 between 0.25 inches and 0.5 inches in height.

