SD DOT	PROJECT	SECTION	SHEET
	034-451	Non	1/17

Plotting Date: 3/28/2025

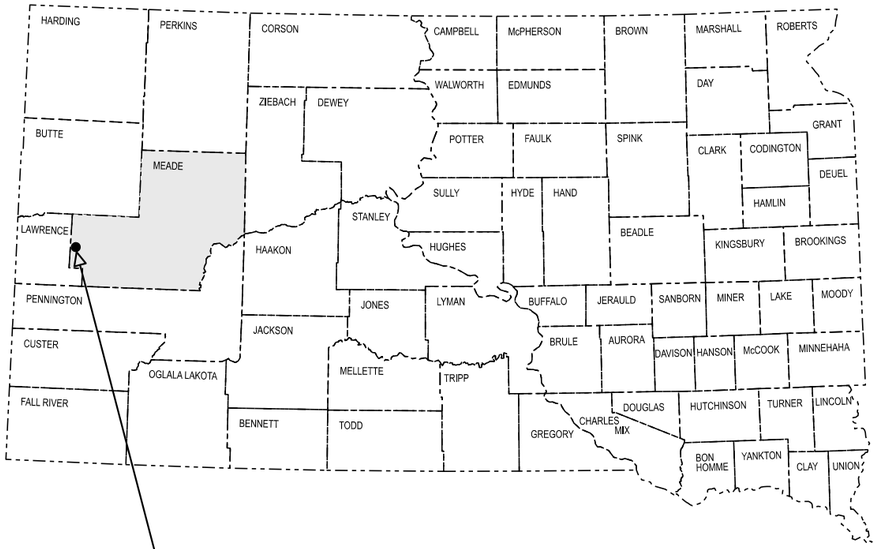
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT 034-451
SD HIGHWAY 34
MEADE COUNTY
LAZELLE STREET

Asphalt Concrete Patch, Curb and Gutter, and Subgrade Repair
PCN i7RN

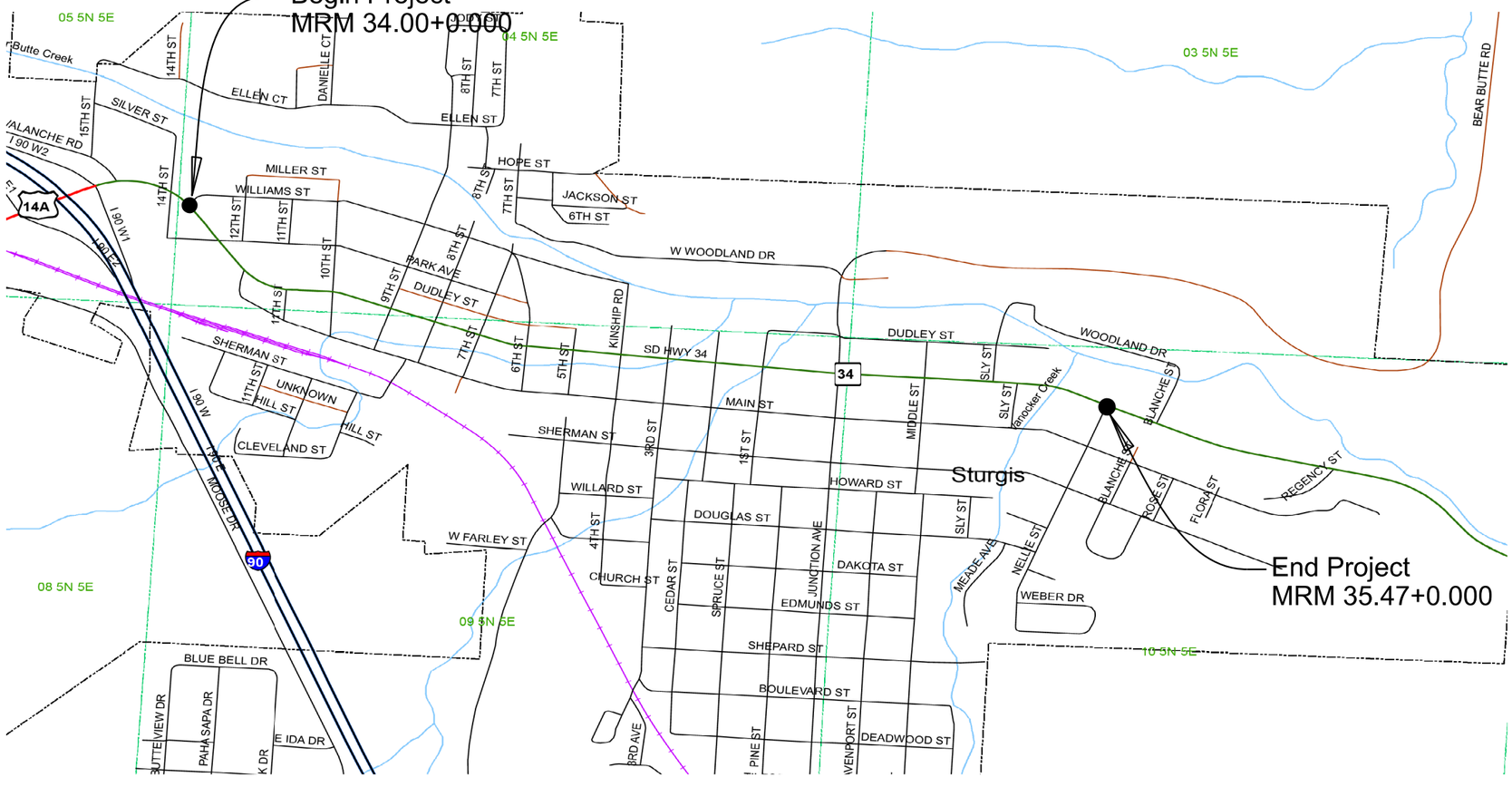
INDEX OF SHEETS



PROJECT
SD Highway 34
MRM 34.00+ 0.000
to MRM 35.47+0.000

Begin Project
MRM 34.00+0.000

End Project
MRM 35.47+0.000



DESIGN DESIGNATION

ADT (2023)	8915
ADT (2043)	13926
DHV	1564
D	50%
T DHV	1.8%
T ADT	4%
V	35 MPH

STORM WATER PERMIT

No Permit Required

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	115	Ft
110E1010	Remove Asphalt Concrete Pavement	76.1	SqYd
110E1140	Remove Concrete Sidewalk	63.9	SqYd
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	1	Each
120E0100	Unclassified Excavation, Digouts	13	CuYd
260E1010	Base Course	21.8	Ton
320E1200	Asphalt Concrete Composite	37.1	Ton
332E0010	Cold Milling Asphalt Concrete	203	SqYd
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	93	Ft
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	35	Ft
634E0010	Flagging	80.0	Hour
634E0110	Traffic Control Signs	236.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0640	Temporary Pavement Marking	220	Ft
650E0060	Type B66 Concrete Curb and Gutter	90	Ft
650E0090	Type B69 Concrete Curb and Gutter	10	Ft
650E4690	Type P9 Concrete Gutter	15	Ft
651E0040	4" Concrete Sidewalk	575	SqFt
670E7000	Reset Drop Inlet Frame and Grate Assembly	1	Each
734E0845	Sediment Control at Inlet with Frame and Grate	2	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	12	Ft

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified 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. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx>

< South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will 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 Public ROW.

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

The waste disposal site(s) will 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 Environmental Office and the Project Engineer.

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with 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 not to exceed the duration of the project. Prior to project completion, the waste will 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) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

State Historic Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

Action Taken/Required:

All earth disturbing activities will require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. 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 if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in 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.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. 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.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

The Contractor is responsible for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

REMOVE ASPHALT CONCRETE PAVEMENT

An estimated 76.1 Square Yards of the in-place asphalt concrete surfacing will be removed from the existing highway according to the in-place surfacing typical sections and wasted as directed by the Engineer.

Additional removals of Asphalt Concrete may be required. Engineer will determine in the field where Asphalt Concrete will be removed at each location. Quantities are subject to change based on field conditions.

The quantity of removed asphalt material is estimated from the in-place surfacing typical sections. The average depth of existing Asphalt Concrete is 6”.

All costs associated with the removal and disposal of removed asphalt will be paid at the contract unit price per SqYd for Remove Asphalt Concrete Pavement.

UNCLASSIFIED EXCAVATION, DIGOUTS

Backfill of digouts will be 6” of Base Course and 6” Asphalt Concrete Composite paid for at the contract unit price per ton.

Asphalt Concrete Composite will be placed in two 3” lifts. Compaction of Base Course will be to the Satisfaction of the Engineer.

Engineer will determine in the field the extent of base course restoration. Quantities for Unclassified Excavation, Digouts and Base Course are subject to change depending on field condition at each location.

Unclassified Excavation, Digouts will be paid for at the unit price per CuYd.

COLD MILLING ASPHALT CONCRETE

In areas with Cold Milling Asphalt specified, 1” of material will be milled off and 1” of Asphalt Concrete Composite will be placed.

Millings will become the property of the Contractor for disposal.

SURFACING THICKNESS DIMENSIONS

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

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

ASPHALT CONCRETE COMPOSITE

Mineral aggregate will be produced from a ledge rock source.

Mineral aggregate for the Asphalt Concrete Composite will conform to the requirements for Class E, Type 1.

Asphalt Concrete will be placed in two, 3” lifts and compacted to the satisfaction of the Engineer. After the placement and compaction of the first lift of Asphalt Concrete, Contractor will allow lift to cool an ample amount of time before placement of second lift. The use of ice or other materials to accelerate the cooling of the lift will not be allowed.

Flush seal will not be required for this project.

All other requirements in the Standard Specifications for Asphalt Concrete Composite will apply.

CONCRETE CURB AND GUTTER REPAIR

Curb and Gutter will be removed and replaced in locations detailed by the table of quantities.

Curb and Gutter Removal will be paid at contract unit price per foot under Removal of Concrete Curb and Gutter bid item.

Curb and Gutter will be replaced with Class M6 concrete conforming to Section 462 of the Standard Specifications. The Contractor will be responsible for submitting mix design to the Project Engineer for approval prior to placement.

Class M6 concrete at time of placement will have a slump no less than 1” and no greater than 4.5” after all water and admixtures are added. Concrete will contain 5.0% to 7.5% entrained air. Concrete will be finished with a broomed surface and shall be cured and protected in accordance with Section 460.3, except the minimum cure time shall be 72 hours.

Placement of new Curb and Gutter will be paid for by the contract unit price per foot for bid items under Curb and Gutter.

The location at MRM 34.16+0.063 will require three No.5 steel rebars. All costs for procuring and installing the rebars will be incidental to the various curb and gutter contract items.

CONCRETE SIDEWALK REPAIR

Concrete sidewalk will be removed and replaced in locations detailed by the table of quantities.

Concrete sidewalk will be replaced with Class M6 concrete conforming to Section 462 of the Standard Specifications. The Contractor will be responsible for submitting mix design to the Project Engineer for approval prior to placement.

When concrete sidewalk is adjacent to Curb and Gutter, the contractor shall place ½” preformed expansion joint filler longitudinally along the backface of the curb and gutter.

Class M6 concrete at time of placement will have a slump no less than 1” and no greater than 4.5” after all water and admixtures are added. Concrete will contain 5.0% to 7.5% entrained air.

Concrete will be finished with a broomed surface and shall be cured and protected in accordance with Section 460.3, except the minimum cure time shall be 72 hours.

All cost associated with the preparation and placement of Concrete sidewalk will be paid for by the contract unit price per SqFt for 4” Concrete Sidewalk.

ITEMIZED LIST OF TRAFFIC CONTROL DEVICES

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R3-2	LEFT TURN PROHIBITION (symbol)	1	24" x 24"	4.0	4.0
R3-7R	RIGHT LANE MUST TURN RIGHT	1	30" x 30"	6.3	6.3
R9-10	SIDEWALK CLOSED (ARROW L or R) USE OTHER SIDE	2	24" x 12"	2.0	4.0
R9-11	SIDEWALK CLOSED AHEAD (ARROW L or R) CROSS HERE	2	24" x 18"	3.0	6.0
W1-4	REVERSE CURVE (L or R)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W9-2	LANE ENDS MERGE LEFT	1	48" x 48"	16.0	16.0
W9-3	CENTER LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (plaque)	1	30" x 30"	6.3	6.3
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			236.6

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

Each mainline asphalt concrete repair location, from which the in-place asphalt concrete has been removed, will be marked with a Type 3 Barricade.

Access to approaches will be maintained at all times.

When work is in progress within an intersection, Flaggers will be required to direct traffic.

The Contractor will maintain pedestrian access at crosswalk locations. Additional traffic control devices will be used as necessary to accommodate the pedestrian traffic if work activities block an existing crosswalk.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A mobile work operation will be allowed provided the pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

TEMPORARY PAVEMENT MARKING

Temporary flexible vertical markers (tabs) must be used on the final lift of asphalt surfacing before roadway is opened to traffic.

The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

Quantities of Temporary Pavement Markings consist of one pass on top of the final lift of asphalt concrete.

FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

PAVEMENT MARKING PAINT

Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4" line = 22.5 Gals/Mile
Dashed 4" line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

This type of sediment control device should be used where there is pavement in the vicinity of the drop inlets and storm water, or sediment could possibly enter the frame and grate. Sediment Control at Inlet with Frame and Grate will be installed prior to working in the vicinity of the drop inlets.

The Contractor will be responsible for maintaining and repairing the sediment control devices for the duration of the project for which sediment control measures are required. Maintenance will be scheduled to prevent storm water from backing up into the driving lane.

"Sediment Control at Inlet with Frame and Grate" will be paid for one time at each location, regardless of the number of times the sediment control devices are installed, inspected, cleaned, removed, repaired, or replaced. All costs associated with furnishing, installing, inspecting, maintaining, cleaning, sediment removal, and repairing Sediment Control at Inlet with Frame and Grate will be incidental to the contract unit price per each for Sediment Control at Inlet with Frame and Grate.

A sediment control device as shown on Standard Plate 734.10. Filter fabric used for constructing the sediment control at inlets with frames and grates will be the same type of fabric that is used in high flow silt fence from the approved product list. The approved product list may be viewed at the following internet site:

http://sddot.com/business/certification/products/Default.aspx

STATE OF SOUTH DAKOTA	PROJECT	SECTION	SHEET
	034-451	Non	5/17

Table of Repair Quantities

MRM	Disp.	Direction	Lane	Repair Length (Ft)	Repair Width (Ft)	Notes	Unclassified Excavation, Digouts (CuYd)	Remove Asphalt Pavement (SqYd)	Base Course (Tons)	Asphalt Concrete Composite (Tons)	Remove Concrete Curb and Gutter (Ft)	Type B66 Concrete Curb and Gutter (Ft)	Type B69 Concrete Curb and Gutter (Ft)	Type P9 Concrete Gutter (Ft)	Remove Concrete Sidewalk (SqYd)	4" Concrete Sidewalk (SqFt)	Remove Drop Inlet Frame and Grate Assembly for Reset (Each)	Reset Drop Inlet Frame and Grate Assembly (Each)	Sediment Control at Inlet with Frame and Grate (Each)	Sediment Control at Type S Reinforced Concrete Drop Inlet (Ft)	Termporary Pavement Markings (Ft)	High Build Waterborne Pavement Marking, 4" White (Ft)	High Build Waterborne Pavement Marking, 4" Yellow (Ft)
34.23	0.017	Eastbound	DL/PL	15	1	C&G, Sidewalk	0.3	1.7	0.5	0.6	15	15			8.3	75					25	31	25
34.67	0.010	Eastbound	DL	10	19	Repair Subgrade, C&G, Sidewalk, and AC patch	3.5	21.1	6.9	7.1	10	10			5.6	50				12	10	13	10
34.88	0.063	Eastbound	DL	15	1	C&G, Sidewalk	0.3	1.7	0.5	0.6	15	15			8.3	75			1		50	13	
35.12	0.012	Eastbound	DL	10	9	Repair Subgrade, C&G, Sidewalk, and AC patch	1.7	10.0	3.3	3.4	10	10			5.6	50					10	3	
35.33	0.091	Eastbound	DL	10	9	Repair Subgrade, C&G, Sidewalk and AC patch	1.7	10.0	3.3	3.4	10	10			5.6	50					10	3	
34.16	0.063	Westbound	DL	10	1	C&G & Sidewalk Repair adjacent to PCCP					10		10		5.6	50	1	1	1				
34.53	0.038	Westbound	DL	15	1	C&G, Sidewalk	0.3	1.7	0.5	0.6	15	15			8.3	75					50	13	
35.21	0.061	Westbound	DL	15	9	Repair Subgrade, C&G, Sidewalk, and AC patch	2.5	15.0	4.9	5.1	15	15			8.3	75					15	4	
35.33	0.100	Westbound	DL	15	9	Repair Subgrade, C&G, Sidewalk and AC patch	2.5	15.0	4.9	5.1	15			15	8.3	75					50	13	
						From Table of Cold Milling Quantities				11.4													
Total							12.7	76.1	24.8	37.1	115	90.0	10.0	15.0	63.9	575.0	1.0	1.0	2.0	12.0	220.0	93.0	35.0

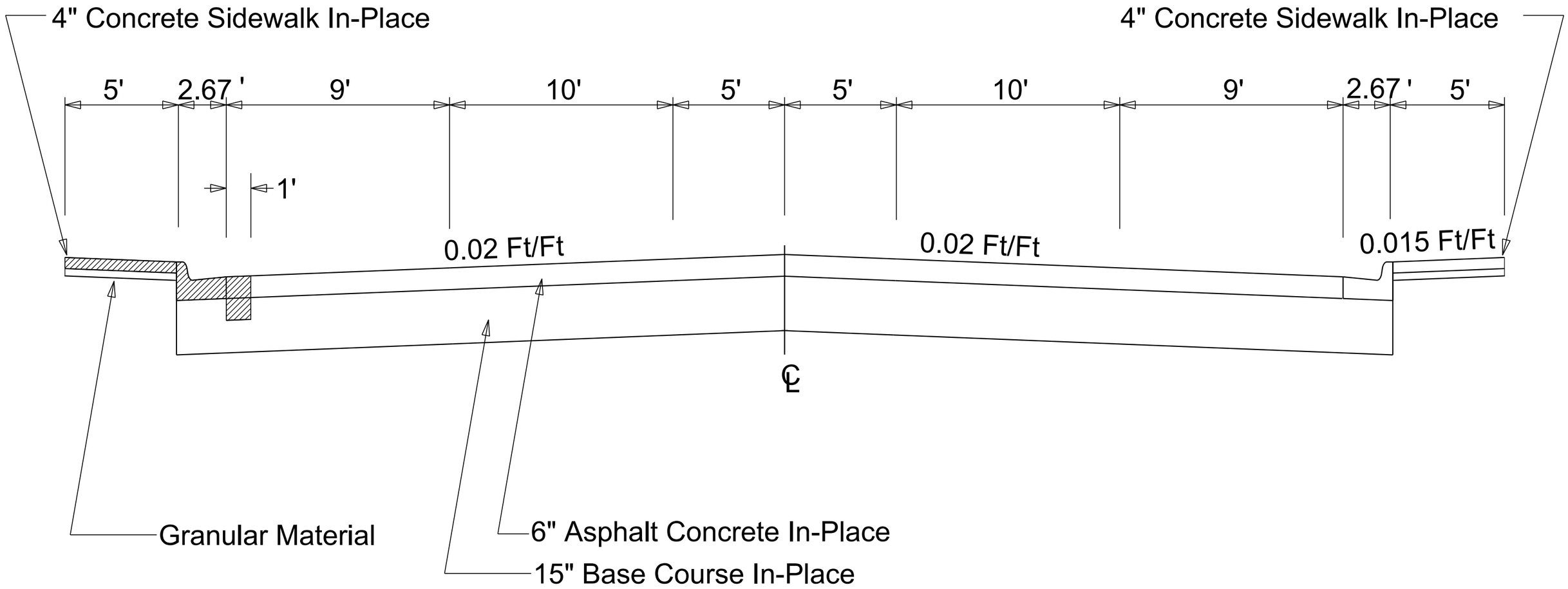
Table Of Cold Milling Quantities

MRM	Disp.	Direction	Lane	Cold Milling Length (Ft)	Cold Milling Width (Ft)	Notes	Cold Milling Asphalt Concrete (SqYd)	Asphalt Concrete Composite (Tons)
34.23	0.017	Eastbound	DL/PL	25	19	Mill 1" AC and Overlay 1"	52.8	3.0
34.88	0.063	Eastbound	DL	50	9	1" AC and Overlay 1"	50	2.8
34.53	0.038	Westbound	DL	50	9	Mill 1" AC and Overlay 1"	50	2.8
35.33	0.100	Westbound	DL	50	9	Mill 1" AC and Overlay 1"	50	2.8
Total							202.8	11.4

SD DOT	PROJECT	SECTION	SHEET
	034-451	Non	6/17

Plotting Date: 3/6/2025

TYPICAL SECTION
Remove and Replace Curb and Gutter and Sidewalk

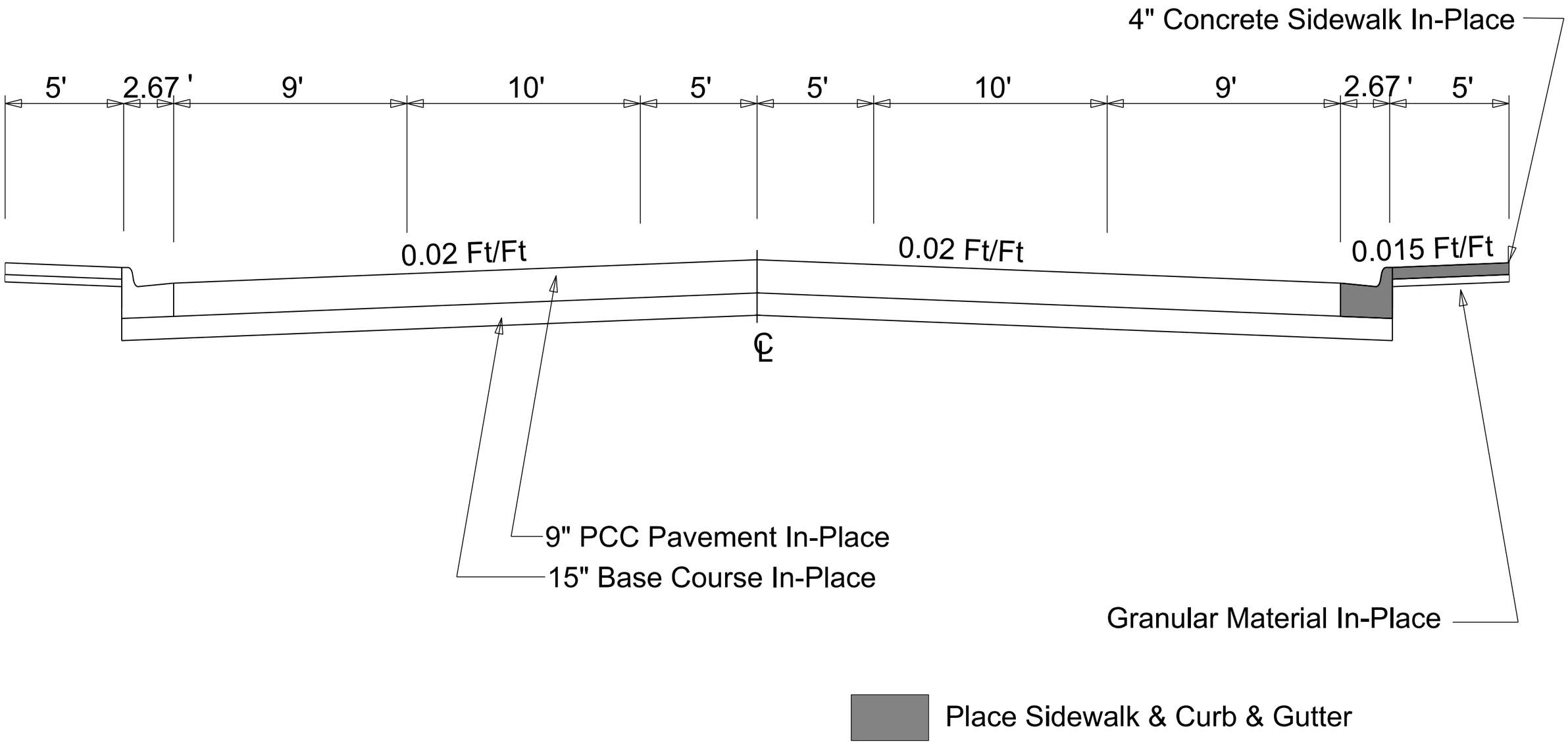


Sidewalk, Curb & Gutter, 6" Asphalt Concrete Composite, and 6" Base Course

SD DOT	PROJECT	SECTION	SHEET
	034-451	Non	7/17

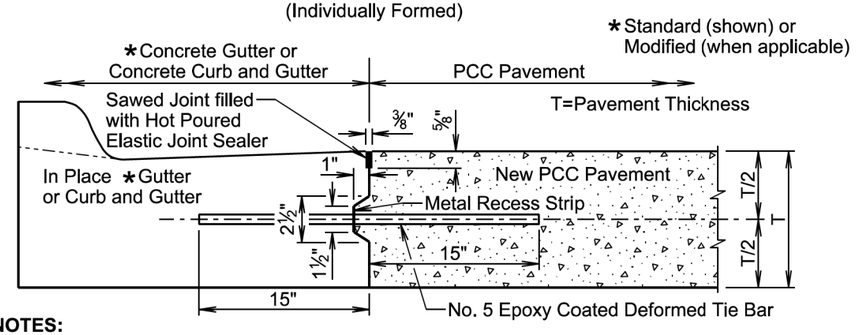
Plotting Date: 3/6/2025

TYPICAL SECTION
MRM 34.16+0.065 WB



LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS

(Individually Formed)



GENERAL NOTES:

No. 5 epoxy coated deformed tie bars will be spaced 48 inches center to center. The tie bars will be placed a minimum of 15 inches from existing transverse contraction joints. The keyway shown above is a female keyway.

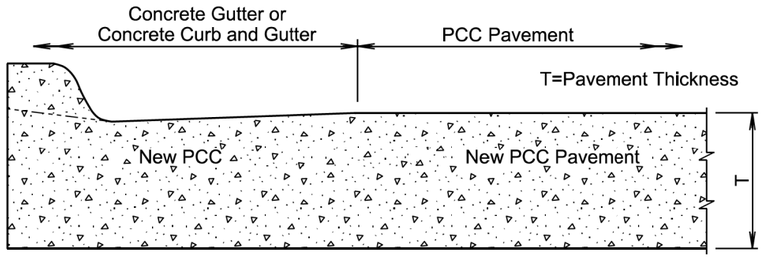
The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip will be used. When concrete pavement is slip formed, a metal recess strip is not required.

The transverse contraction joints in the concrete gutter or concrete curb and gutter will be placed at each mainline PCC pavement transverse contraction joint. The transverse contraction joints in the concrete gutter or the concrete curb and gutter will be 1½ inches deep if formed in fresh concrete using a suitable grooving tool. If a saw is used to cut the transverse contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete gutter or concrete curb and gutter.

Standard curb and gutter may not be placed monolithically with PCC pavement if the mainline lane width is greater than 12 feet.

The term "In Place *Gutter or Curb and Gutter" in the above drawing indicates that the in place *concrete gutter and concrete curb and gutter was placed on the current project.

POURED MONOLITHICALLY (Standard Concrete Curb and Gutter)



GENERAL NOTES:

The mainline curb and gutter may be placed monolithically with the PCC pavement if the mainline lane width is less than or equal to 12 feet. If this method of construction is used, the tie bars and the sawed joint between the curb and gutter and the PCC pavement will be eliminated.

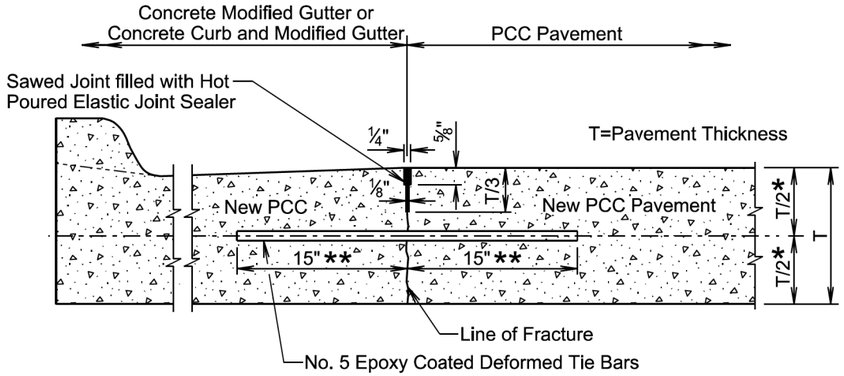
The gutter or curb and gutter will be sawed transversely at each mainline transverse contraction joint. The transverse contraction joints in the gutter or curb and gutter will be sawed and sealed same as the transverse contraction joints in the PCC pavement.

The slope of the gutter will be the slope designated for the type of gutter or curb and gutter to be constructed. The bottom slope of the gutter or curb and gutter will be constructed at the same slope as the mainline concrete pavement.

March 31, 2024

Published Date: 2025	SDDOT	PCC PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS WITH CONCRETE GUTTER OR CONCRETE CURB AND GUTTER	PLATE NUMBER 380.21 Sheet 1 of 2

POURED MONOLITHICALLY (Concrete Curb and Modified Gutter)



GENERAL NOTES:

No. 5 epoxy coated deformed tie bars will be spaced 48 inches center to center.

The tie bars will be placed a minimum of 15 inches from existing transverse contraction joints.

The mainline curb and modified gutter may be placed monolithically with the PCC pavement if the mainline lane width is less than or equal to 14 feet.

The first saw cut to control cracking will be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer is necessary.

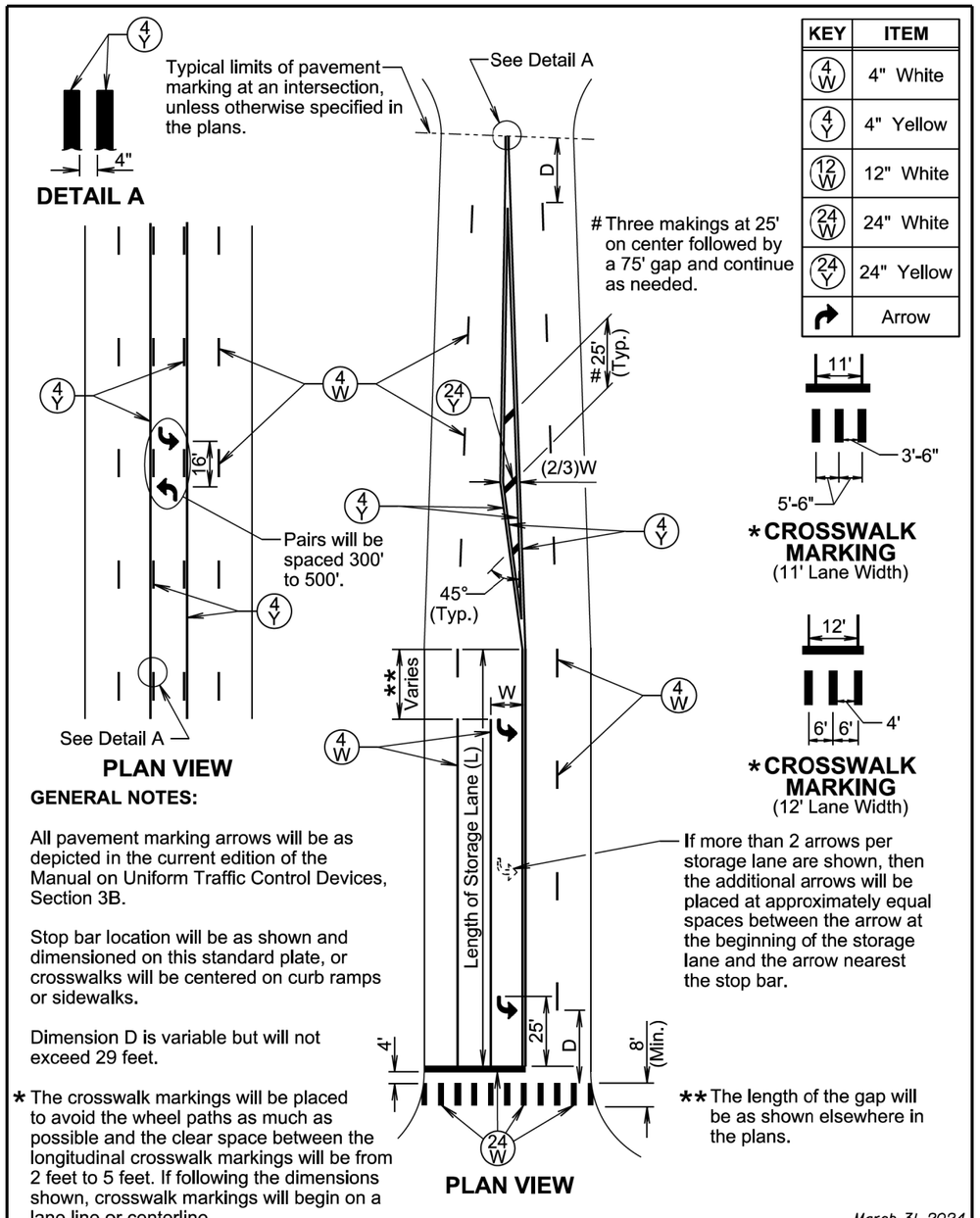
The gutter or curb and gutter will be sawed transversely at each mainline transverse contraction joint. The transverse contraction joints in the gutter or curb and gutter will be sawed and sealed same as the transverse contraction joints in the PCC pavement.

The slope of the gutter will be the slope designated for the type of gutter or curb and gutter to be constructed. The bottom slope of the gutter or curb and gutter will be constructed at the same slope as the mainline concrete pavement.

* The vertical placement tolerance for any part of the tie bar will be ± T/6.
** The transverse placement (side shift) tolerance will be ± 3 inches when measured perpendicular to the longitudinal joint line.

March 31, 2024

Published Date: 2025	SDDOT	PCC PAVEMENT LONGITUDINAL CONSTRUCTION JOINTS WITH CONCRETE GUTTER OR CONCRETE CURB AND GUTTER	PLATE NUMBER 380.21 Sheet 2 of 2



GENERAL NOTES:

All pavement marking arrows will be as depicted in the current edition of the Manual on Uniform Traffic Control Devices, Section 3B.

Stop bar location will be as shown and dimensioned on this standard plate, or crosswalks will be centered on curb ramps or sidewalks.

Dimension D is variable but will not exceed 29 feet.

* The crosswalk markings will be placed to avoid the wheel paths as much as possible and the clear space between the longitudinal crosswalk markings will be from 2 feet to 5 feet. If following the dimensions shown, crosswalk markings will begin on a lane line or centerline.

March 31, 2024

Published Date: 2025	SDDOT	PAVEMENT MARKINGS FOR ADJACENT INTERSECTIONS AND CENTER TURN LANE	PLATE NUMBER 633.01 Sheet 1 of 1

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.

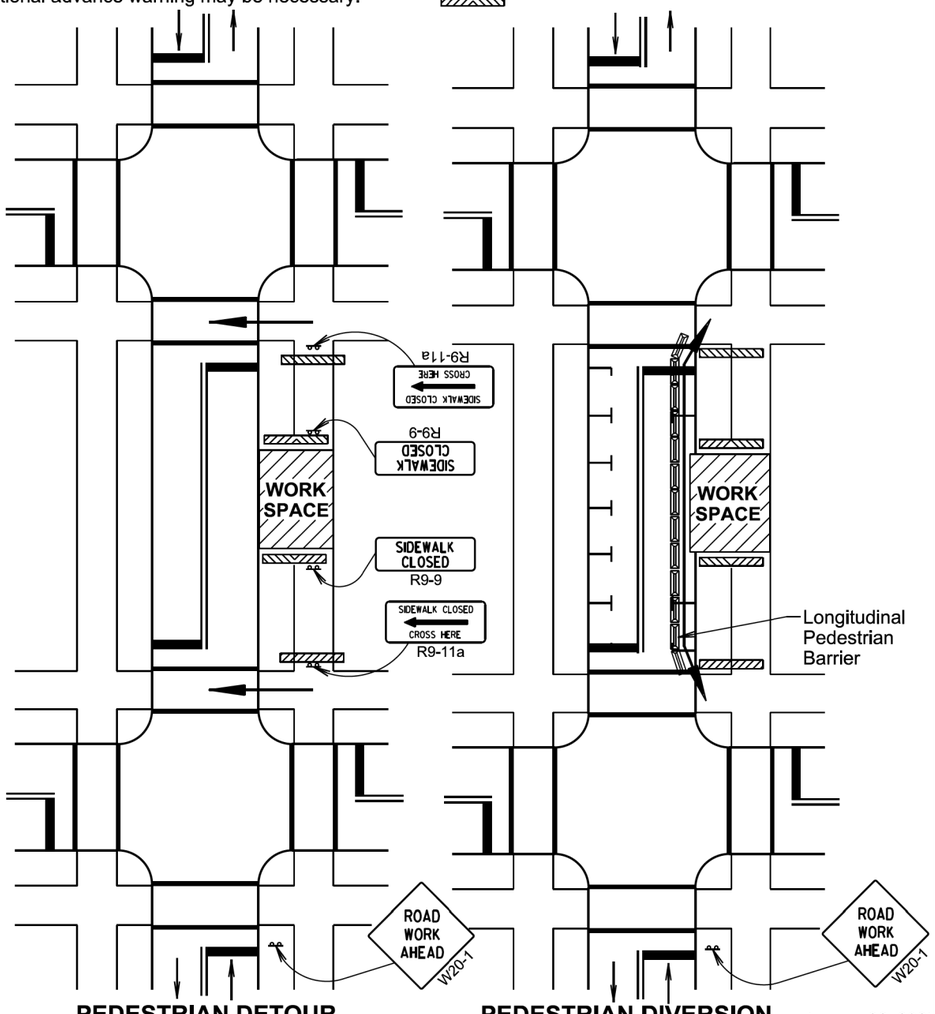
Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks. Type C steady-burn lights may be used on channelizing devices separating the temporary pedestrian diversion from vehicular traffic.

Street lighting should be considered.

Longitudinal Pedestrian Barricade and



January 22, 2021

Published Date: 2025

SDDOT

PEDESTRIAN DETOUR AND PEDESTRIAN DIVERSION

PLATE NUMBER 634.34

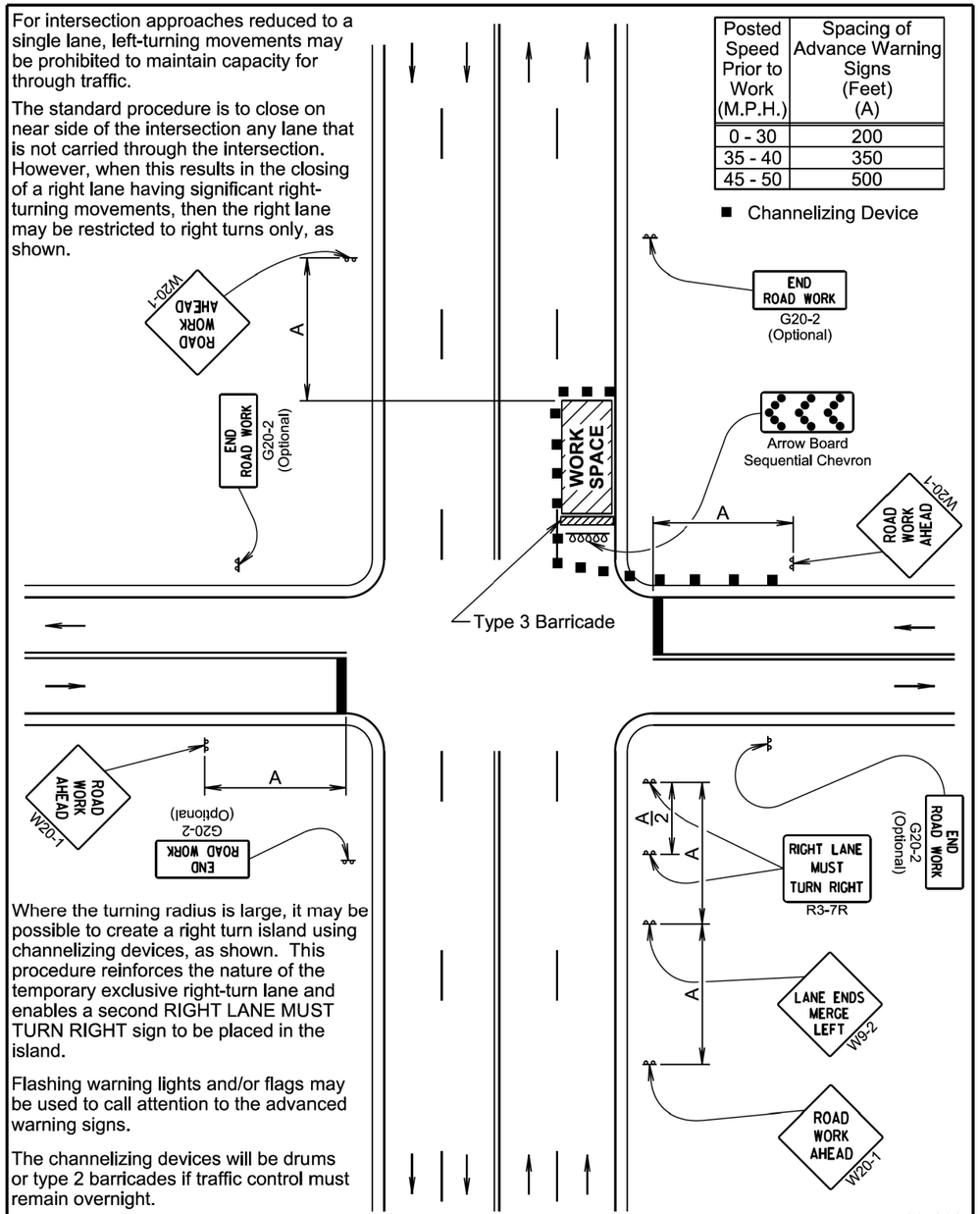
Sheet 1 of 1

For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through traffic.

The standard procedure is to close on near side of the intersection any lane that is not carried through the intersection. However, when this results in the closing of a right lane having significant right-turning movements, then the right lane may be restricted to right turns only, as shown.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500

■ Channelizing Device



Where the turning radius is large, it may be possible to create a right turn island using channelizing devices, as shown. This procedure reinforces the nature of the temporary exclusive right-turn lane and enables a second RIGHT LANE MUST TURN RIGHT sign to be placed in the island.

Flashing warning lights and/or flags may be used to call attention to the advanced warning signs.

The channelizing devices will be drums or type 2 barricades if traffic control must remain overnight.

January 22, 2021

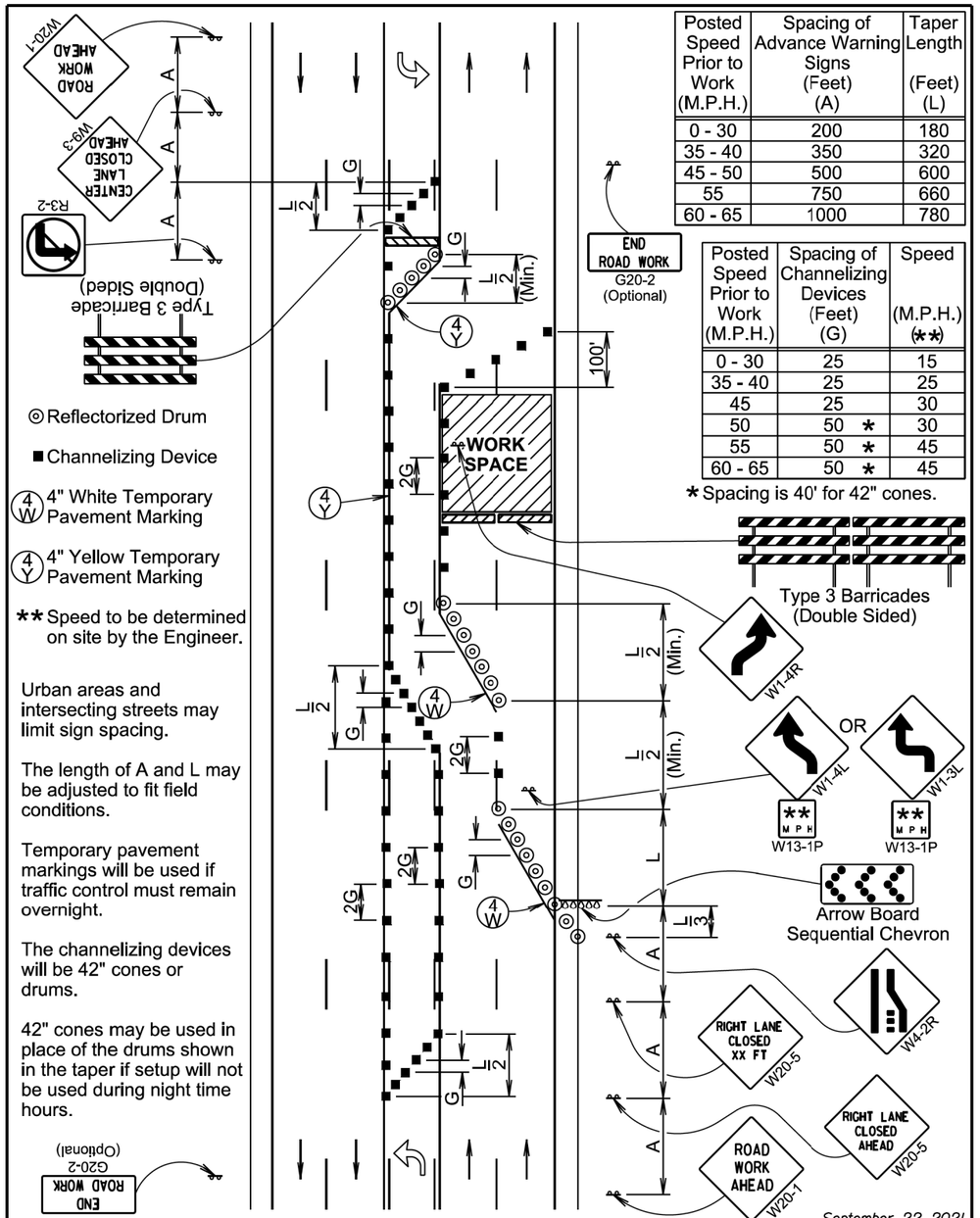
Published Date: 2025

SDDOT

RIGHT LANE CLOSURE FAR SIDE OF INTERSECTION

PLATE NUMBER 634.42

Sheet 1 of 1



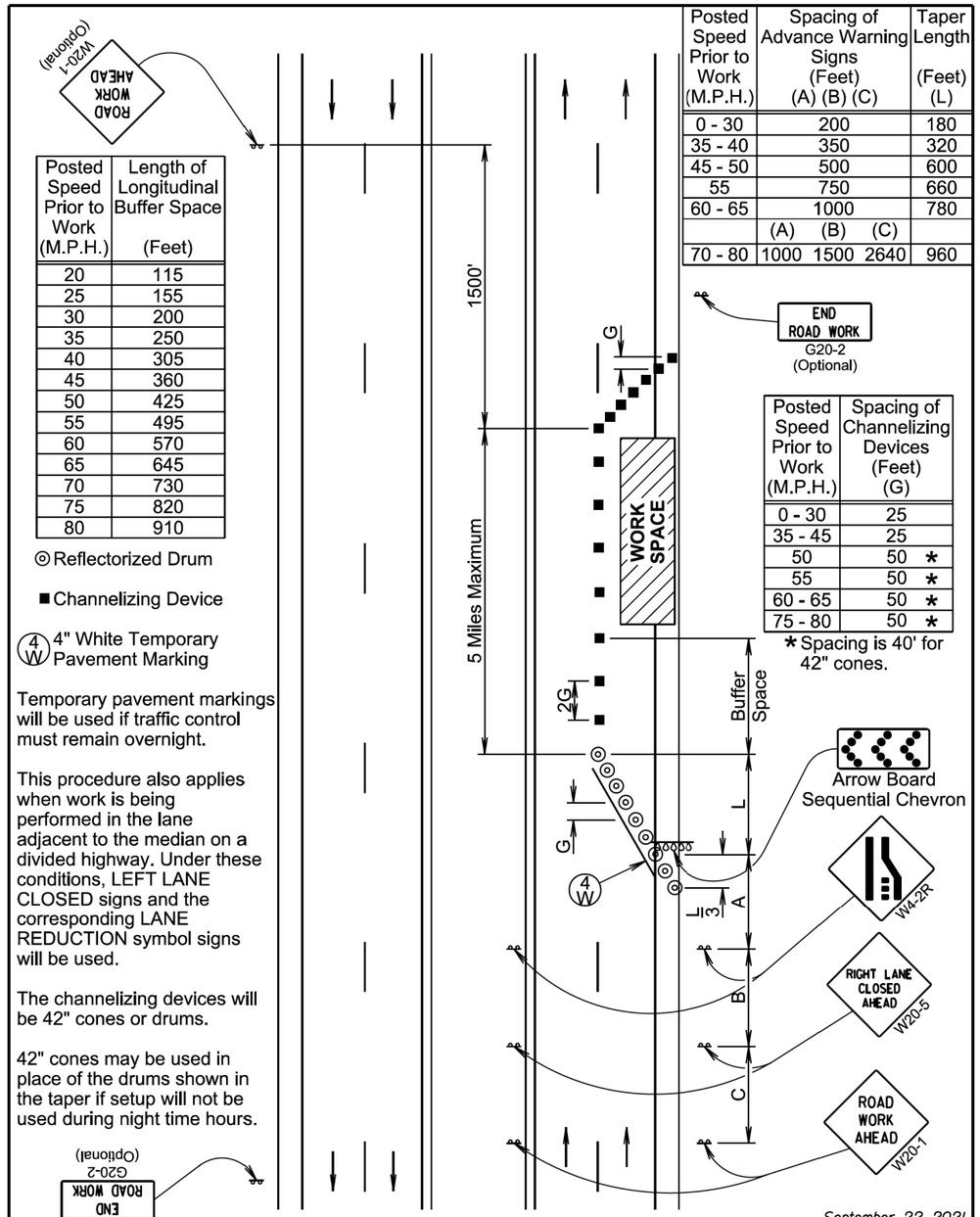
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Speed (M.P.H.) (**)
0 - 30	25	15
35 - 40	25	25
45	25	30
50	50 *	30
55	50 *	45
60 - 65	50 *	45

* Spacing is 40' for 42" cones.

September 22, 2021

Published Date: 2025	SDDOT	5-LANE, 2 LANES CLOSED ONE SIDE	PLATE NUMBER 634.58
			Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820
80	910

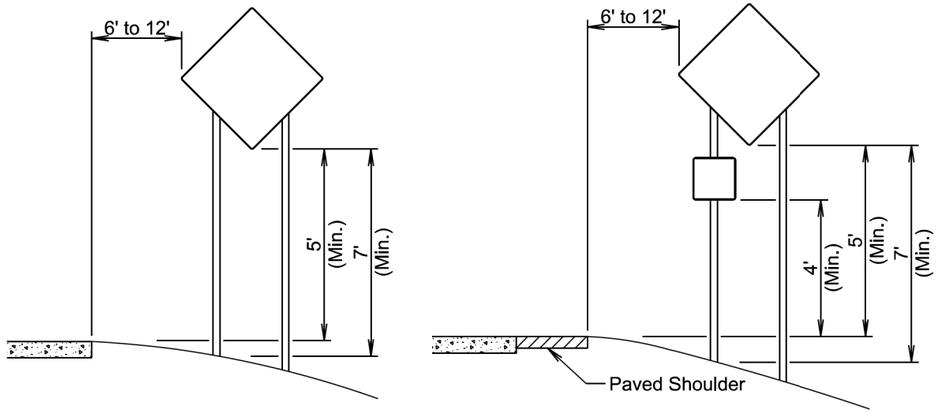
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)			Taper Length (Feet) (L)
0 - 30	200			180
35 - 40	350			320
45 - 50	500			600
55	750			660
60 - 65	1000			780
	(A)	(B)	(C)	
70 - 80	1000	1500	2640	960

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *
75 - 80	50 *

* Spacing is 40' for 42" cones.

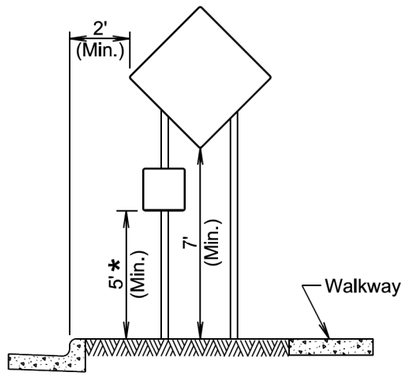
September 22, 2021

Published Date: 2025	SDDOT	LANE CLOSURE WITHOUT BARRIER	PLATE NUMBER 634.64
			Sheet 1 of 1

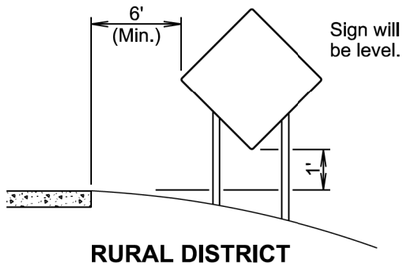


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

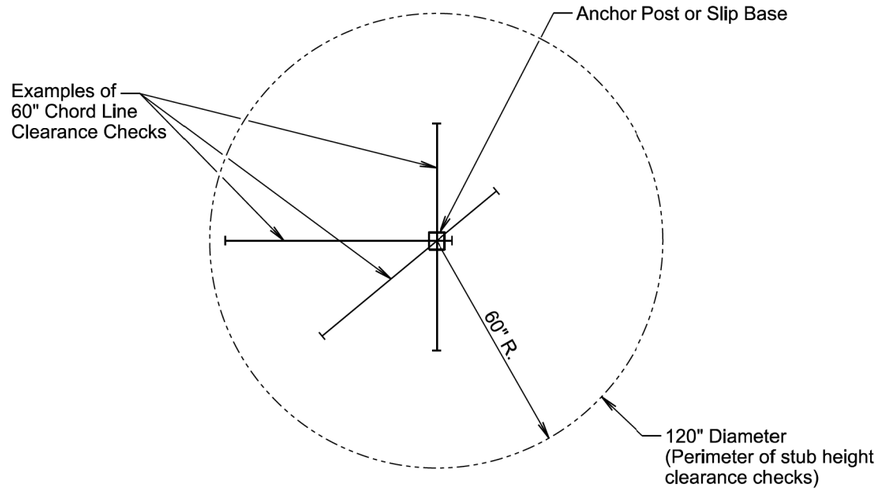


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

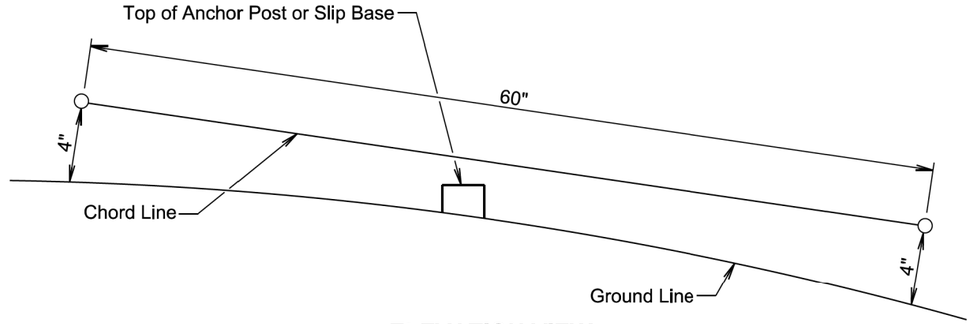
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

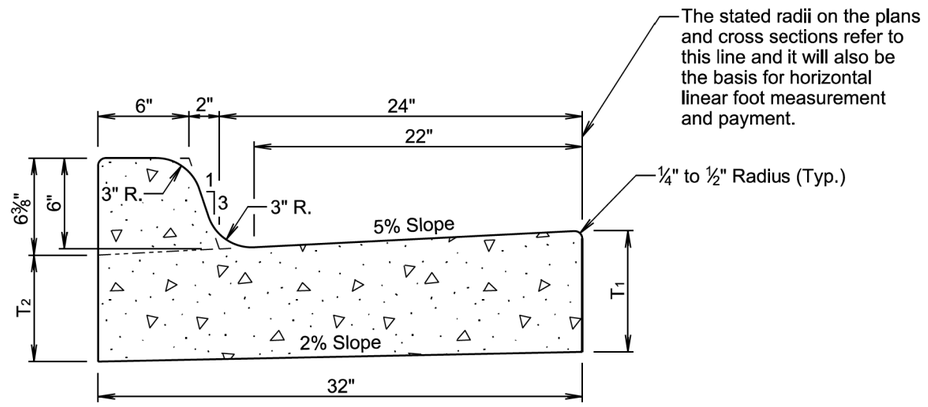
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1



TYPE B CONCRETE CURB AND GUTTER				
Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	5 1/16	0.057	17.7
B67	7	6 1/16	0.065	15.4
B68	8	7 1/16	0.073	13.7
B68.5	8.5	7 9/16	0.077	13.0
B69	9	8 1/16	0.081	12.3
B69.5	9.5	8 9/16	0.085	11.7
B610	10	9 1/16	0.090	11.2
B610.5	10.5	9 9/16	0.094	10.7
B611	11	10 1/16	0.098	10.2
B611.5	11.5	10 9/16	0.102	9.8
B612	12	11 1/16	0.106	9.4

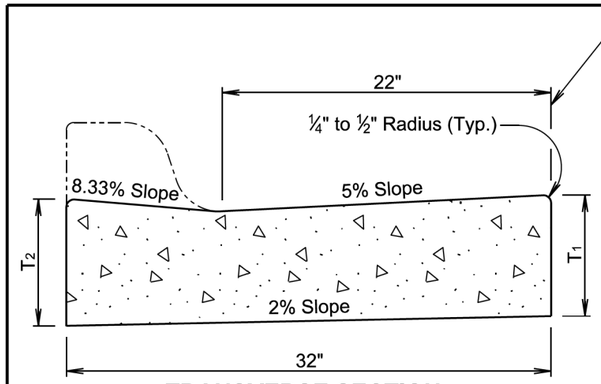
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

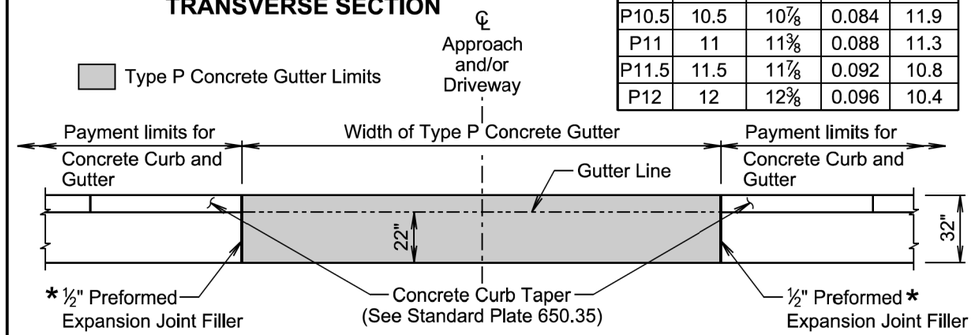
January 22, 2023

Published Date: 2025	SDDOT	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01 Sheet 1 of 1



TRANSVERSE SECTION

TYPE P CONCRETE GUTTER				
Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
P6	6	6⅜	0.047	21.2
P7	7	7⅜	0.055	18.1
P8	8	8⅜	0.064	15.7
P8.5	8.5	8⅞	0.068	14.8
P9	9	9⅜	0.072	13.9
P9.5	9.5	9⅞	0.076	13.2
P10	10	10⅜	0.080	12.5
P10.5	10.5	10⅞	0.084	11.9
P11	11	11⅜	0.088	11.3
P11.5	11.5	11⅞	0.092	10.8
P12	12	12⅜	0.096	10.4



PLAN VIEW

* Joint will not be needed if concrete curb and gutter and type P concrete gutter is placed at the same time. If the ½" preformed expansion joint filler is provided, then the joint will be sealed in accordance with standard plate 650.90.

GENERAL NOTES:

The concrete for the type P concrete gutter will comply with the requirements of the specifications for class M6 concrete.

When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

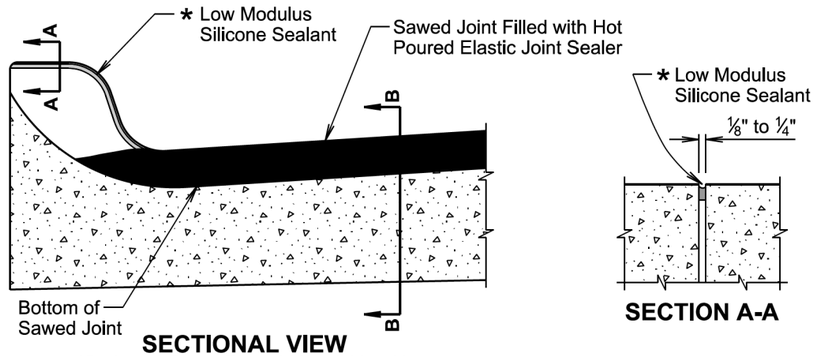
Transverse contraction joints will be constructed at 10-foot intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete gutter at each mainline PCC pavement transverse contraction joint location.

When concrete gutter is placed monolithically with mainline PCC pavement, the transverse contraction joints in the concrete gutter will be sawed and sealed the same as the transverse contraction joints in the mainline PCC pavement.

When concrete gutter is not placed monolithically with the mainline PCC pavement and when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete gutter will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete.

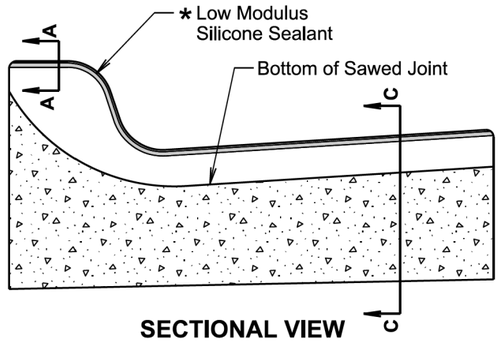
January 22, 2023

Published Date: 2025	SDDOT	TYPE P CONCRETE GUTTER	PLATE NUMBER 650.30 Sheet 1 of 1

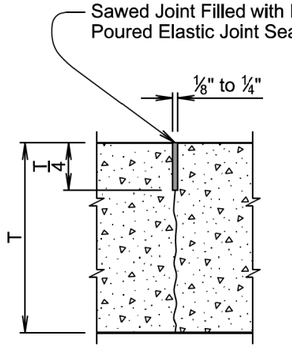


SECTIONAL VIEW
(Curb and Gutter Placed Monolithic with Adjacent Mainline PCC Pavement)

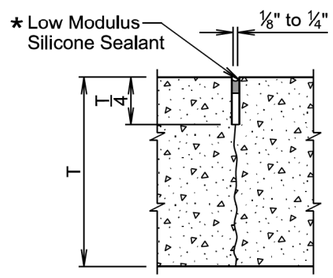
SECTION A-A



SECTIONAL VIEW
(Curb and Gutter not Placed Monolithic with Adjacent Mainline PCC Pavement or Mainline Surfacing is not PCC Pavement)



SECTION B-B

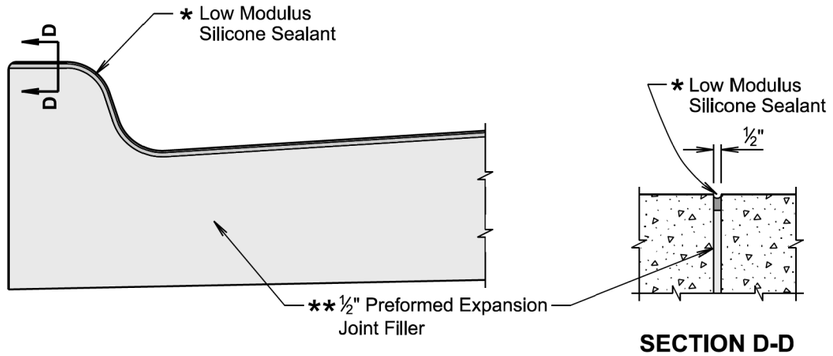


SECTION C-C

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

December 23, 2019

Published Date: 2025	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 2



SECTIONAL VIEW
(Curb and Gutter at ½" Preformed Expansion Joint Filler Location)

SECTION D-D

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

GENERAL NOTES:

For illustrative reason, only the type B curb and gutter is shown.

** A ½-inch preformed expansion joint filler will be placed transversely in the curb and gutter at the following locations:

At each junction between the radius return of curb and gutter, and curb and gutter which is parallel to the project centerline.

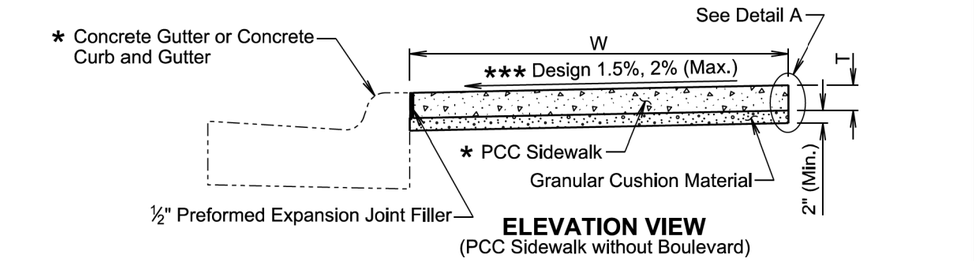
At each junction between new curb and gutter and existing curb and gutter.

Transverse contraction joints will be constructed at 10 foot intervals in the concrete curb and gutter except when the concrete curb and gutter is constructed adjacent to mainline PCC pavement. When concrete curb and gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete curb and gutter at each mainline PCC pavement transverse contraction joint location.

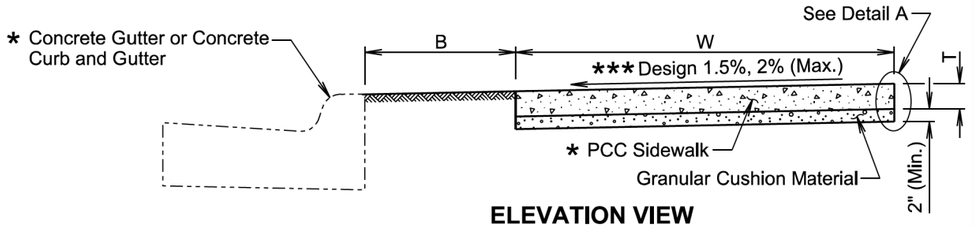
When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete and the joint will be sealed in accordance with the details shown above.

December 23, 2019

Published Date: 2025	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 2 of 2



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



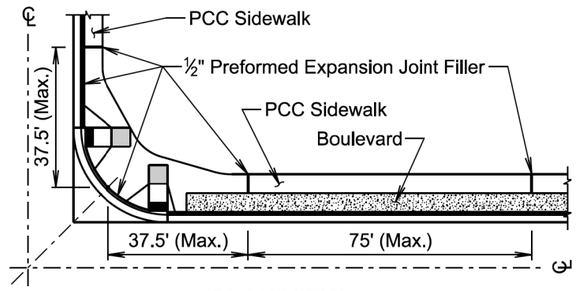
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

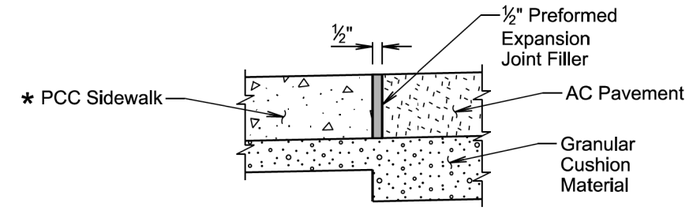
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

An expansion joint in the PCC sidewalk will consist of a ½ -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

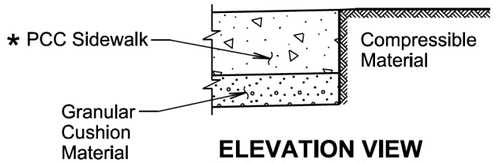
** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

February 14, 2020

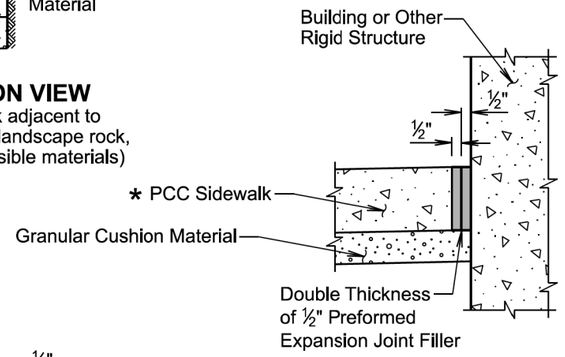
Published Date: 2025	SDDOT	**PCC SIDEWALK**	PLATE NUMBER 651.75
			Sheet 1 of 2



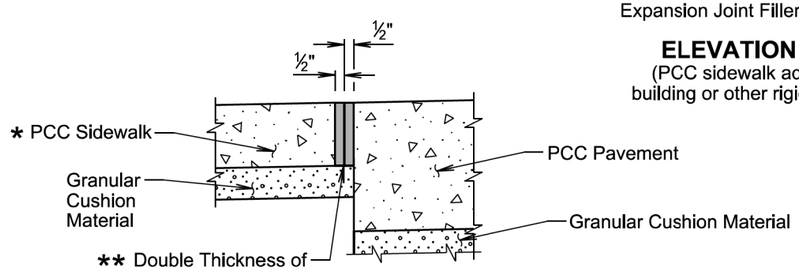
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)

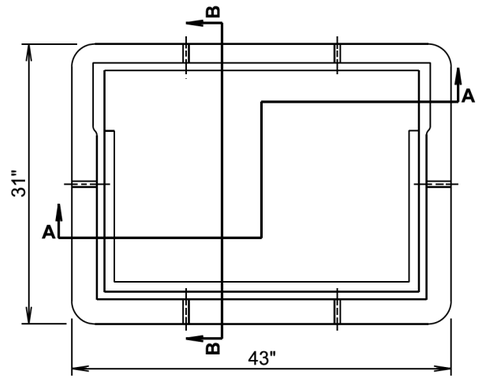


ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

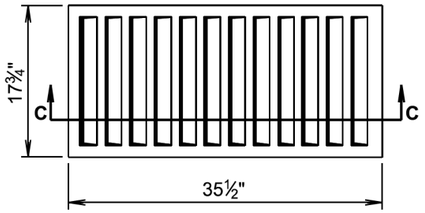
DETAIL A
(Use Appropriate Detail(s))

February 14, 2020

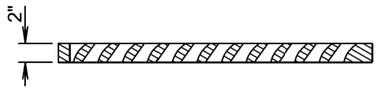
Published Date: 2025	SDDOT	**PCC SIDEWALK**	PLATE NUMBER 651.75
			Sheet 2 of 2



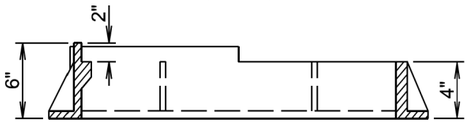
PLAN VIEW
(Frame)



PLAN VIEW
(Grate)

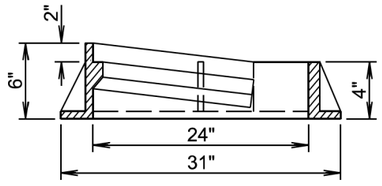


SECTION C-C

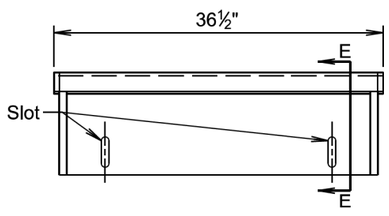


SECTION A-A

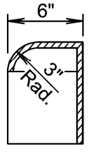
TOP VIEW
(Curb Box)



SECTION B-B



ELEVATION VIEW
(Curb Box)



SECTION E-E

GENERAL NOTES:

The product dimensions may vary from those shown on the standard plate depending on the manufacturer. Grate size and configuration will be similar to the standard plate for hydraulic capacity and bicycle safety. Any variation in dimensions will be approved by the Engineer and the type B frame and grate assembly will be from a manufacturer on the approved products lists.

Design load for the grate will meet the requirements of AASHTO HL-93.

The curb box will be adjustable 6" to 9".

June 1, 2022

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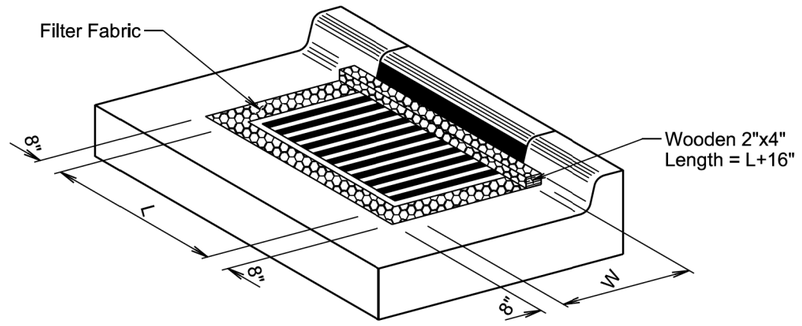
L = Length of Grate
W = Width of Grate



ISOMETRIC VIEW

GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate will be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric will be the type specified in the plans.

The filter fabric will be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric will be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.

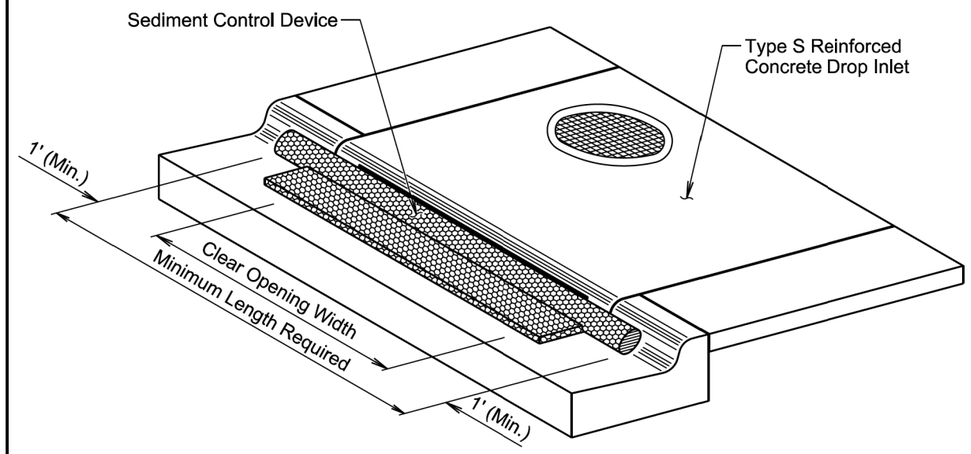
The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

February 14, 2020

Published Date: 2025	SDDOT	*SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES*	*PLATE NUMBER 734.10* *Sheet 1 of 1*



ISOMETRIC VIEW

GENERAL NOTES:

The type of sediment control device shown is for illustrative purposes only.

The type of sediment control device used will be one of the types as specified in the plans.

The sediment control device will be placed at the drop inlets according to the manufacturer's installation instructions.

The sediment control at inlet for type S reinforced concrete drop inlet will be placed at locations stated in the plans or at locations determined by the Engineer.

The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing the device, removing accumulated sediment, and resetting the device.

The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

Payment for the "Sediment Control at Type S Drop Inlet" will be based on the minimum length required at the drop inlets. Some of the sediment control devices specified in the plans will have to be longer due to available length.

All costs for furnishing, installing, inspecting, maintaining, removing, and resetting the sediment control device at the drop inlet including labor, equipment, and materials will be incidental to the contract unit price per foot for "Sediment Control at Type S Reinforced Concrete Drop Inlet".

February 14, 2020

Published Date: 2025	SDDOT	SEDIMENT CONTROL AT INLETS FOR TYPE S REINFORCED CONCRETE DROP INLETS	PLATE NUMBER 734.11 Sheet 1 of 1