SD DOT	PROJECT	SECTION	SHEET
	NH-CR 0385(65)37 & NH-CR 0079(94)59	Non	1/43

Plotting Date: 06/11/2024

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

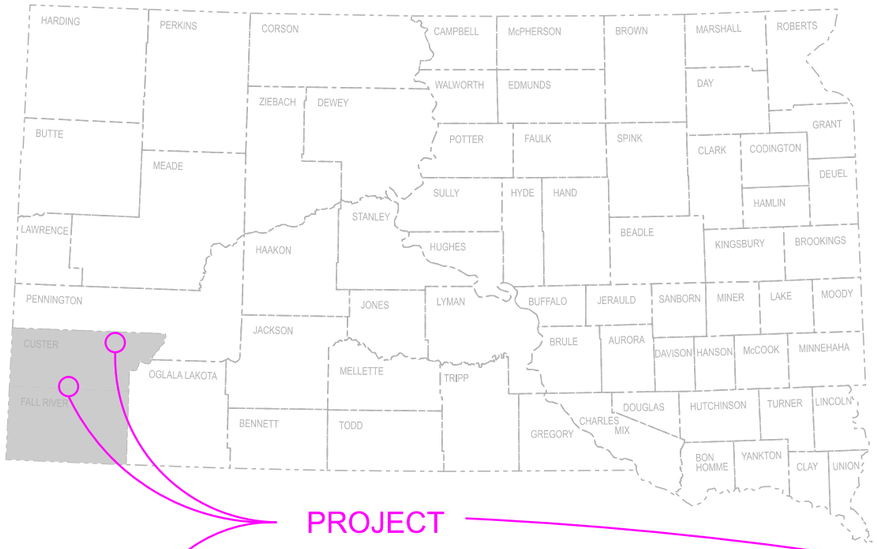
PLANS FOR PROPOSED

PROJECT NH-CR 0385(65)37 & NH-CR 0079(94)59 US HIGHWAY 385 & SD HIGHWAY 79 FALL RIVER & CUSTER COUNTIES

MILL, AC RESURFACING OF SHOULDERS & CROSSOVERS

PCN 09EX & 09EW

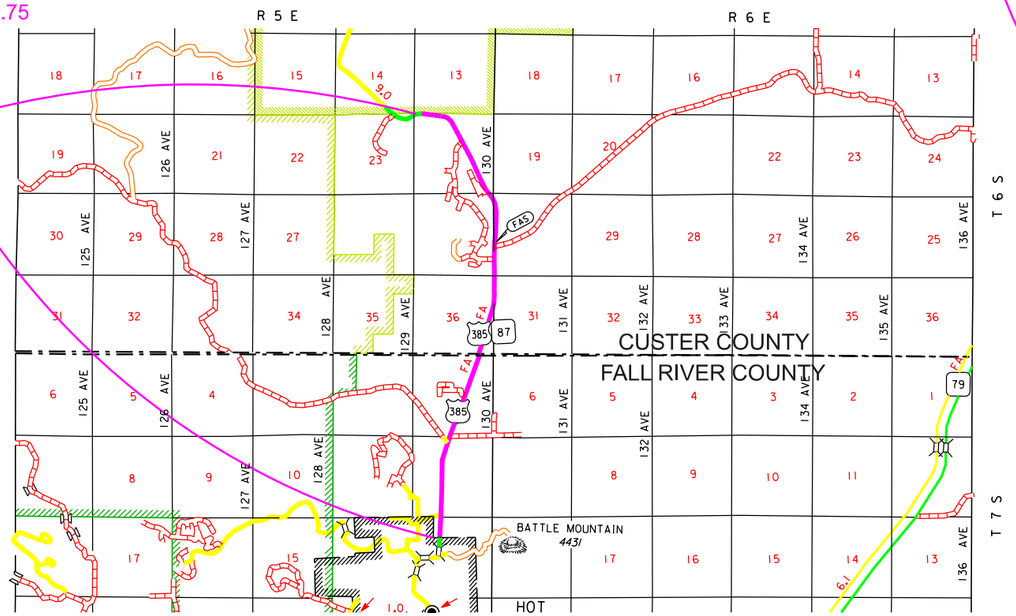
INDEX OF SHEETS

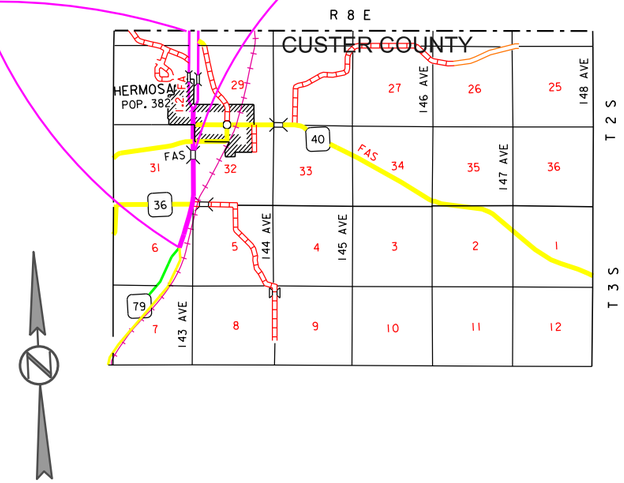


NH-CR 0385(65)37
US 385
MRM 37.29+0.114 to MRM 42.75

NH-CR 0079(94)59
SD 79 NB & SB
MRM 59+0.300 to MRM 60.67+0.280

Exception
Str. No.17-430-024





DESIGN DESIGNATION US 385

ADT (2023)	1964
ADT (2043)	2994
DHV	490
D	51%
T DHV	2.4%
T ADT	5.2%
V	65 mph

DESIGN DESIGNATION SD 79

ADT (2023)	6539
ADT (2043)	10666
DHV	1747
D	51%
T DHV	6.3%
T ADT	13.8%
V	65 mph

STORM WATER PERMIT
None Rquired

US 385		
Gross Length	31724.63 Feet	6.010 Miles
Length of Exceptions	0.00 Feet	0.000 Miles
Net Length	31724.63 Feet	6.010 Miles

SD 79		
Gross Length	6614.76 Feet	1.060 Miles
Length of Exceptions	204.27 Feet	0.039 Miles
Net Length	6410.49 Feet	1.021 Miles

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October 2, 2024

ESTIMATE OF QUANTITIES

US 385 – PCN 09EX

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3320	Checker	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	454.5	SqYd
110E7152	Remove Delineator for Reset	44	Each
120E0100	Unclassified Excavation, Digouts	299	CuYd
120E6200	Water for Granular Material	6.0	MGal
210E1000	Shoulder Preparation	1.000	Mile
260E1010	Base Course	598.0	Ton
260E6000	Granular Material, Furnish	200.0	Ton
320E0005	PG 58-34 Asphalt Binder	159.0	Ton
320E1070	Class HR Asphalt Concrete	5,155.3	Ton
320E1200	Asphalt Concrete Composite	155.4	Ton
320E3000	Compaction Sample	3	Each
320E5010	Saw and Seal Shoulder Joint	63,451	Ft
330E0100	SS-1h or CSS-1h Asphalt for Tack	20.3	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	11.1	Ton
330E1000	Blotting Sand for Prime	5.0	Ton
330E2000	Sand for Flush Seal	196.0	Ton
332E0010	Cold Milling Asphalt Concrete	49,106	SqYd
600E0300	Type III Field Laboratory	1	Each
632E2100	Reset Delineator	44	Each
634E0010	Flagging	540.0	Hour
634E0020	Pilot Car	250.0	Hour
634E0110	Traffic Control Signs	368.4	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
900E0010	Refurbish Single Mailbox	42	Each
900E0012	Refurbish Double Mailbox	12	Each
900E0020	Remove and Reset Neighborhood Mailbox	3	Each
900E5840	Permanent Vehicle Classification System	1	Each

SD 79 – PCN 09EW

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3320	Checker	Lump Sum	LS
110E0700	Remove 3 Cable Guardrail	590	Ft
110E0730	Remove Beam Guardrail	363.0	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	2	Each
110E0770	Remove W Beam Guardrail Breakaway Cable Terminal	4	Each
110E1010	Remove Asphalt Concrete Pavement	57.0	SqYd
110E7152	Remove Delineator for Reset	133	Each
120E0100	Unclassified Excavation, Digouts	38	CuYd
120E6200	Water for Granular Material	2.8	MGal
210E1000	Shoulder Preparation	1.000	Mile
260E1010	Base Course	275.0	Ton
260E6000	Granular Material, Furnish	200.0	Ton
320E0005	PG 58-34 Asphalt Binder	82.0	Ton
320E1070	Class HR Asphalt Concrete	2,742.0	Ton
320E1200	Asphalt Concrete Composite	19.6	Ton
320E3000	Compaction Sample	3	Each
320E5010	Saw and Seal Shoulder Joint	21,874	Ft
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	1.1	Mile
330E0100	SS-1h or CSS-1h Asphalt for Tack	7.6	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	3.7	Ton
330E1000	Blotting Sand for Prime	5.0	Ton
330E2000	Sand for Flush Seal	57.5	Ton
332E0010	Cold Milling Asphalt Concrete	16,040	SqYd
630E0500	Type 1 MGS	350.0	Ft
630E1501	Type 1 Retrofit Guardrail Transition	4	Each
630E2018	MGS MASH Tangent End Terminal	4	Each
632E2100	Reset Delineator	133	Each
632E2220	Guardrail Delineator	18	Each
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	11,987	Ft
634E0010	Flagging	400.0	Hour
634E0110	Traffic Control Signs	760.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	9	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each

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 B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

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

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans 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.

SHPO/THPO review does not relieve the Contractor of the responsibility 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.

COMMITMENT S: FIRE PREVENTION IN THE BLACK HILLS AREA

This project is located within the Black Hills Forest Fire Protection Boundary.

Action Taken/Required:

The Contractor will adhere to the “Special Provision for Fire Plan”.

TYPE III FIELD LABORATORY

Substitution of a cellular telephone for the hard-wired touch-tone telephone is not allowed, as state personnel need the ability to download information over direct phone lines. The phone is intended for state personnel usage only. Contractor personnel are prohibited from using this phone unless pre-approved by the Project Engineer. Reimbursement will not be made for fees associated with the purchase, installation, disconnection, monthly line charges, and incidentals involved in the installation, maintenance, and disconnection of the phone (including attachments). These items will be incidental to the contract unit price per each for Type III Field Laboratory.

UTILITIES

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

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

PERMANENT VEHICLE CLASSIFICATION SYSTEM

The Contractor will install a permanent vehicle classification system on United States Highway 385, STA 123+45 Approximate MRM 39 + 0.350, adjacent to Ridgeview Springs Road (Private Road). The SDDOT Engineer will determine the exact location to include:

1. The Contractor will purchase and install 2 (one per lane) RoadTrax Class II Brass Linguini (BL) 8' piezo's for vehicle classification. The Contractor will install the piezo's by sawing or routing them into the road surface to the measurements shown in drawing A. The Contractor will supply all necessary equipment, manpower and materials to complete this installation. A sample of the major steps of the piezo installation is attached for information purpose only. Drawings B and C provide additional information about the BL piezo installation. The piezo will have enough passive cable length to reach the electronics cabinet. No Splices will be allowed. A representative of SDDOT Office of Inventory Management & Research Traffic Section will be on site and direct the installation of the piezo's. The Contractor must advise the SDDOT Office of Inventory Management & Research Traffic Section at least 2 weeks prior to the date of installation of the piezo and will complete the piezo and loop installation at the same time and in a continuous manner. The final installation of the piezo must be approved by a representative of the SDDOT Office of Inventory Management Traffic Section. The SDDOT Engineer will determine if the weather is acceptable to install piezo' s. No piezo' s will be allowed to be installed after November 1. Air temperature must be 40°F and rising with no rain. All saw cuts must be cleaned to the satisfaction of the SDDOT Engineer before sealing the cuts.
2. The Contractor will install 4 traffic loops - two per lane (6' X 6') by sawing or routing them into the road surface to the measurements shown in drawing A. The loops must have 4 turns of jacketed loop wire meeting the requirements of IMSA Specification No 51-5(1 conductor, PVC/Nylon with Tube Jacket 14 AWG). Home run shielded wire will be stranded 14AWG with DC resistance < 3.0 ohms per 1000 feet and has cross-link polyethylene insulation (XHHW). The Contractor will supply all necessary equipment, manpower and materials to complete the loop installation. The final installation of the loops must be approved by a representative of the SDDOT Office of Inventory Management Traffic Section.
3. The Contractor will provide a new electronics cabinet on a new M6 PCC concrete base located on the East Right of Way line near STA 123+45, approximately MRM 39 + 0.350. The cabinet will meet Standard Plate 635.60, Base Mounted. The new electronics cabinet will include two aluminum shelves with fan and thermostat, a cabinet light controlled by a door switch, lightning surge suppression and terminal blocks for 4 inductive loops and 2 piezo's. The electronics cabinet will be fitted with a #2 Corbin style lock and 2 keys. The new cabinet and base will have a water drain hole in the lowest corner of the cabinet and through the concrete base so that water will freely drain from the cabinet. The cabinet door will be located on the east side of the cabinet. A Class M6 PCC concrete pad (2'X 3'X 6") will be poured adjacent to the base. This pad will be poured in a manner that allows a person to view traffic and access the inside of the cabinet simultaneously. The Contractor will install 110 V AC (100 Amp) electric service to the new electronics cabinet. The Contractor will provide a Sierra Wireless RV55X cell phone modem to be used in the new electronics cabinet. The Contractor will pay for all charges (installation and connect fees, lighting surge suppression, supplies, etc.) for the electric service to be installed into the new electronics cabinet. The Contractor will install and wire all piezo's, inductive loops, counter, electronics, software, and hardware and initialize the system. After the contactor determines the system to be operational then the SDDOT Office of Inventory Management & Research - Traffic Section will review for final approval.
4. The Contractor will provide and install underground 3/4-inch rigid conduit, schedule 80 to a depth at least 24 inches below ground from the edge of the roadway to 2 (two) electrical junction box (Standard Plate 635.65, type II) located 2 (two) feet off the edge of each shoulder and then through 2-inch conduit into the electronics cabinet. Drawing D provides additional information about the conduit installation. A buried cable marker will be placed in the trench for the conduit as indicated on Standard Plate 635.76. The Contractor will provide the SDDOT Office of Inventory Management & Research at least a two-week notice of the dates of the conduit installation. Cost of the marker will be incidental to the contract unit price per each for Permanent Vehicle Classification System.
5. The Contractor will purchase one Peek ADR-3000 with inputs for 2 piezo's and 4 inductive loops and install in the new electronics cabinet.
6. The basis of payment for the Permanent Vehicle Classification System will be the contract item Permanent Vehicle Classification System. All costs associated with furnishing and installing a working vehicle classification system will be incidental to the contract unit price per each for Permanent Vehicle Classification System.

Sample Major Steps of Piezo Installation

1. Carefully mark the slot to be cut, perpendicular to the flow of traffic. Ensure that the sensors
2. are properly positioned in the lane. Shorter sensors are positioned to one side; longer sensors are typically centered on the lane.
3. Cut a slot ¾" wide (± 1/16") and 3/4" deep (-0", +1/4"). (19mm wide, ± 1mm, 19 to 25mm deep). The slot should be ≈ 6" (150mm) longer than the sensor. The lead out should be centered in the slot. The lead out cable is typically 3/8" (9mm) wide and 3"(75mm) deep. It is normally done to the same specifications as the inductive loop and the homerun cables for these.
4. It is strongly recommended that a 3/4" (19mm) wide diamond blade be used for cutting the slot, or that blades be ganged together to get a single 3/4" (19mm) wide cut. The slot should be wet cut to minimize damage to the road.
5. Once all cutting is completed (including the inductive loops) sweep and wash out the debris left in the slot and ensure it is clean and dry. Use high pressure water, a power washer, or water and compressed air to clean ALL foreign matter out of the slot and 6" (150mm) on all sides of the slot. Remove all excess water and debris with a vacuum cleaner and/or sweeping.
6. Carefully dry the slot using torches, torpedo heaters, or natural evaporation, depending on weather conditions. The slot needs to be clean and dry to ensure the chemical bonding of the grout to the pavement.
7. Place a strip of 2" (50mm) wide duct tape along the pavement next to the slot. This facilitates leveling the grout and clean-up.
8. Lay the sensor on the tape next to the slot. Ensure that the sensor is straight and flat. Place the clips on the sensor, about every 6" (150mm). Slightly bend the end of the sensor down at a 30 deg angle, so that it is below the surface. Do the same at the end with the passive cable, bending the sensor about 1" (25mm) from the lead attachment.
9. Trial fit the sensor in the slot, carefully pressing down on the brass element on either side of the clips. Press down only far enough to make sure sensor and clips fit into the slot.
10. Block off the end of the slot where the cable exits using plumbers' putty or foam backer rod after sensor installation. Ensure that there is an adequate 'dam' so that the encapsulation material does not flow out. The dam MUST be about 3-5" (75-125mm) past the end of the lead attachment area. The installation grout must completely encapsulate the lead attachment area. If ducting or conduit is used for the lead in cable, it should not extend to the lead attachment. It must stop 3-5" (75-125mm) short of the lead attachment so that the lead attachment can be fully encapsulated.

PERMANENT VEHICLE CLASSIFICATION SYSTEM (CONTINUED)

11. Test the sensor for Capacitance, Dissipation Factor and Resistance, according to the directions enclosed with the packing slip in the delivery box. Record the test results and the sensor serial number. This information should be stored in the counter cabinet or returned to a data storage file. Then remove the sensor from slot.

12. Mix the grout according to the manufacturer's instructions. Be sure to pre-mix the resin combining the two parts since the filled materials have a tendency to settle. Fill the slot half full of encapsulation material and then place the sensor in the slot pressing the clips to the bottom of the slot. Then fill the rest of the slot with the remaining encapsulation material. Using a trowel, distribute the encapsulation material along the sensor, and smooth it out.

13. Remove the tape on the sides of the sensor as soon as the adhesive starts to cure.

14. Carefully remove the plumber's putty or backer rod used to form the dams at the end of the sensor.

15. Route the lead in cable through the slot cut for it, and cover with loop sealant or grout. NOTE: Hot Tar should not be used since the temperature is difficult to control and it can burn the cable.

16. When the encapsulation material is fully cured, grind the top of the encapsulation material flush with the road using an angle grinder. The profile should be flat and flush with the road, ensuring that there are no concave portions.

17. Clean up the site. When the encapsulation material is fully cured, it may be opened to traffic. Failure to wait for encapsulation material to fully cure may ruin the installation and cause it to fail prematurely.

CHECKING SPREAD RATES

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

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

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

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

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

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

The Department will perform depth checks. The Contractor will be responsible for placement of material to the correct depth unless otherwise directed by the Engineer. If the placed material is not within a tolerance of ±1/2 inch of the plan shown depth, the Contractor will correct the problem at no additional cost to the Department. Excess material above the tolerance will not be paid for. Achieving the correct depth may require picking up and moving material or other action as required by the Engineer. All costs for providing the Contractor furnished checker and performing all related duties will be incidental to the contract lump sum price for Checker. No allowances will be made to the contract lump sum price for Checker due to authorized quantity variations unless the quantities for the material being checked vary above or below the estimated quantities by more than 25 percent. Payment for the Checker will then be increased or decreased by the same proportion as the placed material quantity bears to the estimated material quantity.

SURFACING THICKNESS DIMENSIONS

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

COLD MILLING ASPHALT CONCRETE

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was unknown.

Cold milling asphalt concrete will be done according to the typical section(s). In areas where maintenance patches have raised and/or widened the road, additional asphalt concrete will be milled to provide a uniform typical section from centerline to the edge of the finished shoulder. These areas also include farm, residential, field entrances and intersecting roads. Milling will be daylighted to the outside edge of the roadway. Any additional costs associated with this additional cold milling will be incidental to the contract unit price per square yard for "Cold Milling Asphalt Concrete".

Cold milling asphalt is estimated to produce 5076.4 tons of cold milled asphalt concrete material for PCN 09EX and 2379.3 tons of cold milled asphalt concrete material for PCN 09EW . An estimated 1997.5 tons of cold milled asphalt concrete material for PCN 09EX and an estimated 1096.8 tons of cold milled asphalt concrete material for PCN 09EW will be used on this project as RAP in the Class HR Hot Mixed Asphalt Concrete mixture. The Contractor is responsible to assure enough asphalt concrete salvage is available for the Class HR Hot Mixed Asphalt Concrete.

The remainder of the salvaged asphalt concrete will become the property of the Contractor for disposal.

RAP achieved for project use and/or other uses is based on the dimensions given in the typical section(s). Field conditions will vary from that given in the typical section(s). Therefore, the Contractor may be required to adjust the mill depth, as necessary, to provide the quantity of RAP specified by the plans, if approved by the Engineer. The Contractor is responsible to make sure no vegetation, topsoil, subgrade, or other foreign material is incorporated into the RAP.

CLASS HR ASPHALT CONCRETE

Virgin mineral aggregate for Class HR Asphalt Concrete will consist of a minimum of 80 percent crushed limestone ledge rock and will conform to the requirements for Class E, Type 1.

An estimated 3094.3 tons of RAP is needed for the Class HR mixture. The Class HR Asphalt Concrete will include 40 percent RAP in the mixture.

RAP will be obtained from the material produced by cold milling on this project. An estimated 3094.3 tons will be required for use as RAP.

When directed by the Engineer, the Contractor will saw and remove a total of three undamaged compaction cores (4" dia. min.) per asphalt concrete lift from designated area(s) and repair the hole(s) to the satisfaction of the Engineer. All costs associated with the compaction cores will be incidental to the contract unit price per each for Compaction Sample.

All other requirements for Class HR Asphalt Concrete will apply.

SHOULDER PREPARATION

1 mile of shoulder preparation has been included in the plans to reshape and recompact the shoulders at locations determined by the Engineer. The estimated length includes the preparation of one side of the roadway. Prior to the placement of asphalt concrete on the shoulder, any remaining in-place asphalt will be removed and disposed of by the Contractor, the upper 4 inches of granular material will be scarified, watered, reworked, shaped, and recompacted until a uniform stable surface is obtained. Cost for this work will be incidental to the contract unit price per mile for "Shoulder Preparation".

Included in the Table of Additional Quantities is 200 tons of Granular Material, Furnish to be used in the shoulder preparation operation prior to the placement of asphalt concrete. The payment for this granular material will be at the contract unit price per ton for Granular Material, Furnish. The placement, shaping, and compaction of the granular material will be incidental to the contract unit price per mile for Shoulder Preparation.

Shoulder Preparation will include MC-70 Asphalt for Prime placed at the rate of 0.30 gallons per square yard. The Asphalt for Prime will be applied to the granular material for the full width of the Class HR Asphalt Concrete plus one additional foot. Asphalt for prime and water needed for compaction will be incidental to the contract unit price per mile for Shoulder Preparation.

Compaction of the granular material for Shoulder Preparation will be to the satisfaction of the Engineer.

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Asphalt Concrete Composite and Base Course. The depth of asphalt will match the in-place thickness.

Included in the Estimate of Quantities are 25 cubic yards of Unclassified Excavation, Digouts and 38 square yards of Remove Asphalt Concrete Pavement per mile for the removal of asphalt and unstable material throughout the project.

Included in the Estimate of Quantities are 50 tons of Base Course and 13 tons of Asphalt Concrete Composite per mile for backfill of Unclassified Excavation, Digouts.

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

BLOTTING SAND FOR PRIME

Included in the Estimate of Quantities are 5 tons of Blotting Sand for Prime to be used where necessary for maintenance of traffic as directed by the Engineer. (Rate = 10 pounds per square yard)

GRANULAR MATERIAL, FURNISH

Granular material will be furnished by the Contractor for Shoulder Preparation.

The granular material will be Base Course meeting the requirements of Section 882.

ASPHALT CONCRETE COMPOSITE

Section 324 will apply except that Class HR Asphalt Concrete as specified elsewhere in the plans may be used as Asphalt Concrete Composite.

Plans specified locations for Asphalt Concrete Composite will be paid for at the contract unit price per ton for Asphalt Concrete Composite regardless of the class of asphalt concrete used at such locations.

WATER FOR GRANULAR MATERIAL

Water for Granular Material will be placed at a rate of 10 gallons per ton.

Included in the Estimate of Quantities are 6.0 MGal for PCN 09EX and 2.8 MGal for PCN 09EW of Water for Granular Material for compaction.

FLUSH SEAL

Application of flush seal will be completed within 10 working days following completion of the asphalt concrete surfacing.

Application of flush seal may be eliminated by the Engineer. If the paved surface remains tight, the Engineer will notify the Contractor as soon as possible that the flush seal is unnecessary.

RATES OF MATERIALS

The exact proportions of these materials will be determined on construction.

Sections 1 and 2

Section 1
US HWY 385
Sta. 18+02 to Sta. 21+15.53

Section 2

US HWY 385
Sta. 21+15.53 to Sta. 311+00
Sta. 321+00 to Sta. 342+24.94

CLASS HR ASPHALT CONCRETE

Section 1 Right, Section 2 Right and Left: 2” Lift per Shoulder
Type: Class HR Hot Mixed Asphalt Concrete

Basic Quantity of Aggregate	=	245 Ton/mile
Salvaged Asphalt Concrete	=	163 Ton/mile
PG 58-34 Asphalt Binder	=	13 Ton/mile
Total Mix	=	421 Ton/mile

Laid 2 inches compacted depth; 7’ bottom, 6' top.

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 1.7 tons/mile applied 7.5 feet wide (Rate = 0.09 gallon per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of 0.9 tons/mile applied 7 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 16.4 ton/mile applied 7 feet wide (Rate = 8 lbs. per square yard).

Sections 3,4,5,6,&7

Section 3

SD HWY 79
Sta. 10+00 to Sta. 26+19.67

Section 4

SD HWY 79
Sta. 26+19.67 to Sta. 51+95.69
Sta. 53+99.96 to Sta. 58+20.64

Section 5

SD HWY 79
Sta. 58+20.64 to Sta. 59+42.64

Section 6

SD HWY 79
Sta. 59+42.64 to Sta. 60+58.64

Section 7

SD HWY 79 NBL
Sta. 60+58.64 to Sta. 75+88.62

SD HWY 79 SBL
Sta. 60+58.64 to Sta. 76+14.76

CLASS HR ASPHALT CONCRETE

Section 3 & 4 Right and Left, Section 5 Right, Section 6 Left, Section 7 Outside: 3” Lift per Shoulder
Class HR Hot Mixed Asphalt Concrete

Basic Quantity of Aggregate	=	391 Ton/mile
Salvaged Asphalt Concrete	=	260 Ton/mile
PG 58-34 Asphalt Binder	=	20 Ton/mile
Total Mix	=	671 Ton/mile

Laid 3 inches compacted depth; 6’ bottom, 8' top.

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 1.9 tons/mile applied 8.5 feet wide (Rate = 0.09 gallon per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of 1.0 tons/mile applied 8 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 14.1 ton/mile applied 6 feet wide (Rate = 8 lbs. per square yard).

RATES OF MATERIALS (CONTINUED)

Section 5 and Section 6

Section 5

SD HWY 79
Sta. 58+20.64 to Sta. 59+42.64

Section 6

SD HWY 79
Sta. 59+42.64 to Sta. 60+58.64

CLASS HR ASPHALT CONCRETE

Section 5 Left, Section 6 Right: 3" Lift per Shoulder
Type: Class HR Hot Mixed Asphalt Concrete

Basic Quantity of Aggregate	=	3.03 Ton/sta.
Salvaged Asphalt Concrete	=	2.02 Ton/sta.
PG 58-34 Asphalt Binder	=	0.16 Ton/sta.
Total Mix	=	5.21 Ton/sta.

Laid 3 inches compacted depth; 4' bottom, 2' top.

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.02 tons/sta. applied 4.5 feet wide (Rate = 0.09 gallon per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of .01 tons/sta. applied 4 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 0.27 ton/sta. applied 6 feet wide (Rate = 8 lbs. per square yard).

Section 7

SD HWY 79 NBL
Sta. 60+58.64 to Sta. 75+88.62

SD HWY 79 SBL
Sta. 60+58.64 to Sta. 76+14.76

CLASS HR ASPHALT CONCRETE

Section 7 Inside: 3" Lift per Shoulder
Type: Class HR Hot Mixed Asphalt Concrete

Basic Quantity of Aggregate	=	5.21 Ton/sta.
Salvaged Asphalt Concrete	=	3.48 Ton/sta.
PG 58-34 Asphalt Binder	=	0.27 Ton/sta.
Total Mix	=	8.96 Ton/sta.

Laid 3 inches compacted depth; 4' bottom, 6' top.

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of 0.03 tons/sta. applied 6.5 feet wide (Rate = 0.09 gallon per square yard).

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of .01 tons/sta. applied 6 feet wide (Rate = 0.05 gallon per square yard).

Sand for Flush Seal at the rate of 0.18 ton/sta. applied 4 feet wide (Rate = 8 lbs. per square yard).

Table of Material Quantities - PCN 09EX - US Highway 385

Section	Sta.	to	Sta.	Length (Miles)	Length (Ft)	Shoulder Preparation (Mile)	Cold Milling Asphalt Concrete (SqYd)	Unclassified Excavation, Digouts CuYd)	Granular Material , Furnish (Ton)	Remove Asphalt Concrete Pavement (SqYd)	Base Course (Ton)	Asphalt Concrete Composite (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	Class HR Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	SS-1h or CSS-1h Asphalt for Flush Seal (Ton)	Sand for Flush Seal (Ton)	Blotting Sand for Prime (Ton)	Saw and Seal Shoulder Joint (Ft)
1	18+02.00		21+15.53	0.06	313.53		243.9	1.5		2.3	3.0	0.8	0.1	25.3	0.8	0.1	1		627
2	21+15.53		25+09.95	0.07	394.42		613.6	3.6		5.4	7.0	1.8	0.2	59.0	1.8	0.2	2.2		789
b	25+10.21	b	311+00.00	5.41	28589.79		44473.0	270.6		411.2	541.0	140.6	18.4	4555.2	140.6	9.8	177.4		57180
b	321+00.00	b	336+06.32	0.29	1506.32		2343.2	14.6		22.0	29.0	7.6	1.0	244.2	7.6	0.6	9.6		3013
c	336+99.89	c	341+12.65	0.08	412.76		642.0	4.0		6.0	8.0	2.0	0.2	67.4	2	0.2	2.6		826
d	337+17.13	d	342+24.94	0.10	507.81		790.0	5.0		7.6	10.0	2.6	0.4	84.2	2.6	0.2	3.2		1016
				Intersecting Roads										120.0	3.6				
			Shoulder Preperation			1.0			200.0									5.0	
					Total	1.0	49105.7	299.3	200.0	454.5	598.0	155.4	20.3	5155.3	159.0	11.1	196.0	5.0	63451.0

Table of Material Quantities - PCN 09EW - SD Highway 79

Section	Sta.	to	Sta.	Length (Miles)	Length (Ft)	Length (Stations)	Shoulder Preparation (Mile)	Cold Milling Asphalt Concrete (SqYd)	Unclassified Excavation, Digouts CuYd)	Granular Material, Furnish (Ton)	Remove Asphalt Concrete Pavement (SqYd)	Base Course (Ton)	Asphalt Concrete Composite (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	Class HR Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	SS-1h or CSS-1h Asphalt for Flush Seal (Ton)	Sand for Flush Seal (Ton)	Blotting Sand for Prime (Ton)	Saw and Seal Shoulder Joint (Ft)
3	10+00.00		26+19.67	0.31	1619.67	16.20		2519.5	7.8		11.8	15.5	4.0	1.2	416.0	12.4	0.6	8.8		3239
4	26+19.67		51+95.69	0.49	2576.02	25.76		4007.1	12.3		18.6	24.5	6.4	1.8	657.6	19.6	1.0	13.8		10304
4	53+99.96		58+20.64	0.08	420.68	4.21		654.4	2.0		3.0	4.0	1.0	0.4	107.4	3.2	0.2	2.2		1683
5	58+20.64		59+42.64	0.02	122.00	1.22		135.6	0.5		0.8	1.0	0.3	0.1	19.8	0.6	0.0	0.6		244
6	59+42.64		60+58.64	0.02	116.00	1.16		128.9	0.5		0.8	1.0	0.3	0.1	19.5	0.6	0.0	0.6		232
7 SB	60+58.64		76+14.76	0.29	1556.12	15.56		2074.8	7.3		11.0	14.5	3.8	1.0	334.0	10.0	0.5	6.8		3112
7 NB	60+58.64		75+88.62	0.29	1529.98	15.30		2040.0	7.3		11.0	14.5	3.8	1.0	331.7	9.9	0.4	6.8		3060
Additional Quantities							1.0	4480.0		200.0		200.0		2.0	856.0	25.7	1.0	17.9	5.0	
			Total				1.0	16040.3	37.7	200.0	57.0	275.0	19.6	7.6	2742.0	82.0	3.7	57.5	5.0	21874.0

Table of Additional Quantities - PCN 09EW - SD Highway 79

Section	Sta.	to	Sta.	Length (Miles)	Length (Ft)	Length (Stations)	Shoulder Preparation (Mile)	Cold Milling Asphalt Concrete (SqYd)	Granular Material, Furnish (Ton)	Base Course (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	Class HR Asphalt Concrete (Ton)	PG 58-34 Asphalt Binder (Ton)	SS-1h or CSS-1h Asphalt for Flush Seal (Ton)	Sand for Flush Seal (Ton)	Blotting Sand for Prime (Ton)
4	26+19.67		51+95.69	0.49	2576.02	25.76		3890.0			1.5	656.4	19.7	0.8	15.6	
4	53+99.96		58+20.64	0.08	420.68	4.21		280.0			0.1	47.3	1.4	0.1	1.1	
	Median Crossover							310.0			0.1	52.3	1.6	0.1	1.2	
	Shoulder Preperation						1.0		200.0							5.0
	Intersecting Roads									200.0	0.3	100.0	3.0			
	Total						1.0	4480.0	200.0	200.0	2.0	856.0	25.7	1.0	17.9	5.0

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.

PCN 09EX will use Standard Plates 634.03, 634.04, 634.06, 634.23, 634.85, and 634.99.

PCN 09EW will use Standard Plates 634.03, 634.04, 634.08, 634.38, 634.42, 634.47, 634.57, 634.60, 634.63, 634.85, and 634.99.

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 temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

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.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

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.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

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.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

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.

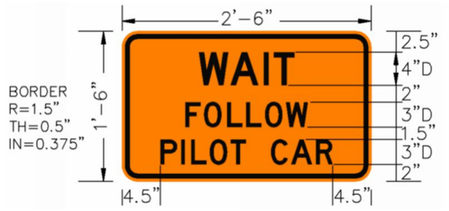
A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans. Additional Type 3 Barricades will be installed facing traffic within the closed lane at a spacing of ¼ mile.

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

WORK ZONE SPEED REDUCTION

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63.

To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

PERMANENT PAVEMENT MARKING

The Contractor will be required to repaint all existing pavement markings including lane lines for the asphalt median on SD 79. The Contractor will be required to document and be able to relocate for replacement of the existing lane lines before the markings are obliterated. The cost to duplicate the existing marking locations will be incidental to the contract unit prices for the various contract items.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at locations determined by the Engineer to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

ROAD WORK
STARTS (Date)

When work begins that will affect traffic patterns, the Contractor will re-program the PCMS with the messages as directed by the Engineer.

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.

ITEMIZED LIST OF TRAFFIC CONTROL DEVICES

PCN 09EX – US 385

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-5	SHOULDER WORK	6	48" x 48"	16.0	96.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			368.4

PCN 09EW – SD 79

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	2	36"	7.5	15.0
R2-1	SPEED LIMIT 45	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 55	4	36" x 48"	12.0	48.0
R2-1	SPEED LIMIT 65	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 70	2	36" x 48"	12.0	24.0
R2-6aP	FINES DOUBLE (plaque)	2	36" x 24"	6.0	12.0
R3-7R	RIGHT LANE MUST TURN RIGHT	1	36" x 36"	9.0	9.0
W3-5	SPEED REDUCTION AHEAD (65MPH)	4	48" x 48"	16.0	64.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W8-1	BUMP	4	48" x 48"	16.0	64.0
W9-2	LANE ENDS MERGE LEFT	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
W20-1	ROAD WORK AHEAD	8	48" x 48"	16.0	128.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	6	48" x 48"	16.0	96.0
G20-2	END ROAD WORK	4	48" x 24"	8.0	32.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			760.6

GRIND RUMBLE STRIPS/STRIPES IN ASPHALT CONCRETE

Asphalt concrete rumble strips/stripes will be constructed on the asphalt median on SD 79. Rumble strips/stripes will be paid for at the contract unit price per mile for Grind 12" Rumble Strip or Stripe in Asphalt Concrete. It is estimated that 1.14 miles of asphalt concrete rumble strips/stripes will be required.

Rumble strip/stripe installation will be completed prior to application of the flush seal and permanent pavement markings. In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply a flush seal to the newly installed 12" rumble strips/stripes at a width of 18" and at the same rate as specified in this plan set. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

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 = 7.6 Gal/Mile
Glass Beads = 8 Lbs/Gal.

REMOVE AND RESET DELINEATORS

Small, numbered plaques on single posts are found in both projects adjacent to the shoulders. These plaques will be removed and reset along with the delineators. Payment for removal and reset of these plaques will be included in the contract unit price per each for Remove Delineator for Reset and Reset Delineator.

The Contractor will note the locations of the delineators and small signs and reset them at their original location.

Table of Delineation and Pavement Marking

	Remove Delineator for Reset	Reset Delineator	Guardrail Delineator	Grind 12" Rumble Strip or Stripe in Asphalt	High Build Waterborne Pavement Marking Paint, 4"
Location	(Each)	(Each)	(Each)	(Mile)	(Ft)
PCN 09EX					
US 385	44	44			
PCN 09EW					
SD 79	133	133	18	1.14	11986.8

MAILBOXES

The Contractor will reset the existing mailboxes on new posts with the necessary support hardware for single or double mailbox assemblies. The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

If large mailboxes are located at double mailbox installations, a single post may need to be used for the large mailbox.

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for Refurbish Single Mailbox or Refurbish Double Mailbox.

Table of Mailboxes - US 385 - PCN 09EX

Direction	MRM	Disp.	Refurbish Single Mailbox (Each)	Refurbish Double Mailbox (Each)	Remove and Reset Neighborhood Mailbox (Each)
NB	37	+ 0.826	1		
	38	+ 0.315	13		
	38	+ 0.590	1		
	38	+ 0.703	1		
	38	+ 0.890	1		
	39	+ 0.021	1		
	39	+ 0.355	2	6	
	40	+ 0.058			1
	40	+ 0.438	1		
	42	+ 0.015	1		
	42	+ 0.414	1	1	
SB	37	+ 0.409	7		
	37	+ 0.590	1	2	
	37	+ 0.615	1		
	37	+ 0.810	4		
	37	+ 0.920		1	
	38	+ 0.010	1		
	38	+ 0.862	1		1
	39	+ 0.129	1		
	39	+ 0.659	1		
	40	+ 0.233	1		
	40	+ 0.935	1		
	41	+ 0.500		2	
	42	+ 0.194			1
		Total	42	12	3

Table of Guardrail

Str. No 17-430-024	Remove Beam Guardrail (Ft)	Remove 3 Cable Guardrail (Ft)	Remove 3 Cable Guardrail Anchor Assembly (Each)	Remove W Beam Guardrail Breakaway Cable Terminal (Each)	Type 1 Retrofit Guardrail Transition (Each)	Type 1 MGS (Ft)	MGS MASH Tangent End Terminal (Each)
NB	181.5	280	1	2	2	175	2
SB	181.5	310	1	2	2	175	2
Total	363	590	2	4	4	350	4

TYPICAL SURFACING SECTIONS

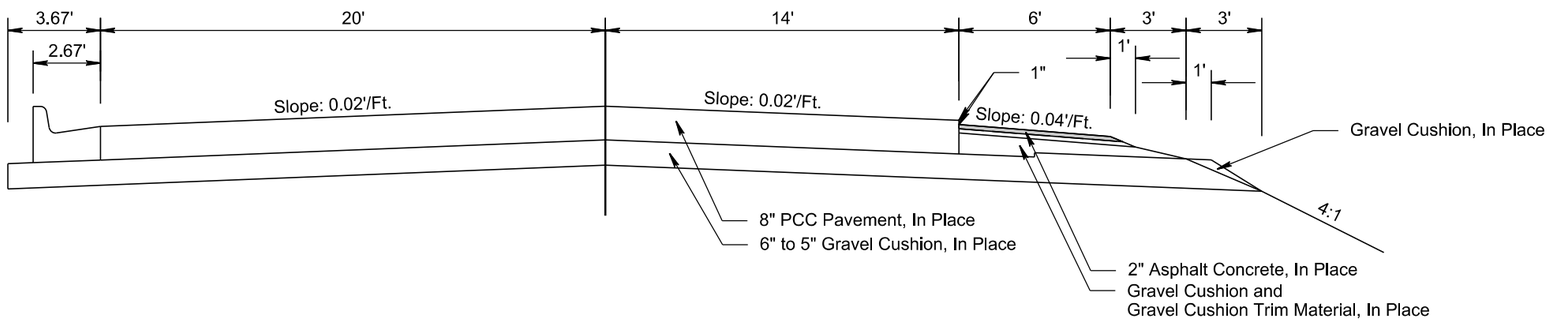
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	12	43

Plotting Date: 01/26/2024

Cold Milling @ 0.04'/Ft.
(2" From Top of Concrete)

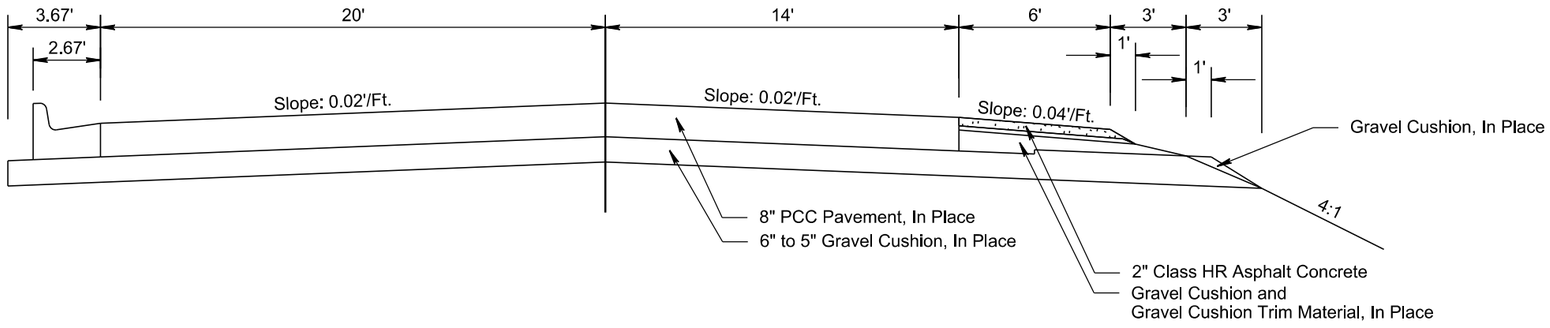
Section 1

US HWY 385
Sta. 18+02 to Sta. 21+15.53
In Place & Cold Milling Section



Section 1

US HWY 385
Sta. 18+02 to Sta. 21+15.53
Resurfacing Section



TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	13	43

Plotting Date: 01/26/2024

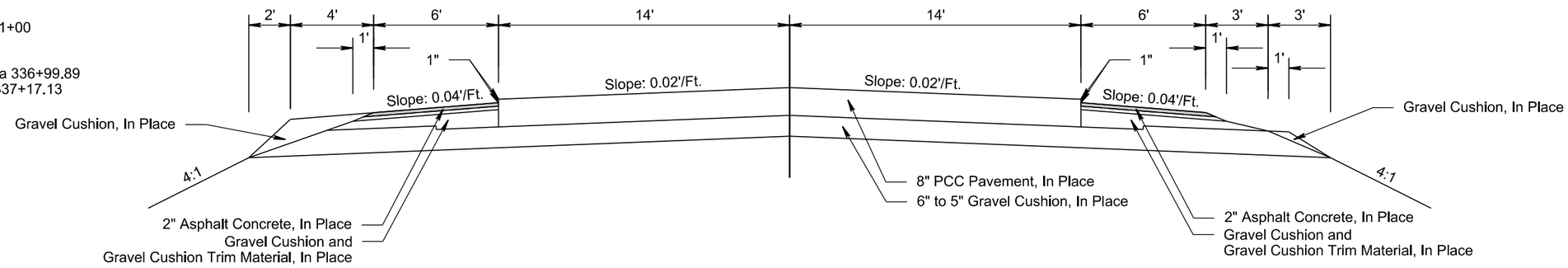
Cold Milling @ 0.04'/Ft.
(2" From Top of Concrete)

Surfacing Exception:
Sta. 311+00 to Sta. 321+00

Equation:
Sta. 336+06.32 = Sta. a 336+99.89
Sta. a 341+12.65 = b 337+17.13

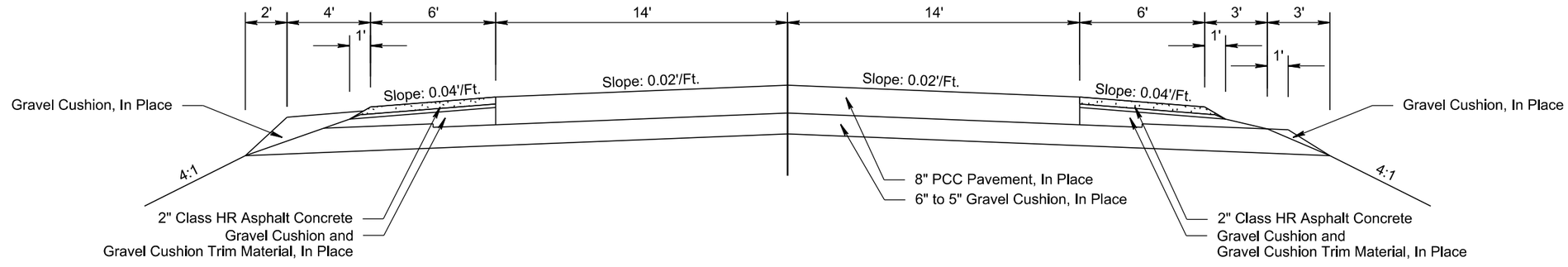
Section 2

US HWY 385
Sta. 21+15.53 to Sta. 311+00
Sta. 321+00 to Sta. b 342+24.94 (thru equations)
In Place & Cold Milling Section



Section 2

US HWY 385
Sta. 21+15.53 to Sta. 311+00
Sta. 321+00 to Sta. 342+24.94
Resurfacing Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 2

FILE - ...\09EW_TYPSECT_TJ01.DGN

TYPICAL SURFACING SECTIONS

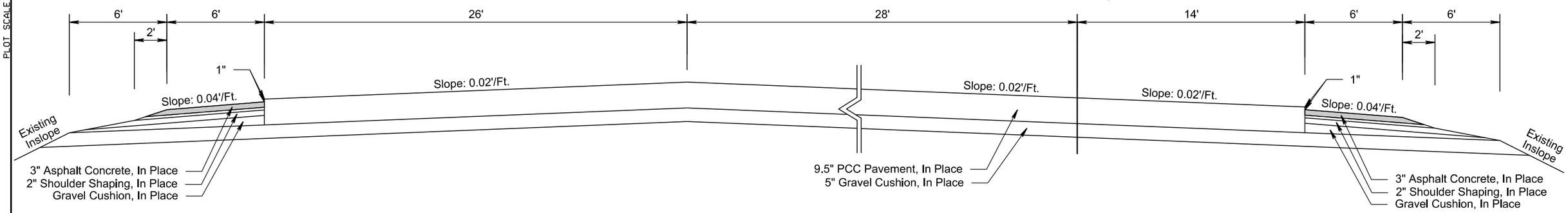
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	14	43

Plotting Date: 01/26/2024

Cold Milling @ 0.04'/Ft.
(3" From Top of Concrete)

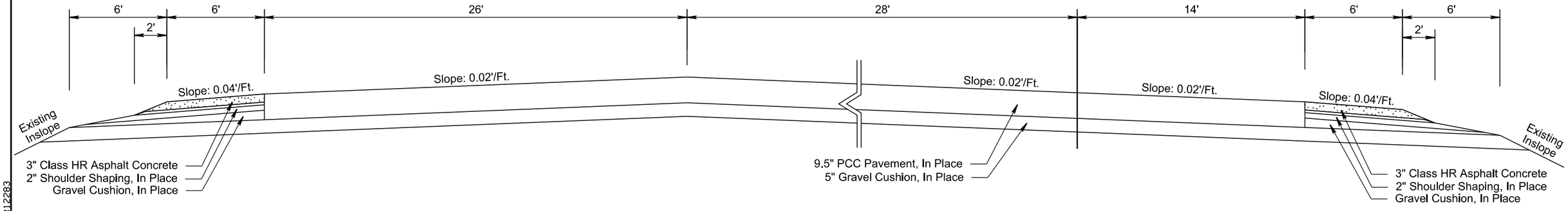
Section 3

SD HWY 79
Sta. 10+00 to Sta. 26+19.67
In Place & Cold Milling Section



Section 3

SD HWY 79
Sta. 10+00 to Sta. 26+19.67
Resurfacing Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 3

FILE - ...\09EW_TYPSECT_TJ01.DGN

TYPICAL SURFACING SECTIONS

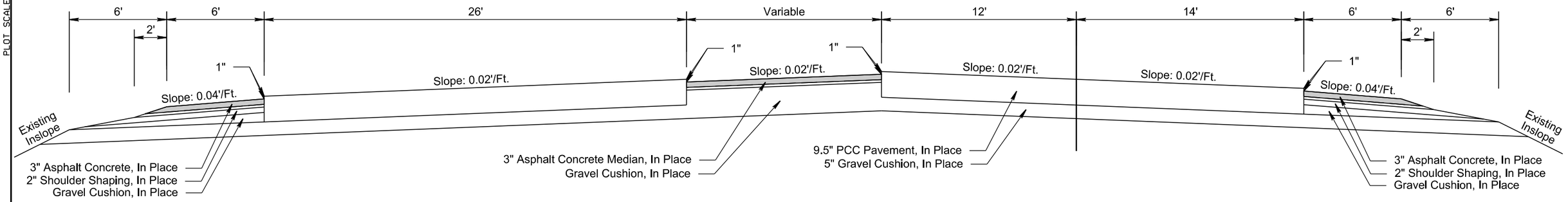
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	15	43

Plotting Date: 01/26/2024

Cold Milling @ 0.04'/Ft.
(3" From Top of Concrete)

Section 4

SD HWY 79
Sta. 26+19.67 to Sta. 51+95.69
Sta. 53+99.96 to Sta. 58+20.64
In Place & Cold Milling Section

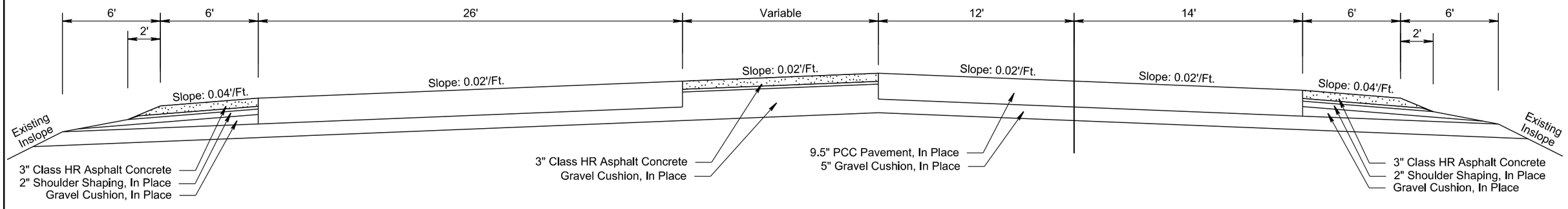


Brdige Exception:

Sta. 51+95.69 to Sta. 53+99.96

Section 4

SD HWY 79
Sta. 26+19.67 to Sta. 51+95.69
Sta. 53+99.96 to Sta. 58+20.64
Resurfacing Section



PLOT SCALE - 1:6.00001
PLOT NAME - 4
FILE - ...\09EW_TYPSECT_TJ01.DGN
PLOTTED FROM - TRPR12283

TYPICAL SURFACING SECTIONS

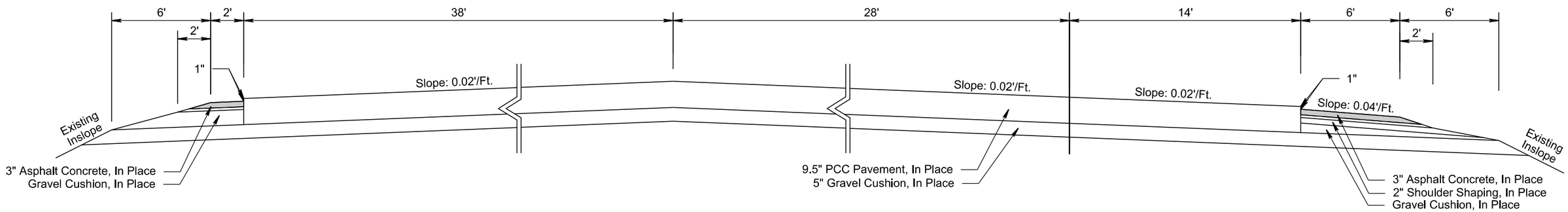
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	16	43

Plotting Date: 01/26/2024

Cold Milling @ 0.04'/Ft.
(3" From Top of Concrete)

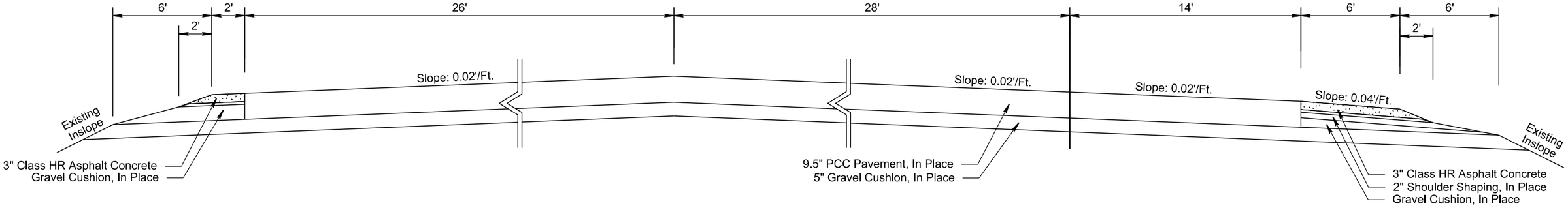
Section 5

SD HWY 79
Sta. 58+20.64 to Sta. 59+42.64
In Place & Cold Milling Section



Section 5

SD HWY 79
Sta. 58+20.64 to Sta. 59+42.64
Resurfacing Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 5

FILE - ...\09EW_TYPSECT_TJ01.DGN

TYPICAL SURFACING SECTIONS

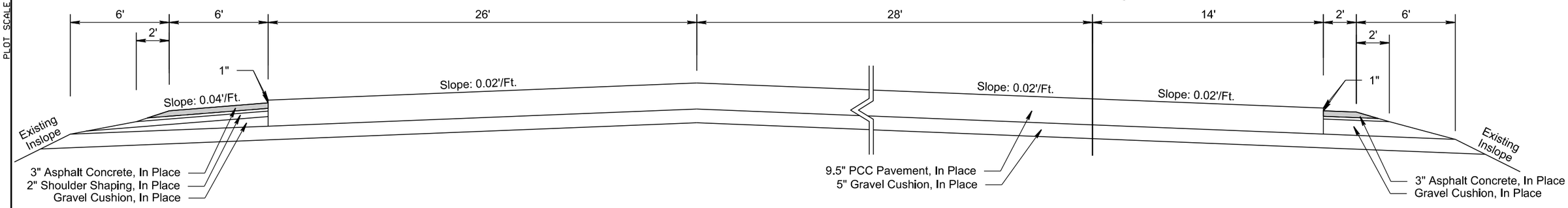
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	17	43

Plotting Date: 01/26/2024

Cold Milling @ 0.04'/Ft.
(3" From Top of Concrete)

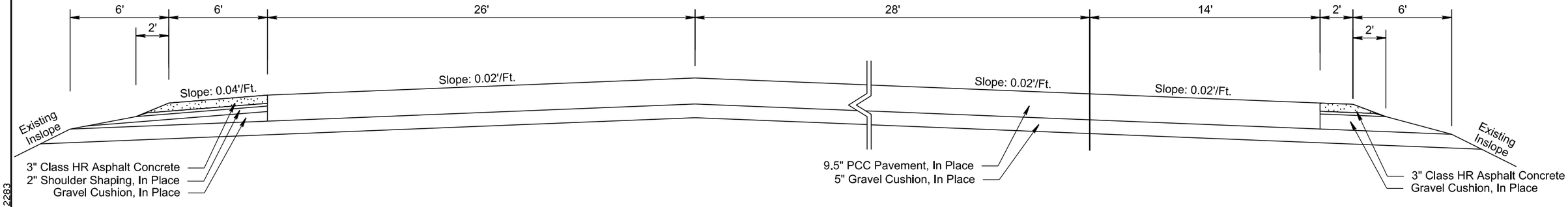
Section 6

SD HWY 79
Sta. 59+42.64 to Sta. 60+58.64
In Place & Cold Milling Section



Section 6

SD HWY 79
Sta. 59+42.64 to Sta. 60+58.64
Resurfacing Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 6

FILE - ...\09EW_TYPSECT_TJ01.DGN

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	18	43

Plotting Date: 01/26/2024

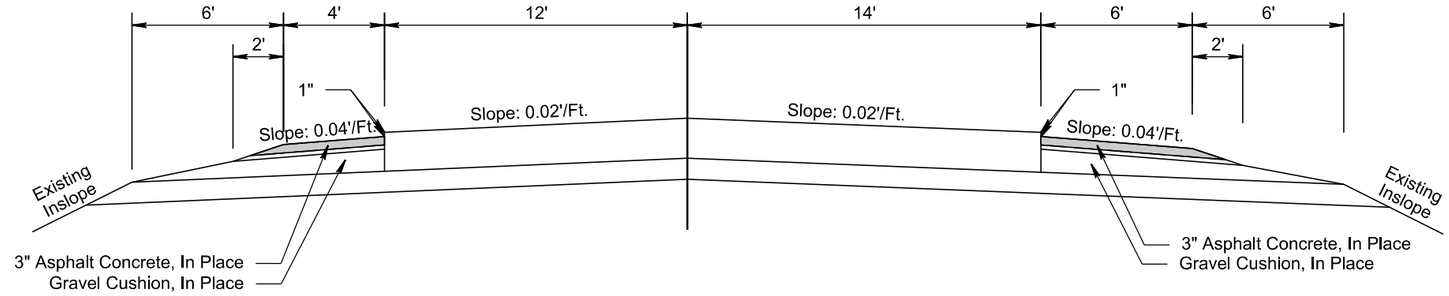
Cold Milling @ 0.04'/Ft.
(3" From Top of Concrete)

Section 7

SD HWY 79 NBL
Sta. 60+58.64 to Sta. 75+88.62
In Place & Cold Milling Section

Section 7

SD HWY 79 SBL
Sta. 60+58.64 to Sta. 76+14.76
In Place & Cold Milling Section

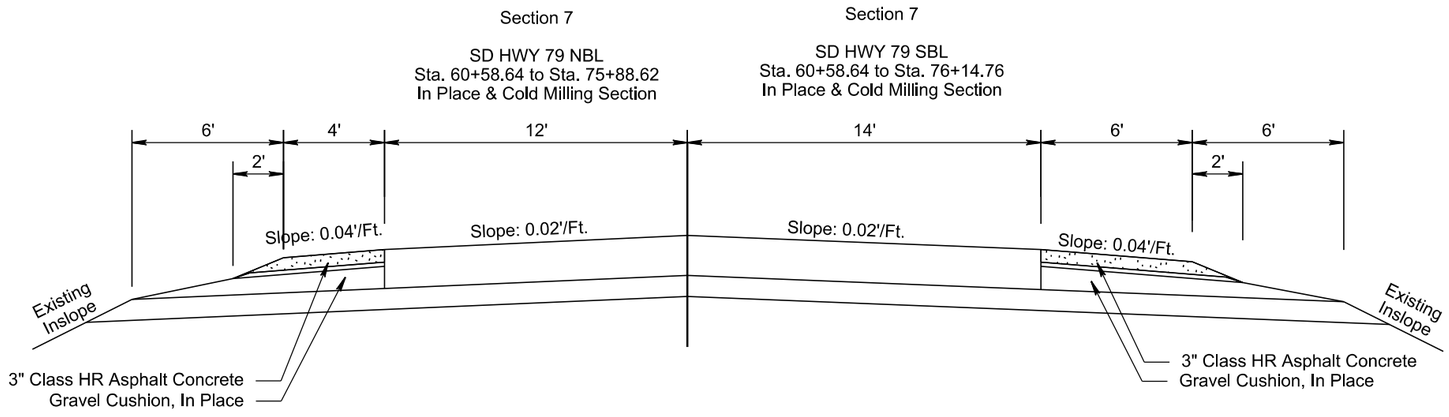


Section 7

SD HWY 79 NBL
Sta. 60+58.64 to Sta. 75+88.62
In Place & Cold Milling Section

Section 7

SD HWY 79 SBL
Sta. 60+58.64 to Sta. 76+14.76
In Place & Cold Milling Section



PLOT SCALE - 1:6.00001

PLOTTED FROM - TRPR12283

PLOT NAME - 7

FILE - ...\09EW_TYPSECT_TJD1.DGN

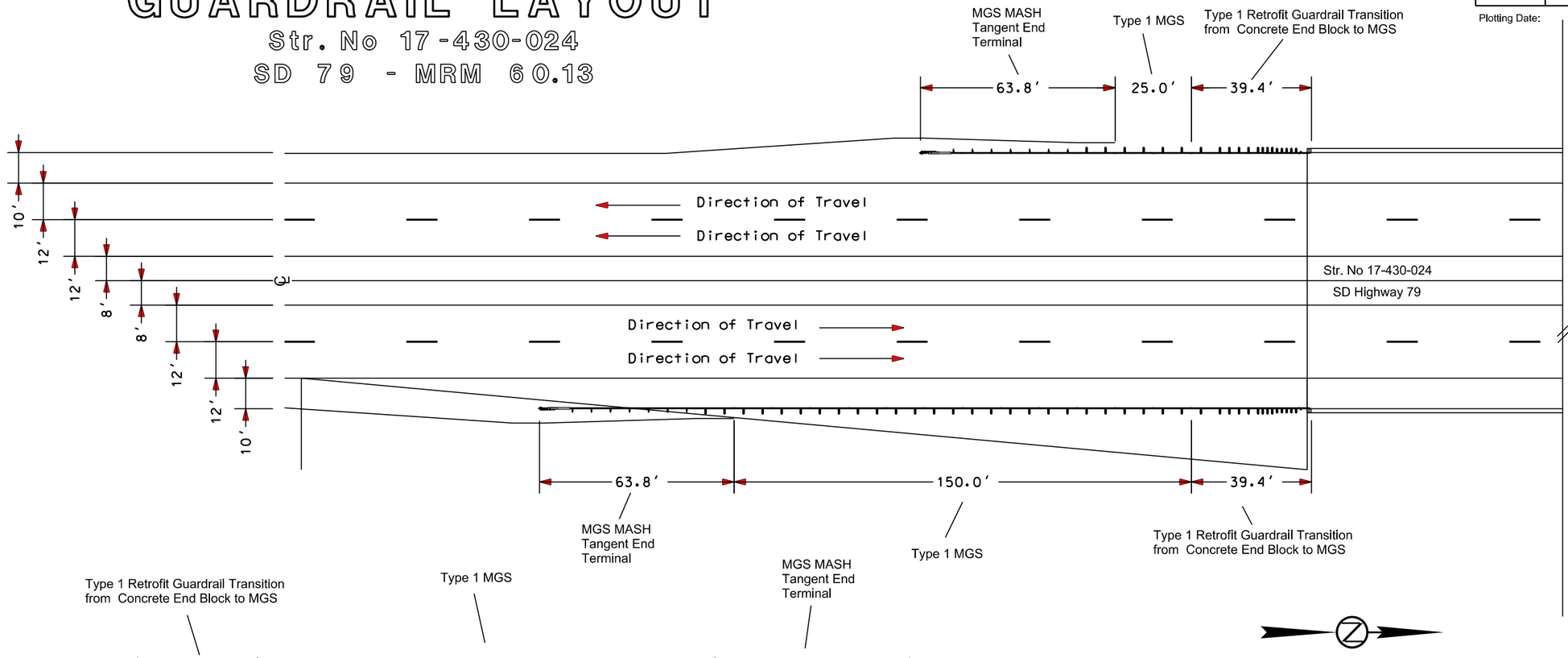
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0385(65)37 & NH-CR 0079(94)59	19	43

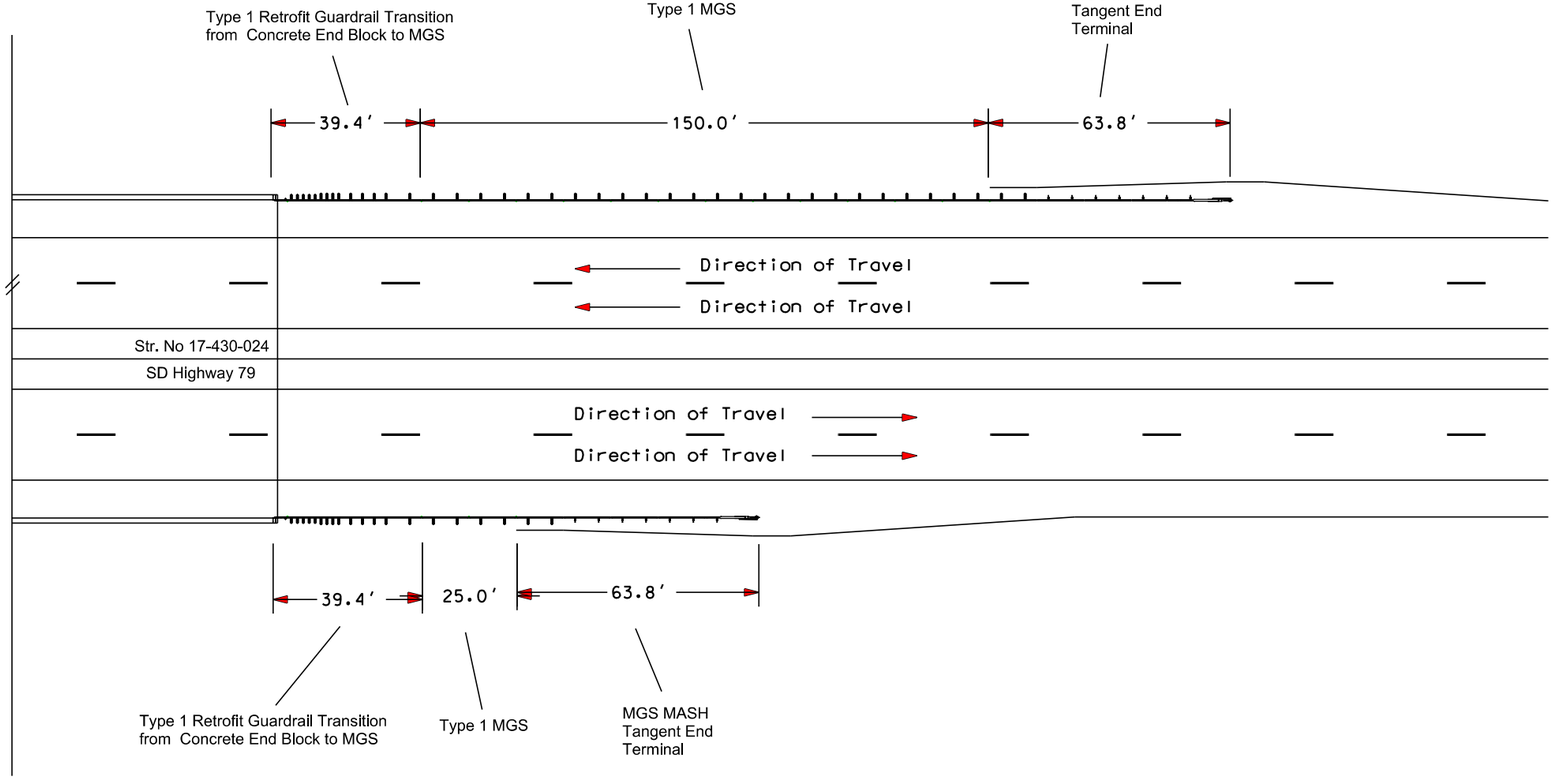
Plotting Date: 05/17/2024

GUARDRAIL LAYOUT

Str. No 17-430-024

SD 79 - MRM 60.13



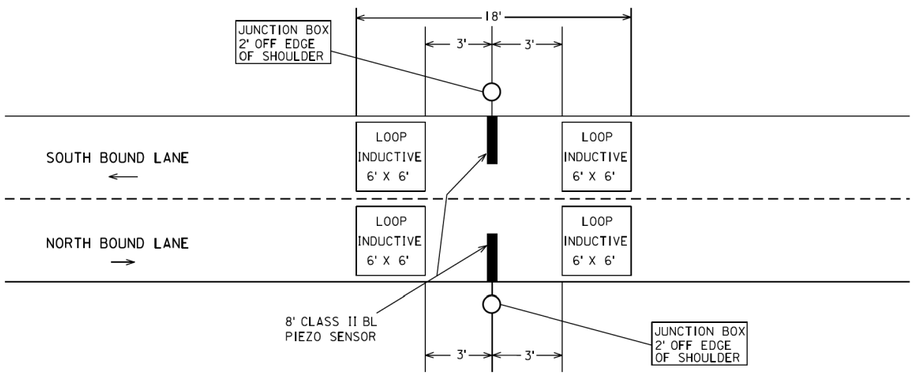


Plot Scale - 1:40

Plotted From - TRRC12608

File - ...\Guardrail\Layout Str. No. 17-430-024.dgn

DRAWING A



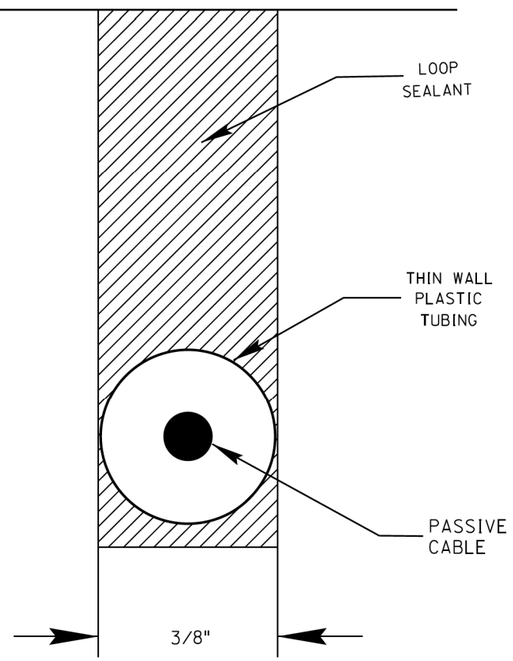
Station - PSI 174 (US385)
Lane Setup - Loop/Plezo/Loop
Counter Type - ADR 3000
Loop Type - 6'x6' Inductive Loop w/Jacket
Sensor Type - 8' Class II BL Plezo

CABINET ← TO BE LOCATED ON EAST SIDE

N

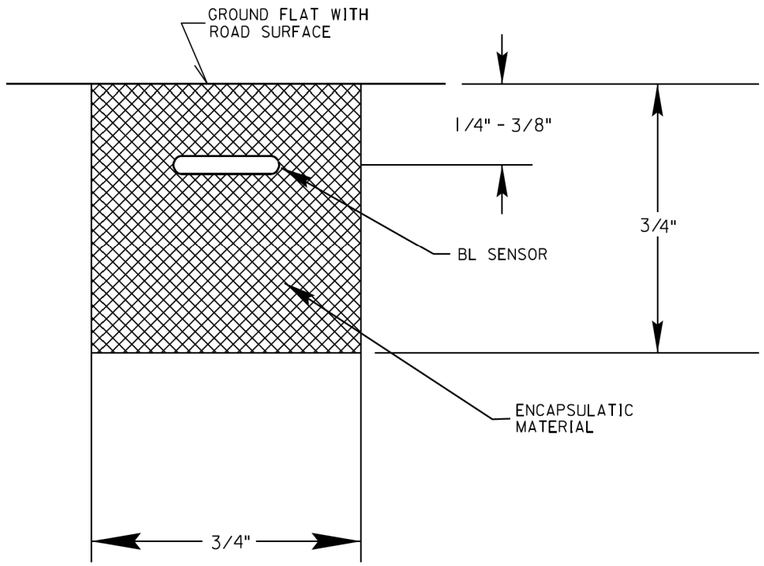
DRAWING B

A-A: THE PASSIVE CABLE CAN BE PUT IN A THIN WALL PLASTIC TUBE FOR ADDITIONAL PROTECTION.



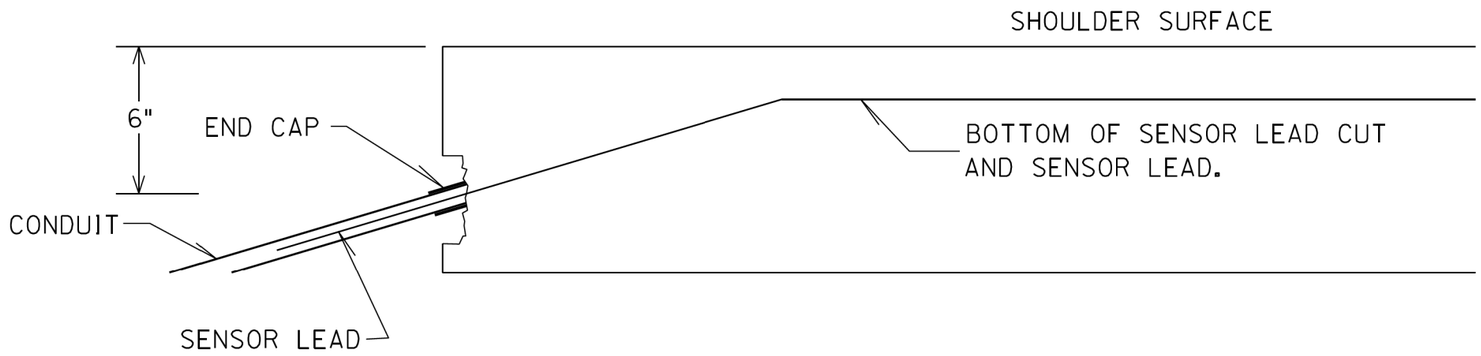
DRAWING C

B-B: TYPICAL CROSS SECTION OF A BL SENSOR INSTALLATION.



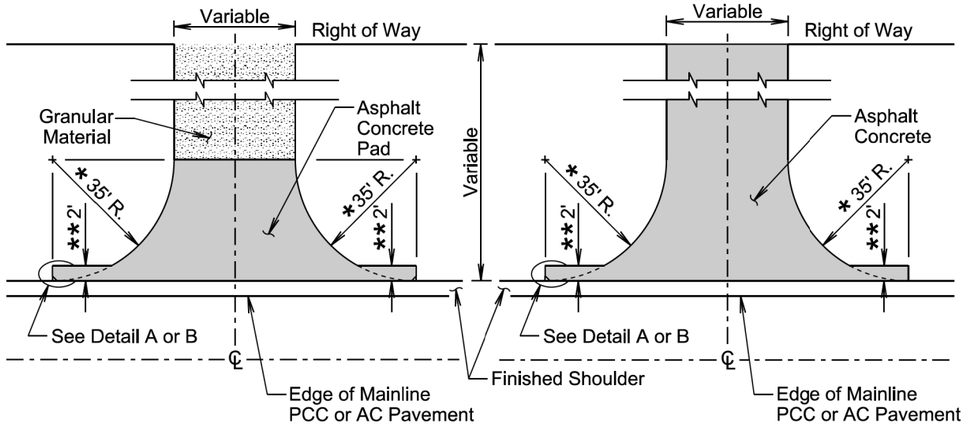
EDGE OF ROAD CONDUIT DETAILS

DRAWING D



NOTES:

1. THE SENSOR LEAD SAW CUT IS EXTENTED TO THE END OF THE PAVEMENT, IN THE FINAL 1 FOOT, THE SAW BLADE IS DROPPED TO ITS MAXIMUM DEPTH.
2. THE EARTH IS EXCAVATED AND THE CONDUIT IS INSTALLED AS CLOSE TO THE EDGE OF PAVEMENT AS POSSIBLE.
3. AFTER PULLING THE SENSOR LEAD, THE END OF THE CONDUIT IS SEALED WITH AN END CAP OR OTHER MEANS.



PLAN VIEW
(Intersecting Road)
(No Asphalt Concrete Surfacing Beyond Right of Way)

PLAN VIEW
(Intersecting Road)
(Asphalt Concrete Surfacing Beyond Right of Way)

GENERAL NOTES:

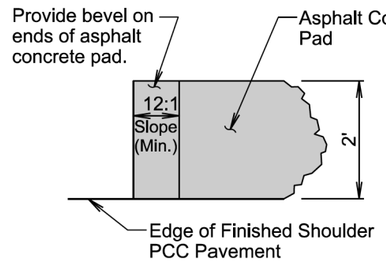
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

* For new construction, 35' radius typical or as specified in the plans. For resurfacing projects, radius is variable depending on existing conditions.

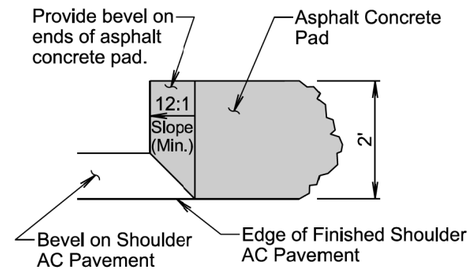
** The Contractor may adjust the screed of the paver during mainline paving operations to provide the 2-foot asphalt concrete pad or the Contractor may provide the 2-foot asphalt concrete pad during paving of the intersecting roads as shown above. The Engineer may eliminate the 2-foot asphalt concrete pads if the Engineer, in the Engineer's sole discretion, determines the pads are infeasible to construct due to site specific reasons including, but not limited to; existing inslope configuration, borrow and material availability, and right-of-way constraints.

August 27, 2020

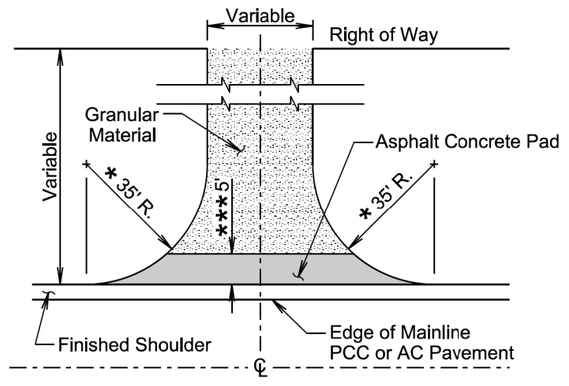
Published Date: 2025	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 1 of 2



DETAIL A
(Typ. for Projects with PCC Pavement on Shoulder)



DETAIL B
(Typ. for Projects with AC Pavement on Shoulder)

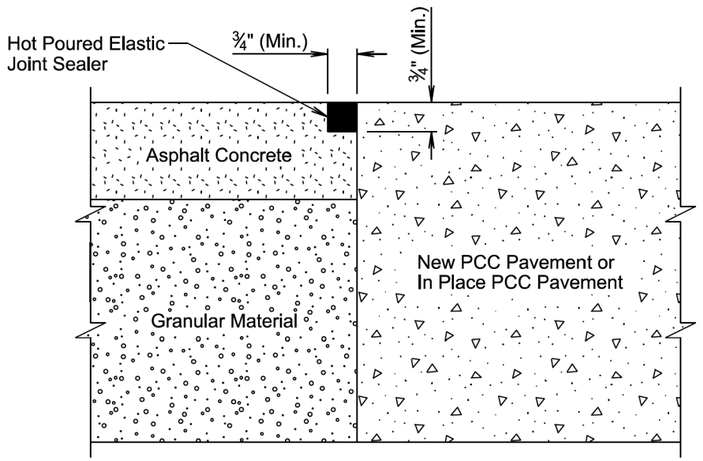


PLAN VIEW
(Entrance)

*** Not required if finished shoulder width is 4' or greater.

August 27, 2020

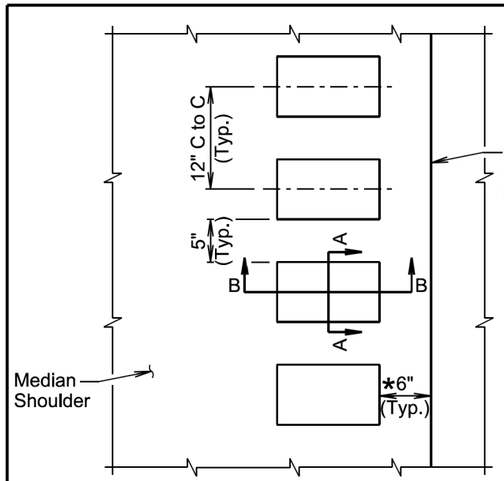
Published Date: 2025	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04 Sheet 2 of 2



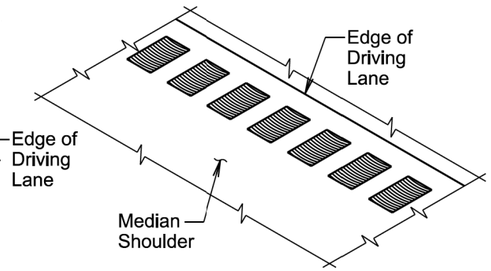
TRANSVERSE SECTION
(Asphalt Concrete Shoulder Joint)

September 14, 2019

Published Date: 2025	SDDOT	ASPHALT CONCRETE SHOULDER JOINT ADJACENT TO PCC PAVEMENT	PLATE NUMBER 320.15
			Sheet 1 of 1

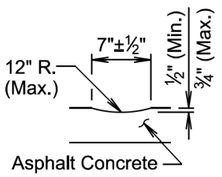


PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

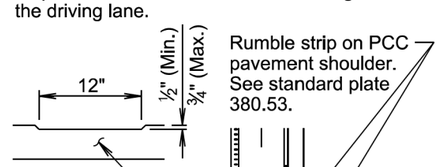


PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

* When PCC pavement width from centerline to edge of pavement is 12', the rumble strip may be placed a maximum of 2' from the edge of the driving lane.



SECTION A-A



SECTION B-B

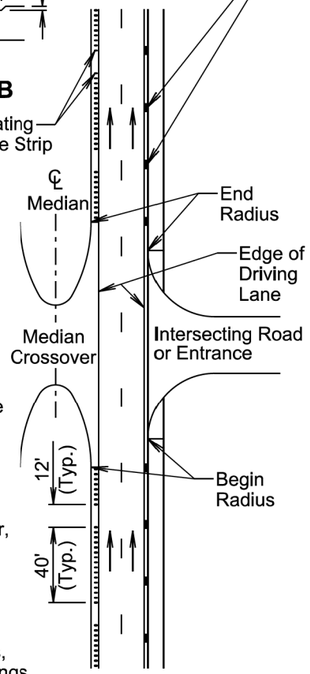
GENERAL NOTES:

A rumble strip will be constructed on all of the asphalt concrete median shoulders by grinding alternating patterns of 40' continuous indentations in the asphalt concrete. The rumble strip will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble strip will not be constructed through intersecting roads, entrances, median crossovers, entrance ramps, exit ramps, turnouts, gore areas, bridge decks, bridge approach slabs, and railroad crossings. The lengths of the 40' segments with continuous indentations and the 12' segments without a rumble strip adjacent to the intersecting roads, entrances, median crossovers, entrance ramps, exit ramps, turnouts, gore areas, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble strip the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble strip.

Measurement of the rumble strip will be to the nearest 0.1 of a mile for each median shoulder. Measurement and payment of the rumble strip will include the 12' long segments without rumble strips and the segments adjacent to intersecting roads, entrances, median crossovers, entrance ramps, exit ramps, turnouts, gore areas, bridge decks, bridge approach slabs, and railroad crossings without rumble strips. Payment for constructing the rumble strip will be at the contract unit price per mile for "Grind 12" Rumble Strip or Stripe in Asphalt Concrete".



PLAN VIEW

March 31, 2024

Published Date: 2025	SDDOT	12" RUMBLE STRIP IN ASPHALT CONCRETE ON DIVIDED HIGHWAY MEDIAN SHOULDER	PLATE NUMBER 320.26
			Sheet 1 of 1

TYPE AND DETAILS OF MGS						
Type of MGS	W Beam Rail Single or Double (Nested)	Blockout Size	Blockout Material	Post Size	Post Material	Post Spacing
1	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"
1C	Single	6"x12"x14"	Wood	6"x8"x7'-6"	Wood	6'-3"
2	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	3'-1½"
3	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	1'-6¾"
4	Double	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"

STANDARD PLATE REFERENCE	
Type of MGS	See Standard Plate(s)
1	630.20, 630.22
1C	630.20, 630.25
2	630.20
3	630.20
4	630.20

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing on sheet 2 of 6.

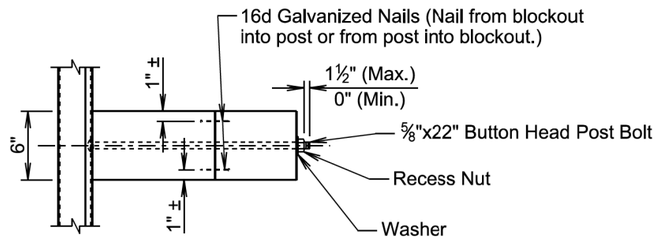
All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

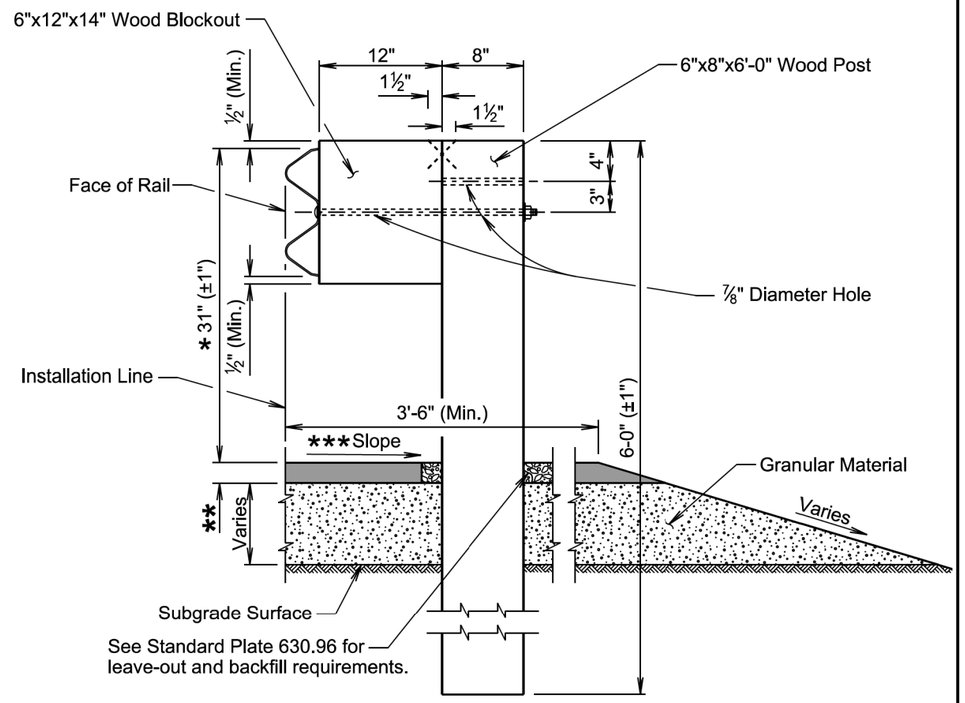
Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for constructing the MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per foot for the respective MGS contract item.

September 14, 2019



TOP VIEW
(Type 1, 2, or 3 MGS Installation)



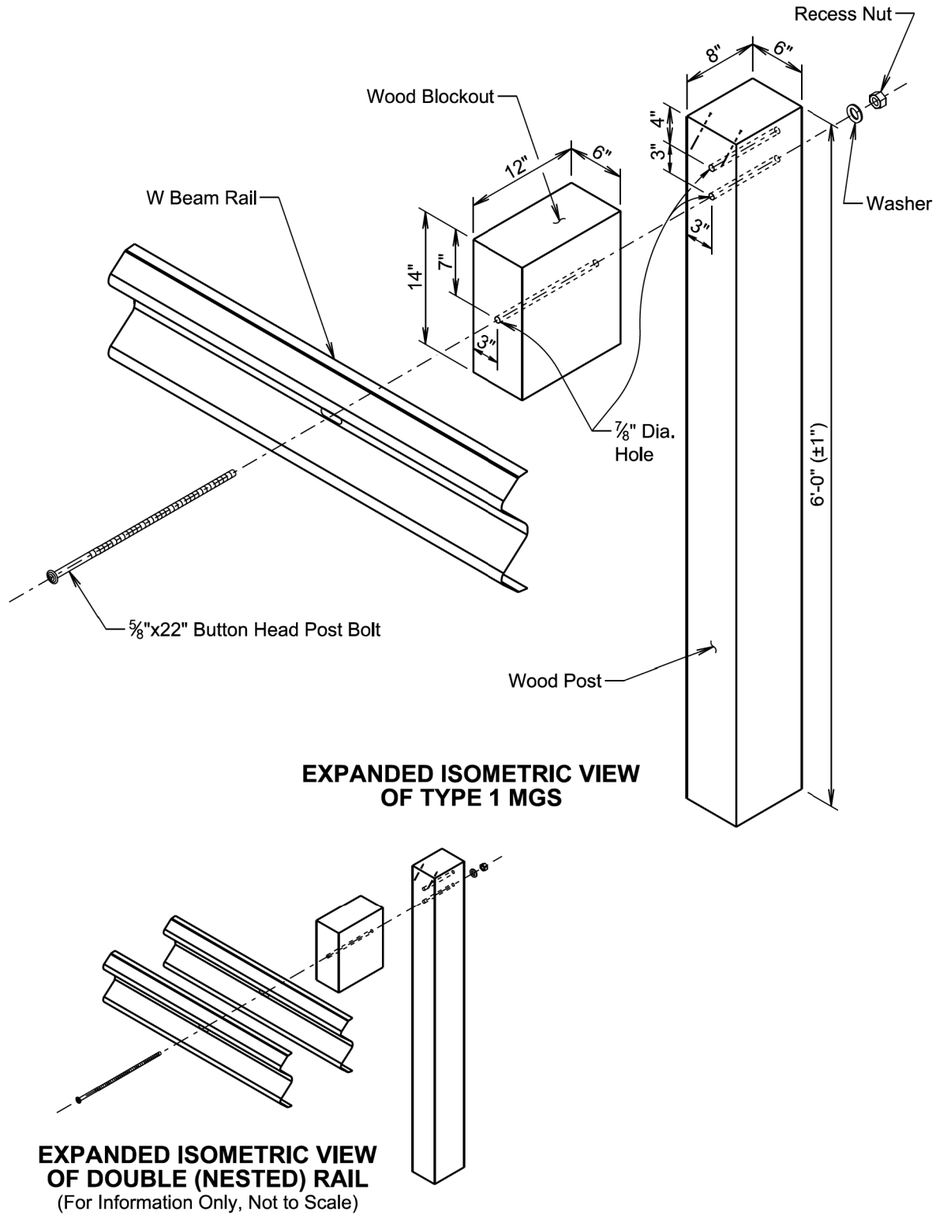
TRANSVERSE SECTION
(Type 1, 2, or 3 MGS Installation)

* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

September 14, 2019

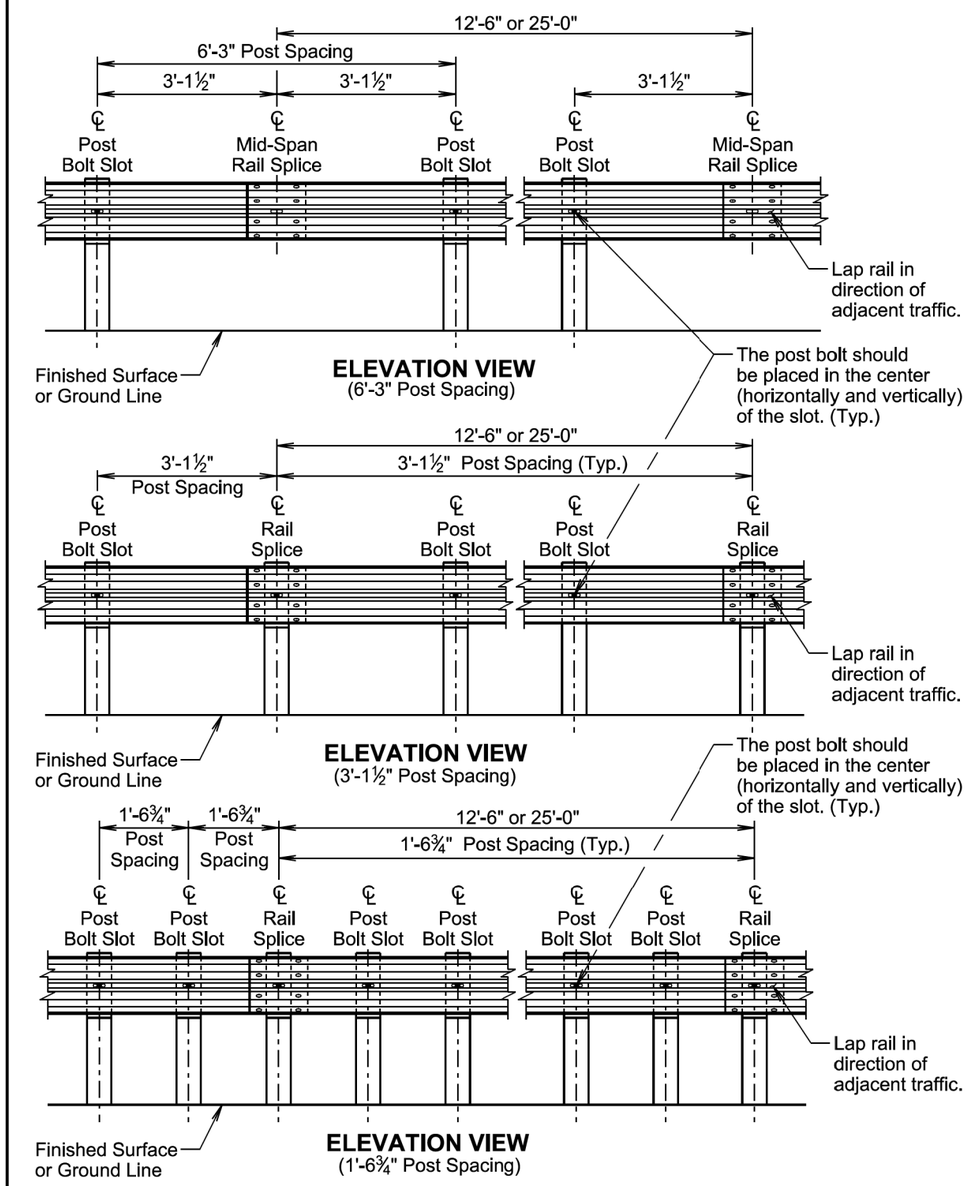


EXPANDED ISOMETRIC VIEW OF TYPE 1 MGS

EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) RAIL
(For Information Only, Not to Scale)

September 14, 2019

Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 3 of 6



ELEVATION VIEW
(6'-3" Post Spacing)

ELEVATION VIEW
(3'-1½" Post Spacing)

ELEVATION VIEW
(1'-6¾" Post Spacing)

September 14, 2019

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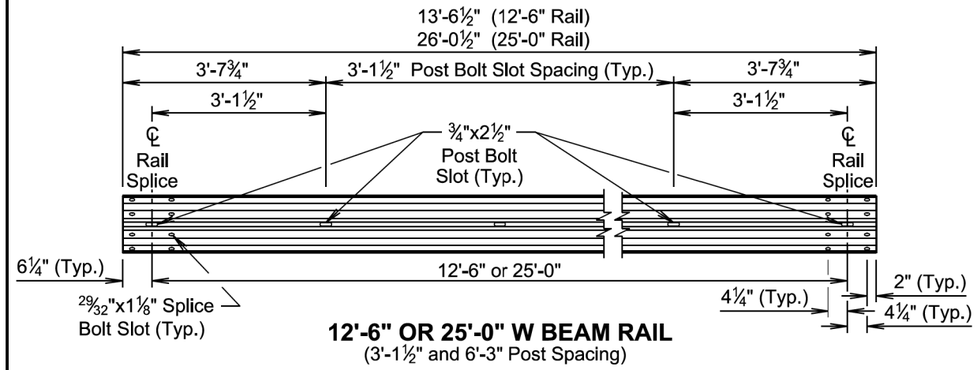
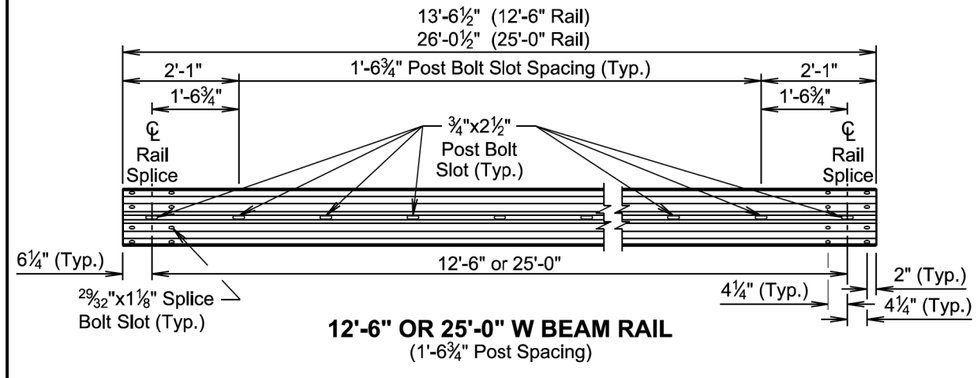


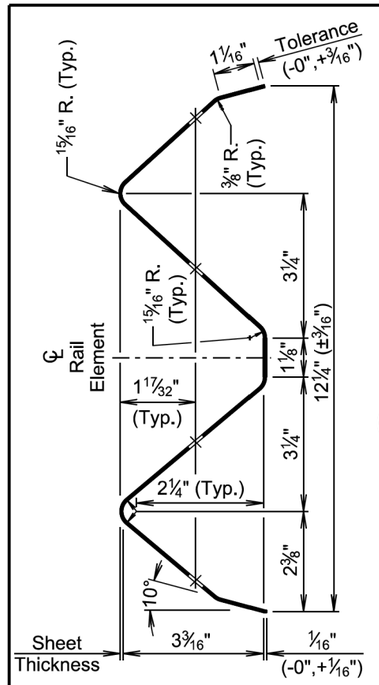
12'-6" OR 25'-0" W BEAM RAIL
(3'-1½" and 6'-3" Post Spacing)



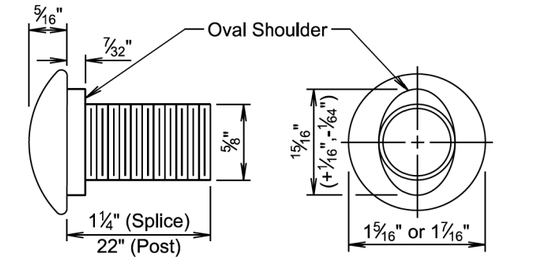
12'-6" OR 25'-0" W BEAM RAIL
(1'-6¾" Post Spacing)

September 14, 2019

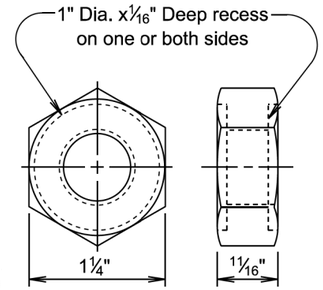
Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20	Sheet 5 of 6



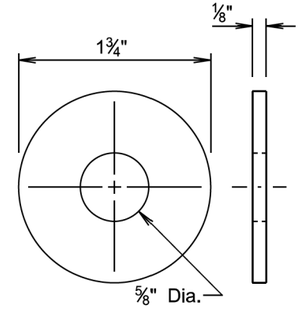
SECTION THROUGH W BEAM RAIL



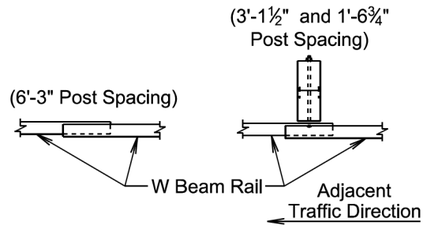
SPLICE BOLT AND POST BOLT
(⅝" Button Head Bolt)



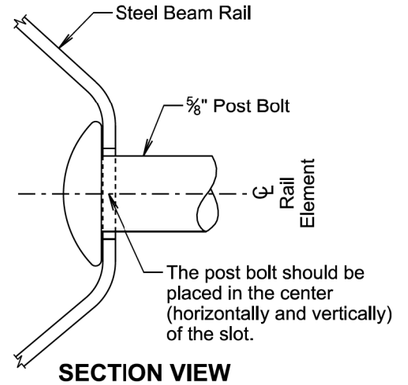
RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)



WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 2 and 3.)



PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(8 splice bolts and 8 recess nuts per splice, NO washers)



SECTION VIEW
(At Post Bolt)

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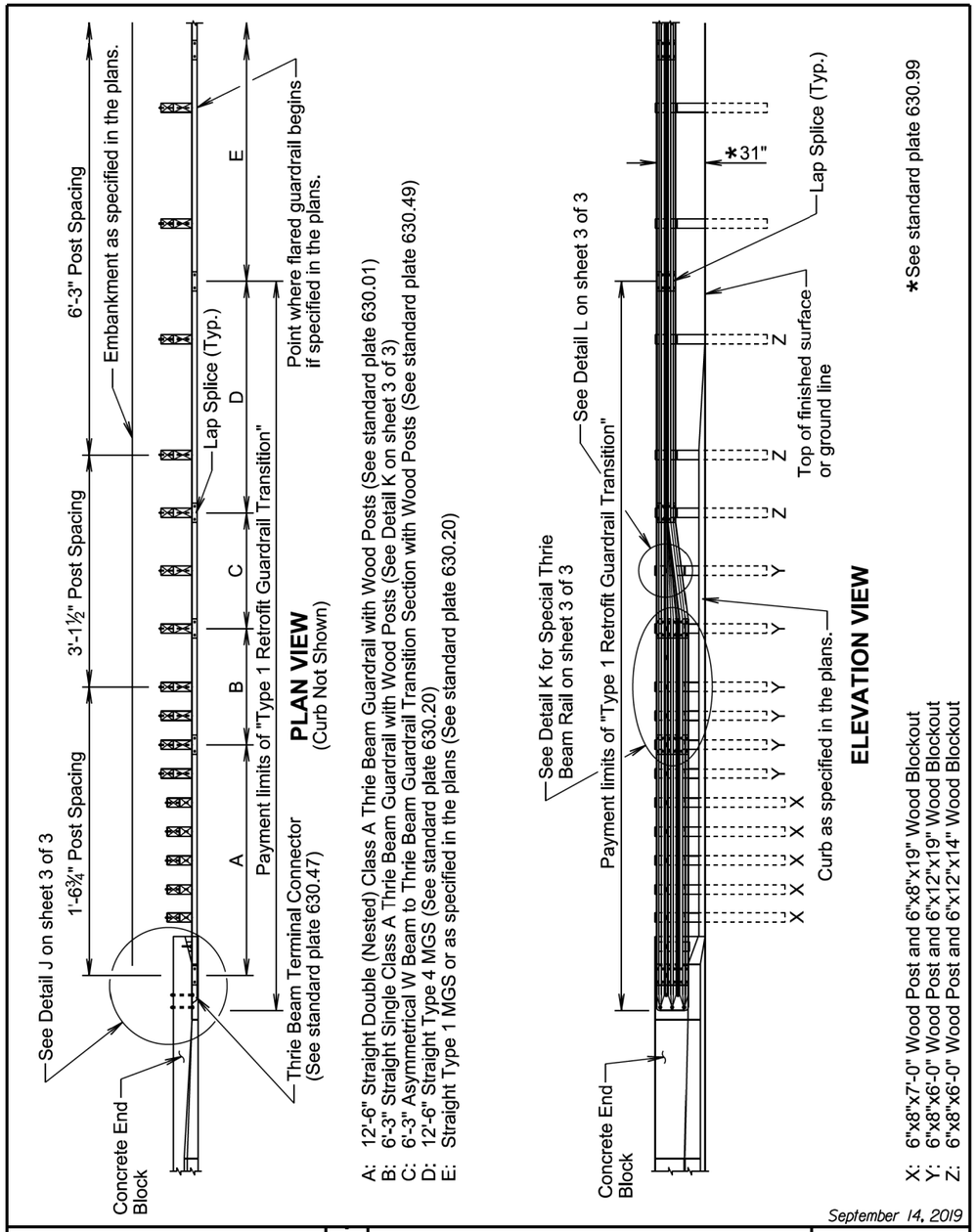
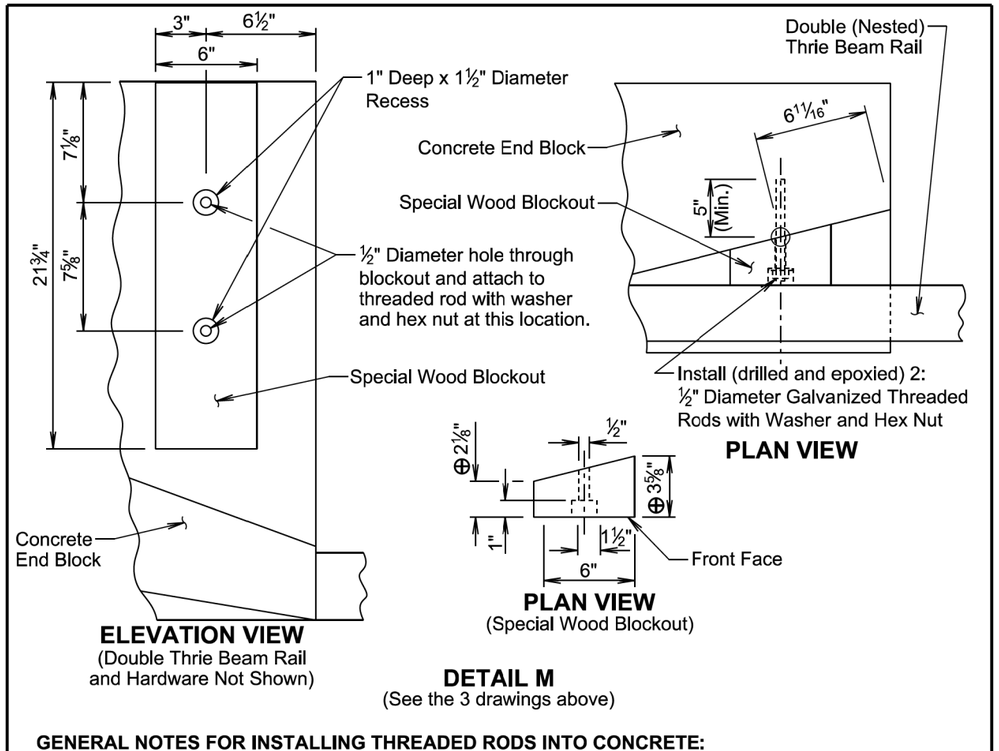


September 14, 2019

Published Date: 2025	SDDOT	TYPE 1 RETROFIT GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.51
			Sheet 1 of 3



GENERAL NOTES FOR INSTALLING THREADED RODS INTO CONCRETE:

⊕ The dimensions shown are estimated based on original construction plans of the concrete end block. The special wood blockout will be cut as necessary such that the front face of the special wood blockout will align with the vertical front face of the concrete end block ±½".

The threaded rods will be ½" diameter and conform to ASTM F1554, Grade 55. The threaded rods will be embedded a minimum of 5" into the concrete.

The diameter of the drilled holes will not be less than ⅛" greater or more than ⅜" greater than the diameter of the threaded rods or as per the Manufacturer's recommendations. The holes will not be drilled using core bits. The drilled holes will be blown out with compressed air using a device that will reach the back of the hole to ensure that all debris or loose material has been removed prior to the epoxy injection.

The epoxy resin mixture will be of a type for bonding steel to hardened concrete and will conform to AASHTO M235 Type IV, Grade 3 (Equivalent to ASTM C881, Type IV, Grade 3).

Mix epoxy resin as recommended by the Manufacturer and apply by an injection method as approved by the Engineer. Beginning at the back of the drilled holes, fill the holes ⅓ to ½ full of epoxy, or as recommended by the Manufacturer, prior to insertion of the steel rod. Rotate the steel rod during installation to eliminate voids and ensure complete bonding of the rod. Insertion of the rods by the dipping or painting methods will not be allowed.

Loads will not be applied to the epoxy grouted threaded rods until the epoxy resin has had sufficient time to cure as specified by the epoxy resin Manufacturer.

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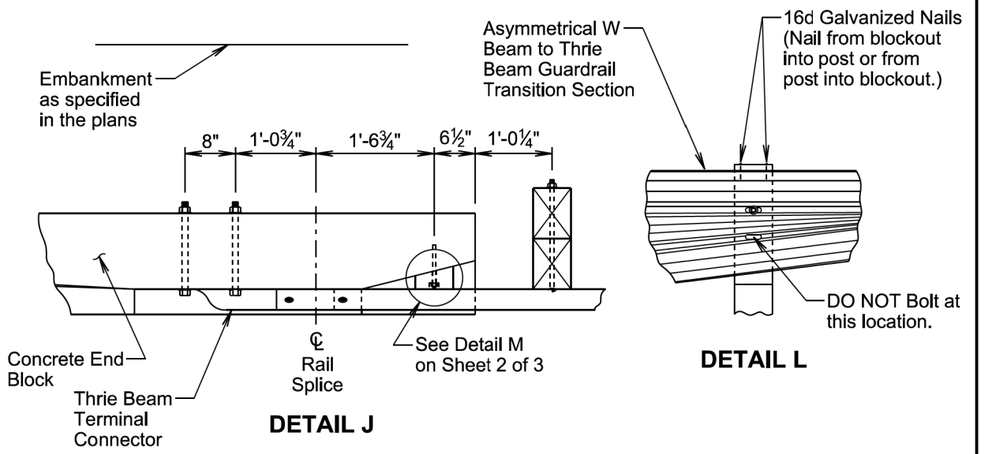
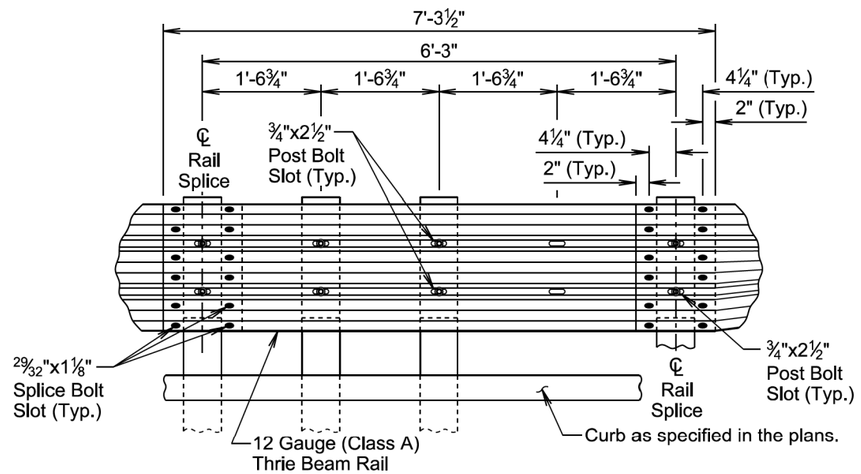
Published Date: 2025	SDDOT	TYPE 1 RETROFIT GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.51
			Sheet 2 of 3



DETAIL L

DETAIL J



DETAIL K
(Special Thrie Beam Rail)

GENERAL NOTES:

Throughout the type 1 retrofit guardrail transition, slots in the rails will be provided as specified in the plans and by the Manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for furnishing and installing the type 1 retrofit guardrail transition including labor, equipment, and materials which includes all rail sections, posts and blockouts, special blockout, hardware, and incidentals will be included in the contract unit price per each for "Type 1 Retrofit Guardrail Transition".

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Published Date: 2025	SDDOT	TYPE 1 RETROFIT GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.51
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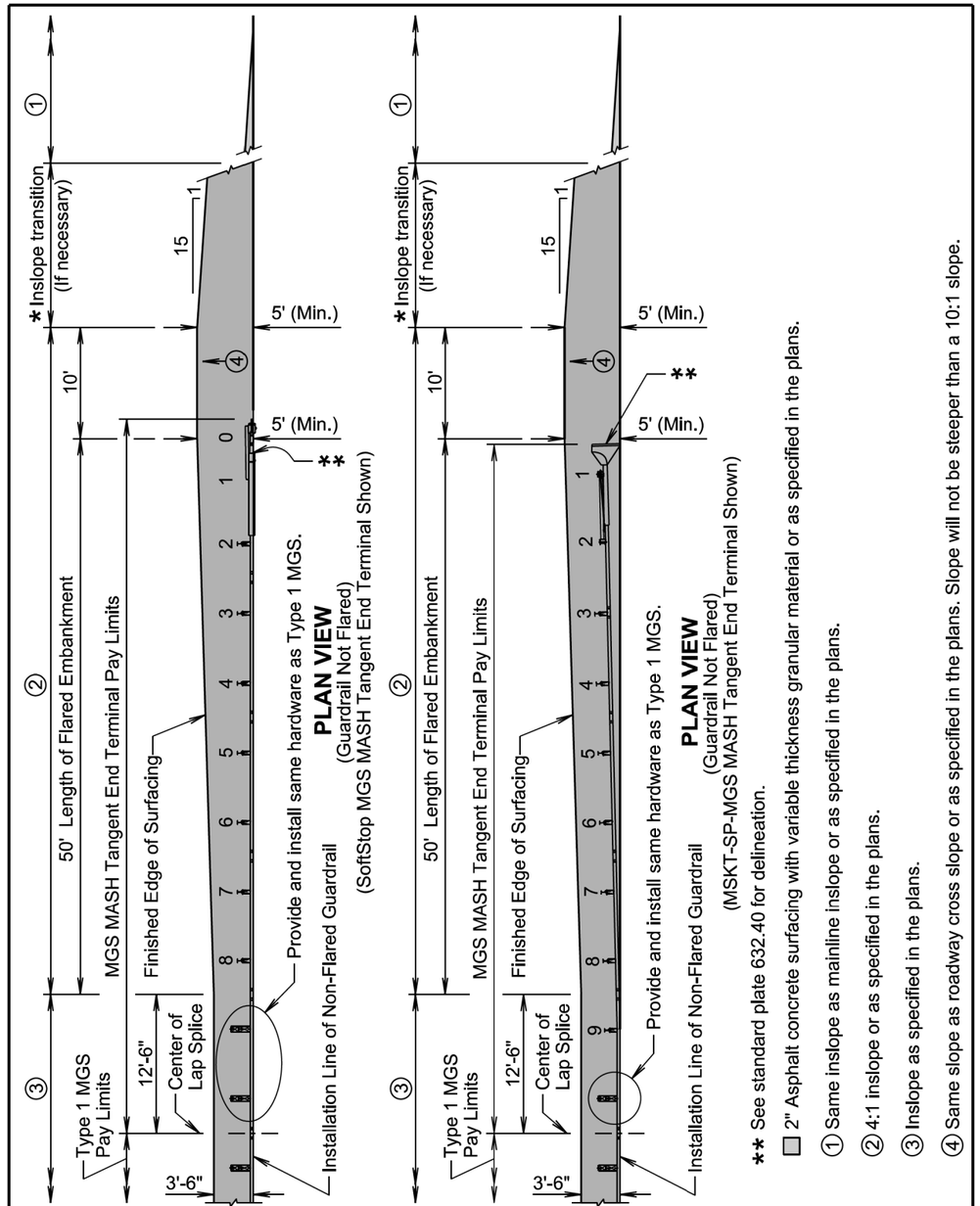
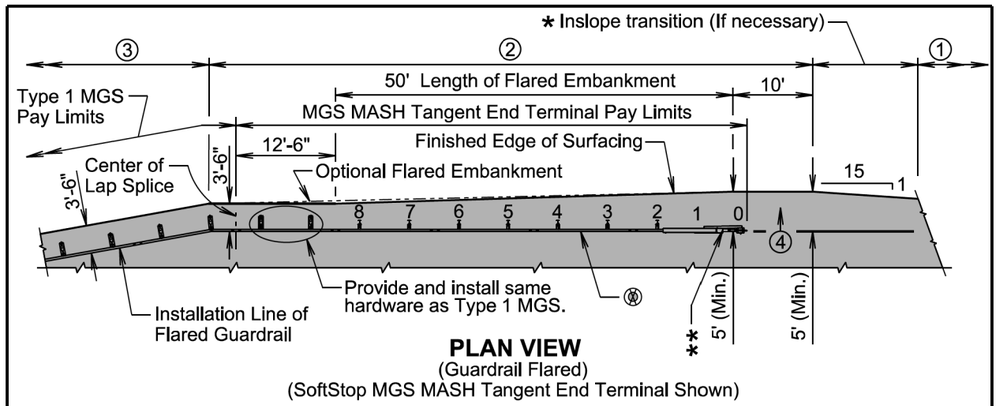
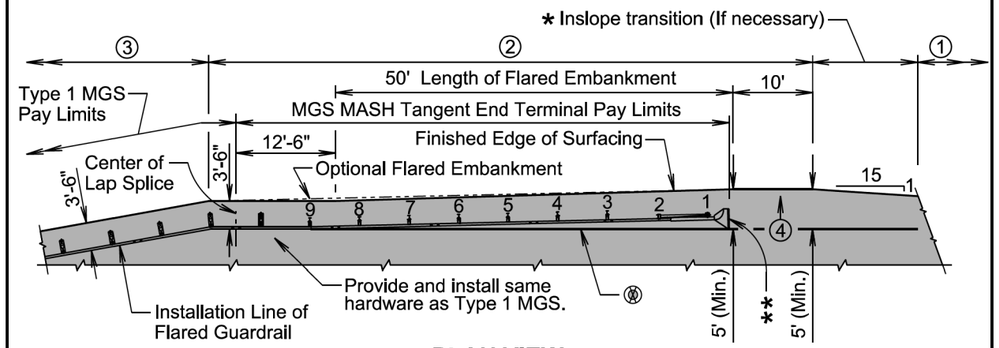


November 19, 2021

Published Date: 2025	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 1 of 2



PLAN VIEW
(Guardrail Flared)
(SoftStop MGS MASH Tangent End Terminal Shown)



PLAN VIEW
(Guardrail Flared)
(MSKT-SP-MGS MASH Tangent End Terminal Shown)

GENERAL NOTES:

The MGS MASH tangent end terminals above are for illustrative purpose only. Pay limit length of the MGS MASH tangent end terminal is 62'-6".

* The length of inslope transition varies with the amount of change between inslopes. The length of the transition will change 100' for every whole number change in the inslope. For Example: If the inslope changes from a 5:1 to a 4:1 the length of the inslope transition would be 100'. If the inslope changes from a 6:1 to a 4:1 the length of the inslope transition would be 200'.

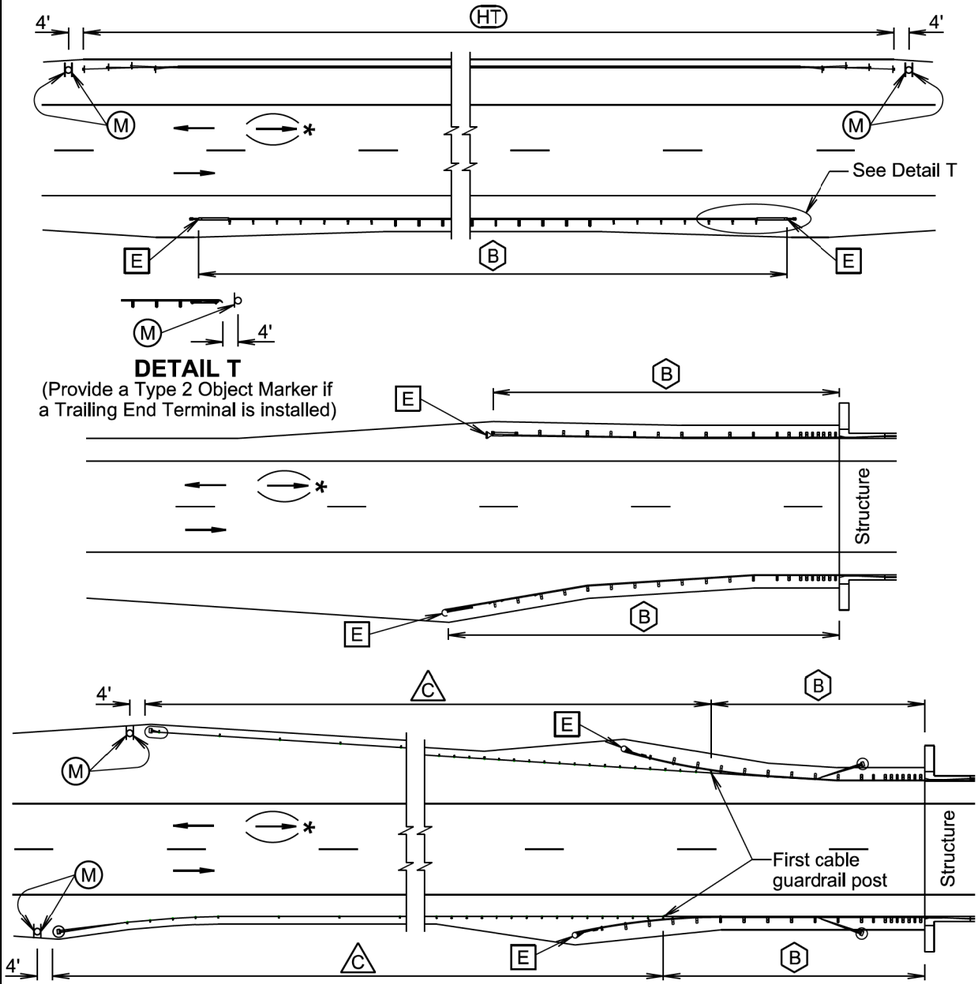
Ⓜ The installation reference line for MGS MASH tangent end terminals will always be parallel to the roadway.

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

November 19, 2021

Published Date: 2025	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89 Sheet 2 of 2



DETAIL T
(Provide a Type 2 Object Marker if a Trailing End Terminal is installed)

PLAN VIEW
(Typical Guardrail Layouts)

- (B) Steel Beam Guardrail Delineation
- [E] Guardrail End Terminal Object Marker
- △C 3 Cable Guardrail (Low Tension) Delineation
- (HT) High Tension Cable Guardrail Delineation
- (M) Type 2 Object Marker

*For two-way traffic, install delineation at the opposite end of structure the same as shown. Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

March 31, 2024

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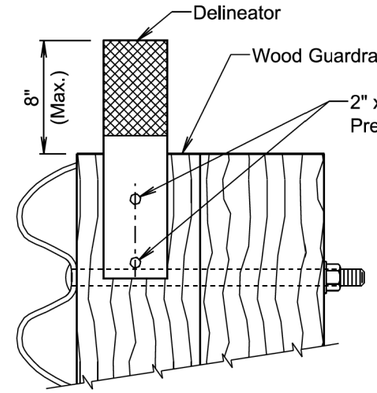
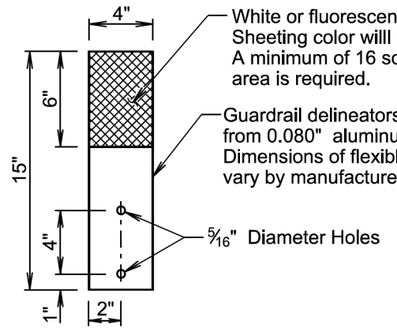
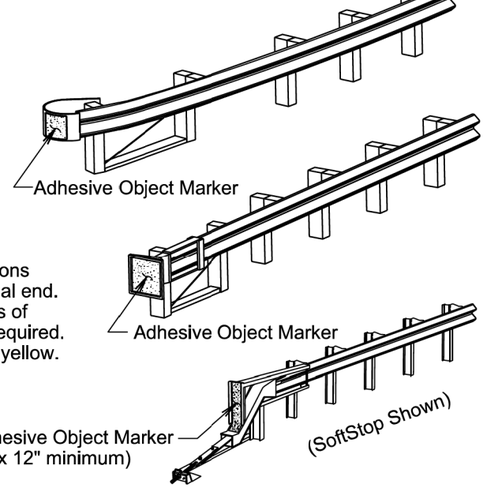
			Sheet 1 of 4



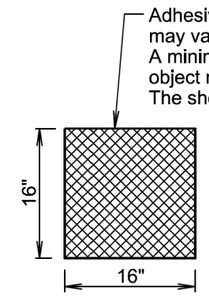
(B) STEEL BEAM GUARDRAIL DELINEATION



DELINEATOR
(For Steel Beam Guardrail)



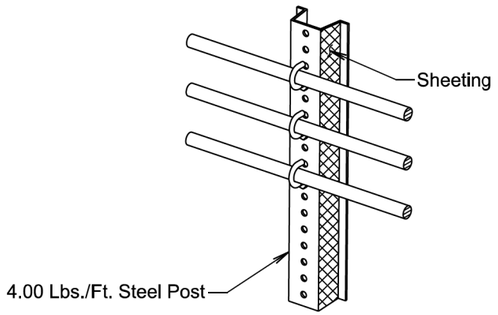
[E] GUARDRAIL END TERMINAL OBJECT MARKER



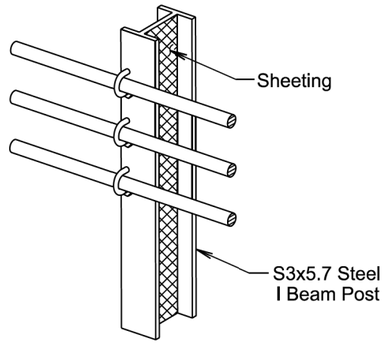
ADHESIVE OBJECT MARKER

March 31, 2024

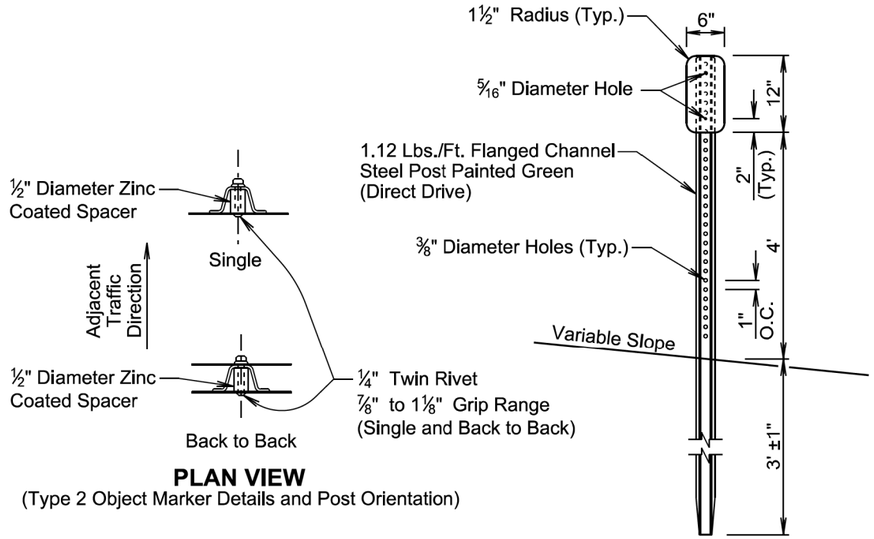
Published Date: 2025	SDDOT	DELINEATION GUARDRAIL	PLATE NUMBER 632.40
			Sheet 2 of 4



Ⓒ **3 CABLE GUARDRAIL (LOW TENSION) DELINEATION**



Ⓒ **3 CABLE GUARDRAIL (LOW TENSION) DELINEATION**



PLAN VIEW
(Type 2 Object Marker Details and Post Orientation)

ELEVATION VIEW
Ⓜ (Type 2 Object Marker)
(For Marking 3 Cable Guardrail (Low Tension) Anchor, High Tension Cable Guardrail Anchor, and Trailing End Terminal)

March 31, 2024

Published Date: 2025	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 3 of 4

GENERAL NOTES:

The delineation of high tension cable guardrail will be reflective sheeting placed back to back on every third post cap or cable spacer. Maximum spacing of delineation will not exceed 35 feet. The sheeting will be type XI in conformance with ASTM D4956. The color of the reflective sheeting will be the same as the nearest pavement marking.

The delineators for steel beam guardrail and sheeting on 3 cable guardrail (low tension) posts will be covered with a minimum of 16 square inches of reflective sheeting. The reflective sheeting will be type XI in conformance with ASTM D4956. Along two-way roadways the sheeting will be on both sides of the delineators and guardrail posts and will be white in color. For one-way roadways the sheeting will only be required on the side facing traffic and the color will be the same as the nearest pavement marking, yellow on the left side of the roadway and white on the right side.

When steel beam guardrail is attached to a bridge the first delineator will be attached to the post nearest the bridge.

At bridges with guardrail less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object marker. The spacing between the delineators will be approximately one third of the length of the guardrail.

At bridges with guardrail 200 feet and greater in length, including bridges that have steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

Steel beam guardrail that is not attached to a bridge and is less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object markers. The spacing between the delineators will be approximately one third of the length of the guardrail.

Steel beam guardrail that is not attached to a bridge and is 200 feet and greater in length, including steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

All costs for furnishing and installing single or back to back guardrail delineation on 3 cable guardrail and steel beam guardrail will be included in the contract unit price per each for "Guardrail Delineator".

All costs for furnishing and installing the reflective sheeting on the cable spacers or post caps for the high tension cable guardrail will be incidental to the respective high tension cable guardrail contract item.

An adhesive object marker will be placed on the end of the W beam guardrail or MGS end terminal. The adhesive object marker dimensions may vary due to the shape of the terminal end. A minimum of 256 square inches of object marker reflective sheeting area is required on end terminals with sufficient surface area. Other end terminals (SoftStop) will require an adhesive object marker with a minimum size of 6" x 12". The reflective sheeting will be fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the adhesive object marker will be incidental to various contract items.

A type 2 object marker will be placed adjacent to the 3 cable guardrail (low tension) anchor, high tension cable guardrail anchor, and trailing end terminal at the location noted on sheet 1 of this standard plate. The type 2 object marker (6" x 12") will have fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the type 2 object marker including the steel post, 6" x 12" reflective panel, and hardware will be included in the contract unit price per each for "Type 2 Object Marker" for single-sided and "Type 2 Object Marker Back to Back" for back to back type 2 object markers.

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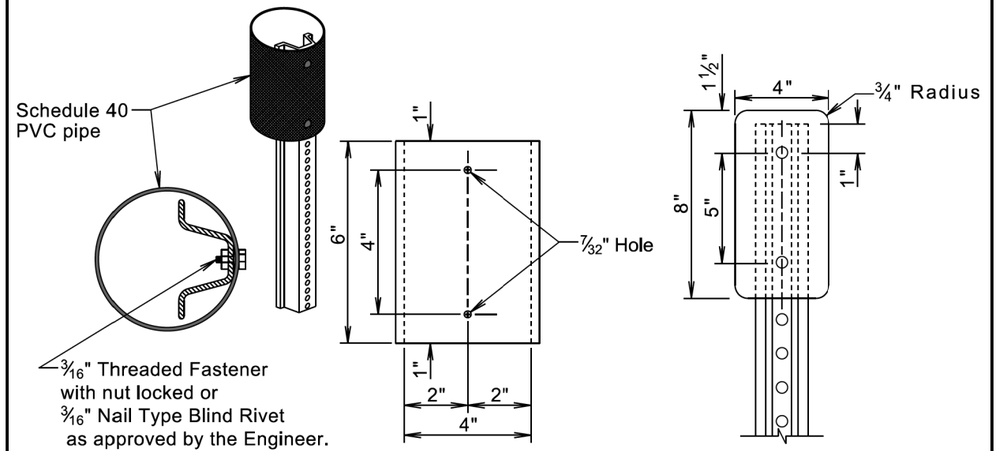
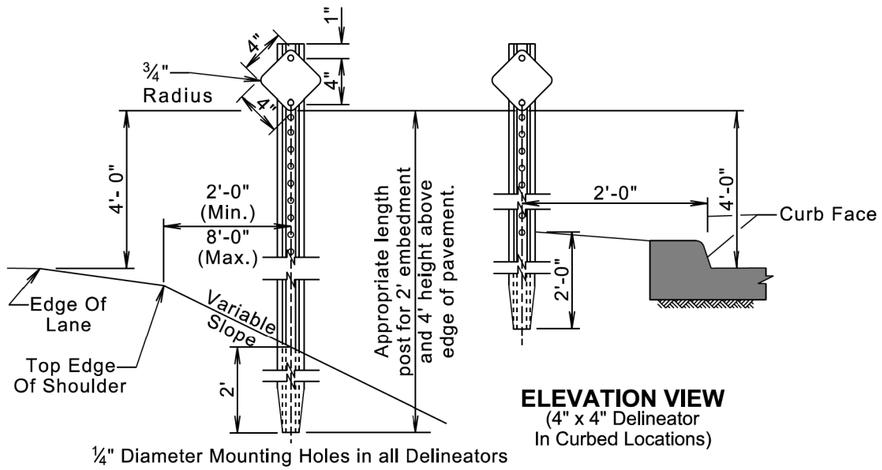


ELEVATION VIEW
(4" Tubular delineator
mounted on post)

ELEVATION VIEW
(4" x 8" Delineator)



ELEVATION VIEW
(4" x 4" Delineators)

ELEVATION VIEW
(4" x 4" Delineator
In Curbed Locations)

GENERAL NOTES:

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

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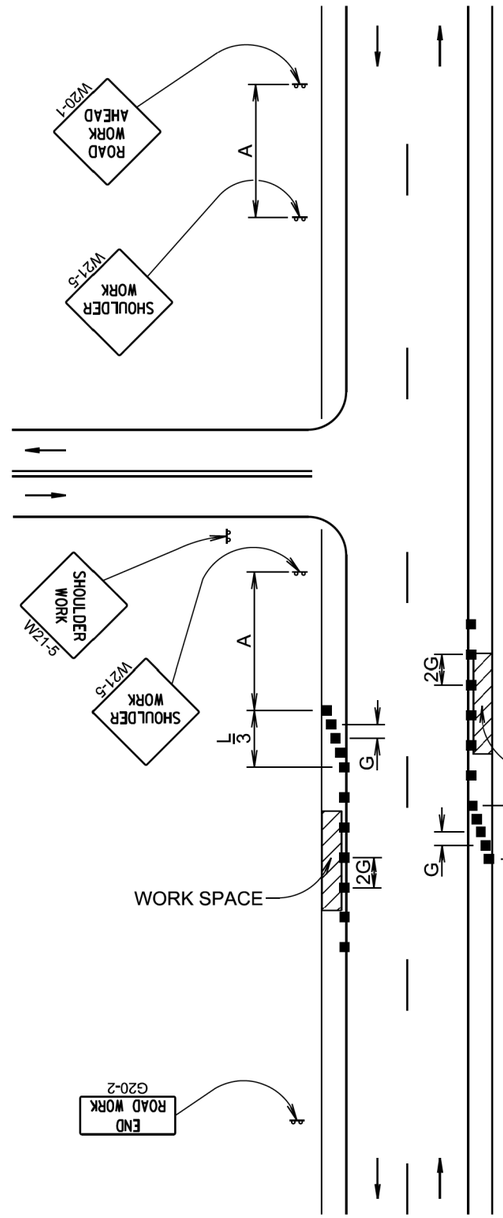
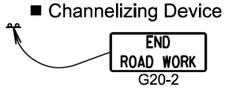
Published Date: 2025	SDDOT	***DELINEATOR INSTALLATION DETAIL***	*PLATE NUMBER* 632.42
			Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

Published Date: 2025

SDDOT

WORK ON SHOULDERS

PLATE NUMBER 634.03

Sheet 1 of 1

*In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

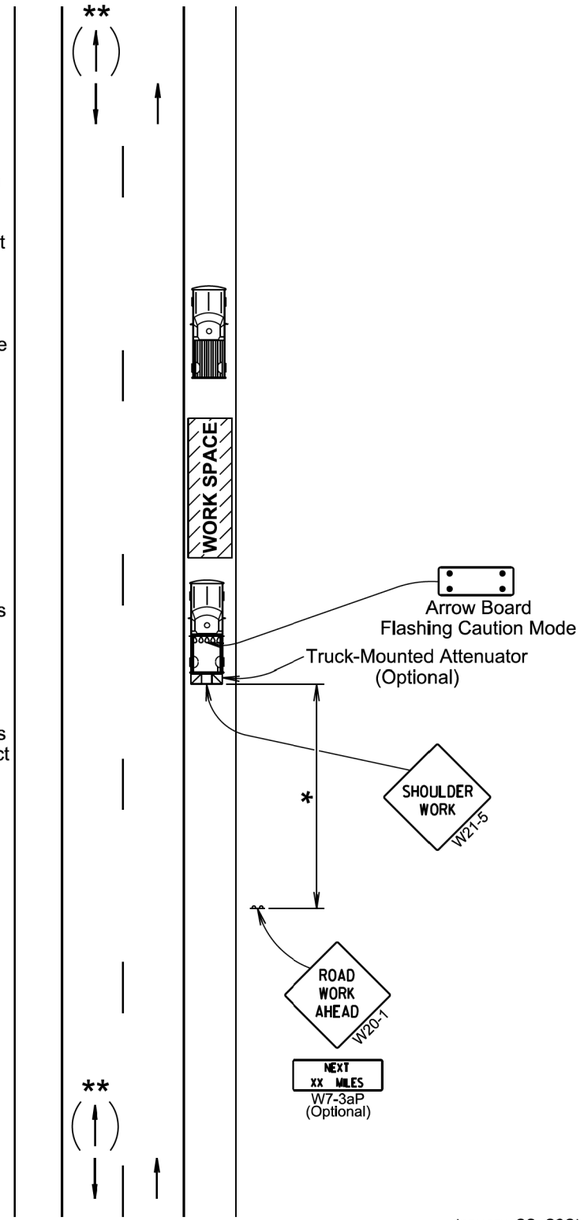
The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

Arrow board is required for intermittently and continuously moving mobile operations when work exceeds 1 hour.

**If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

In situations where the distance between the advance warning signs and the work is 2 miles to 5 miles, a Supplemental Distance plaque should be used with the ROAD WORK AHEAD sign.

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON SHOULDERS

PLATE NUMBER 634.04

Sheet 1 of 1

* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

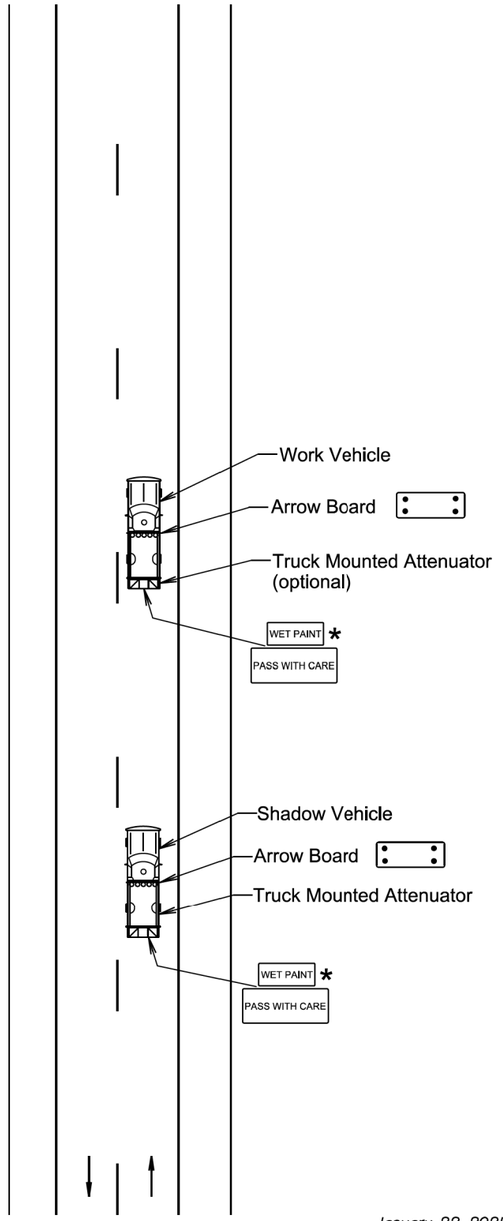
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON 2-LANE ROAD

PLATE NUMBER 634.06

Sheet 1 of 1

* Messages on signs will vary depending on the operation being conducted.

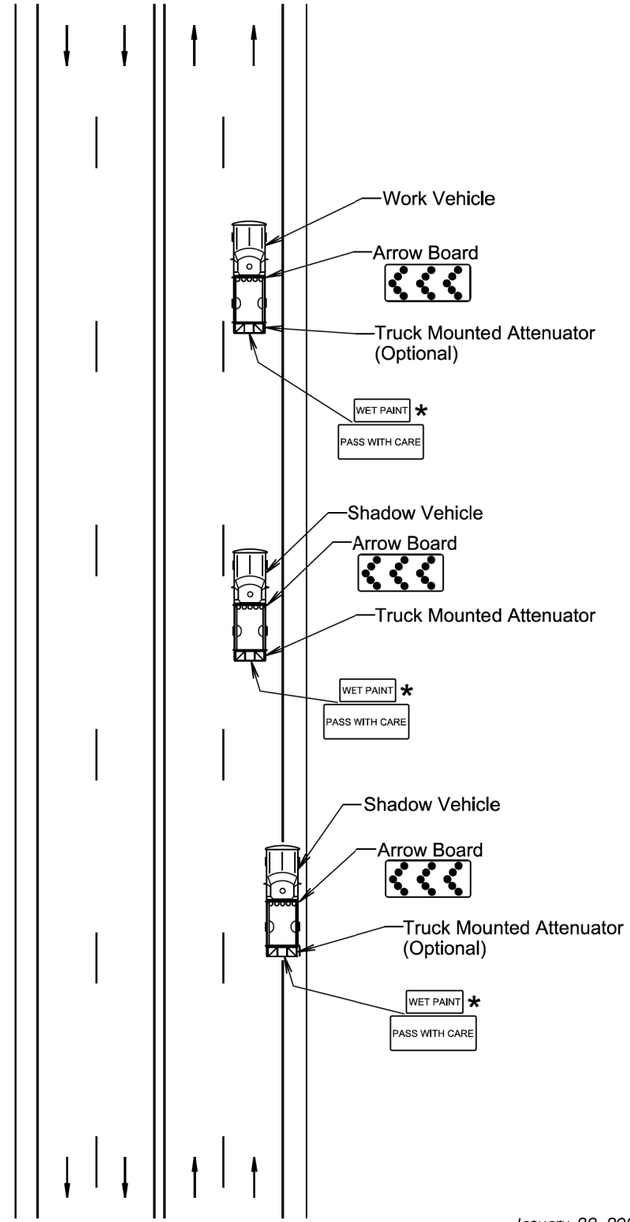
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS

PLATE NUMBER 634.08

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

Flagger

Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

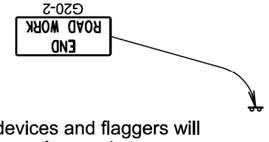
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

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

The channelizing devices will be drums or 42" cones.

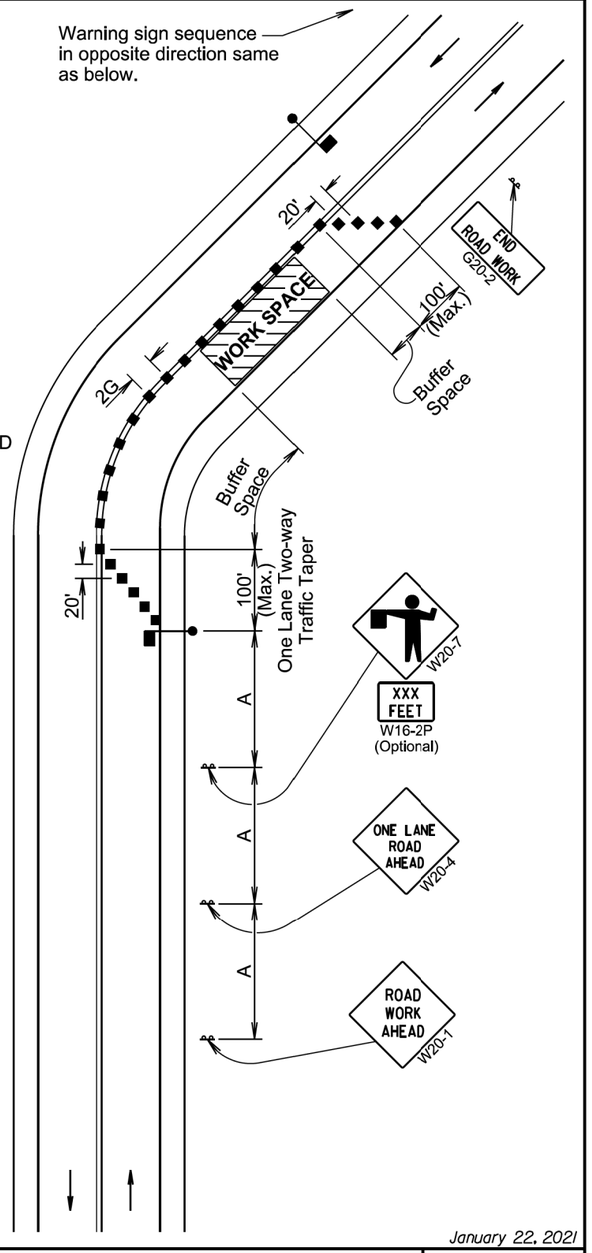
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

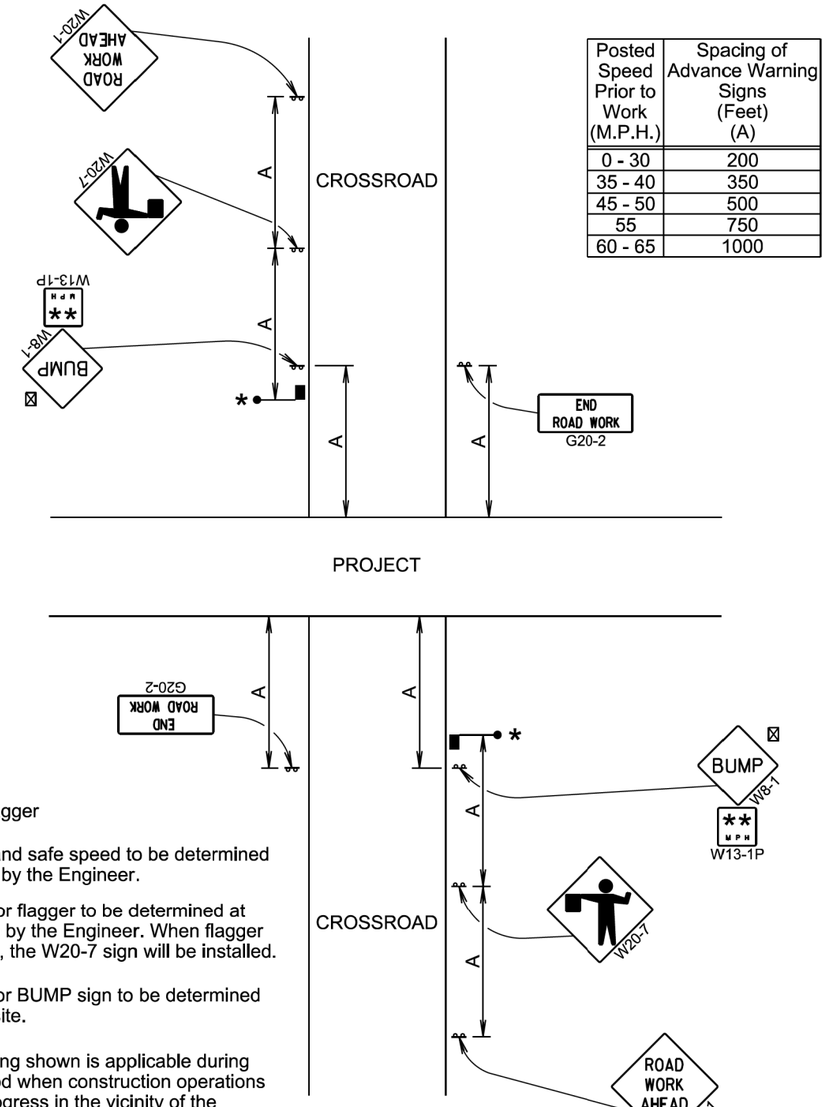
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



January 22, 2021

Published Date: 2025	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1



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

Flagger

** Need and safe speed to be determined on site by the Engineer.

* Need for flagger to be determined at the site by the Engineer. When flagger is used, the W20-7 sign will be installed.

☒ Need for BUMP sign to be determined at the site.

The signing shown is applicable during that period when construction operations are in progress in the vicinity of the crossroad. Need for such signing at specific crossroad locations will be determined at the site by the Engineer.

January 22, 2021

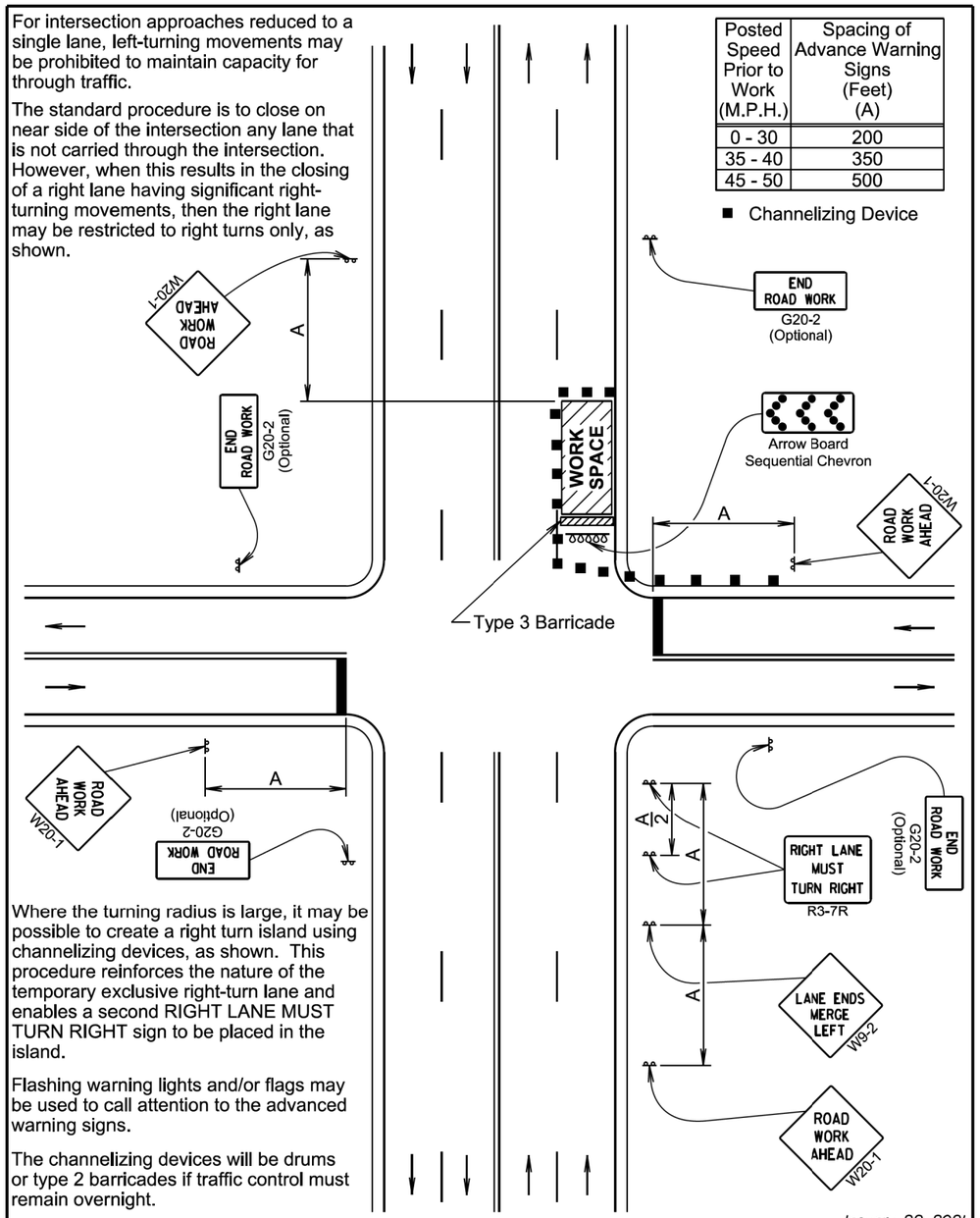
Published Date: 2025	SDDOT	PROJECT OPEN TO TRAFFIC FROM CROSSROAD	PLATE NUMBER 634.38
			Sheet 1 of 1

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)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

■ Channelizing Device

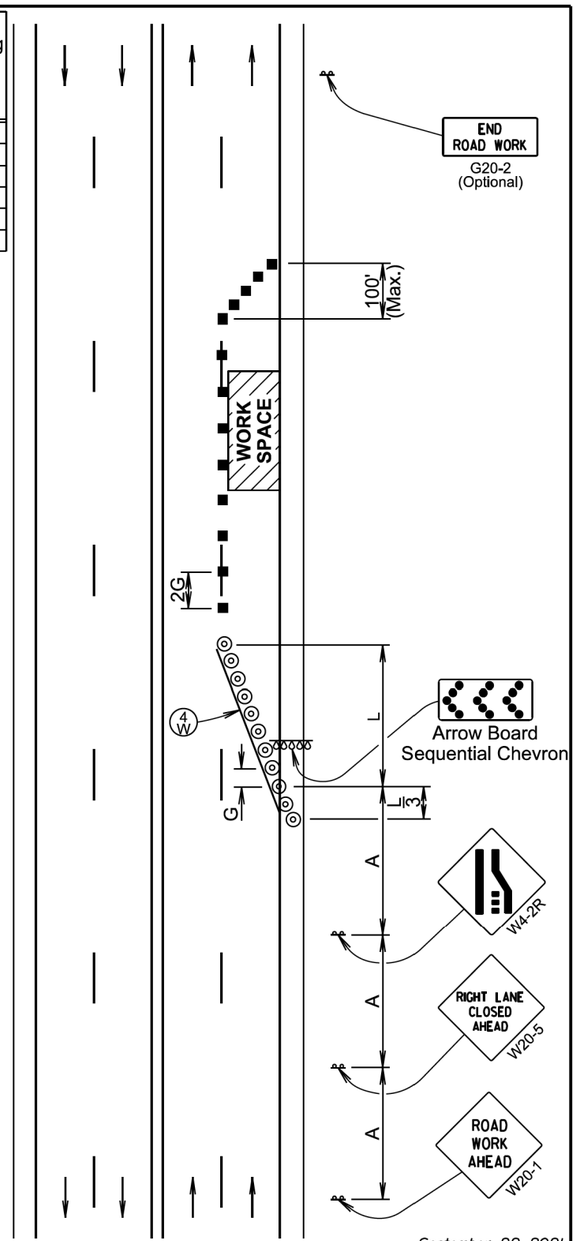
(4W) 4" White Temporary Pavement Marking

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

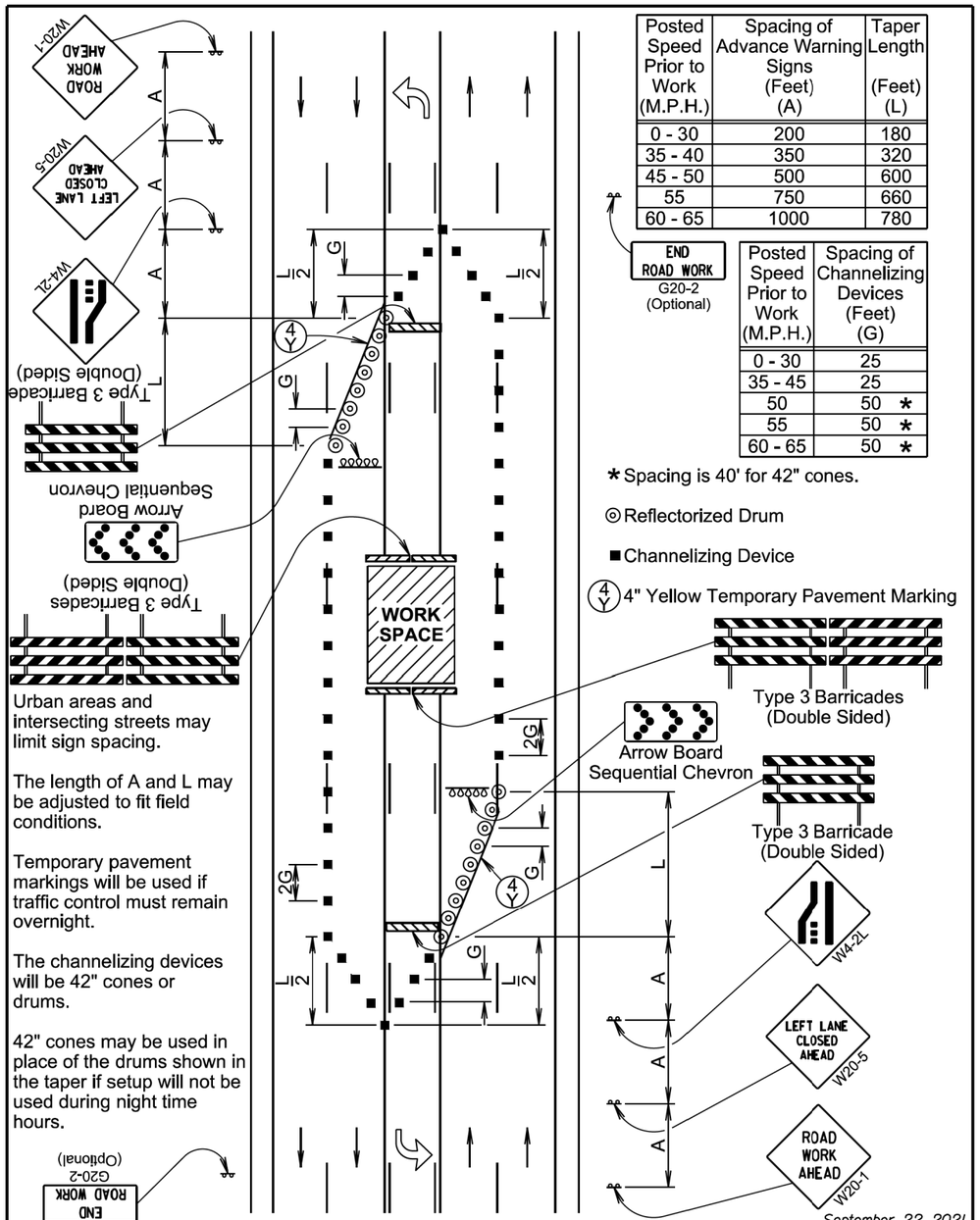
Temporary pavement markings will be used if traffic control must remain overnight.

The length of A and L may be adjusted to fit field conditions.



September 22, 2021

Published Date: 2025	SDDOT	4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47
			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

END ROAD WORK
G20-2 (Optional)

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 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

■ Channelizing Device

(4Y) 4" Yellow Temporary Pavement Marking

Urban areas and intersecting streets may limit sign spacing.

The length of A and L may be adjusted to fit field conditions.

Temporary pavement markings will be used if traffic control must remain overnight.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

END ROAD WORK (Optional) G20-2

September 22, 2021

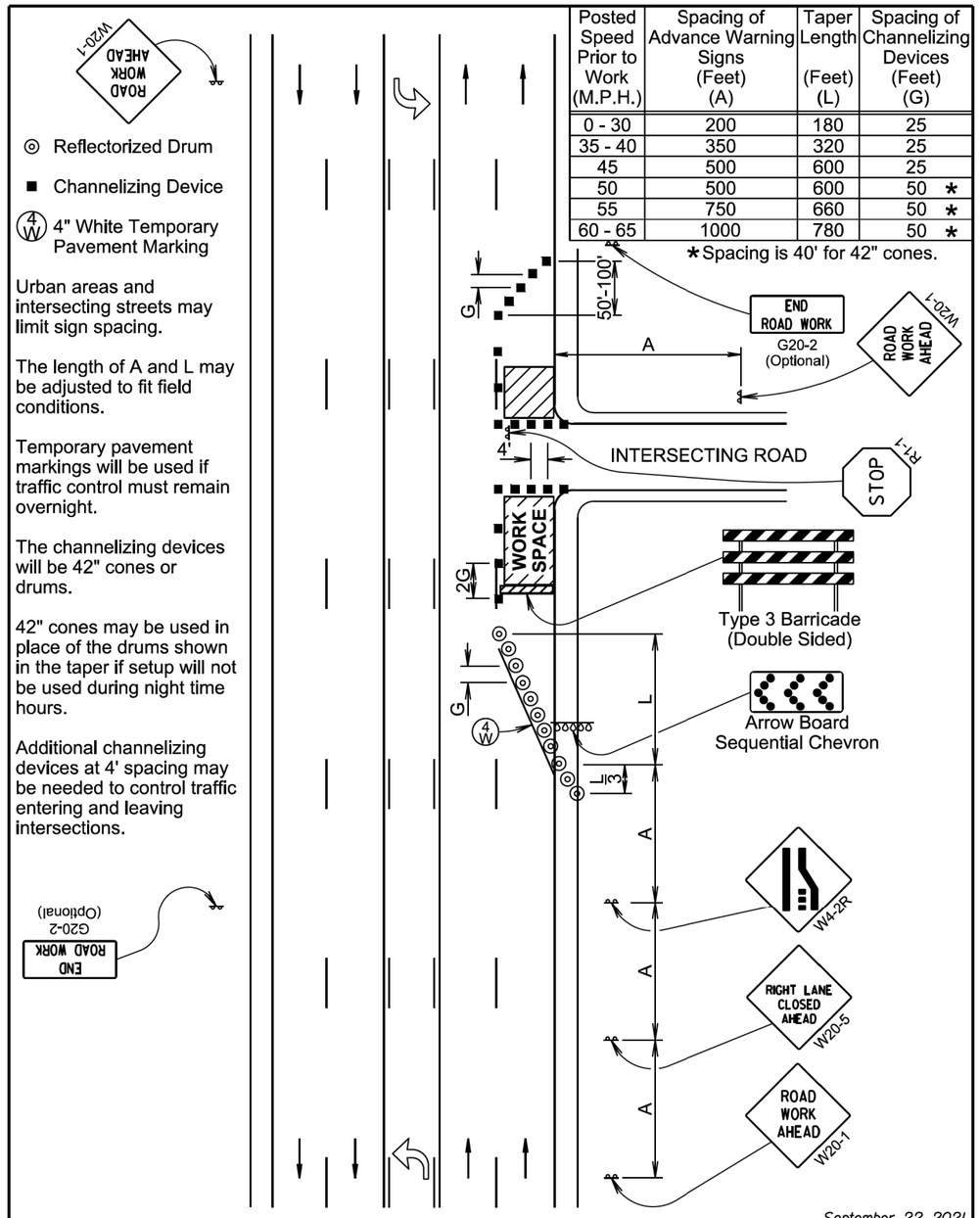
Published Date: 2025

SDDOT

5-LANE, CENTER 3 LANES CLOSED

PLATE NUMBER 634.57

Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

■ Channelizing Device

(4W) 4" White Temporary Pavement Marking

Urban areas and intersecting streets may limit sign spacing.

The length of A and L may be adjusted to fit field conditions.

Temporary pavement markings will be used if traffic control must remain overnight.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

Additional channelizing devices at 4' spacing may be needed to control traffic entering and leaving intersections.

September 22, 2021

Published Date: 2025

SDDOT

5-LANE, OUTSIDE LANE CLOSED

PLATE NUMBER 634.60

Sheet 1 of 1

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

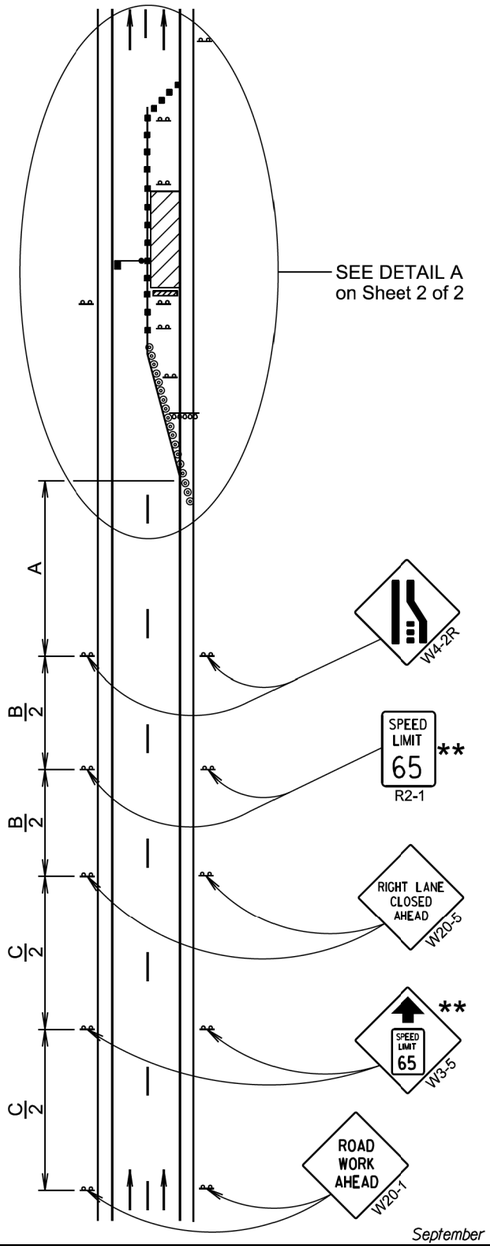
** Speed appropriate for location.

◎ Reflectorized Drum

▪ Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.



September 22, 2021

Published Date: 2025	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
			Sheet 1 of 2

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)
0 -30	25	180
35 - 40	25	320
45	25	600
50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 80	50 *	960

* Spacing is 40' for 42" cones.

** Speed appropriate for location.

*** Use speed limit designated for the condition when workers are present in the work space. Signs will be covered or removed when workers are not present.

▪● Flagger (As Necessary)

◎ Reflectorized Drum

▪ Channelizing Device

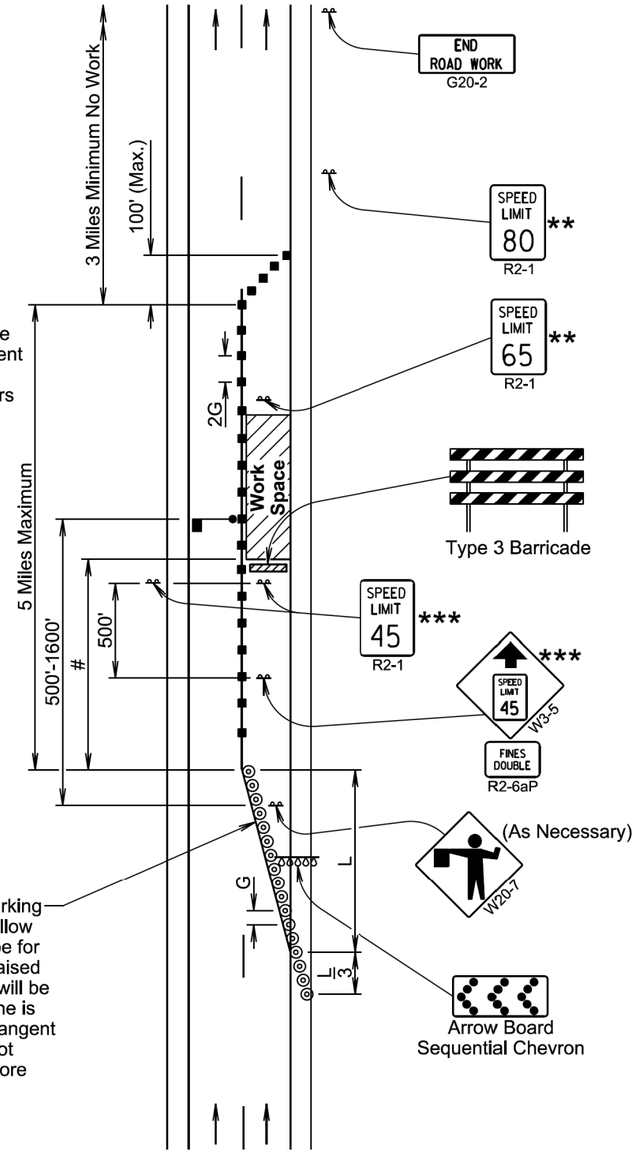
The Work Space will be a minimum of 500' from the end of the taper.

The FLAGGER sign will be used whenever there is a Flagger present.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

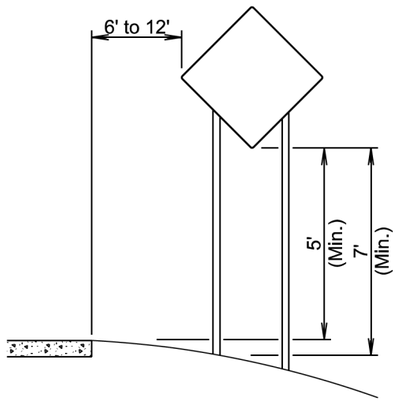
4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



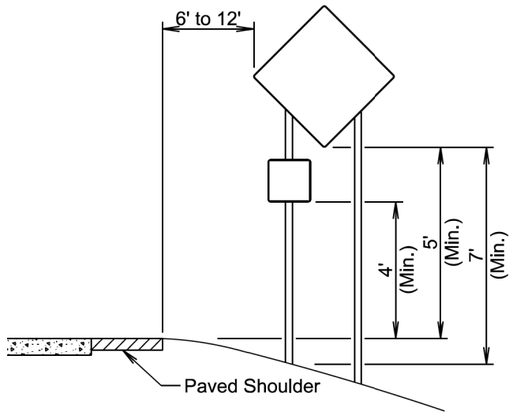
DETAIL A

September 22, 2021

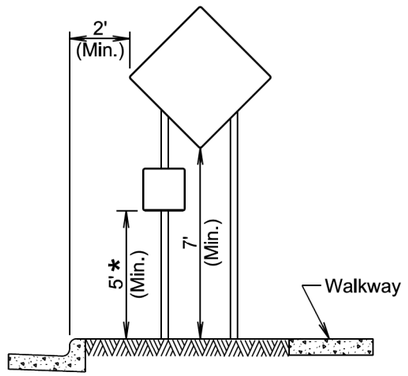
Published Date: 2025	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
			Sheet 2 of 2



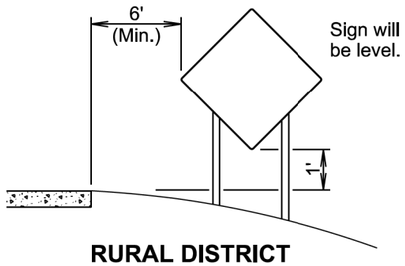
RURAL DISTRICT



RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

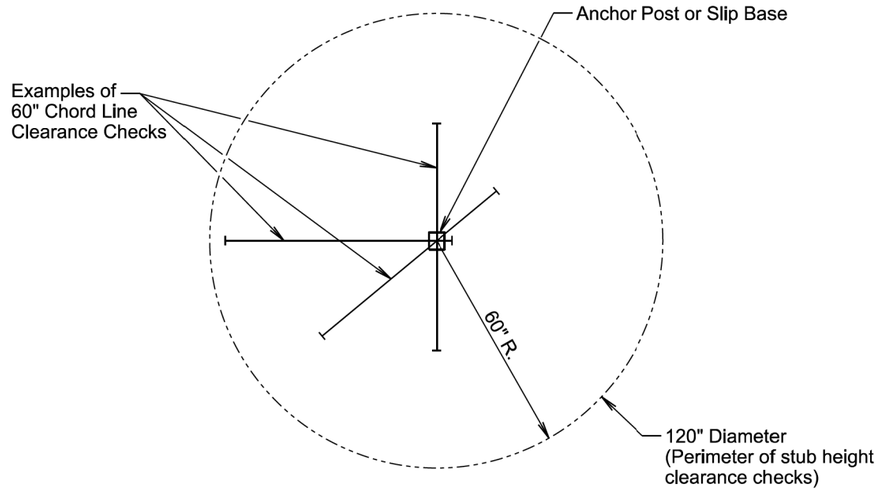


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

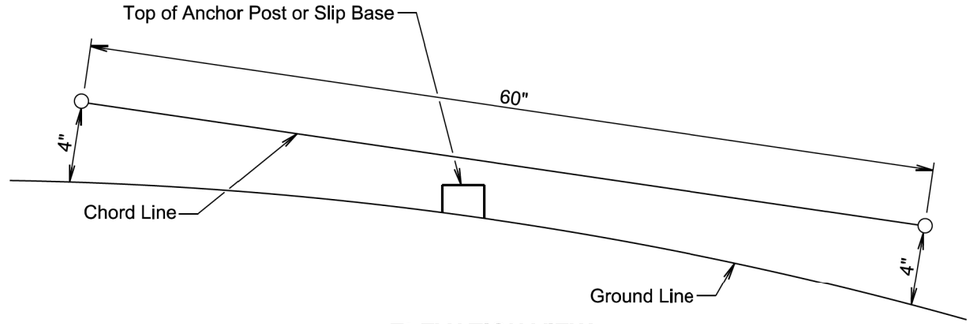
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

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:

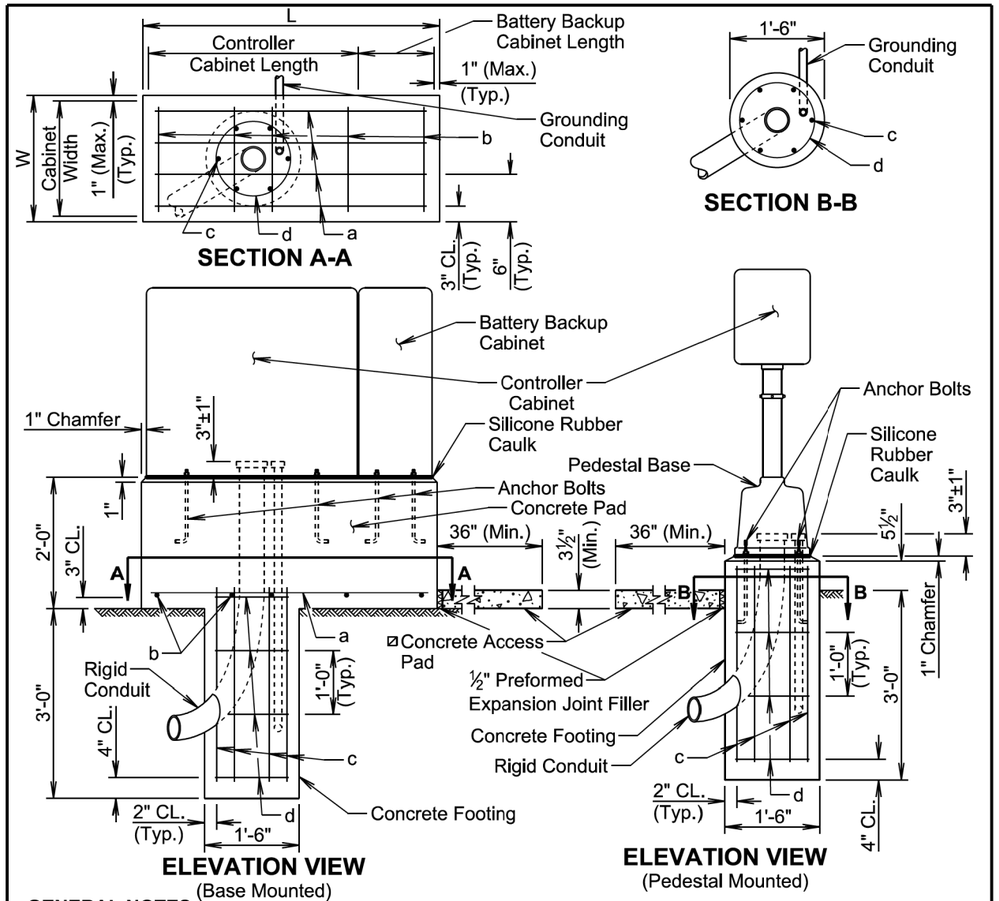
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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



GENERAL NOTES:

The concrete pad will conform to the base of the controller and battery backup cabinets to the satisfaction of the Engineer.

Conduits will be sealed water-tight until the conductor cables are installed.

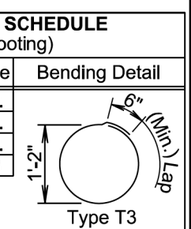
☑ If the controller and battery backup concrete pad and footing is not located within or adjacent to an existing sidewalk, the Contractor will provide a concrete access pad as directed by the Engineer.

Anchor bolts and related hardware will conform to the controller and battery backup cabinets manufacturer's specifications.

A continuous bead of silicone rubber caulk will provide a weather-tight seal between the concrete pad or footing, and the cabinet or base.

REINFORCING SCHEDULE
(for one footing)

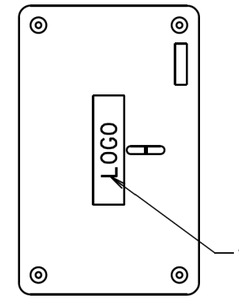
Mk.	No.	Size	Length	Type	Bending Detail
a	*	3	L-4"	Str.	
b	*	3	W-4"	Str.	
c	6	6	3'-0"	Str.	
d	4	3	4'-0"	T3	

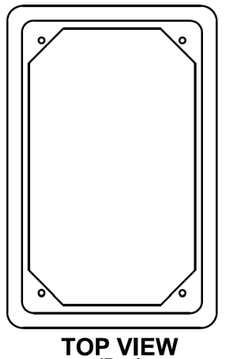


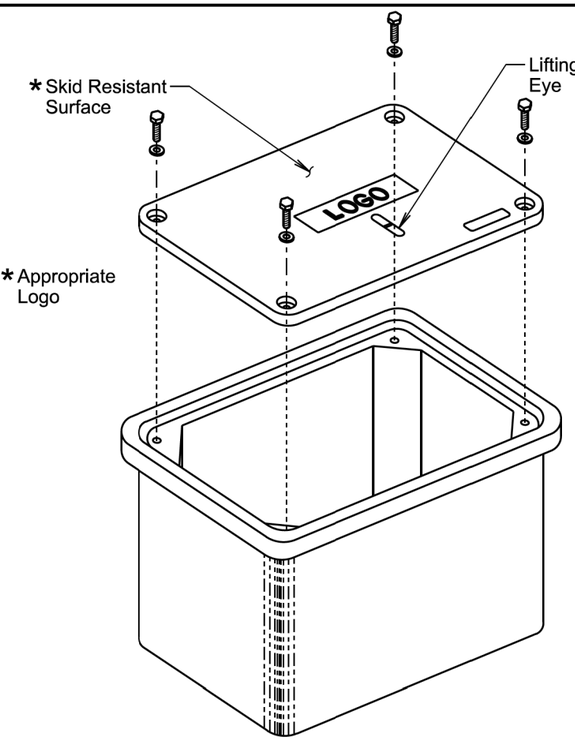
Note: Dimensions are out to out of bar
* Vary number of bars as required by footing size.

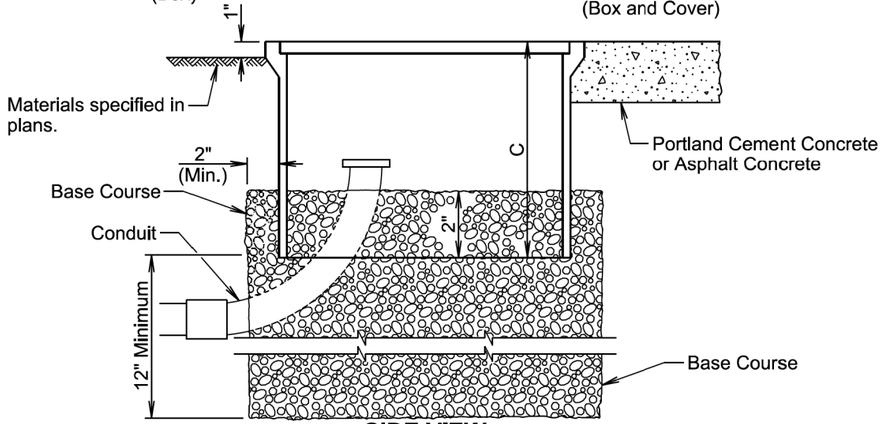
November 19, 2022

Published Date: 2025 | SDDOT | CONTROLLER CABINET AND FOOTING | PLATE NUMBER 635.60 | Sheet 1 of 1



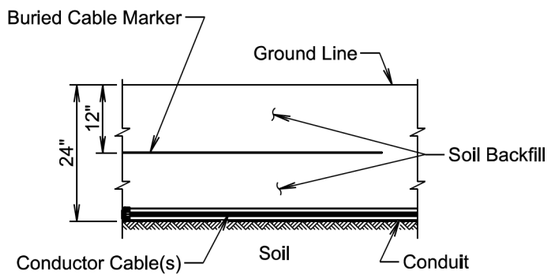




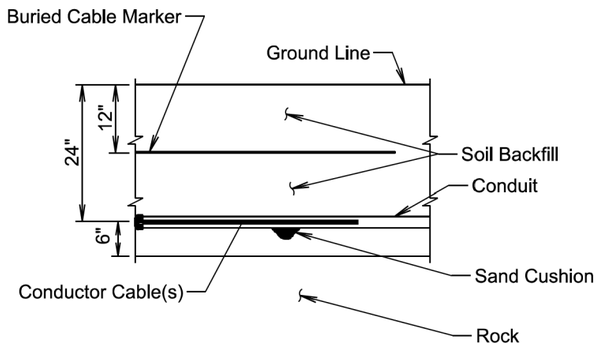


November 19, 2020

Published Date: 2025 | SDDOT | ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4 | PLATE NUMBER 635.65 | Sheet 1 of 2



SECTION VIEW



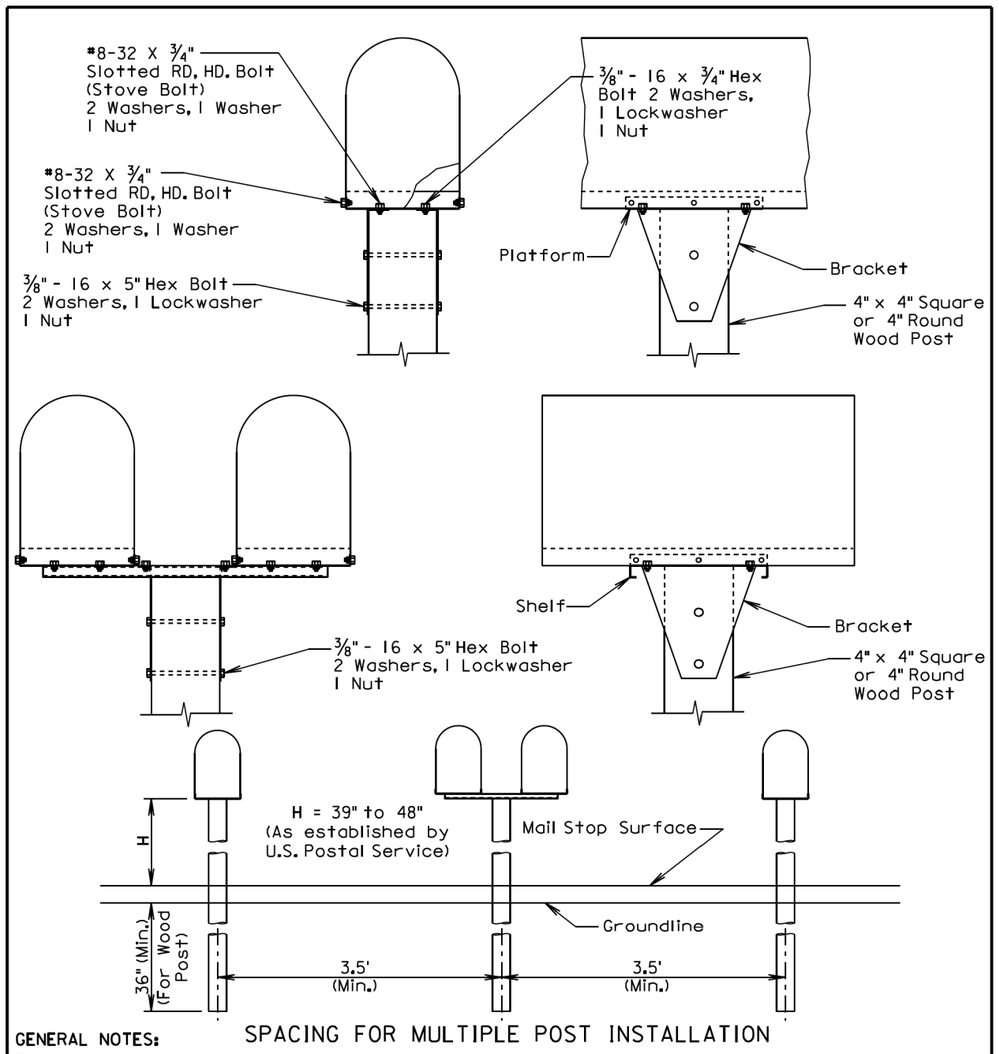
SECTION VIEW

GENERAL NOTE:

The Buried Cable Marker will be plastic, approximately 6" wide, and will be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker will have a life expectancy approximately equal to that of the conductor(s) beneath it. A phrase indicating the presence of a buried electric circuit below will be printed in a contrasting color on the cable marker. The Buried Cable Marker will be subject to approval by the Engineer. All costs associated with furnishing and installing the Buried Cable Marker will be incidental to the contract unit price per foot for the bid item used for the electrical conductor.

November 19, 2022

Published Date: 2025	SDDOT	CONDUIT INSTALLATION	PLATE NUMBER 635.76 Sheet 1 of 1



SPACING FOR MULTIPLE POST INSTALLATION

GENERAL NOTES:

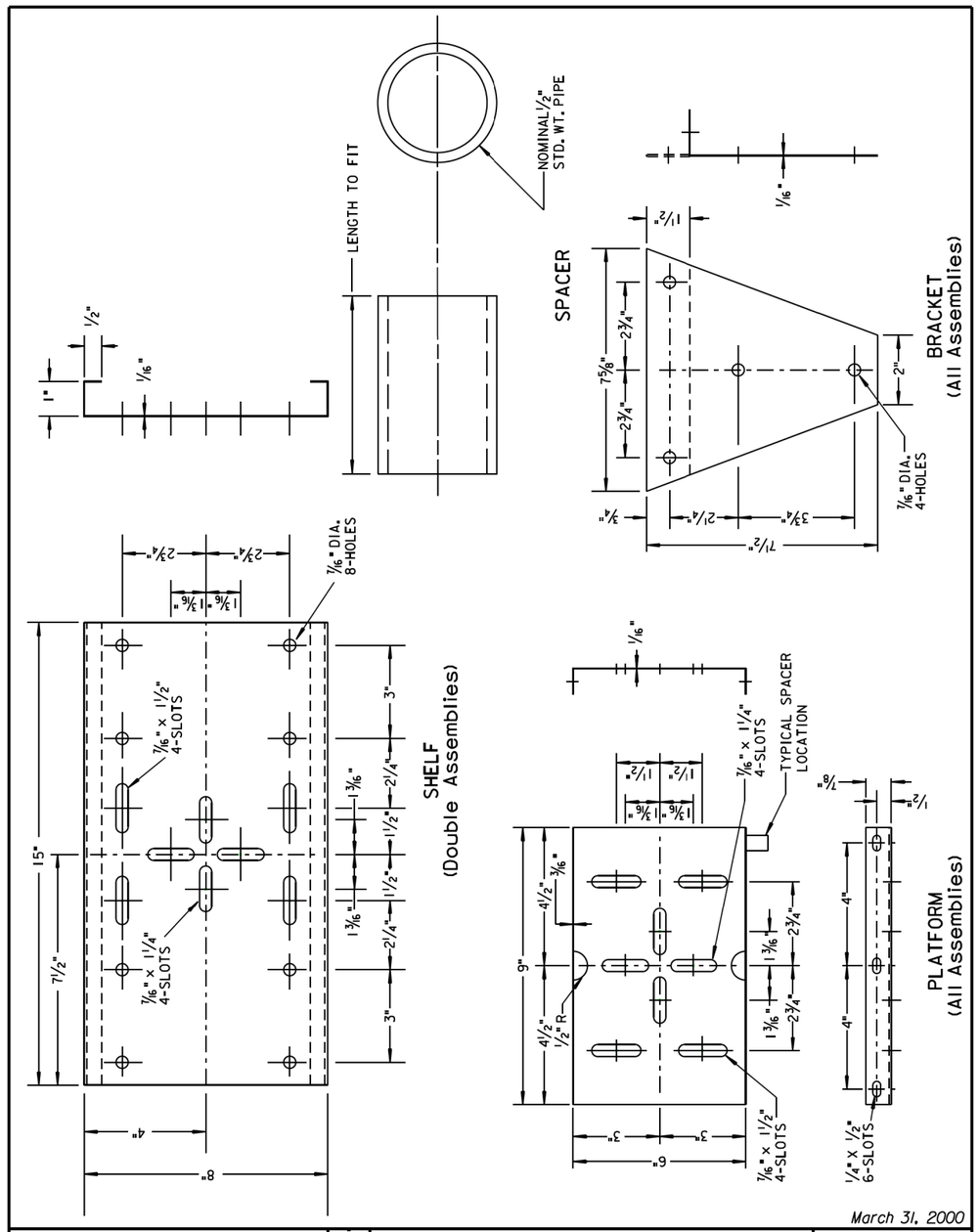
The post support assemblies provided should be consistant throughout the project. Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

Published Date: 2025	SDDOT	***SINGLE AND DOUBLE MAILBOX ASSEMBLIES***	***PLATE NUMBER*** 900.02 Sheet 1 of 1



March 31, 2000

Published Date: 2025	SDDOT	***MAILBOX SUPPORT HARDWARE***	***PLATE NUMBER*** 900.03 Sheet 1 of 1