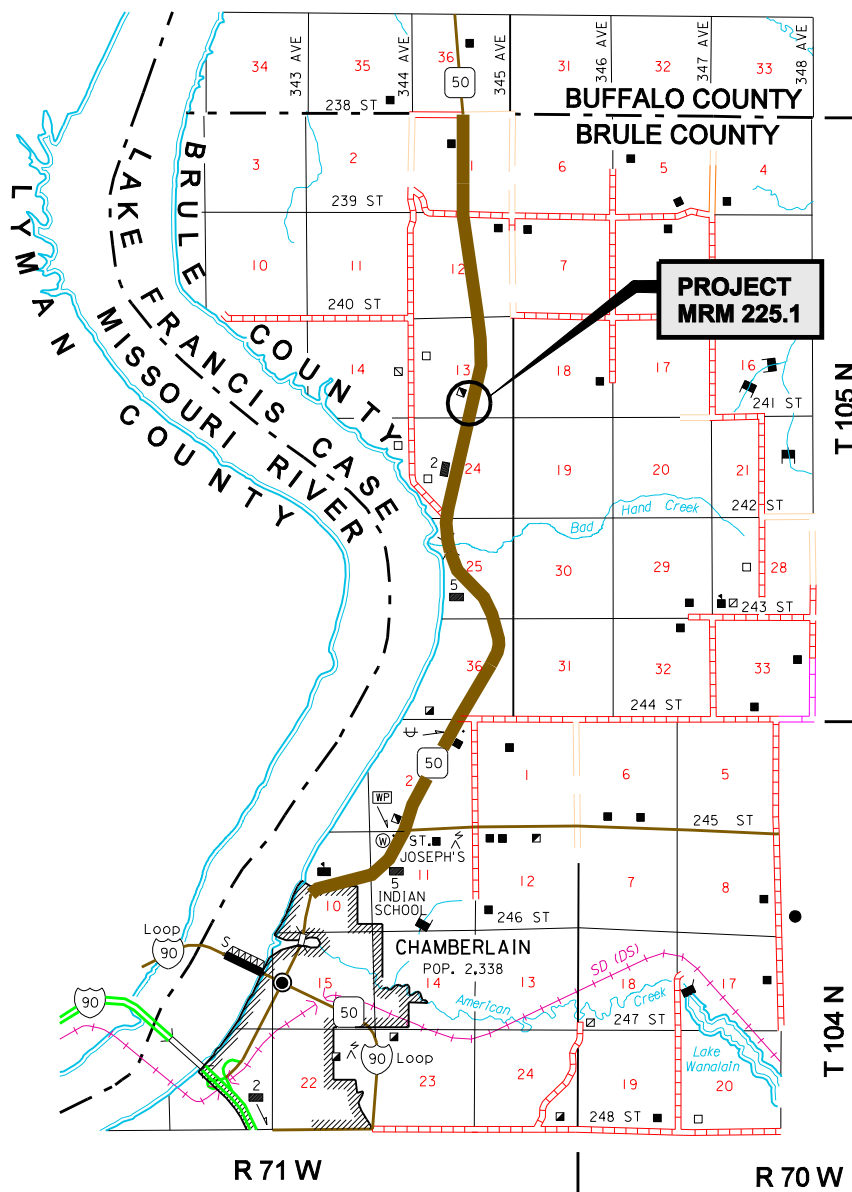


# 050-253 BRULE COUNTY PIPE REPAIR PCN I2EG



ADT(2009) 920

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BRULE COUNTY**

**ESTIMATE OF QUANTITIES**

<b>Bid Item Number</b>	<b>Item</b>	<b>Quantity</b>	<b>Unit</b>
009E0010	Mobilization	Lump Sum	LS
110E0500	Remove Pipe Culvert	45	Ft
120E0600	Contractor Furnished Borrow	1,500	CuYd
450E4867	84" CMP 10 Gauge, Furnish	45	Ft
450E4870	84" CMP, Install	45	Ft
450E8900	Cleanout Pipe Culvert	1	Each
620E0020	Type 2 Right-of-Way Fence	300	Ft
634E0010	Flagging	40	Hour
634E0100	Traffic Control	184	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
734E0010	Erosion Control	Lump Sum	LS

**SPECIFICATIONS**

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

**SCOPE OF WORK**

The following scope of work and sequence of operation shall be as shown below unless otherwise approved by the Engineer:

1. Set up work zone lane closure maintaining traffic on half of the roadway width as per Standard Plate 634.23 or 634.25, if needed.
2. Remove embankment around inlet end of existing 84" CMP.
3. Remove collapsed inlet end of 84" CMP to limits such that a full circular section remains. Verify length of new 84" CMP needed.
4. Cleanout existing 84" CMP.
5. Prepare Class B Bedding for pipe.
6. Install new 84" CMP attaching to existing CMP.
7. Backfill CMP and build embankment to match existing roadway inslope.
8. Install erosion control including seeding and mulching.

**UTILITIES**

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

Utilities are not planned to be affected on this project. 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 shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

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**HISTORICAL PRESERVATION OFFICE CLEARANCES**

To obtain State Historical Preservation Office (SHPO) clearance, a cultural resources survey may need to be conducted by a qualified archaeologist. In lieu of a cultural resources survey, the Contractor could request a records search from Jim Donohue, State Archaeological Research Center (SARC). Provide SARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that no artifacts have been found on the site. The Contractor shall arrange and pay for the cultural resource survey and/or records search.

If any earth disturbing activities occur within the current geographical or historic boundaries of any South Dakota reservation, the Contractor shall obtain Tribal Historical Preservation Office (THPO) clearance. If no THPO exists, the required SHPO clearance shall suffice, with documentation of Tribal contact efforts provided to SHPO.

To facilitate SHPO or THPO responses, the Contractor should submit a records search or cultural resources survey report to the DOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3268). Allow 30 days from the date this information is submitted to the Environmental Engineer for SHPO/THPO approval. The Contractor is responsible for obtaining all required permits and clearances for staging areas, borrow sites, waste disposal sites, and all material processing sites. The Contractor shall provide the required permits and clearances to the Engineer at the preconstruction meeting.

**WASTE DISPOSAL SITE**

The Contractor will be required to furnish a site(s) for the disposal of construction/demolition debris generated by this project.

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

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

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

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

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

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

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

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

**WATER QUALITY**

**Surface Water Quality**

The Contractor is advised the South Dakota Surface Water Quality Standards, administered by the Department of Environment and Natural Resources (DENR), apply to this project.

**Surface Water Discharge**

If construction dewatering is required, the Contractor is required to obtain a Surface Water Discharge Permit from the DENR. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit.

**Storm Water**

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.

**CLEANOUT PIPE CULVERT**

This work shall consist of cleaning out, removing and disposing of the earth and debris within the existing culvert and ditch shaping to restore flows.

The existing culvert is 84" CMP x 240' in length. Once the existing inlet is removed, there will be approximately 195' of pipe to clean out.

It is the responsibility of the Contractor to visit the site to determine the extent of culvert cleaning work required.

Cleaning method shall be approved by the Engineer. The culvert shall be cleaned to the satisfaction of the Engineer. The Contractor shall be responsible for repairing any damage caused by the cleaning process. These repairs, if required, shall be the responsibility of the Contractor.

Earth and debris removed from the culvert shall be disposed of outside the existing right-of-way. The Contractor shall shape the ditches in the area of the culvert ends to restore ditch flow.

The Contractor shall implement appropriate sediment control measures prior to water flushing in order to prevent discharges from project boundaries.

Cost for cleaning out the existing 84" CMP and associated work described above shall be included in the contract unit price per each for Cleanout Pipe Culvert.

**EMBANKMENT ADJACENT TO CULVERTS & CONTRACTOR FURNISHED BORROW**

Earth embankment adjacent to the existing culvert shall be removed prior to removing the collapsed CMP. Upon installation of the new CMP, the earth embankment shall be replaced adjacent to the CMP.

The Contractor shall provide a suitable site for Contractor Furnished Borrow material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. Some borrow material may be available within the right-of-way. It is suggested that the Contractor visit the project site prior to the letting to determine borrow quantity availability. The borrow material shall be approved by the Engineer. Restoration of the Contractor Furnished Borrow site shall be the responsibility of the Contractor.

Prior to placement or removal of fill material, the Contractor will be required to remove four inches of topsoil and replace it following the placement of the new fill material. Removing and replacing topsoil will not be measured for payment but shall be incidental to the contract unit price per cubic yard for Contractor Furnished Borrow.

Compaction of the fill material shall be to the specified density method to ensure long-term stability of the inslope.

Cost for water shall be incidental to the contract unit price per cubic yard for Contractor Furnished Borrow.

Cost for removing, replacing and compacting the earth embankment shall be included in the contract unit price per cubic yard for Contractor Furnished Borrow.

Plans quantity will be the basis of payment for Contractor Furnished Borrow.

**REMOVING CORRUGATED METAL PIPE**

When it is necessary to remove a damaged culvert end, the culvert may be cut with a torch. If the culvert is cut with a torch, it shall be painted with a galvanizing paint approved by the Engineer.

The Contractor is advised of the risk of lead exposure when cutting galvanized paint. The Contractor should plan his/her operations accordingly, and inform employees of hazards of lead exposure.

Cost for removing damaged portions of culverts shall be included in the contract unit price per foot for Remove Pipe Culvert.

**CORRUGATED METAL PIPE**

Corrugated metal pipes shall have 2  $\frac{3}{8}$ -inch x  $\frac{1}{2}$ -inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes shall have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

**EROSION CONTROL**

Erosion Control shall consist of all labor, equipment, material, seed, mulch and low flow silt fence to prevent soil and sediment from leaving the work site and to restore the vegetation on the disturbed in-slopes once the new pipes have been installed. The Type C Permanent Seed Mixture required to restore the vegetation is estimate to be 30 pounds. The mulch required to cover the disturbed area is estimated to be 0.75 ton. The low flow silt fence estimated to protect the work site is estimated to be 200 feet.

Plans quantity will be the basis of payment for Erosion Control.

**GENERAL MAINTENANCE OF TRAFFIC**

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

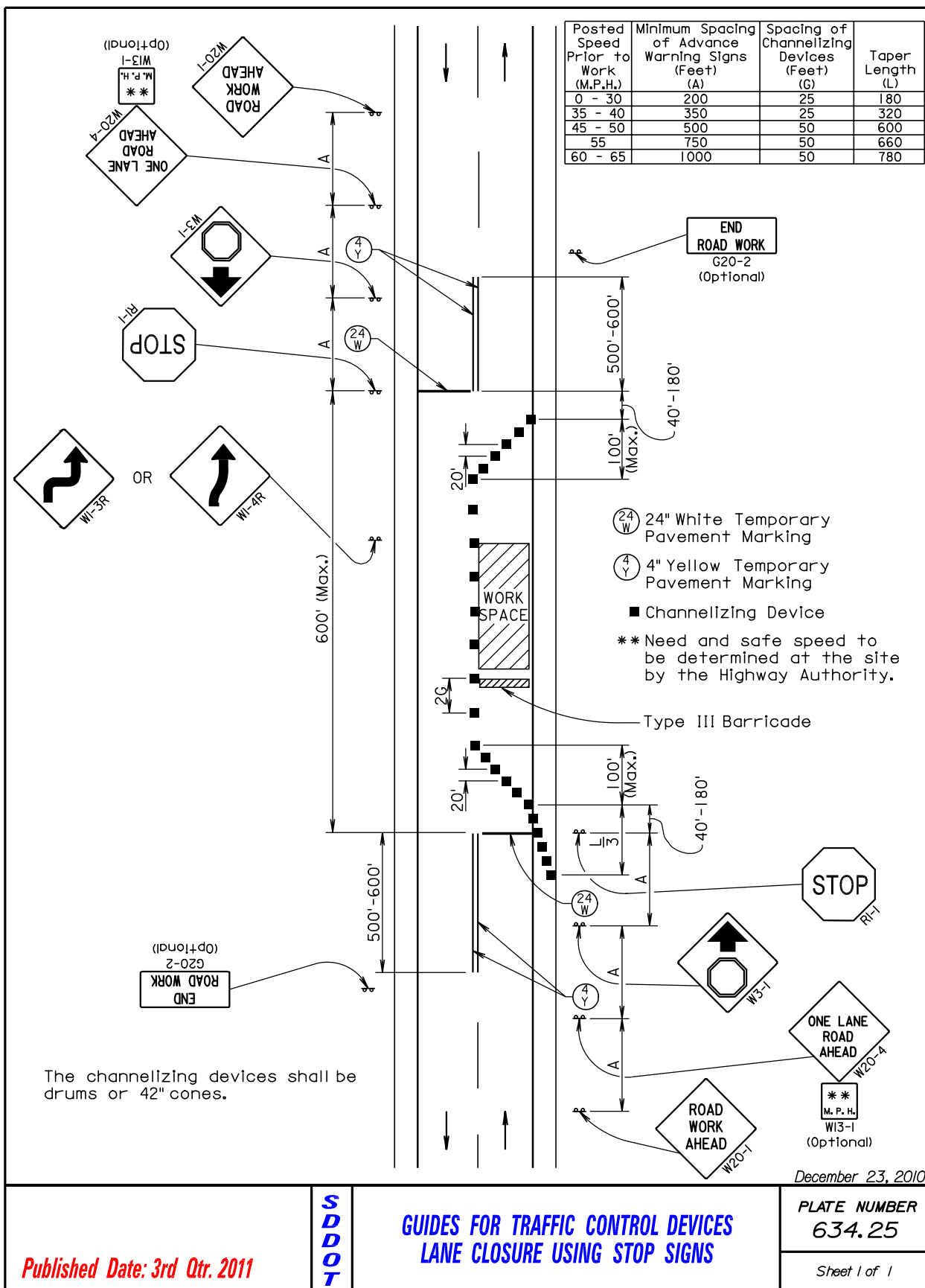
Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

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



Work activities shall be conducted during daylight hours only.

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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 - 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) shall 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 shall be drums or 42" cones.

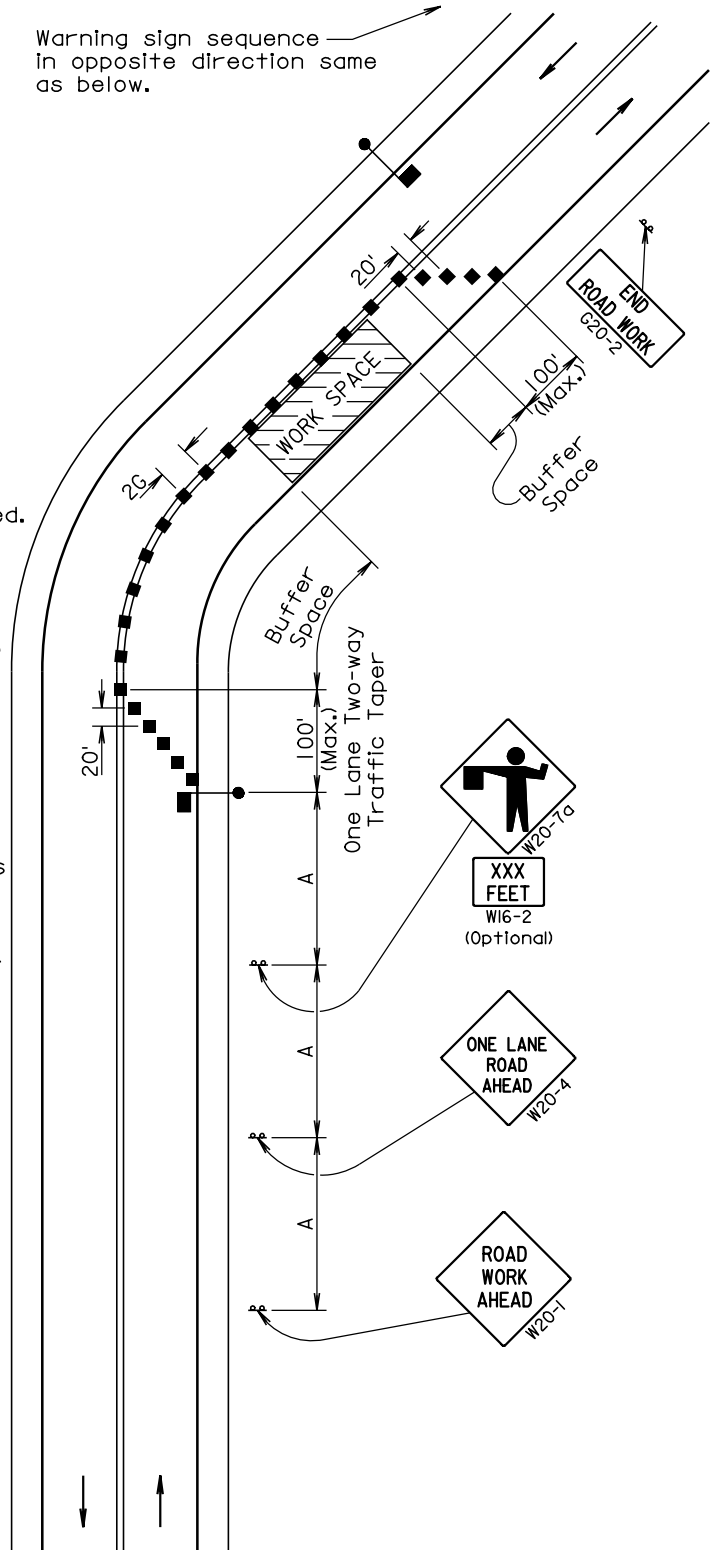
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

2-020-2  
END ROAD WORK

Channelizing devices and flaggers shall 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.

Warning sign sequence in opposite direction same as below.



February 14, 2011


*Published Date: 3rd Qtr. 2011*

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**GUIDES FOR TRAFFIC CONTROL DEVICES  
LANE CLOSURE WITH FLAGGER PROVIDED**

**PLATE NUMBER  
634.23**

Sheet 1 of 1

-  Replace 84" CMP
-  Excavation & Contractor Furnished Borrow

