

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-452	1	6

Plotting Date: 03/19/2015

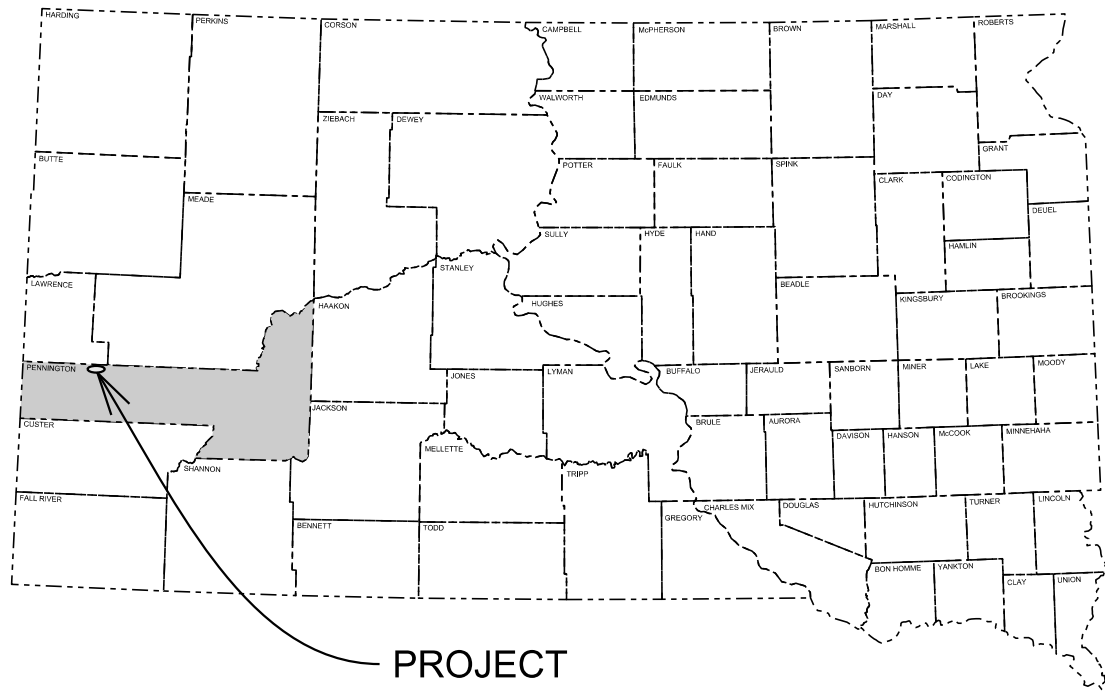
PLANS FOR PROPOSED
PROJECT 000P-452
SD HIGHWAY 44
PENNINGTON COUNTY

INDEX OF SHEETS

- 1 General Layout with Index
- 2 - 4 Estimate With General Notes & Tables
- 5 Plan Sheet
- 6 Standard Plates

TREE CLEARING
PCN i2u4

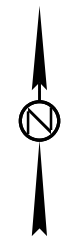
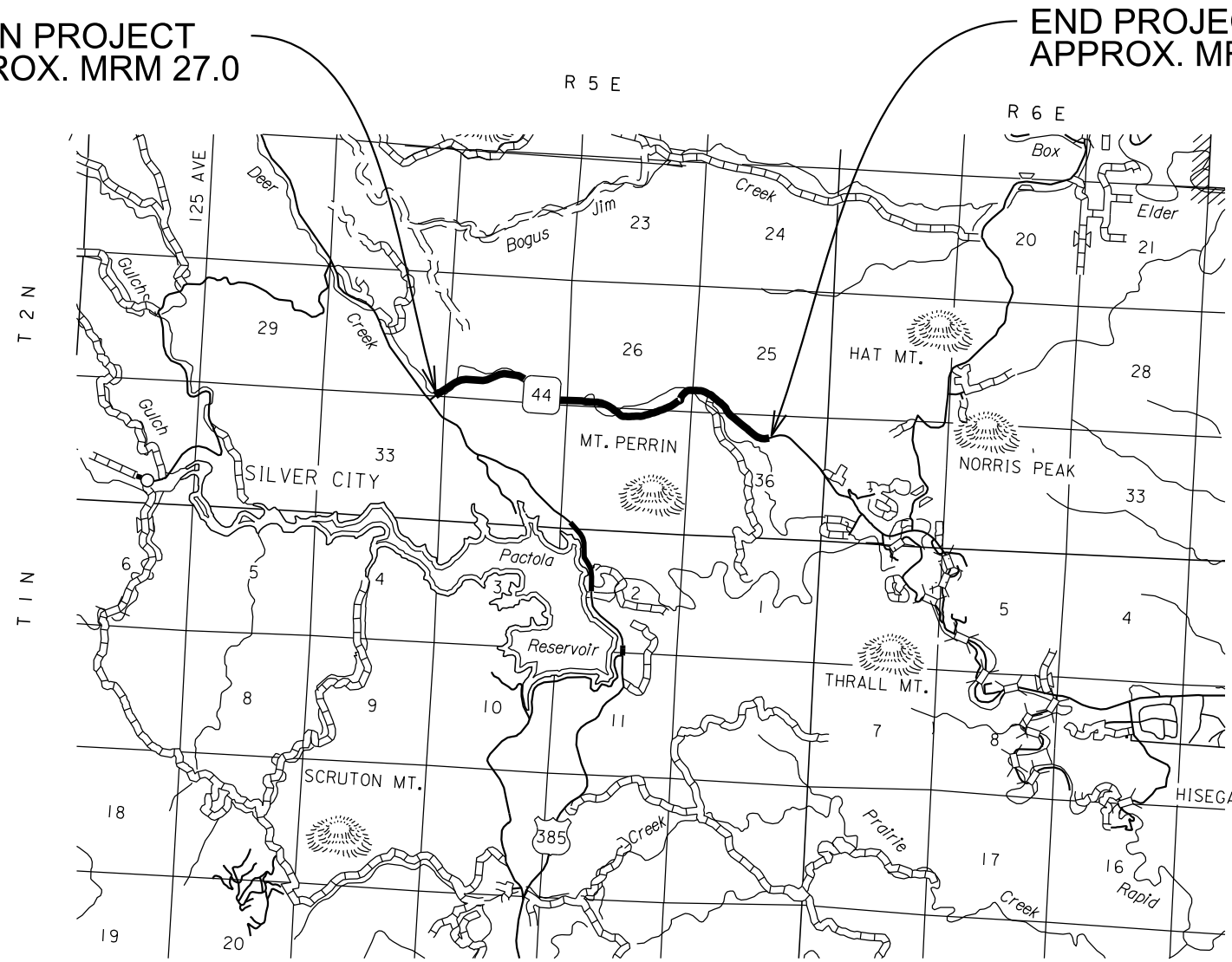
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PROJECT

BEGIN PROJECT
APPROX. MRM 27.0

END PROJECT
APPROX. MRM 30.2



DESIGN DESIGNATION

ADT (2014)	1360
ADT (2034)	1973
DHV	446
D	51 %
T DHV	3.5 %
T ADT	7.8 %
V	50 MPH

STORM WATER PERMIT

None Required

GROSS LENGTH 16,896 FEET 3.2 MILES

Plotted From - trcs11610

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ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
100E0020	Clear and Grub Tree	359	Each
100E0100	Clearing	Lump Sum	LS
110E7802	Remove Fence for Reset	700	Ft
620E4100	Reset Fence	700	Ft
634E0010	Flagging	500	Hour
634E0100	Traffic Control	306	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
730E1200	Hydroseeding	4,840	SqYd
731E0100	Fertilizing	1,500	Lb
732E0250	Fiber Mulching	2,000	Lb

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

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

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

Action Taken/Required:

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

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

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

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

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

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

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

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

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

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COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

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

Action Taken/Required:

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

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

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

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

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

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

COMMITMENT R: FIRE PREVENTION IN THE BLACK HILLS AREA

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

Action Taken/Required:

The Contractor shall adhere to the "Special Provision for Fire Plan".

WORK DESCRIPTION

Work on this project will consist of the following:

- Clearing and disposal of all merchantable and non-merchantable trees, brush, and woody vegetation within designated areas along SD Hwy 44.

CLEARING

Note: The Contractor is highly encouraged to visit the project locations prior to bidding.

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project.

Clearing areas shall be cleared to 40' from the white painted edgeline.

The clearing areas consists of cutting all vegetative material less than 6" diameter, including limbs, residual slash, hazard or unstable trees, down timber, non-merchantable timber, and merchantable timber. Areas behind guardrail are steep and narrow. Extra care shall be taken not to damage other nearby trees during the clearing process.

All timber within the clearing area shall become the property of the Contractor and removed.

All species and sizes will be removed from the clearing area except as noted. Additionally, no material will be piled within this area. Decking will not be allowed in the clearing area.

All felled trees, limbs, and brush as well as other previously downed material shall be removed from the clearing areas and disposed of properly by the Contractor.

Material may be chipped into bark mulch size pieces at the location it is felled when possible. Chips shall be broadcast spread to a depth not to exceed 4 inches. Any material exceeding 4" in depth, will have to be disposed of by the Contractor.

The Contractor is responsible for keeping the roadway clear of debris. No separate payment will be made for this work.

The Contractor shall restore and grade areas disturbed by clearing activities including ruts. No separate payment will be made for this work.

Brush and trees shall be cut to a maximum height of 3" above the ground.

All costs for clearing, disposal, and other work as described in this section, "CLEARING", shall be included in the contract unit price per each for "Clearing and Grubbing".

HYDROSEEDING

Only disturbed areas, as determined by the Engineer, will be Hydroseeded with Type E Permanent Seed Mixture.

Type E Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Flintlock, Rodan, Rosana	7
Green Needlegrass	Lodorm	4
Sideoats Grama	Butte, Killdeer, Pierre, Trailway	3
Blue Grama	Bad River, Willis	2
Canada Wildrye	Mandan	2
Wildflowers		
Dotted Gayfeather (<i>Liatris punctata</i>)		0.5
Black-eyed Susan (<i>Rudbeckia hirta</i>)		0.5
Blue Flax (<i>Linum lewisii</i>)		0.5
Pale Purple Coneflower (<i>Echinacea angustifolia</i>)		0.5
Total:		20

Hydroseeding shall be done by applying a mixture of water and seed at locations determined by the Engineer during construction.

The equipment used for hydroseeding shall be a mechanical agitation hydroseeding machine.

All costs for hydroseeding including equipment, labor, and materials which include the water and seed shall be incidental to the contract unit price per square yard for "Hydroseeding"

FERTILIZING

Only disturbed areas, as determined by the Engineer, will be fertilized.

The Contractor shall apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer shall have a minimum guaranteed analysis of 4-6-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 3.2%, a minimum of 6% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer shall be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer shall have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer shall also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

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The all-natural slow release fertilizer shall be applied according to the manufacturer's application recommendations.

The application rate is 1,500 pounds per acre.

The all-natural slow release fertilizer shall be as shown below or an approved equal:

Product	Manufacturer
Sustane	Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 http://www.sustane.com/

FIBER MULCHING

Only disturbed areas, as determined by the Engineer, will be Fiber Mulched.

Fiber mulch shall be applied in a separate operation following permanent seeding.

An additional 2% by weight of tackifier shall be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier shall be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier shall be synthetic.

Fiber mulch shall be applied at the rate of 2000 pounds per acre.

The Contractor shall allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials shall be incidental to the contract unit price per pound for "Fiber Mulching".

The fiber mulch provided shall be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:

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

TRAFFIC CONTROL – GENERAL NOTES

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- Storage of vehicles and equipment shall be as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage of 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.
- Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State. Any damage to existing pipe or guardrail shall be repaired or replaced by the Contractor at no cost to the State.
- 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.
- Vehicles working in traffic or alongside traffic shall be equipped with a flashing amber light visible from all directions. The amber light shall be mounted on the uppermost part of the contractor's vehicle. Lights must have peak intensity within the range of 40 to 400 candelas and must flash at 75 ± 15 flashes per minute. Vehicle flasher/hazard lights are not acceptable.
- Work activities shall be conducted during daylight hours only. Traffic shall be returned to the normal driving lanes during non-working hours. Storage of vehicles and equipment shall be outside the clear zone (30' from white edgeline) and as near to the right-of-way as possible.
- Only one set of signs according to Standard Plate Number 634.30 is included in the estimate of quantities. The Contractor shall only work at one site unless the Engineer approves additional work sites.
- Certified flaggers with appropriate advance warning signs for both directions of travel will be required for any work that occupies the traveled lanes. The road shall be kept open to traffic with not more than 5 minutes delay time. The 15-20 minute closure shown on Standard Plate Number 634.30 shall be changed to not exceeding **5 minutes**.

INVENTORY OF TRAFFIC CONTROL DEVICES

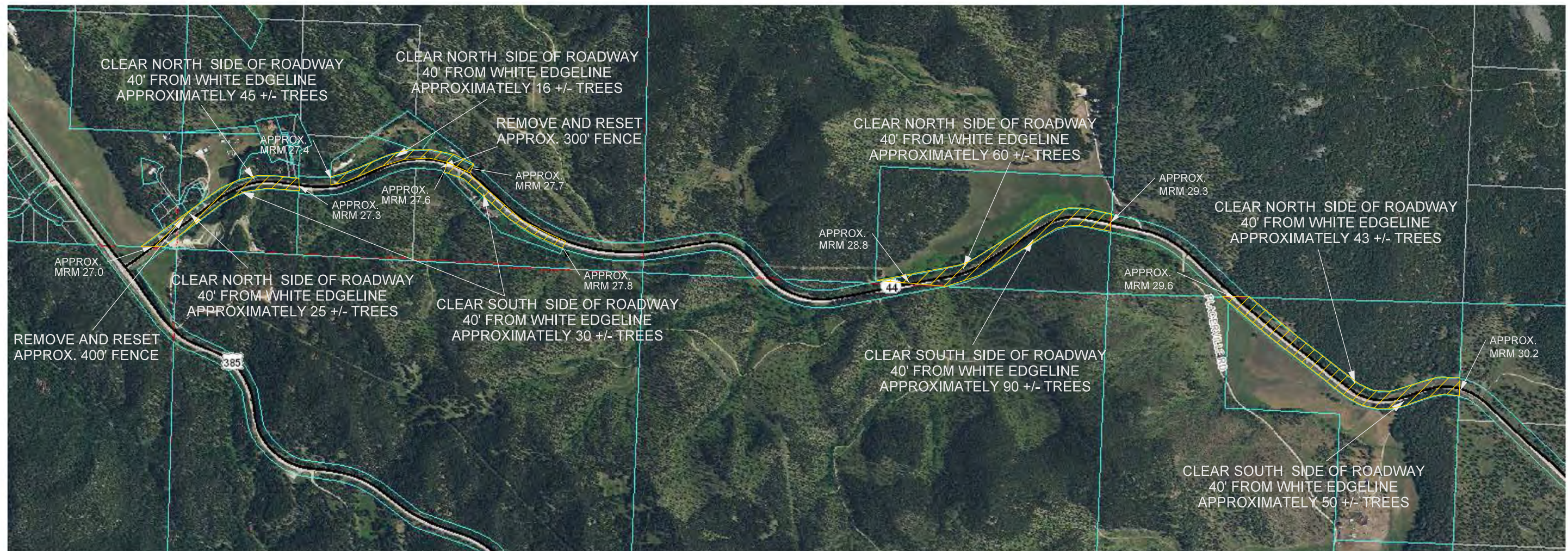
SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
W3-4	48" x 48"	BE PREPARED TO STOP	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W4-2	48" x 48"	RT OR LT LANE ENDS (SYMBOL)	1	34	34
W20-5	48" x 48"	LT. OR RT. LANE CLOSED ##### FT. OR AHEAD	1	34	34
W20-7a	48" x 48"	FLAGGER	2	34	34
TOTAL UNITS					306

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CLEARING AREAS

NOTE:
 AREAS ON THE NORTH SIDE OF THE ROADWAY
 THAT ARE BEHIND GUARDRAIL - CLEAR ONLY
 PINE TREES AND COTTONWOOD TREES -
 EXTRA CARE SHALL BE TAKEN TO NOT DAMAGE
 OTHER NEARBY TREES DURING CLEARING PROCESS



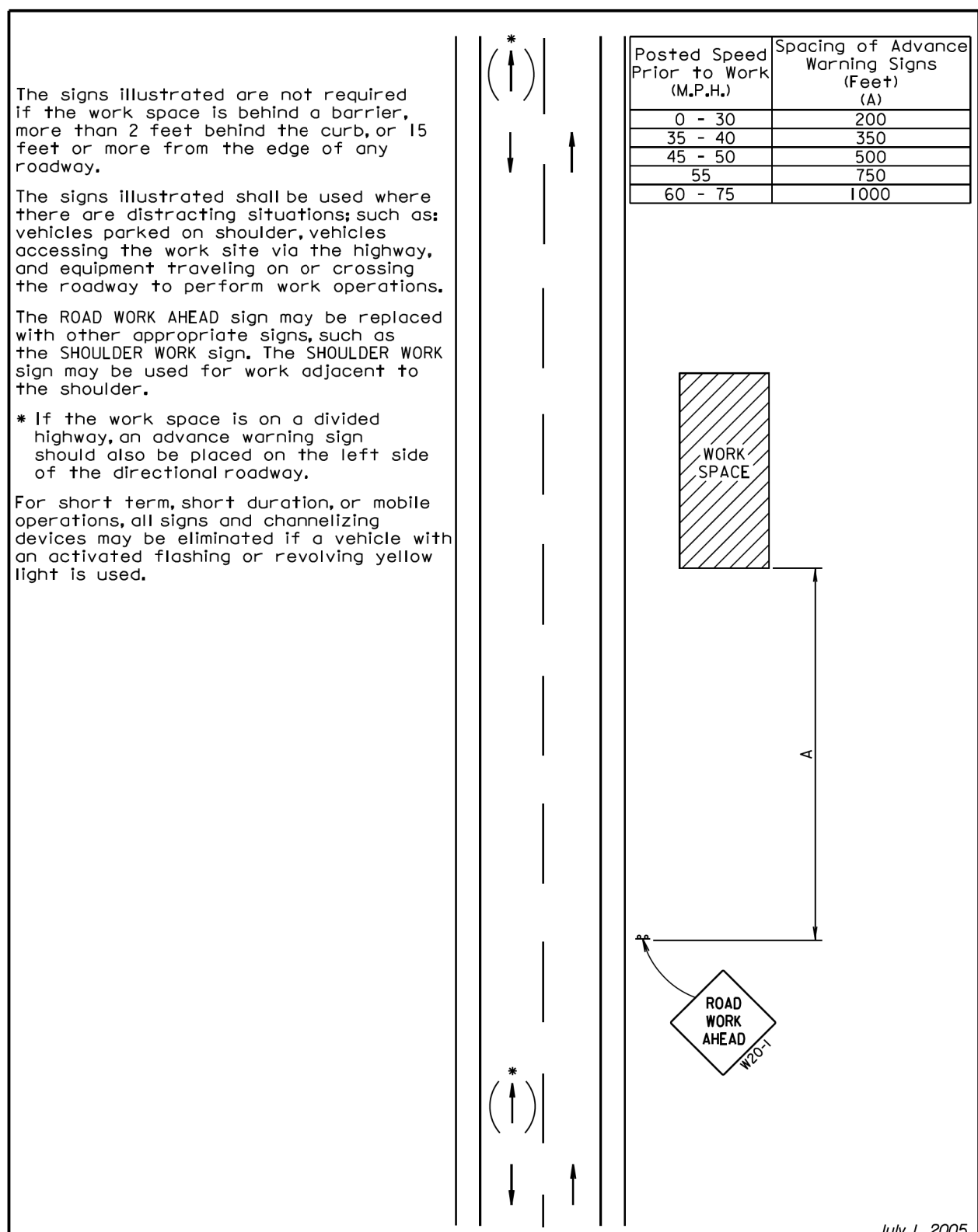
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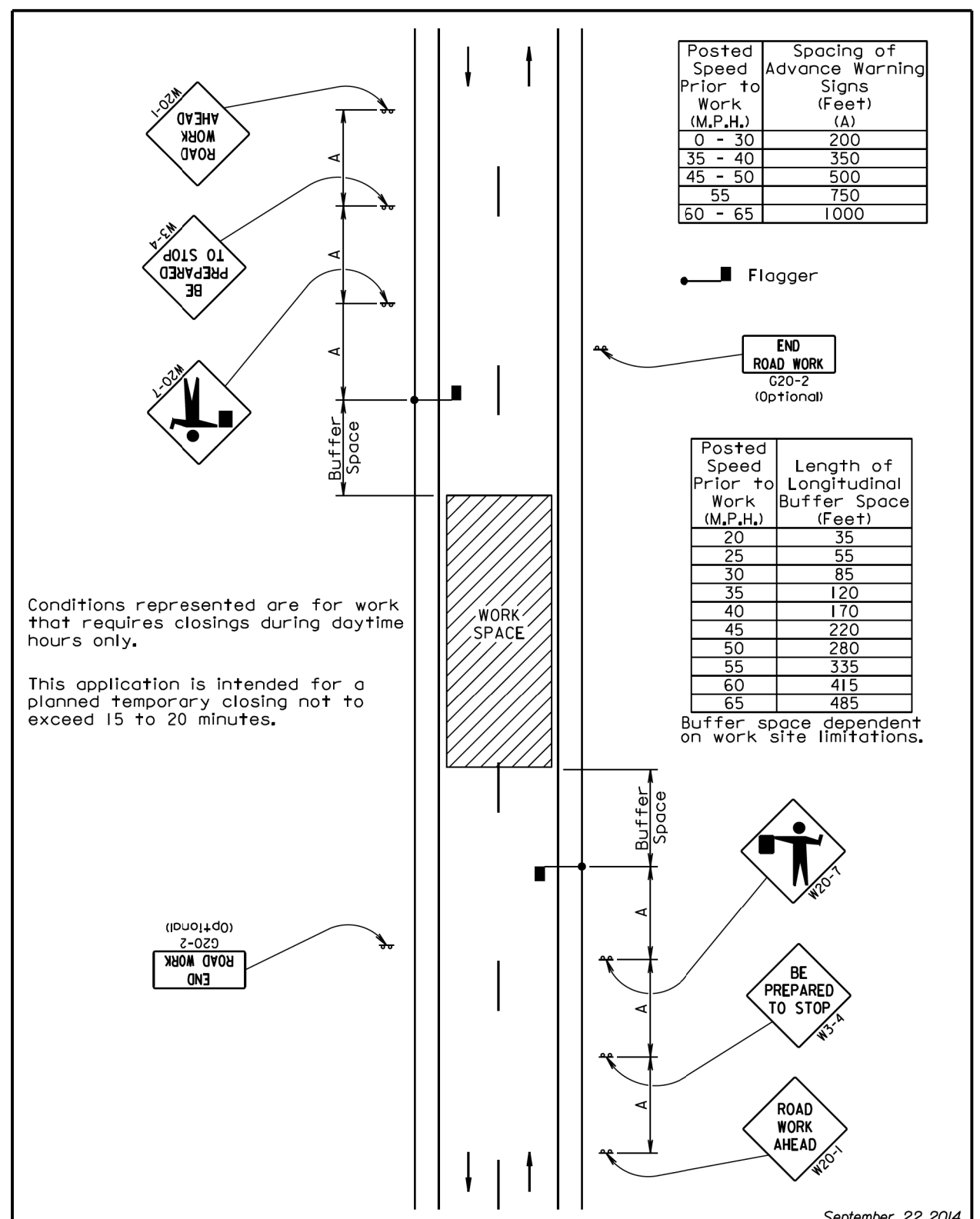
PLOT SCALE - 1:200



July 1, 2005

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
		Sheet 1 of 1

Published Date: 1st Qtr. 2015



September 22, 2014

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD WORK	PLATE NUMBER 634.30
		Sheet 1 of 1

Published Date: 1st Qtr. 2015

-PLOTTED FROM - TRRC11610

PLOT NAME - 3

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