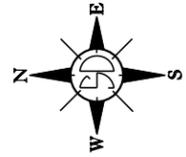


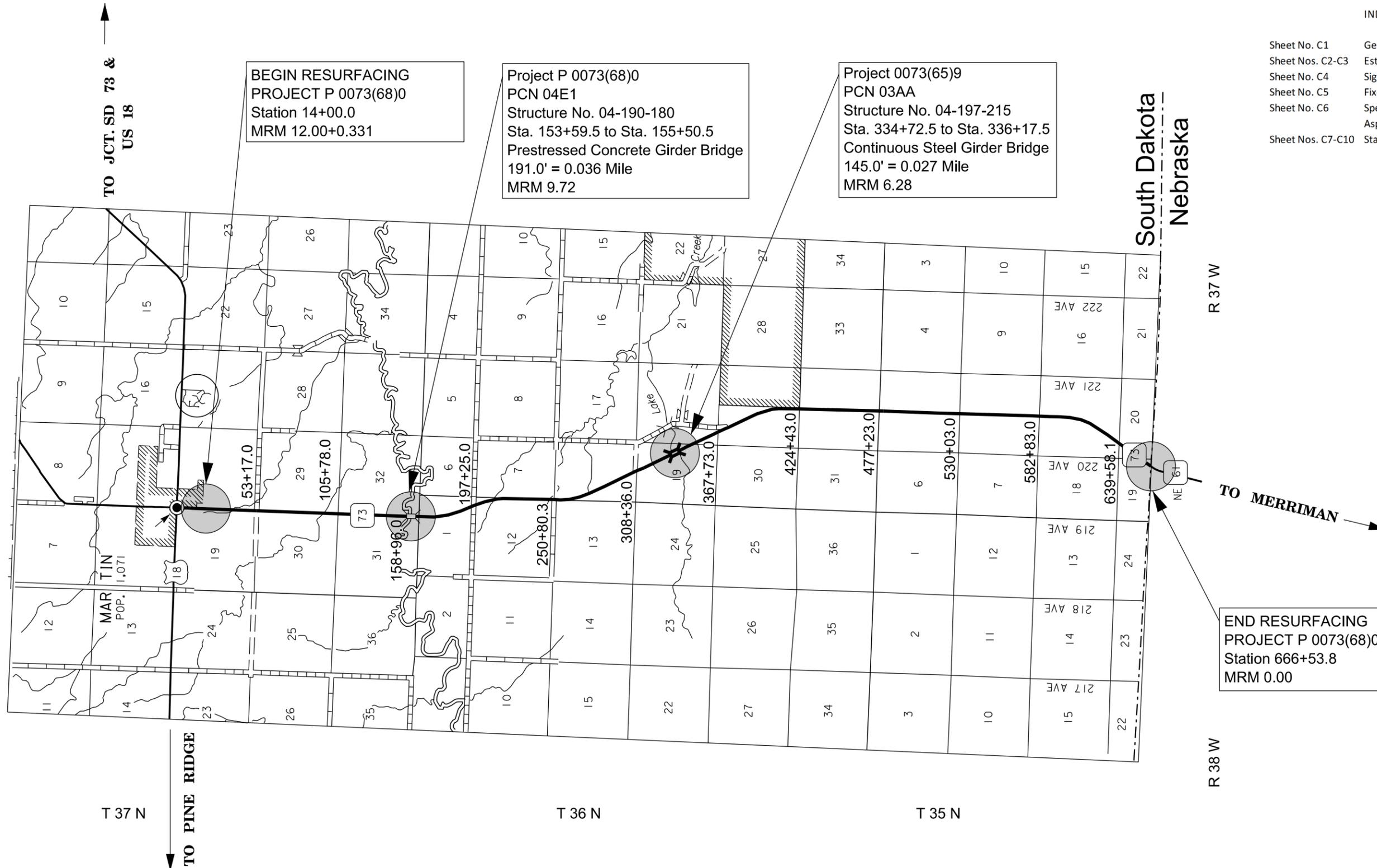
STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	P 0073(68)0 & P 0073(65)9	C1	C10

SECTION C - TRAFFIC CONTROL



INDEX OF SHEETS

- Sheet No. C1 General Layout & Index
- Sheet Nos. C2-C3 Estimate of Quantities & Plan Notes
- Sheet No. C4 Sign Tabulation & Paint
- Sheet No. C5 Fixed Location Sign Layout
- Sheet No. C6 Special Detail for Mobile Operations for Asphalt Coring
- Sheet Nos. C7-C10 Standard Plates



T 37 N

T 36 N

T 35 N

R 38 W

R 37 W

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ESTIMATE OF QUANTITIES

Project P 0073(68)0 PCN 04E1

Bid Item Number	Item	Quantity	Unit
633E1300	Pavement Marking Paint, White	418.0	Gal
633E1305	Pavement Marking Paint, Yellow	148.5	Gal
634E0010	Flagging	400	Hour
634E0020	Pilot Car	200	Hour
634E0100	Traffic Control	1,542	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0610	4" Temporary Pavement Marking Tape Type 2	8,928	Ft
634E0630	Temporary Pavement Marking	24.6	Mile

SEQUENCE OF OPERATIONS

Traffic shall be maintained through the project at ALL times.

The Contractor shall submit a proposed sequence of operations for the Engineer's review and approval at least two weeks prior to the preconstruction meeting.

The Contractor shall be aware of the Scope of Work notes in Sections E and F along with the Sequence of Operations notes in Section E and coordinate work accordingly.

Multiple asphalt lift laydown operations will not be allowed on the same location on the same day, unless approved by the Engineer.

The Contractor shall coordinate the removal of thrie beam guardrail in conjunction with the cold milling operation. The Contractor will only be allowed to remove the guardrail on the same side as the cold milling operation.

The Contractor shall place drums or Type II Barricades at 25-foot intervals for a distance of 175 feet beyond the exposed bridge end for each direction of traffic in accordance with Section 630 of the Specification. These drums or barricades shall remain in place until the new guardrail has been installed.

Reconstruction and cold milling of the bridge approaches shall begin no more than 15 days prior to mainline paving.

Once work that inconveniences traffic has commenced on a structure site, it shall be pursued in a near continuous, expeditious manner to its completion. Any work that restricts the motorist from driving the posted speed limit, reduces existing roadway width, or causes a potentially unsafe condition due to Contractor operations such as frequent movement of equipment or materials on or through the project, is considered to be an inconvenience to traffic.

Three separate stop condition setups will be required to complete the work on the two structure sites within this Contract. One at Structure No. 04-197-215 and two set ups at Structure 04-190-180. All costs associated to complete the work within this Contract shall be incidental to the contract unit price per unit for "Traffic Control".

The Contractor shall maintain access on and off the highway for local residences and county roads.

PROJECT WORK HOURS

The Contractor may perform work on the roadway during daylight hours only, unless additional hours are approved by the Engineer.

TRAFFIC CONTROL FOR ASPHALT CORING

Coring operations shall be completed during daylight hours only. Traffic control for coring operations shall be executed by following the "Special Detail for Mobile Operations for Asphalt Coring" sheet.

GENERAL MAINTENANCE OF TRAFFIC

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

Certified flaggers properly attired and preceded by FLAGGER symbol signs, will be required where work activity and/or equipment present a hazard to the workers, a hazard to through traffic, or encroaches into a driving lane.

Removing, relocating, covering, salvaging and resetting of existing 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 (30') 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 site 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.

Traffic approaching the project from intersecting roadways and approaches must be adequately accommodated. Major intersections or large commercial entrances may require additional signing, flaggers, and channelizing devices on a temporary basis until work activities pass these areas.

All non-fixed location signs may be mounted on portable supports. The portable supports shall be constructed to yield upon impact to minimize hazards to motorists, and shall be of proper height. The bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas and one foot above the pavement in rural areas. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than 3 days the signs shall meet the minimum mounting heights of 5 foot for rural areas and 7 foot for urban areas.

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

Erect only those signs that are applicable to the work in progress. When the Contractor is working at specific work spaces within the project, only those traffic control devices applicable to that operation should be displayed. Non-

applicable signs and/or devices shall be removed from view by the Contractor and stored a minimum of 30 feet from the driving lanes during periods of inactivity. All costs to do this work shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

A shadow vehicle, equipped with flashing amber light and a ROAD MACHINERY AHEAD sign prominently displayed, shall be used in advance of landscaping, clean up, and other mobile work activities. Highway equipment working within traffic or adjacent to traffic shall, at all times, display a flashing or revolving amber light to warn the traveling public. The Contractor shall maintain the driving surface on the project to eliminate hazards to the traveling public. The driving surface is defined as both driving lanes along with both outside shoulders on the project.

The cost for additional signs shall be paid for at the contract unit price per unit for "Traffic Control". Additional Flagger hours shall be paid for at the contract unit price per hour for "Flagging". The cost of additional channeling devices shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

Traffic Control units, as shown in the Estimate of Quantities, are estimates. Contractor's operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used.

TRAFFIC CONTROL

The Contractor shall designate an employee who will be available 24 hours/day, 7 days/week to be responsible for the maintenance of traffic during periods of repair work. The person so designated must have training and experience in the field of construction traffic control and be knowledgeable about the Manual on Uniform Traffic Control Devices (MUTCD). The cost of the traffic control person shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous". The Engineer must approve the employee selected. The name and phone number of the person(s) shall be provided to the SD Department of Transportation (605-842-0810), SD Highway Patrol State Radio (email to Jason.Husby@state.sd.us), and the Bennett County Sheriff Department (605-685-6516).

Channelizing devices in a series shall be of the same type. Channelizing drums shall be of a two part construction with breakaway bases.

All traffic control devices shall be in "like new" condition.

Type III Barricades 8' wide shall mark both ends of the construction work zone at structure sites. In addition, Type III Barricades 8' wide shall be placed in the lanes that are closed to traffic on structures at the discretion of the Engineer.

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TEMPORARY PAVEMENT MARKING

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

Temporary pavement markings shall be as per the Specifications.

The total length of no passing zone is estimated to be **1.738** miles.

No Passing Zones shall be identified using DO NOT PASS and PASS WITH CARE signs in addition to dashed centerline pavement markings. It is estimated that 9 DO NOT PASS and 9 PASS WITH CARE signs will be required to mark the no passing zones.

The Contractor shall erect DO NOT PASS signs to mark no passing zones prior to the removal of the existing pavement markings. PASS WITH CARE signs shall also be used in conjunction with the DO NOT PASS signs. These signs shall be erected on fixed location supports.

These signs shall be removed upon completion of the permanent pavement markings.

If the Contractor elects not to use the DO NOT PASS and PASS WITH CARE signs, the temporary pavement markings placed shall be fully compliant as normally used to identify no passing zones.

At the end of each day the temporary pavement markings shall be in place and visible. No separate payment will be made for remarking a segment of roadway that was not evened up with surface treatment at the end of the previous day.

Quantities of Temporary Pavement Markings consist of:

- 1) One pass on top of the Asphalt Concrete
- 2) ** One pass on top of the Flush Seal

** If the flush seal is eliminated from the contract, the length of temporary pavement marking used for the flush seal shall also be eliminated from the contract.

** Multiple applications may be needed if plastic covers are lost and the tabs are not functioning. No extra payment will be made.

Approximately 1,728 feet of 4 inch white temporary pavement marking tape, type 2, (24" stop bar reduced to 4" equivalent) and 7,200 feet of 4 inch yellow temporary pavement marking tape, type 2, will be required to complete both structure sites. The Contractor will be paid only once for tape placement. The Contractor is responsible for maintaining and cleaning the tape throughout the duration of the project and for removing all temporary pavement marking tape when it is no longer required.

PERMANENT PAVEMENT MARKING

The Contractor shall advise the Engineer a minimum of 2 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of No Passing Zones.

The application of permanent pavement marking paint may not begin until 2 calendar days following completion of flush seal and shall be completed within 14 calendar days following completion of the flush seal. If the Flush Seal is eliminated, the Contractor shall complete the application of permanent pavement marking paint no sooner than 2 calendar days, but within 14 calendar days following completion of final surfacing.

The Contractor will be required to inventory and mark, and/or offset the extent and location of the existing turn arrows, etc. before the markings are obliterated.

The Contractor will be required to repaint all existing pavement marking including centerline, edge line, lane lines, turn arrows, etc. This list is approximate. Additional quantities are included in the Estimate of Quantities to paint the additional pavement markings.

All materials shall be applied as per manufacturer's recommendations.

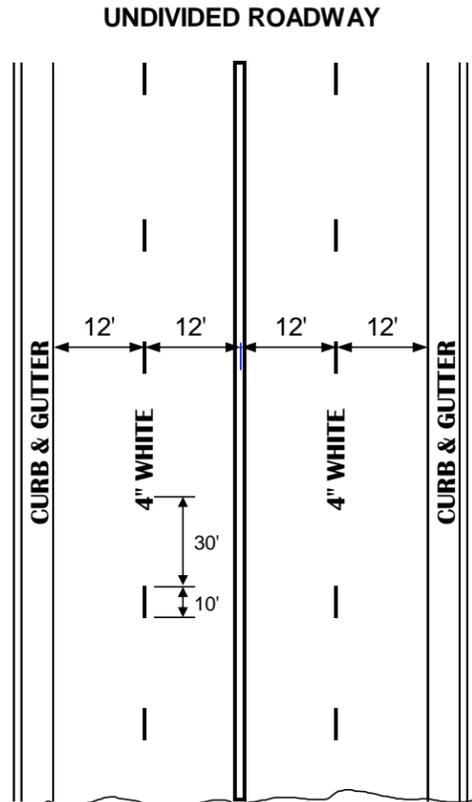
PROJECT SIGN AND PAINT TABULATION

Revised by JJR on 12/09/14

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	P 0073(68)0 & P 0073(65)9	C4	C10

FURNISHING AND APPLYING PAVEMENT MARKING PAINT

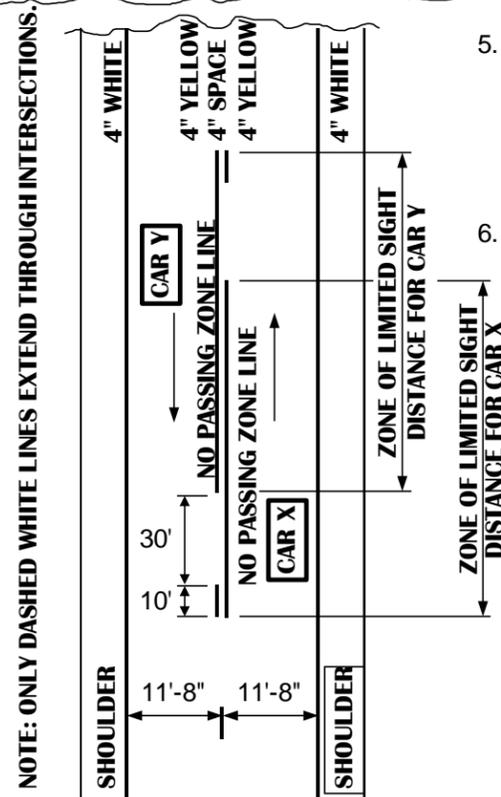
SIGN TABULATION P0073(68)0 PCN 04E1



1. Pavement marking paint and glass beads will be furnished and applied by the Contractor. Material shall meet the requirements of Section 980 and 981 of the Specifications. The bead application rate shall be 8 pounds/gallon of paint.
2. Construction requirements, methods of measurement and basis of payment shall conform to the requirements of Section 633 of the Specifications.
3. Approximate paint application rates shall be as follows:

Four Lane Roadway (Rates for one line)	Two Lane Roadway
Solid Yellow Centerline Rate = 16.90 Gals./Pass-Mile	Yellow Centerline (Includes No Passing Zones) Rate = 12± Gals./Pass-Mile
Dashed White Laneline Rate = 4.60 Gals./Pass-Mile	Solid White Edgeline (Rate for one line) Rate = 16.90 Gals./Pass-Mile
Solid White Edgeline (Not applicable in curb & gutter section) Rate = 16.90 Gals./Pass-Mile	

4. Typical pavement marking as shown on this sheet shall be applied throughout the entire length of undivided roadway.
5. Exact location of NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, shall not be used as the beginning and ending of NO PASSING ZONE lines.
6. Traffic Control shall be incidental to the cost of application. The striper and advance or trailing warning vehicle shall be equipped with flashing amber lights or advance warning arrow panel.

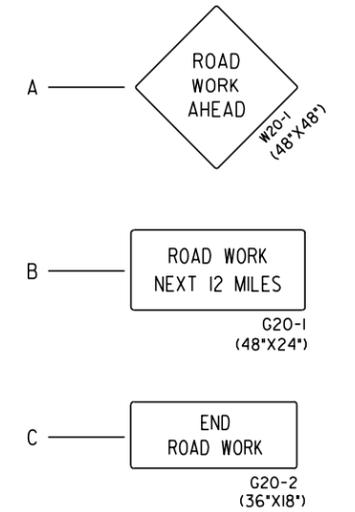
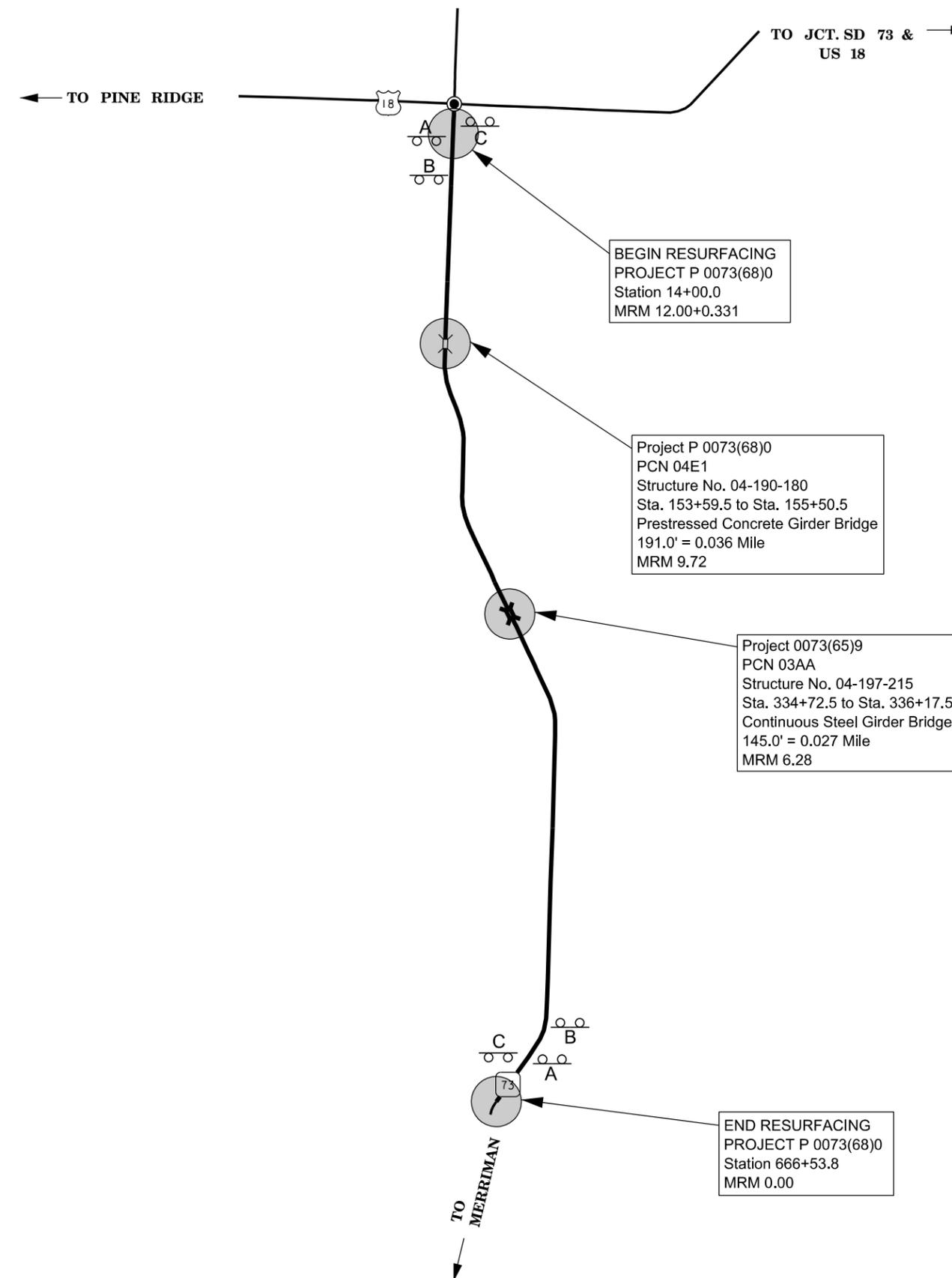


ESTIMATED QUANTITIES	
PAVEMENT MARKING PAINT	QUANTITY
WHITE	418.0 GALLONS
YELLOW	148.5 GALLONS
TOTAL	566.5 GALLONS

SIGN CODE	DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	UNITS PER SIGN	UNITS
R1-1	STOP	4	30" x 30"	21	84
W1-3	REVERSE TURN (L or R)	2	48" x 48"	34	68
W3-1	STOP AHEAD (symbol)	4	48" x 48"	34	136
W8-11	UNEVEN LANES	6	48" x 48"	34	204
W13-1P	ADVISORY SPEED (plaque)	4	30" x 30"	21	84
W16-2P	___ FEET (supplemental distance plaque)	2	30" x 24"	18	36
W20-1	ROAD WORK AHEAD	8	48" x 48"	34	272
W20-4	ONE LANE ROAD AHEAD	6	48" x 48"	34	204
W20-7	FLAGGER (symbol)	2	48" x 48"	34	68
W21-5	SHOULDER WORK	4	48" x 48"	34	136
G20-1	ROAD WORK NEXT ___ MILES	2	36" x 18"	17	34
G20-2	END ROAD WORK	8	36" x 18"	17	136
-	TYPE 3 BARRICADE - 8' single sided	2		40	80
TOTAL UNITS					1542

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0073(68)0 & P 0073(65)9	C5	C10

FIXED LOCATION SIGN LAYOUT



Notes:

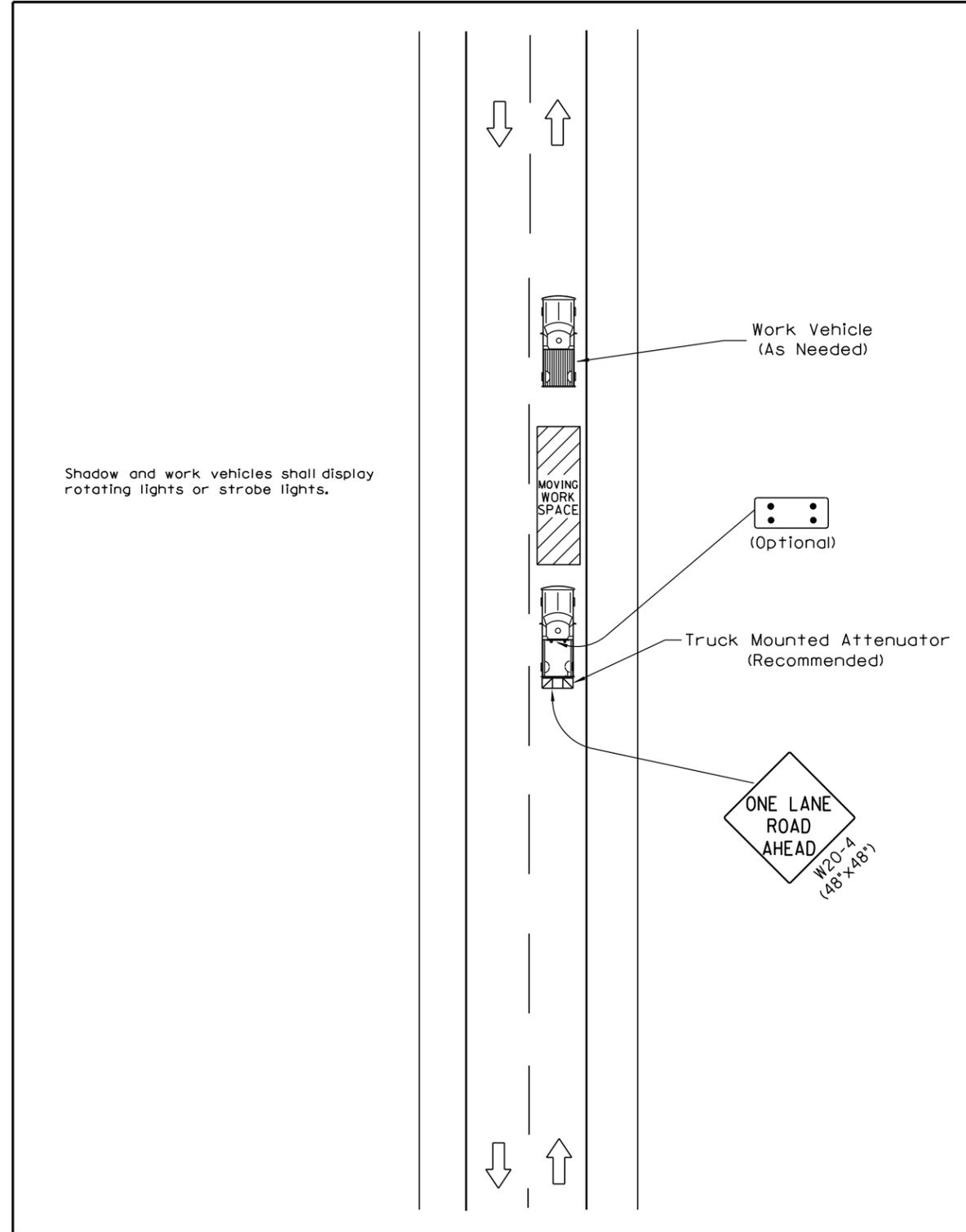
Sign locations will be verified in the field by the Engineer prior to installation.

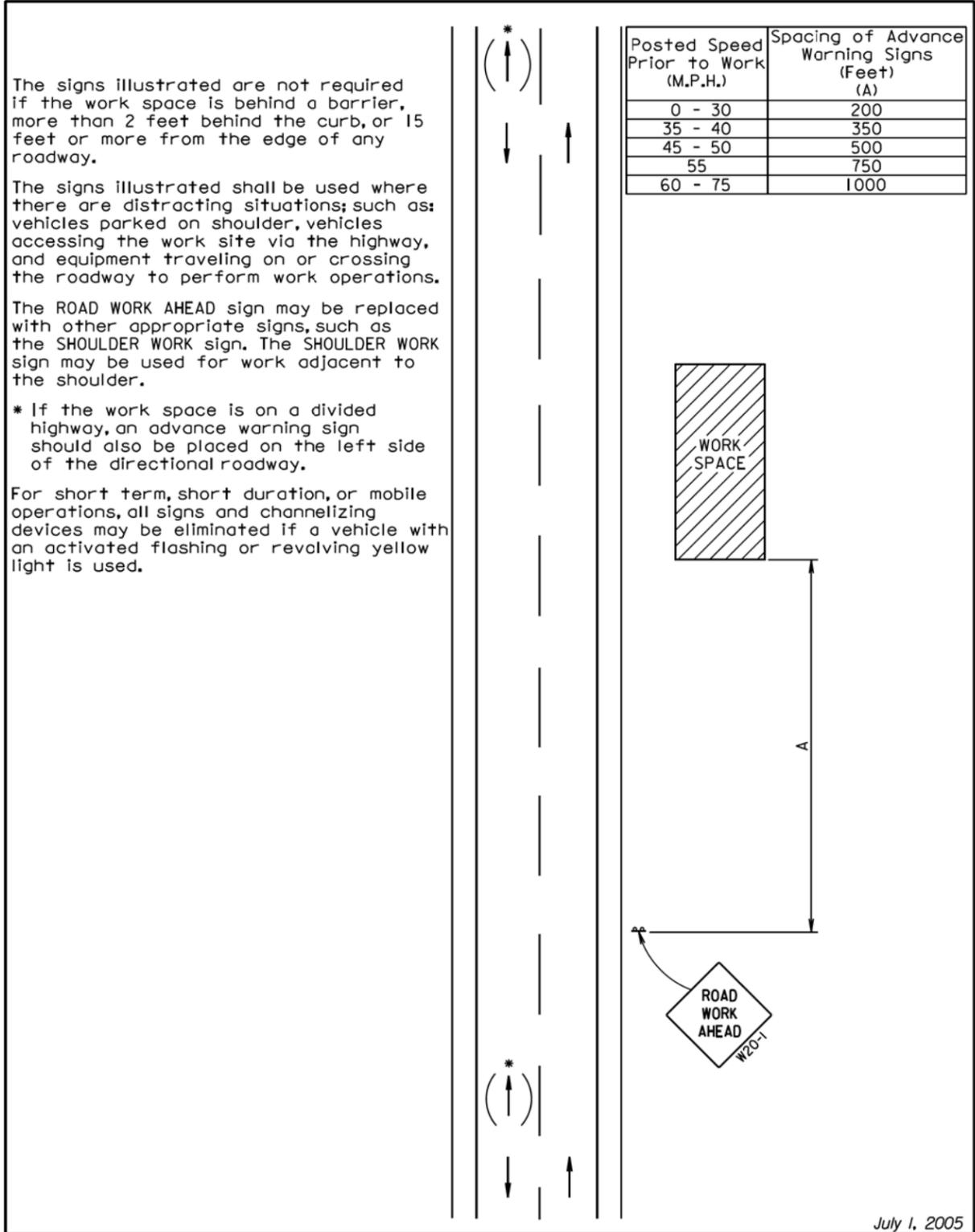
Fixed location signs to remain in place until the completion of permanent pavement markings.

DRAWING NOT TO SCALE

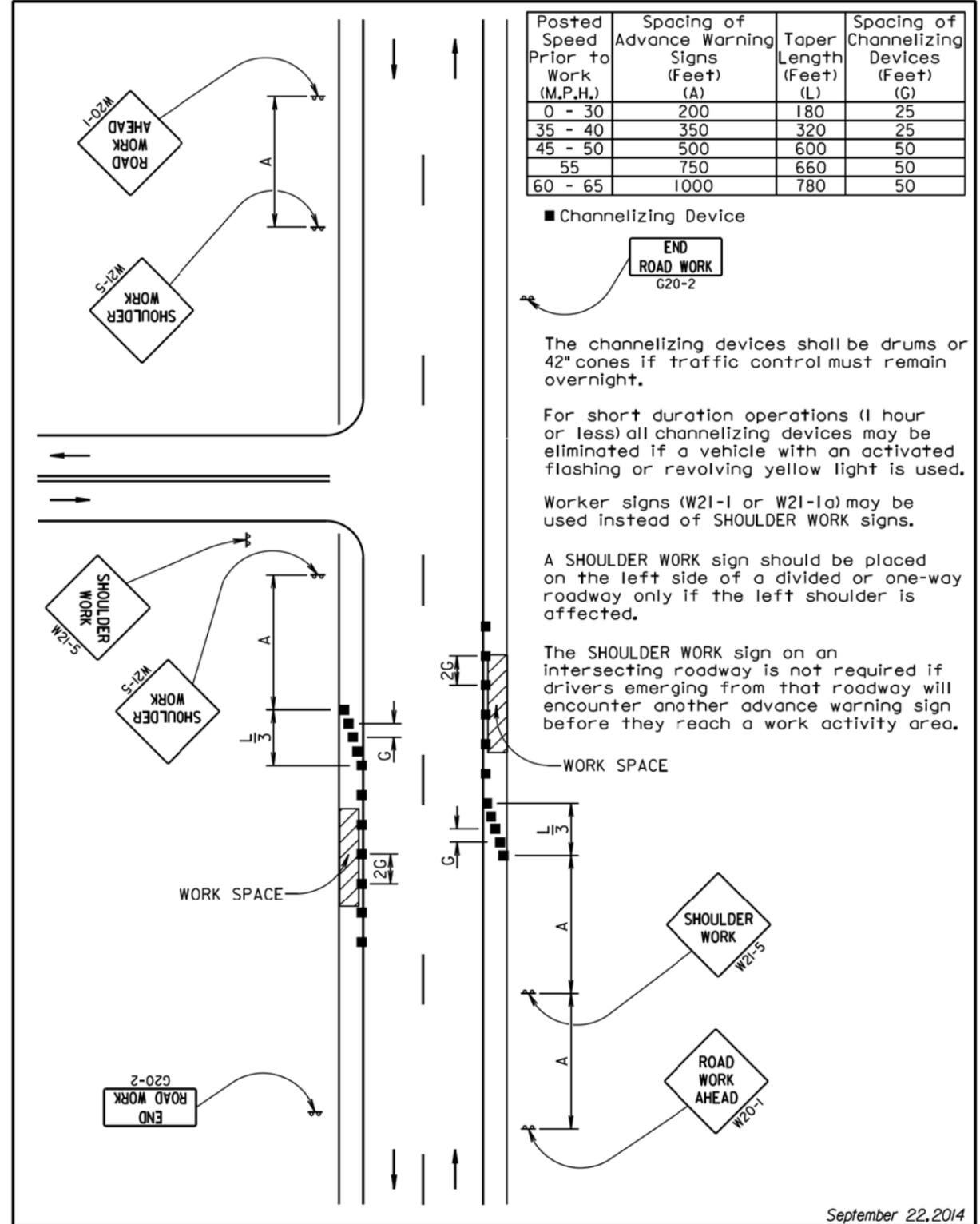
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0073(68)0 & P 0073(65)9	C6	C10

SPECIAL DETAIL FOR MOBILE OPERATION FOR ASPHALT CORING

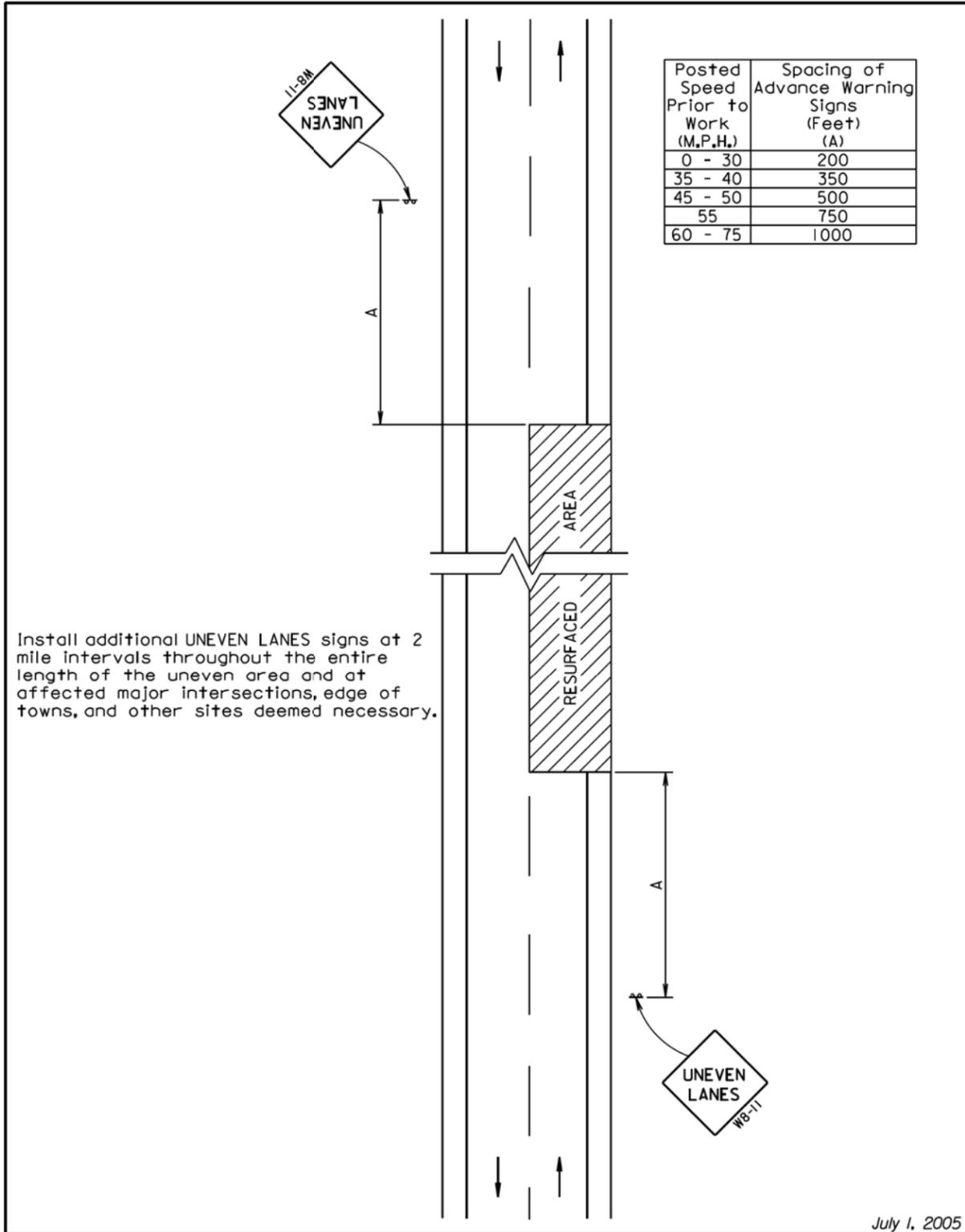




July 1, 2005

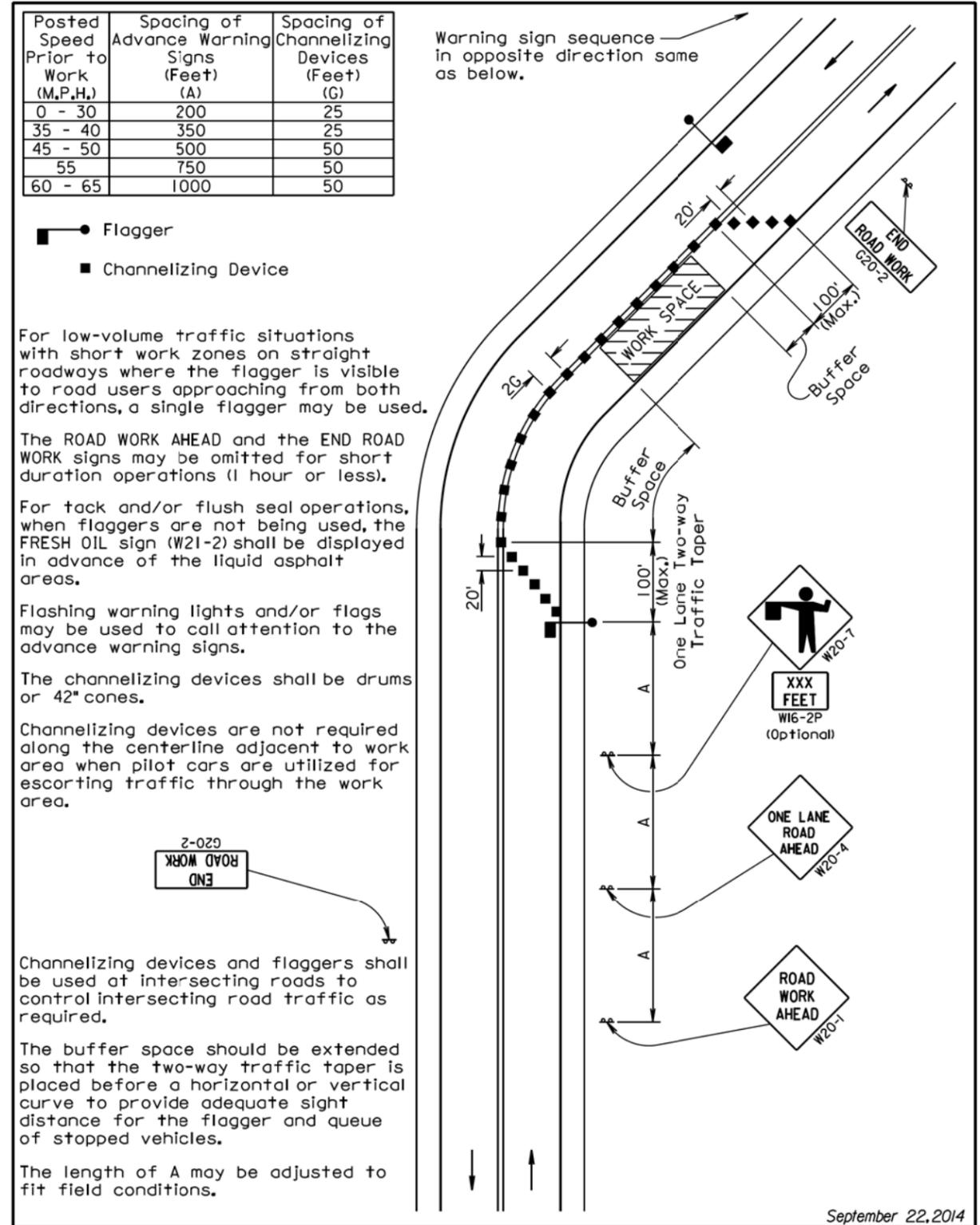


September 22, 2014

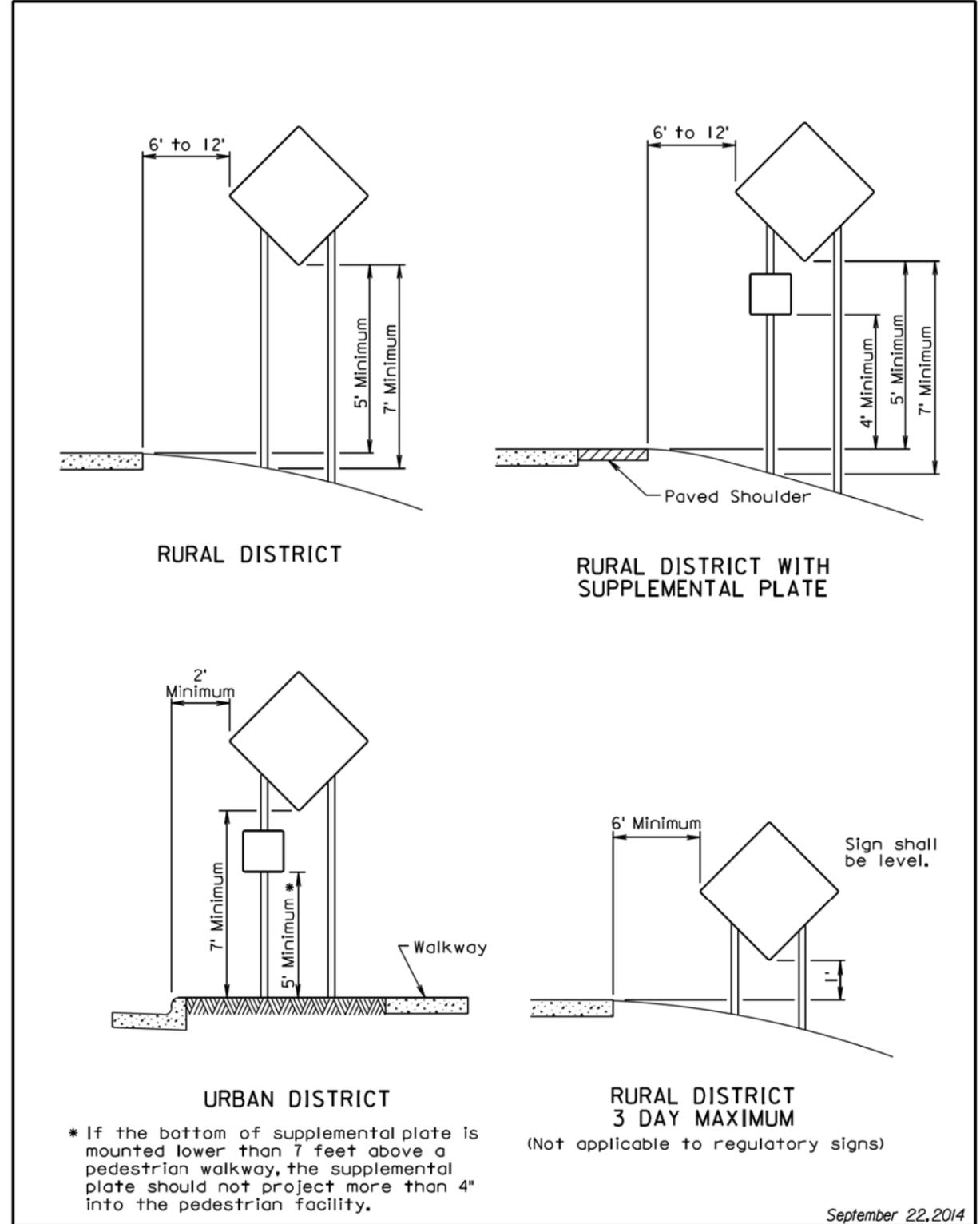
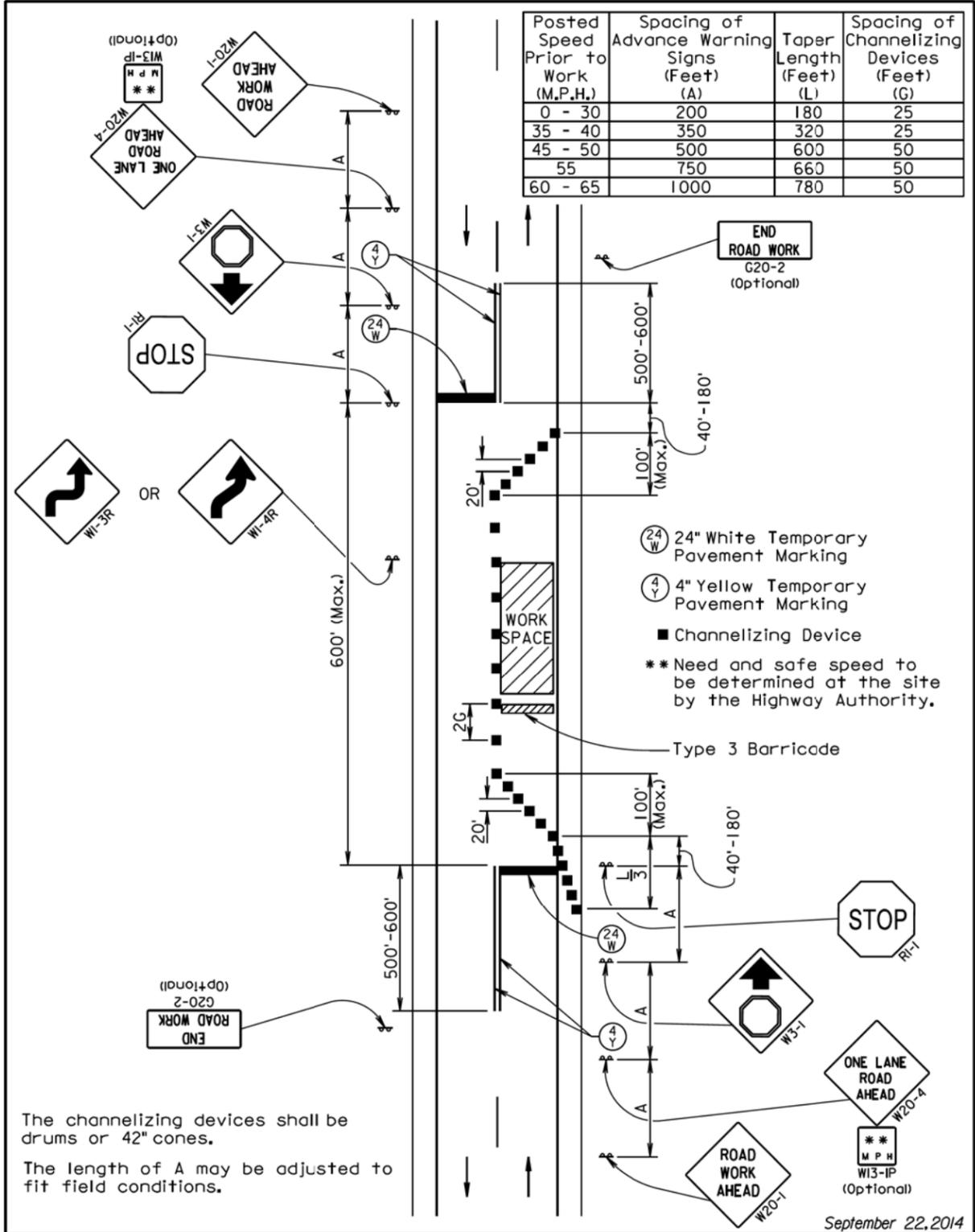


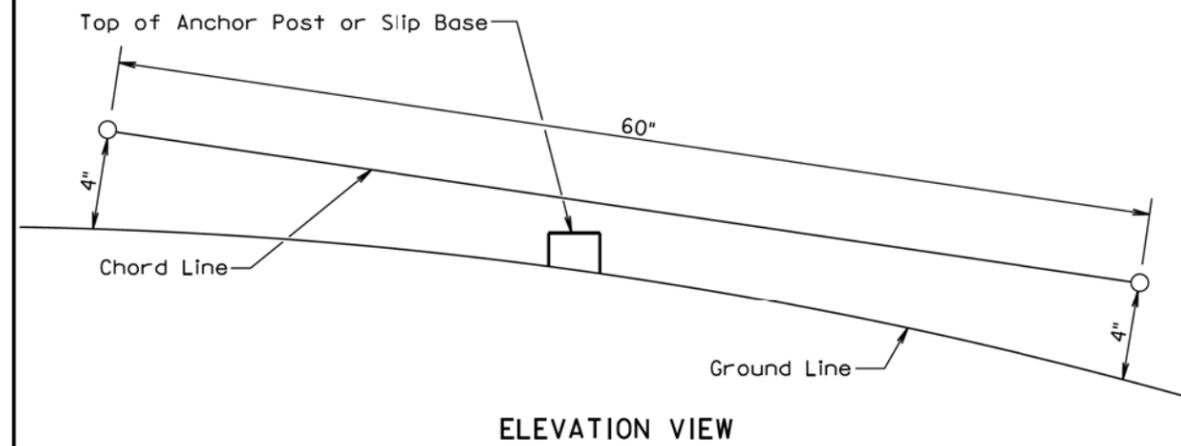
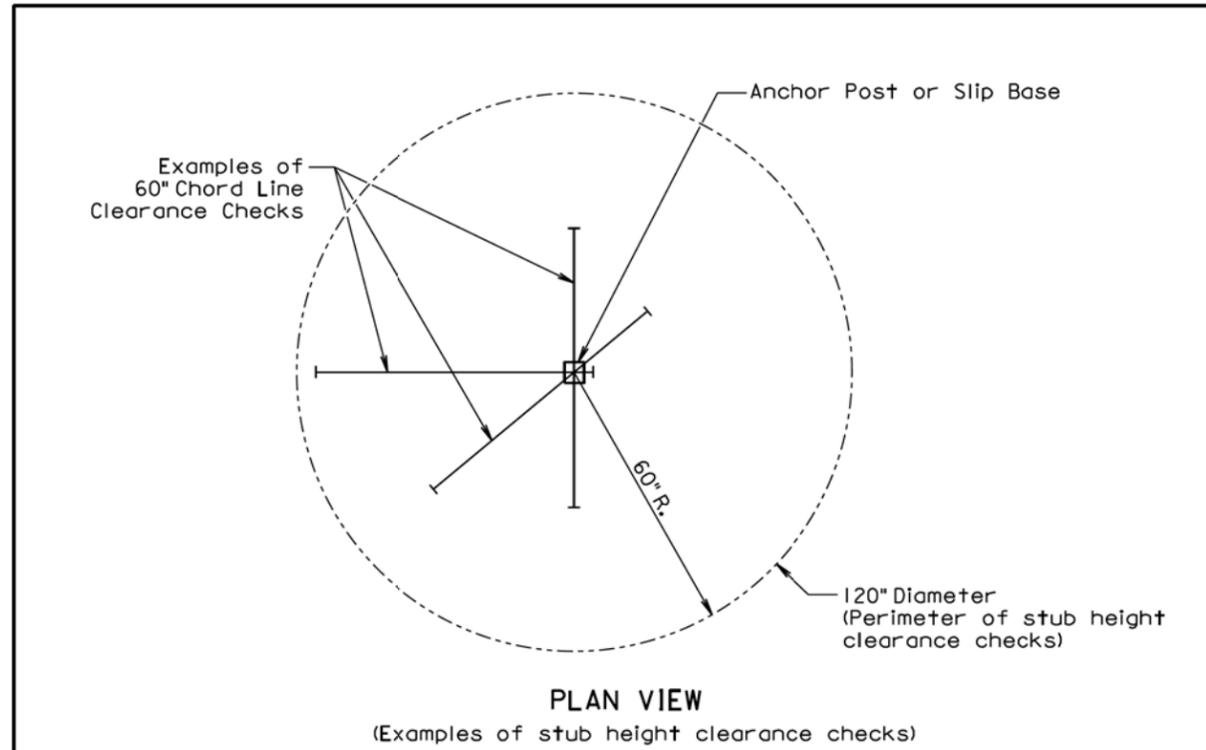
Install additional UNEVEN LANES signs at 2 mile intervals throughout the entire length of the uneven area and at affected major intersections, edge of towns, and other sites deemed necessary.

July 1, 2005



September 22, 2014





GENERAL NOTES:

The top of anchor posts and slip bases SHALL 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 shall 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.

July 1, 2005