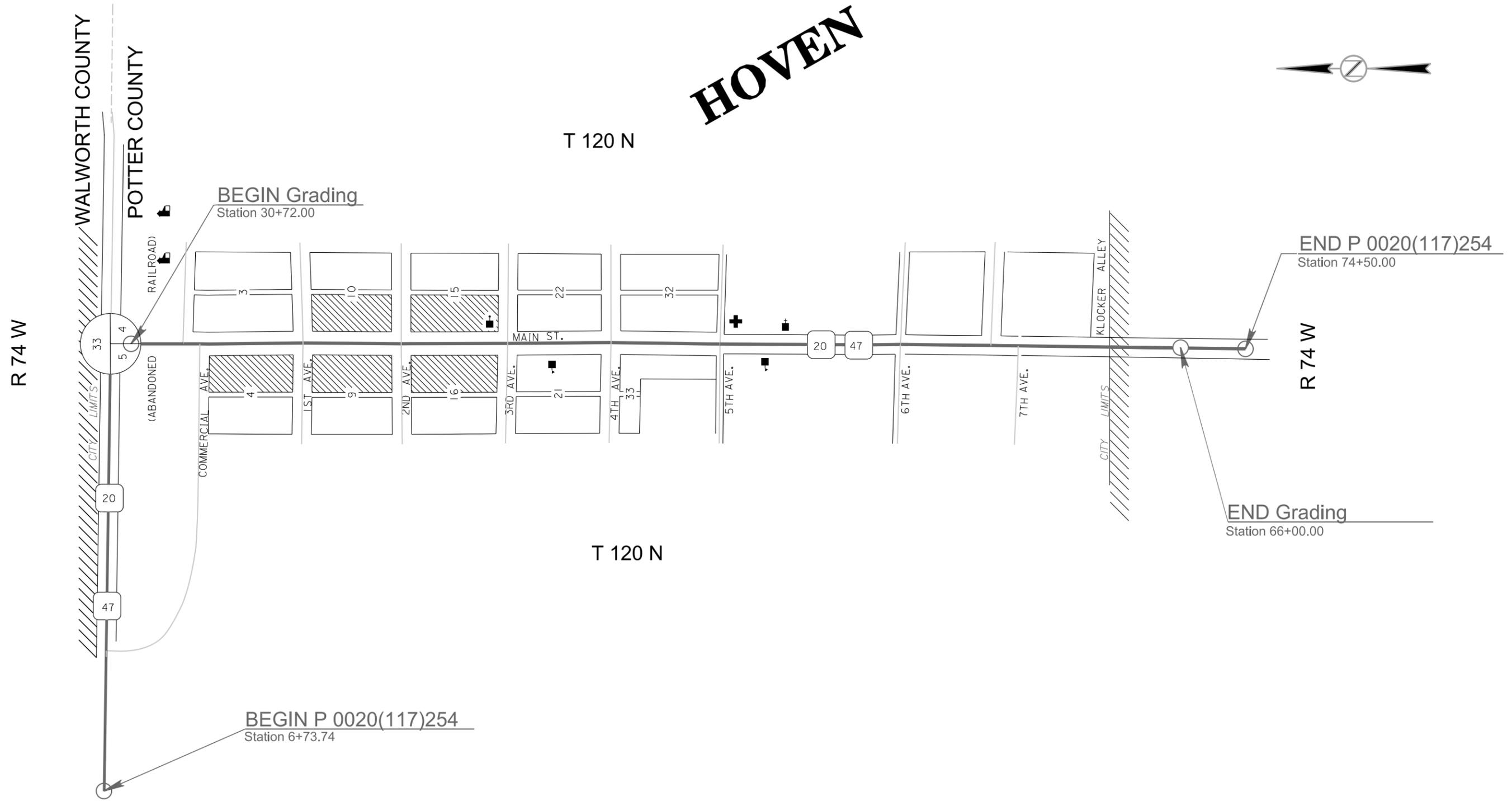


# Section C: Traffic Control Plans

## INDEX OF SHEETS

- C1 General Layout w/Index
- C2-C3 Estimate with General Notes & Tables
- C4 Fixed Location Signs
- C5-C6 Alternate Route Signing Layouts
- C7-C12 Standard Plates



# TRAFFIC CONTROL NOTES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0020(117)254	C2	C12

## ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
634E0010	Flagging	100.0	Hour
634E0110	Traffic Control Signs	1,687	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	64	Each
634E0640	Temporary Pavement Marking	7,350	Ft
634E1002	Detour Signing	360.0	SqFt
634E2020	Temporary Curb Ramp	10	Each

## SEQUENCE OF OPERATIONS

The Contractor's Sequence of Operations shall be submitted in writing and approved by the Engineer prior to the preconstruction meeting per Special Provision for Prosecution and Progress. Requests for additional mobilization compensation for any work that is controlled by the Contractor's Sequence of Operations will not be considered for payment.

The Contractor will complete all work on the project, including final cleanup, by the November 4, 2016 field work completion date.

## TRAFFIC CONTROL

The Contractor shall install the alternate route signing before starting any work in Hoven that will affect traffic. During construction, SD20 and SD47 will be closed full width to thru traffic within the project limits until the final lift of asphalt pavement is complete. However, the Contractor shall accommodate and maintain local traffic in all areas of the project that are not actively being worked on at the direction of the Engineer.

Areas that are designated by the Engineer to be open to local traffic shall be properly signed and delineated, and have a minimum of 2" of Base Course placed at a minimum width of 22'. Additional Base Course shall be added as needed to adequately accommodate and maintain local traffic to the satisfaction of the Engineer. The State will pay 100% of the initial 420 tons of Base Course that is used for maintaining local traffic, and then 50% of any additional quantity of Base Course needed for adequately maintaining local traffic.

For estimating purposes, 630 tons of Base Course has been added to the Estimate of Quantities in Section F for maintaining local traffic. Base Course for the purposes of maintaining local traffic may be used without any further testing, and the Contractor will not be required to salvage it for future use elsewhere on the project.

All traffic control sign locations, including alternate route signs, shall be set in the field by the Contractor and verified by the Engineer prior to installation. The affected business owners along the project will be allowed to place signs that indicate directions to their property within the State Right of Way during construction of the project as approved by the Engineer. The Contractor shall accommodate these signs at no additional cost to the contract.

Material tracking off vehicles leaving the project, pit, and plant sites must be removed from the roadway in a manner that satisfies the Storm Water Pollution Prevention Plan. All costs associated with this work shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

## DETOUR SIGNING, MAINTENANCE, AND REMOVAL

The Contractor will be required to furnish, install, maintain, and remove the alternate route signing in accordance with the Specifications, the MUTCD, and as detailed in the plans. The cost for furnishing, installing, maintaining, relocating, and removing alternate route related signs, supports, and mounting hardware shall be incidental to the contract price per square foot for Detour Signing.

## PEDESTRIAN TRAFFIC CONTROL

The existing sidewalks cannot be closed without supplying an alternate route. When crosswalks, sidewalks or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall include accessibility features. The Contractor shall provide for and maintain a pedestrian crossing from one side of the project to the other near the location of the school at all times while school is in session.

The Contractor shall adhere to the requirements of the Americans with Disabilities Act (ADA) during construction. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG), and should not be used as a control for pedestrian movements.

A smooth, continuous hard surface should be provided throughout the entire length of the temporary pedestrian facility. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use.

A temporary pedestrian ramp shall be provided by the Contractor in all cases where an alternate route cannot be found, and the intersection will carry pedestrian traffic. A suitable ramp would be one made out of wood that is at least 3' wide and no greater than a 12:1 slope. The ramp should be sufficiently sturdy and unyielding with hand rails. The cost of the temporary pedestrian ramps shall be incidental to the contract price per each for Temporary Curb Ramp.

The Contractor shall adequately sign and barricade the sidewalk for pedestrian traffic. The Contractor must not leave un-barricaded holes open either overnight or over the weekend.

The Contractor shall accommodate pedestrian traffic, including those with disabilities. Bicycle traffic shall also be accommodated. The Contractor shall submit a detailed plan to the Engineer on how pedestrian and bicycle traffic will be accommodated during the various phases of the work at the effected locations. This plan should be in conformance with the details contained in these plans for pedestrian accommodation. The plan may be submitted at the Preconstruction Meeting.

The plan shall be submitted no later than two weeks prior to the start of work. Some options for consideration to accommodate the pedestrian traffic include:

1. The use of various approved traffic control devices to maintain the pedestrians through or past the immediate work area.
2. The detour of pedestrians and bicycles to the opposite side of the street, alternate routes(s) or around a City block.
3. Manned crossing assistance (crossing guards) combined with an accessible path.

The cost for all other pedestrian traffic control shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

## TEMPORARY WALKWAY

Where and when active construction activities are not occurring, a temporary walkway shall be in place. The Contractor can barricade a portion of the street (parking lane) for pedestrian traffic and use the temporary walkway to cross the removal area immediately in front of the individual business entrances.

The Contractor shall provide an ADA compliant temporary walkway for customer access to businesses in areas where the sidewalk has been removed. The Contractor shall provide plans for a temporary walkway to the Engineer for approval prior to the beginning of construction. All costs for constructing the temporary walkway including materials, labor, maintenance, and removal shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

## SHOULDER DROP-OFF SIGNS

Shoulder Drop-Off signs and Channelizing Devices shall be used when a shoulder drop-off equals or exceeds 3 inches in height. Channelizing Devices shall be placed and maintained at 25' intervals along the affected area when there is a drop off of 3" or greater. All costs associated with furnishing, installing, maintaining and removing the Channelizing Devices shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous. Payment for Shoulder Drop-Off signs will be made at the contract price per square foot for Traffic Control Signs.

# TRAFFIC CONTROL NOTES

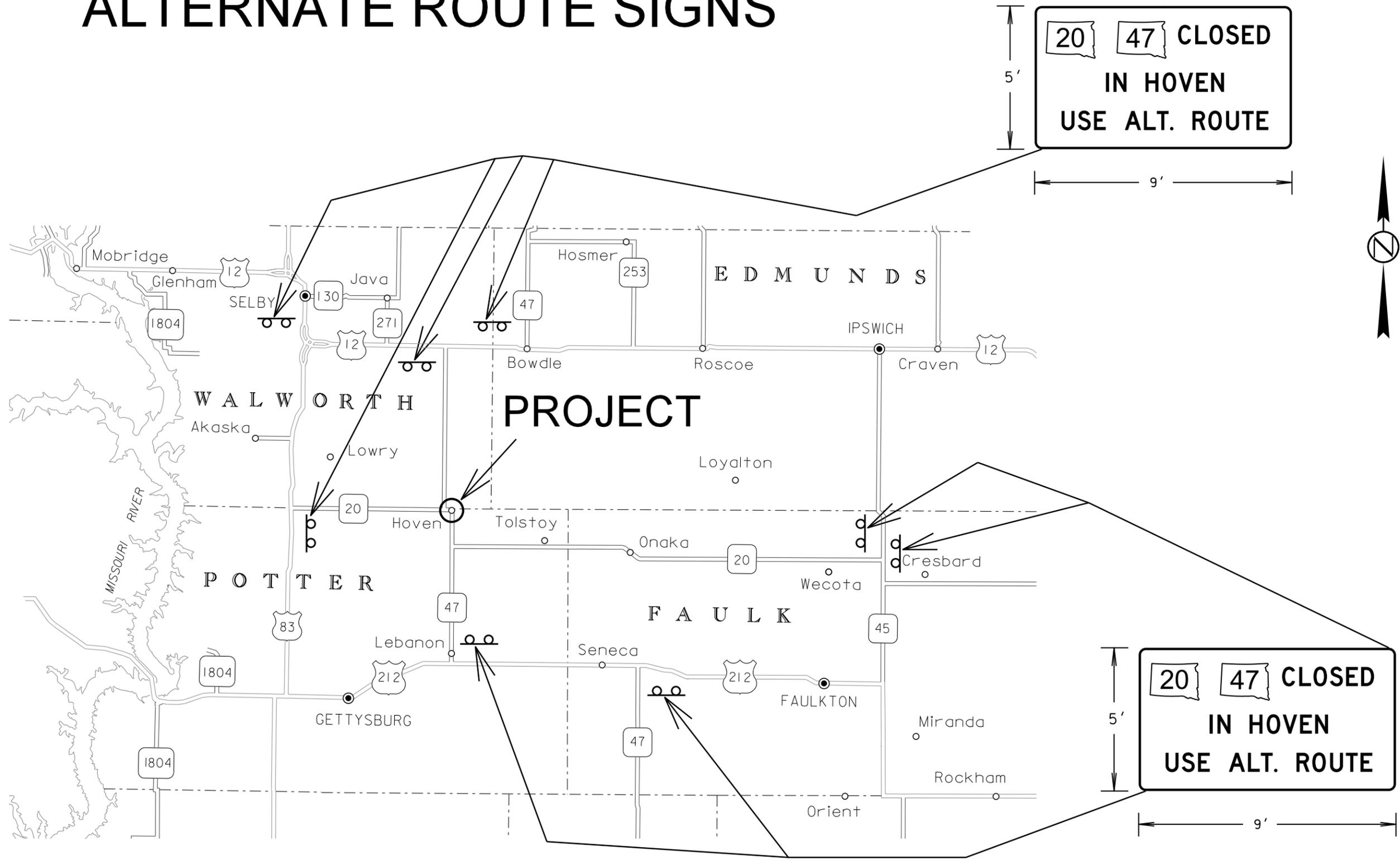
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0020(117)254	C3	C12

## SIGN TABULATION

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	4	30" x 30"	6	24
R3-1	NO RIGHT TURN (symbol)	4	24" x 24"	4	16
R3-2	NO LEFT TURN (symbol)	4	24" x 24"	4	16
R4-1	DO NOT PASS	2	24" x 30"	5	10
R4-7c	(Narrow) KEEP RIGHT (symbol)	4	18" x 30"	4	16
R9-8	PEDESTRIAN CROSSWALK	4	36" x 18"	5	20
R9-9	SIDEWALK CLOSED	8	24" x 12"	2	16
R9-10	SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE	8	24" x 12"	2	16
R9-11	SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE	4	24" x 18"	3	12
R9-11a	SIDEWALK CLOSED with ARROW (L or R) CROSS HERE	4	24" x 12"	2	8
R11-2	ROAD CLOSED	14	48" x 30"	10	140
R11-3a	ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY	4	60" x 30"	13	52
R11-4	ROAD CLOSED TO THRU TRAFFIC	2	60" x 30"	13	26
W3-4	BE PREPARED TO STOP	4	48" x 48"	16	64
W8-1	BUMP	6	48" x 48"	16	96
W8-6	TRUCK CROSSING	4	48" x 48"	16	64
W8-7	LOOSE GRAVEL	4	48" x 48"	16	64
W8-11	UNEVEN LANES	4	48" x 48"	16	64
W8-17	SHOULDER DROP-OFF (symbol)	4	48" x 48"	16	64
W11-2	PEDESTRIAN (symbol)	8	36" x 36"	9	72
W13-1P	ADVISORY SPEED (plaque)	4	30" x 30"	6	24
W16-2P	___ FEET (supplemental distance plaque)	2	30" x 24"	5	10
W16-9P	AHEAD (plaque)	4	30" x 18"	4	16
W20-1	ROAD WORK AHEAD	23	48" x 48"	16	368
W20-3	ROAD CLOSED AHEAD	4	48" x 48"	16	64
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-1	WORKERS (symbol)	2	48" x 48"	16	32
W21-2	FRESH OIL	2	48" x 48"	16	32
W21-3	ROAD MACHINERY AHEAD	2	48" x 48"	16	32
W21-5	SHOULDER WORK	4	48" x 48"	16	64
W21-6	SURVEY CREW	2	48" x 48"	16	32
G20-2	END ROAD WORK	5	36" x 18"	5	25
<b>TOTAL</b>					<b>1687</b>
<b>ITEM DESCRIPTION</b>		<b>QUANTITY</b>			
Type 3 Barricade, 8' Double Sided		64 Each			

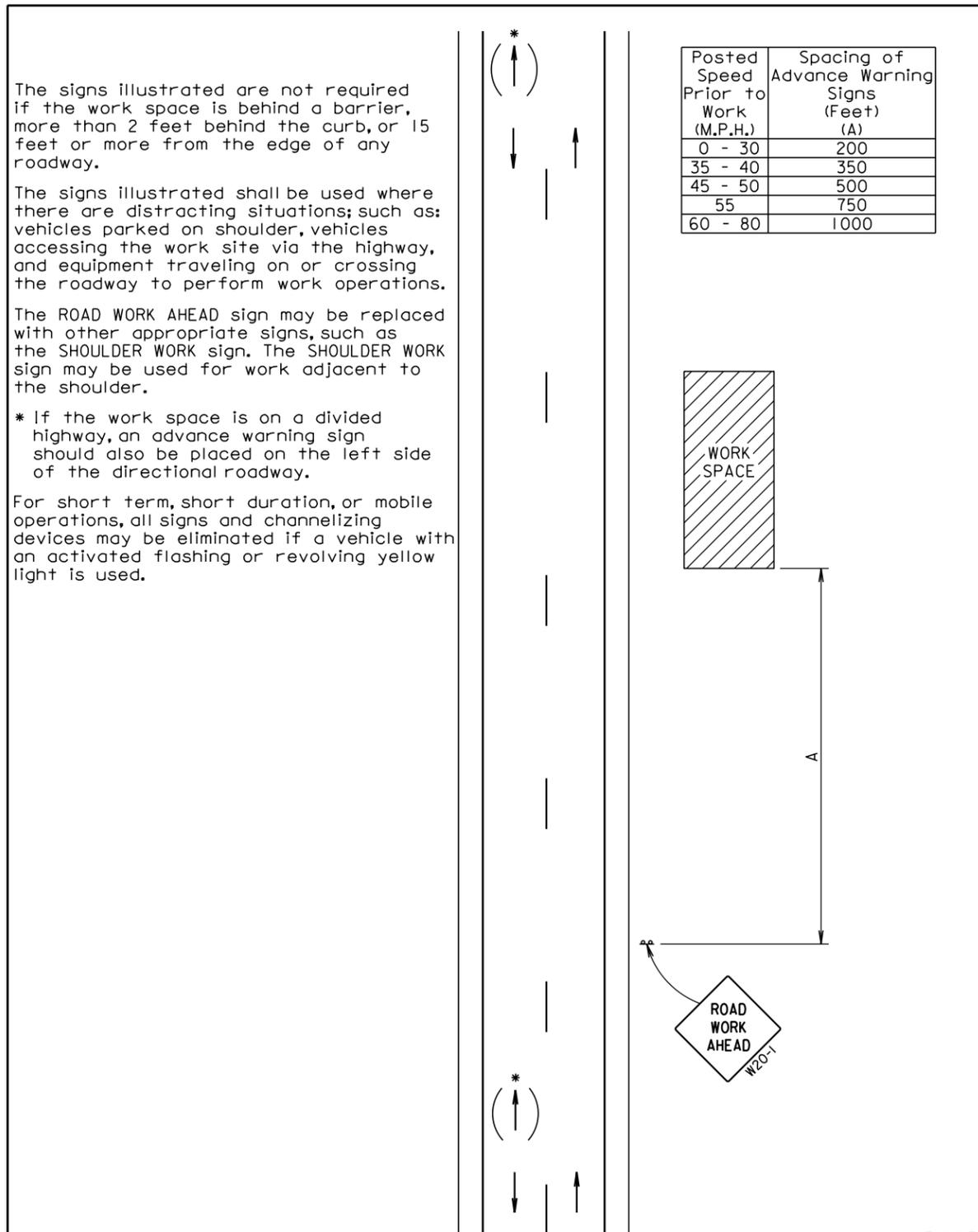


# ALTERNATE ROUTE SIGNS

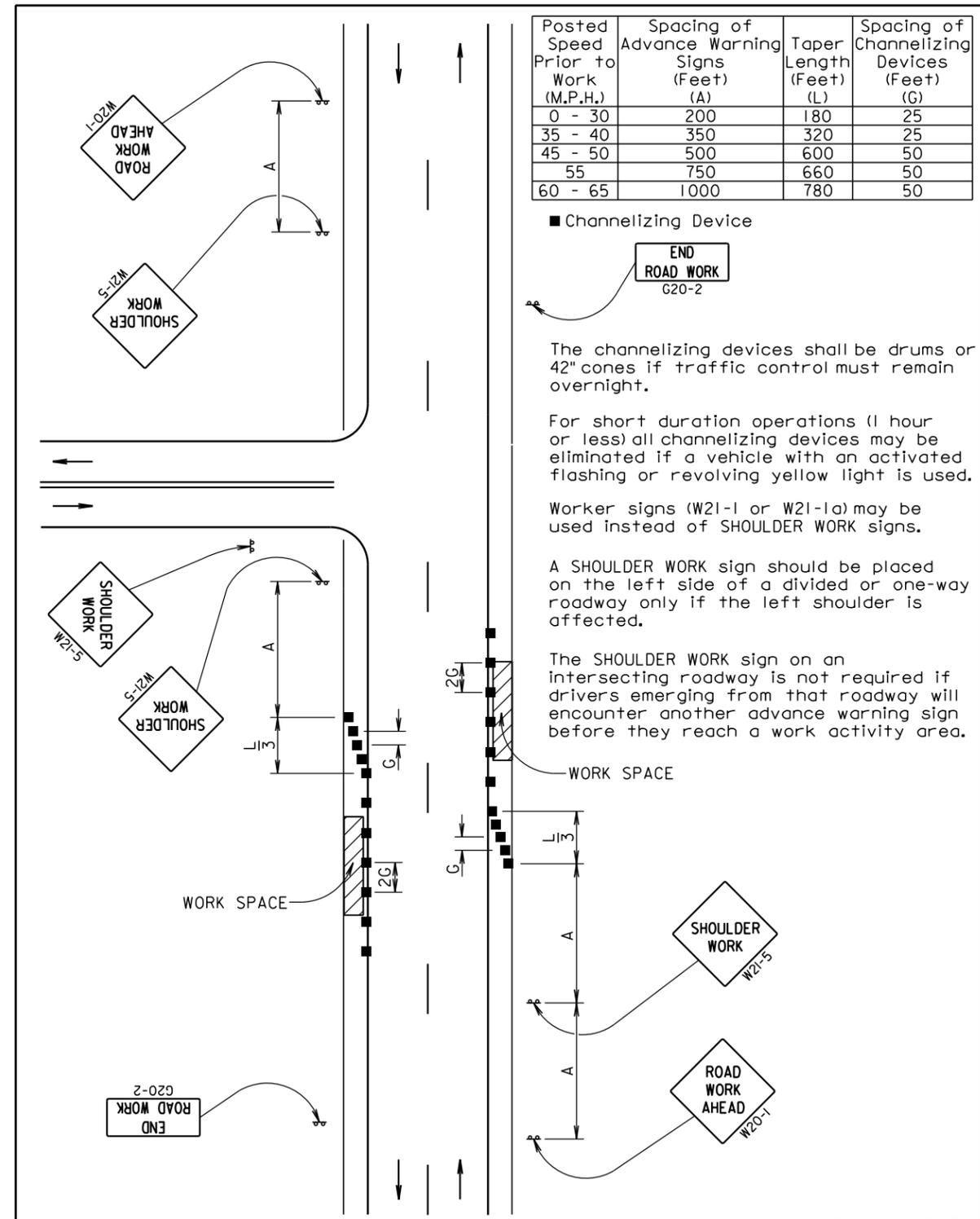


ALL ALTERNATE ROUTE SIGNS, INCLUDING POSTS AND MOUNTING HARDWARE, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR DETOUR SIGNING.

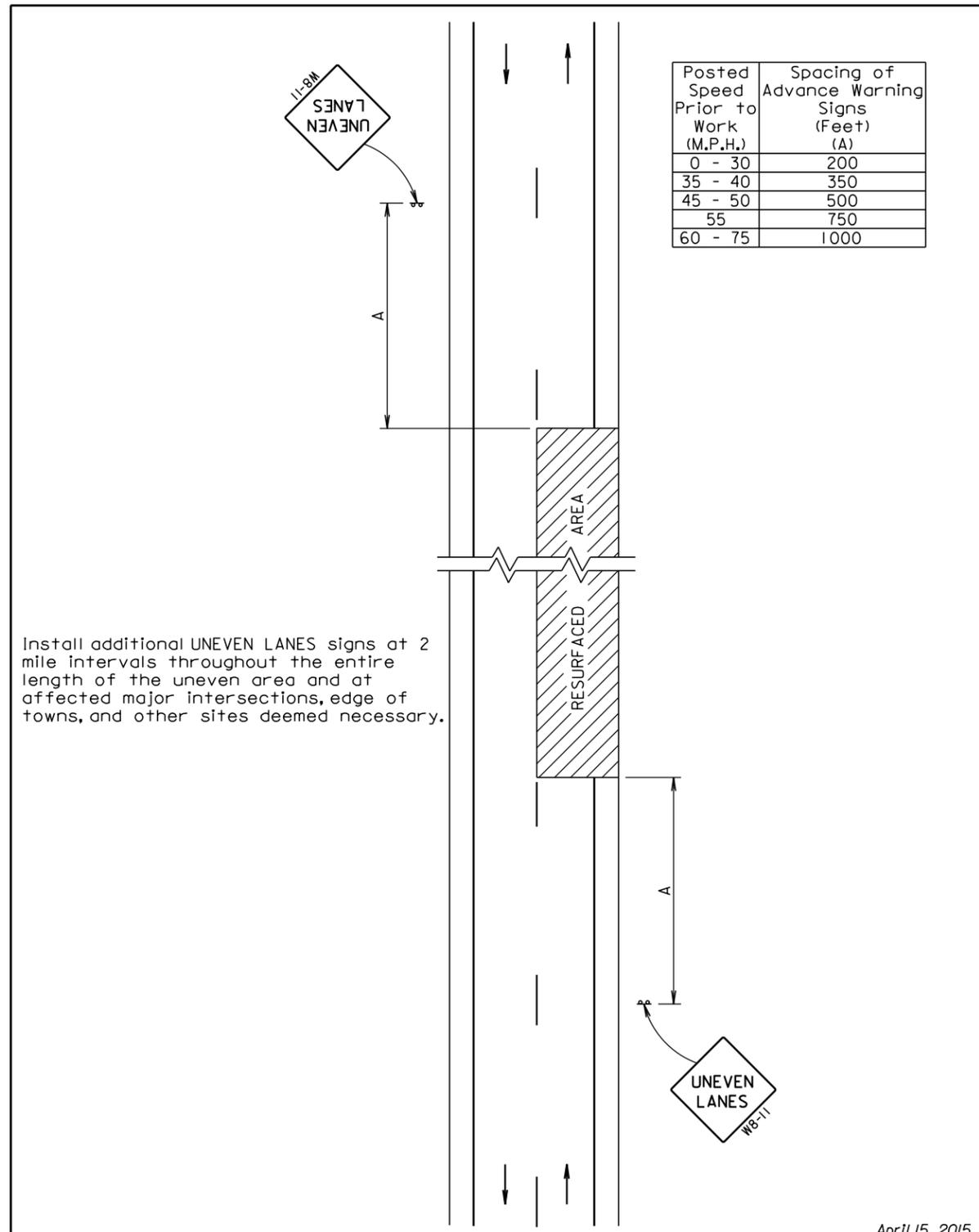




April 15, 2015

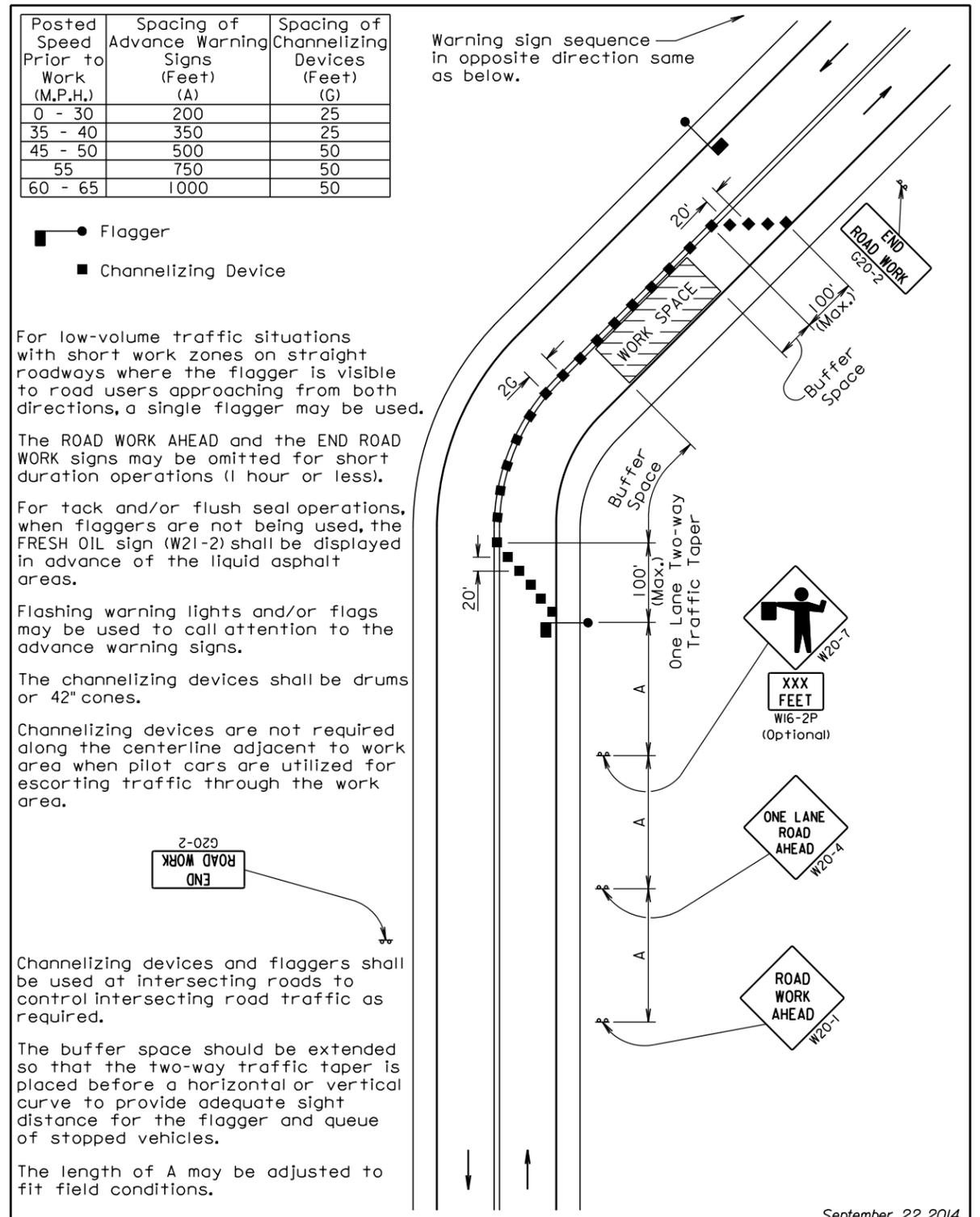


September 22, 2014



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.

April 15, 2015



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.

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

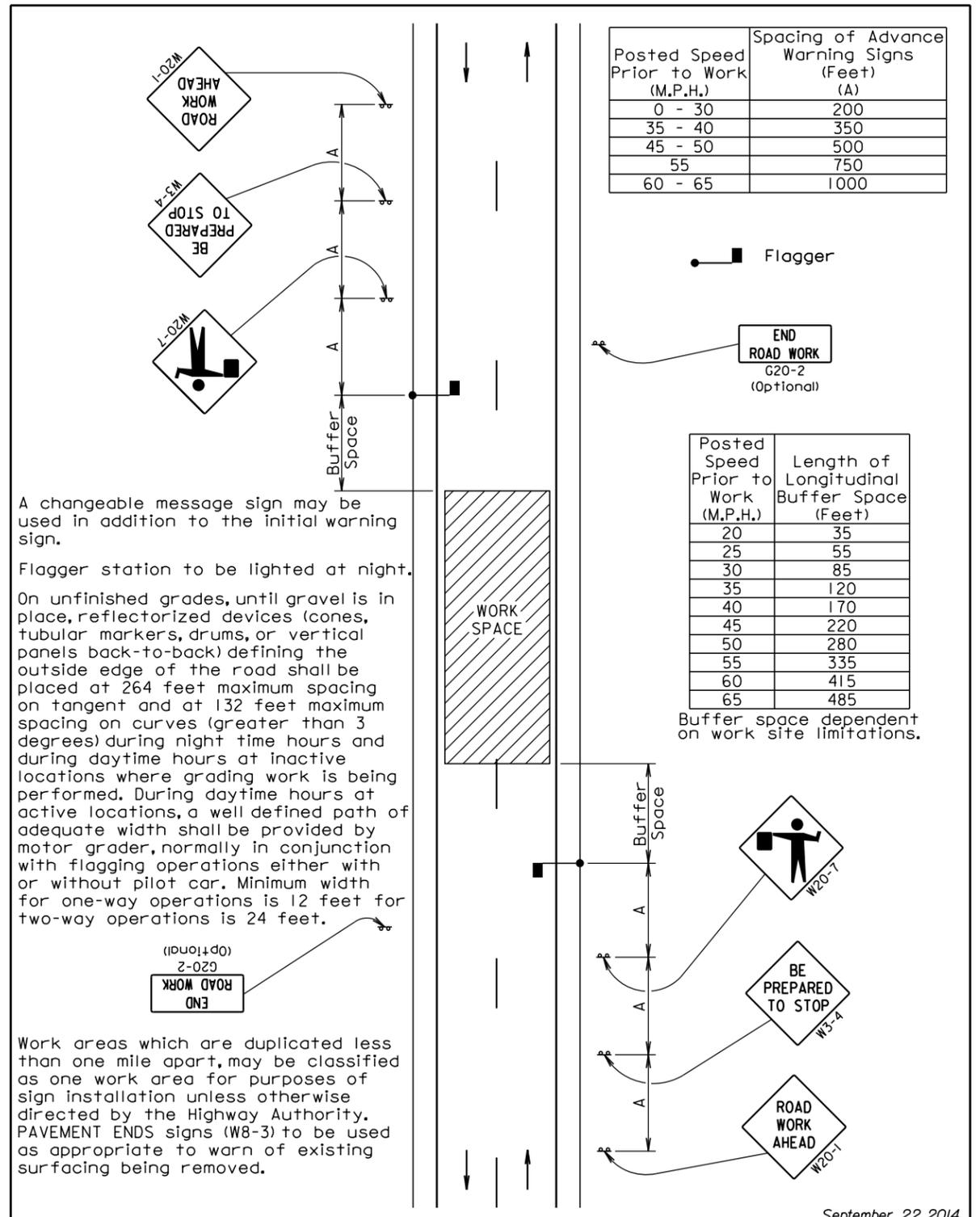
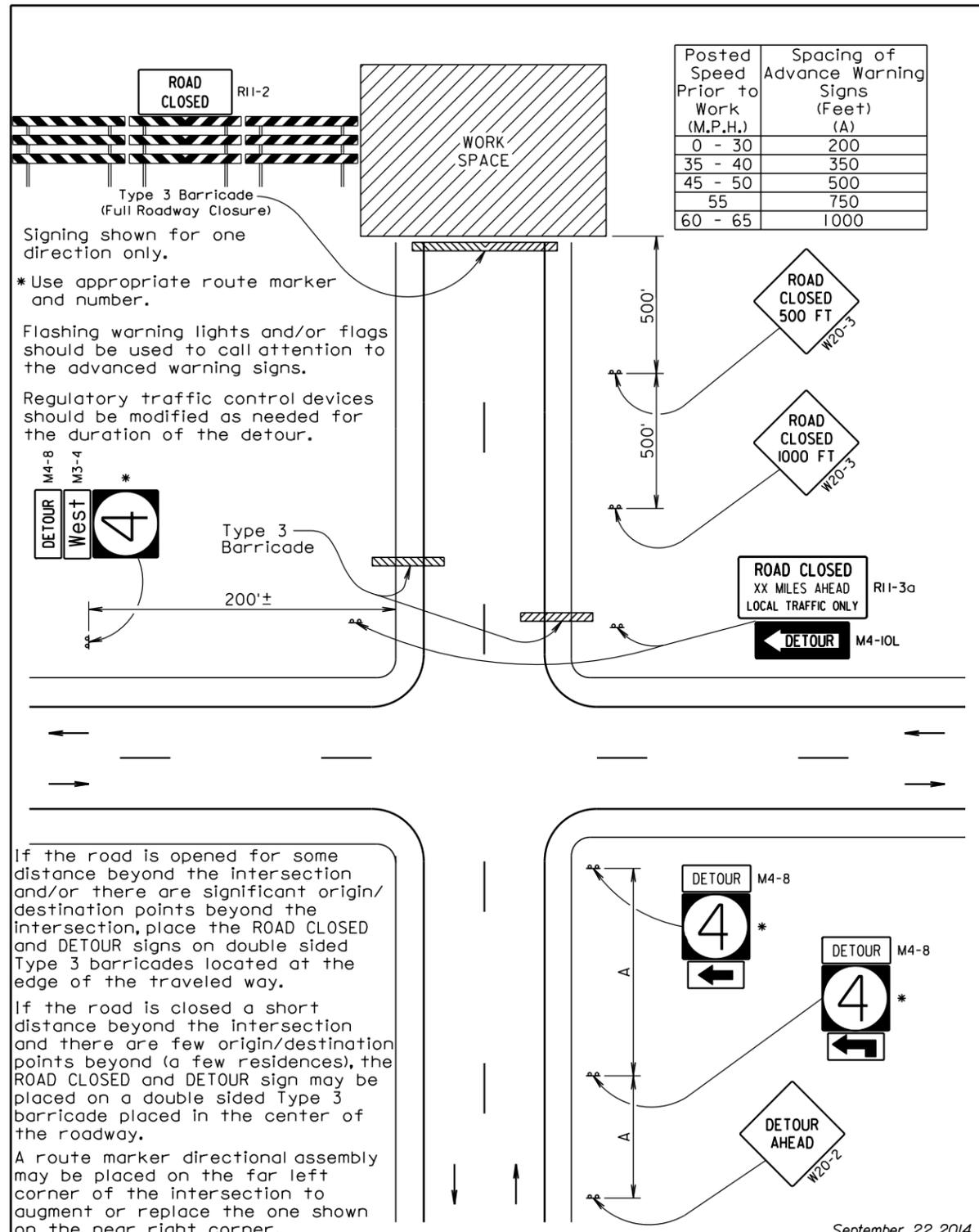
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

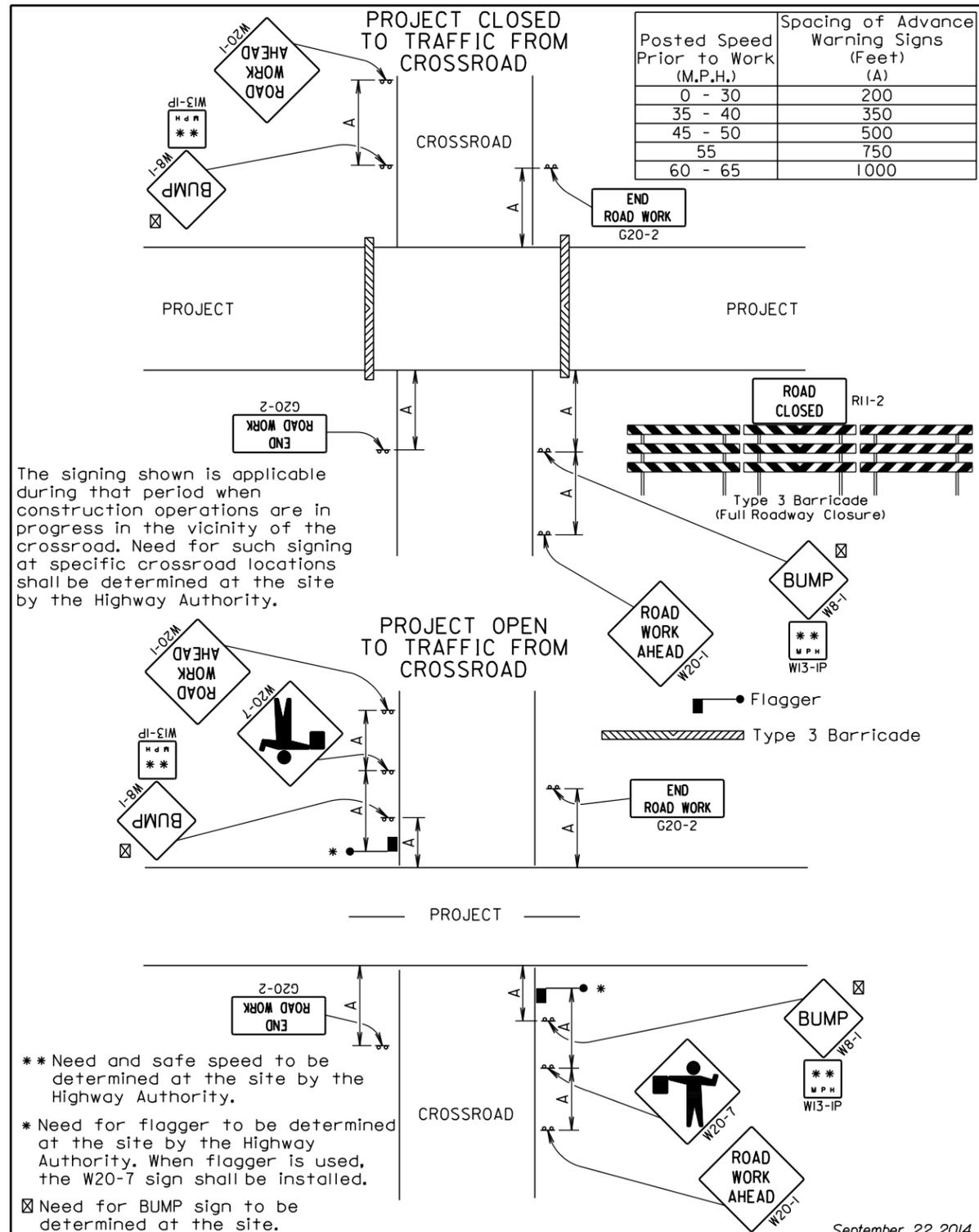
The length of A may be adjusted to fit field conditions.

Warning sign sequence in opposite direction same as below.

2-029 ROAD WORK END

September 22, 2014



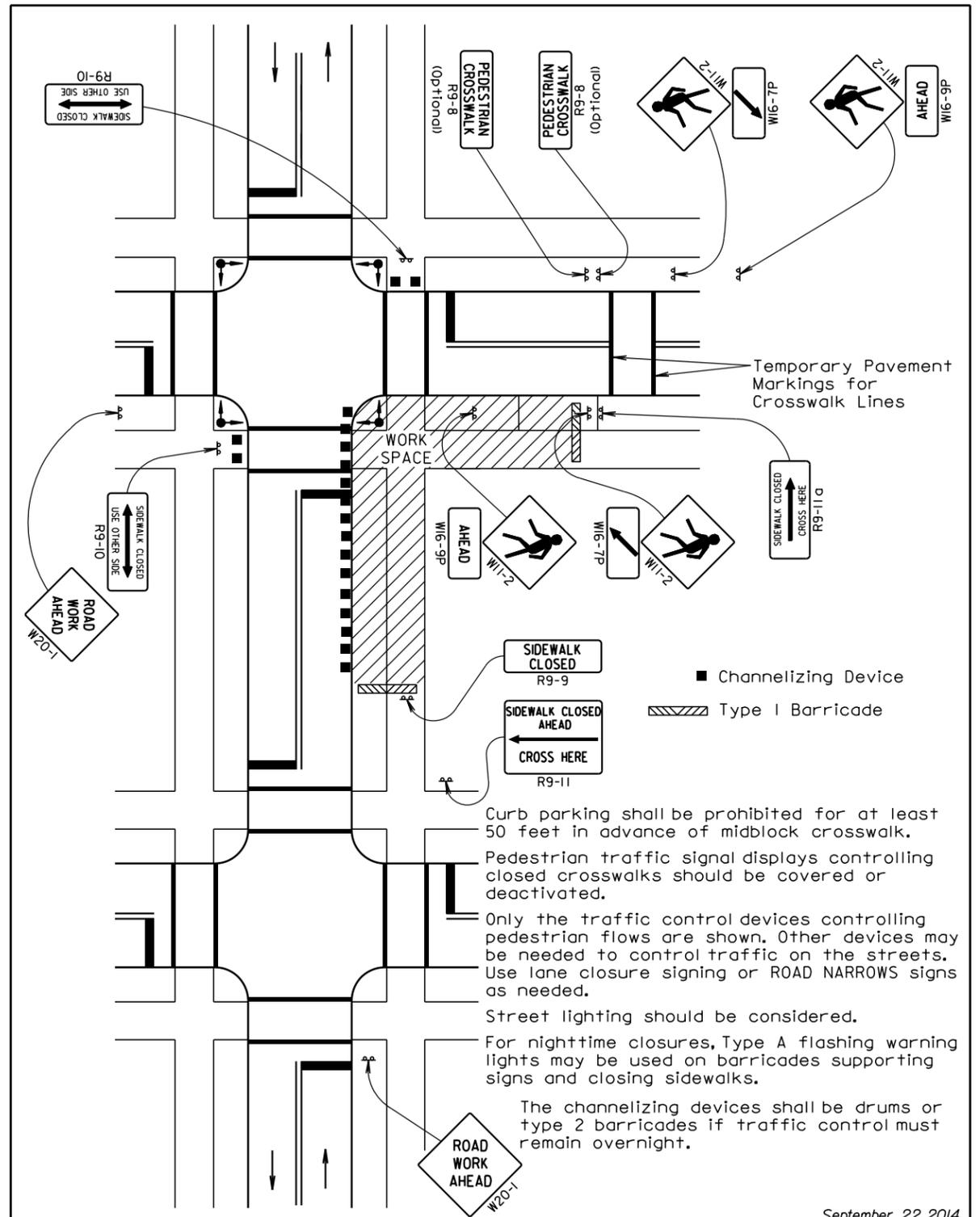


\*\* Need and safe speed to be determined at the site by the Highway Authority.

\* Need for flagger to be determined at the site by the Highway Authority. When flagger is used, the W20-7 sign shall be installed.

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

September 22, 2014



September 22, 2014

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs, as needed.

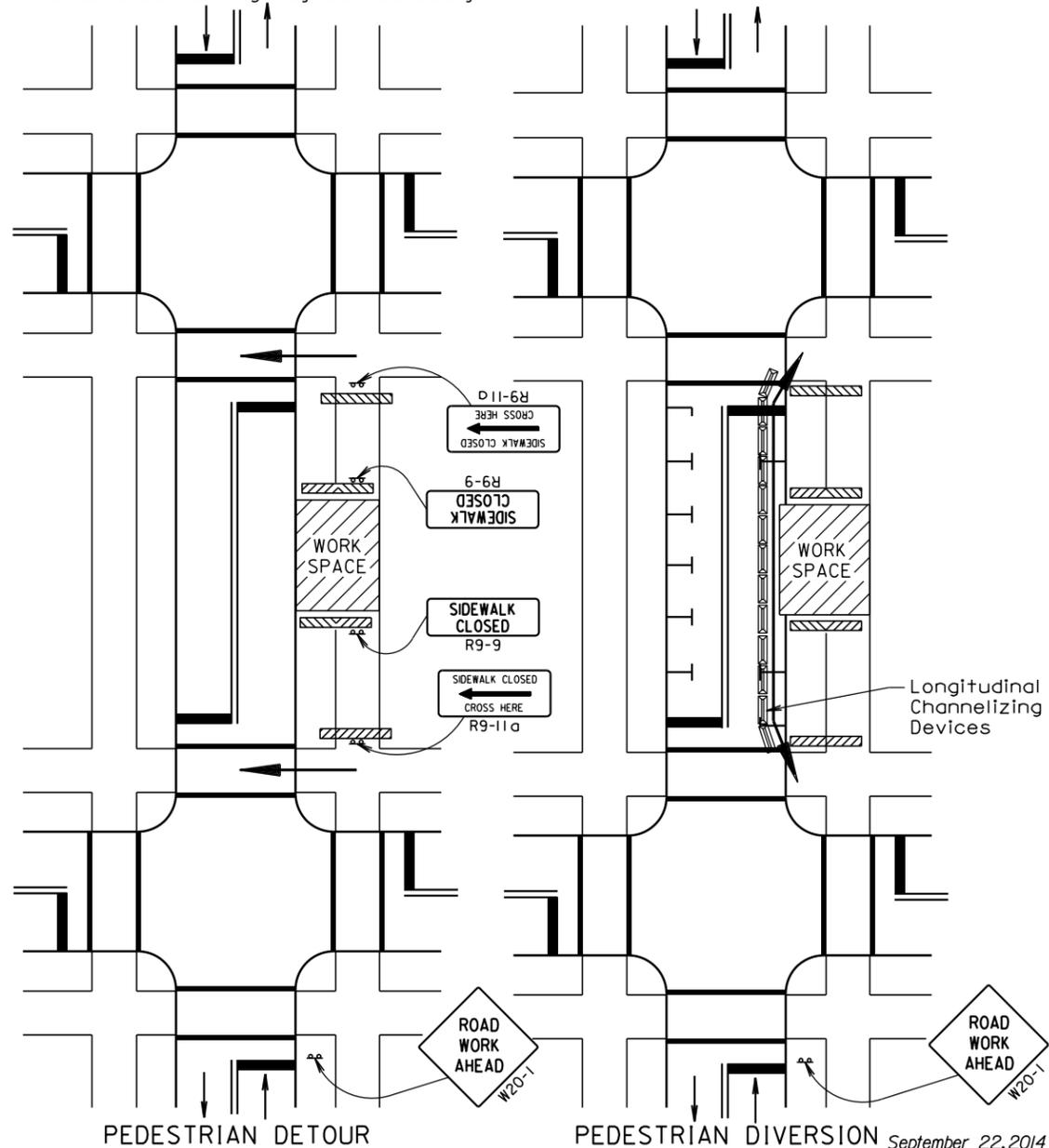
Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

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

Street lighting should be considered.

 Type 1 Barricade  
and  
 Channelizing Device

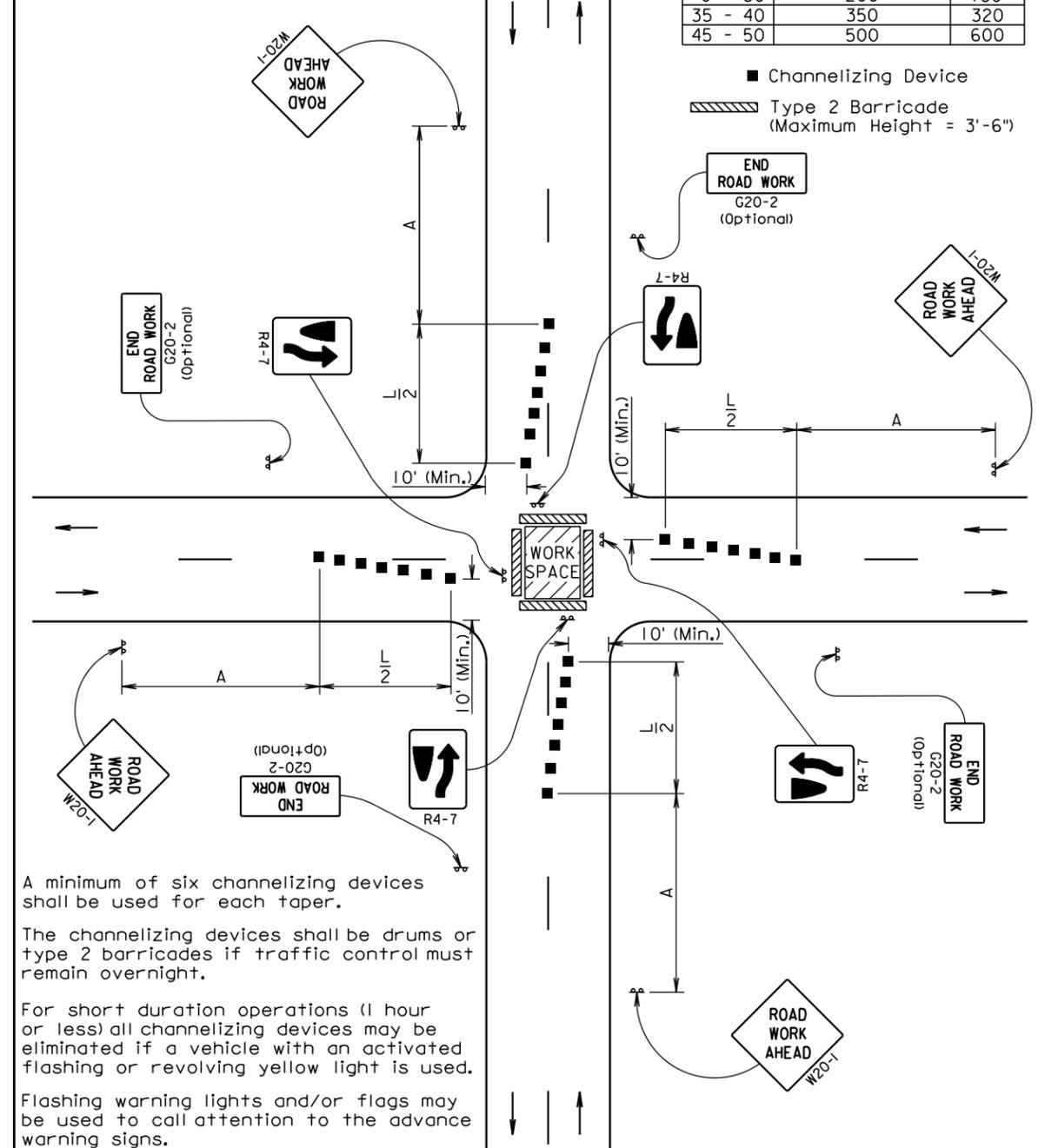


PEDESTRIAN DETOUR

PEDESTRIAN DIVERSION

September 22, 2014

Prohibit left turns as required by traffic conditions. Unless the streets are wide, it may be physically impossible to turn left, especially for large vehicles.



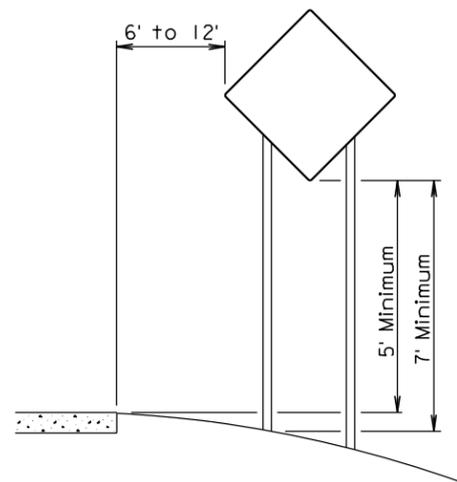
A minimum of six channelizing devices shall be used for each taper.

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

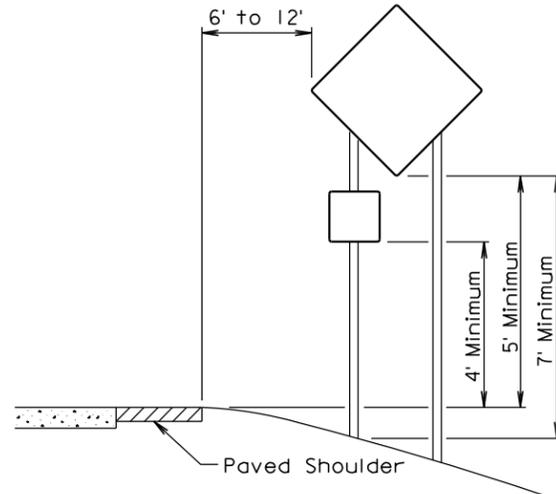
For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

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

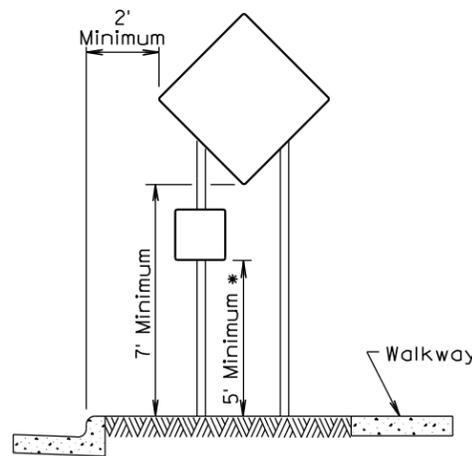
September 22, 2014



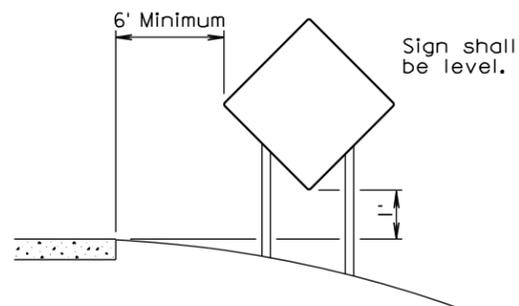
RURAL DISTRICT



RURAL DISTRICT WITH  
SUPPLEMENTAL PLATE



URBAN DISTRICT

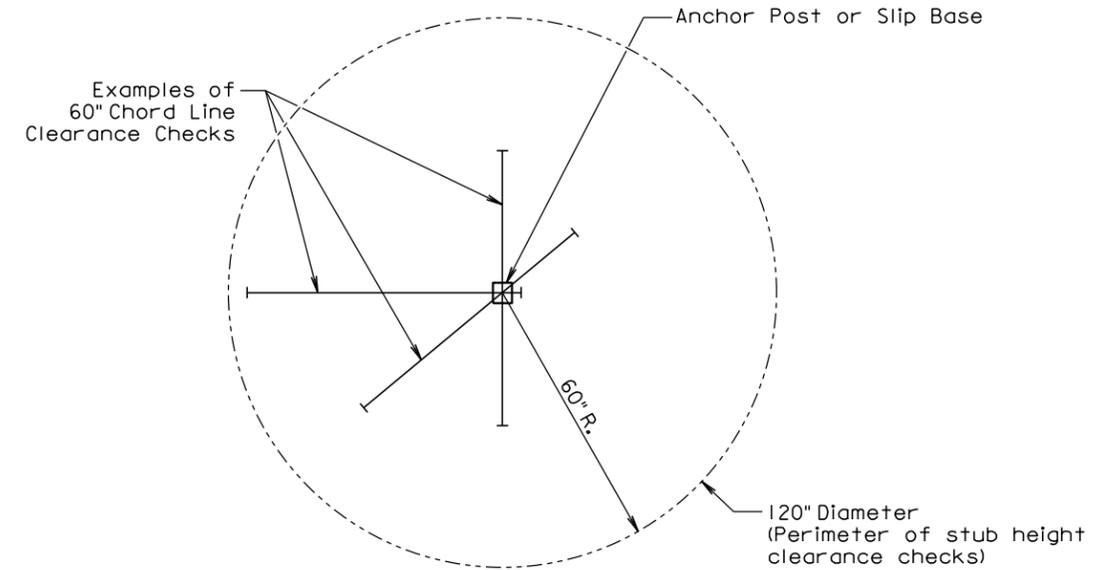


RURAL DISTRICT  
3 DAY MAXIMUM  
(Not applicable to regulatory signs)

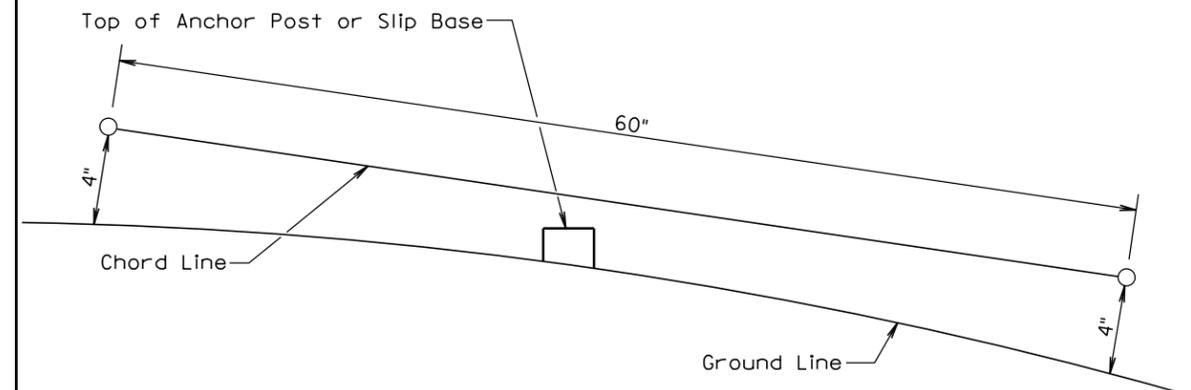
\* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

September 22, 2014

Published Date: 2nd Qtr. 2015	S D D O T	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 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

Published Date: 2nd Qtr. 2015	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1