

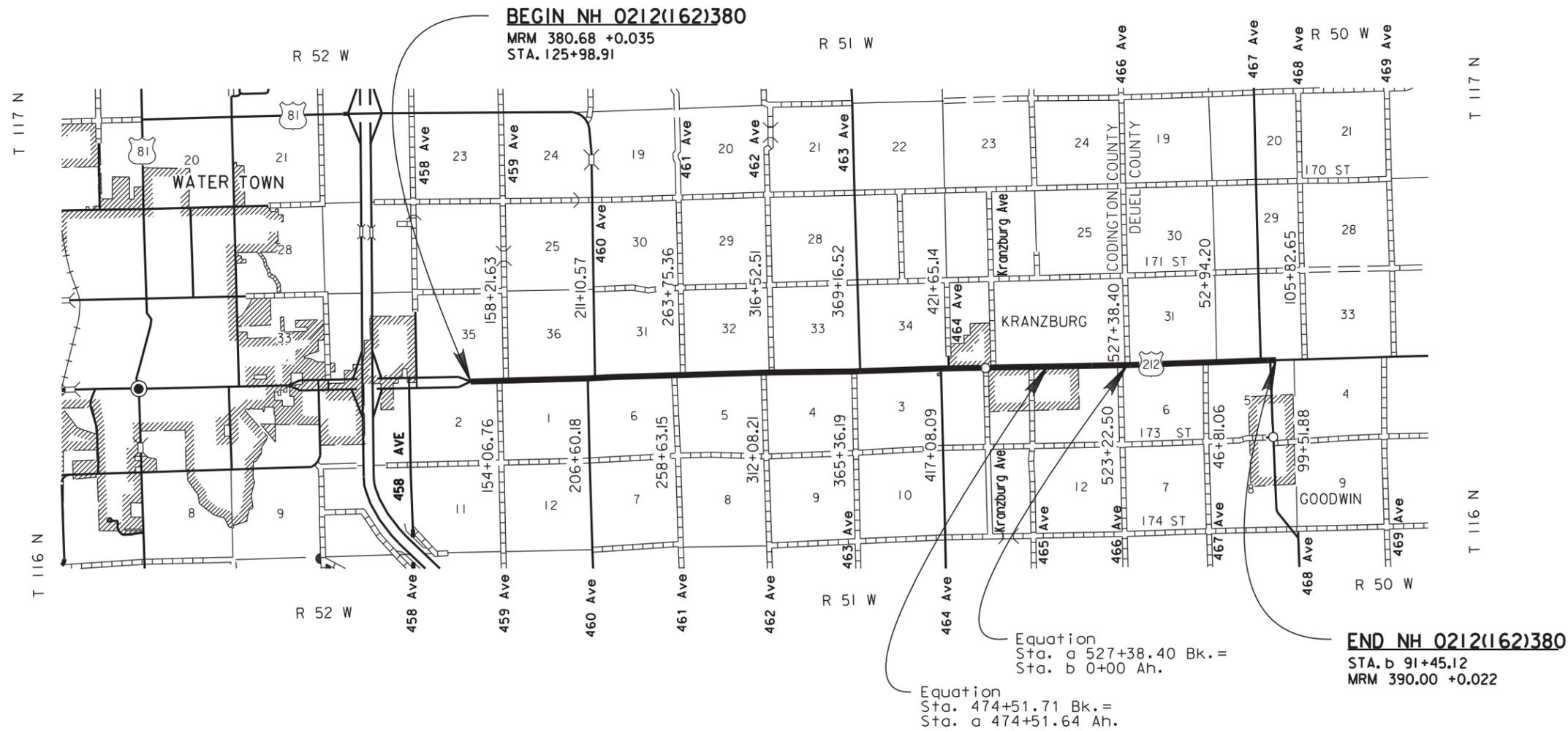
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0212(162)380	C1	C21

Plotting Date: 08/06/2015

SECTION C: TRAFFIC CONTROL PLANS

INDEX OF SHEETS

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SECTION C – ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1400	Remove Pavement Marking, 4" or Equivalent	150	Ft
632E2510	Type 2 Object Marker Back to Back	4	Each
633E1300	Pavement Marking Paint, White	878	Gal
633E1305	Pavement Marking Paint, Yellow	312	Gal
633E3000	Durable Pavement Marking, 4" White	96,242	Ft
633E3005	Durable Pavement Marking, 4" Yellow	18,712	Ft
633E5100	Grooving for Durable Pavement Marking, 4"	114,954	Ft
634E0110	Traffic Control Signs	2,613	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0265	Type 3 Barricade, 6' Double Sided	24	Each
634E0285	Type 3 Barricade, 8' Double Sided	86	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0600	4" Temporary Pavement Marking Tape Type I	600	Ft
634E0630	Temporary Pavement Marking	0.1	Mile
634E1002	Detour Signing	1,070.5	SqFt

SEQUENCE OF OPERATIONS

The following Sequence of Operations shall be adhered to. Any changes must be approved in writing by the Area Engineer prior to changes being made.

1. Install Detour and Road Closure signing prior to start of work.
2. Install storm water pollution prevention devices and strip inslopes.
3. Install surfacing.
4. Restore inslopes, install permanent signing, pavement marking and erosion control.
5. Remove road closure signing and open US 212 to traffic.
6. Remove detour signing.

This project shall be constructed in phases.

- Phase 1 shall be between Sta. 125+98.91 (Begin Project) and Sta. b 84+64 (Deuel County Hwy. 312).
- Phase 2 shall be between Sta. b 84+64 (Deuel County Hwy. 312) and Sta. b 91+45.12 (End of Project).

Work may begin in either Phase 1 or Phase 2. Refer to the Special Provision for Contract Time for closure limitations on Phase 2. The Detour Route for Cars will be different when Phase 2 of the project is closed to traffic.

TRAFFIC CONTROL

US 212 shall be closed to traffic to allow for reconstruction.

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

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.

Work activities during non-daylight hours are subject to prior approval.

The Contractor shall maintain access to all mailboxes along the project in the same manner as traffic is maintained to the accesses. With Post Office and Engineer approval, mailboxes may temporarily be relocated. There shall be no additional payment for temporary relocation of a mailbox.

The Contractor shall maintain access to all farms, homes, business and other used entrances along the project. The Contractor shall maintain traffic on the shoulder of the roadway from the various entrances to a Section Line Road while paving through the entrance. A 10 foot wide path free of obstructions shall be maintained. Items such as shoulder delineation may need to be removed. The Contractor shall mark both sides of the shoulder route with 42" grabber cones placed at a maximum spacing of 200 feet. Any other objects such as mailboxes or construction generated hazards shall also be marked with 42" grabber cones or traffic control drums.

There shall be no additional payment for maintaining traffic on the shoulder of the road. If additional granular material is required, Base Course shall be utilized and the material shall be paid for at the contract unit price.

No more than 3 consecutive public roads shall be closed to traffic simultaneously. 100 tons of Base Course has been included in the Section F Estimate of Quantities for providing temporary ramps between the existing surfacing and the new PCCP to allow for cross traffic passage following surfacing.

The Contractor shall provide 72 hour advance notice to farmsteads, homeowners, industry, and business should an entrance be closed. Landowners of field entrances shall also be notified. The written notice shall also include specific instructions on how access is going to be maintained to those impacted by the closing of an entrance.

If an entrance is closed to traffic, a double sided Type 3 Barricade shall be placed on the closed entrance.

The Contractor shall be responsible for providing public announcements (press releases) when Public Roads such as Section Line Roads, County Roads and City Streets are going to be closed to traffic and likewise when reopened to traffic. The Contractor shall be responsible for the public announcements however; the Engineer shall approve the public announcements prior to submitting to the media. Public announcements shall be provided to Watertown area radio stations and the Watertown Public Opinion. Public announcements shall be provided a minimum of 48 hours prior to closing a public road. All public announcements shall be submitted to the Engineer in an email format such that the announcement can be forwarded to the SDDOT Information Officer.

The Contractor shall provide the Codington and Deuel County Sheriff's Offices, Watertown City Fire/Rescue Department, and the Prairie Lakes Hospital Emergency Department a detailed map showing roadway segment construction work limits and the most appropriate routing for emergency vehicles. Updated maps shall be provided to the departments 24 hours prior to any changes in work limits. Changes in work limits will not be allowed until the 24 hour advance notice requirement has been satisfied.

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 be on fixed location, ground mounted, breakaway supports.

Included in the Section F Estimate of Quantities are 500 tons of Base Course for Traffic Control maintenance of intersecting roads, business, residence, farm and field entrances.

The locations of traffic control devices shown on the layouts are approximate. Exact locations shall be determined in the field.

Traffic Control signs 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.

The project will be open full width throughout its length for all traffic and turning movements prior to winter. Should there be any un-surfaced areas either on the project proper, street approaches or accesses, the Contractor shall be responsible at his expense for providing at least 6 inches of Base Course and 4 inches of asphalt concrete for winter use and for its removal in the spring when the project work is completed.

REMOVAL OF CONFLICTING PAVEMENT MARKINGS

The Contractor shall remove the 4" White centerline skips in the traffic merge area for the lane closure taper at the beginning of the project. Limits of removal shall be determined in the field by the Engineer. Existing centerline pavement markings to be removed are cold applied pavement marking tape.

All costs to remove existing skip line shall be incidental to the contract unit price per foot for "Remove Pavement Marking, 4" or Equivalent".

It is estimated that 150 feet of 4" pavement marking will be removed from the centerline markings.

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DETOUR ROUTE

Codington County Highways 9 and 20 and Deuel County Highways 498 and 312 have been established as the car detour route for Phase 1. When work is underway in Phase 2, the car detour will also utilize Deuel County Highway 3 and SD15. Interstate 29 and South Dakota Highways 20, 22 and 15 have been established as the truck detour routes.

The Contractor shall place new centerline and edge line pavement markings on the 26 miles designated as the car detour route prior to closing US 212 to traffic.

Type 2 Object Markers Back to Back shall be installed on all 4 corners of the box culvert located on Deuel County Highway 498 along the car detour route prior to closing US 212 to traffic.

Signs shall be constructed as required per the Manual on Uniform Traffic Control Devices (MUTCD), the latest edition of "Standard Highway Signs", and/or as specified on the Detour Route Sign Layout sheet shown in the plans.

All sign material shall comply with Section 984 of the Standard Specifications.

All upper/lower case letters and numerals shall be as required per the MUTCD, the latest edition of "Standard Highway Signs", and/or as illustrated on the Special Design Signs sheets.

All signs shall be manufactured in accordance with the sheeting manufacturer's recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All black legend and borders shall be nonreflectorized (unless otherwise specified in these plans).

The Contractor shall use neoprene washers (against the sign sheeting). A minimum of two bolts shall be used to attach signs to posts.

PERMANENT PAVEMENT MARKING ON CAR DETOUR ROUTES

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.

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

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.

TEMPORARY PAVEMENT MARKING TAPE TYPE I

A quantity of 600 feet of Temporary Pavement Marking Tape Type I has been included in the Estimate of Quantities for use in the traffic merge area for the lane closure taper at the beginning of the project.

Temporary raised pavement markers may be used in place of temporary pavement marking tape. The spacing of the temporary raised pavement markers shall be 5 feet.

TEMPORARY PAVEMENT MARKINGS STA b 84+63.66 to STA b 91+45.12

Temporary Flexible Vertical Markers (Tabs) shall be used to mark dashed centerline and No Passing Zones. Paint will not be allowed for Temporary Pavement Marking on the Asphalt Concrete Class E Hot Mixed Asphalt Concrete wear course or after application of the Flush Seal.

Temporary Flexible Vertical Markers (Tabs) may be used as detailed in the specifications. Covers on the tabs shall be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers shall be properly disposed. The Contractor shall remove and properly dispose of the tabs after Permanent Pavement Marking is applied. Method of removal shall be nondestructive to the road surface and shall be accomplished within one week of completion of the Permanent Pavement Marking.

Any Temporary Flexible Vertical Markers (Tabs) with covers removed before the flush seal shall be replaced prior to Flush Seal application.

Cost for furnishing, applying, removing and disposing of the Temporary Flexible Vertical Markers (Tabs) shall be included in the contract unit price per mile for TEMPORARY PAVEMENT MARKING.

A maximum of one application of Temporary Pavement Marking will be measured and paid for on this project.

DURABLE PAVEMENT MARKINGS ON US 212

The Contractor shall mark the centerline skip lines, no passing zones and edgelines with a durable pavement marking, as per the Special Provision for Durable Pavement Markings.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD				EXPRESSWAY / INTERSTATE			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R11-2	ROAD CLOSED	26	48" x 30"	10	260		48" x 30"	10	
R11-3a	ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY	25	60" x 30"	13	325				
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16	32		48" x 48"	16	
W8-1	BUMP	6	48" x 48"	16	96		48" x 48"	16	
W20-1	ROAD WORK AHEAD	3	48" x 48"	16	48		48" x 48"	16	
W20-2	DETOUR AHEAD	10	48" x 48"	16	160		48" x 48"	16	
W20-3	ROAD CLOSED AHEAD	24	48" x 48"	16	384		48" x 48"	16	
W20-3	ROAD CLOSED 500 FT	2	48" x 48"	16	32		48" x 48"	16	
W20-3	ROAD CLOSED 1000 FT	2	48" x 48"	16	32		48" x 48"	16	
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16	32		48" x 48"	16	
G20-2	END ROAD WORK	2	36" x 18"	5	10		48" x 24"	8	
M1-4	US ROUTE MARKER (3 digits)	75	30" x 24"	5	375	11	45" x 36"	11	121
M3-2	DIRECTION MARKER - EAST	29	24" x 12"	2	58	7	36" x 18"	5	35
M3-4	DIRECTION MARKER - WEST	41	24" x 12"	2	82	3	36" x 18"	5	15
Special	CAR	35	24" x 12"	2	70		36" x 18"	5	
M4-4	TRUCK	36	24" x 12"	2	72	10	36" x 18"	5	50
M4-6	END	6	24" x 12"	2	12	1	36" x 18"	5	5
M4-8	DETOUR	75	24" x 12"	2	150	11	30" x 15"	3	33
M4-10	DETOUR ARROW (L or R)	2	48" x 18"	6	12		48" x 18"	6	
M5-1 L	ADVANCE TURN ARROW 90° (L)	10	21" x 15"	2	20	2	30" x 21"	4	8
M5-1 R	ADVANCE TURN ARROW 90° (R)	11	21" x 15"	2	22	1	30" x 21"	4	4
M6-1	DIRECTION ARROW - Horizontal Single Head (L or R)	21	21" x 15"	2	42		30" x 21"	4	
M6-2	DIRECTION ARROW - 45° Single Head (L or R)		21" x 15"	2		3	30" x 21"	4	12
M6-3	DIRECTION ARROW - Vertical Single Head	2	21" x 15"	2	4		30" x 21"	4	
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 2330				EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT 283			

TYPE 3 BARRICADES

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 6' Double Sided	24 Each
Type 3 Barricade, 8' Double Sided	86 Each

ARROW BOARDS

ITEM DESCRIPTION	QUANTITY
Type C Arrow Board	1 Each

DETOUR SIGNING TABLE

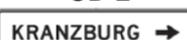
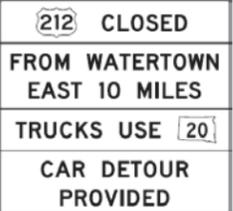
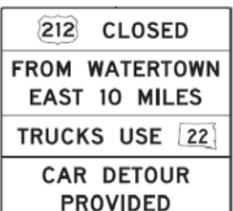
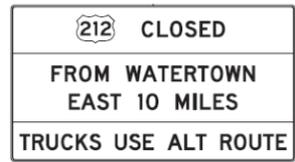
DESCRIPTION/ILLUSTRATION	DIMENSIONS (INCHES)	AREA (Sq Ft)	QUANTITY	TOTAL (Sq Ft)
TRUCK (for signs on US 212, SD15 & SD20)	24" X 12"	2.0	5	10.0
TRUCK (for signs on I-29)	36" X 18"	4.5	2	9.0
CD-1 	72" X 18"	9.0	1	9.0
CD-2 	72" X 18"	9.0	1	9.0
TD-1 	132" X 132"	121.0	1	121.0
TD-2 	132" X 132"	121.0	1	121.0
TD-3 	108" X 120"	90.0	4	360.0
TD-4 	108" X 120"	90.0	4	360.0
TD-5 	132" X 78"	71.5	1	71.5
TOTAL				1,070.5

TABLE OF PAVEMENT MARKING QUANTITIES

ROUTE	STATION	TO	STATION	LENGTH	LENGTH	PAVEMENT MARKING PAINT, WHITE	PAVEMENT MARKING PAINT, YELLOW	DURABLE PAVEMENT MARKING, 4" WHITE	DURABLE PAVEMENT MARKING, 4" YELLOW	GROOVING FOR DURABLE PAVEMENT MARKING, 4"	TEMPORARY PAVEMENT MARKING	COMMENTS
				(FT)	(Mile)	(Gallon)	(Gallon)	(FT)	(FT)	(FT)	(Mile)	
Car Detour Codington County Hwy 9					3.95	133.5	47.4					Place markings prior to use as the Car Detour
Car Detour Codington County Hwy 20					8.03	271.4	96.4					Place markings prior to use as the Car Detour
Car Detour Deuel County Hwy 498					2.04	69.0	24.5					Place markings prior to use as the Car Detour
Car Detour Deuel County Hwy 312					4.00	135.2	48.0					Place markings prior to use as the Car Detour
Car Detour Deuel County Hwy 3					7.95	268.7	95.4					Place markings prior to use as the Car Detour
US 212	125+98.91	to	417+08.09	29109.18					7277	7277		Centerline Skips
US 212	417+08.09	to	443+55.00	2646.91					5294	5294		Double Yellow Centerline at Kranzburg
US 212	443+55.00	to	447+51.71	396.71					99	99		Centerline Skips
US 212	a 447+51.64	to	a 527+38.40	7986.76					1997	1997		Centerline Skips
US 212	b +0.00	to	b 88+65.12	8865.12					2216	2216		Centerline Skips
US 212	125+98.91	to	129+00.00	301.09					301	301		West Bound No Passing Zone
US 212	b 36+90.00	to	b 42+40.00	550.00					550	550		East Bound No Passing Zone
US 212	b 50+45.00	to	b 56+20.00	575.00					575	575		West Bound No Passing Zone
US 212	b 87+43.00	to	b 91+45.12	402.12					402	402		East Bound No Passing Zone
US 212	125+98.91	to	430+22.00	30423.09				30423		30423		Left White Edge Line
US 212	437+70.00	to	447+51.71	981.71				982		982		Left White Edge Line
US 212	a 447+51.64	to	a 527+38.40	7986.76				7987		7987		Left White Edge Line
US 212	b +0.00	to	b 91+45.12	9145.12				9145		9145		Left White Edge Line
US 212	125+98.91	to	427+49.00	30150.09				30150		30150		Right White Edge Line
US 212	443+28.00	to	447+51.71	423.71				424		424		Right White Edge Line
US 212	a 447+51.64	to	a 527+38.40	7986.76				7987		7987		Right White Edge Line
US 212	b +0.00	to	b 91+45.12	9145.12				9145		9145		Right White Edge Line
US 212	b 84+63.66	to	b 91+45.12		0.13						0.1	Temporary centerline skips and no passing zone
TOTALS						878	312	96242	18712	114954	0.1	

0.1 mile of Temporary Pavement Marking has been included if the Contractor elects to begin work in Phase 2, which would require that traffic be restored to this segment of US 212 prior to the entire project being reopened to traffic.

Stationing of No Passing Zones is approximate. Exact location of the No Passing Zone lines will be determined in the field by the Engineer.

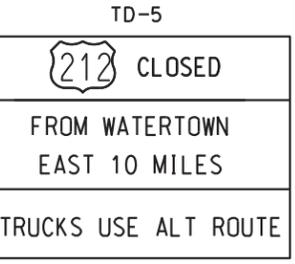
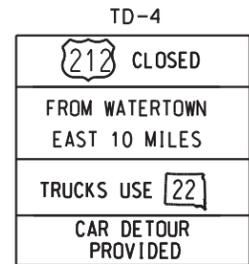
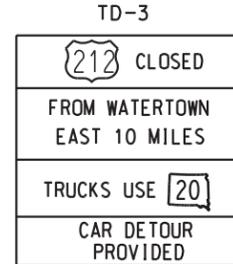
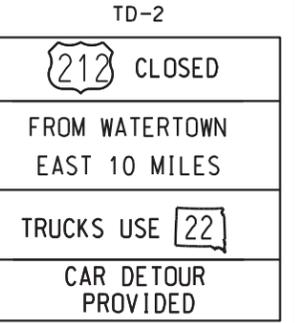
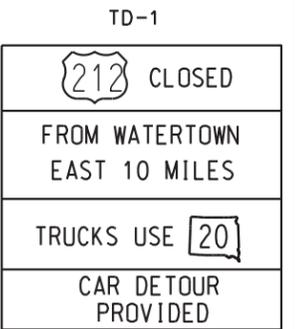
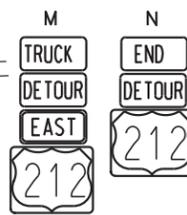
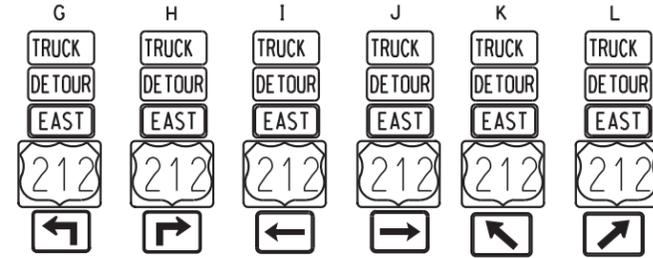
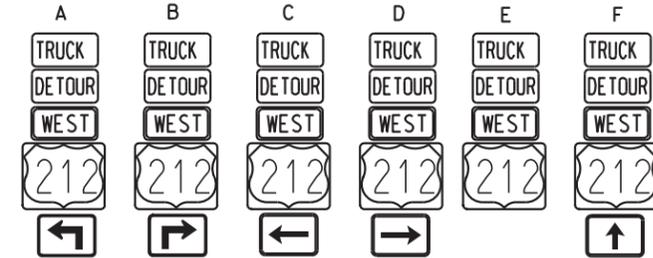
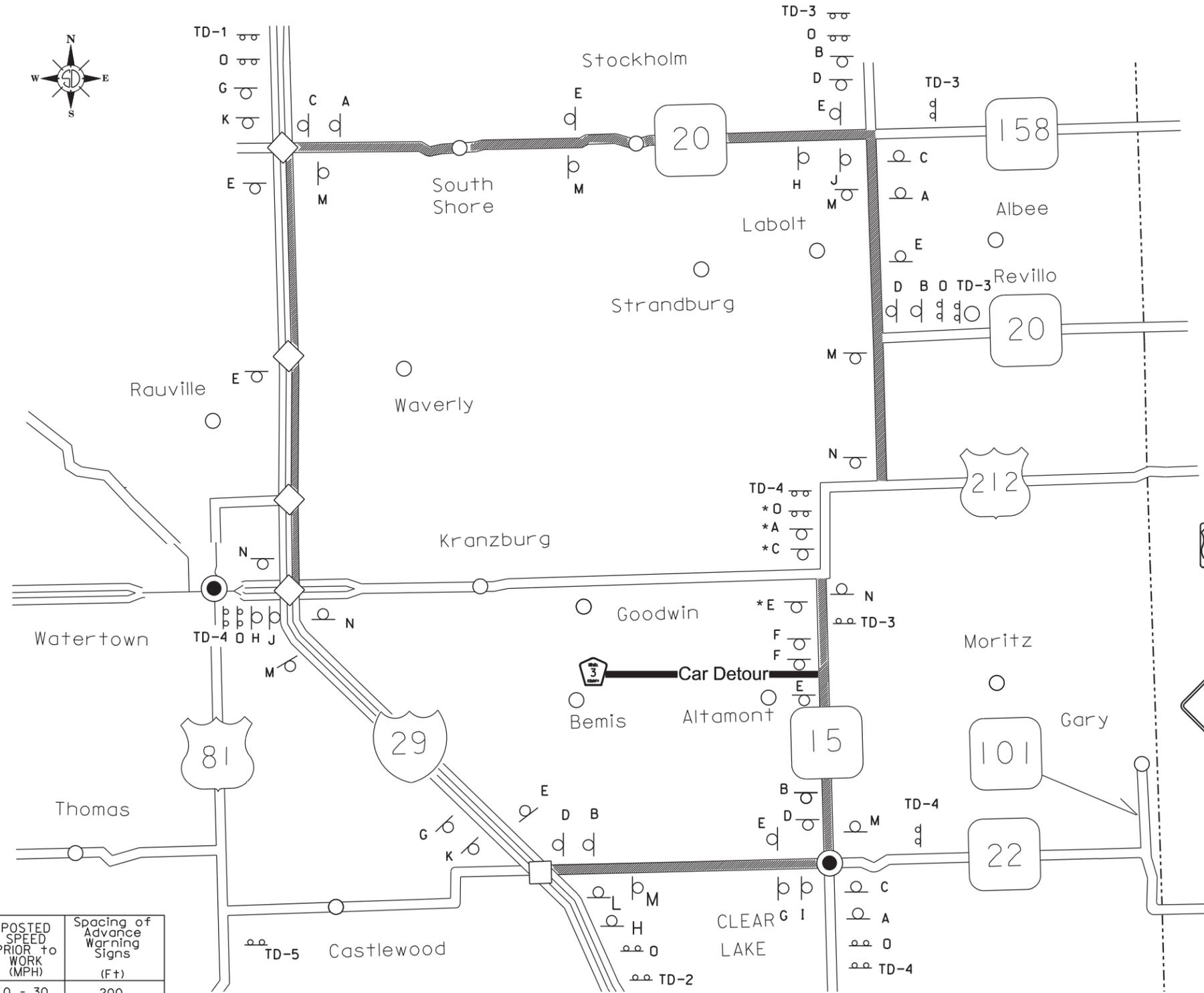
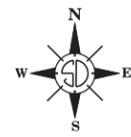
TRUCK DETOUR ROUTE SIGN LAYOUT

(Fixed Location, Ground Mounted, Breakaway Support Signs)

PLOT SCALE - 1:32000

PLOT NAME - 2

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POSTED SPEED PRIOR TO WORK (MPH)	Spacing of Advance Warning Signs (Ft)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000

NOTES:

Installation and location of detour signs is to be coordinated with fixed location ground mount support and permanent signs placed on detour route.

Signs E and M to be placed approximately 200 ft from intersections and beginning of detours.

Signs C, D, I, & J to be placed approximately 100 ft from intersections.

Signs F shall be placed adjacent to signs B & D when Phase 2 of the Car Detour is utilized.

All other sign spacing shall be according to the table based on posted speed limits.

Distance shown are minimums, adjust spacing to maintain a minimum 50'-100' between existing urban, 100'-200' rural signs.

All signs to be installed so that the sign does not obscure any existing signs.

Signs designated with a * symbol shall have the "TRUCK" auxiliary sign removed when Phase 2 Car Detour is in use.

PLOTTED FROM - TRAB17882

SPECIAL SIGN DESIGN

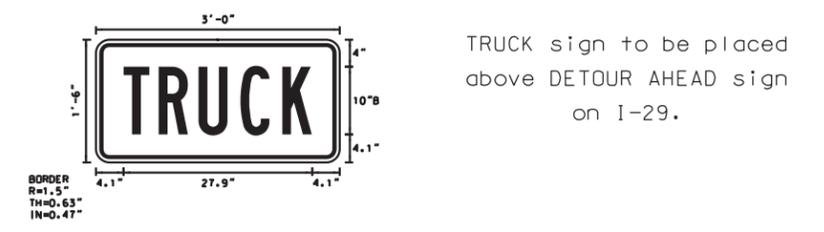
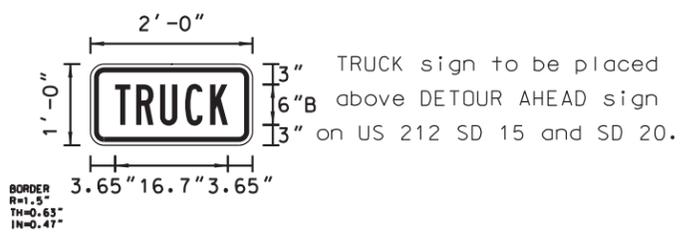
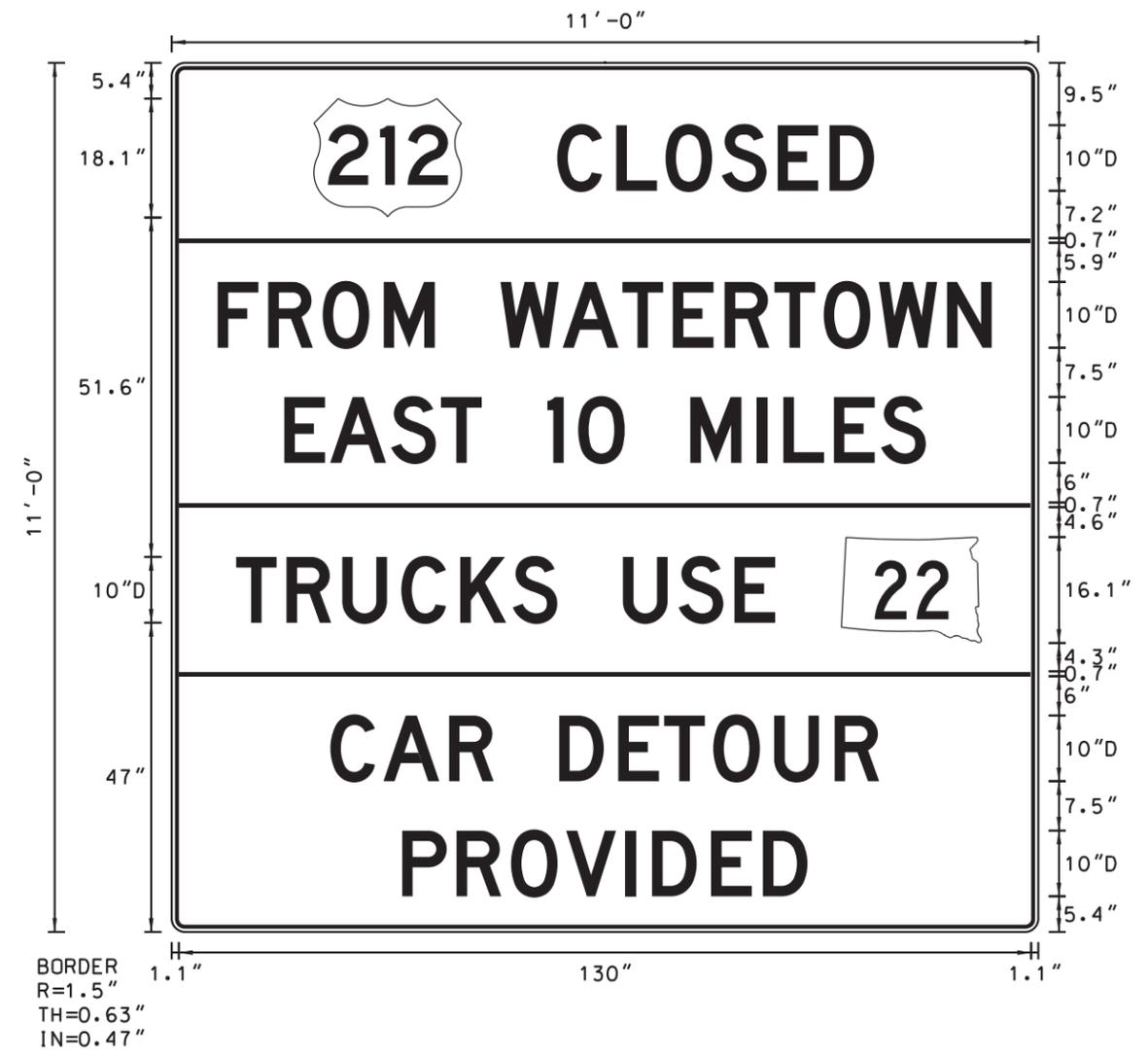
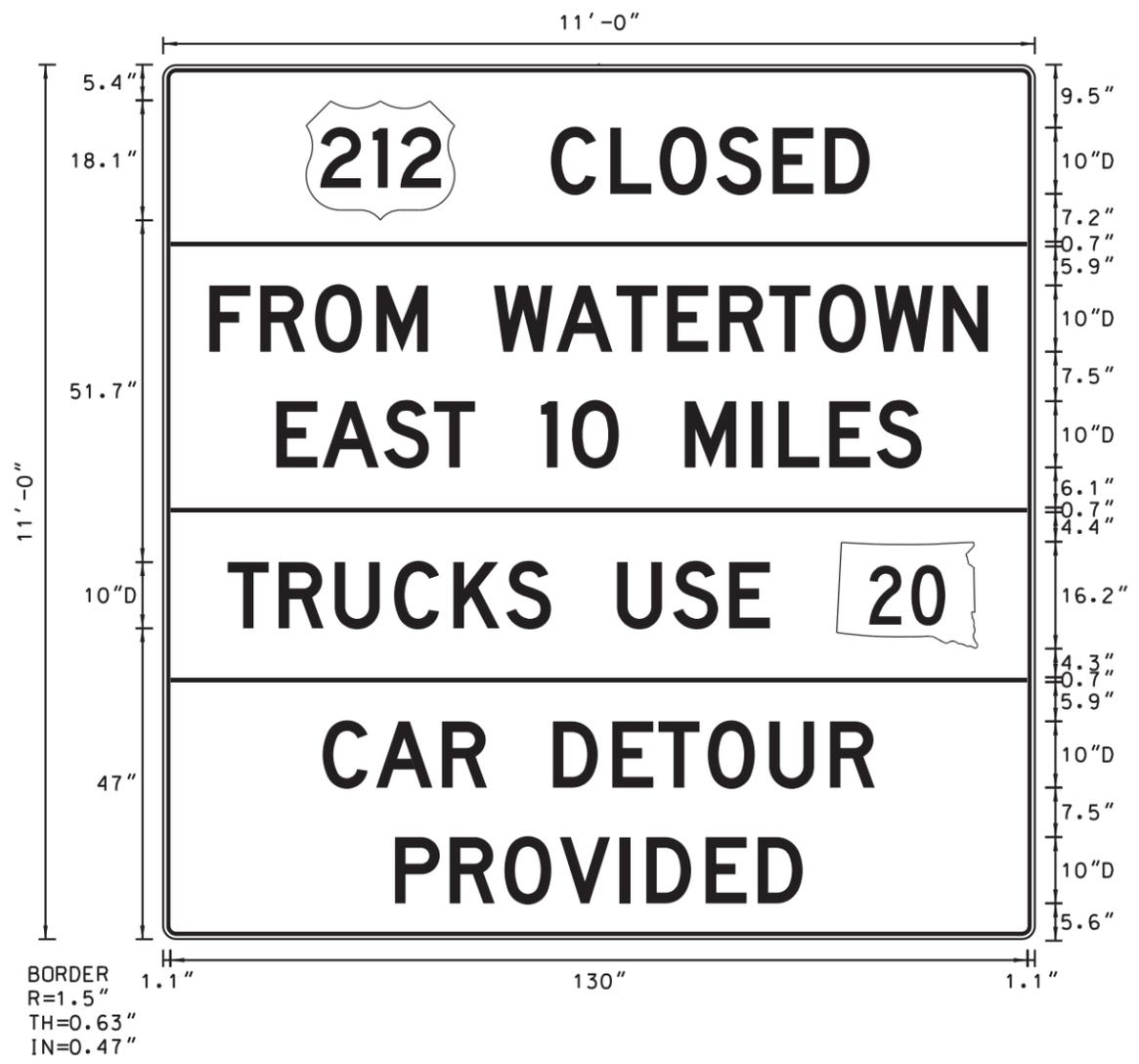
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162) 380	C7	C21
Plotting Date: 08/10/2015			

PLOT SCALE - 1:2,2575

PLOT NAME - 3

TD-1

TD-2



All signs on this sheet shall have a orange background with black legend and border

PLOTTED FROM - TRAB17882

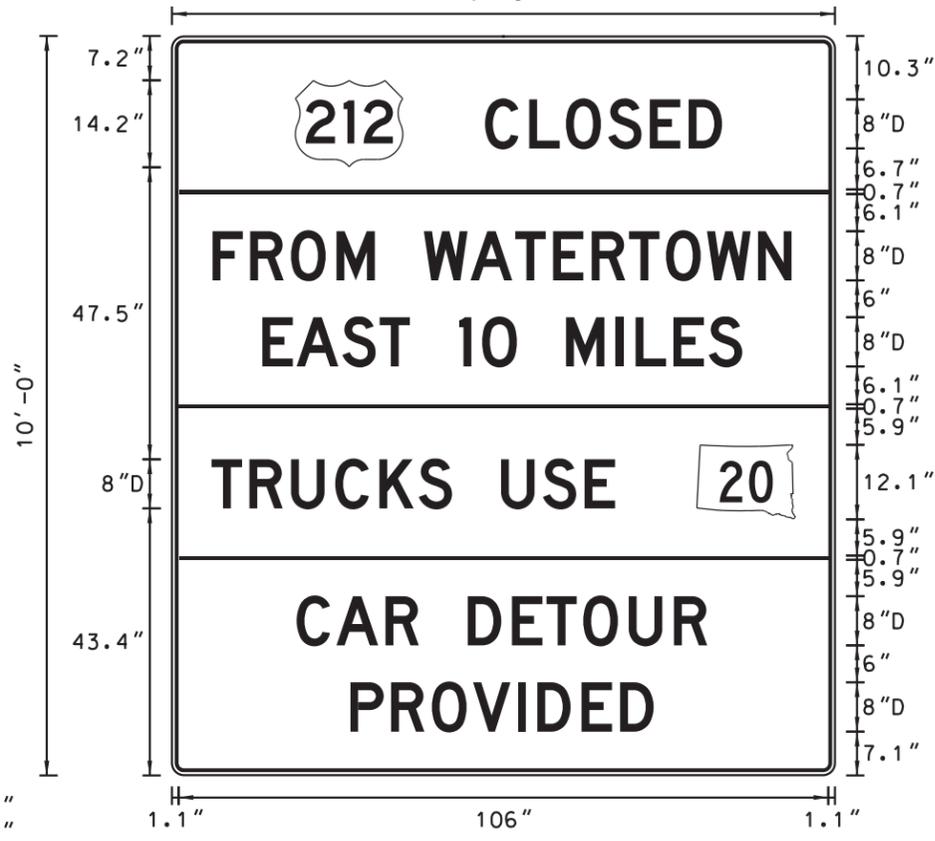
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SPECIAL SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162)380	C8	C21
Plotting Date: 08/06/2015			

TD-3

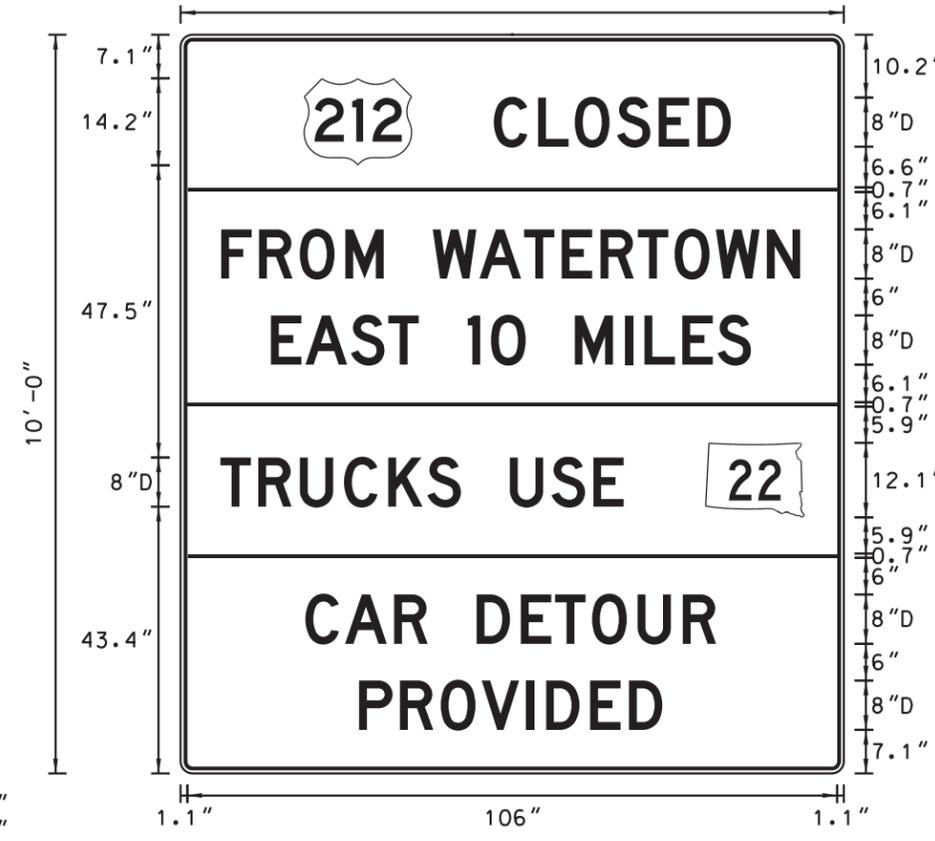
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BORDER
R=1.5"
TH=0.63"
IN=0.47"

TD-4

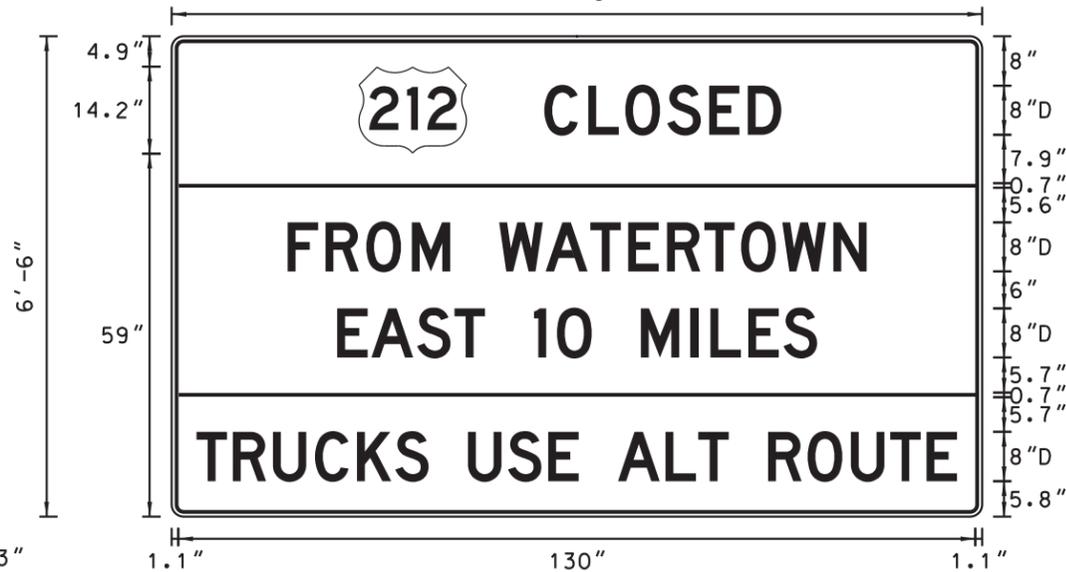
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BORDER
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IN=0.47"

TD-5

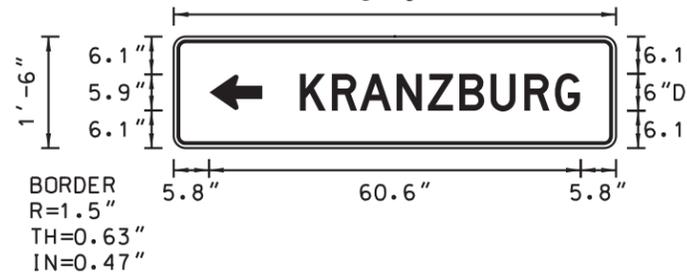
11'-0"



BORDER
R=1.5"
TH=0.63"
IN=0.47"

CD-1

6'-0"



BORDER
R=1.5"
TH=0.63"
IN=0.47"

CD-2

6'-0"



BORDER
R=1.5"
TH=0.63"
IN=0.47"

All signs on this sheet shall have a orange background with black legend and border

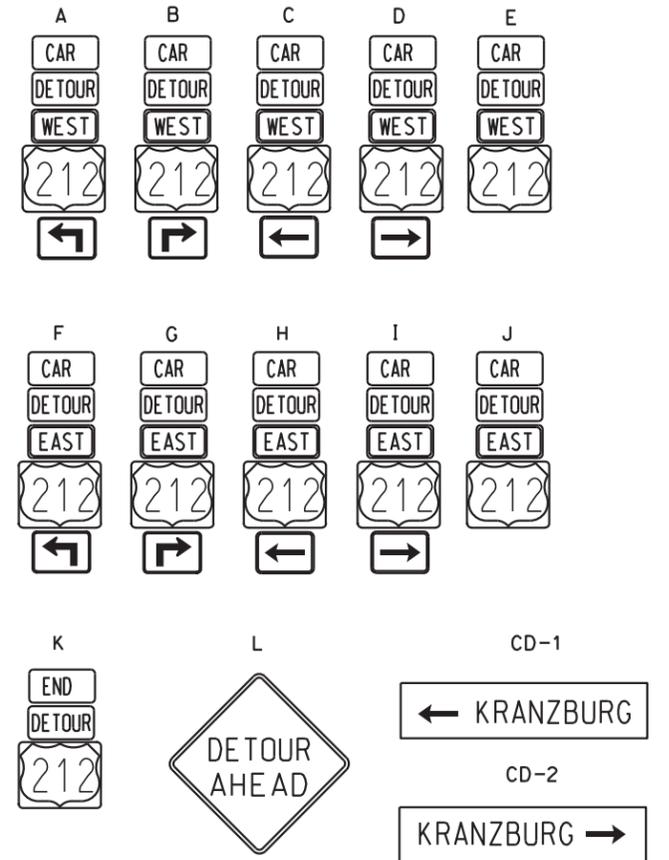
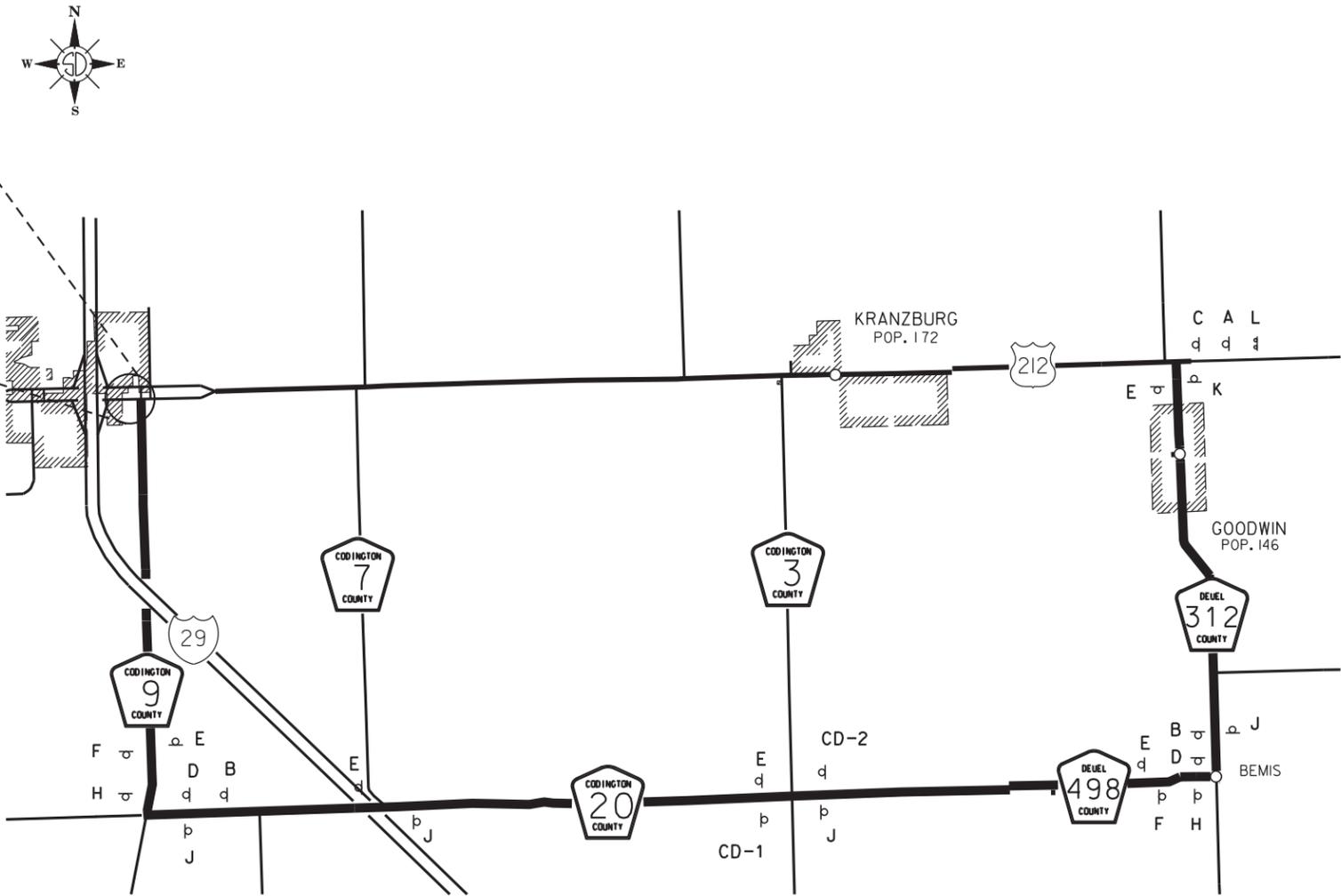
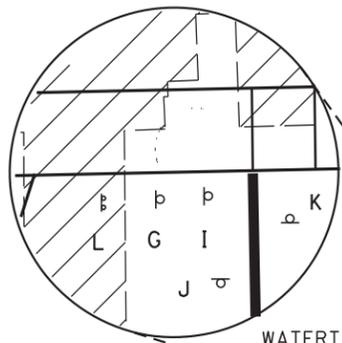
CAR DETOUR ROUTE SIGN LAYOUT - PHASE 1 ONLY

(Fixed Location, Ground Mounted, Breakaway Support Signs)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162) 380	C9	C21
Plotting Date: 08/06/2015			

PLOT SCALE - 1:32000

PLOT NAME - 5



NOTES:

Installation and location of detour signs is to be coordinated with fixed location ground mount support and permanent signs placed on detour route.

Signs E and J to be placed approximately 200 ft from intersections and beginning of detours.

Signs C, D, H, & I to be placed approximately 100 ft from intersections.

All other sign spacing shall be according to the table based on posted speed limits.

Distance shown are minimums, adjust spacing to maintain a minimum 50'-100' between existing urban, 100'-200' rural signs.

All signs to be installed so that the sign does not obscure any existing signs.

Signs CD-1 and CD-2 shall be covered during closure period of County Highway 3 at US 212.

POSTED SPEED PRIOR to WORK (MPH)	Spacing of Advance Warning Signs (Ft)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000

PLOTTED FROM - TRAB17882

FILE - ... \SECTION\03\RN\DETOUR.DGN

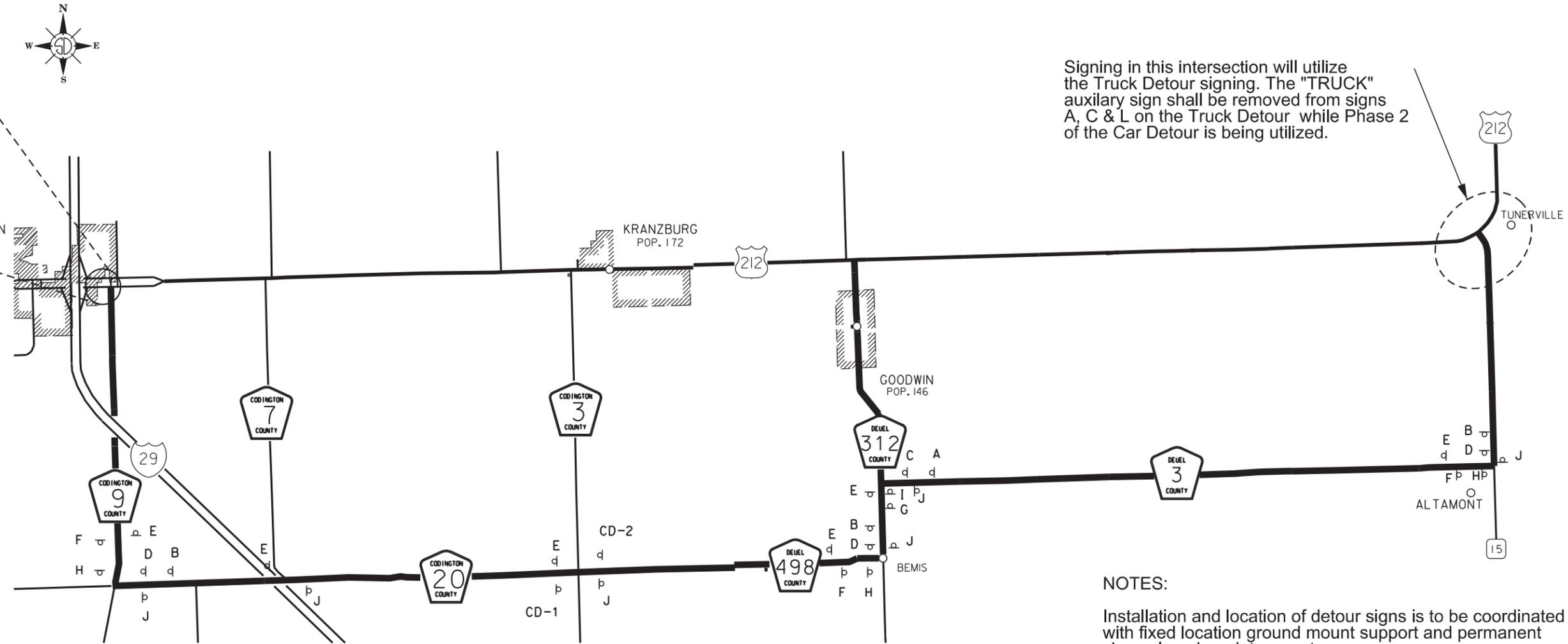
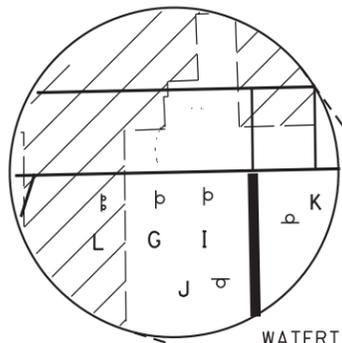
CAR DETOUR ROUTE SIGN LAYOUT - PHASE 1 AND 2

(Fixed Location, Ground Mounted, Breakaway Support Signs)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162) 380	C10	C21
Plotting Date: 08/06/2015			

PLOT SCALE - 1"=3200'

PLOT NAME - 6



POSTED SPEED PRIOR TO WORK (MPH)	Spacing of Advance Warning Signs (F+)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000

Signing in this intersection will utilize the Truck Detour signing. The "TRUCK" auxiliary sign shall be removed from signs A, C & L on the Truck Detour while Phase 2 of the Car Detour is being utilized.

NOTES:

Installation and location of detour signs is to be coordinated with fixed location ground mount support and permanent signs placed on detour route.

Signs E and J to be placed approximately 200 ft from intersections and beginning of detours.

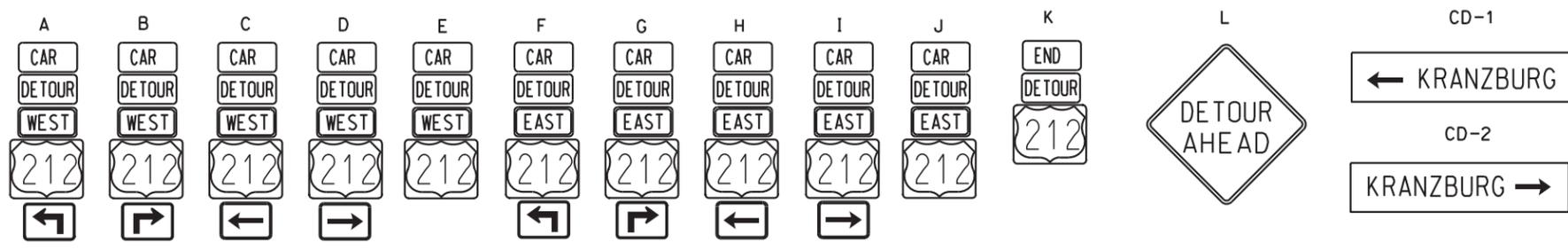
Signs C, D, H, & I to be placed approximately 100 ft from intersections.

All other sign spacing shall be according to the table based on posted speed limits.

Distance shown are minimums, adjust spacing to maintain a minimum 50'-100' between existing urban, 100'-200' rural signs.

All signs to be installed so that the sign does not obscure any existing signs.

Signs CD-1 and CD-2 shall be covered during closure period of County Highway 3 at US 212.

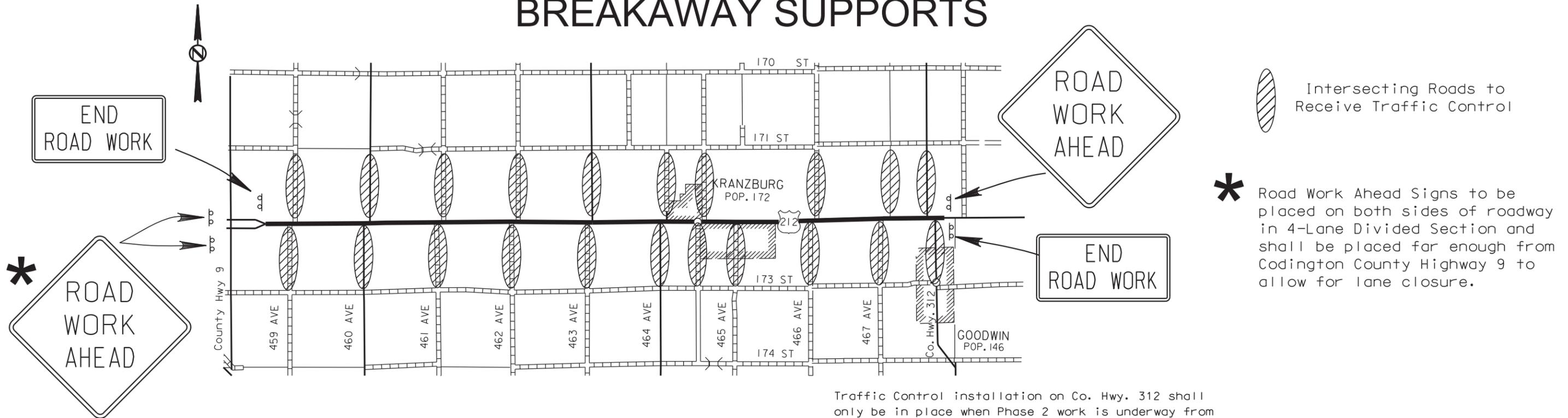


PLOTTED FROM - TRAB17882

FILE - ... \SECTION\03RN\DETOUR.DGN

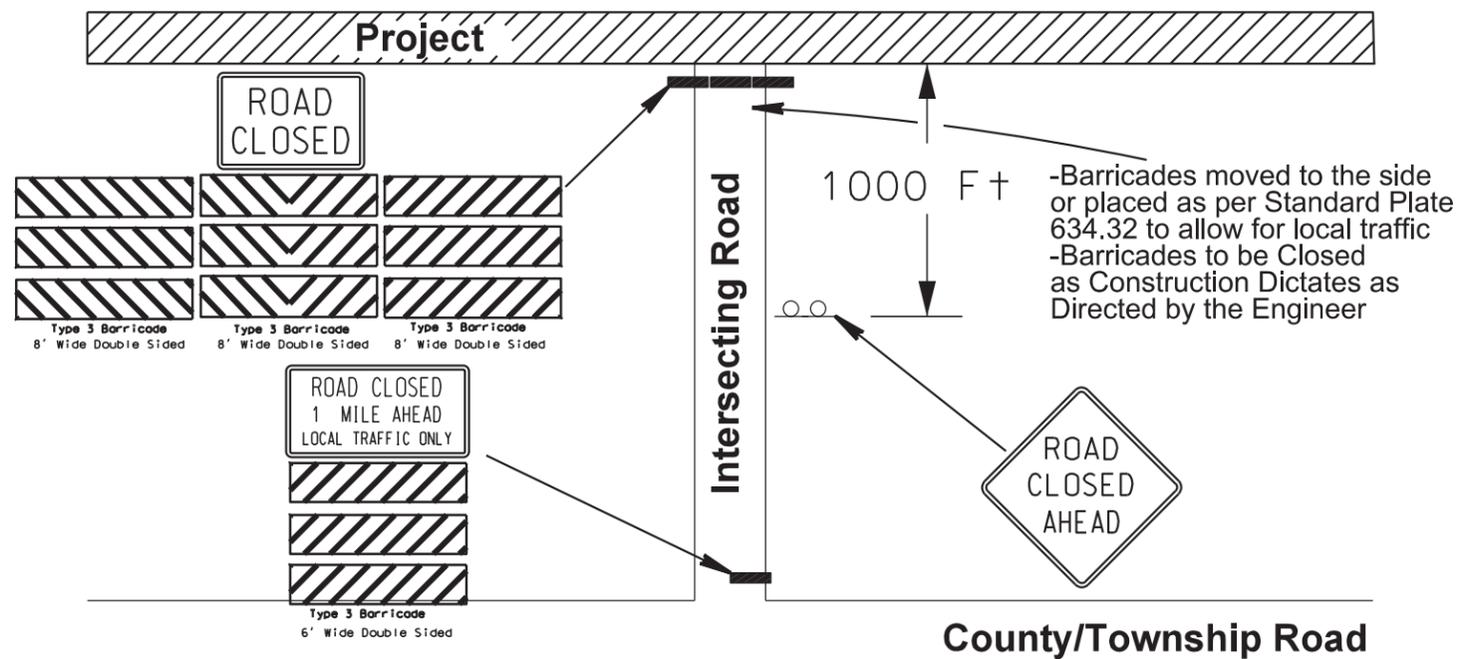
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(162)380	C11	C21
Plotting Date: 08/06/2015			

FIXED LOCATION SIGNS GROUND MOUNTED, BREAKAWAY SUPPORTS



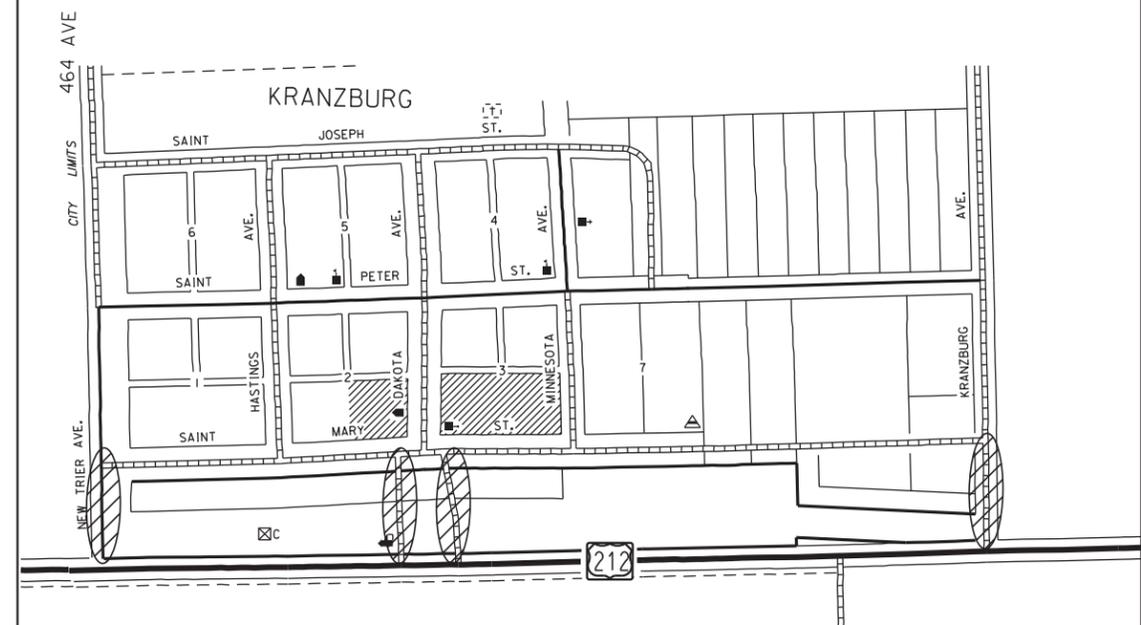
Traffic Control installation on Co. Hwy. 312 shall only be in place when Phase 2 work is underway from Co. Hwy 312 east to end of project.

Typical Intersecting Road Detail



Additional City Streets Requiring Signage

Sign/barricade locations will need to be adjusted to accommodate nearest cross street



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162)380	C12	C21
Plotting Date: 08/06/2015			

BEGIN PROJECT DETAILS

Phase 1 and/or Phase 1 & 2

NOTES:

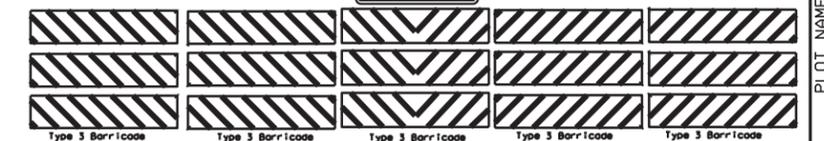
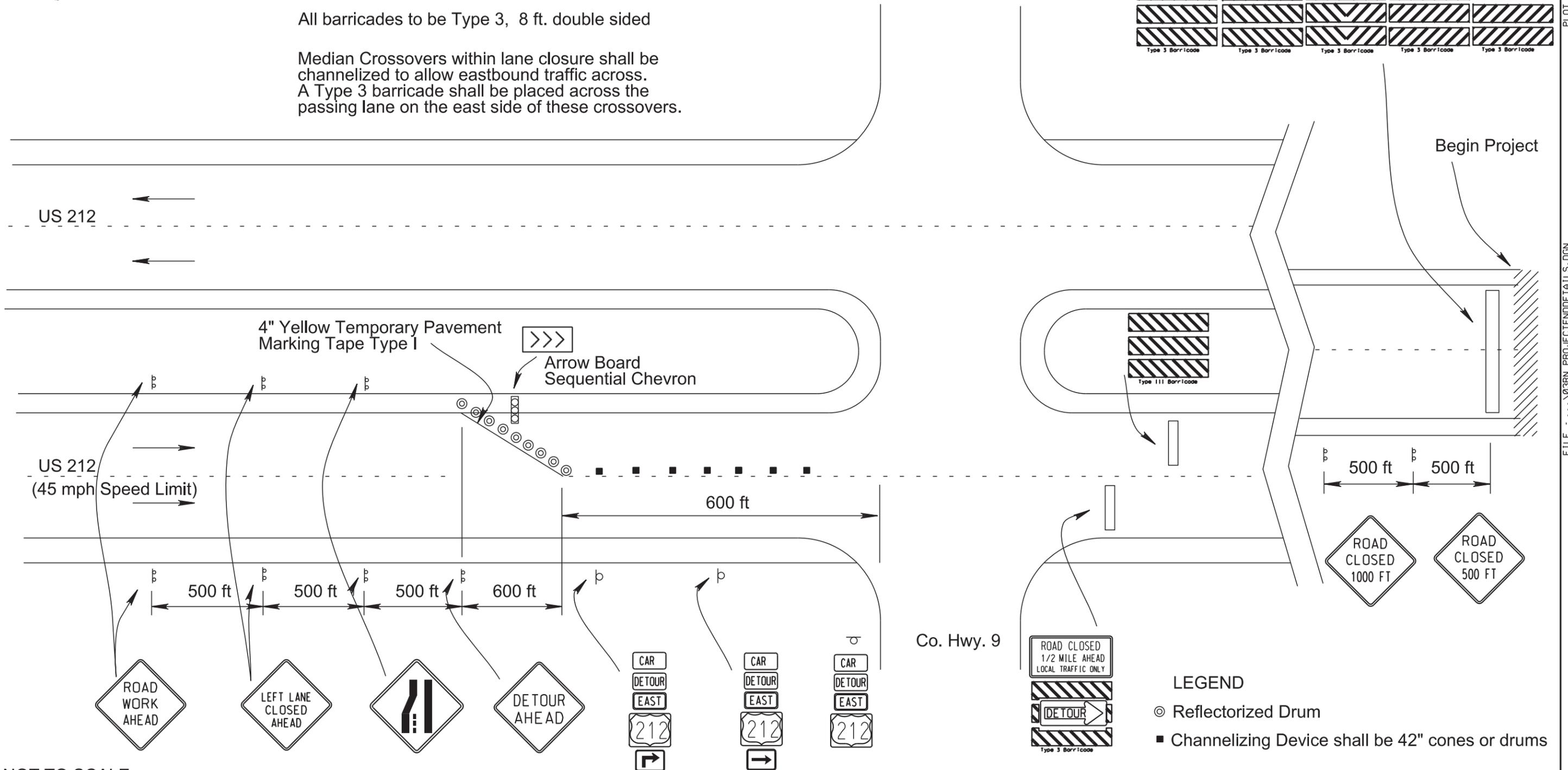
All barricades to be Type 3, 8 ft. double sided

Median Crossovers within lane closure shall be channelized to allow eastbound traffic across. A Type 3 barricade shall be placed across the passing lane on the east side of these crossovers.



PLOT SCALE - 1:240

PLOT NAME - 8



- LEGEND**
- ⊙ Reflectorized Drum
 - Channelizing Device shall be 42" cones or drums

NOT TO SCALE

PLOTTED FROM - TRAB17882

FILE - ... \03RN_PROJECTDETAILS.DGN

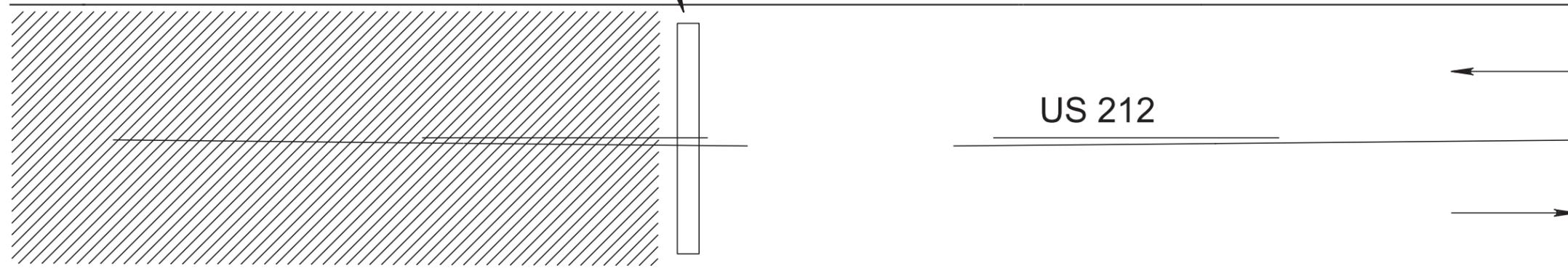
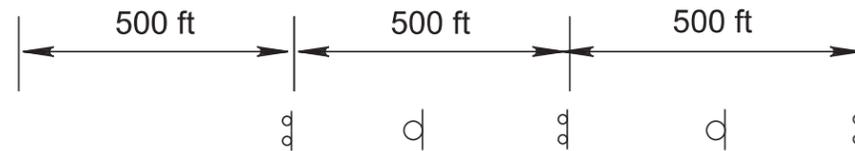
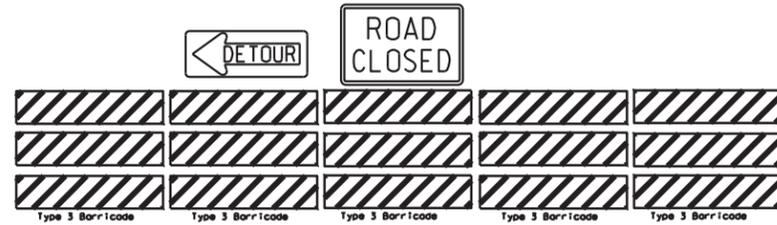
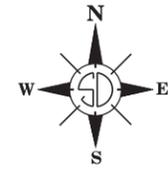
Co. Hwy. 9



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162)380	C13	C21
Plotting Date: 08/06/2015			

END PROJECT DETAILS

Phase 1



Deuel Co.
Hwy. 312

To Goodwin
↓

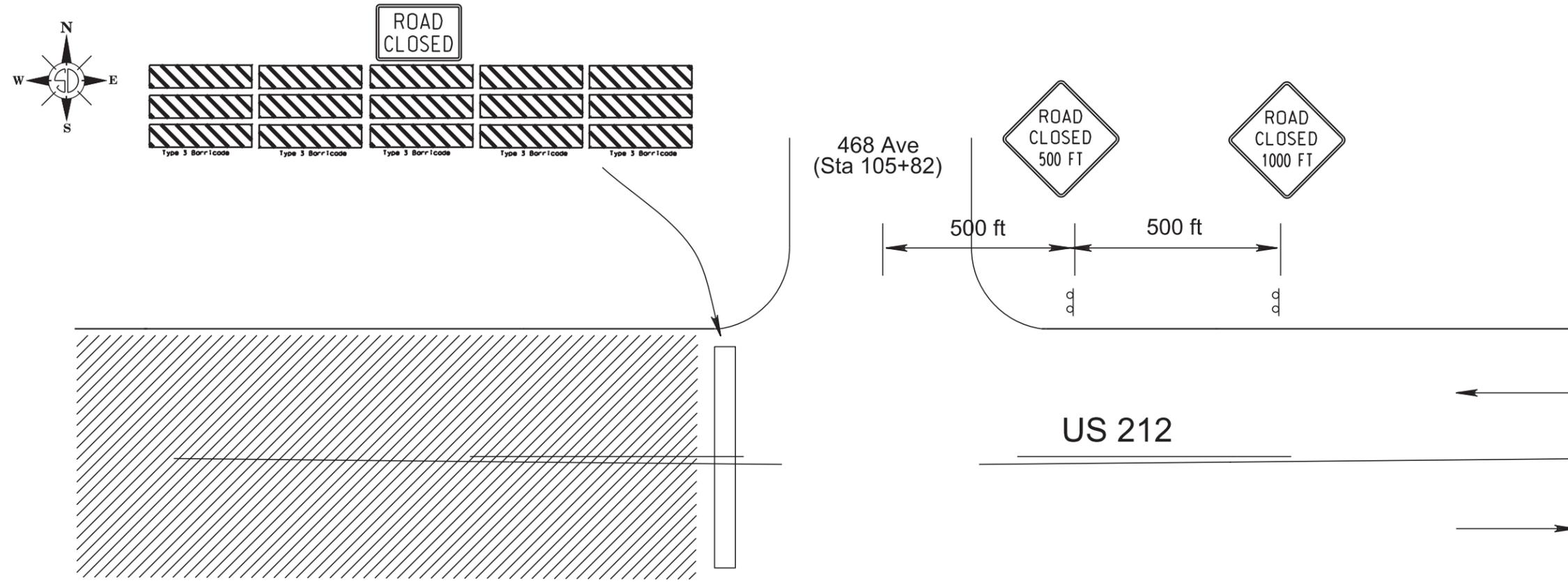
All barricades to be Type 3, 8 ft. double sided

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162)380	C14	C21
Plotting Date: 08/06/2015			

END PROJECT DETAILS

Phase 2

Sheet 1 of 2



All barricades to be Type 3, 8 ft. double sided

PLOT SCALE - 1:240

PLOTTED FROM - TRAB17882

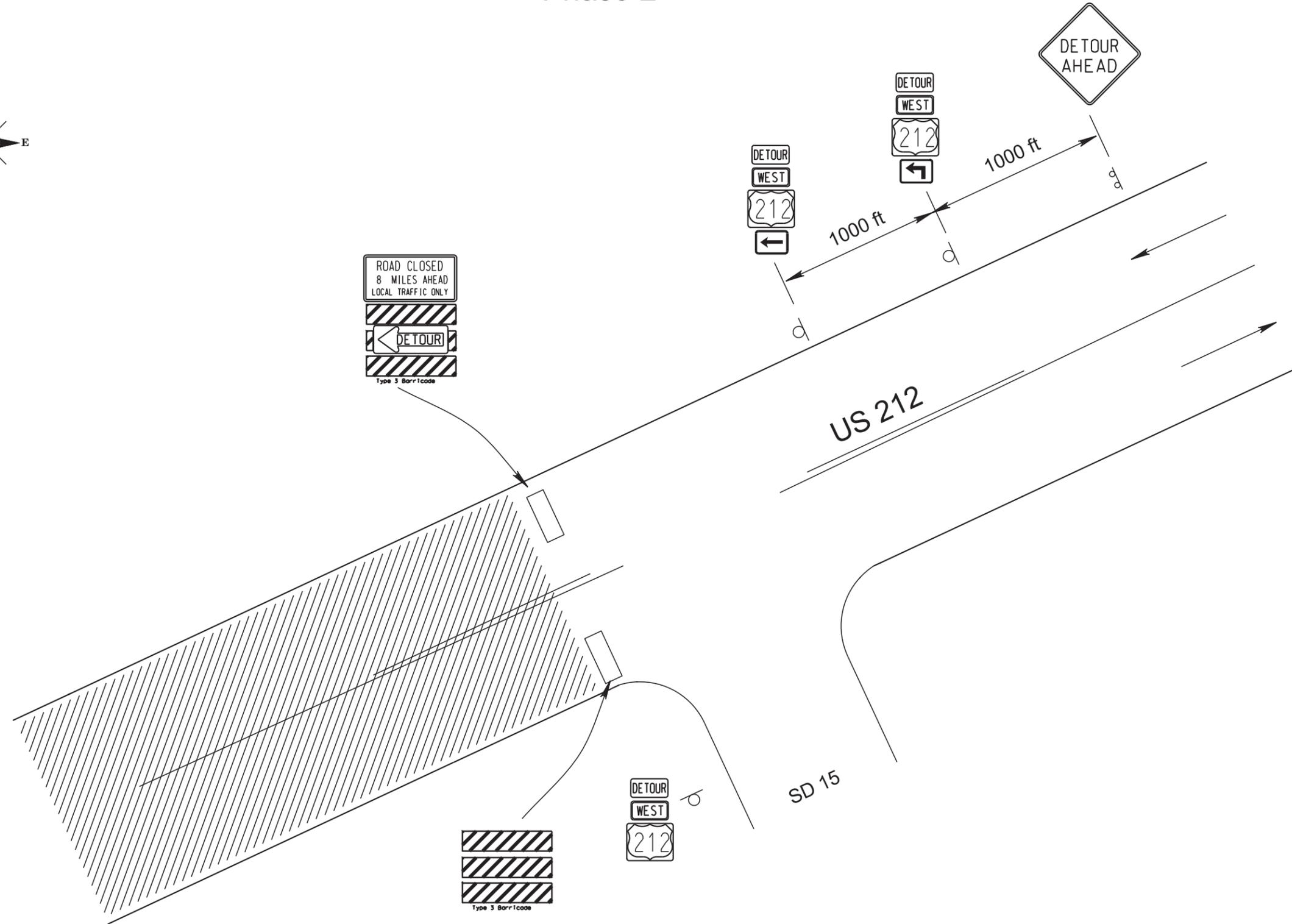
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162)380	C15	C21
Plotting Date: 08/06/2015			

END PROJECT DETAILS

Phase 2

Sheet 2 of 2

PLOT SCALE - 1:240



All barricades to be Type 3, 8 ft. double sided

PLOTTED FROM - TRAB17882

PLOT NAME - 11

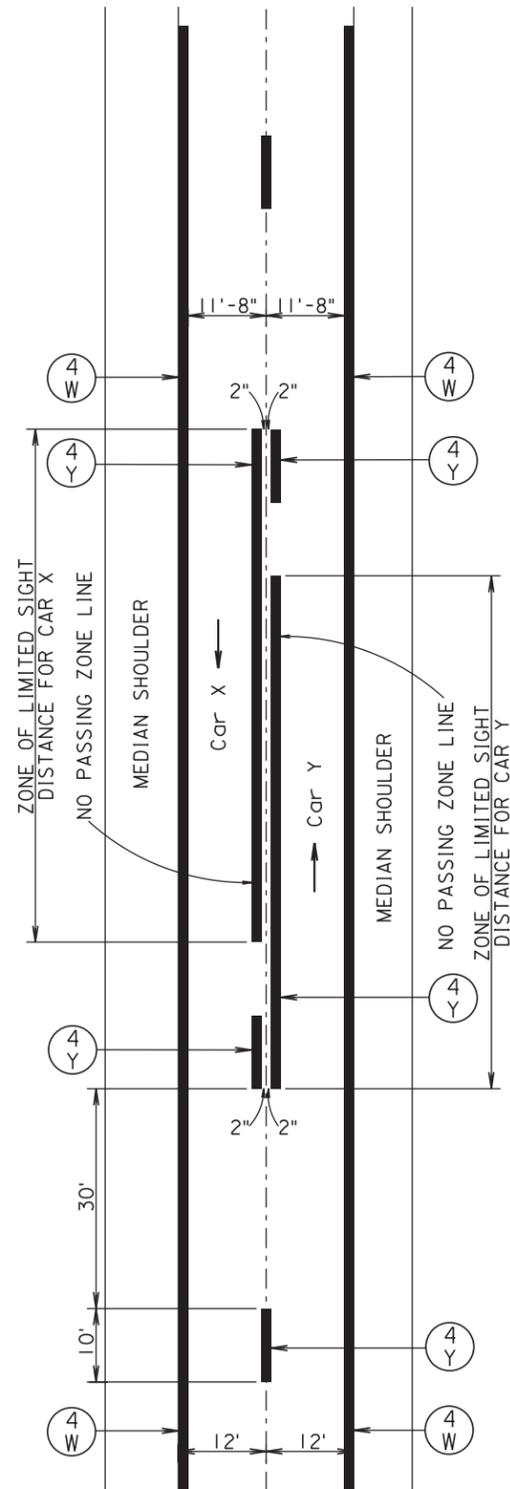
FILE - ... \03RN_PROJECT\DETAILS.DGN

CAR DETOUR ROUTE PAVEMENT MARKING

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212(162)380	C16	C21
Plotting Date: 08/06/2015			

TWO LANE UNDIVIDED ROADWAY

The Engineer shall verify and adjust the lane widths
as necessary on each segment of the Car Detour Route



KEY	ITEM
(4) W	4" White
(4) Y	4" Yellow

FURNISHING AND APPLYING PAVEMENT MARKING PAINT

1. The approximate paint application rates shall be as follows:

Undivided Roadway	Divided Roadway
Yellow Centerline 12± Gallons/Pass-Mile (Includes No-passing lines)	White Centerline 4.60 Gallons/Pass-Mile
White Edgeline 16.90 Gallons/Pass-Mile (Solid Line)	Yellow or White Edgeline 16.90 Gallons/Pass-Mile (Solid Line)

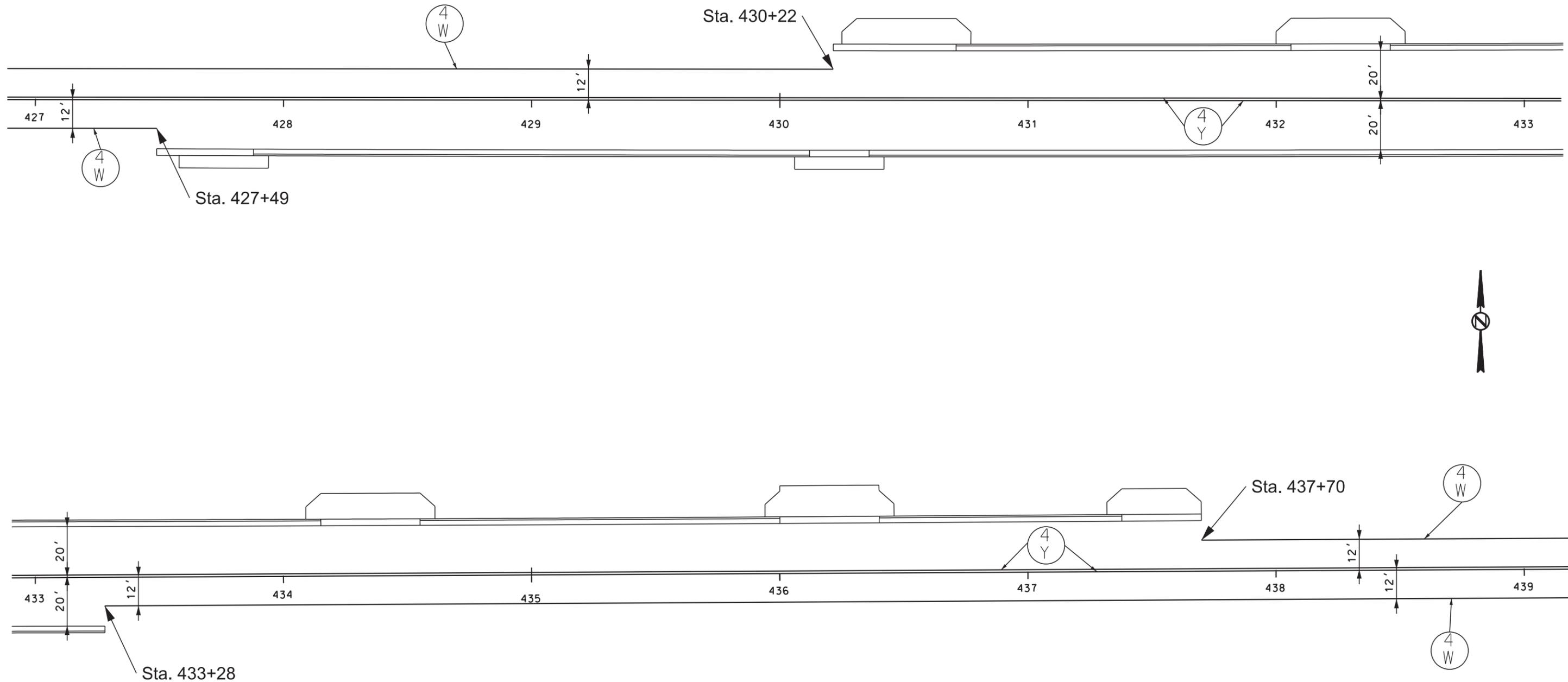
- The typical pavement markings as shown on this sheet shall be applied throughout the entire length of the project.
- Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, shall not be used as the beginning and ending NO PASSING ZONE lines.
- 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.

US 212 PAVEMENT MARKING LAYOUT AT KRANZBURG

STATE OF SOUTH DAKOTA	PROJECT NH 0212 (162) 380	SHEET NO. C17	TOTAL SHEETS C21
Plotting Date: 08/06/2015			

PLOT SCALE - 1"=40'

PLOT NAME - 13



FILE - ... \KRANZBURG PAVEMENT MARKING LAYOUTS.DGN

PLOTTED FROM - TRAB17882

Exact location of the 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 NO PASSING ZONE lines.

US 212 DURABLE PAVEMENT MARKING

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0212 (162)380	C18	C21
Plotting Date: 08/06/2015			

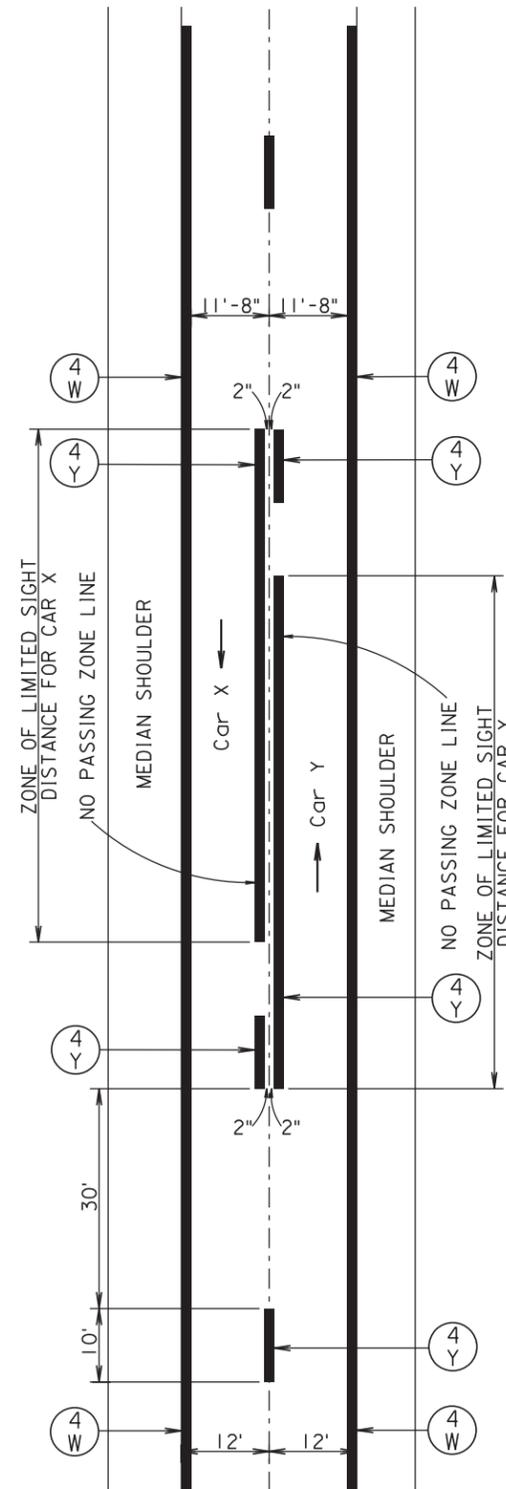
TWO LANE UNDIVIDED ROADWAY

Refer to US 212 PAVEMENT MARKING LAYOUT AT KRANZBURG
for additional details on pavement marking.

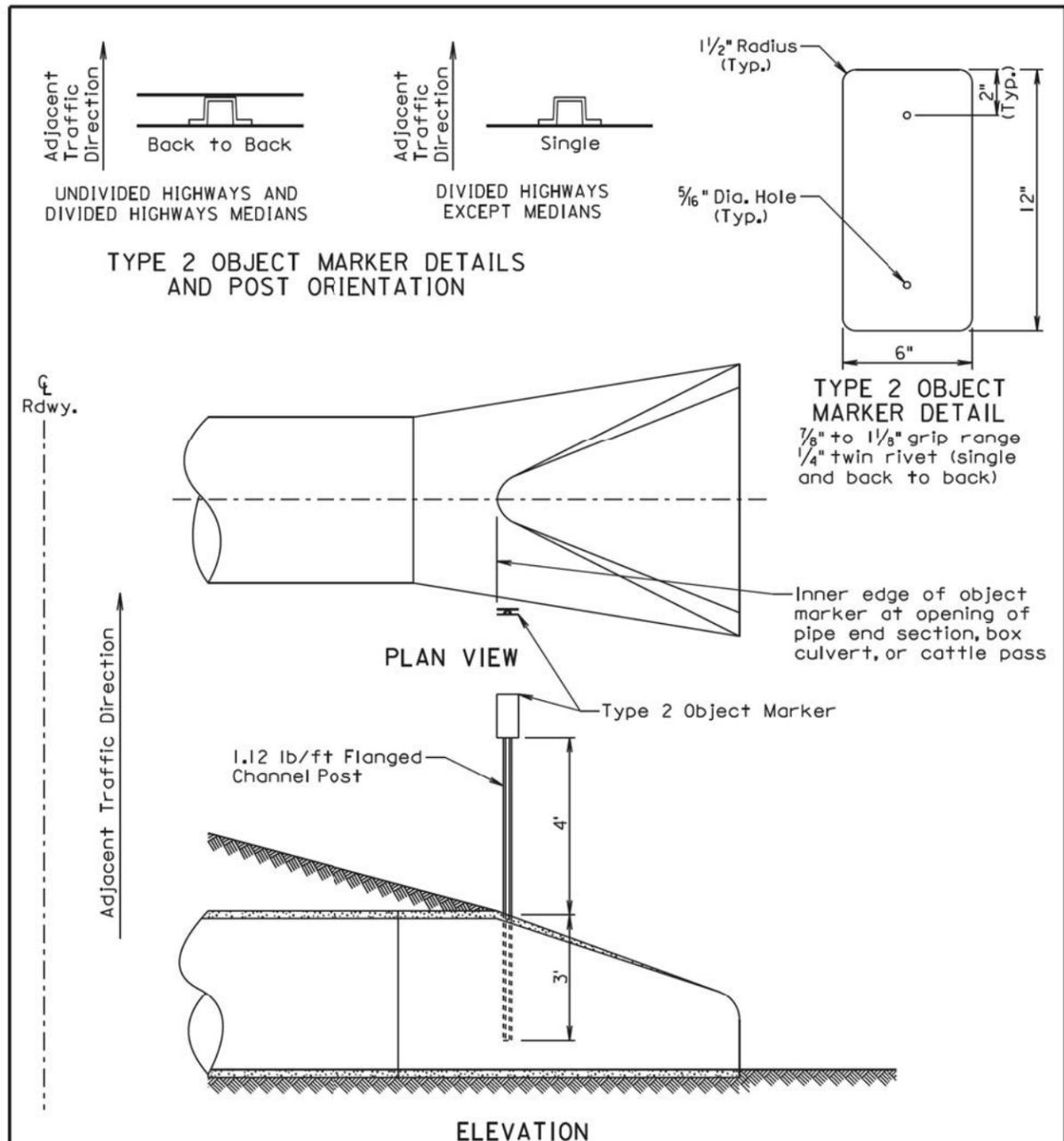
KEY	ITEM
(4) W	4" White
(4) Y	4" Yellow

FURNISHING AND APPLYING DURABLE PAVEMENT MARKING PAINT

- The typical pavement markings as shown on this sheet shall be applied throughout the entire length of the project.
- Exact location of the 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 NO PASSING ZONE lines.



Plotting Date: 08/06/2015



TYPE 2 OBJECT MARKER DETAILS AND POST ORIENTATION

TYPE 2 OBJECT MARKER DETAIL
7/8" to 1 1/8" grip range
1/4" twin rivet (single and back to back)

PLAN VIEW

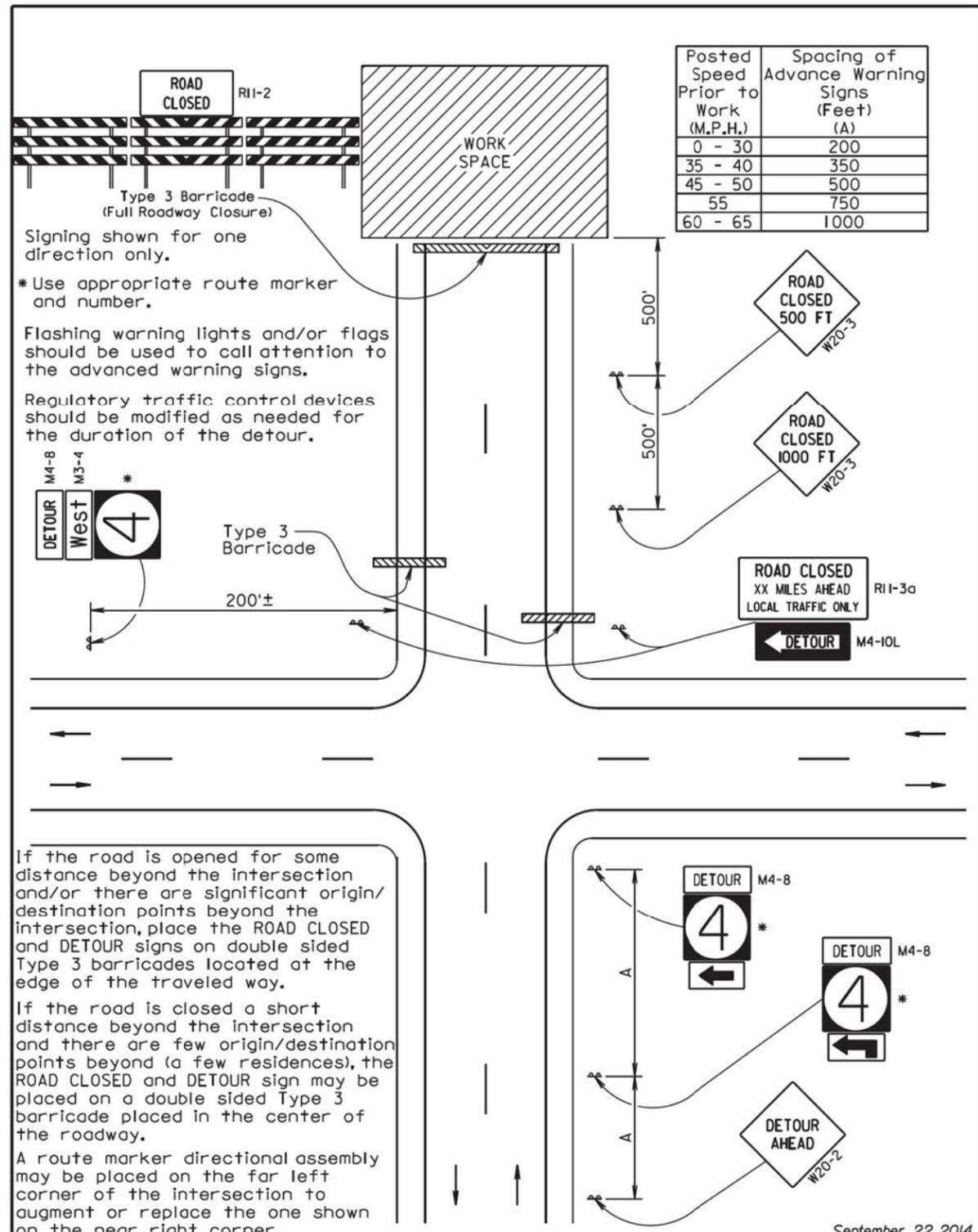
ELEVATION

GENERAL NOTES:

The type 2 object markers and the 1.12 lb/ft flanged channel posts shall be in conformance with Specifications Section 982.2 J.
Payment for the type 2 object markers shall be in conformance with Specification Section 632.5 B.

June 26, 2015

S D D O T	TYPE 2 OBJECT MARKER INSTALLATION AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES	PLATE NUMBER 632.10
	Published Date: 3rd Qtr. 2015	Sheet 1 of 1



GUIDES FOR TRAFFIC CONTROL DEVICES ROAD CLOSED WITH OFF-SITE DETOUR

If the road is opened for some distance beyond the intersection and/or there are significant origin/destination points beyond the intersection, place the ROAD CLOSED and DETOUR signs on double sided Type 3 barricades located at the edge of the traveled way.
If the road is closed a short distance beyond the intersection and there are few origin/destination points beyond (a few residences), the ROAD CLOSED and DETOUR sign may be placed on a double sided Type 3 barricade placed in the center of the roadway.
A route marker directional assembly may be placed on the far left corner of the intersection to augment or replace the one shown on the near right corner.

September 22, 2014

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES ROAD CLOSED WITH OFF-SITE DETOUR	PLATE NUMBER 634.29
	Published Date: 3rd Qtr. 2015	Sheet 1 of 1

PLOT SCALE - 1:200

PLOTTED FROM - TRAB17882

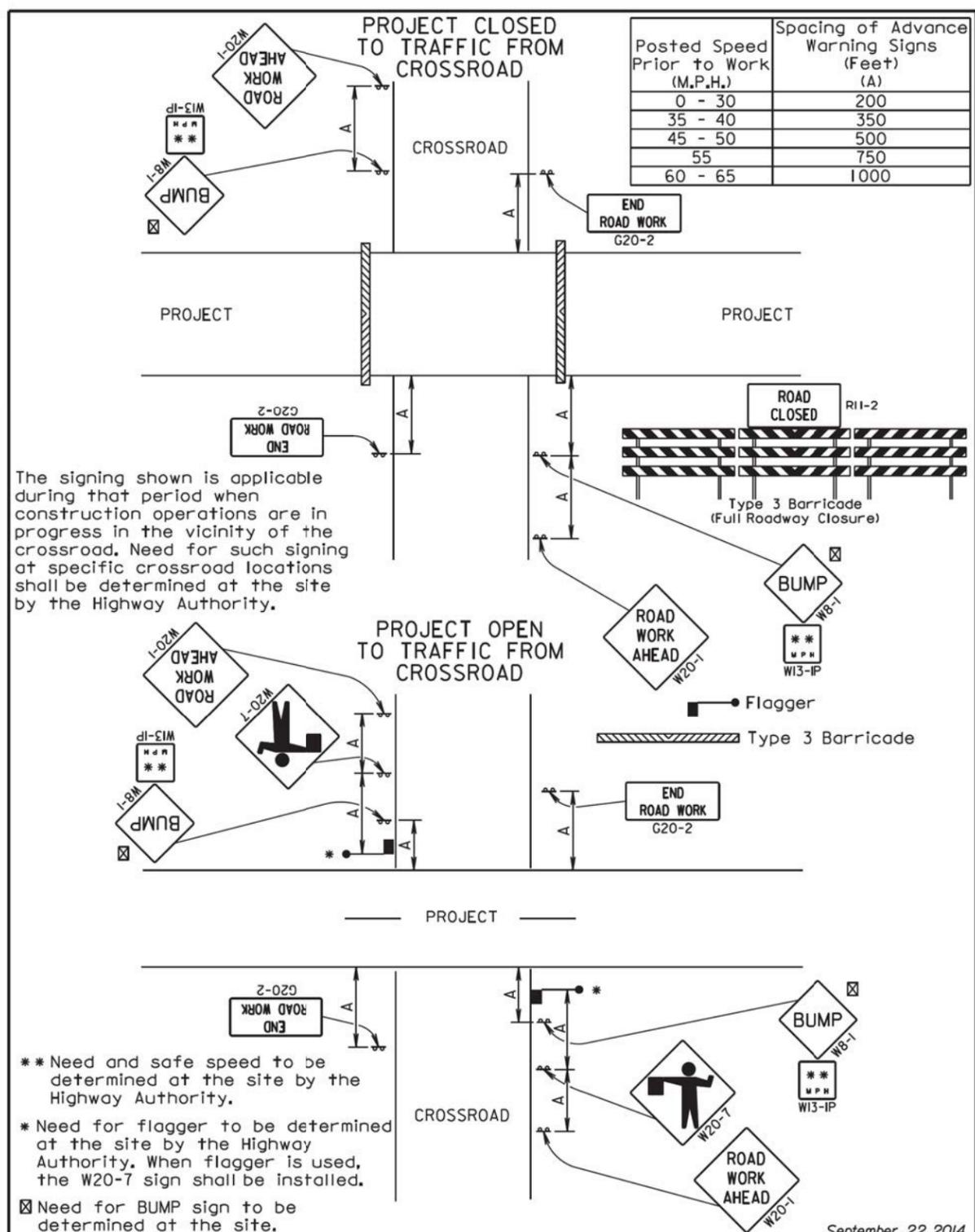
PLOT NAME - 1

FILE - ... \SECTION\63210_ & 63429.DGN

Plotting Date: 08/06/2015

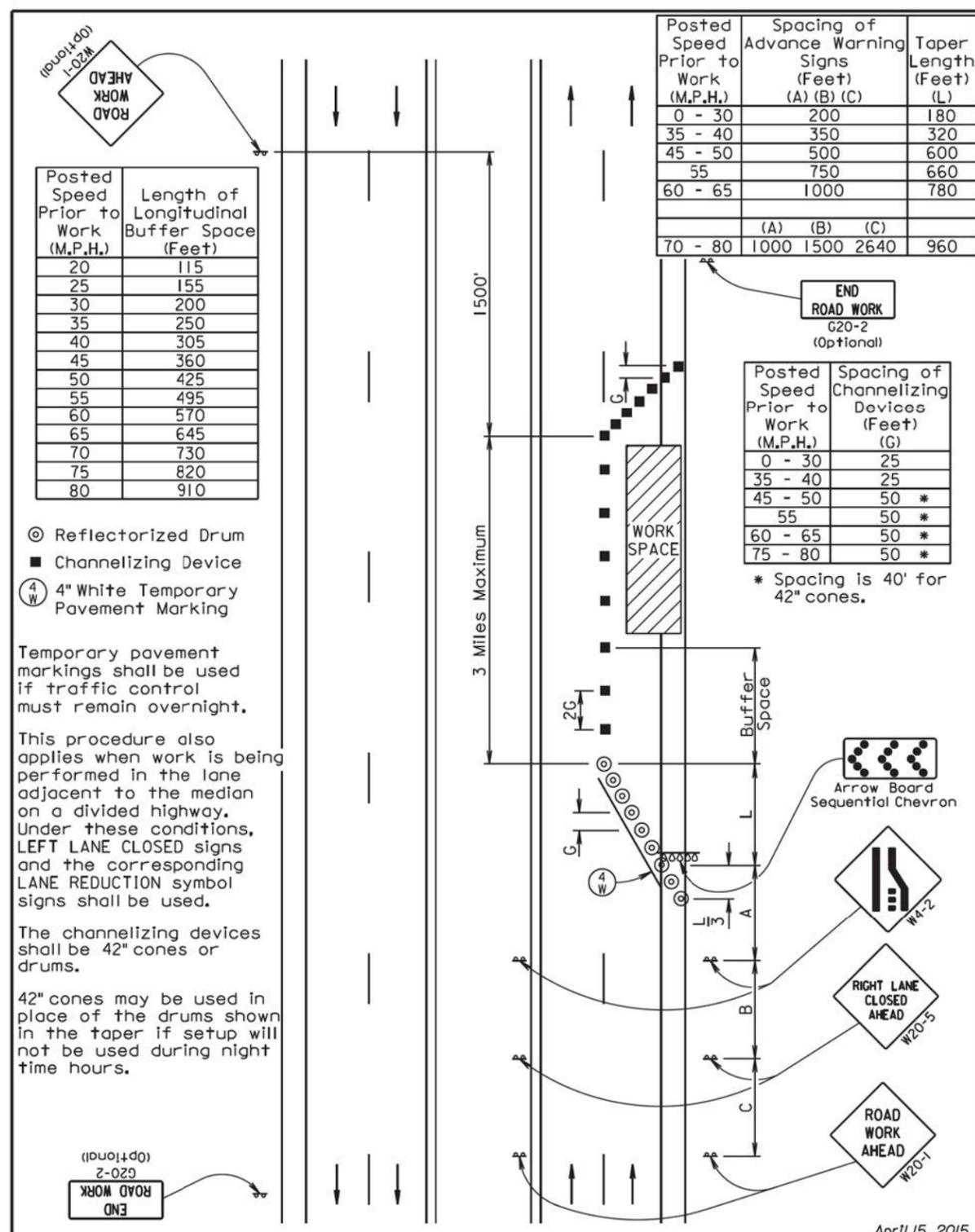
PLOT SCALE - 1:200

PLOT NAME - 2



September 22, 2014

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES CROSSROAD SIGNING	PLATE NUMBER 634.32
	Published Date: 3rd Qtr. 2015	Sheet 1 of 1



April 15, 2015

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITHOUT BARRIER	PLATE NUMBER 634.64
	Published Date: 3rd Qtr. 2015	Sheet 1 of 1

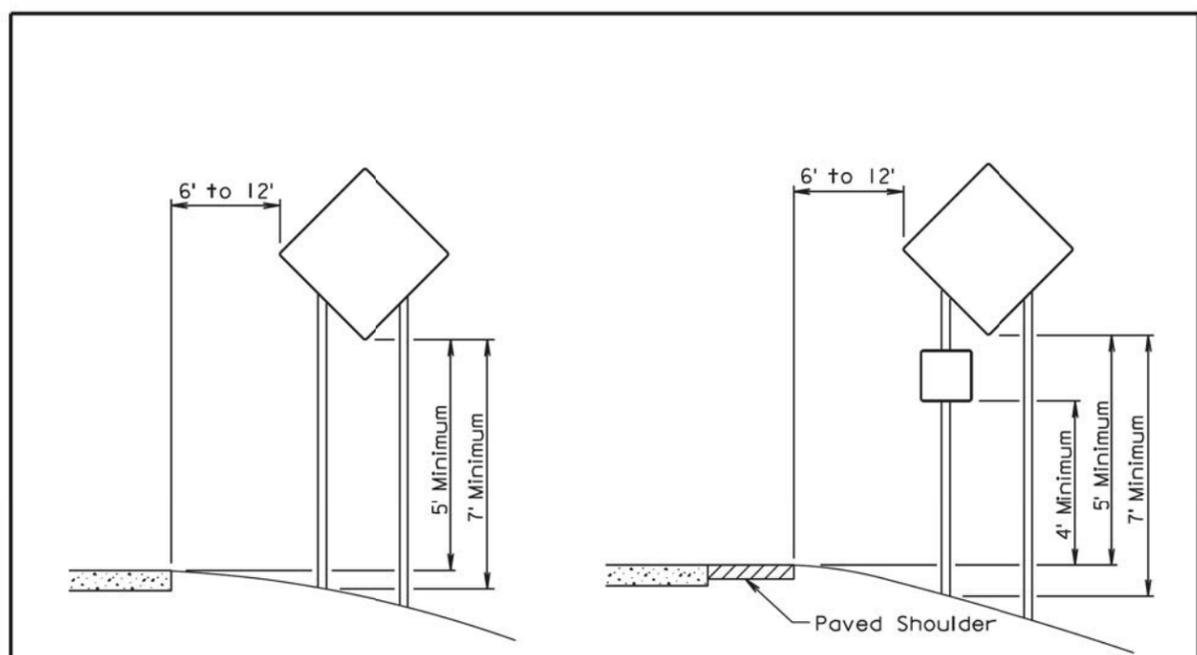
PLOTTED FROM - TRAB17882

FILE - ... \SECTION\63432_ & 63464.DGN

PLOT SCALE - 1:200

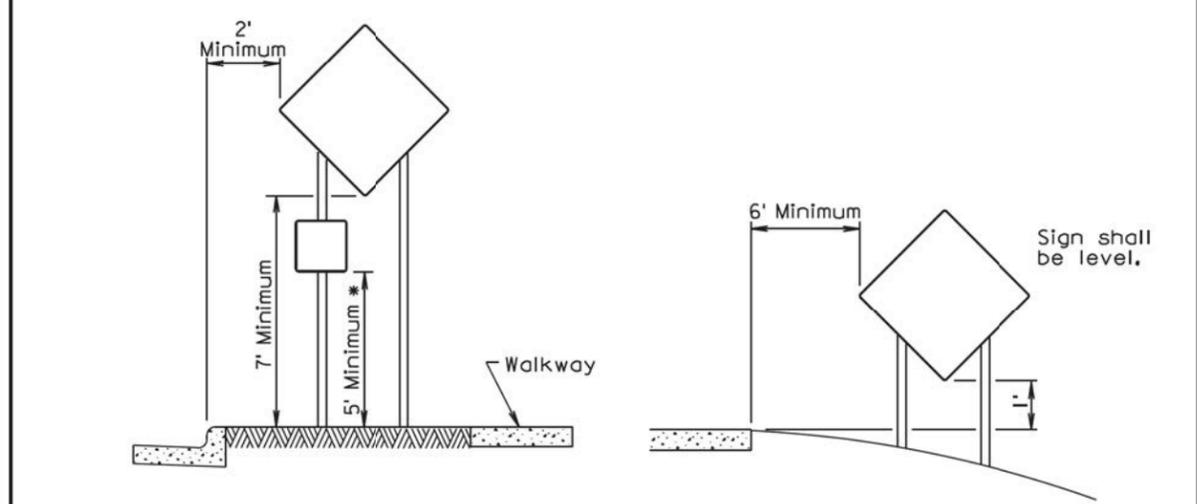
PLOT NAME - 3

FILE - ... \SECTION\63485_ & 63499.DGN



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

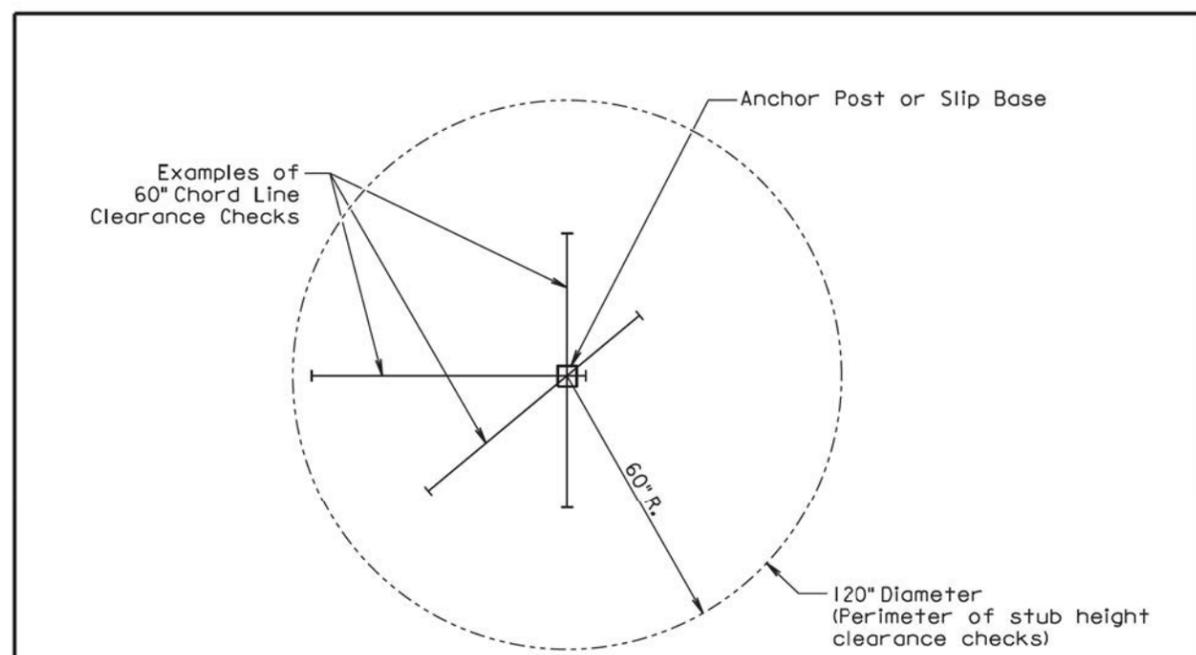
RURAL DISTRICT 3 DAY MAXIMUM

* 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.

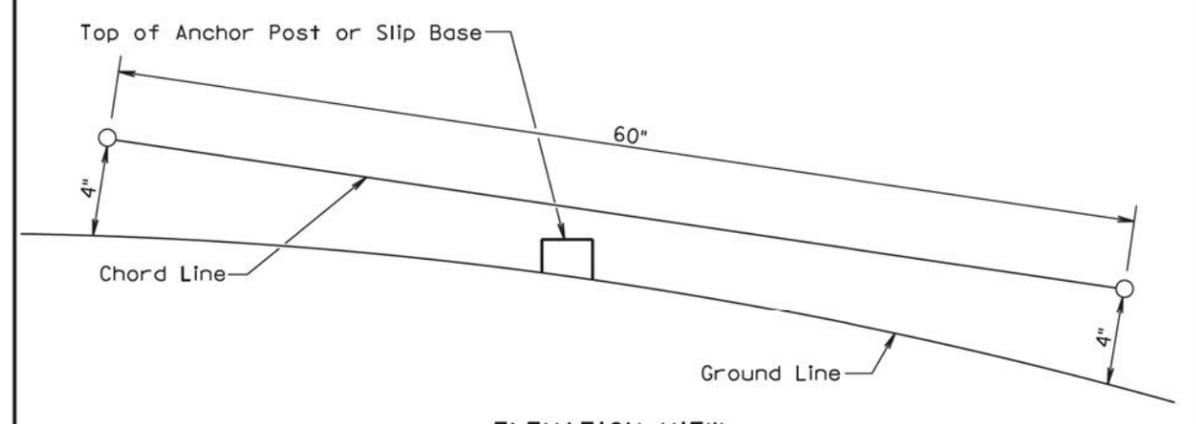
(Not applicable to regulatory signs)

September 22, 2014

Published Date: 3rd 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: 3rd Qtr. 2015	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1