

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: May 17, 2016
Date of Addendum: May 12, 2016

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
154	07-0206-068	HMA PAVEMENT / RESURFACING	BLACK HAWK	NHSX-020-6(68)--3H-07 NHSX-020-6(70)--3H-07	17MAY154.A01

Make the following change to the PROPOSAL DETAILS, Page 2:

Add:

SITE 02 NO START DATE SPECIFIED: 40 WORKING DAYS: LIQUIDATED
DAMAGES: \$2,500
SEE SITE NUMBER 02 DESCRIPTION BELOW

*** SITE NUMBER 02 ***

ALL WORK ITEMS THAT REQUIRE LANE CLOSURES ON MAINLINE U.S. 20 EASTBOUND FROM STATION 924+50 TO STATION 995+00 SHALL BE COMPLETED SUCH THAT THERE WILL BE NO FURTHER LANE CLOSURES AFTER THE 40 WORKING DAY PERIOD. THE WORK IN THIS AREA REQUIRES SPECIAL TRAFFIC CONTROL DETAILS AND THEREFORE THE INTENT IS TO COMPLETE ALL OF THIS WORK AT ONE TIME TO MAINTAIN CONSISTENCY IN THE TRAFFIC CONTROL.

LANE CLOSURES FOR THE ITEMS FOR GROOVES CUT FOR PAVEMENT MARKINGS AND THE FINAL PAVEMENT MARKINGS WILL BE ALLOWED OUTSIDE THE 40 WORKING DAY PERIOD FOR THIS SITE SINCE THE GROOVES CUT FOR PAVEMENT MARKINGS AND THE FINAL PAVEMENT MARKINGS CANNOT BE PLACED UNTIL A MINIMUM OF 30 DAYS AFTER THE FINAL HMA LIFT PLACEMENT. THIS WORK SHALL BE DONE DURING NIGHTTIME HOURS AS DESCRIBED IN TAB 108-23B.

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 0500 2527-9263109 PAINTED PAVEMENT MARKING,
WATERBORNE OR SOLVENT-BASED:
From : 3,759.380 STA
To: 3,760.840 STA

Change Proposal Line No. 0510 2527-9263131 WET RETROREFLECTIVE REMOVABLE
TAPE MARKINGS:

From : 55.600 STA
To: 80.600 STA

Change Proposal Line No. 0520 2527-9263180 PAVEMENT MARKINGS REMOVED:

From : 27.810 STA
To: 29.280 STA

If the above changes are not made, they will be made as shown here.

NHSX-020-6(68)--3H-07

Replace the attached SHEET NUMBER A.1, C.1, C.3, C.4, C.25, C.32, C.33, J.1, J.2, J.4, J.5, J.6 and J.7 to the plan.

Add the attached SHEET NUMBER J.8, J.9 and J.10 to the plan.

Add the following to SHEET J.1 under TRAFFIC CONTROL PLAN & STAGING NOTES TAB's

Please add a note in the STAGING NOTES to indicate that all full depth, partial depth, and longitudinal joint repair patching should be done within the area where traffic will be shifted onto the shoulder as part of the TC-421 Traffic Control Zone before beginning TC-421 Traffic Control for the bridge approach replacement work for the bridge at Station 942+03.82. You should provide the stationing from Sta. 924+50 to whatever station would be 200 ft. east of where traffic will start to shift towards the shoulder.

Please add a note to the TRAFFIC CONTROL PLAN that says: "Traffic Control Set Up and traffic control switches for the traffic control details shown on these J sheets shall be done during nighttime hours as described in Tab 108-23B."

Please add a note to the TRAFFIC CONTROL PLAN that says: "The contractor shall notify the Engineer a minimum of 10 days in advance of work that will reduce the vertical clearance under overhead bridges as tabulated in Tab 108-25."

HMA PAVEMENT WIDENING WITH HMA RESURFACING
BLACK HAWK & BUCHANAN Co.
NHSX-020-6(68)--3H-07

LETTING DATE
 05/17/2016

MILEAGE SUMMARY		
Location	Lin. Ft.	Miles
STA 924+50 to 1285+00	36,050	6.828
Equation: STA 1285+00 Back- STA 0+00 Ahead		
STA 0+00 to STA 59+50	5950	1.127
Deduct Bridge at STA 941+59.8	-271	-0.051
Total Length of Roadway in Division 1	42,000	7.954
Total Length of Bridge in Division 1	-271	-0.051
Total Length of Division 1	41,729	7.903



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

BLACK HAWK/BUCHANAN COUNTIES

HMA PAVEMENT WIDENING WITH HMA RESURFACING

Eastbound US 20 from I-380 east to County Road V-65 at Jesup

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

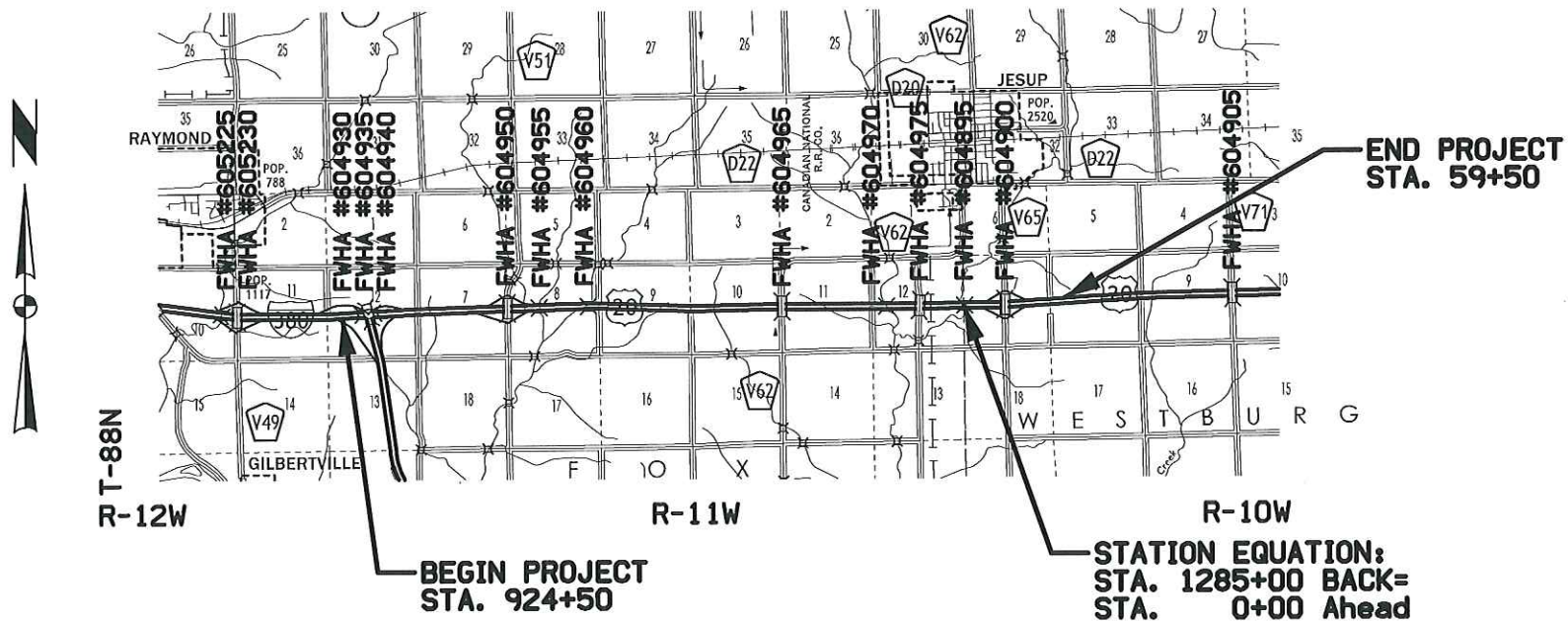
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

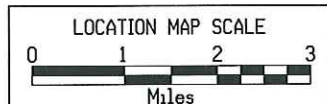
TOTAL	76
PROJECT IDENTIFICATION NUMBER	13-07-020-020
PROJECT NUMBER	NHSX-020-6(68)--3H-07
R.O.W. PROJECT NUMBER	

INDEX OF SHEETS	
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C.1 - C.2	Estimated Project Quantities
C.2 - C.4	Estimate Reference Information
C.4	Standard Road Plans
C.5	Index of Tabulations
C.5	General Notes
C.6	Pollution Prevention Plan
C.7 - C.33	Tabulations
D Sheets	Mainline Plan and Profile Sheets
D.1 - D.23	As-built Plan & Profile Sheets
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.1	Staging Notes Stage
J.1	Tabulation of Special Events
* J.2 - J.3	US 20 EB Ramp Detour Sheets
* J.4	Eastbound US 20 EB Detour Traffic Control
* J.5 - J.6	US 20 EB Mainline Detour Sheets
* J.7 - J.10	EB US 18 Lane Closures for Approach work
U Sheets	Detail Sheets
U.1 - U.4	General Detail Sheets
	* Color Plan Sheets



DESIGN DATA RURAL

2014 AADT	6,300	V.P.D.
2034 AADT	8,900	V.P.D.
20-- DHV	--	V.P.H.
TRUCKS	14	%
Total		
Design ESALs	3,650,000	



PROFESSIONAL ENGINEER

MARK R. CALLAHAN

11835

IOWA

I hereby certify that this plan was prepared under my supervision and that engineering decisions with regard to the design were made by me or by other duly licensed Professional Engineers under the laws of the State of Iowa.

Mark Callahan 5-11-16
Signature Date

MARK R. CALLAHAN

My license renewal date is December 31, 2017

Pages or sheets covered by this seal: A.1, B.1-B.5, C.1-C.33, D.1-D.23, J.1-J.10 & U.1-U.4

PROJECT DESCRIPTION

This project consists of constructing HMA shoulder widening units and resurfacing with 4.0 inches of HMA. Interchange ramps will be resurfaced with 3.0 inches of HMA. The project also includes full depth and partial depth patching, installation of subdrains and culvert repairs. Two bridge approaches will be replaced and the existing guardrail updated. Shoulder rumble strips will also be placed.

**ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)**

Division 1: Rural, Participating, 100% IDOT
Division 2: Rural, Non-Participating, 100% IDOT

Item No.	Item Code	Item	Unit	Quantities												
				Estimated					As Built							
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5		
1	2102-2625000	EMBANKMENT-IN-PLACE	CY	5,500.0							5,500.0					
2	2105-8425005	TOPSOIL, FURNISH AND SPREAD	CY	2,357.0							2,357.0					
3	2115-0100000	MODIFIED SUBBASE	CY	271.1							271.1					
4	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	9,257.3							9,257.3					
5	2122-5190501	PAVED SHOULDER, PORTLAND CEMENT CONCRETE (PAVED SHOULDER PANEL FOR BRIDGE END DRAIN)	SY	157.8							157.8					
6	2122-5500060	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 6 IN.	SY	1,626.4							1,626.4					
7	2125-2225050	RESHAPING DITCHES	STA	6.50							6.50					
8	2212-0475095	CLEANING AND PREPARATION OF BASE	MILE	7.9							7.9					
9	2212-5070310	PATCHES, FULL-DEPTH REPAIR	SY	2,931.6							2,931.6					
10	2212-5070322	PATCHES, PARTIAL-DEPTH REPAIR, HOT MIX ASPHALT	SY	1,103.2							1,103.2					
11	2212-5070330	PATCHES BY COUNT (REPAIR)	EACH	390							390					
12	2212-5075001	HOT MIX ASPHALT SURFACE PATCHES	TON	20.0							20.0					
13	2213-2713300	EXCAVATION, CLASS 13, FOR WIDENING	CY	5,216.7							5,216.7					
14	2214-5145150	PAVEMENT SCARIFICATION	SY	4,890.6							4,890.6					
15	2214-7450050	BLADING AND SHAPING SHOULDER MATERIAL	STA	59.40							59.40					
16	2301-0690202	BRIDGE APPROACH, BR-202	SY	586.0							586.0					
17	2303-0001000	HOT MIX ASPHALT MIXTURE, WEDGE, LEVELING OR STRENGTHENING COURSE	TON	3,123.2							3,123.2					
18	2303-0031750	HOT MIX ASPHALT MIXTURE (1,000,000 ESAL), BASE COURSE, 3/4 IN. MIX	TON	9,608.1							9,608.1					
19	2303-0052500	HOT MIX ASPHALT MIXTURE (10,000,000 ESAL), INTERMEDIATE COURSE, 1/2 IN. MIX	TON	22,098.3							22,098.3					
20	2303-0053502	HOT MIX ASPHALT MIXTURE (10,000,000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2	TON	22,629.6							22,629.6					
21	2303-0246422	ASPHALT BINDER, PG 64-22	TON	3,447.6							3,447.6					
22	2303-6911000	HOT MIX ASPHALT PAVEMENT SAMPLES	LS	1.00							1.00					
23	2303-7000610	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE LABORATORY VOIDS (FORMULA - BY PAY FACTOR)	EACH	27500							27500					
24	2303-7000620	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA MIXTURE FIELD VOIDS (FORMULA - BY PAY FACTOR)	EACH	27500							27500					
25	2317-7000120	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR HMA PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	48500							48500					
26	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1.00							1.00					
27	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	174.0							174.0					
28	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	2							2					
29	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.	EACH	13							13					
30	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN.	EACH	6							6					
31	2416-1541036	REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN.	LF	102							102					
32	2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN.	LF	30							30					
33	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	39,145.0							39,145.0					
34	2502-8221304	SUBDRAIN OUTLET, DR-304	EACH	160							160					
35	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	2,612.5							2,612.5					
36	2505-4008300	STEEL BEAM GUARDRAIL	LF	337.5							337.5					
37	2505-4008400	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION	EACH	18							18					
38	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	18							18					
39	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	18							18					
40	2505-6000111	HIGH TENSION CABLE GUARDRAIL	LF	1,800.0							1,800.0					
41	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR	EACH	16							16					
42	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT	EACH	1							1					
43	2507-3250005	ENGINEERING FABRIC	SY	64.8							64.8					
44	2507-6800061	REVTMENT, CLASS E	TON	28.6							28.6					
45	2507-8029000	EROSION STONE	TON	10.2							10.2					
46	2510-6745850	REMOVAL OF PAVEMENT	SY	743.8							743.8					
47	2518-6910000	SAFETY CLOSURE	EACH	15							15					
48	2519-3280000	FENCE, FIELD	LF	132.0							132.0					
49	2519-3300400	FIELD FENCE BRACE PANELS	EACH	4							4					
50	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	3,760.84							3,760.84					
51	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	STA	80.60							80.60					
52	2527-9263180	PAVEMENT MARKINGS REMOVED	STA	29.28							29.28					
53	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS	STA	1,183.22							1,183.22					
54	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	1,100.0							1,100.0					
55	2528-8445110	TRAFFIC CONTROL	LS	1.00							1.00					
56	2528-8445113	FLAGGERS	EACH								See Proposal					
57	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY								See Proposal					
58	2529-2242304	CD JOINT ASSEMBLY	EACH	61							61					
59	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA	SY	35.6							35.6					
60	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT	EACH	4							4					
61	2529-8174010	SUBBASE (PATCHES)	SY	3,129.3							3,129.3					

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
26	2401-6745650	REMOVAL OF EXISTING STRUCTURES Refer to Tabulation 110-2 for additional information.
-	-	-
27	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT Refer to Tabulation 104-13 for additional information. Excavated material shall become property of the Contractor and removed from the project. Overhaul will not be paid for this item.
-	-	-
28	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.
29	2416-0101036	REMOVE AND REINSTALL CONCRETE PIPE APRONS LESS THAN OR EQUAL TO 36 IN.
30	2416-0101136	REMOVE AND REINSTALL CONCRETE PIPE APRONS GREATER THAN 36 IN.
31	2416-1541036	REMOVE AND REINSTALL RIGID PIPE CULVERT LESS THAN OR EQUAL TO 36 IN.
32	2416-1541136	REMOVE AND REINSTALL RIGID PIPE CULVERT GREATER THAN 36 IN. Refer to Tabulation 104-13 for additional information.
-	-	-
33	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.
34	2502-8221304	SUBDRAIN OUTLET, DR-304 Refer to Typical MC-1 and MC-2 and Tabulations 102-5 and 104-9 for additional information. Installation to include cutting through econocrete base material.
-	-	-
35	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL Refer to Tabulations 110-7A and 110-13 for additional information. All posts and associated material other than steel guardrail shall become property of the Contractor. Bridge number signs that need to be removed and reinstalled by the Contractor shall be incidental to this bid item.
-	-	-
36	2505-4008300	STEEL BEAM GUARDRAIL
37	2505-4008400	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION
38	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED
39	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205 Refer to Tabulation 108-8A for additional information.
-	-	-
40	2505-6000111	HIGH TENSION CABLE GUARDRAIL
41	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR
42	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT Refer to Tabulation 108-9A for additional information.
-	-	-
43	2507-3250005	ENGINEERING FABRIC
44	2507-6800061	REVTMENT, CLASS E
45	2507-8029000	EROSION STONE Refer to Tabulation 100-23 for additional information.
-	-	-
46	2510-6745850	REMOVAL OF PAVEMENT Refer to Tabulation 110-1 for additional information.
-	-	-
47	2518-6910000	SAFETY CLOSURE Refer to Tabulation 108-13A and Sheets J.3 and J.4 for additional information. It is estimated I-380 Ramp D will need to be closed 5 times and US 20 Eastbound closed 10 times to perform the work.
-	-	-
48	2519-3280000	FENCE, FIELD
49	2519-3300400	FIELD FENCE BRACE PANELS Refer to Tabulation 100-7 for additional information.
-	-	-
50	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED
51	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS
52	2527-9263180	PAVEMENT MARKINGS REMOVED
53	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS Refer to Tabulations 108-22 and 108-29 for additional information. Grooving depth shall be 0.08 inches to 0.10 inches. Grooving and final pavement markings shall be placed a minimum of 30 days after final HMA lift placement.
-	-	-
54	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE Refer to Typical 8210 and Tabulation 108-33 for additional information.
-	-	-
55	2528-8445110	TRAFFIC CONTROL Refer to Tabulation 108-23A and J Sheets for additional information. Messages for the portable DMS board will be discussed at the Pre- Construction meeting.
-	-	-
56	2528-8445113	FLAGGERS
-	-	-
57	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS) Refer to Tabulation 108-23A and J Sheets for additional information. Messages for the portable DMS board will be discussed at the Pre- Construction meeting.
-	-	-
58	2529-2242304	CD JOINT ASSEMBLY
59	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA
60	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT
61	2529-8174010	SUBBASE (PATCHES)
62	2529-8174020	SUBBASE PATCH WITH EF JOINT
63	2529-8174050	PATCH SUBDRAIN
64	2529-8201000	JOINT ASSEMBLY, EF Refer to Tabulations 102-5 and 102-6C and Sheet U.1 for additional information.
-	-	-

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
65	2530-0400061	HOT MIX ASPHALT (PARTIAL DEPTH PATCH MATERIAL) Refer to Tabulation 102-14 for additional information.
-	-	-
66	2533-4980005	MOBILIZATION
-	-	-
67	2540-4480507	LONGITUDINAL JOINT REPAIR Refer to Tabulation 106-8 for additional information. Milling into PCC a nominal depth of 3 inches will be required.
-	-	-
68	2548-0000100	MILLED SHOULDER RUMBLE STRIPS, HMA SURFACE
69	2548-0000110	ASPHALT EMULSION FOR FOG SEAL (SHOULDER RUMBLE STRIPS) Refer to Tabulation 112-10 for additional information.
-	-	-
70	2551-0000110	TEMP CRASH CUSHION Refer to Typical 8210 and Tabulation 108-30 for additional information.
-	-	-
71	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS Refer to Tabulation 110-13 for additional information.
-	-	-
72	2601-2634100	MULCHING Mulching per Article 2601.03. E. 2. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes. This item also includes areas requiring reshaping and seedbed preparation. Mulch shall be Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations. Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.
-	-	-
73	2601-2636015	NATIVE GRASS SEEDING All areas outside eight feet adjacent to shoulder shall be seeded with "Native Grass Seeding". All seed for "Native Grass Seeding" will be supplied and mixed by the contractor according to Article 2601.03, B, 4, c and installed according to Article 2601.03, C, 5. All forb seed will be applied through the native grass drill wildflower or small seed box. Forb seed will not be allowed to be mixed and applied with the native grass seed. Cover crop will be required to be applied through the cool season or cover crop seed box. The cover crop seed will not be allowed to be mixed and applied with the native grass seed. Drill shall be calibrated prior to operation at the project site to the specified seeding rate for the project and witnessed by the contracting authority. The Engineer will review the limits prior to seeding with the Contractor.
-	-	-
74	2601-2636043	SEEDING AND FERTILIZING (RURAL) Refer to Tabulations 100-23, 103-4, 104-13 and 300-1 for additional information. Included for all areas designated by the Engineer. All disturbed areas shall be seeded and fertilized per Article 2601.03. C. 3 of the Standard Specifications. Use ground driven equipment.
-	-	-
75	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING This item includes disturbed areas as directed by the Engineer. Seed and fertilize all disturbed areas according to Article 2601.03. C. 1 of the Standard Specifications.
-	-	-
76	2602-0000020	SILT FENCE Refer to Tabulation 100-17 for additional information. This item is for grading at guardrail blisters. Verify specific locations with the Engineer prior to placement. Estimated quantity includes an additional 10% for other areas as directed by the Engineer.
-	-	-
77	2602-0000030	SILT FENCE FOR DITCH CHECKS Refer to Tabulation 100-18 and Sheet U.1 for additional information. This item is for grading at guardrail blisters. Verify specific locations with the Engineer prior to placement. Estimated quantity includes an additional 10% for other areas as directed by the Engineer.
-	-	-
78	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS This item is included for silt fence and silt fence for ditch check removal when slopes have been mulched and the Engineer has determined that fencing is no longer needed or for areas that have achieved 70% permanent growth.
-	-	-
79	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK This item is included for maintaining silt fence and silt fence ditch checks installed for the project. Estimated at 10% of the silt fence installed.
-	-	-
80	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA. Refer to Tabulation 100-19 for additional information. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to placement.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
-	-	Use Perimeter and Slope Sediment Control Devices fabricated using wood excelsior only.
81	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE
-	-	-
82	2602-0010010	MOBILIZATIONS, EROSION CONTROL
-	-	-
83	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL
-	-	-

111-25
10-18-11

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110-7A	REMOVAL OF STEEL BEAM GUARDRAIL	C.26
110-12A	POLLUTION PREVENTION PLAN	C.6 - C.6
110-13	DELIVERY AND STOCKPILING	C.24
111-25	INDEX OF TABULATIONS	C.4
112-6	BRIDGE APPROACH SECTION	C.26
112-9	SHOULDERS	C.29 - C.30
112-10	MILLED RUMBLE STRIPS	C.32
262-4	AUTOMATIC TRAFFIC RECORDER	C.5
262-6	UTILITIES (NOT A POINT 25 PROJECT)	C.5
300-1	DITCH SHAPING	C.7
300-2	SHOULDER MILLING	C.24

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-200	04-19-16	Steel Beam Guardrail Components
BA-201	04-19-16	Steel Beam Guardrail Barrier Transition Section
BA-202	10-20-15	Steel Beam Guardrail Bolted End Anchor
BA-203	10-18-11	Steel Beam Guardrail W-Beam End Anchor
BA-205	04-19-16	Steel Beam Guardrail End Terminal
BA-250	04-19-16	Steel Beam Guardrail Installation at Concrete Barrier or Bridge End Post
BA-251	04-19-16	Steel Beam Guardrail Installation at Side Obstacle (Two-Way Protection)
BA-252	04-19-16	Steel Beam Guardrail Installation at Side Obstacle (One-Way Protection)
BA-351	04-20-10	High Tension Cable Guardrail
BA-401	04-16-13	Temporary Barrier Rail (Precast Concrete)
BA-500	04-19-16	Temporary Crash Cushions Sand Barrel
BR-101	04-21-15	Bridge Approach Section (General Details)
BR-202	04-21-15	Double Reinforced 10" Approach with Variable Depth Paving Notch
BR-211	04-21-15	Bridge Approach (Abutting PCC or Composite Pavement)
DR-101	04-19-16	Pipe Culvert (Bedding and Backfill)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-121	10-20-15	Connected Pipe Joints
DR-201	04-21-15	Concrete Aprons
DR-213	04-21-15	Pipe Apron Guard
DR-303	10-20-15	Subdrains (Longitudinal)
DR-304	04-21-15	Outlets for Longitudinal, Transverse and Backslope Subdrains
EC-201	04-21-15	Silt Fence
EC-204	04-19-16	Perimeter and Slope Sediment Control Devices
EC-301	04-21-15	Rock Erosion Control (REC)
EW-301	10-20-15	Guardrail Grading
EW-302	10-20-15	Special Shaping for High Tension Cable Guardrail at Median Obstacles
MI-101	10-20-15	Fencing Layout
MI-103	10-20-15	Deer Fence and Field Fence Construction
PM-110	04-16-13	Line Types
PM-120	10-21-14	Stop Lines and Islands
PM-210	10-18-11	Separation in Two-Lane Roadway
PM-211	10-18-11	Separation in Four-Lane Roadway
PM-310	04-19-16	Entrance and Exit Ramps
PM-520	04-19-11	Two-Lane Roadway with no Turn Lanes (Two-Way Stop Condition)
PM-560	04-19-11	Divided Multi-Lane Roadway with no Turn Lanes
PR-103	10-21-14	Full Depth PCC Patch with Dowels
PR-105	10-21-14	Full Depth Ramp PCC Patch with Dowels
PR-140	04-21-15	Subbase Patches
PR-201	10-21-14	Runouts for Resurfacing
PR-202	10-21-14	Notches for Resurfacing (with or without Runout)
PV-12	04-19-16	Milled Shoulder Rumble Strips
PV-101	04-19-16	Joints
PV-202	04-16-13	Hot Mix Asphalt Resurfacing
PV-203	10-15-13	HMA Base Widening
PV-302	04-17-12	Superelevation Details Four Lane Roadway Depressed Median
PV-303	04-19-11	Superelevation Details Ramps
PV-410	10-18-11	Deceleration Taper for 16' Exit Ramp
PV-411	10-18-11	Acceleration Taper for 16' Entrance Ramp
SI-172	04-19-16	Delineators
SI-173	04-19-16	Object Markers
SI-211	10-19-10	Object Marker and Delineator Placement with Guardrail
SI-881	10-15-13	Special Signs for Workzones
SI-882	04-20-10	Special Signs for Restricted Width Traffic Control Zones
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-213	04-17-12	Lane Closure with Flaggers
TC-273	04-20-10	Construction Site Entrance
TC-402	04-21-15	Work Within 15 ft of Traveled Way
TC-416	04-17-12	Partial Lane Closure on Ramps
TC-417	04-16-13	Ramp Closure
TC-418	10-15-13	Lane Closure on Divided Highway
TC-420	04-21-15	Lane Closure at Ramps
TC-432	04-16-13	Shoulder Rumble Strip Operations
TC-482	04-19-11	Uneven Lanes

100-27
10-20-09

PAVEMENT SMOOTHNESS + PCC TEXTURE

Road Identification	Begin Station	End Station	Proposed Posted Speed			Remarks
			35 or less	40 - 45	over 45	
US 20 EBL	924+50	1285+00			X	
	+00	59+50			X	

FILE NO. ENGLISH DESIGN TEAM Callahan\Coggins\Meise

BLACK HAWK COUNTY PROJECT NUMBER NHSX-020-6(68)--3H-07

SHEET NUMBER C.4

106-8
04-19-11

LONGITUDINAL JOINT REPAIR

Begin Station	End Station	Length FT	Side	Pay Length		Remarks
				Width IN	LF	
Mainline US 20						
924+50	931+50	700	O	6	700	Eastbound
931+50	939+95	845	O	6	845	Eastbound
944+13	945+62	149	O	6	149	Eastbound
955+00	958+20	320	O	6	320	Eastbound
960+00	968+28	828	O	6	828	Eastbound
935+00	938+83	383	I	6	383	Eastbound
944+75	968+29	2354	I	6	2354	Eastbound
997+25	1003+95	670	O	6	670	Eastbound
1033+08	1043+68	1060	O	6	1060	Eastbound
1068+10	1079+90	1180	C.L.	6	1180	Eastbound
1127+90	1133+00	510	C.L.	6	510	Eastbound
1240+15	1242+10	195	C.L.	6	195	Eastbound
Equation:						
3+25	9+95	670	O	6	670	Eastbound
34+95	46+80	1185	O	6	1185	Eastbound
I-380 Interchange						
4545+40	4551+35	595	Rt.	12	1190	Ramp D
4551+35	4571+70	2035	Rt.	6	2035	Ramp D
4549+00	4554+00	500	Lt.	6	500	Ramp D; various locations
V51 Ramps						
2499+10	2502+90	380	Lt.	6	380	Ramp B gore area
2521+35	2521+96	61	Lt.	6	61	Ramp B
2521+35	2521+96	61	Rt.	6	61	Ramp B
4520+35	4521+25	90	Lt.	6	90	Ramp D
4520+35	4520+90	55	Rt.	6	55	Ramp D
4533+30	4534+00	70	Lt.	6	70	Ramp D gore area
4535+80	4537+00	120	Lt.	6	120	Ramp D gore area
					15611	Total:

102-16
10-21-14

NOTCHES AND RUNOUTS FOR RESURFACING

Refer to PR-201 and PR-202.
① Bid item. Applies only to Types 'N1' and 'N3' on PR-202. Refer to 100-25 for remaining values.

Location Station	Type of Notch or Runout	S	I	DI	L	M	Pavement Scarification SY	Remarks
		IN	IN	IN	FT	IN		
EB								
924+50.0	Type 'N3'	2.0	2.0		200	2.0	See Tab 100-25	
939+81.8	Type 'N3'	2.0	2.0		200	2.0	See Tab 100-25	
944+29.8	Type 'N3'	2.0	2.0		200	2.0	See Tab 100-25	
59+50.0	Type 'N3'	2.0	2.0		200	2.0	See Tab 100-25	
IB								
4544+54.2	Type 'N3'	1.5	1.5		150	1.5	See Tab 100-25	I-380 Ramp D
2521+95.8	Type 'N3'	1.5	1.5		Varies	1.5	See Tab 100-25	V51 Ramp B
4520+35.3	Type 'N3'	1.5	1.5		Varies	1.5	See Tab 100-25	V51 Ramp D
2524+64.8	Type 'N3'	1.5	1.5		Varies	1.5	See Tab 100-25	V65 Ramp B
4522+00.0	Type 'N3'	1.5	1.5		Varies	1.5	See Tab 100-25	V65 Ramp D
Overhead Bridges								
1021+50.1	Type 'N2'	1.5			60	1.5	See Tab 100-25	For overlay of Bridge approaches
1259+30.0	Type 'N2'	1.5			60	1.5	See Tab 100-25	For overlay of Bridge approaches

108-13A
08-01-08

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
I-380 Ramp D	5		See TC-417 and Sheet J.3
20 Eastbound	10		See Sheet J.4
	15		Total:

108-30
04-16-13

CRASH CUSHIONS

* Bid Item
① Lane(s) to which the installation is adjacent.
② Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	Direction of Traffic	Location Station	Side	Obstacle Width FT	Crash Cushion (Select One)*					Sand Barrel Details ②					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10 CY	Embankment in Place CY	Permanent EACH	Permanent Severe Use EACH		
										Length FT	Length FT	Length FT	Length FT	Length FT						
EB		938+90	O	2.0	1													Temporary concrete barrier rail	TC-421	
EB		938+90	I	2.0	1													Temporary concrete barrier rail	TC-421	
Total:					2															

100-7
10-16-12

FENCING

* Bid Item
Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

Location				Side	Chain Link				Deer				Field				Channel Crossing		Remarks
From		To			Fence		Gate		Fence Length* LF	Brace Panels* EACH	Gate		Fence Length* LF	Brace Panels* EACH	Gate		Length* LF	Type	
Station	Offset	Station	Offset		Length* LF	Type	No.* EACH	Type			No.* EACH	Type			No.* EACH	Type			
939+84	24'LT	940+29	24'RT	MED.								66	2					(A)	
942+91	24'LT	943+36	24'RT	MED.								66	2					(A)	
Totals:																			
(A) To be placed in the median between the twin bridge ends.																			

TRAFFIC CONTROL PLAN

- 1) Traffic on mainline US 20 and the V-51 and V-65 interchange ramps shall be maintained on the project at all times except as noted below. Traffic on I-380 Ramp D (NB I-380 to EB US 20) shall be detoured while work is being performed on this ramp. The ramp shall be open to traffic during non-working hours.
- 2) Eastbound US 20 shall be detoured as shown on Sheets J.4 to J.6 while work (except bridge approach replacement work) is being performed from the Sta. 924+50 (BOP) to Sta. 965+00. All work (except work involving bridge approach replacement) shall be performed at night according to the schedule shown in Tab. 108-23B.
- 3) Work on I-380 Ramp D (NB I-380 to EB US 20) shall be performed at night according to the schedule shown in Tab. 108-23B.
- 4) Traffic Control Set Up and traffic control switches for the traffic control details shown on these J sheets shall be performed during nighttime hours as described in Tab 108-23B.
- 5) The Iowa Department of Transportation reserves the right to modify the hours specified in Tab 108-23B as necessary to accommodate unexpected traffic volumes.
- 6) The Contractor shall notify the Engineer a minimum of 10 days in advance of a ramp closure.
- 7) The contractor shall notify the Engineer a minimum of 10 days in advance of work that will reduce the vertical clearance under overhead bridges as tabulated in Tab 108-25.
- 8) The Contractor shall notify the Engineer a 10 days in advance of work that requires a lane closure or restriction.

STAGING NOTES

Coordinate with all public and private projects in the area at all times.
Refer to Sheets J.2 to J.10 for additional information.
The leveling/strengthening is designed to be performed after base widening.
Milling, subdrain, patching and resurfacing work on I-380 Ramp D (NB I-380 to EB US 20) shall be performed in a manner that the number of ramp closures are kept to a minimum as ramp closures are implemented.
All mainline U.S. 20 full depth, partial depth, and longitudinal joint repair patching shall be completed from Sta 924+50 (BOP) to Sta 965+00 prior to implementing the traffic control shown on sheets J.7 to J.10 and beginning approach replacement work for the bridge at Sta 942+03.

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
IMN-380-7(120)7-0E-07	Deck joint repair on I-380 in the City of Waterloo over Cedar River/ Texas Street/RR approx. 0.4 miles S of Jct US 20
IMN-380-6(279)0--0E-52	Pcc Patching
NHSX-020-6(70)--3H-07	HMA pavement Widening with HMA resurfacing

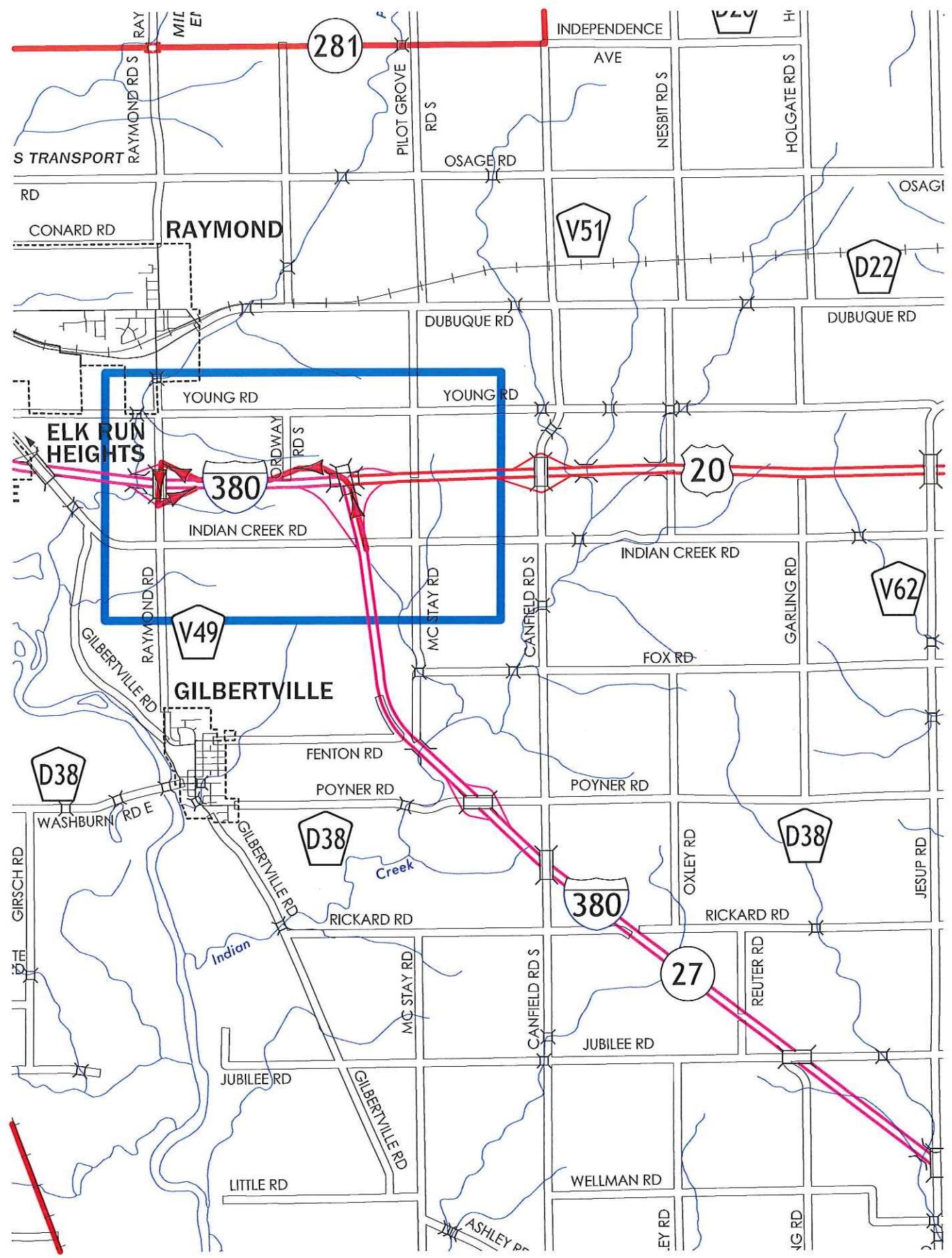
511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
US 20	EB	Blackhawk	US 20 W TO I-380 S OVER US 20 E	US 20 EB	Bridge	FHWA 604935	Vertical	16.83	NOT	EFFECTED	16.83	
US 20	EB	Blackhawk	I-380 & US 20 INTERCHANGE	US 20 EB	Bridge	FHWA 604940	Vertical	16.83	NOT	EFFECTED	16.83	
US 20	EB	Blackhawk	3 MI E OF JCT IA 297	US 20 EB	Bridge	FHWA 604950	Vertical	16.92			16.58	
US 20	EB	Blackhawk	2 MI W OF BUCHANAN CO LINE	US 20 EB	Bridge	FHWA 604965	Vertical	16.42			16.08	
US 20	EB	Blackhawk	.5 MI W OF BUCHANAN CO LINE	US 20 EB	Bridge	FHWA 604975	Vertical	16.67			16.33	
US 20	EB	Blackhawk	1.5 MI S OF JESUP	US 20 EB	Bridge	FHWA 604900	Vertical	17			16.67	
US 20	EB	Blackhawk	US-20 EB AT EXIT TO I-380 SB	US 20 EB	Sign Truss	S07010	Vertical	17.75	NOT	EFFECTED	17.75	
I-380	NB	Blackhawk	I-380 NB AT US-20 EB/WB SPLIT	US 20 EB	Sign Truss	S07001	Vertical	18	NOT	EFFECTED	18	

* This is to only be used in conjunction with Tabulation 108-23A, Note 2, 3 and 4.
Shaded area indicates non-working times

TRAFFIC CONTROL CLOSURE TABLE(S)

	AM											NOON	PM											
	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30
SUN	The work Eastbound US 20 immediately east of I-380 and I-380 Ramp D shall be performed at night according to the following schedule.																							
MON																								
TUE																								
WED																								
THU																								
FRI																								
SAT																								

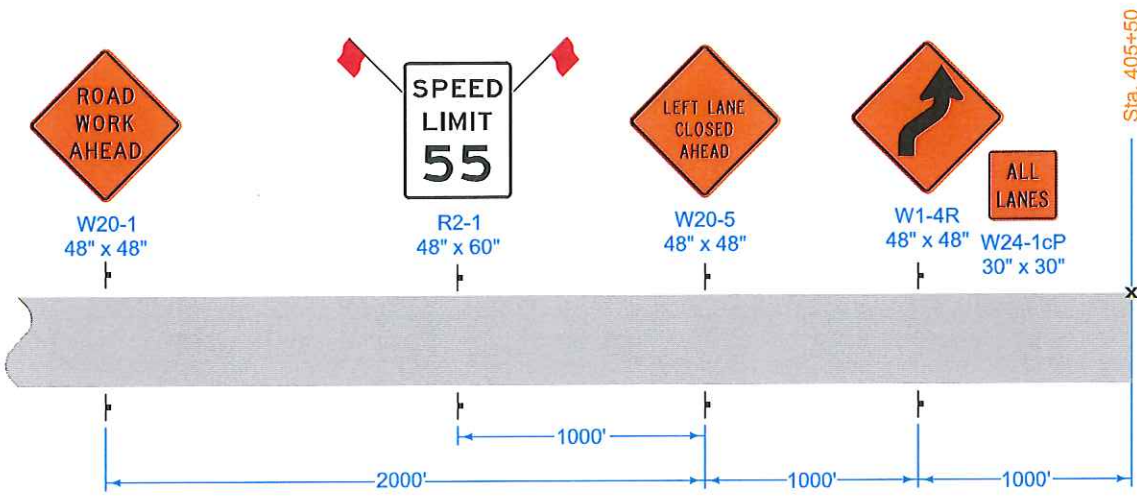


Notes:

- A. When implementing this detour, remove or cover any conflicting signs.
- B. Sign sizes and installation (standards and guidance) shall be in accordance with the 2009 MUTCD.
- C. Maintain a minimum of 100' spacing between existing signs and detour signs.

SIGN/DEVICE	SIGN NO.	COLOR	SIZE
	M1-4B	BLK/SIL	36x36
	M3-2	BLK/SIL	24x12
	M4-8	BLK/ORG-DG	24x12
	M4-11	BLK/ORG-DG	60x36

SIGN/DEVICE	SIGN NO.	COLOR	SIZE
	M6-1	BLK/SIL	24x24
	M5-2	BLK/SIL	24x24
	M6-1L	BLK/SIL	24x12
	M6-2	BLK/SIL	24x24
	PORTABLE DYNAMIC MESSAGE SIGN		
	R11-2	BLACK ON WHITE	48X30
	TYPE III		



Place LEFT LANE CLOSED 4 MILES and LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

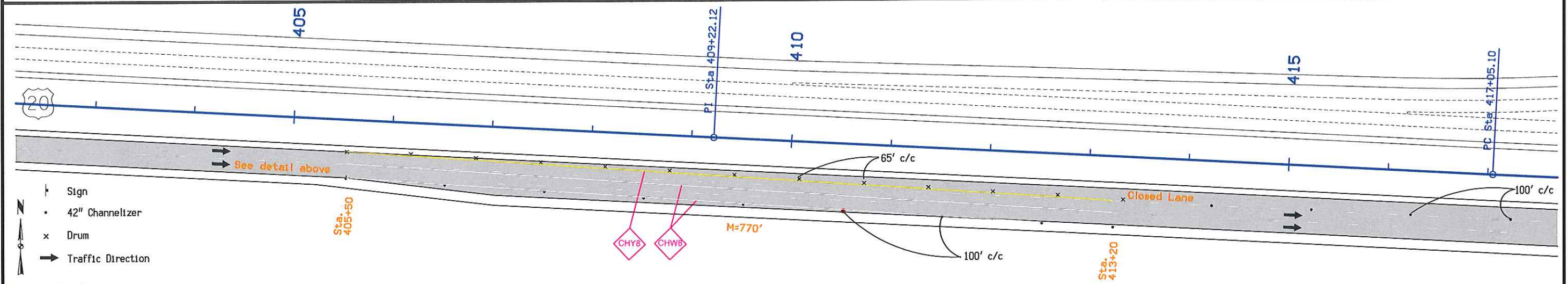
Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

Refer to SI-881 for sign details.

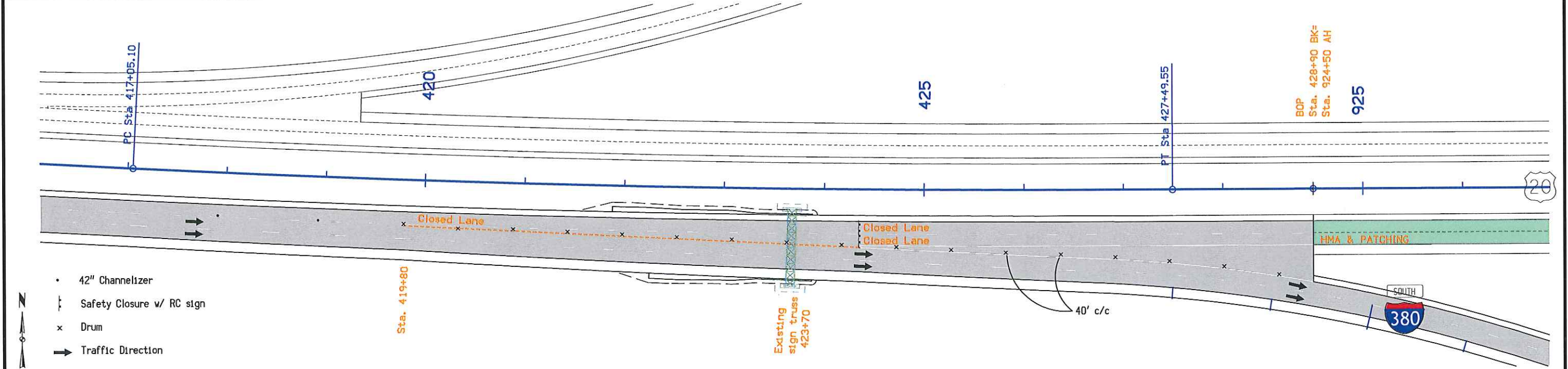
Place SPEED LIMIT 55 signs prior to the lane closure as shown.

When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.



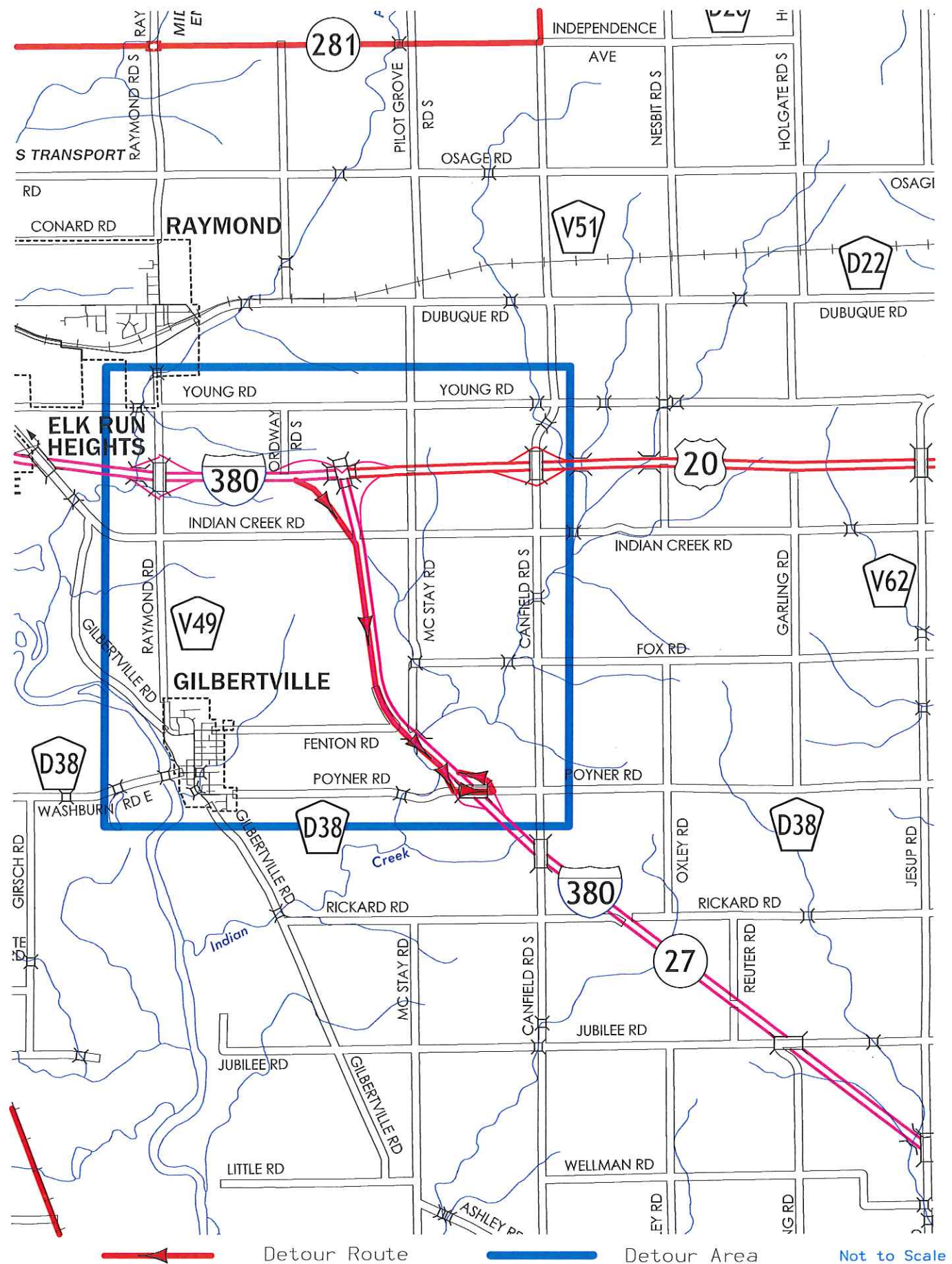
Not to Scale



Not to Scale

Eastbound US 20 Detour Traffic Control

FILE NO.	ENGLISH	DESIGN TEAM	Callahan\Coggins\Meise	BLACK HAWK/BUCHANAN COUNTY	PROJECT NUMBER	NHSX-020-6(68)--3H-07	SHEET NUMBER	J.4	X
7:53:18 AM 5/10/2016 bcoggin pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\0702002013\01strictDesign\07-0206-068_j02.sht					Changed by Addenda				



Notes:

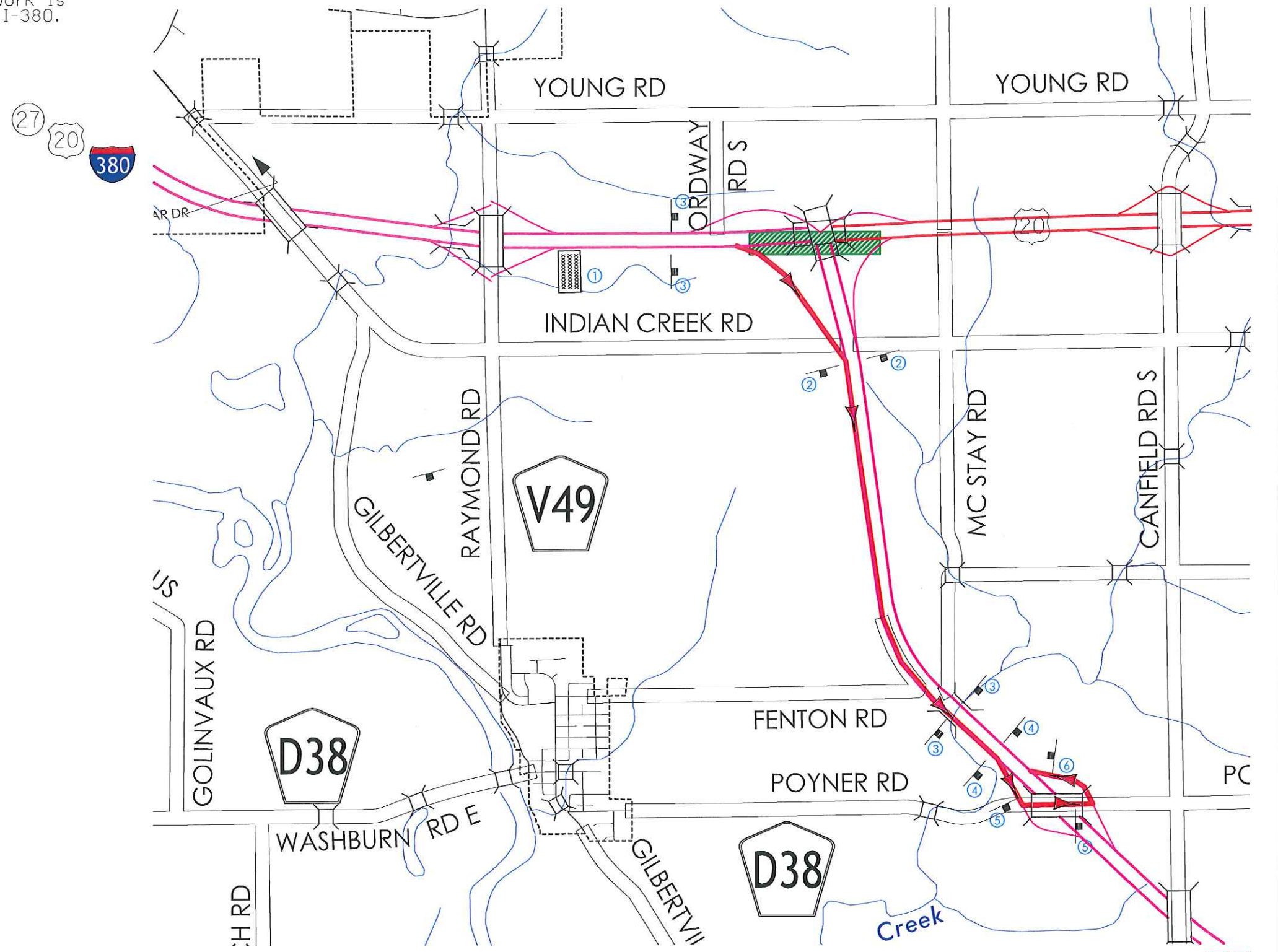
- A. When implementing this detour, remove or cover any conflicting signs.
- B. Sign sizes and installation (standards and guidance) shall be in accordance with the 2009 MUTCD.
- C. Maintain a minimum of 100' spacing between existing signs and detour signs.

SIGN/DEVICE	SIGN NO.	COLOR	SIZE
	M1-4B	BLK/SIL	36x36
	M3-2	BLK/SIL	24x12
	M4-8	BLK/ORG-DG	24x12
	M4-11	BLK/ORG-DG	60x36

SIGN/DEVICE	SIGN NO.	COLOR	SIZE
	M6-1	BLK/SIL	24x24
	M5-2	BLK/SIL	24x24
	M6-1L	BLK/SIL	24x12
	M6-2	BLK/SIL	24x24
	PORTABLE DYNAMIC MESSAGE SIGN		
	R11-2	BLACK ON WHITE	48X30
	TYPE III		

Refer to Staging Notes and Traffic Control Plan, Sheet J.1. Detour shall be implemented while work is being performed on US 20 immediately east of I-380.

Messages for the Dynamic Message Sign will be discussed at the Pre-Construction meeting.



- SIGN
- SAFETY CLOSURE
- WORK AREA
- DETOUR ROUTE

① See notes above

②
DETOUR
EAST
20
↑

③
DETOUR
EAST
20
↗

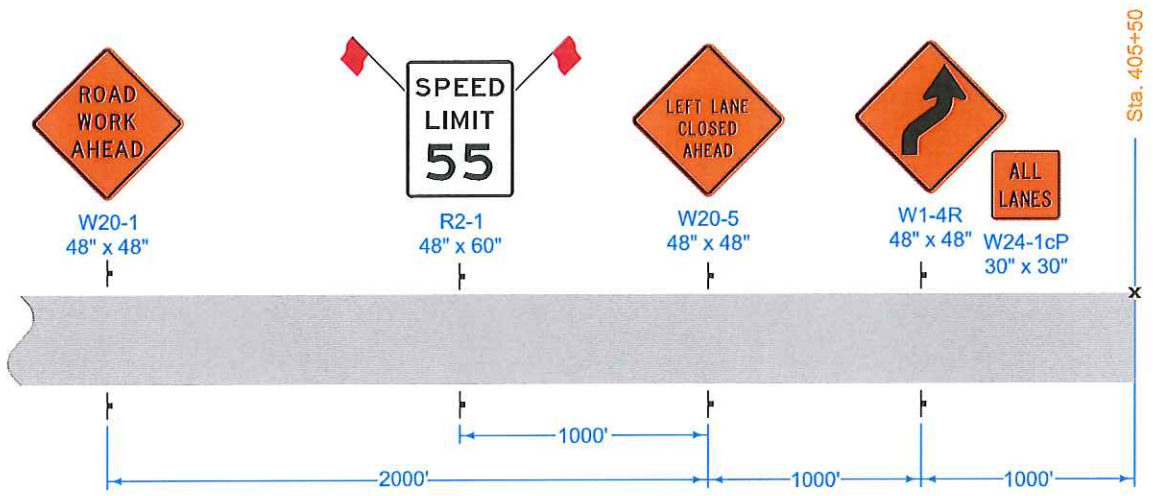
④
DETOUR
EAST
20
↘

⑤
DETOUR
EAST
20
←

⑥
END DETOUR
THANK YOU



Not to Scale
**EB US 20
MAINLINE DETOUR**



Place LEFT LANE CLOSED 4 MILES and LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, as appropriate.

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

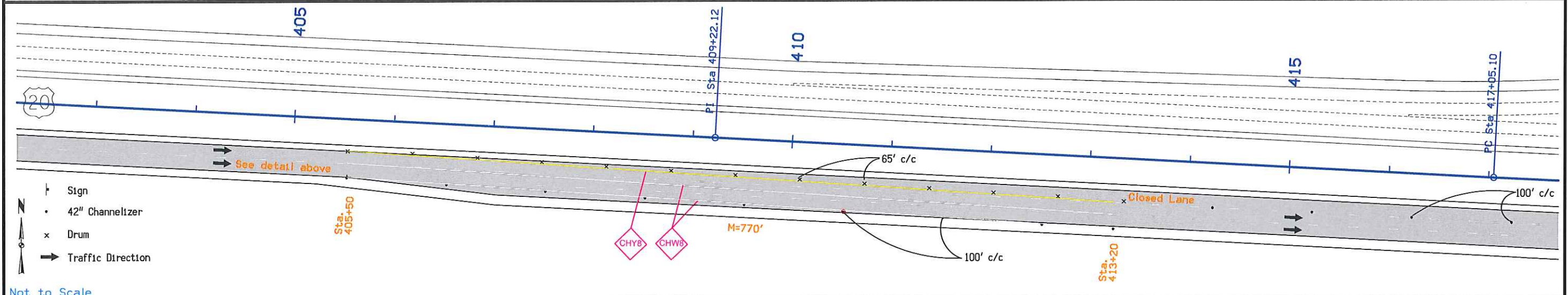
Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

Refer to SI-881 for sign details.

Place SPEED LIMIT 55 signs prior to the lane closure as shown.

When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

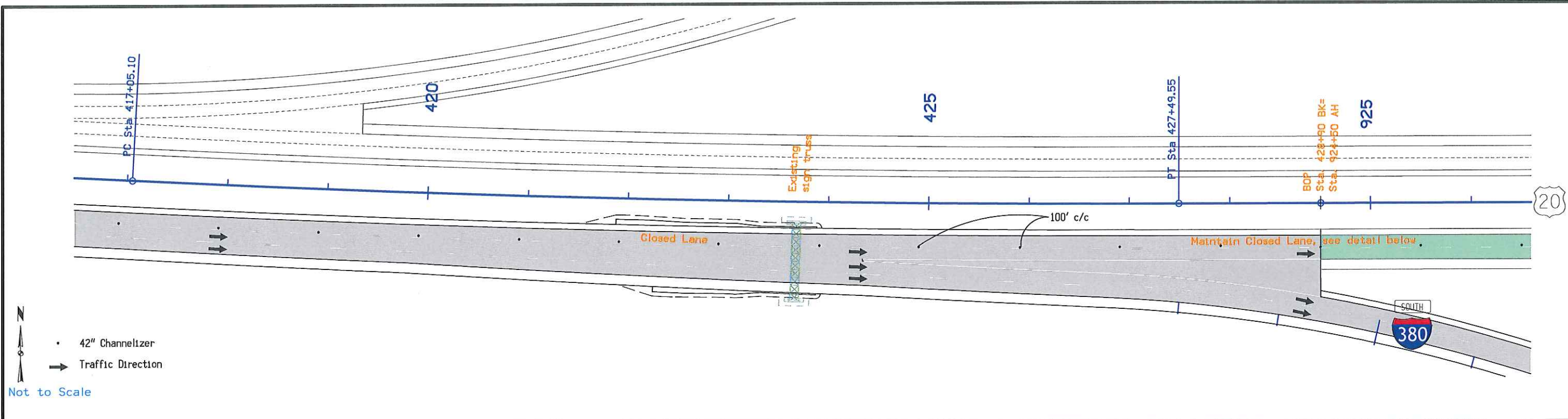


Not to Scale

See Sheet J.8

Eastbound US 20 Inside Lane Closure for Bridge Approach Replacement (Part 1)

FILE NO.	ENGLISH	DESIGN TEAM Callahan\Coggins\Meise	BLACK HAWK/BUCHANAN COUNTY	PROJECT NUMBER NHSX-020-6(68)--3H-07	SHEET NUMBER J.7	X
Changed by Addenda						

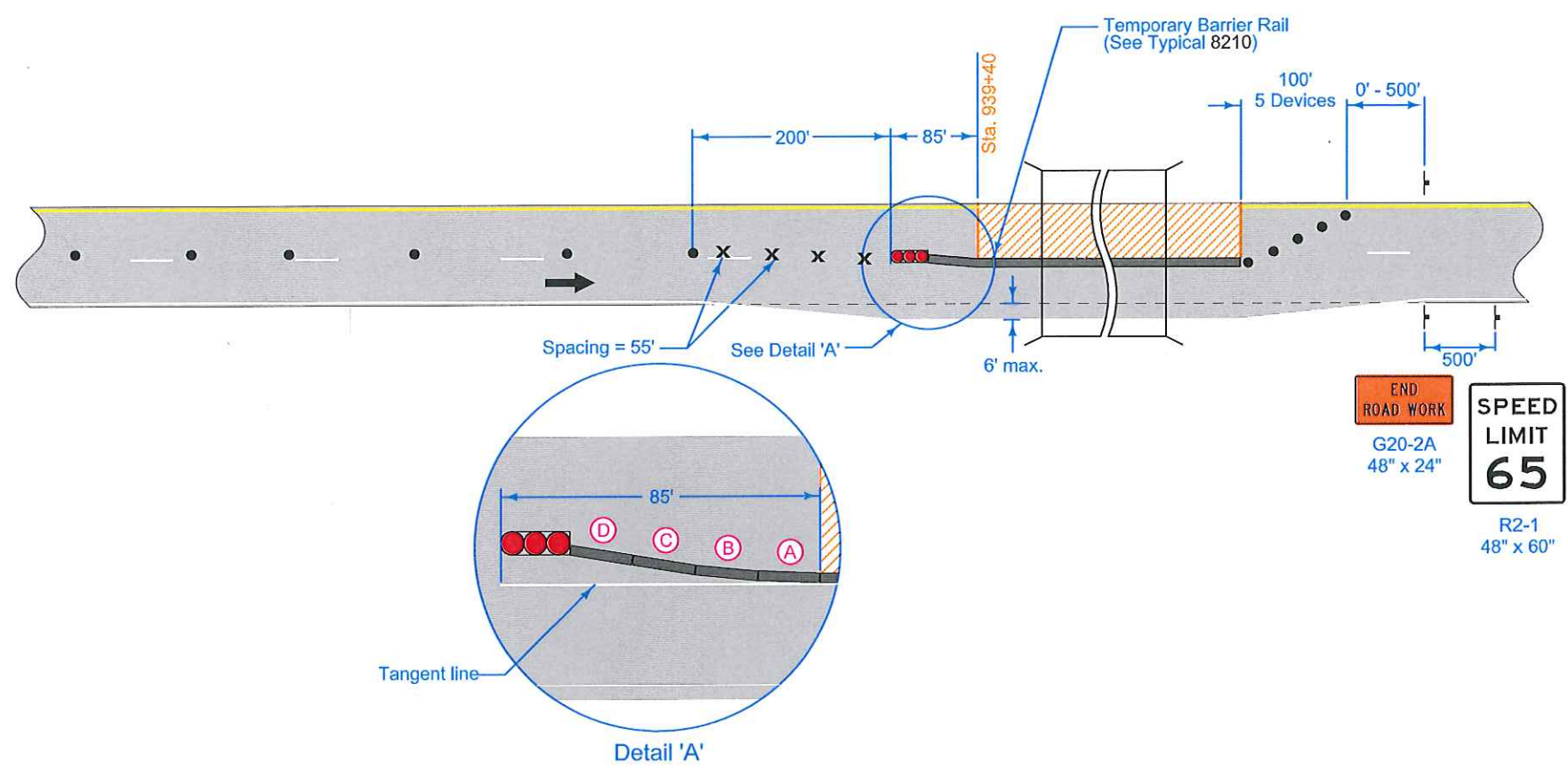


• 42" Channelizer
 → Traffic Direction
 Not to Scale

LEGEND

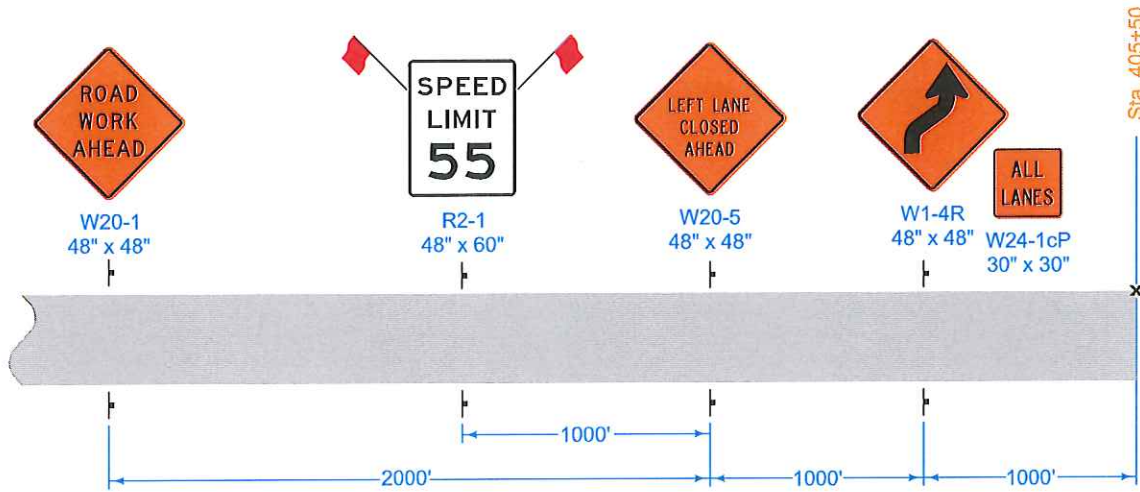
- ✕ Drum
- 42" Channelizer
- ▬▬▬ Temporary Crash Cushion
- ▨ Work Area
- Direction of Traffic

Place Concrete Barrier Markers at 10 ft C/C on bridge rail.



Eastbound US 20 Inside Lane Closure for Bridge Approach Replacement (Part 2)

FILE NO.	ENGLISH	DESIGN TEAM	BLACK HAWK/BUCHANAN COUNTY	PROJECT NUMBER	SHEET NUMBER	X
		Callahan\Coggins\Meise		NHSX-020-6(68)--3H-07	J.8	



Place LEFT LANE CLOSED 4 MILES and LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, as appropriate.

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

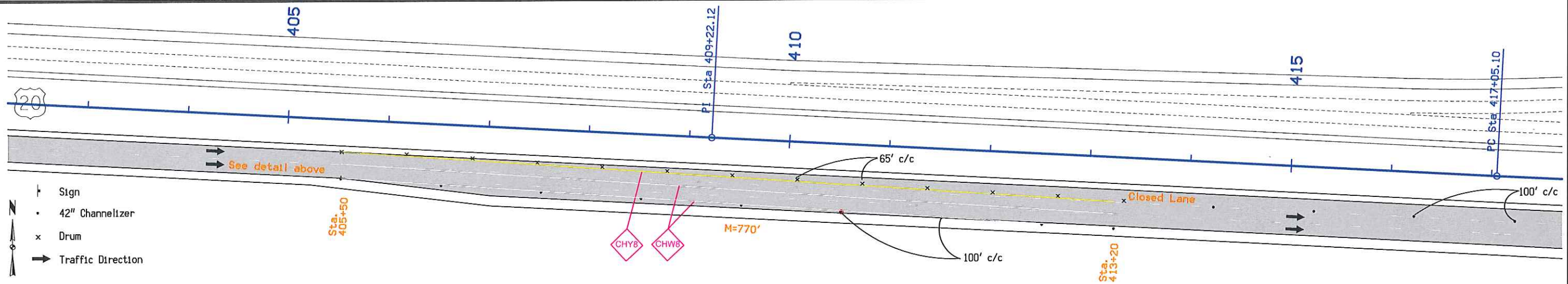
Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

Refer to SI-881 for sign details.

Place SPEED LIMIT 55 signs prior to the lane closure as shown.

When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

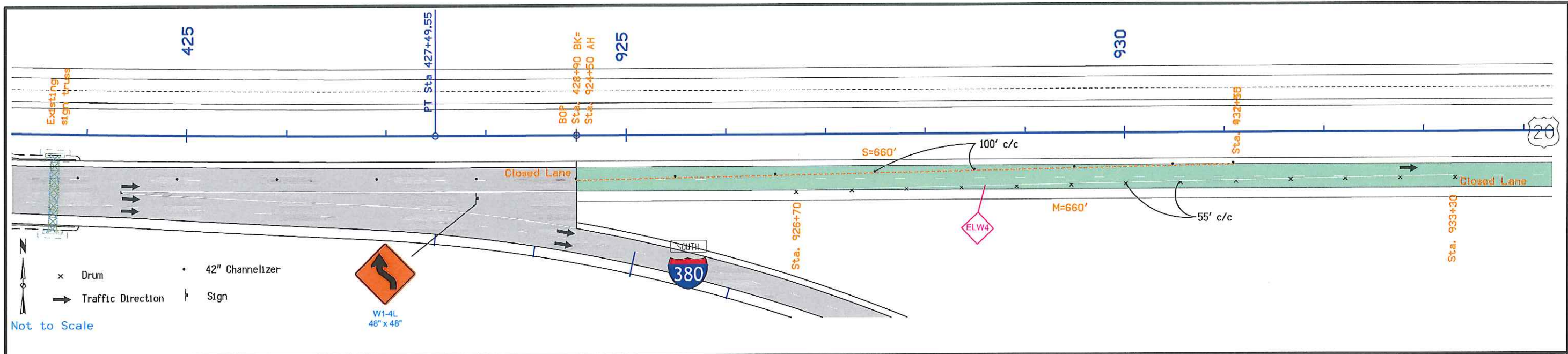


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See Sheet J.10

Eastbound US 20 Outside Lane Closure for Bridge Approach Replacement (Part 1)

FILE NO.	ENGLISH	DESIGN TEAM Callahan\Coggins\Meise	BLACK HAWK/BUCHANAN COUNTY	PROJECT NUMBER NHSX-020-6(68)--3H-07	SHEET NUMBER J.9	X
7:53:22 AM 5/10/2016 bcoggin				Changed by Addenda		

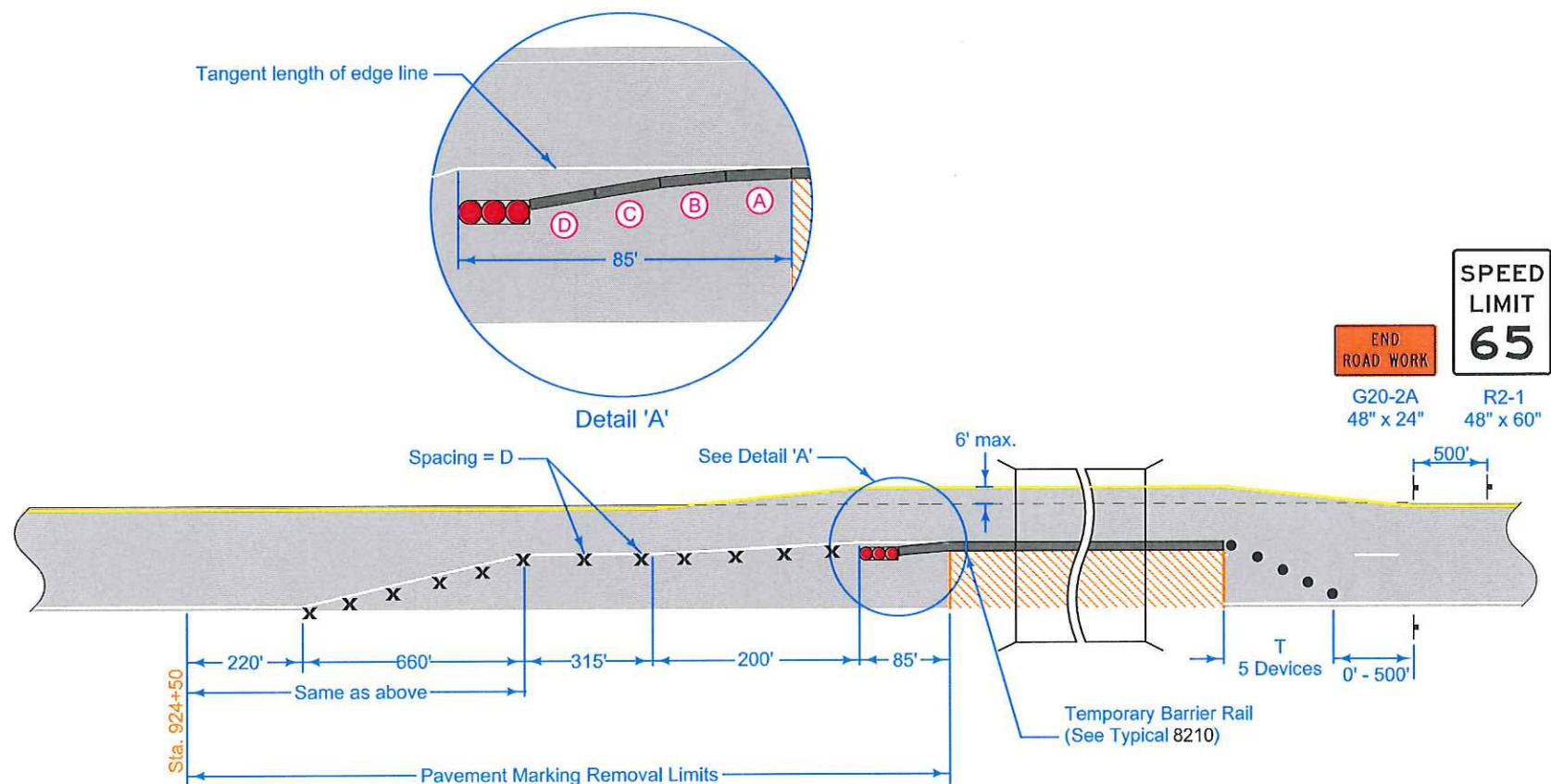


LEGEND

x	Drum
•	42" Channelizer
●●●	Temporary Crash Cushion
▨	Work Area
→	Direction of Traffic

Place Concrete Barrier Markers at 10 ft C/C on bridge rail.

- ① For roadways with a posted speed limit of 60 mph or greater before road work: Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.



Eastbound US 20 Outside Lane Closure for Bridge Approach Replacement (Part 2)

FILE NO.	ENGLISH	DESIGN TEAM Callahan\Coggins\Meise	BLACK HAWK/BUCHANAN COUNTY	PROJECT NUMBER NHSX-020-6(68)--3H-07	SHEET NUMBER J.10	X
7:53:22 AM 5/10/2016	bcoggin	pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\0702002013\DistrictDesign\07-0206-068.j02.sht		Changed by Addenda		