

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR _____ BITUMINOUS SURFACING AND BITUMINOUS RECLAMATION _____

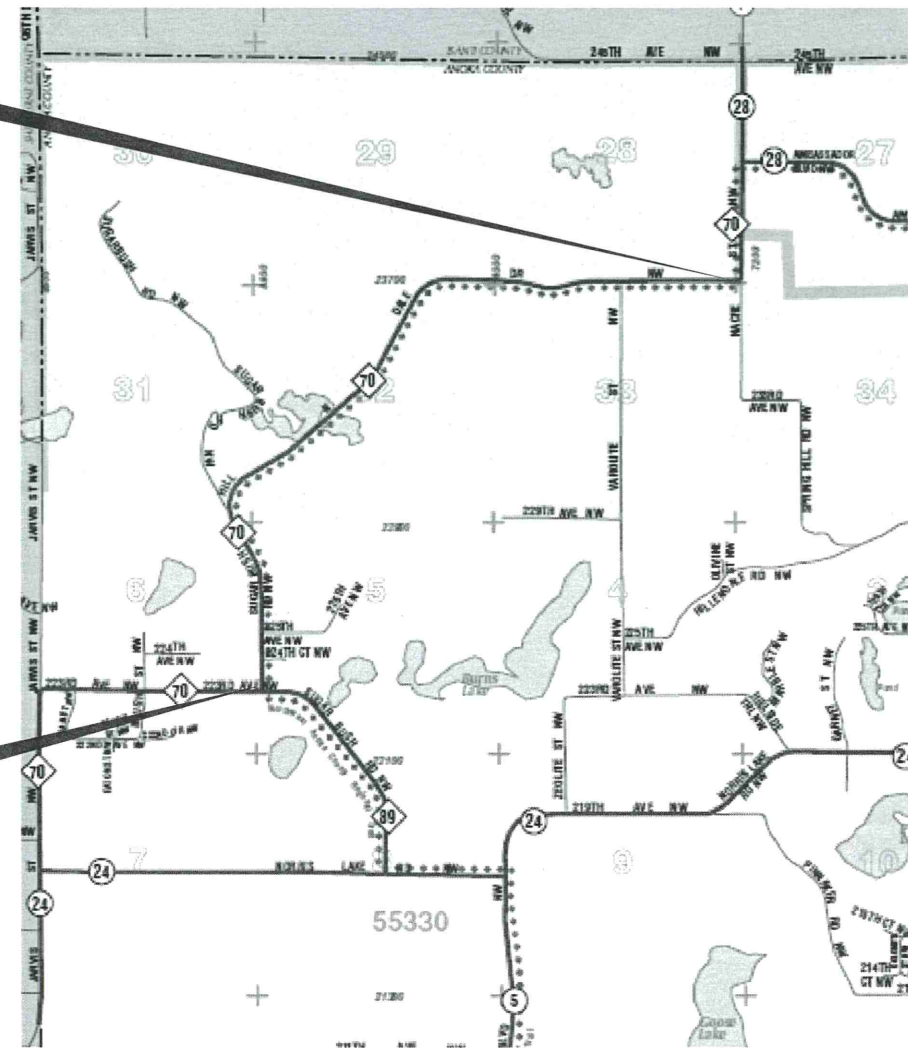
LOCATED ON CR 70 BETWEEN 223 RD AVE AND NACRE ST

CR 70

GROSS LENGTH	<u>17594.00</u>	FEET	<u>3.332</u>	MILES
EXCEPTIONS-LENGTH	<u>0.00</u>	FEET	<u>0.000</u>	MILES
NET LENGTH	<u>17594.00</u>	FEET	<u>3.332</u>	MILES

END CP 23-13-70
CR 70, STA: 187+50.00

BEGIN CP 23-13-70
CR 70, STA: 11+56.00



PROJECT LOCATION



CITY OF ST FRANCIS / CITY OF NOWTHEN
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 32
TOWNSHIP 34 NORTH
RANGE 25 WEST

DESIGN DESIGNATION (CR 70)

ESAL 20	<u>116,719</u>	FUNCTIONAL CLASSIFICATION	<u>MINOR COLLECTOR</u>
R VALUE	<u>70</u>	NO. OF TRAFFIC LANES	<u>2</u> NO. OF PARKING LANES <u>0</u>
ADT (YYYY)	<u>988</u>	DESIGN SPEED	<u>55</u> MPH
PROJ. ADT (YYYY)	<u>988</u>	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCADT (YYYY)	<u>58</u>	HEIGHT OF EYE	<u>3.5'</u> HEIGHT OF OBJECT <u>2.0'</u>
SOIL FACTOR	<u>N/A</u>	DESIGN SPEED NOT ACHIEVED AT:	
<u>10</u> TON DESIGN		STA. _____ TO STA. _____	MPH _____

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE "SUPPLEMENTAL SPECIFICATIONS" DATED SEPTEMBER 2022 SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

THIS PLAN CONTAINS 21 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4-5	DETAILS
6	SUPER ELEVATION TAB
7-13	CONSTRUCTION PLAN
14-21	SIGNING AND STRIPING PLANS

Approved 1-10-23
ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION	
	01/10/2023					10:23:24 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)Base\Proposed\23-13-70 TITLE.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR

SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY KPR DATE 12/06/2022

DESIGN BY KPR DATE 12/06/2022

CHECKED BY CSO DATE 12/06/2022



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 23-13-70

TITLE SHEET
Sheet 1 of 21 Sheets

manrichar

STATEMENT OF ESTIMATED QUANTITIES

Notes	Item Number	ITEM DESCRIPTION	Unit	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
1	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	17
1	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	206
2	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	15
3	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	66
3	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	686
4	2123.510	MOTOR GRADER	HOUR	8
	2130.523	WATER	M GALLON	356
5	2211.509	AGGREGATE BASE CLASS 5	TON	221
	2215.504	FULL DEPTH RECLAMATION	SQ YD	50818
6	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	90
7	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	901
8	2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	32
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2575
9	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3;B)	TON	11
10	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	158
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	11688
	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	15
11	2540.602	MAIL BOX SUPPORT	EACH	14
	2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1
12	2563.601	TRAFFIC CONTROL	LUMP SUM	1
13	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
14	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	1408
15	2582.503	4" SOLID LINE MULTI-COMPONENT GROUND IN	LIN FT	41500
15	2582.503	4" BROKEN LINE MULTI-COMPONENT GROUND IN	LIN FT	1580
15	2582.503	4" DOUBLE SOLID LINE MULTI-COMPONENT GROUND IN	LIN FT	9830

CONSTRUCTION NOTES

1	REFERENCE DETAILS (PAGE 4) FOR REMOVAL DETAILS
2	ITEM FOR CONCRETE DRIVEWAYS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
3	ITEM FOR BITUMINOUS DRIVEWAYS AND STREET APPROACHES. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
4	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
5	GRAVEL BASE FOR CONCRETE AND BITUMINOUS STREET APPROACHES AND DRIVEWAYS.
6	ITEM USED TO HAUL EXCESS RECLAIM FROM TIE-IN POINTS, SUPER ELEVATION AREAS, AND REUSED ON SITE.
7	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
8	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT
9	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
10	STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING
11	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY, CONTRACTOR IS RESPONSIBLE FOR CONTACTING. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
12	ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO, AND BE INSTALLED IN ACCORDANCE WITH, THE MOST CURRENT REVISION OF THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". "DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE, AND STOP HERE ON RED SIGNS SHALL BE INPLACE WHENEVER PERMANENT PAVEMENT MARKINGS ARE NOT PRESENT.
13	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
14	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON MILLED SURFACE AND EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL STRIPING.
15	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING. CANNOT BE INSTALLED SOONER THAN 48 HOURS.

BITUMINOUS STREET SUMMARY

LOCATION	BITUMINOUS		NOTES
	2360 TYPE SP 12.5 WEAR (4,C)		
	TON		
224 th CT	58		[1]
225 th AVE	23		[1]
Sugarbush RD	31		[1]
Varolite RD	46		[1]
PROJECT TOTAL	158		

BITUMINOUS SUMMARY NOTES:

[1] QUANTITY ESTIMATED FOR 1 LIFT

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT

MNDOT STANDARD PLATES

PLATE NO.	DESCRIPTION
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)
8150C	INSTALLATION OF CULVERT MARKERS
9350B	MAILBOX SUPPORT - SWING-AWAY TYPE

BASIS OF PLANNED QUANTITIES

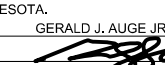
2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD
2211	AGGREGATE BASE CLASS 5	1.8 TONS / CU YD
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN THICKNESS
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS

NO	DATE	BY	CKD	APPR	REVISION
	02/28/2023				10:28:13 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 SEQ.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: 

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022

DESIGN BY: KPR DATE: 12/06/2022

CHECKED BY: CSO DATE: 12/06/2022



**ANOKA COUNTY
HIGHWAY DEPT.**

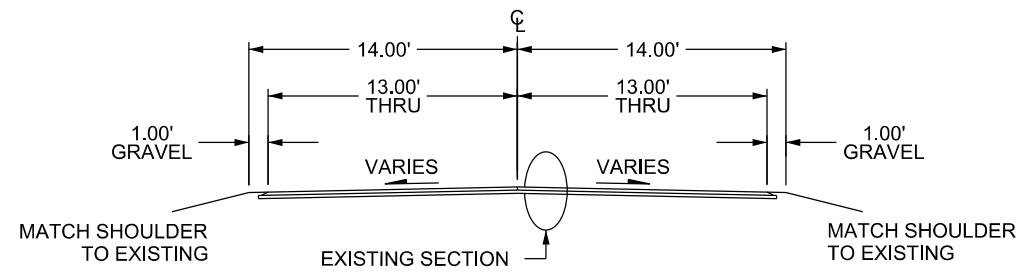
COUNTY PROJECT 23-13-70

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 21 Sheets

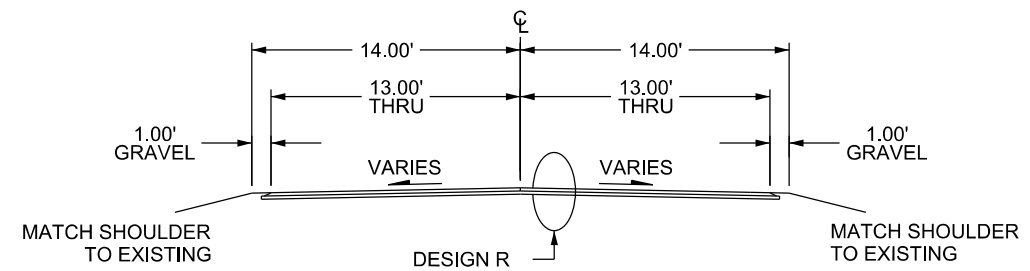
CR 70- Hill and Dale Drive/Sugar Bush Road
(EXISTING) SECTION

11+56.00 - 187+50.00



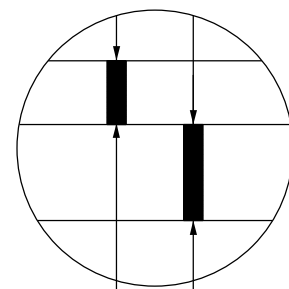
CR 70- Hill and Dale Drive/Sugar Bush Road
(PROPOSED) SECTION

11+56.00 - 187+50.00



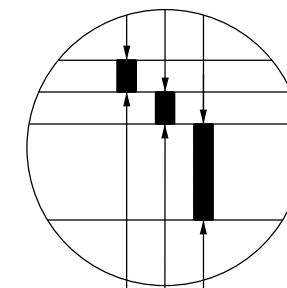
NOTE: 1' BUMP OUT AT LOW END OF SUPER

EXISTING SECTION



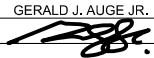
4" - 6" EXISTING BITUMINOUS
EXISTING GRANULAR BASE

**DESIGN R
RECLAIM SECTION**

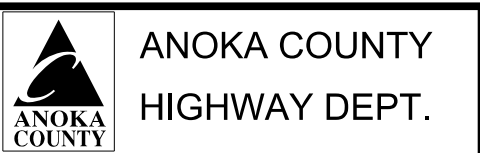


2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
RECLAIMED BITUMINOUS

NO	DATE	BY	CKD	APPR	REVISION	01/10/2023	10:23:31 AM
NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 TYPICALS.dgn							

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: GERALD J. AUGER JR.
SIGNATURE: 
DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY KPR DATE 12/06/2022
DESIGN BY KPR DATE 12/06/2022
CHECKED BY CSO DATE 12/06/2022

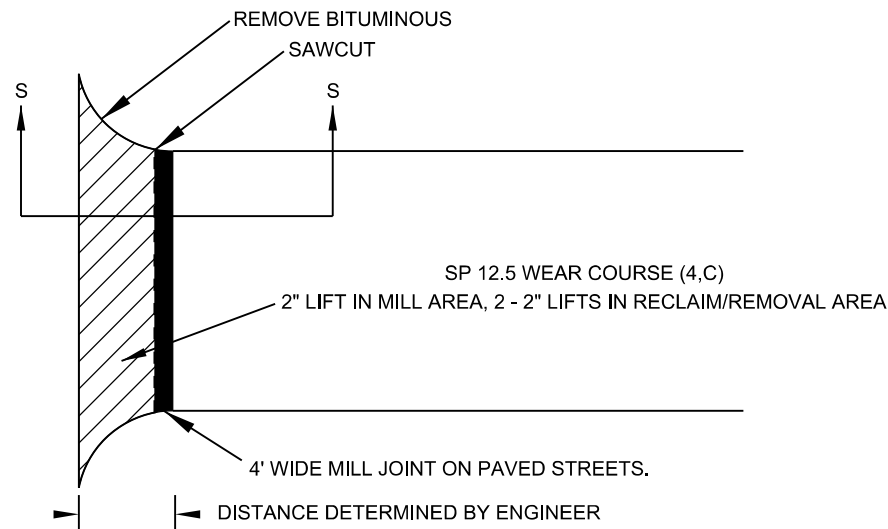


COUNTY PROJECT 23-13-70

TYPICAL SECTIONS
Sheet 3 of 21 Sheets

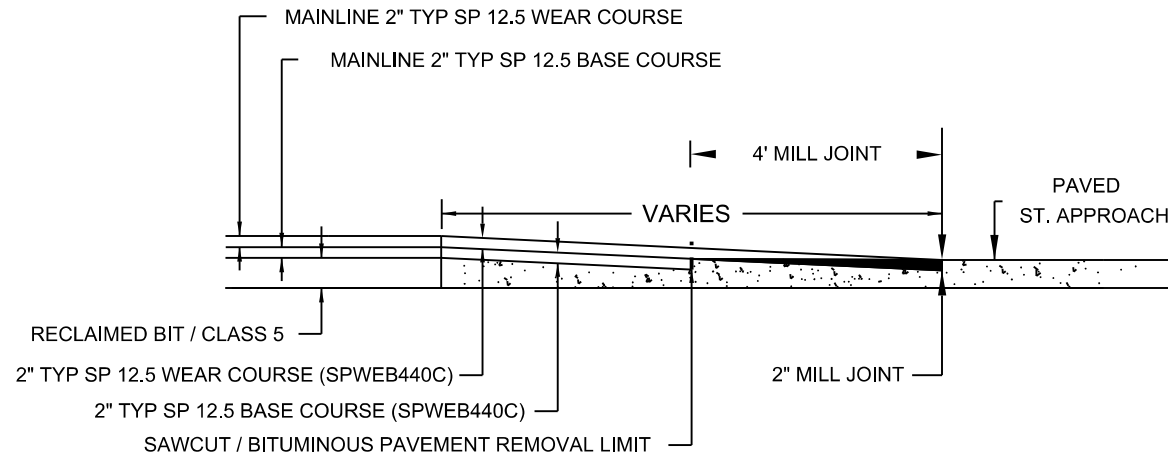
STREET APPROACH DETAIL (RECLAIM)

PLAN VIEW



BITUMINOUS STREET

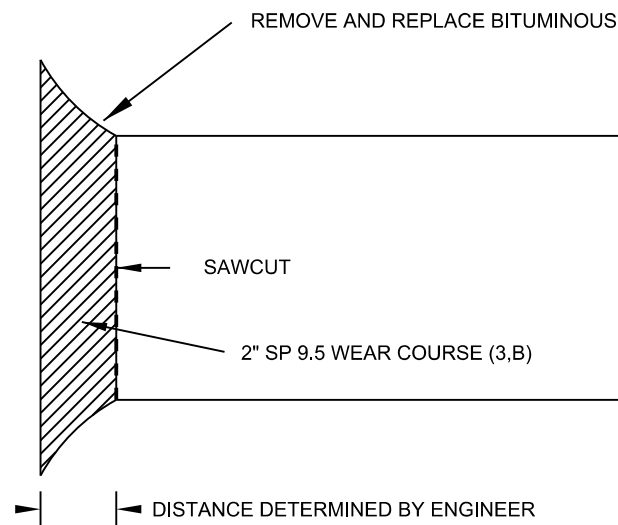
SECTION S - S



RECLAIM AREA - DRIVEWAY DETAIL

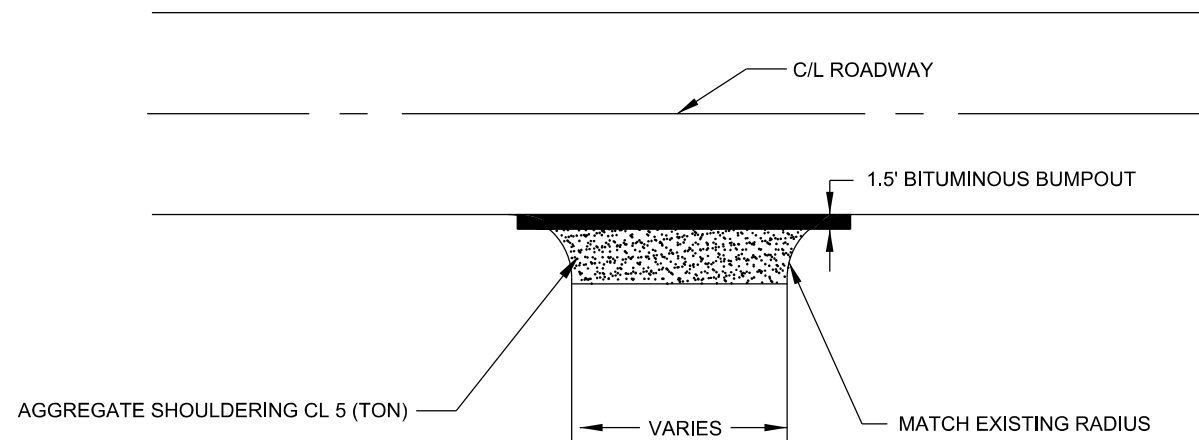
BITUMINOUS

PLAN VIEW



DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE



NO	DATE	BY	CKD	APPR	REVISION	01/10/2023	10:23:32 AM
NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 DETAILS.dgn							

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

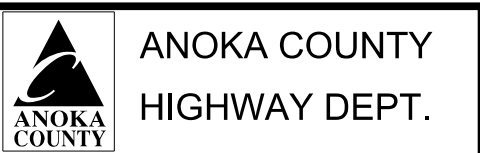
SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY KPR DATE 12/06/2022

DESIGN BY KPR DATE 12/06/2022

CHECKED BY CSO DATE 12/06/2022



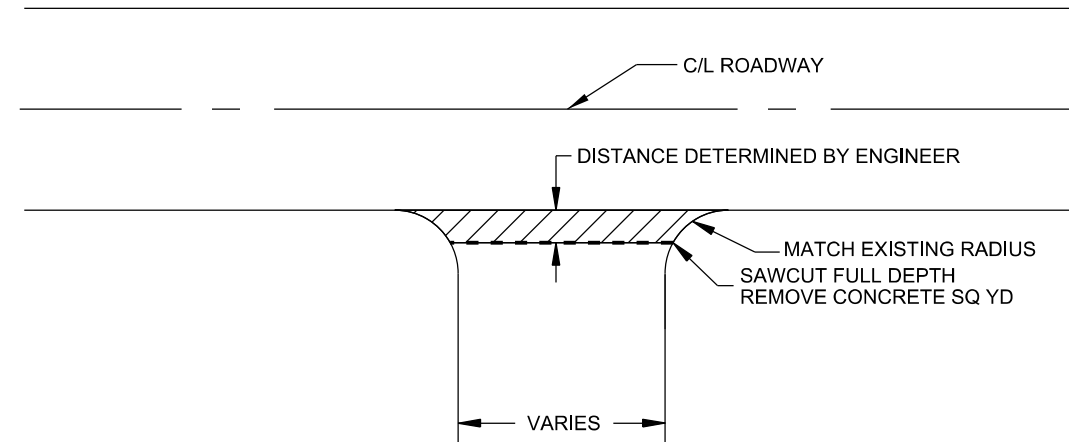
COUNTY PROJECT 23-13-70

DETAILS

Sheet 4 of 21 Sheets

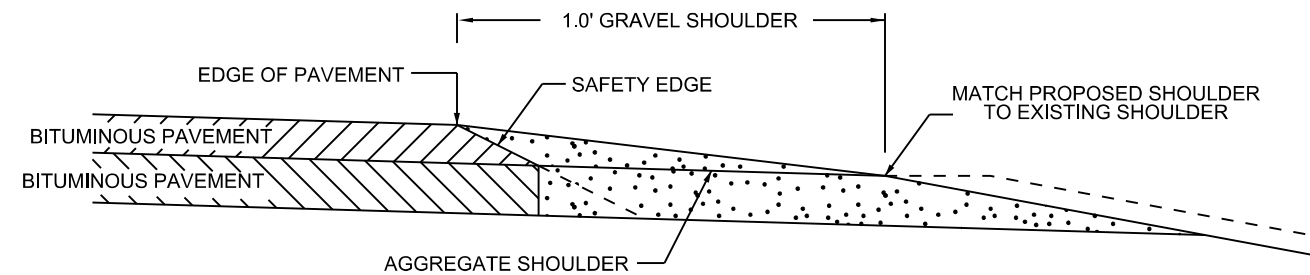
DRIVEWAY DETAIL

CONCRETE DRIVEWAY



SHOULDER DETAIL

BITUMINOUS SAFETY EDGE GRAVEL SHOULDER



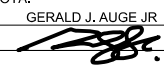
SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5". SEE SPECIAL PROVISIONS .

NO	DATE	BY	CKD	APPR	REVISION		
	01/10/2023					10:23:32 AM	

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 DETAILS.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR
 SIGNATURE: 
 DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022
 DESIGN BY: KPR DATE: 12/06/2022
 CHECKED BY: CSO DATE: 12/06/2022



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 23-13-70

DETAILS

Sheet 5 of 21 Sheets

SUPERELEVATION CORRECTION TAB CURVE 1			
STATION	POINT	LEFT GRADE	RIGHT GRADE
33+05	BEGIN RT TRANS	-2.0%	-2.0%
33+50		-2.0%	-0.5%
34+10	BEGIN LT TRANS	-2.0%	1.4%
34+50		-3.1%	2.7%
35+00		-4.5%	4.3%
35+05	PC	-4.7%	4.5%
35+53	BEGIN FULL SUPER LT/RT	-6.0%	6.0%
36+00		-6.0%	6.0%
36+50		-6.0%	6.0%
37+00		-6.0%	6.0%
37+50		-6.0%	6.0%
38+00		-6.0%	6.0%
38+50		-6.0%	6.0%
39+00		-6.0%	6.0%
39+16	END FULL SUPER LT/RT	-6.0%	6.0%
39+63	PT	-4.7%	4.5%
40+00		-3.7%	3.3%
40+60	END TRANS LT	-2.0%	1.4%
41+00		-2.0%	0.1%
41+64	END TRANS RT	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 3			
STATION	POINT	LEFT GRADE	RIGHT GRADE
66+79	BEGIN RT TRANS	-2.0%	-2.0%
67+00		-2.0%	-1.5%
67+74	BEGIN LT TRANS	-2.0%	0.4%
68+00		-2.7%	1.0%
68+50		-4.1%	2.3%
68+71	PC	-4.7%	2.8%
69+00		-5.5%	3.5%
69+19	BEGIN FULL SUPER LT/RT	-6.0%	4.0%
69+50		-6.0%	4.0%
70+00		-6.0%	4.0%
70+50		-6.0%	4.0%
71+00		-6.0%	4.0%
71+50		-6.0%	4.0%
72+00		-6.0%	4.0%
72+50		-6.0%	4.0%
73+00		-6.0%	4.0%
73+50		-6.0%	4.0%
74+00		-6.0%	4.0%
74+14	END FULL SUPER LT/RT	-6.0%	4.0%
74+62	PT	-4.7%	2.8%
75+00		-3.6%	1.9%
75+58	END TRANS LT	-2.0%	0.4%
76+00		-2.0%	-0.7%
76+54	END TRANS RT	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 5			
STATION	POINT	LEFT GRADE	RIGHT GRADE
111+00		-2.0%	-2.0%
111+50	BEGIN RT TRANS	-2.0%	-2.0%
112+00	BEGIN LT TRANS	-2.0%	-2.6%
112+50		-1.1%	-3.1%
113+00		-0.2%	-3.7%
113+50		0.7%	-4.3%
114+00		1.6%	-4.9%
114+50		2.4%	-5.4%
115+00	BEGIN RT SUPER	3.3%	-6.0%
115+49	PC	4.2%	-6.0%
115+50		4.2%	-6.0%
116+00		5.1%	-6.0%
116+50	BEGIN LT SUPER	6.0%	-6.0%
117+00		6.0%	-6.0%
117+50		6.0%	-6.0%
117+69	PCC	6.0%	-6.0%
118+00		6.0%	-6.0%
118+50		6.0%	-6.0%
119+00		6.0%	-6.0%
119+50		6.0%	-6.0%
120+00		6.0%	-6.0%
120+50		6.0%	-6.0%
121+00		6.0%	-6.0%
121+20	PCC	6.0%	-6.0%
121+50		6.0%	-6.0%
122+00		6.0%	-6.0%
122+50		6.0%	-6.0%
123+00		6.0%	-6.0%
123+50	END LT SUPER	6.0%	-6.0%
124+00		5.2%	-6.0%
124+07	PCC	5.1%	-6.0%
124+50		4.4%	-6.0%
125+00		3.6%	-6.0%
125+50		2.8%	-6.0%
126+00	END RT SUPER	2.0%	-6.0%
126+19	PT	1.7%	-5.6%
126+50		1.2%	-5.0%
127+00		0.4%	-4.0%
127+50		-0.4%	-3.0%
128+00	END RT TRANS	-1.2%	-2.0%
128+50	END LT TRANS	-2.0%	-2.0%
129+00		-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 6,7,8			
STATION	POINT	LEFT GRADE	RIGHT GRADE
134+00		-2.0%	-2.0%
134+50		-2.0%	-2.0%
135+00		-2.0%	-2.0%
135+50		-2.0%	-2.0%
136+00	BEGIN LT & RT TRANS	-2.0%	-2.0%
136+50		-1.1%	-2.7%
137+00		-0.3%	-3.3%
137+50		0.6%	-4.0%
137+74	PC	1.0%	-4.3%
138+00		1.4%	-4.7%
138+50		2.3%	-5.3%
139+00	BEGIN RT SUPER	3.1%	-6.0%
139+50	BEGIN LT SUPER	4.0%	-6.0%
140+00	END LT SUPER	4.0%	-6.0%
140+50		3.1%	-6.0%
141+00		2.3%	-6.0%
141+50		1.4%	-6.0%
141+99	PT	0.6%	-6.0%
142+00	END RT SUPER	0.6%	-6.0%
142+50		-0.3%	-4.7%
143+00		-1.1%	-3.3%
143+50	END/BEGIN LT & RT TRANS	-2.0%	-2.0%
143+87	PC	-2.7%	-1.3%
144+00		-3.0%	-1.0%
144+50		-4.0%	0.0%
145+00		-5.0%	1.0%
145+23	PCC	-5.5%	1.5%
145+50	BEGIN LT SUPER	-6.0%	2.0%
146+00		-6.0%	3.0%
146+50	BEGIN RT SUPER	-6.0%	4.0%
147+00		-6.0%	4.0%
147+50	END RT SUPER	-6.0%	4.0%
148+00		-6.0%	2.6%
148+19	PCC	-6.0%	2.0%
148+50	END LT SUPER	-6.0%	1.1%
149+00		-4.7%	-0.3%
149+50		-3.3%	-1.7%
149+74	PT	-2.7%	-2.4%
150+00	END LT TRANS	-2.0%	-3.1%
150+50		-2.0%	-4.6%
151+00	BEGIN LT TRANS & RT SUPER	-2.0%	-6.0%
151+50		-1.4%	-6.0%
152+00		-0.9%	-6.0%
152+50		-0.3%	-6.0%
152+67	PC	-0.1%	-6.0%
153+00		0.2%	-6.0%
153+50		0.8%	-6.0%
154+00		1.3%	-6.0%
154+50		1.9%	-6.0%
155+00		2.4%	-6.0%
155+50	BEGIN LT SUPER	3.0%	-6.0%
156+00	END LT SUPER	3.0%	-6.0%
156+18	PCC	2.6%	-6.0%
156+50		2.0%	-6.0%
157+00		1.0%	-6.0%
157+50		0.0%	-6.0%
158+00		-1.0%	-6.0%
158+50	END LT TRANS	-2.0%	-6.0%
158+55	PT	-2.0%	-6.0%
159+00	END RT SUPER	-2.0%	-6.0%
159+50		-2.0%	-5.0%
160+00		-2.0%	-4.0%
160+50		-2.0%	-3.0%
161+00	END RT TRANS	-2.0%	-2.0%
161+50		-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 2			
STATION	POINT	LEFT GRADE	RIGHT GRADE
47+49	BEGIN TRANS LT	-2.0%	-2.0%
48+00		-0.3%	-2.0%
48+45	BEGIN TRANS RT	1.2%	-2.0%
49+00		3.0%	-3.5%
49+41	PC	4.4%	-4.7%
49+50		4.7%	-4.9%
49+89	BEGIN FULL SUPER LT/RT	6.0%	-6.0%
50+00		6.0%	-6.0%
50+50		6.0%	-6.0%
51+00		6.0%	-6.0%
51+50		6.0%	-6.0%
52+00		6.0%	-6.0%
52+50		6.0%	-6.0%
53+00		6.0%	-6.0%
53+50		6.0%	-6.0%
54+00		6.0%	-6.0%
54+50		6.0%	-6.0%
55+00		6.0%	-6.0%
55+50		6.0%	-6.0%
56+00		6.0%	-6.0%
56+50		6.0%	-6.0%
57+00		6.0%	-6.0%
57+50		6.0%	-6.0%
58+00		6.0%	-6.0%
58+50		6.0%	-6.0%
59+00		6.0%	-6.0%
59+50		6.0%	-6.0%
60+00		6.0%	-6.0%
60+52	END FULL SUPER LT/RT	6.0%	-6.0%
60+99	PT	4.4%	-4.7%
61+50		2.7%	-3.3%
61+96	END TRANS RT	1.2%	-2.0%
62+50		-0.6%	-2.0%
62+92	END TRANS LT	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 4			
STATION	POINT	LEFT GRADE	RIGHT GRADE
88+50		-2.0%	-2.0%
89+00	BEGIN LT TRANS	-2.0%	-2.0%
89+50		-2.5%	-2.0%
90+00	BEGIN RT TRANS	-3.0%	-2.0%
90+50		-3.5%	-1.1%
91+00		-4.0%	-0.3%
91+50		-4.5%	0.6%
92+00		-5.0%	1.4%
92+50		-5.5%	2.3%
92+67	PC	-5.7%	2.6%
93+00	FULL SUPER LT	-6.0%	3.1%
93+50	FULL SUPER RT	-6.0%	4.0%
94+00		-6.0%	4.0%
94+50		-6.0%	4.0%
95+00		-6.0%	4.0%
95+50		-6.0%	4.0%
95+88	PCC	-6.0%	4.0%
96+00		-6.0%	4.0%
96+50		-6.0%	4.0%
97+00	END RT SUPER	-6.0%	4.0%
97+50		-6.0%	3.0%
98+00	END LT SUPER	-6.0%	2.0%
98+50		-5.0%	1.0%
98+59	PT	-4.8%	0.8%
99+00		-4.0%	0.0%
99+50		-3.0%	-1.0%
100+00	END LT & RT SUPER	-2.0%	-2.0%
100+50		-2.0%	-2.0%
101+00		-2.0%	-2.0%

NO	DATE	BY	CKD	APPR	REVISION		
						01/10/2023	10:23:32 AM
NAME: P:\23-01-00\CR_70_ (223RD-NACRE)\Base\Proposed\23-13-70 DETAILS.dgn							

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGÉ JR.

SIGNATURE: _____

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY KPR DATE 12/06/2022

DESIGN BY KPR DATE 12/06/2022

CHECKED BY CSO DATE 12/06/2022

**ANOKA COUNTY
HIGHWAY DEPT.**

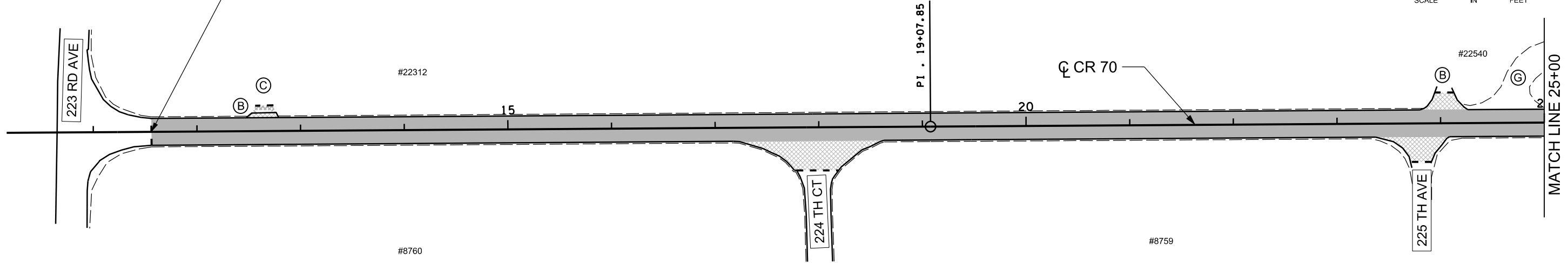
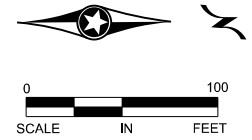
COUNTY PROJECT 23-13-70

SUPER ELEVATION TAB

Sheet 6 of 21 Sheets

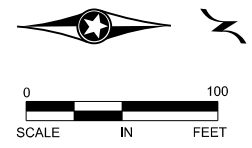
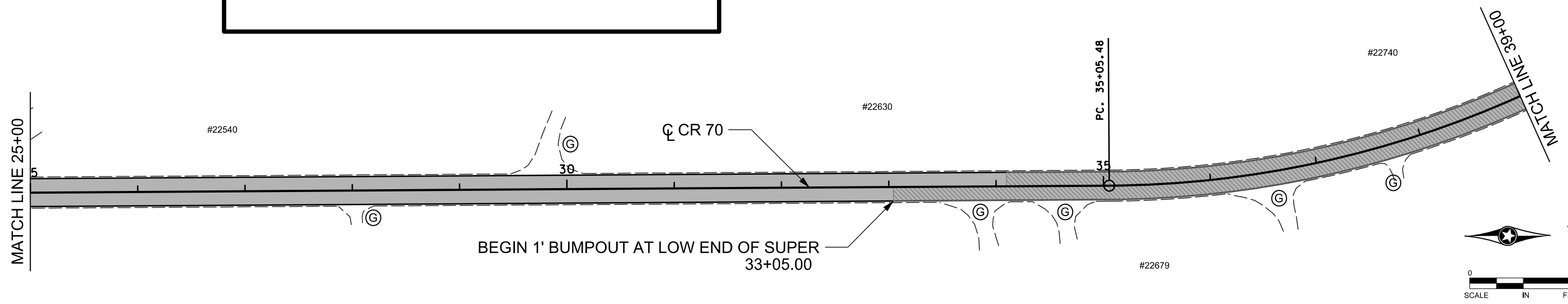
SPHoots

BEGIN CONSTRUCTION
CP: 23-13-70
STATION: 11+56.00



LEGEND

(C) CONCRETE	(B) BITUMINOUS	(G) GRAVEL	--- SAWCUT	█ MAINLINE (RECLAIM)	▨ REMOVE AND REPLACE BITUMINOUS PAVEMENT	▩ SUPER TRANSITION AREA	— R / W
--------------	----------------	------------	------------	----------------------	--	-------------------------	---------



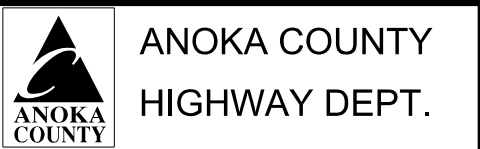
NO	DATE	BY	CKD	APPR	REVISION	
	01/10/2023					10:23:37 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP1.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

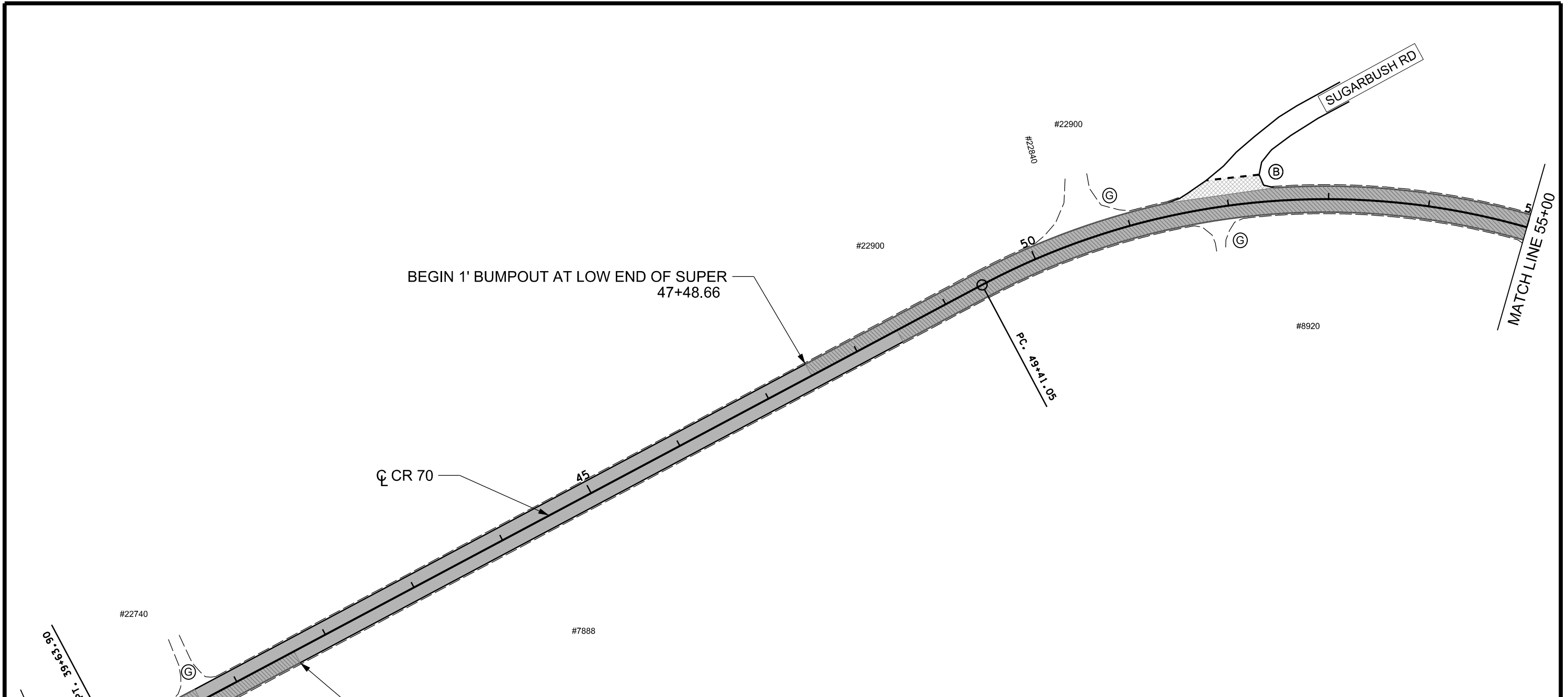
PRINT NAME: GERALD J. AUGER JR.
SIGNATURE: *[Signature]*
DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022
DESIGN BY: KPR DATE: 12/06/2022
CHECKED BY: CSO DATE: 12/06/2022



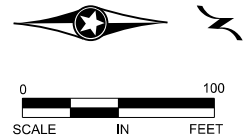
COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN
STA 11+56 TO 39+00
Sheet 7 of 21 Sheets



LEGEND

(B)	BITUMINOUS		MAINLINE (RECLAIM)
(G)	GRAVEL		REMOVE AND REPLACE BITUMINOUS PAVEMENT
⊕	CORE LOCATION		SUPER TRANSITION AREA
- - -	SAWCUT	----- R/W -----	



NO	DATE	BY	CKD	APPR	REVISION	01/10/2023	10:23:38 AM
NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP2.dgn							

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.
 SIGNATURE:
 DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY KPR DATE 12/06/2022
 DESIGN BY KPR DATE 12/06/2022
 CHECKED BY CSO DATE 12/06/2022

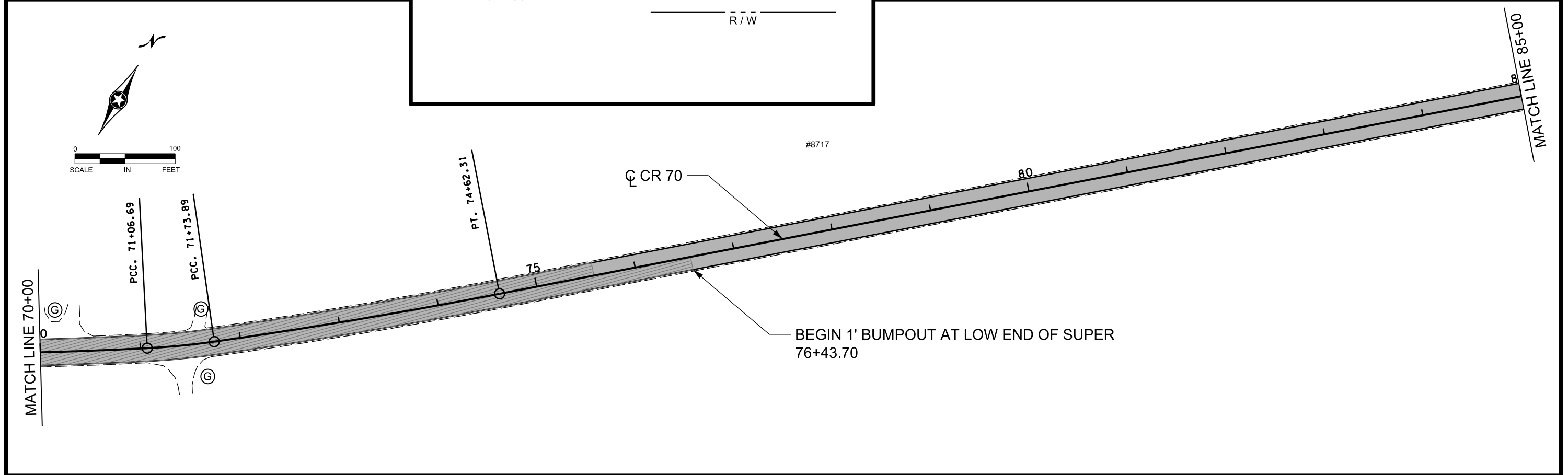
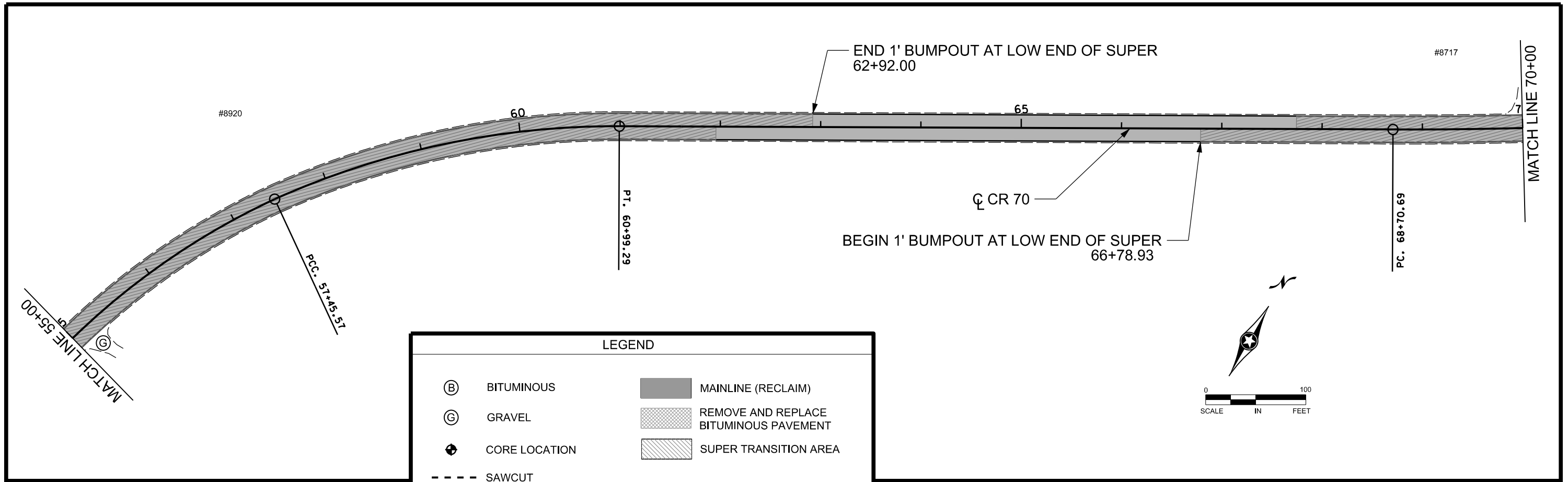
**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN

STA 39+00 TO 55+00

Sheet 8 of 21 Sheets



LEGEND

ⓑ	BITUMINOUS		MAINLINE (RECLAIM)
Ⓒ	GRAVEL		REMOVE AND REPLACE BITUMINOUS PAVEMENT
⊕	CORE LOCATION		SUPER TRANSITION AREA
- - -	SAWCUT		
			R / W

NO	DATE	BY	CKD	APPR	REVISION		
	01/10/2023					10:23:39 AM	

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP3.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022

DESIGN BY: KPR DATE: 12/06/2022

CHECKED BY: CSO DATE: 12/06/2022

ANOKA COUNTY
HIGHWAY DEPT.

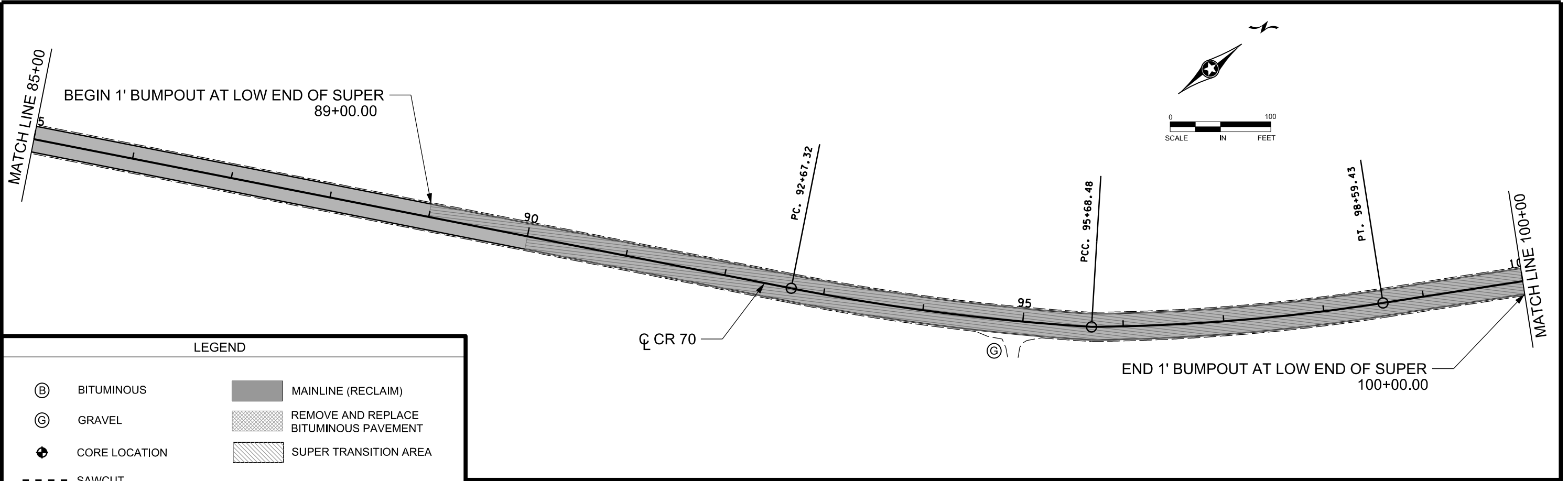
COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN

STA 55+00 TO 85+00

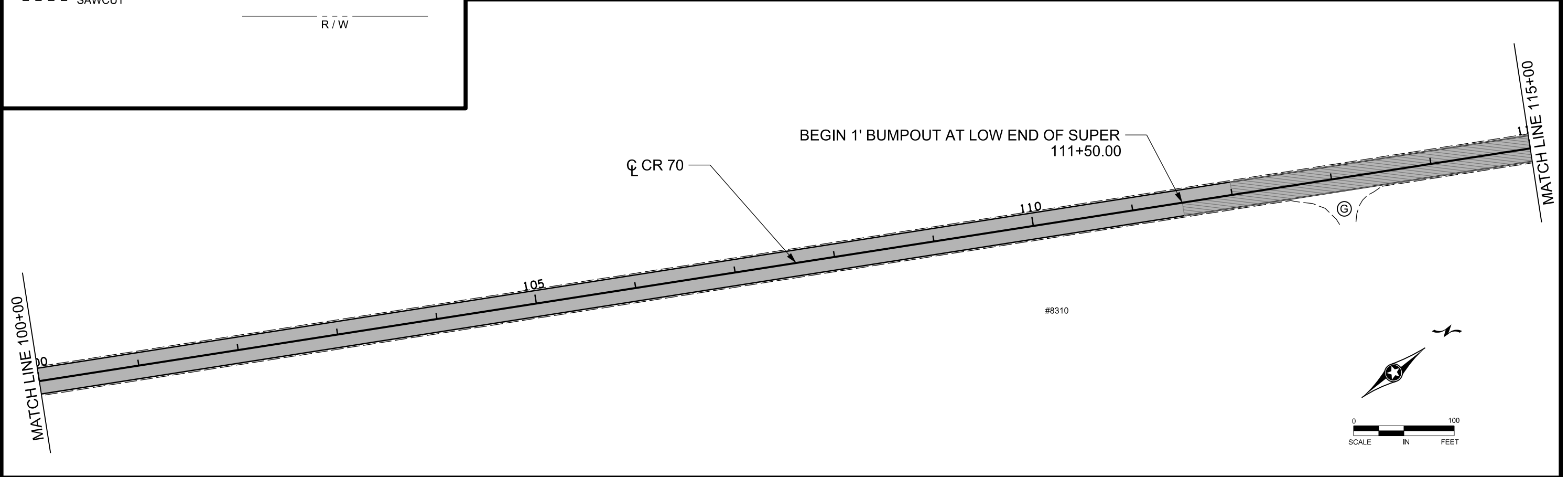
Sheet 9 of 21 Sheets

SPH005



LEGEND

(B)	BITUMINOUS		MAINLINE (RECLAIM)
(G)	GRAVEL		REMOVE AND REPLACE BITUMINOUS PAVEMENT
	CORE LOCATION		SUPER TRANSITION AREA
- - -	SAWCUT		
			R / W



NO	DATE	BY	CKD	APPR	REVISION	
	01/10/2023					10:23:40 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP4.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022

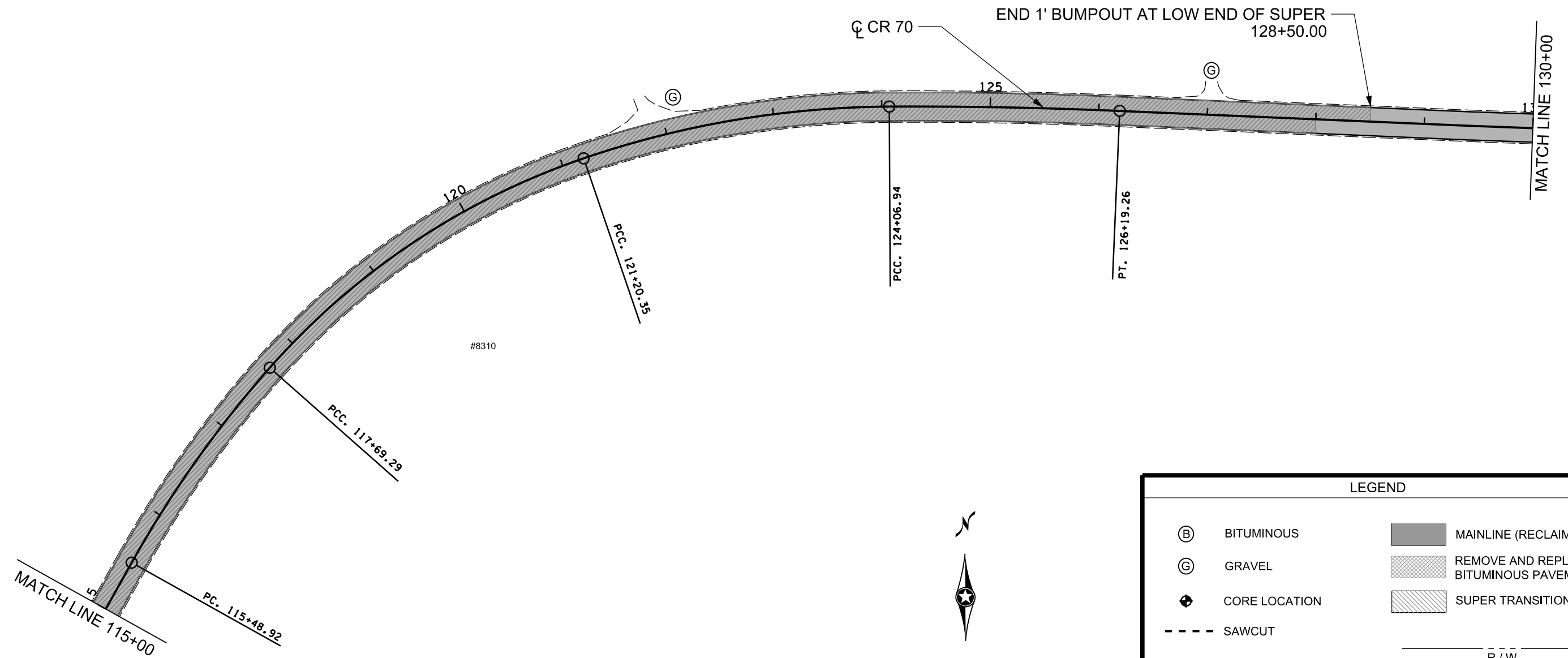
DESIGN BY: KPR DATE: 12/06/2022

CHECKED BY: CSO DATE: 12/06/2022

ANOKA COUNTY HIGHWAY DEPT.

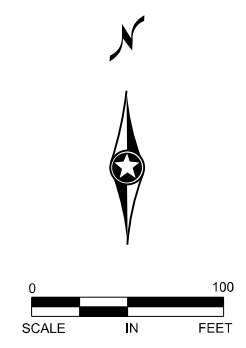
COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN
 STA 85+00 TO 115+00
 Sheet 10 of 21 Sheets



LEGEND

(B)	BITUMINOUS		MAINLINE (RECLAIM)
(G)	GRAVEL		REMOVE AND REPLACE BITUMINOUS PAVEMENT
⊕	CORE LOCATION		SUPER TRANSITION AREA
- - -	SAWCUT		
			R/W



NO	DATE	BY	CKD	APPR	REVISION	
	01/10/2023					10:23:40 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP5.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022

DESIGN BY: KPR DATE: 12/06/2022

CHECKED BY: CSO DATE: 12/06/2022

**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN

STA 115+00 TO 130+00

Sheet 11 of 21 Sheets

MATCH LINE 130+00

☉ CR 70

BEGIN 1' BUMPOUT AT LOW END OF SUPER
136+00.00

135

140

PC. 137+73.66

PT. 141+98.62

PC. 143+86.52
MATCH LINE 144+00

LEGEND

Ⓟ BITUMINOUS

MAINLINE (RECLAIM)

Ⓞ GRAVEL

REMOVE AND REPLACE
BITUMINOUS PAVEMENT

⊕ CORE LOCATION

SUPER TRANSITION AREA

--- SAWCUT

R / W



MATCH LINE 144+00

145

PCC. 145+23.21

PCC. 148+18.91

PT. 149+74.41

150

☉ CR 70

155

PC. 152+67.33

PCC. 156+17.96

PT. 158+55.48

MATCH LINE 159+00

#7758

#1820

NO	DATE	BY	CKD	APPR	REVISION	01/10/2023	10:23:41 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP6.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022

DESIGN BY: KPR DATE: 12/06/2022

CHECKED BY: CSO DATE: 12/06/2022



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN

STA 130+00 TO 159+00

Sheet 12 of 21 Sheets

SPhotos

MATCH LINE 159+00

MATCH LINE 174+00

BEGIN 1' BUMPOUT AT LOW END OF SUPER
161+00.00

CR 70

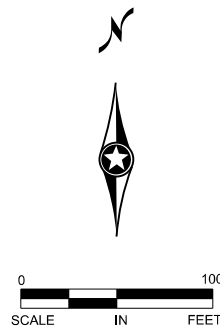
160

165

170

VAROLITE ST

#7508



LEGEND

- (B) BITUMINOUS
- (G) GRAVEL
- ⊕ CORE LOCATION
- - - SAWCUT
- █ MAINLINE (RECLAIM)
- ▨ REMOVE AND REPLACE BITUMINOUS PAVEMENT
- ▩ SUPER TRANSITION AREA
- R / W

MATCH LINE 174+00

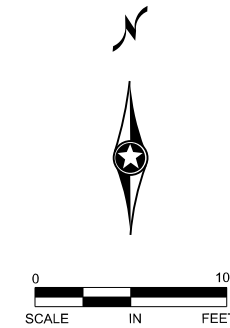
POT. 188+81.60

CR 70

175

180

185



NACRE ST

#7382

#23640

END CONSTRUCTION
CP: 23-13-70
STATION: 187+50.00

NO	DATE	BY	CKD	APPR	REVISION	
	01/10/2023					10:23:42 AM

NAME: P:\23-01-00\CR_70_(223RD-NACRE)\Base\Proposed\23-13-70 CP7.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE:

DATE: 12-16-2022 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/06/2022

DESIGN BY: KPR DATE: 12/06/2022

CHECKED BY: CSO DATE: 12/06/2022

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 23-13-70

CONSTRUCTION PLAN
STA 159+00 TO 187+50
Sheet 13 of 21 Sheets

**PERMANENT PAVEMENT MARKING PLAN
NOTES AND GUIDELINES**

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. ANOKA COUNTY HIGHWAY DEPARTMENT WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

MULTI COMPONENT (MULTI COMP):

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENT AND/OR LAITANCE ON LOW SPEED (SPEED LIMIT 35 MPH OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS. SANDBLAST CLEANING SHALL BE USED FOR ALL MULTI COMP PAVEMENT MARKINGS.

THE MULTI COMP MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE MULTI COMP LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

A MULTI COMP LINE SHALL BE APPLIED WITH A MINIMUM THICKNESS OF 20 MILS (WET) AND 4" WIDE. GLASS BEADS SHALL BE APPLIED AT A MINIMUM RATE OF 25LBS POUNDS PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES FAHRENHEIT OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PREFORMED THERMOPLASTIC:

THE PREFORMED THERMOPLASTIC MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS ON CLEAN AND DRY SURFACES. SEE SPECIAL PROVISIONS FOR PREFORMED THERMOPLASTIC MARKING SPECIFICATIONS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50 DEGREES FARHENHEIT OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILD OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

PAVEMENT MARKING TABULATION			
ITEM	UNIT	TOTAL QUANTITY	NOTES
4" SOLID LINE MULTICOMP GROUND IN (WHITE)	LIN FT	35370	
4" SOLID LINE MULTICOMP GROUND IN (YELLOW)	LIN FT	6130	
4" BROKEN LINE MULTICOMP GROUND IN (YELLOW)	LIN FT	1580	1
4" SOLID DBL LINE MULTICOMP GROUND IN (YELLOW)	LIN FT	9830	

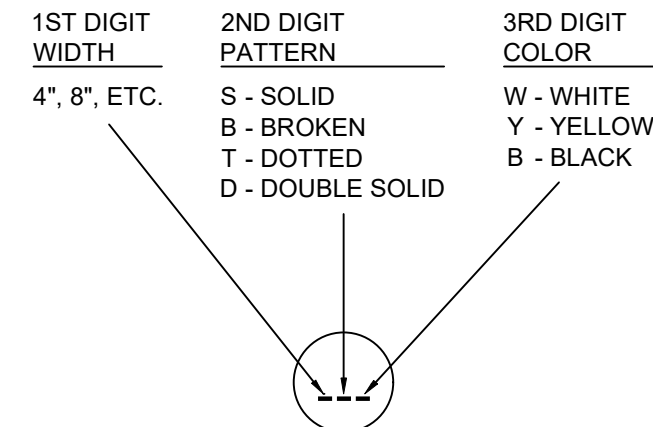
1 10' STRIPE, 40' GAP

SYMBOLS & MATERIALS LEGEND

- CROSSWALK BLOCK WHITE - POLY PREFORM
- ↩ PAVEMENT MESSAGE (LEFT ARROW) POLY PREFORM

STRIPING KEY

- CIRCLE - MULTI COMP GROUND IN
- △ TRIANGLE - PAINT
- SQUARE - POLY PREFORM THERMOPLASTIC
- ⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



EXAMPLE: (4SW) = SOLID LINE WHITE - MULTI COMP

- — BROKEN LINE - 50' CYCLE (10' LINE, 40' GAP)
- - - - DOTTED LINE - 15' CYCLE (3' LINE, 12' GAP) UNLESS SHOWN OTHERWISE IN THE PLAN

1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(223rd-Nacre)\Base\Traffic\Perm Pvmr Mrkg Guide Notes 2021.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23
 SIGNATURE: *[Signature]* LICENSE NO. 57216

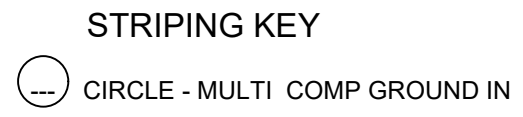
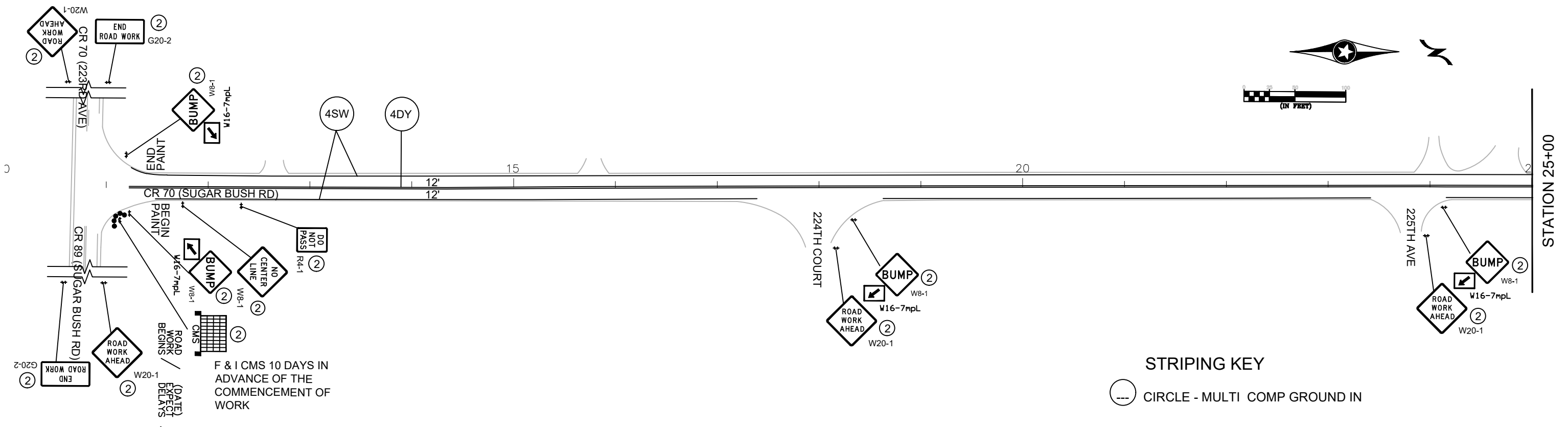
DRAWN BY: TMV DATE: 09/26/22
 DESIGN BY: TMV DATE: 09/26/22
 CHECKED BY: JRB DATE: 10/24/22



**ANOKA COUNTY
HIGHWAY DEPT.**

CP 23-13-70

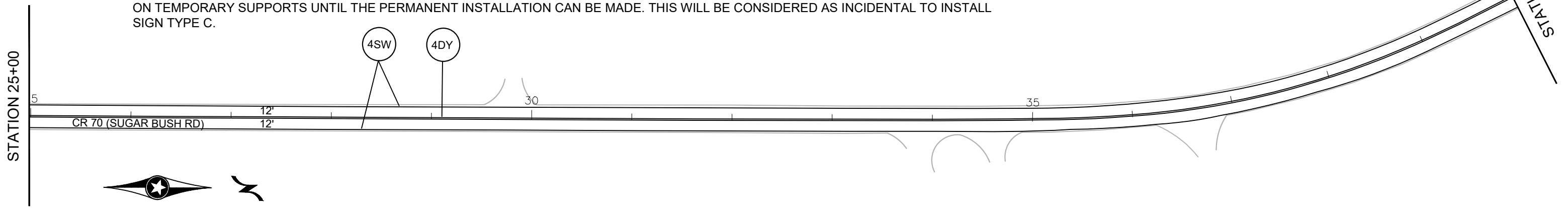
PERMANENT PAVEMENT MARKING PLAN DETAILS
 SHEET 14A OF 21 SHEETS



NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

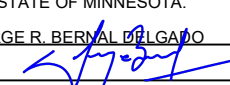
SIGN NOTES:
 ② TEMPORARY TRAFFIC CONTROL SIGN



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Striping Perm Striping.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23

SIGNATURE:  LICENSE NO. 57216

DRAWN BY TMV DATE 09/23/22

DESIGN BY TMV DATE 09/23/22

CHECKED BY JRB DATE 10/24/22



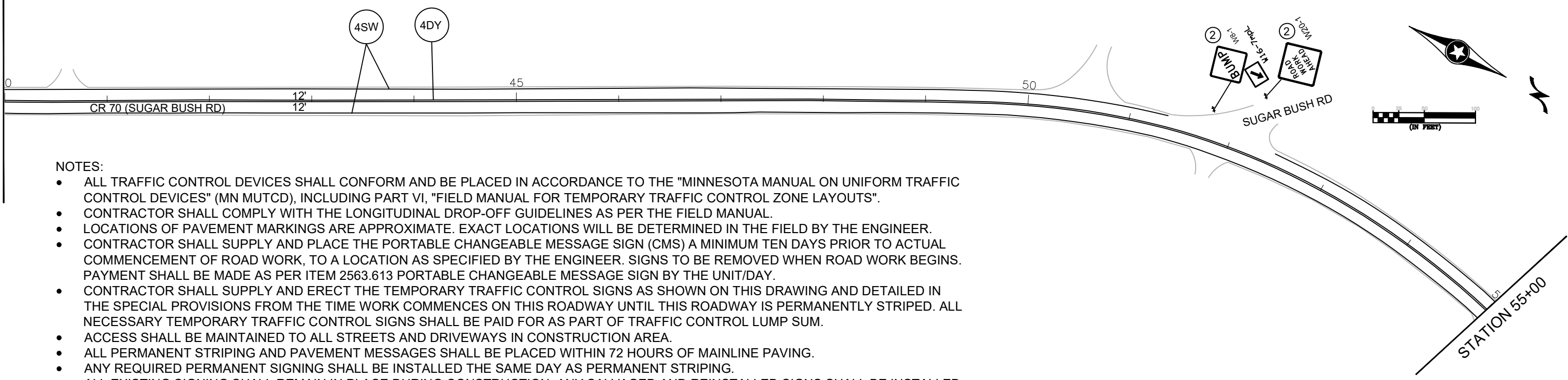
ANOKA COUNTY
HIGHWAY DEPT.

CP 23-13-70

TEMPORARY SIGNING
 PERMANENT STRIPING

SHEET 15A OF 21 SHEETS

STATION 40+00



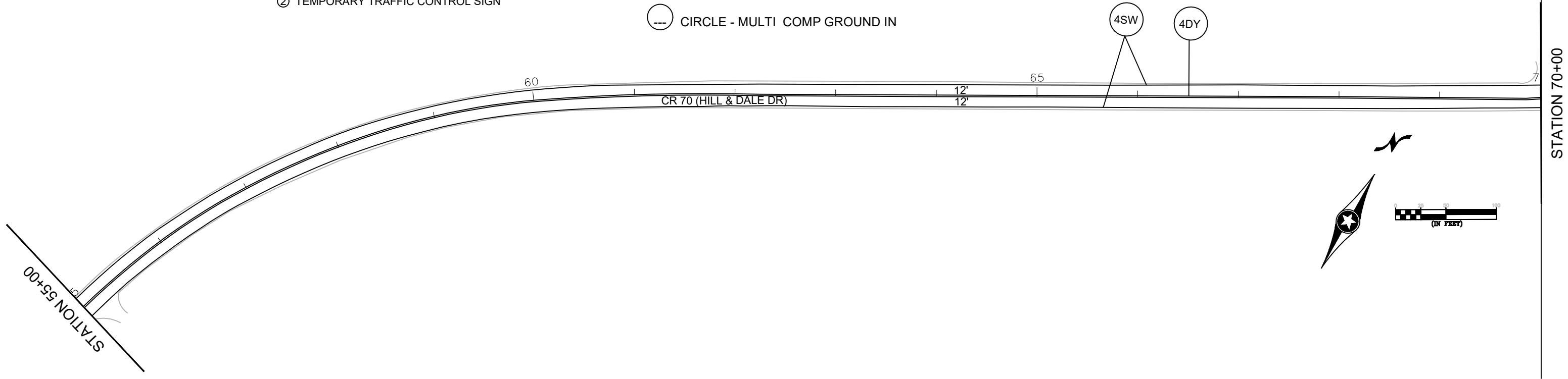
NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

SIGN NOTES:
 ② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY

○ CIRCLE - MULTI COMP GROUND IN



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Signing Perm Striping.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23

SIGNATURE: *[Signature]* LICENSE NO. 57216

DRAWN BY: TMV DATE: 09/23/22

DESIGN BY: TMV DATE: 09/23/22

CHECKED BY: JRB DATE: 10/24/22

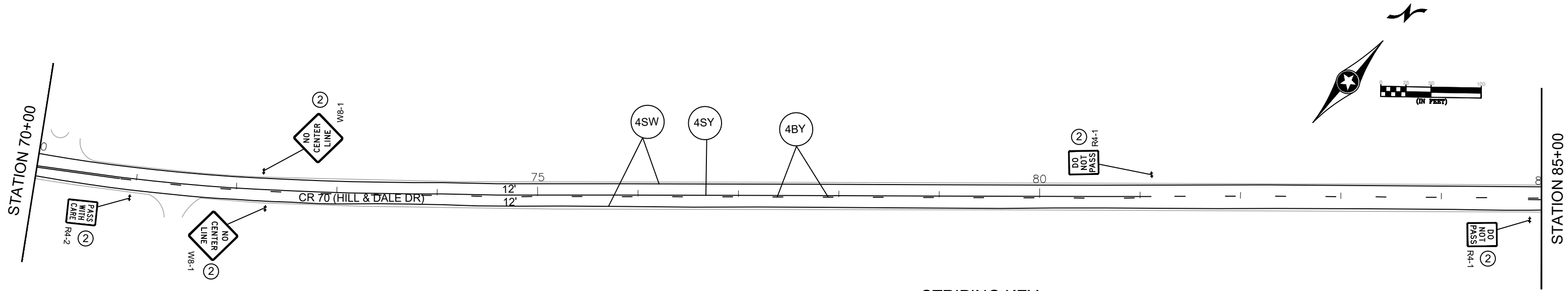


ANOKA COUNTY
HIGHWAY DEPT.

CP 23-13-70

TEMPORARY SIGNING
PERMANENT STRIPING

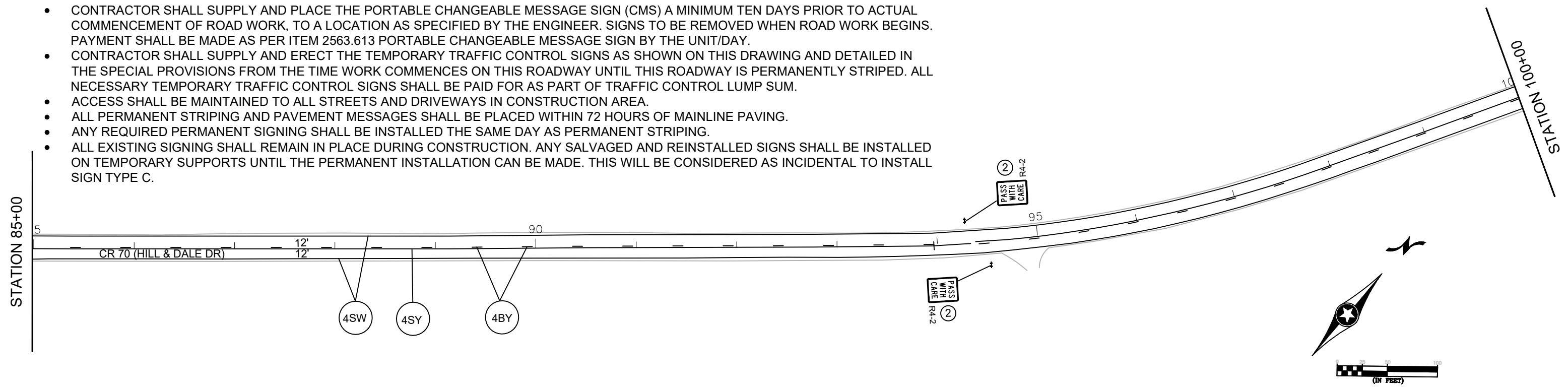
SHEET 16A OF 21 SHEETS



SIGN NOTES:
 (2) TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 (---) CIRCLE - MULTI COMP GROUND IN

- NOTES:
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
 - CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
 - LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
 - CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
 - ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
 - ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
 - ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
 - ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Signing Perm Striping.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23

SIGNATURE: *[Signature]* LICENSE NO. 57216

DRAWN BY TMV DATE 09/23/22

DESIGN BY TMV DATE 09/23/22

CHECKED BY JRB DATE 10/24/22



ANOKA COUNTY
 HIGHWAY DEPT.

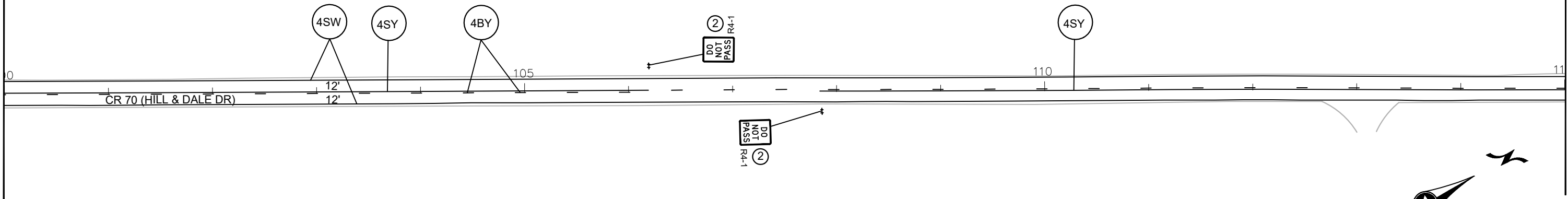
CP 23-13-70

TEMPORARY SIGNING
 PERMANENT STRIPING

SHEET 17A OF 21 SHEETS

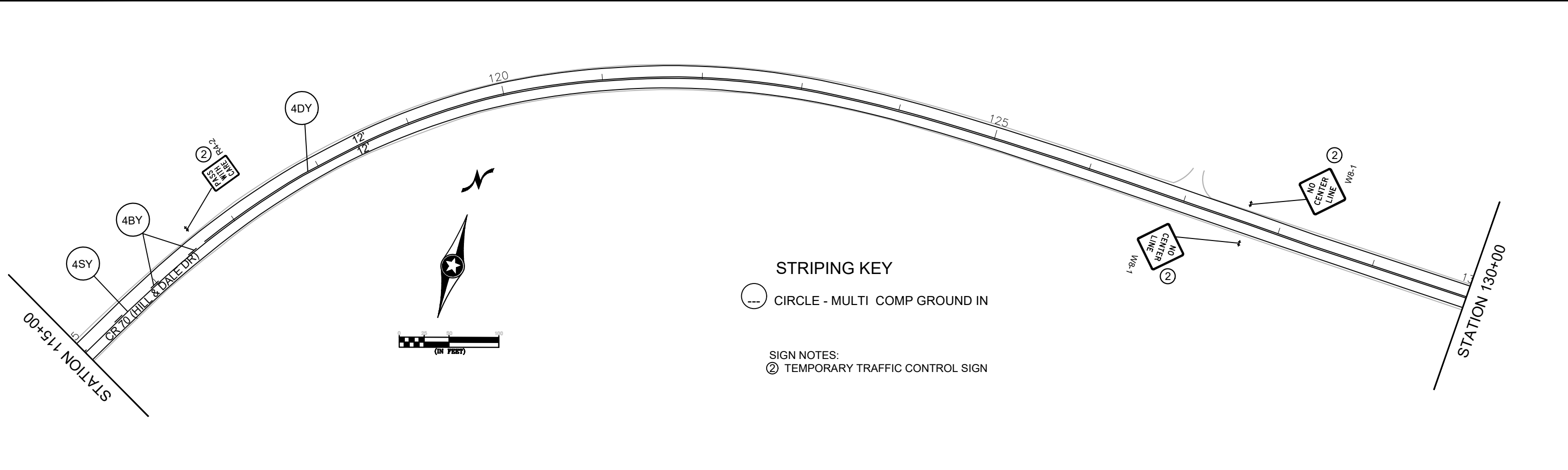
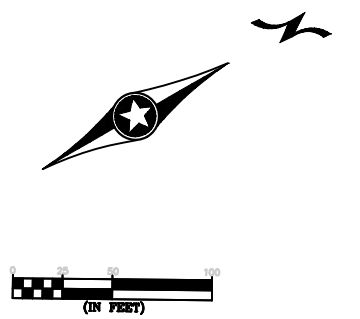
STATION 100+00

STATION 115+00



NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.



STRIPING KEY

○ CIRCLE - MULTI COMP GROUND IN

SIGN NOTES:
② TEMPORARY TRAFFIC CONTROL SIGN

1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Signing Perm Striping.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23

SIGNATURE: *[Signature]* LICENSE NO. 57216

DRAWN BY: TMV DATE: 09/23/22

DESIGN BY: TMV DATE: 09/23/22

CHECKED BY: JRB DATE: 10/24/22

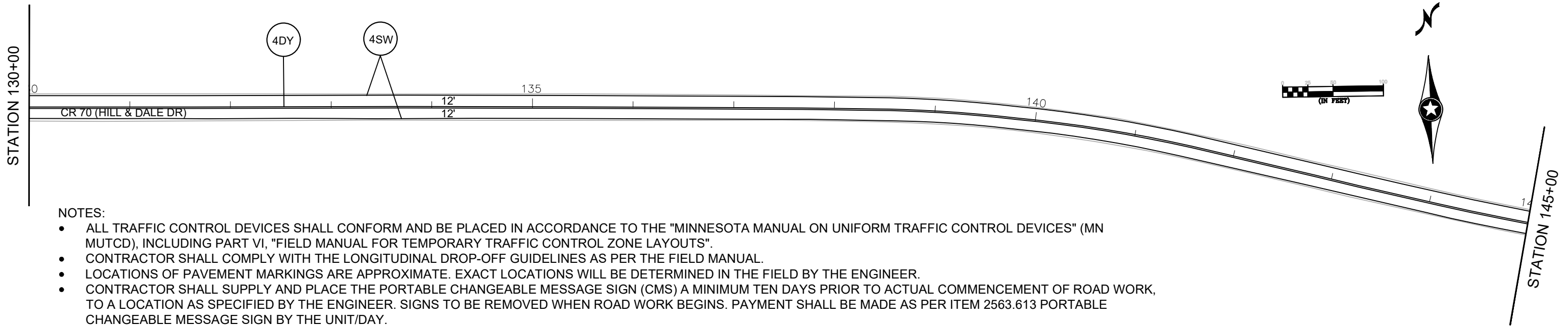


ANOKA COUNTY
HIGHWAY DEPT.

CP 23-13-70

TEMPORARY SIGNING
PERMANENT STRIPING

SHEET 18A OF 21 SHEETS



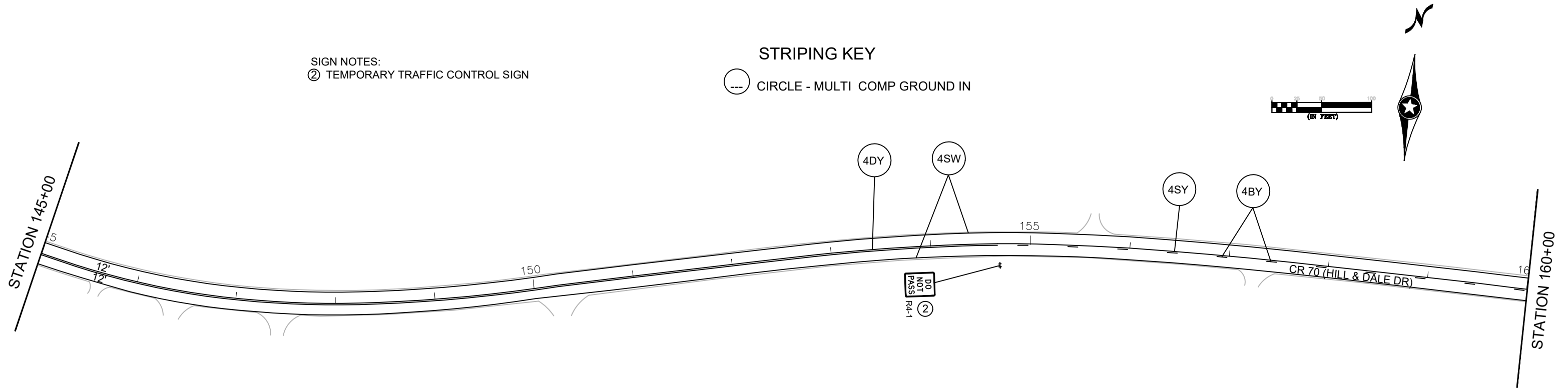
NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

SIGN NOTES:
 ② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY

○ CIRCLE - MULTI COMP GROUND IN



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Signing Perm Striping.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23

SIGNATURE: *[Signature]* LICENSE NO. 57216

DRAWN BY: TMV DATE: 09/23/22

DESIGN BY: TMV DATE: 09/23/22

CHECKED BY: JRB DATE: 10/24/22



ANOKA COUNTY
 HIGHWAY DEPT.

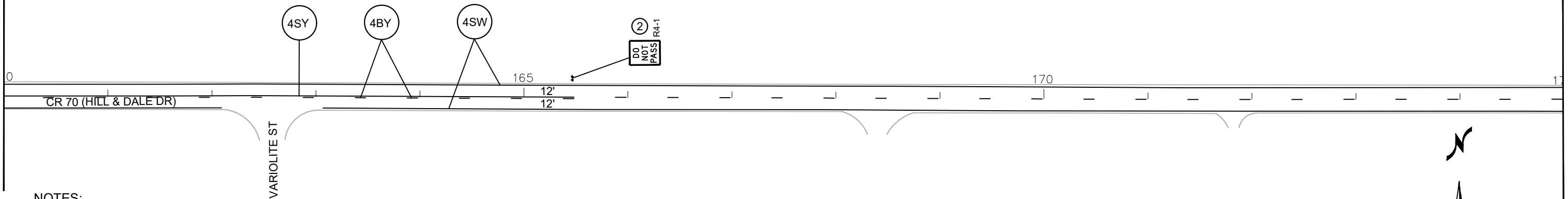
CP 23-13-70

TEMPORARY SIGNING
 PERMANENT STRIPING

SHEET 19A OF 21 SHEETS

STATION 160+00

STATION 175+00

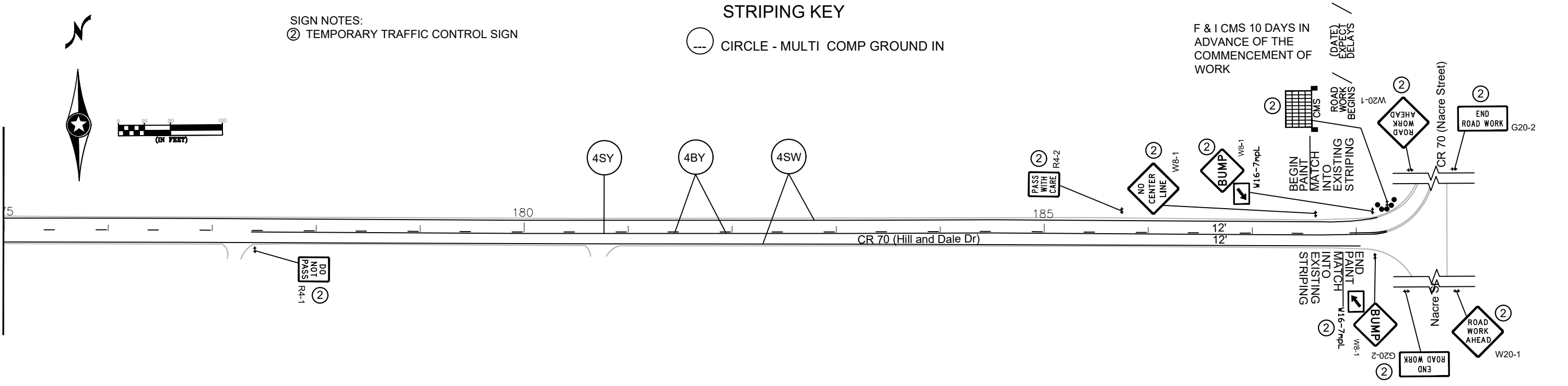


NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.



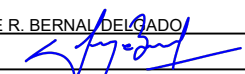
STATION 175+00



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Signing Perm Striping.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-23

SIGNATURE:  LICENSE NO. 57216

DRAWN BY TMV DATE 09/23/22

DESIGN BY TMV DATE 09/23/22

CHECKED BY JRB DATE 10/24/22



ANOKA COUNTY
HIGHWAY DEPT.

CP 23-13-70

TEMPORARY SIGNING
PERMANENT STRIPING

SHEET 20A OF 21 SHEETS

TEMPORARY TRAFFIC CONTROL SIGNS				TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-12	48" x 48"		6	W8-9	48" x 48"		AS NEEDED
R4-1	24" x 30"		8	W8-11	48" x 48"		AS NEEDED
R4-2	24" x 30"		5	W8-23	48" x 48"		AS NEEDED
G20-2	36" x 18"		4	W20-1	48" x 48"		AS NEEDED (ESTIMATED 7)
W8-1	48" x 48"		7	W20-4	48" x 48"		AS NEEDED
W16-7P	30" x 18"		7	W20-7	48" x 48"		AS NEEDED (ESTIMATED 2)
W3-4	48" x 48"		AS NEEDED	REFLECTORIZED REBOUNDABLE DRUM			AS NEEDED (ESTIMATED 10)
W8-1	48" x 48"		AS NEEDED	CMS sign to be placed a minimum of ten days prior to actual commencement of road work. Signs to be removed when road work begins.			2 AT 10 DAYS EA
W8-8	48" x 48"		AS NEEDED				

CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

		R	O	A	D								
		W	O	R	K			<	D	A	T	E	>
		B	E	G	I	N	S		E	X	P	E	C
									D	E	L	A	Y
									S				

CMS SIGN TO BE PLACED A MINIMUM OF TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\23-01-00\CR_70_(CSAH 24-223rd)\Base\Traffic\Temp Signing Perm Striping.dwg

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JORGE R. BERNAL DELGADO DATE: 11-8-22

SIGNATURE:

LICENSE NO. 57216

DRAWN BY TMV DATE 09/23/22

DESIGN BY TMV DATE 09/23/22

CHECKED BY JRB DATE 10/24/22



ANOKA COUNTY
HIGHWAY DEPT.

CP 23-13-70

TEMPORARY SIGNING
QUANTITIES

SHEET 21 OF 21 SHEETS