MINNESOTA DEPARTMENT OF TRANSPORTATION **ANOKA COUNTY**

CONSTRUCTION PLAN FOR _____ MILL BITUMINOUS, BITUMINOUS SURFACING, AND BITUMINOUS RECLAMATION AND FAWN LAKE DR NE (N. COUNTY LINE) LOCATED ON CSAH 24 BETWEEN ____ CSAH 24 GROSS LENGTH EXCEPTIONS-LENGTH END SAP 002-624-029 CSAH 24, STA: 235+00.00 BEG EXCEPTION SAP 002-624-029 CSAH 24, STA: 55+90.00 CEDAR CREEK NATURAL HISTORY AREA NA DANEMPORT ST. END EXCEPTION SAP 002-624-029 CSAH 24, STA; 112+70.00 BEGIN SAP 002-624-029 CSAH 24, STA: 10+20.00

PROJECT LOCATION

	DEGIGIA	DESIGNATION (CSAH	24)	
ESAL 20	325231	FUNCTIONAL CLASSIF	ICATIONMA	JOR COLLECTOR
R VALUE	70	NO. OF TRAFFIC LANE	S 2 NO. OF PA	ARKING LANES X
ADT (2021)	2753	DESIGN SPEED 55	MPH .	
PROJ. ADT (2041)	2753	STOPPING SIGHT DIST	ANCE BASED ON:	
PROJ. HCADT (2041)	162	HEIGHT OF EYE	3.5' HEIGHT	OF OBJECT 2.0'
SOIL FACTOR	N/A	DESIGN SPEED NOT A	CHIEVED AT:	
TON DESI	GN	STA.	TO STA.	MPH



CITY OF EAST BETHEL ANOKA COUNTY MN/DOT TRANSPORTATION DISTRICT - METRO SECTION 26, 27, 28 29 TOWNSHIP 34 NORTH

RANGE 23 WEST

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

THIS PLAN CONTAINS 34 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3-5	TYPICAL SECTIONS
6 - 8	DETAILS
9	TABULATIONS
10 - 16	CONSTRUCTION PLAN
17	PERMANENT MARKING TABULATIONS
18-22	SIGNING AND STRIPING DETAILS
23-29	SIGNING AND STRIPING PLAN
30	SIGNING AND STRIPING QUANTITIES
31-34	EXISTING SIGNAL PLANS

	DATE
DISTRICT STATE AID ENGINEER: REVIEWED FOR	
COMPLIANCE WITH STATE AID RULES/POLICY	

DATE .

STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

CITY OF EAST BETHEL ENGINEER

ANOKA COUNTY ENGINEER

NAME: P:\21-01-00\CSAH 24 (TH65-NCL)\Base\Proposed\CSAH24 TITLE.dgr

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

DRAWN BY DLD DATE 12-11-20 CHECKED BY CO DATE 02-02-21



ANOKA COUNTY HIGHWAY DEPT. TITLE SHEET

STATE AID PROJECT 002-624-029

Sheet 1 of 34 Sheets

	STATEMENT OF ESTIMATED QUANTITIES							
				TOTAL PROJECT				
NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITIES ESTIMATED				
		MOBILIZATION	LUMP SUM	1				
1		SAWING CONCRETE PAVEMENT (FULL DEPTH)	LINFT	21				
1		SAWING BIT PAVEMENT (FULL DEPTH)	LINFT	165				
2		REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	36				
3		REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	104				
		REMOVE BITUMINOUS PAVEMENT	SQ YD	1011				
4	2105.602	CONSTRUCT TURN LANES	EACH	1				
5	2123.510	MOTOR GRADER	HOUR	32				
7	2211.509	AGGREGATE BASE CLASS 5	TON	40				
	2215.504	FULL DEPTH RECLAMATION	SQ YD	56670				
	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	1193				
18	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	160				
8	2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	138				
		BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2864				
9, 10	2360.509	TYPE SP 12.5 WEARING COURSE MIX (4:C)	TON	99				
10	2360.509	TYPE SP 12.5 WEARING COURSE MIX (4;C)	TON	13162				
1	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	36				
11	2540.602	MAIL BOX SUPPORT	EACH	5				
	2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1				
13	2563.601	TRAFFIC CONTROL	LUMP SUM	1				
14	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20				
	2564.518	SIGN PANELS TYPE C	SQ FT	12.50				
12	2565.602	RIGID PVC LOOP DETECTOR 6'X6'	EACH	6				
	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1				
	2574.507	COMMON TOPSOIL BORROW	CU YD	64				
15	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	POUND	350				
16	2581.503	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LINFT	840				
17	2582.503	4" SOLID LINE MULTI COMP	LINFT	40441				
17	2582.503	4" BROKEN LINE MULTI COMP	LINFT	1642				
17	2582.503	4" DBLE SOLID LINE MULTI COMP	LINFT	8432				
17	2582.503	8" DOTTED LINE MULTI COMP CONT	LINFT	36				
17	2582.518	PAVT MSSG PREF THERMO	SQ FT	31				
18	2582.518	PAVT MSSG PREF THERMO ESR GR IN	SQ FT	290				

	CONSTRUCTION NOTES
1	REFERENCE DETAILS (PAGE 6 & 7) FOR REMOVAL DETAILS
2	ITEM FOR CONCRETE DRIVEWAYS. CONTRACTOR IS RESPONSIBILE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
3	ITEM FOR BITUMINOUS DRIVEWAYS AND STREET APPROACHES. CONTRACTOR IS RESPONSIBILE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
4	THIS ITEM INCLUDES: COMMON EXCAVATION, SELECT GRANULAR BORROW, TOPSOIL, AND AGG BASE CL-5. (SEE PG 10 FOR QUANTITIES) SHAPING OF SUB-GRADE AND AGGREGATE BASE ARE INCIDENTAL TO CONSTRUCT TURN LANE ITEM
5	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
6	GRAVEL BASE FOR BITUMINOUS DRIVEWAYS, AND CURB PATCHES.
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, ALL PAVED ST APPROACHES, AND DRIVEWAYS; SEE DETAILS FOR DIMENSIONS
9	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
10	ITEM FOR STREET APPROACHES. STREET APPRACHES 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 RESPONSIBILE FOR CONTACTING. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
12	LOOP REPLACEMENT REQUIRED AT CSAH 24 AND TH 65. CONTRACTOR SHALL CONTACT PETE ELLWANGER (MNDOT), 651-775-1279, FOR COORDINATION ON PLACEMENT, SIGNAL FLASH OPERATION, AND INSTALL. SIGNAL PLANS ARE INCLUDED AT THE END OF THIS PLAN.
13	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.
14	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
15	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
16	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.
17	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
18	INSTALLED AT CSAH 24 AND TH 65. CONTACT PETE ELLWANGER (MNDOT), 651-775-1279, FOR PLACEMENT AND SIGNAL FLASH OPERATION DURING INSTALL.

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

	MNDOT STANDARD PLATES						
PLATE NO.	DESCRIPTION						
8000J	CHANNELIZERS						
8132B	PREFORMED RIGID PVC CONDUIT LOOP DETECTOR - LAYOUT DETAILS, LAYOUT NOTES, TYPICAL INSTALLATION (3 SHEETS)						
9350A	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						
2221	SHOULDER BASE AGGREGATE 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						
2575	SEED MIXTURE 25-121	61 LBS./ ACRE						
2574	FERTILIZER TYPE 3	350 LBS./ ACRE						
2575	HYDRAULIC REINFORCED FIBER MATRIX	3900 LBS. / ACRE						

								I HEREBY CERTIFY TH/ OR UNDER MY DIRECT LICENSED PROFESSIO THE STATE OF MINNES PRINT NAME: GERA	T SUF DNAL SOT <i>F</i>
NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:04 AM	SIGNATURE:	
NAME:	DATE: 02-24-2021								

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. AUGE JR.

SIGNATURE: DATE: 02-24-2021 LICENSE NO. 26511

DRAWN BY ______ DLD ___ DATE _12-11-20 _____

DESIGN BY _____ SPH ___ DATE _12-11-20 ______

CHECKED BY XXX DATE 02/26/2021

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT. STATEMENT OF ESTIMATED QUANTITIES

STATE AID PROJECT<u>002-624-029</u>

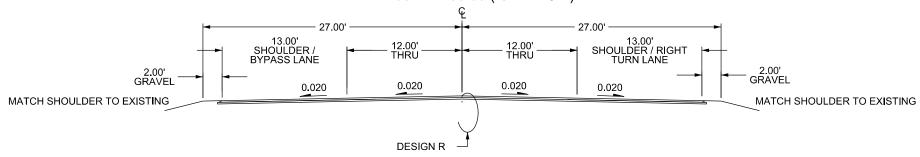
Sheet 2 of 34 Sheets

CSAH 24 - 237th AVE NE

(RECLAIM) SECTION

10+20.00 - 15+63.00 (BALTIMORE ST.)

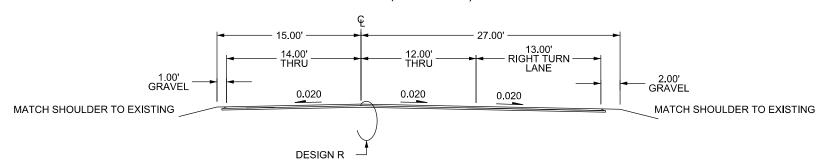
39+80.00 - 42+60.00 (ISANTI ST.)



CSAH 24 - 237th AVE NE

(RECLAIM) SECTION

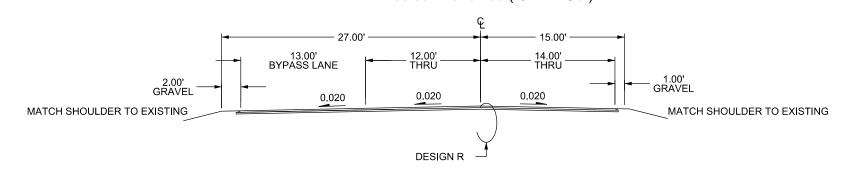
37+62.00 - 39+80.00 (ISANTI ST.)



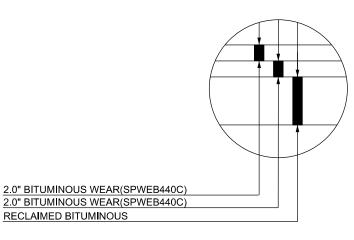
CSAH 24 - 237th AVE NE

(RECLAIM) SECTION

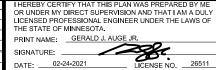
42+60.00 - 46+02.00 (ISANTI ST.)



DESIGN R RECLAIM SECTION



NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:12 AM
NAME: P:\21-01-00\CSAH_24_(TH65-NCL)\Base\Proposed\CSAH24_TYPICALS.dgn							



	DRAWN BY _	DLD	DATE 12-11-20
_	DESIGN BY _	SPH	DATE 12-11-20
_	CHECKED BY	CO	DATE 02-03-21



ANOKA COUNTY HIGHWAY DEPT.

TYPICAL SECTIONS

STATE AID PROJECT 002-624-029

Sheet 3 of 34 Sheets

CSAH 24 - 237th AVE NE

(RECLAIM) SECTION

15+63.00 - 19+84.00

24+84.00 - 37+62.00

46+02.00 - 55+90.00

Q

15.00'

14.00'
THRU
THRU
THRU

1.00'
GRAVEL

MATCH SHOULDER
TO EXISTING

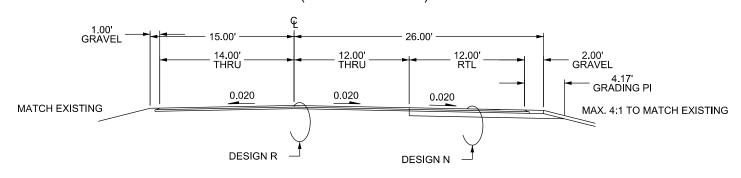
DESIGN R

MATCH SHOULDER
TO EXISTING

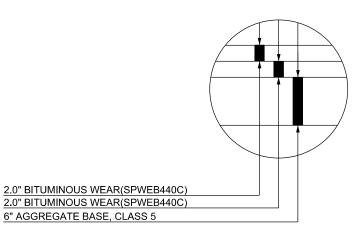
CSAH 24 - 237th AVE NE

RIGHT TURN LANE

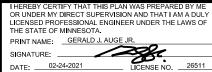
19+84.00 - 24+84.00 (DAVENPORT ST.)

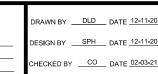


DESIGN N RIGHT TURN & BYPASS LANE



NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:12 AM
NAME: P:\21-01-00\CSAH_24_(TH65-NCL)\Base\Proposed\CSAH24_TYPICALS.dgn							







ANOKA COUNTY HIGHWAY DEPT.

TYPICAL SECTIONS

STATE AID PROJECT 002-624-029

Sheet 4 of 34 Sheets

CSAH 24 - FAWN LAKE DR. NE

(RECLAIM) SECTION 112+70.00 - 116+69.00 132+83.00 - 154+93.00 166+28.00 - 173+04.00 185+17.00 - 202+78.00 217+12.00 - 235+00.00 15.00' 14.00' THRU 14.00' THRU 1.00' GRAVEL 1.00' GRAVEL 0.020 0.020 MATCH SHOULDER TO EXISTING MATCH SHOULDER TO EXISTING

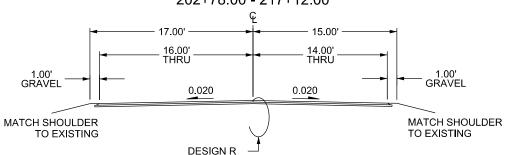
CSAH 24 - FAWN LAKE DR. NE

DESIGN R

(RECLAIM) SECTION 116+69.00 - 132+83.00 173+04.00 - 185+17.00 14.00' THRU 16.00' THRU 1.00' GRAVEL 1.00' GRAVEL 0.020 0.020 MATCH SHOULDER TO EXISTING MATCH SHOULDER TO EXISTING DESIGN R

CSAH 24 - FAWN LAKE DR. NE (RECLAIM) SECTION

154+93.00 - 166+28.00 202+78.00 - 217+12.00 15.00 14.00' THRU 1.00' GRAVEL



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NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:12 AM	5	
NAME:	NAME: P:\21-01-00\CSAH_24_(TH65-NCL)\Base\Proposed\CSAH24_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. AUGE ______LICENSE NO. ______26511 SIGNATURE: DATE: 02-24-2021

CHECKED BY _____CO___ DATE_02-03-21



ANOKA COUNTY HIGHWAY DEPT.

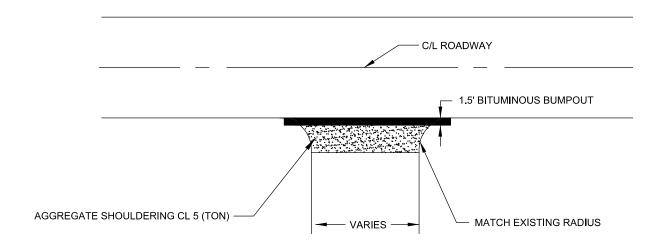
TYPICAL SECTIONS

STATE AID PROJECT 002-624-029

Sheet <u>5</u> of <u>34</u> Sheets

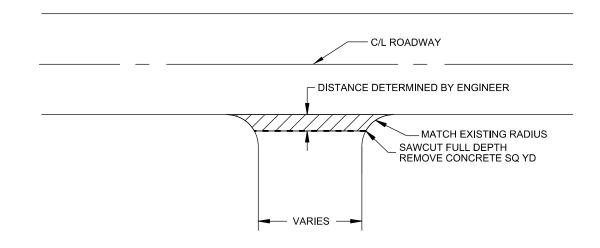
DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE



DRIVEWAY DETAIL

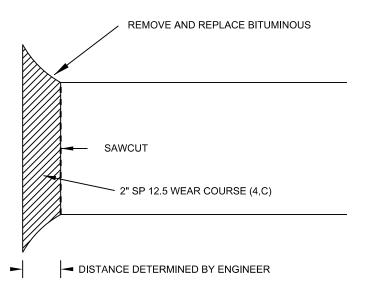
CONCRETE DRIVEWAY



RECLAIM AREA - DRIVEWAY DETAIL

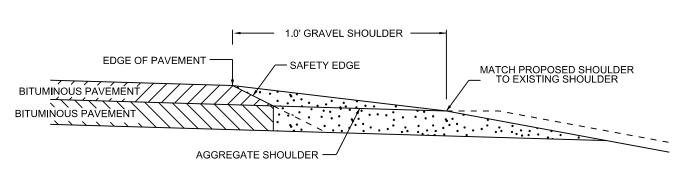
BITUMINOUS

PLAN VIEW



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

								I HEREBY CERTIFY THAT OR UNDER MY DIRECT S LICENSED PROFESSION. THE STATE OF MINNESC PRINT NAME: GERAL
NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:14 AM	SIGNATURE:
NAME:	P:\21-01-00\CSA	H_24_(TH6	5-NCL)\Ba	se\Propose	d\CSAH24_DETAI	LS.dgn		DATE: <u>02-24-2021</u>

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. AUGE JR.

SIGNATURE: DATE: 02-24-2021 LICENSE NO. 26511

 DRAWN BY
 DLD
 DATE
 12-11-20

 DESIGN BY
 SPH
 DATE
 12-11-20

 CHECKED BY
 CO
 DATE
 02-03-21



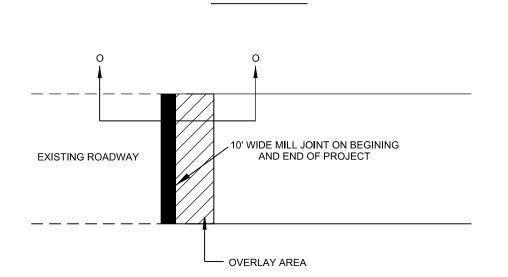
ANOKA COUNTY HIGHWAY DEPT.

DETAILS

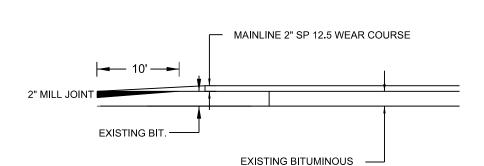
STATE AID PROJECT <u>002-624-029</u>

Sheet 6 of 34 Sheets

MAINLINE JOINT DETAIL (RECLAIM)



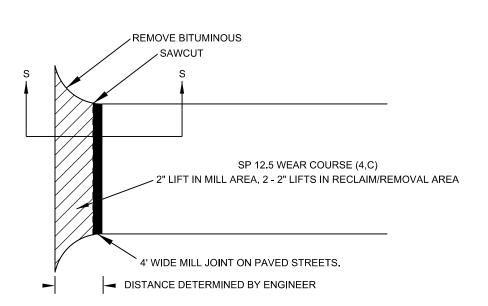
PLAN VIEW



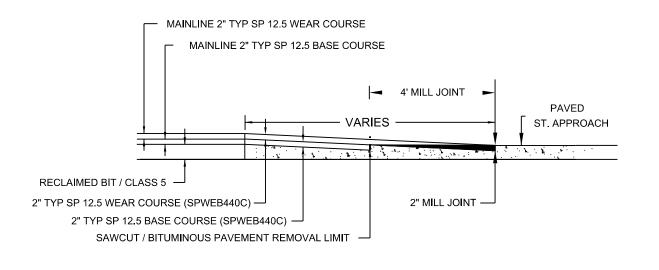
SECTION O - O

STREET APPROACH DETAIL (RECLAIM)

BITUMINOUS STREET



PLAN VIEW



SECTION S - S

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. AUGE JR.
SIGNATURE:

SIGNATURE:
DATE: 02-24-2021 LICENSE NO. 26511

LICENSE NO. 26511

ANOKA COUNTY
HIGHWAY DEPT.

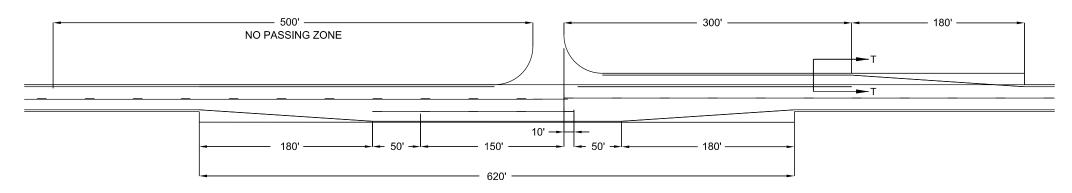
STATE AID PROJECT _002-624-029

DETAILS

24-029 Sheet <u>7</u> of <u>34</u> Sheets

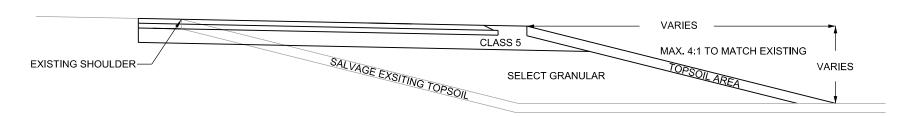
RIGHT TURN AND BYPASS LANE

GENERAL LAYOUT PLAN VIEW



RIGHT TURN AND BYPASS LANE

SECTION T - T



								I HEREBY CERTIFY THAT
								OR UNDER MY DIRECT S
								LICENSED PROFESSIONA THE STATE OF MINNESO
								PRINT NAME: GERALI
NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:15 AM	SIGNATURE:
NAME:	P:\21-01-00\CSAI	H 24 (TH6	5-NCL)\Bas	se\Propose	d\CSAH24 DETAIL	S.dgn		DATE: 02-24-2021

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. AUGE JR.

SIGNATURE: DATE: 02-24-2021 LICENSE NO. 26511

 DRAWN BY
 DLD
 DATE 12-11-20

 DESIGN BY
 SPH
 DATE 12-11-20

 CHECKED BY
 CO
 DATE 02-03-21



ANOKA COUNTY HIGHWAY DEPT.

DETAILS

STATE AID PROJECT 002-624-029

Sheet 8 of 34 Sheets

SUPI	ERELEVATION CO	RRECTION	TAB
STATION	POINT	LEFT GRADE	RIGHT GRADE
112+70	MATCH EXISTING	2.9%	-6.7%
113+25		3.0%	-6.0%
113+75		2.0%	-5.2%
114+25		1.0%	-4.4%
114+75		0.0%	-3.6%
115+25		-1.0%	-2.8%
115+85	END SUPER	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB							
STATION	POINT	LEFT GRADE	RIGHT GRADE				
117+10	BEGIN SUPER	-2.0%	-2.0%				
117+70		0.0%	-2.0%				
118+30		-2.0%	-2.0%				
118+90	PC	4.0%	-4.0%				
119+50	BEGIN FULL SUPER	6.0%	-6.0%				
120+10		6.0%	-6.0%				
120+70		6.0%	-6.0%				
121+30		6.0%	-6.0%				
121+90		6.0%	-6.0%				
122+50		6.0%	-6.0%				
123+10		6.0%	-6.0%				
123+70		6.0%	-6.0%				
124+30		6.0%	-6.0%				
124+90		6.0%	-6.0%				
125+50		6.0%	-6.0%				
126+10		6.0%	-6.0%				
126+70		6.0%	-6.0%				
127+30		6.0%	-6.0%				
127+90		6.0%	-6.0%				
128+50		6.0%	-6.0%				
129+10		6.0%	-6.0%				
129+70		6.0%	-6.0%				
130+30		6.0%	-6.0%				
130+90		6.0%	-6.0%				
131+50		6.0%	-6.0%				
131+93	END FULL SUPER	6.0%	-6.0%				
132+53	PT	4.0%	-4.0%				
133+13		2.0%	-2.0%				
133+73		0.0%	-2.0%				
134+33	END SUPER	-2.0%	-2.0%				

SUP	SUPERELEVATION CORRECTION TAB									
STATION	POINT	LEFT GRADE	RIGHT GRADE							
153+38	BEGIN SUPER	-2.0%	-2.0%							
153+86		-2.0%	-2.0%							
154+34		-2.0%	-2.0%							
154+82		-2.0%	-2.0%							

OTATION	10111	LLI I GIVADL	TRIGITI GIVAD
153+38	BEGIN SUPER	-2.0%	-2.0%
153+86		-2.0%	-2.0%
154+34		-2.0%	-2.0%
154+82		-2.0%	-2.0%
155+30		-2.0%	-0.4%
155+78		-3.0%	1.2%
156+26	PC	-4.0%	2.8%
156+74		-5.0%	4.4%
157+22	BEGIN FULL SUPER	-6.0%	6.0%
157+70		-6.0%	6.0%
158+18		-6.0%	6.0%
158+66		-6.0%	6.0%
159+14		-6.0%	6.0%
159+62		-6.0%	6.0%
160+10		-6.0%	6.0%
160+58		-6.0%	6.0%
161+06		-6.0%	6.0%
161+54		-6.0%	6.0%
162+02		-6.0%	6.0%
162+50		-6.0%	6.0%
162+98		-6.0%	6.0%
163+46		-6.0%	6.0%
163+94		-6.0%	6.0%
164+20	END FULL SUPER	-6.0%	6.0%
164+68		-5.0%	5.0%
165+16	PT	-4.0%	4.0%
165+64		-3.0%	3.0%
166+12		-2.0%	2.0%
166+60		-2.0%	1.0%
167+08		-2.0%	0.0%
167+56		-4.0%	-1.0%

SUPERELEVATION CORRECTION TAB

	STATION	POINT	LEFT GRADE	RIGHT GRADE
	170+64	BEGIN SUPER	-2.0%	-2.0%
	171+12		-2.0%	-2.0%
	171+60		-2.0%	-2.0%
	172+08		-2.0%	-2.0%
	172+56		-0.4%	-2.0%
	173+04		1.2%	-3.0%
	173+52	PC	2.8%	-4.0%
	174+00		4.4%	-5.0%
	174+48	BEGIN FULL SUPER	6.0%	-6.0%
	174+96		6.0%	-6.0%
	175+44		6.0%	-6.0%
	175+92		6.0%	-6.0%
	176+40		6.0%	-6.0%
	176+88		6.0%	-6.0%
	177+36		6.0%	-6.0%
	177+84		6.0%	-6.0%
	178+32		6.0%	-6.0%
	178+80		6.0%	-6.0%
	179+28		6.0%	-6.0%
	179+76		6.0%	-6.0%
	180+24		6.0%	-6.0%
	180+72		6.0%	-6.0%
	181+20		6.0%	-6.0%
	181+68		6.0%	-6.0%
	182+16		6.0%	-6.0%
	182+64		6.0%	-6.0%
	182+80	END FULL SUPER	6.0%	-6.0%
	183+28		5.0%	-5.0%
	183+76	PT	4.0%	-4.0%
	184+24		3.0%	-3.0%
	184+72		2.0%	-2.0%
7	185+20		1.0%	-2.0%
_	185+68		0.0%	-2.0%
	186+16		-1.0%	-2.0%
	186+64	END SUPER	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB

001			1710
STATION	POINT	LEFT GRADE	RIGHT GRADE
200+48	BEGIN SUPER	-2.0%	-2.0%
200+96		-2.0%	-2.0%
201+44		-2.0%	-2.0%
201+92		-2.0%	-2.0%
202+40		-2.0%	-0.4%
202+88		-3.0%	1.2%
203+36	PC	-4.0%	2.8%
203+84		-5.0%	4.4%
204+32	BEGIN FULL SUPER	-6.0%	6.0%
204+80	220111 022 001 211	-6.0%	6.0%
205+28		-6.0%	6.0%
205+76		-6.0%	6.0%
206+24		-6.0%	6.0%
206+72		-6.0%	6.0%
207+20		-6.0%	6.0%
207+68		-6.0%	6.0%
208+16		-6.0%	6.0%
208+64		-6.0%	6.0%
209+12		-6.0%	6.0%
209+60		-6.0%	6.0%
210+08		-6.0%	6.0%
210+56		-6.0%	6.0%
211+04		-6.0%	6.0%
211+52		-6.0%	6.0%
212+00		-6.0%	6.0%
212+48		-6.0%	6.0%
212+96		-6.0%	6.0%
213+44		-6.0%	6.0%
213+92		-6.0%	6.0%
214+40		-6.0%	6.0%
214+88		-6.0%	6.0%
215+36	END FULL SUPER	-6.0%	6.0%
215+84	LIND I OLL OOI LIK	-5.0%	5.0%
216+32		-4.0%	4.0%
216+80		-3.0%	3.0%
217+28		-2.0%	2.0%
217+76	PT	-2.0%	1.0%
218+24	1 1	-2.0%	0.0%
218+72		-2.0%	-1.0%
219+20	END SUPER	-2.0%	-2.0%

NO	DATE	BY	CKD	APPR	REVISION	02/26/2021	9:13:15 AM			
NAME:	NAME: P:\21-01-00\CSAH 24 (TH65-NCL)\Base\Proposed\CSAH24 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. AUGE JR. LICENSE NO. 26511 SIGNATURE:

DATE: ____02-24-2021

END SUPER

-2.0%

-2.0%

168+04

CHECKED BY <u>CO</u> DATE <u>02-03-21</u>

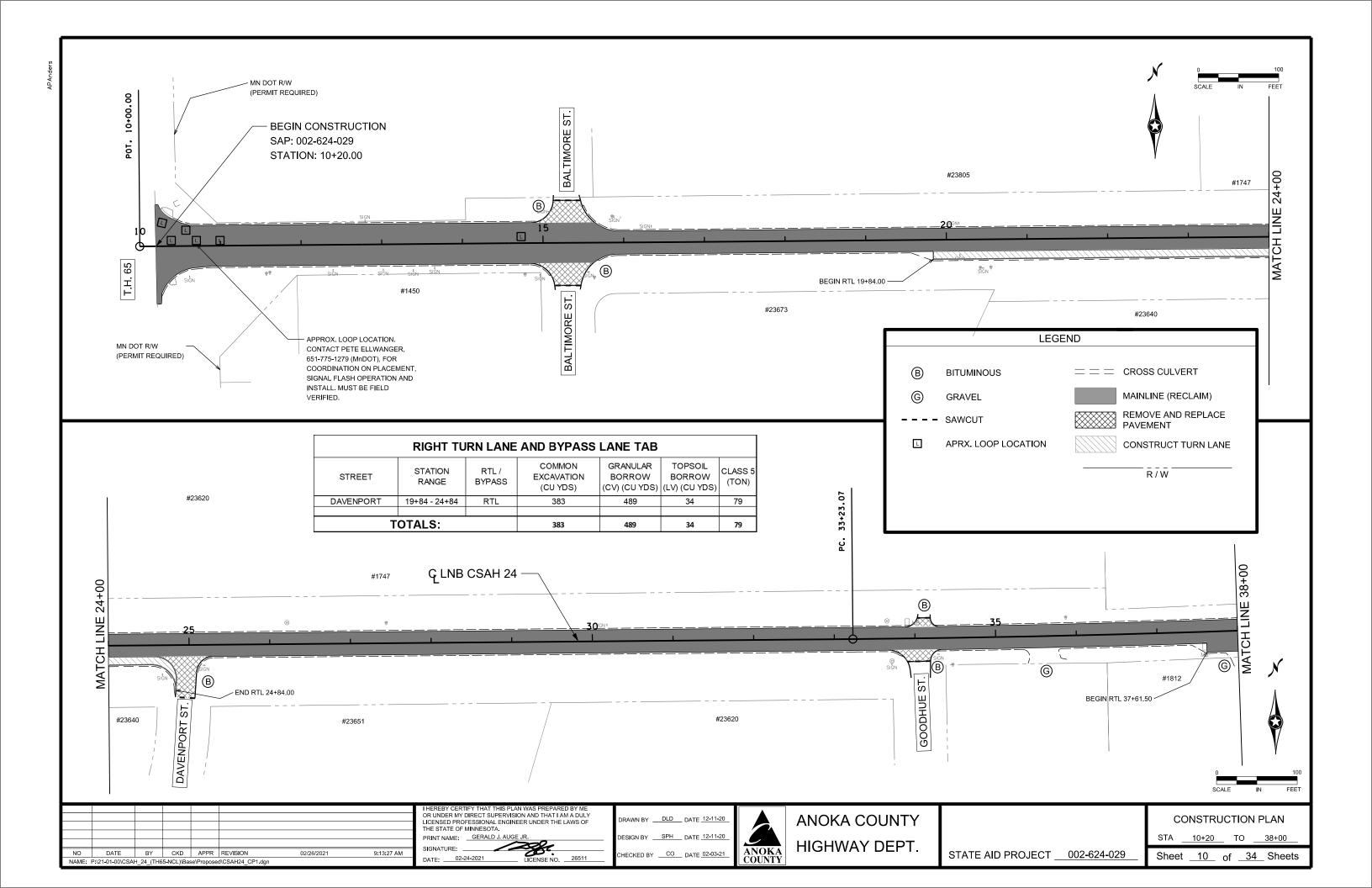


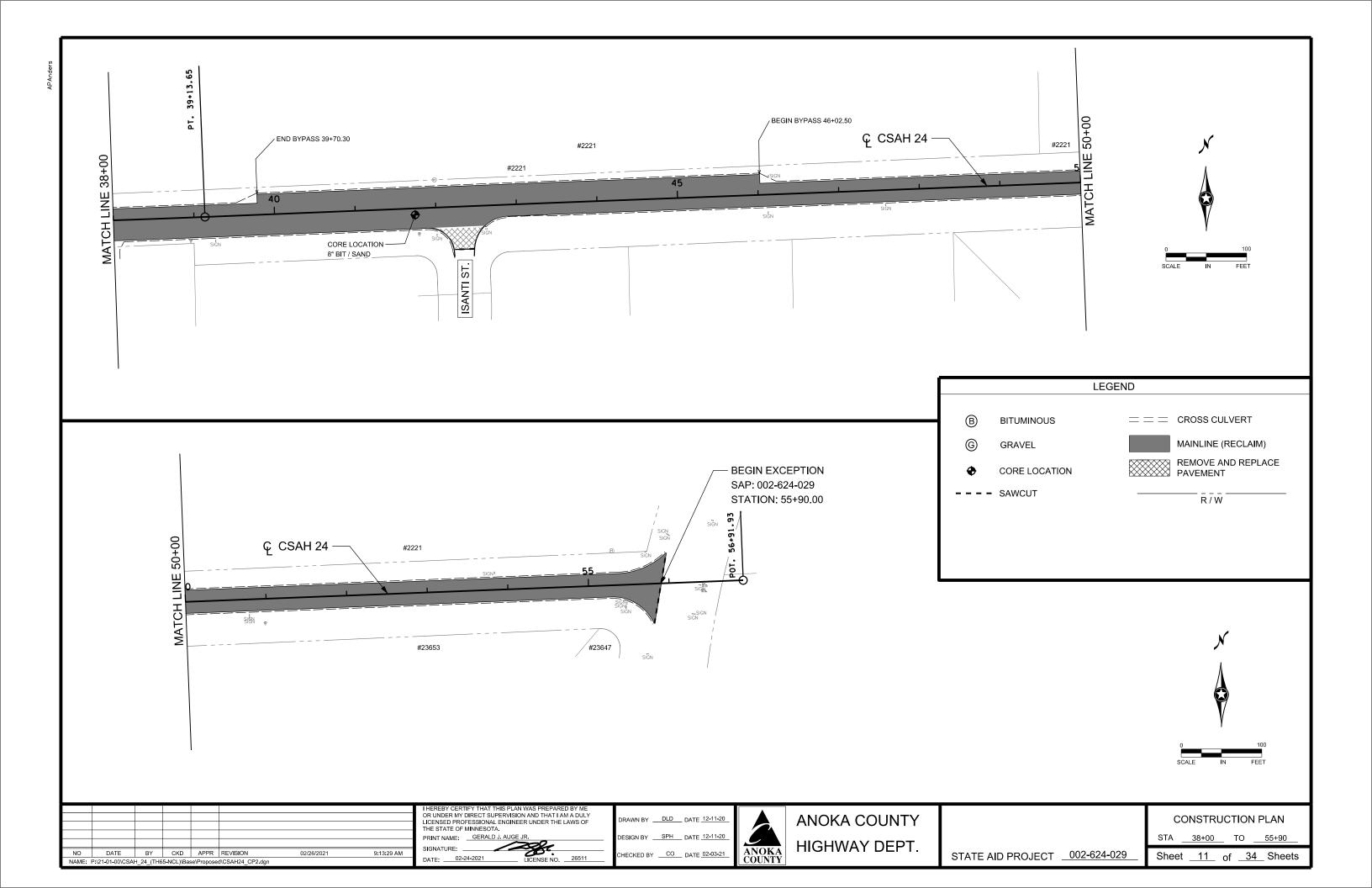
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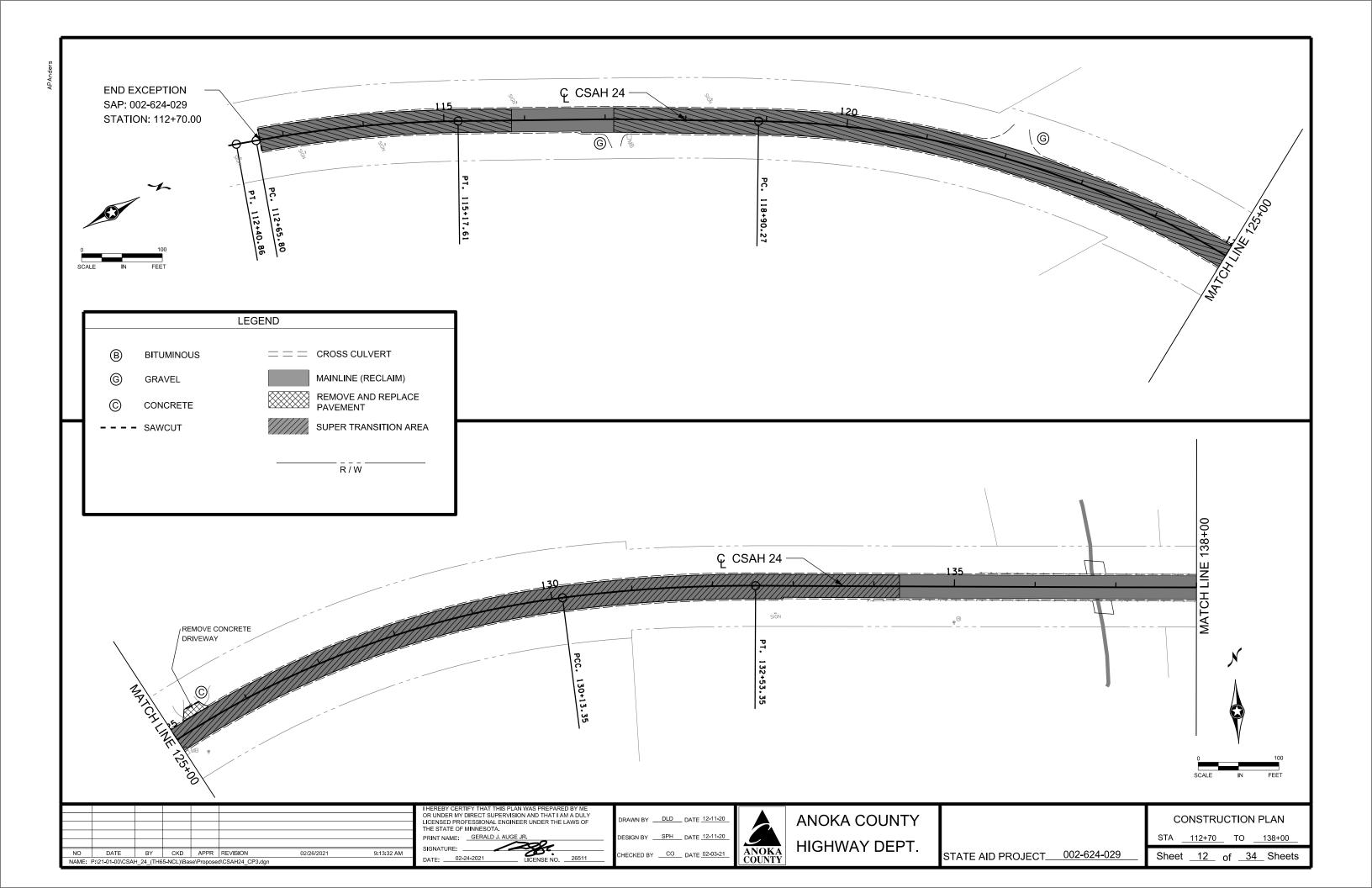
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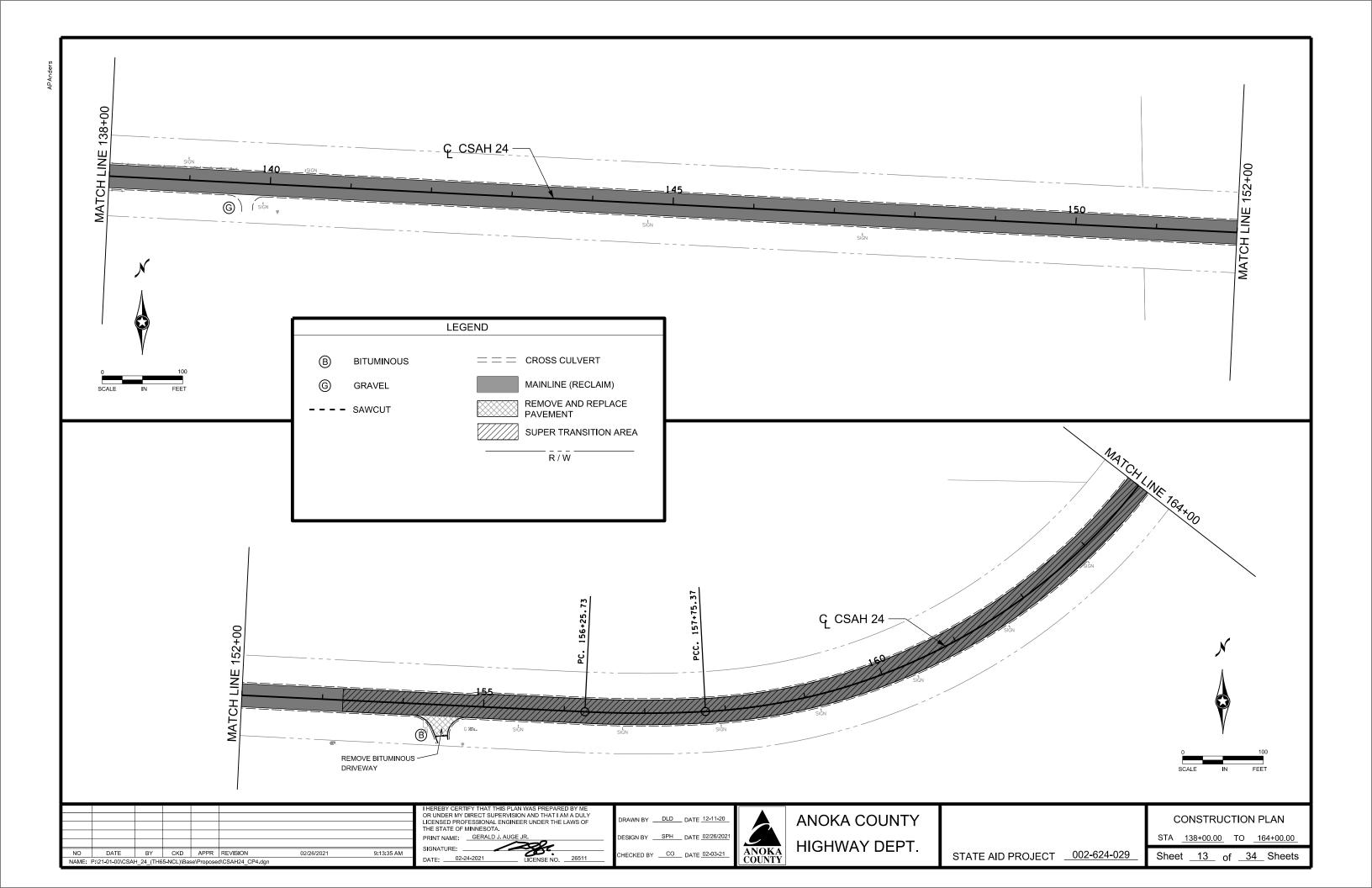
STATE AID PROJECT 002-624-029

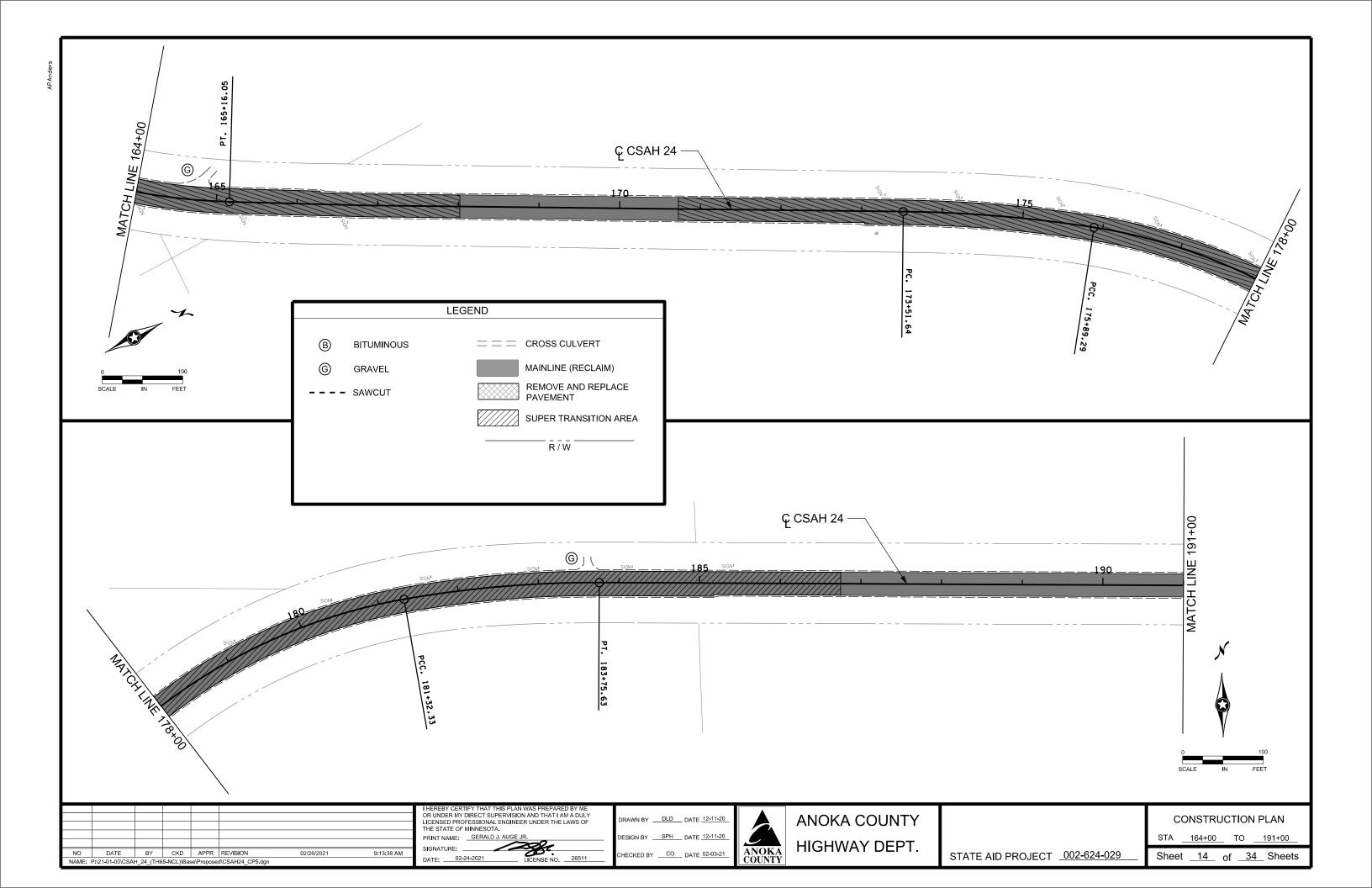
Sheet 9 of 34 Sheets

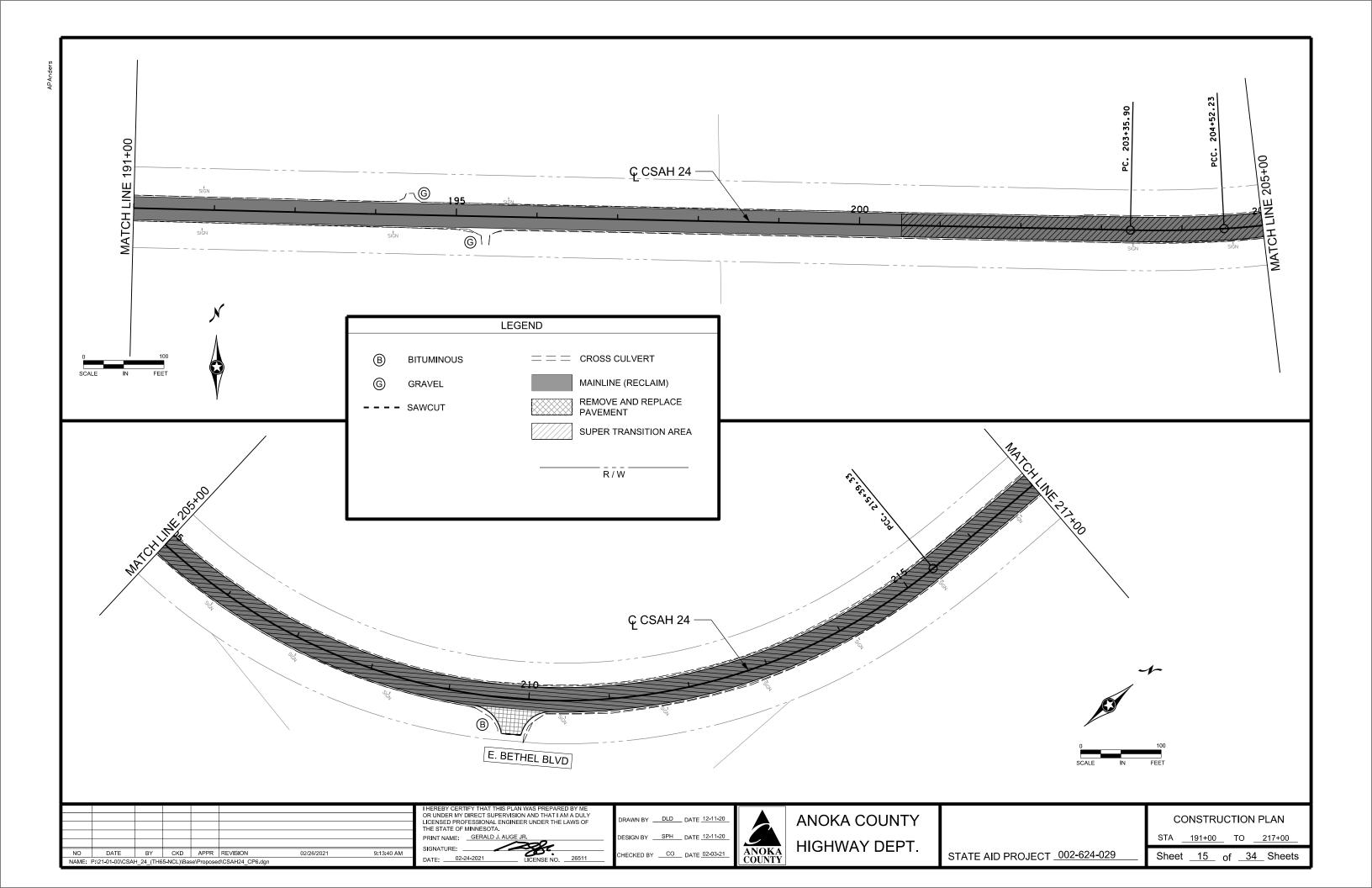


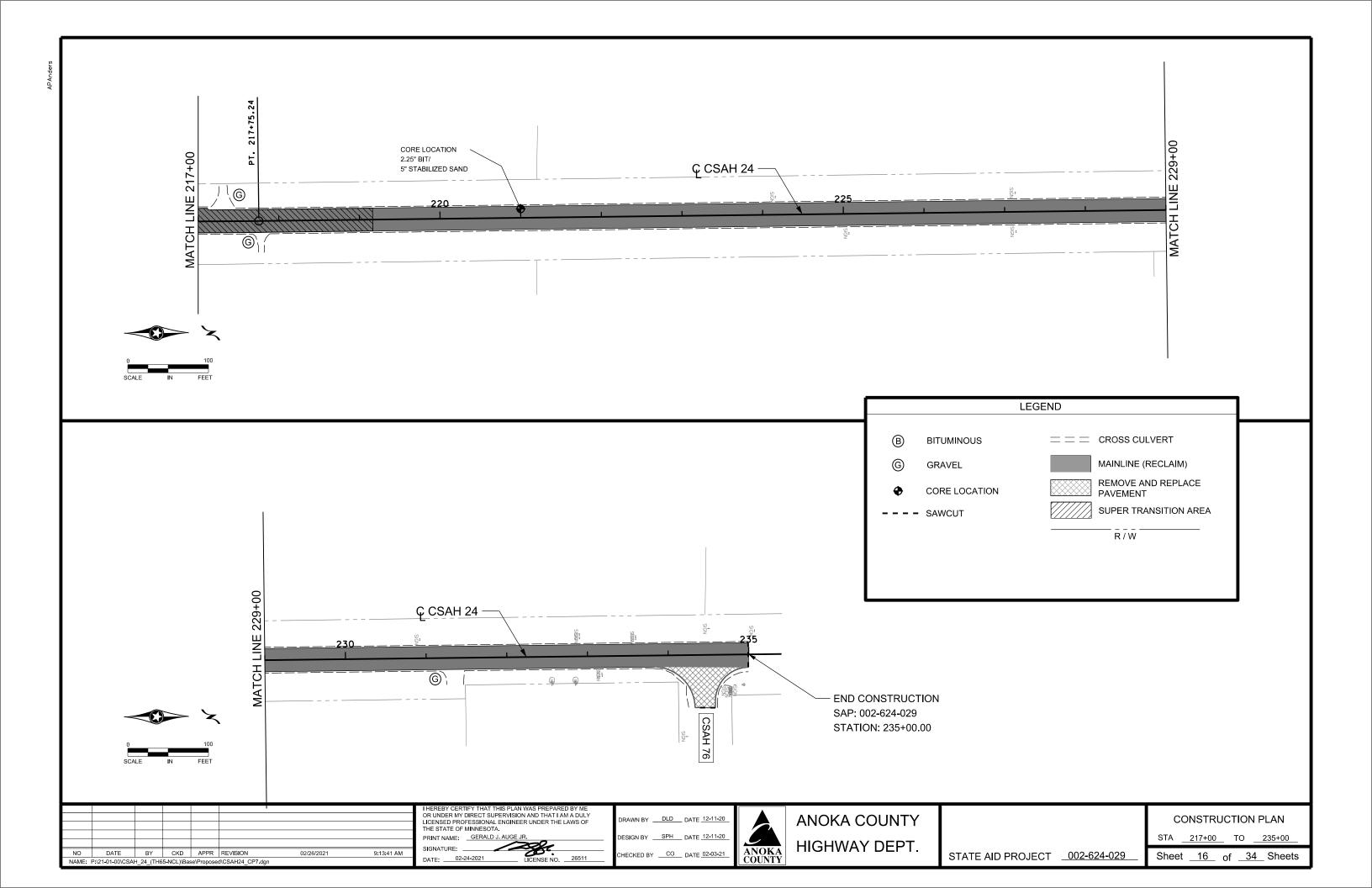












PERMANENT PAVEMENT MARKING PLAN NOTES AND GUIDELINES

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 \$\frac{1}{4}\$ INCH UNDER OR \$\frac{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.

EPO II

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 EPOXY PAVEMENT MARKINGS.

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

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND 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 FILM 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.

ПЕМ	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - MULTI COMP	LINFT	34179
8" DOTTED LINE WHITE - MULTI COMP	LINFT	36
4" SOLID LINE YELLOW - MULTI COMP	LINFT	6262
4" SOLID DOUBLE LINE YELLOW - MULTI COMP	LINFT	8432
4" BROKEN LINE YELLOW - MULTI COMP	LINFT	1642
24" SOLID LINE WHITE - PREF THERMO ESR GR IN	SQFT	56
3'x6' ZEBRA CROSSWALK - PREF THERMO ESR GR IN	SQFT	234
PAVEMENT MESSAGE (RIGHT ARROW) - PREFORMED THERMOPLASTIC	SQFT	31

- 1 10' STRIPE 40' GAP
- 2 3' STRIPE 12' GAP

SYMBOLS & MATERIALS LEGEND

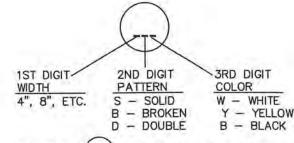
- CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC
- PAVEMENT MESSAGE (LEFT ARROW)
 PREFORMED THERMOPLASTIC

STRIPING KEY

- CIRCLE EPOXY SQUARE PREFORMED THERMOPLASTIC
- A TRIANG

TRIANGLE - PAINT

PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



EXAMPLE: (4SW)= 4" SOLID LINE WHITE - EPOXY

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY UDIRECT SUPPRISION AND THAT I AM A
DULY LICENSED PROFESSIONAL-PROSINE UNDER
THE LAWS OF THE STATE OP MINNESOTA.
PRINT NAME:
OSEPH J. MACPHERSON, P.E.
SIGNATURE:

AME: P:\(\text{21-01-00/CSAH_24_(TH65-NCL)\(\text{\text{Base}\)}} \)
LICENSE NO \(\text{46732}\)

DESIGN BY TMV NATE 11/25/20

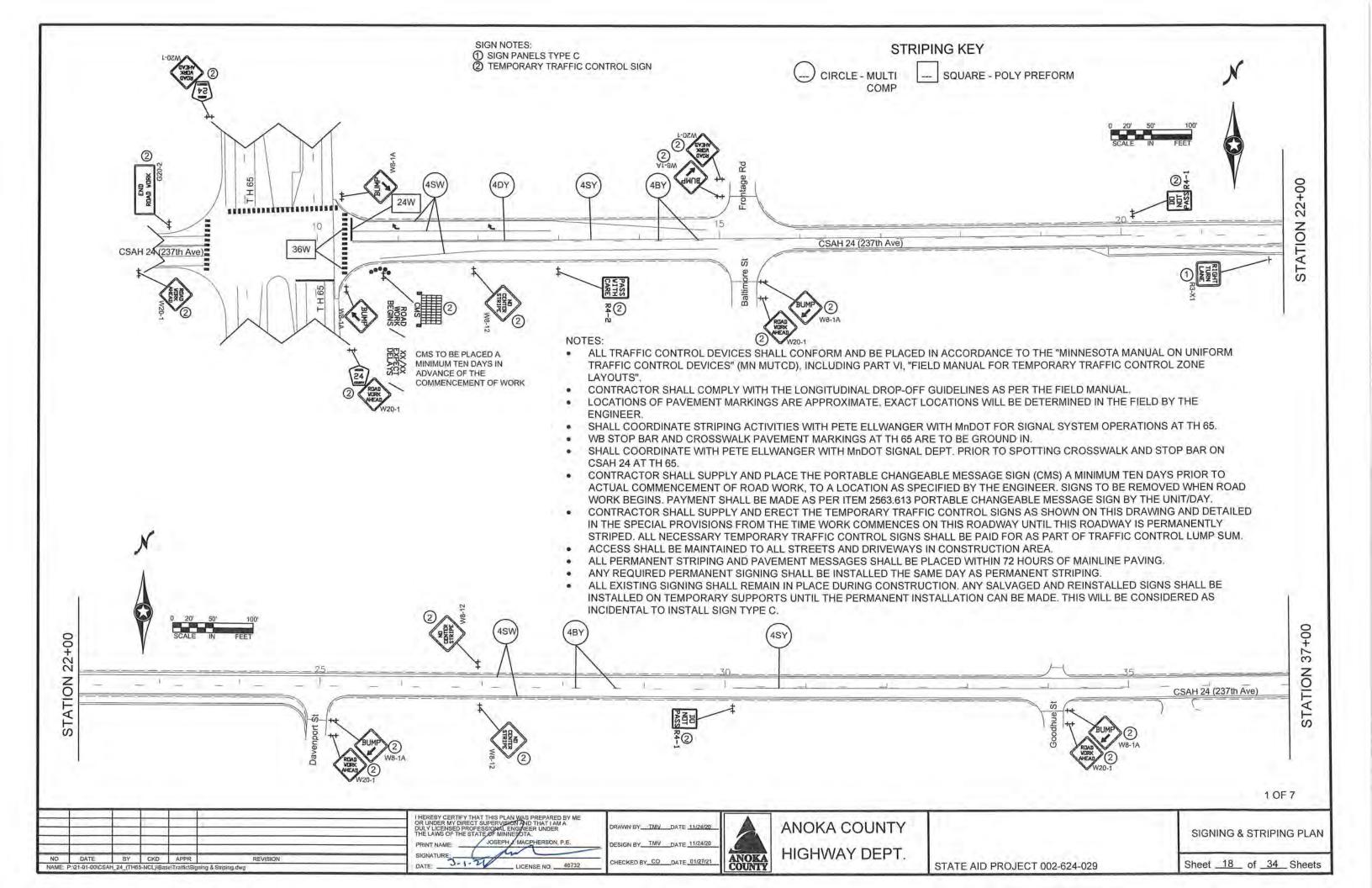


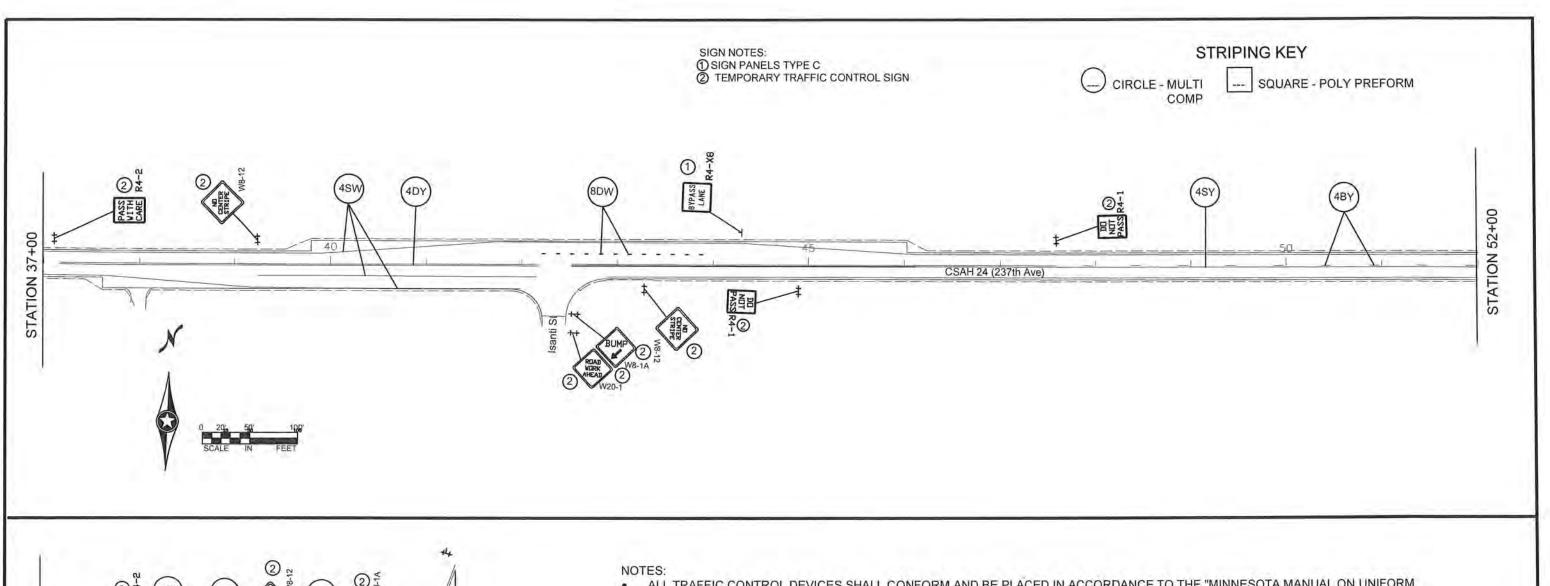
ANOKA COUNTY HIGHWAY DEPT.

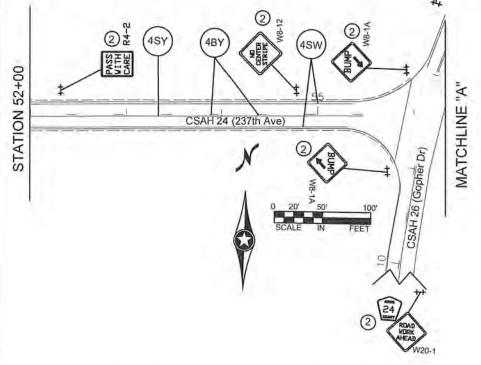
PERMANENT MARKING TABULATION

STATE AID PROJECT 002-624-029

Sheet __17_ of __34_Sheets



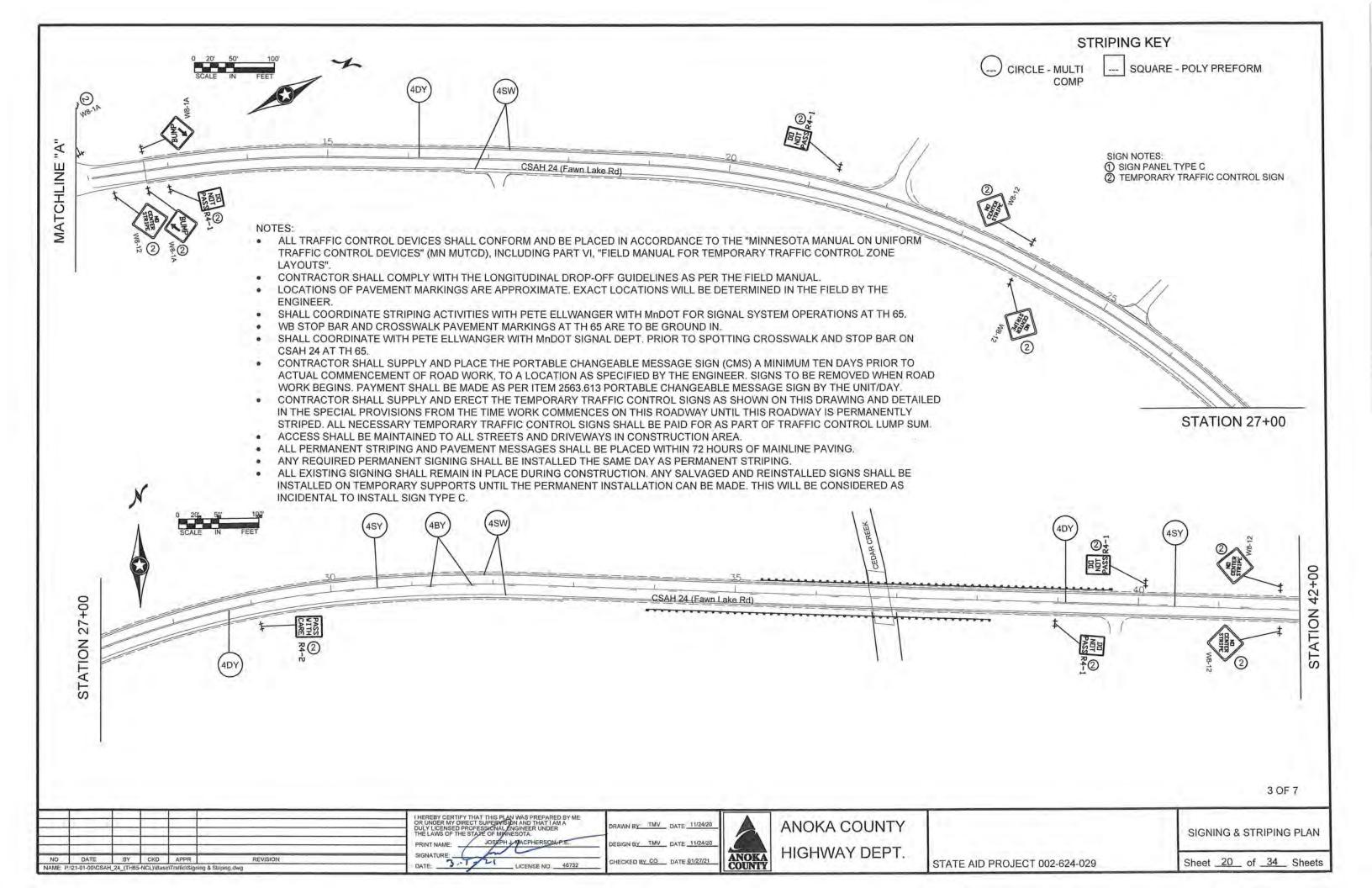


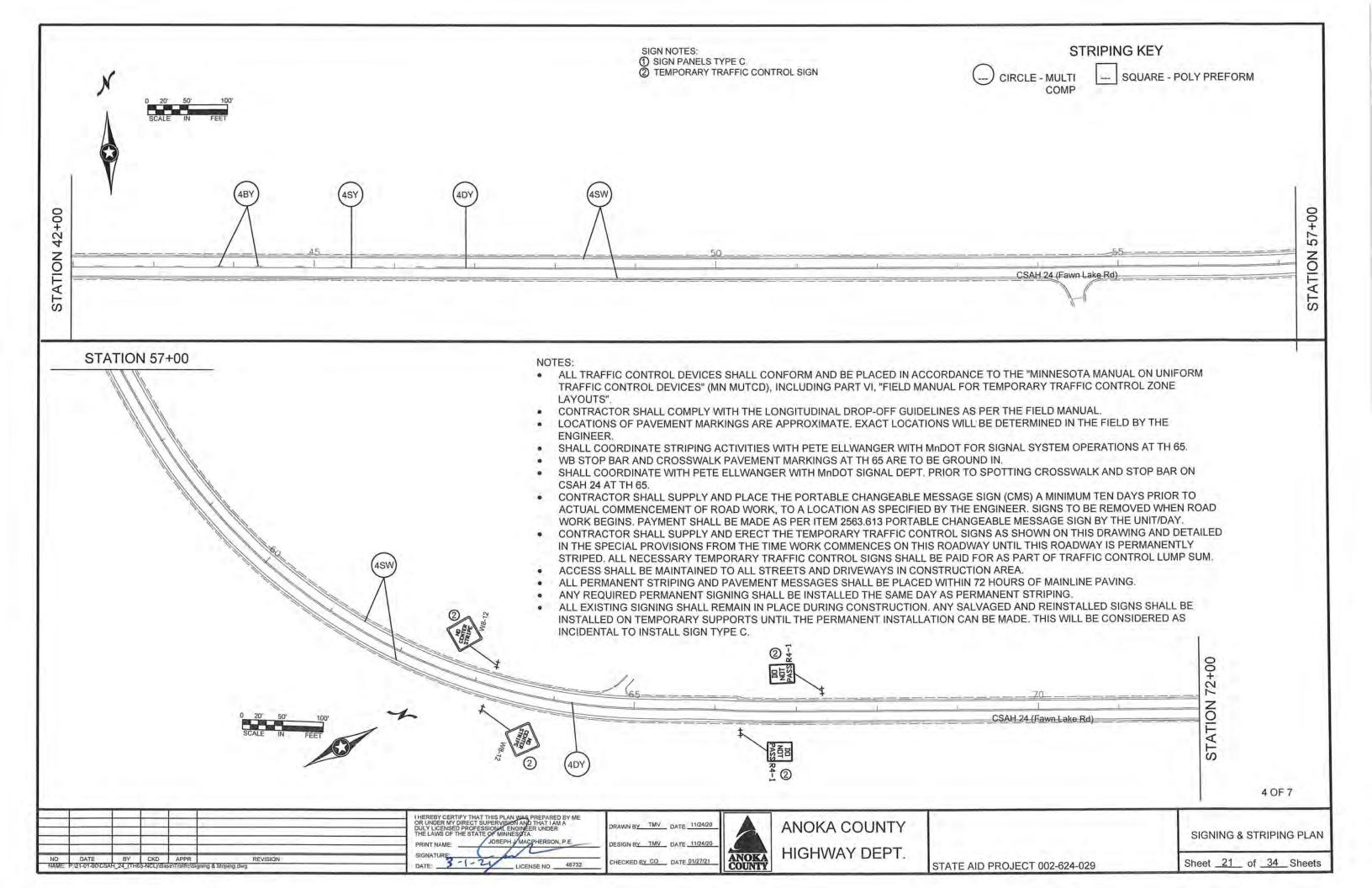


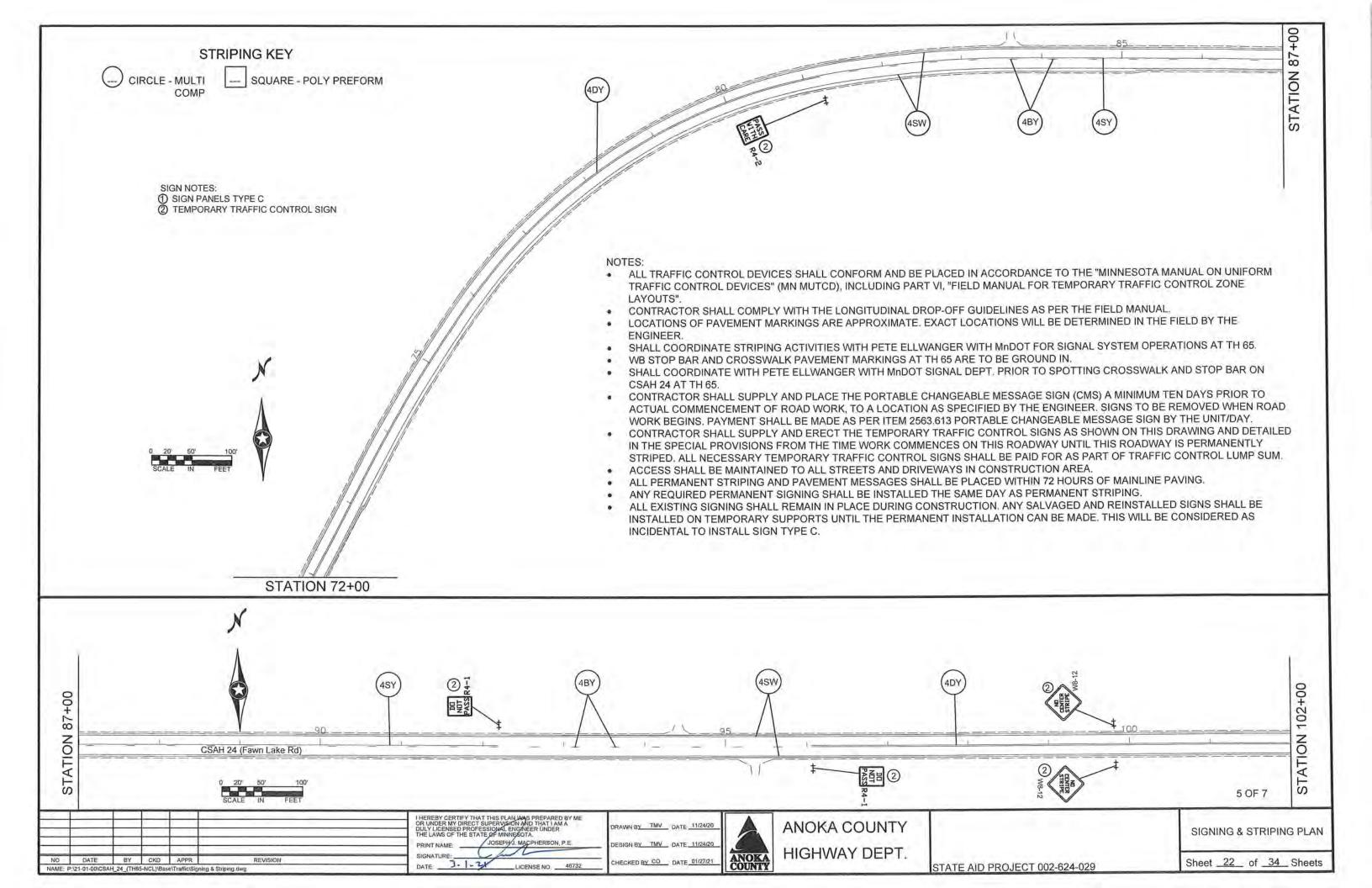
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM
 TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE
 LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- SHALL COORDINATE STRIPING ACTIVITIES WITH PETE ELLWANGER WITH MnDOT FOR SIGNAL SYSTEM OPERATIONS AT TH 65.
- WB STOP BAR AND CROSSWALK PAVEMENT MARKINGS AT TH 65 ARE TO BE GROUND IN.
- SHALL COORDINATE WITH PETE ELLWANGER WITH MnDOT SIGNAL DEPT. PRIOR TO SPOTTING CROSSWALK AND STOP BAR ON CSAH 24 AT TH 65.
- 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.

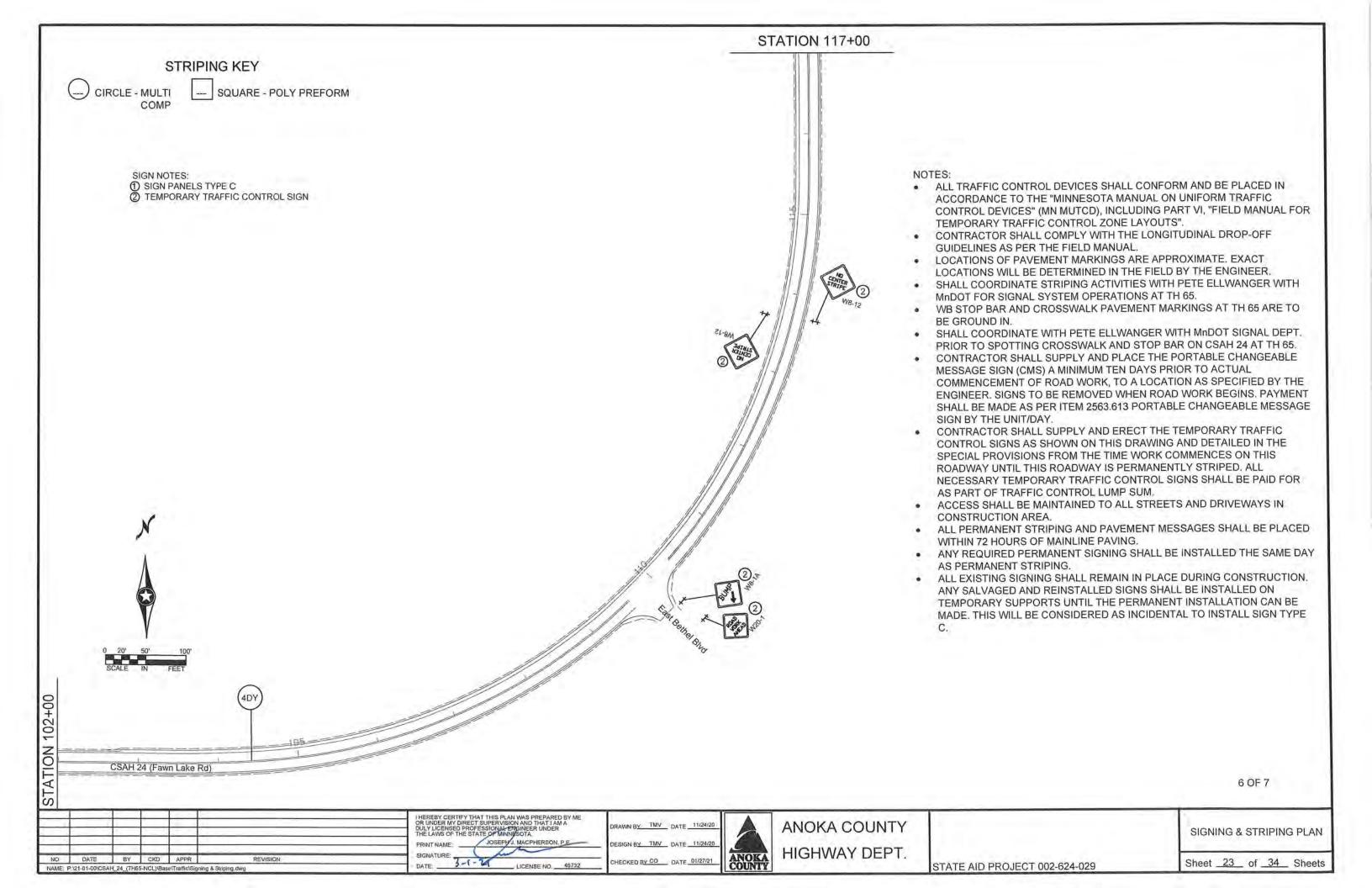
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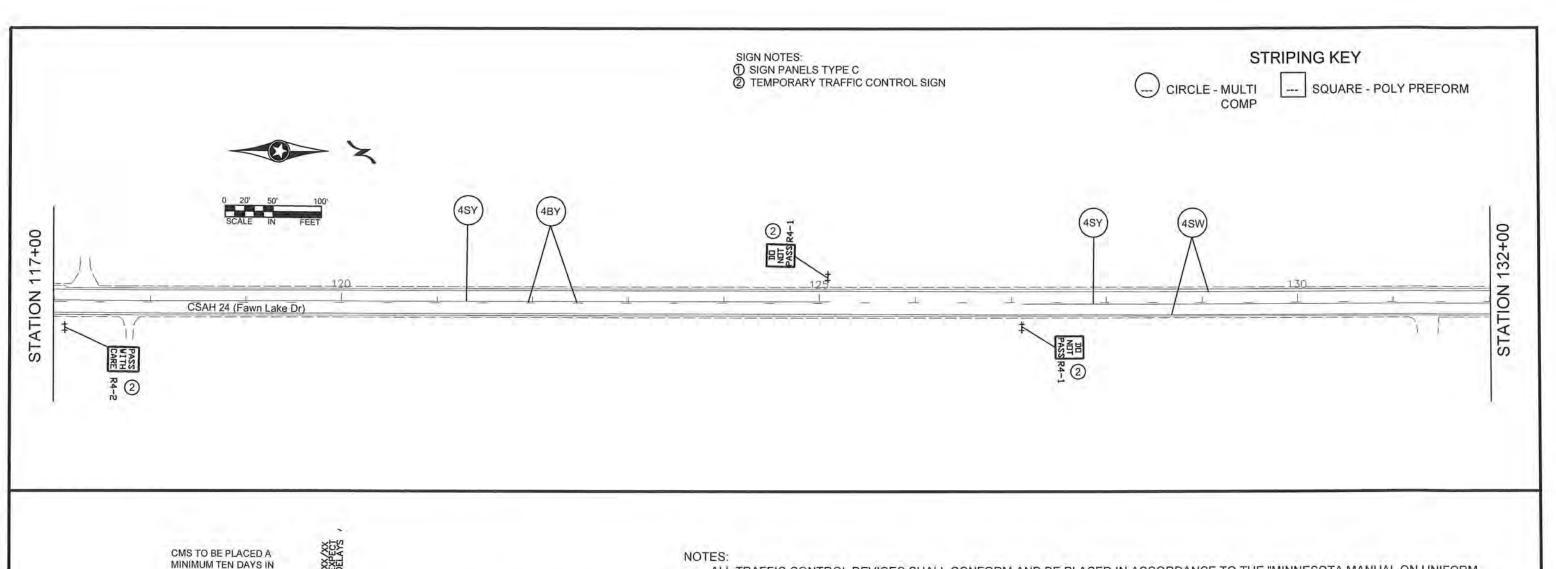
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				THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: JOSEPH MACPHERSON, P.E.	DESIGN BY TMV DATE 11/24/20				SIGNING & STRIPING PLAN
				I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A	DRAWN BY TMV DATE 11/24/20	A	ANOKA COUNTY		

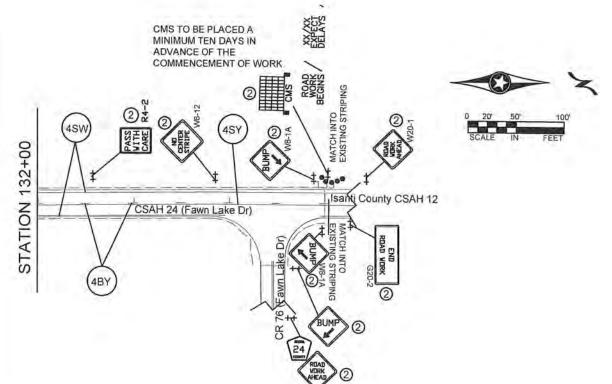






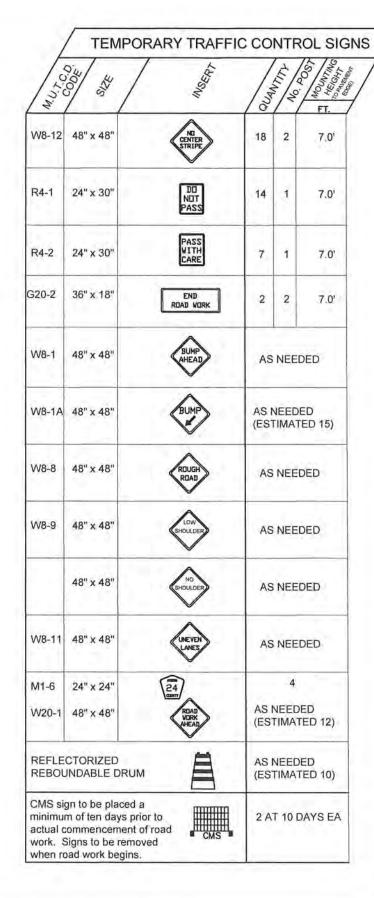






- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM
 TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE
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 WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
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											7 OF 7
						THE LAWS OF THE STATE OF MINMESOTA.	DRAWN BY TMV DATE 11/24/20	A	ANOKA COUNTY		SIGNING & STRIPING PLAN
NO DAT	TE	BY	CKD	APPR	REVISION Striping.dwg	PRINT NAME: JUSEPH J. MIGUPHERSON, P.E. SIGNATURE: 3-1-21 LICENSE NO. 46732	CHECKED BY CO DATE 01/27/21	ANOKA	HIGHWAY DEPT.	STATE AID PROJECT 002-624-029	Sheet <u>24</u> of <u>34</u> Sheet



		SIGN	PANELS	TYPE C			
M.U.T.C.D.	SIZE	INSERT	QUANTITY	PANEL AREA SQ. FT.	TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT To pavement edge
R3-X1	30" x 30"	RIGHT TURN LANE	A.	6.25	6.25	j	7.0'
		TOTAL	TOPE C SIGN S	SO FT	12.50		
		PRO I	ECT TOTAL S	∃ FT	12.50		

CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

	R	0	Α	D		1
	W	0	R	K		
В	Е	G	1	N	S	

	<	D	Α	T	Е	
1-1	E	Х	P	E	С	T
	D	Е	L	Α	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.

CMS sign to be placed a minimum of ten days prio actual commencement of work. Signs to be remove when road work begins.

NO DATE BY CKD APPR REVISION

NAME: P:V1-01-00/CSAH_24_(TH65-NCL)/Baset/Traffic/Signing & Stifping dwg

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

PRINT NAME:

PRINT NAME:

PROFESSIONAL ENGINEER UNDER
E STATE OF MINNESOTA

JOSEPH MACPHERSON, P.E.

LICENSE NO. 46732

DESIGN BY TMV DATE 11/24/20

DESIGN BY TMV DATE 11/24/20

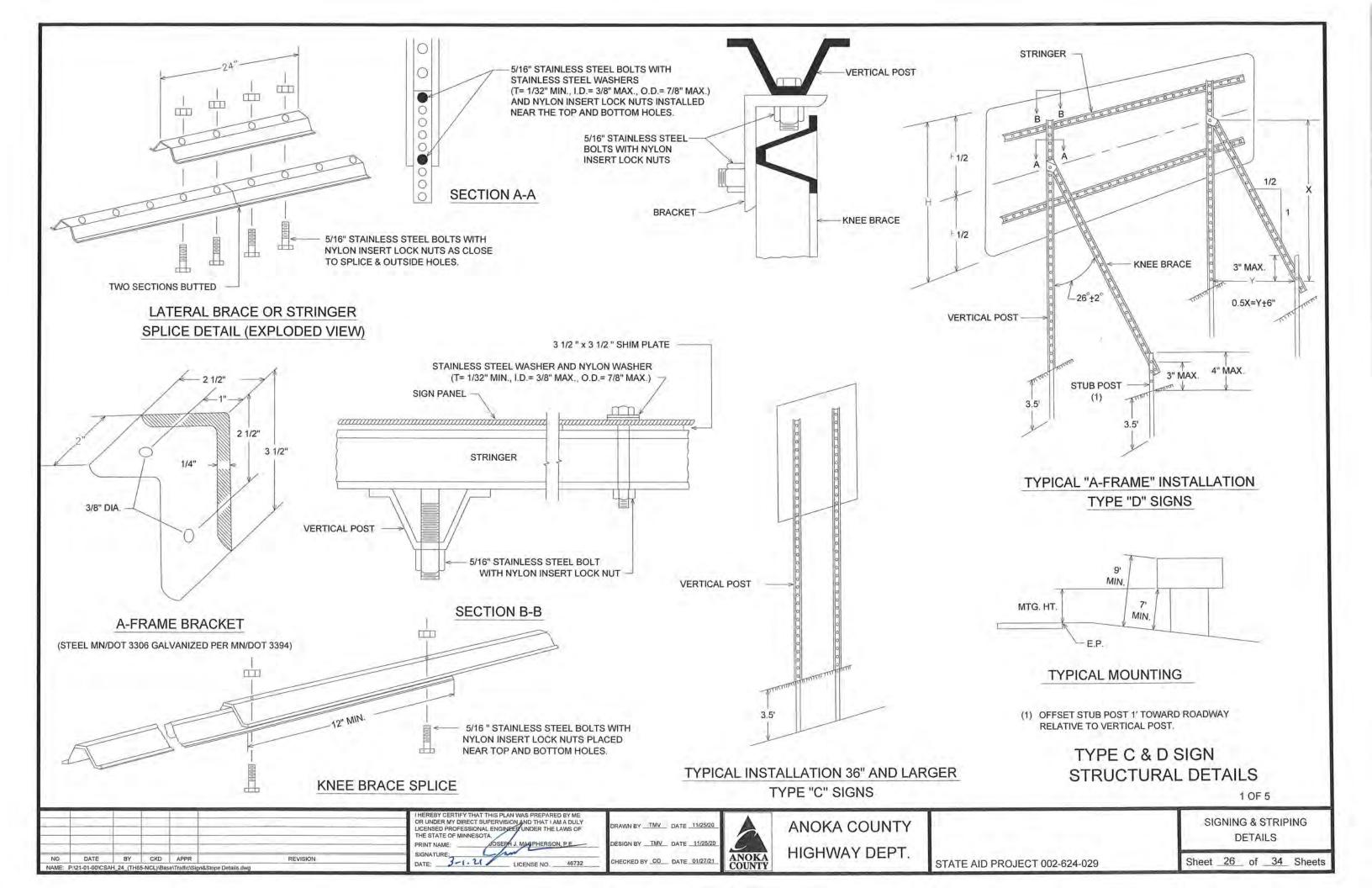
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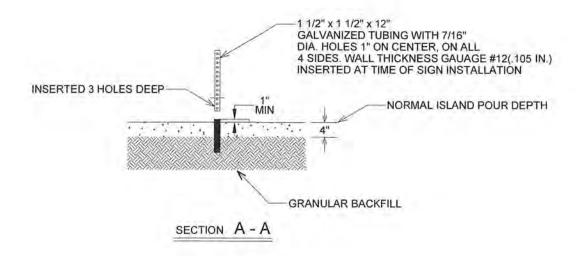


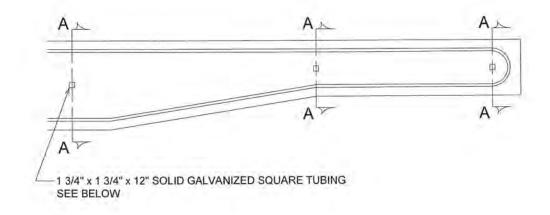
ANOKA COUNTY HIGHWAY DEPT. SIGNING & STRIPING QUANTITIES

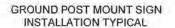
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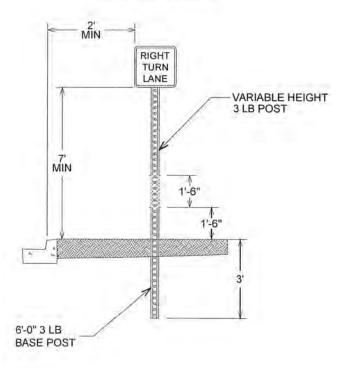
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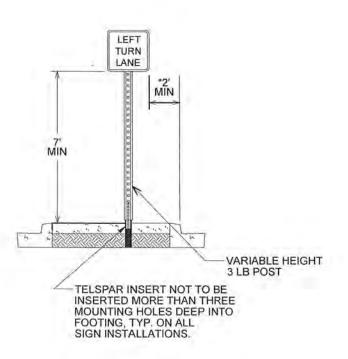




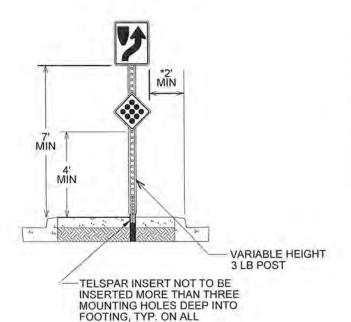




ISLAND MOUNT BREAK-AWAY SIGN INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN SIGN INSTALLATION TYPICAL KEEP RIGHT/CLUSTER



*1' MIN FOR NARROW URBAN LOCATIONS

INSTALLATION NEAR SIDEWALK (MN MUTCD)

The minimum height, measured vertically from the bottom of the sign to the sidewalk, of signs installed above sidewalks shall be 7 feet. If the bottom of a secondary sign that is mounted below another sign is mounted lower than 7 feet above a pedestrian sidewalk or pathway, the secondary sign shall not project more than 4 inches into the pedestrian facility.

2 OF 5

REVISION NO DATE BY CKD APPR

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

SIGNATURE

DRAWN BY TMV DATE 11/25/20



ANOKA COUNTY HIGHWAY DEPT.

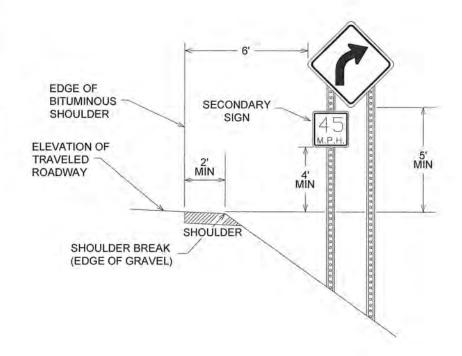
SIGN INSTALLATIONS.

SIGNING & STRIPING DETAILS

STATE AID PROJECT 002-624-029

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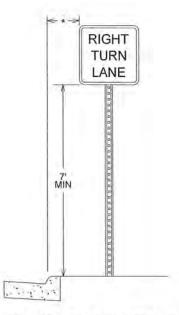
TYPICAL SIGN PLACEMENT (RURAL)



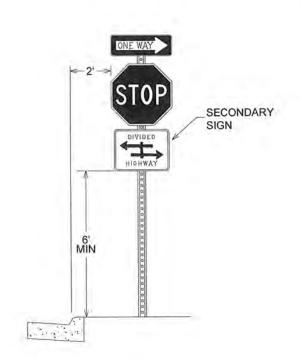
NOTES:

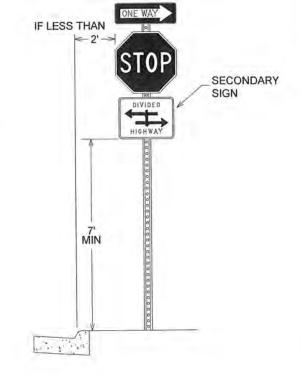
- -ALL DIMENSIONS ARE MINIMUMS
- -MAINTAIN A DISTANCE OF 2' BETWEEN SIGNS AND BITUMINOUS TRAIL
- -7' SIGN CLEARANCE IF A 2' DISTANCE BETWEEN SIGN AND BITUMINOUS TRAIL CANNOT BE MAINTAINED

TYPICAL SIGN PLACEMENT (URBAN)

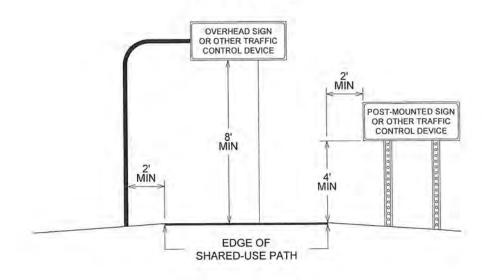


- *2' NARROW BOULEVARD (≤ 8' WIDE)
- 6' WIDE BOULEVARD





TYPICAL SIGN PLACEMENT SHARED-USE PATH



3 OF 5

SIGNATURE NO DATE BY CKD APPR REVISION

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:

LICENSE NO. 46732



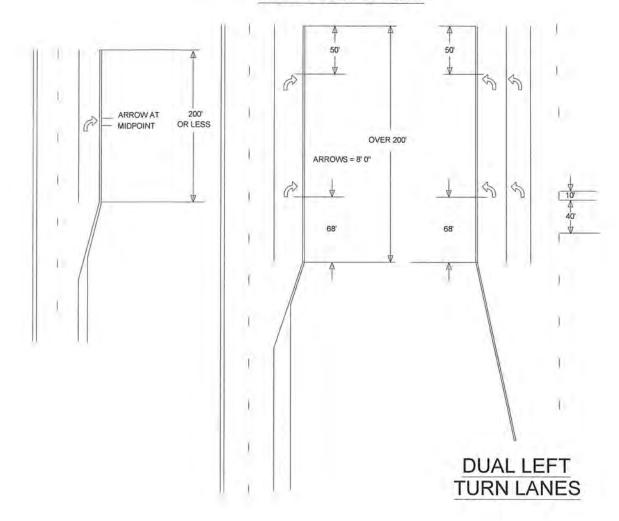
ANOKA COUNTY HIGHWAY DEPT. SIGNING & STRIPING

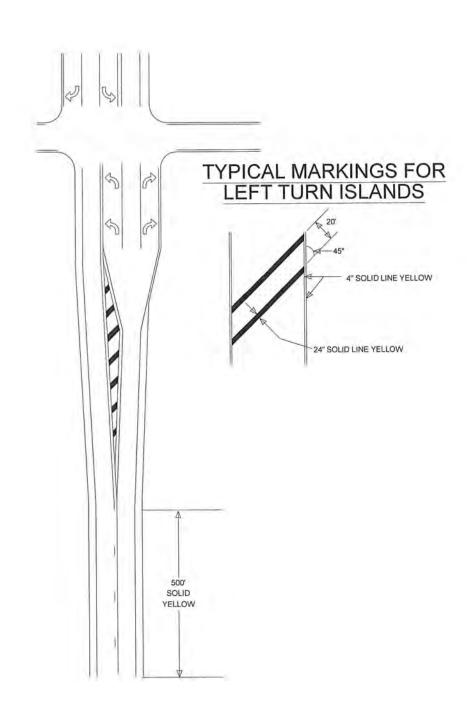
STATE AID PROJECT 002-624-029

DETAILS

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TYPICAL MESSAGE PLACEMENT FOR TURN LANES





4 OF 5

NO	DATE	BY	CKD	APPR	REVISION	I HEREBY CERTIFY THAT THIS OR UNDER MY DIRECT SUPER: LICENSED PROFESSIONAL ENG THE STATE OF MINNESOTA PRINT NAME: SIGNATURE
NAME:			*			DATE: J 1 2

HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY ICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA PRINT NAME: JOSEPH J. MACPHERSON, P.E.

DRAWN BY TMV DATE

THE LAWS OF DESIGN BY TMV DATE

THE LAWS OF DESIGN BY TMV DATE

THE LAWS OF DESIGN BY TMV DATE

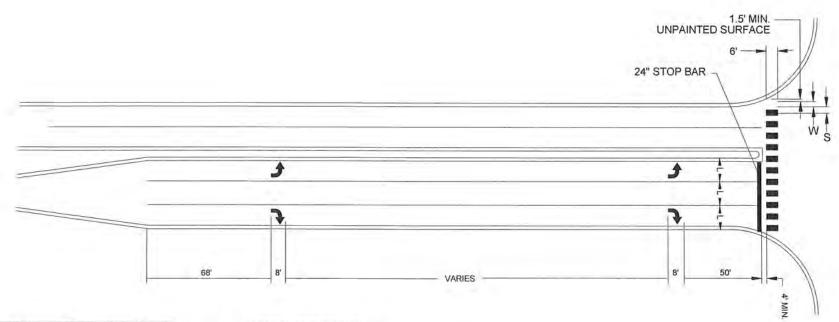


ANOKA COUNTY HIGHWAY DEPT. SIGNING & STRIPING DETAILS

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MARKINGS FOR PEDESTRIAN CROSSWALKS



(L)	(W)	(S)
WIDTH OF INSIDE LANE	WDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13"	3.0'	3.5'

NOTES: CROSSWALKS:

- PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES. EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) INSIDE LANE.

5 OF 5

NO DATE BY CKD APPR REVISION THE STATE OF MINNESO DATE: 3-1-21/

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.

JOSEPH J. MACPHERSON, P.E.

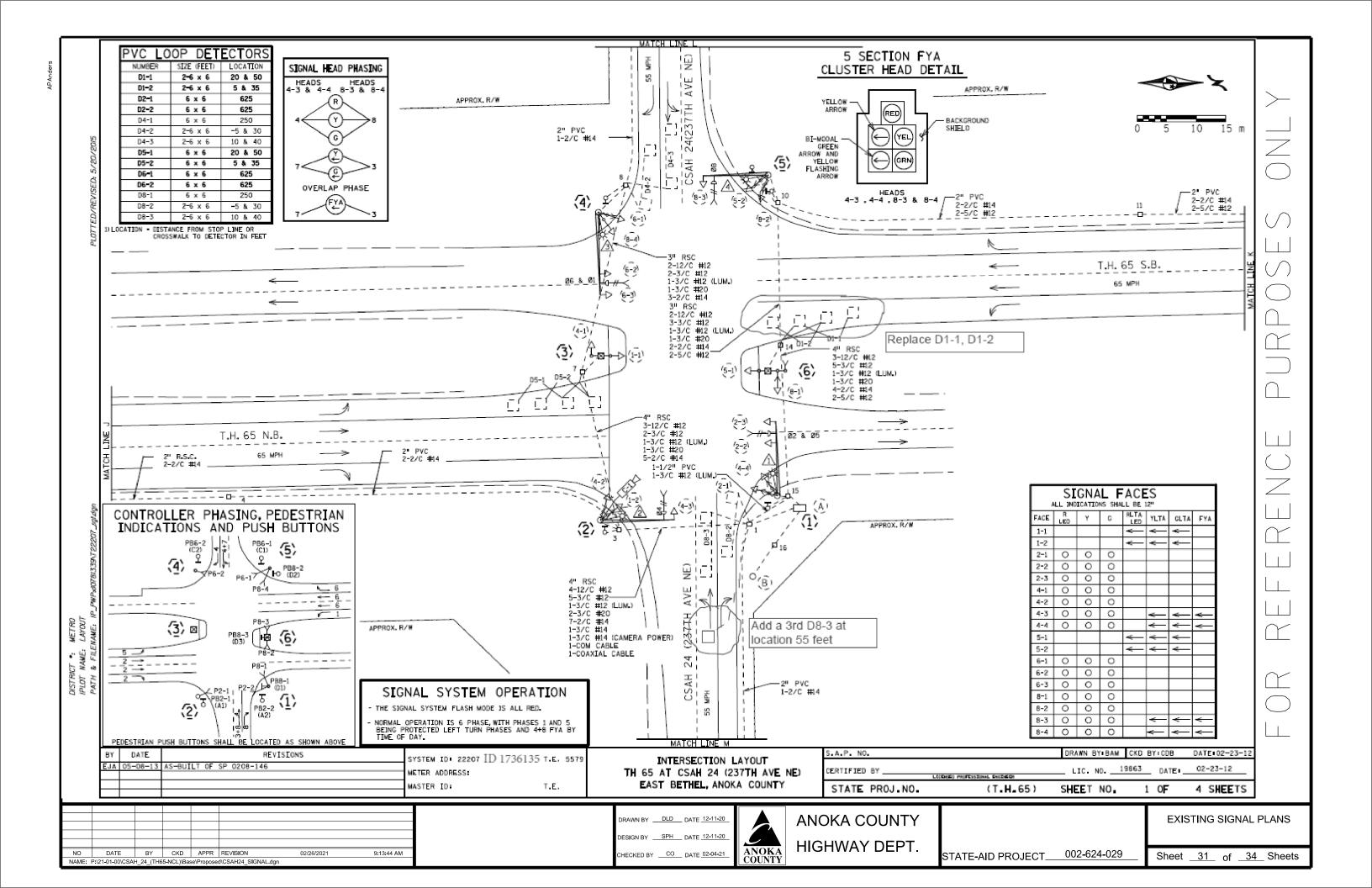
DRAWN BY TMV DATE 11/25/20

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT. SIGNING & STRIPING DETAILS

STATE AID PROJECT 002-624-029

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MET NOT

DATE

BY

DATE

EJA 05-08-13 AS-BUILT OF SP 0208-146

CKD APPR REVISION

1 PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9 (DAVIT AT 350 DEG)
2-SWING AWAY HINGES
OVERDHEAD AT 0' PA100 POLE FOUNDATION 2-ONE WAY SIGNALS OVERHEAD AT O' AND 11 2-TYPE 10B POLE MOUNTED AT 0 DEG AND 270 DEG 2-C.D. PED IND ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT PHASES 285 LUMINAIRE-200 W HPS RADIO INTERCONNECT ANTENNA (ETHERNET) 1-APS PB AND SIGN (LT ARROW) (PB8-1) EXTEND INTO HH 15 3" RSC 2-12/C #12 3-3/C #12 2-3/C #12 (LUM.) 1-3/C #20 1-3/C #14 1-COM CABLE (ANTENNA) APS PED PB STA (PB2-2) 1-APS PB AND SIGN (RT ARROW) EXTEND INTO HH 15s

PAIGO POLE FOUNDATION
TYPE PAIGO-A-40-D40-9 (DAVIT AT 350 DEG)
1-X6-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG)
(INCLUDES LIGHTNING ROD, 7/16" GROUND BRAID AND GROUND ROD)
1-VIDEO CAMERA WITH MOUNT 2-SWING AWAY HINGES ONE WAY SIGNAL OVERHEAD AT O' TYPE 10A POLE MOUNTED AT 270 DEG TYPE 10B POLE MOUNTED AT 0 DEG ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT PHASE 4 LUMINAIRE-200 W HPS 1-R10-X12 SIGN ADJACENT TO HEAD (4-3) EXTEND INTO HH 3 3" RSC 1-12/C #12 3-3/C #12 2-3/C #12 (LUM.) 1-3/C #14 1-2/C #14 1-7/16" GROUNDING BRAID TO GROUND ROD IN HH 3 1-3/C #14 (CAMERA POWER) 1-COM CABLE 1-COAXIAL CABLE

APS PED PB STA (PB2-1) 1-APS PB AND SIGN (LT ARROW) EXTEND INTO HH 3: 1-1/4" PVC 1-2/C #14

5 PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350 DEG) 2-SWING AWAY HINGES ONE WAY SIGNAL OVERHEAD AT O' 2-TYPE 10B POLE MOUNTED AT 0 DEG AND 270 DEG 22-c.D. PED IND
ONE WAY EVP DETECTOR AND CONFIRMATORY
LIGHT PHASE 8 LUMINAIRE-200 W HPS 1-R10-X12 SIGN ADJACENT TO HEAD (8-3) EXTEND INTO HH 10 3" RSC 2-12/C #12 3-3/C #12 1-3/C #12 (LUML) 2-2/C #14 APS PED PB STA (PBG-1)
1-APS PB AND SIGN (LT ARROW)
EXTEND INTO HH 10

APS PED PB STA (PB8-2) 1-APS PB AND SIGN (LT ARROW) EXTEND INTO HH 10: 1-1/4 PVC 1-2/C #14

B SOP - INPLACE WOOD POLE WEATHERHEAD 2" RSC TO HH 16 WITH 3-1/C #2

REVISIONS

02/26/2021

1-1/4" PVC

EQUIPMENT PAD CONTROLLER AND CABINET SERVICE EQUIPMENT (PAD MOUNTED) LOAD CENTER TO CABINET

2-1/C #6 1-1/C #6 INS. GR.

POLE NOTES TH 65 AT CSAH 24 (237TH AVE NE) EAST BETHEL, ANOKA COUNTY

S.A.P. NO. DRAWN BY BAM CKD BY CDB DATE: 02-23-12 LIC. NO. ___19863__ 02-23-12 CERTIFIED BY _ STATE PROJ.NO. (T.H.65) SHEET NO. 3 OF 4 SHEETS

DRAWN BY ____DLD___ DATE _12-11-20_ DESIGN BY SPH DATE 12-11-20 9:14:00 AM CHECKED BY ____CO__ DATE _02-04-21

T.E.

SYSTEM ID: 22207 ID 1736135 T.E. 5579

METER ADDRESS:

MASTER ID:



ANOKA COUNTY HIGHWAY DEPT.

CONTROLLER CABINET TO HH 15

STATE-AID PROJECT_

EXISTING SIGNAL PLANS

002-624-029

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4' RSC 5-12/C #12 8-3/C #12 2-3/C #20 4-2/C #14 1-3/C #14 2-5/C #12 1-COM CABLE (ANTENNA) LOAD CENTER TO HH 15 CONTROLLER CABINET TO HH 1 4 RSC 4-12/C #12 5-3/C #12 2-3/C #20 10-2/C #14 2-3/C #12 (LUM.) METER TO HH 16 2" RSC 3-1/C #2 1-3/C #14 1-3/C #14 (CAMERA POWER) 1-COM CABLE (CAMERA) 1-COAXIAL CABLE STUB OUT THREAD AND CAP 3" RSC

10'PEDESTAL POLE PLUS BASE 2-STRAIGHT MOUNT SIGNALS AT 0 AND 180 DEG 2-STRAIGHT MOUNT C.D. PED IND AT 90 AND 270 DEG 1-APS PB AND SIGN (DLB ARROW) (PB8-3) 3" COUNDUIT TO HH 14: 1-12/C #12 2-3/C #12

2-ONE WAY SIGNALS OVERHEAD AT 0 AND 11 TYPE 10A POLE MOUNTED AT 0 DEG TYPE 10B POLE MOUNTED AT 270 DEG 1-C.D. PED IND ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT PHASES 6&1 LUMINAIRE-200 W HPS EXTEND INTO HH 8 3" RSC 2-12/C #12 2-3/C #12 1-3/C #12 (LUM.) 1-2/C #14 1-3/C #20

4) PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350 DEG)
2-SWING AWAY HINGES

PEDESTAL FOUNDATION

PEDESTAL FOUNDATION 10' PEDESTAL POLE PLUS BASE

3' PVC TO HH 7

2-STRAIGHT MOUNT SIGNALS AT 0 AND 180 DEG

APS PED PB STA (PB6-2) 1-APS PB AND SIGN (RT ARROW) EXTEND INTO HH 8: 1-2/C #14

STATE-AID PROJECT_

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