

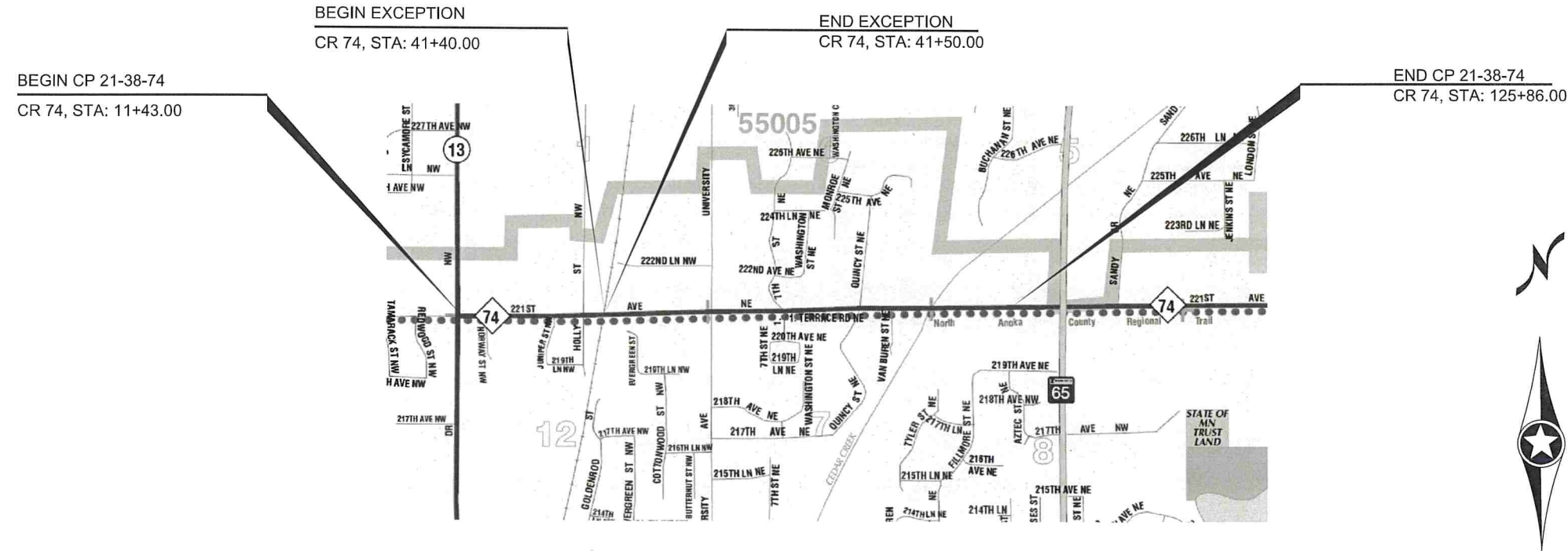
MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS SURFACING, BITUMINOUS RECLAMATION, AND RIGHT TURN LANE CONSTRUCTION

LOCATED ON CR # 74 BETWEEN CEDAR DRIVE NW (CSAH 13) AND 1220' WEST OF CENTRAL AVENUE NE (TH 65)

CR # 74
 GROSS LENGTH 11,443.00 FEET 2.167 MILES
 EXCEPTIONS-LENGTH 10.00 FEET 0.000 MILES
 NET LENGTH 11,433.00 FEET 2.165 MILES



GOVERNING SPECIFICATIONS

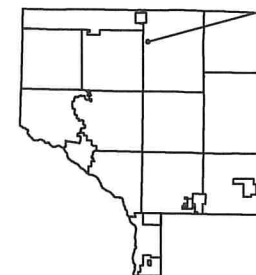
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

THIS PLAN CONTAINS 25 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3 - 5	TYPICAL SECTIONS
6 - 8	DETAILS
9 - 13	CONSTRUCTION PLAN
14	PERMANENT MARKING GUIDE
15 - 19	TEMPORARY STRIPING/PERMANENT SIGNING & STRIPING
20 - 25	SIGNING AND STRIPING DETAILS

PROJECT LOCATION



CITIES OF OAK GROVE & EAST BETHEL
 ANOKA COUNTY
 MN/DOT TRANSPORTATION DISTRICT - METRO
 SECTIONS 1, 5, 6, 7, 8, & 12
 TOWNSHIP 33 NORTH
 RANGE 23, 24 WEST

Approved 2-10-22
 ANOKA COUNTY ENGINEER

DESIGN DESIGNATION (CR #74)

ESAL 20	<u>511.769</u>	FUNCTIONAL CLASSIFICATION	<u>MINOR ARTERIAL</u>
R VALUE	<u>50</u>	NO. OF TRAFFIC LANES	<u>2</u> NO. OF PARKING LANES <u>X</u>
ADT (2022)	<u>4332</u>	DESIGN SPEED	<u>55</u> MPH
PROJ. ADT (2042)	<u>4332</u>	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCADT (2042)	<u>256</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

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: AARON P. ANDERSON
 SIGNATURE:
 DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY APA DATE 12/01/2021
 DESIGN BY APA DATE 12/01/2021
 CHECKED BY CO DATE 2/1/2022



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-38-74

TITLE SHEET

Sheet 1 of 25 Sheets

NO	DATE	BY	CKD	APPR	REVISION		
	02/09/2022					11:38:07 AM	

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 TITLE.dgn

STATEMENT OF ESTIMATED QUANTITIES

Notes	Item Number	Code	ITEM DESCRIPTION	Unit	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	00010	MOBILIZATION	LUMP SUM	1
	2021.601	00050	RAILROAD PROTECTIVE SERVICES	LUMP SUM	1
1	2104.503	00195	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	15
1	2104.503	00205	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	580
1,3	2104.504	00080	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	31
1,3	2104.504	00110	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	768
1,2	2104.504	00120	REMOVE BITUMINOUS PAVEMENT	SQ YD	1865
4	2106.602	00020	CONSTRUCT TURN LANES	EACH	2
5	2123.510	00020	MOTOR GRADER	HOUR	12
	2130.523	00010	WATER	M GALLON	288
6	2211.509	00070	AGGREGATE BASE CLASS 5	TON	259
	2215.504	00010	FULL DEPTH RECLAMATION	SQ YD	41089
7	2215.507	00010	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	80
8	2221.509	00080	SHOULDER BASE AGGREGATE CLASS 5	TON	970
9	2232.604	00470	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	192
	2357.506	00010	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2264
10	2360.509	13200	TYPE SP 9.5 WEARING COURSE MIXTURE (3;B)	TON	88
11	2360.509	24300	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	420
	2360.509	24300	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	10035
	2411.502	00030	CONCRETE FLUME	EACH	2
	2531.503	02080	CONCRETE CURB AND GUTTER DESIGN B418	LIN FT	742
	2531.504	00060	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	39
12	2540.602	00150	MAIL BOX SUPPORT	EACH	33
	2563.601	00001	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1
13	2563.601	00010	TRAFFIC CONTROL	LUMP SUM	1
14	2563.613	01100	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
	2564.518	00130	SIGN PANELS TYPE C	SQ FT	14.50
	2574.507	00100	COMMON TOPSOIL BORROW	CU YD	142
15	2575.508	40003	HYDRAULIC REINFORCED FIBER MATRIX	POUND	1853
16	2581.503	00010	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	915
17	2582.503	30104	4" SOLID LINE MULTI-COMPONENT	LIN FT	16830
17	2582.503	30204	4" BROKEN LINE MULTI-COMPONENT	LIN FT	1830
17	2582.503	30308	8" DOTTED LINE MULTI-COMPONENT	LIN FT	36
17	2582.503	30404	4" DOUBLE SOLID LINE MULTI-COMPONENT	LIN FT	2150
18	2582.518	04000	PAVEMENT MESSAGE PREFORM THERMOPLASTIC	SQ FT	124
17	2582.603	79000	PAVEMENT MARKING SPECIAL	LIN FT	72

CONSTRUCTION NOTES

1	REFERENCE DETAILS (PAGE 4) FOR REMOVAL DETAILS
2	INCLUDES REMOVAL OF BITUMINOUS FLUMES
3	ITEM FOR BITUMINOUS DRIVEWAYS AND STREET APPROACHES. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
4	ITEMS INCLUDED IN THE TURNLANE BY THE EACH ARE - COMMON EXCAVATION, SELECT GRANULAR BORROW, TOPSOIL , AGG BASE CL-5. SHAPING OF SUBGRADE AND AGGREGATE BASE ARE INCIDENTAL TO CONSTRUCT TURN LANES ITEM.
5	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIMAREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
6	GRAVEL BASE FOR BITUMINOUS DRIVEWAYS.
7	ITEM USED TO HAUL EXCESS RECLAIM FROM TIE-IN POINTS AND REUSED ON SITE.
8	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
9	TO BE USED FOR MILLING STREET APPROACHES AND/OR DETAIL MILLING AREAS AS IDENTIFIED IN THE PLAN. DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES, AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
10	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
11	ITEM FOR STREET APPROACHES. STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING
12	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POST MASTER AUTHORITY. CONTRACTOR IS RESPONSIBLE FOR CONTACTING LOCAL POST MASTER AUTHORITY. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
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. CANNOT BE INSTALLED SOONER THAN 48 HOURS.
18	INCLUDES ALL THERMOPLASTIC STOP BARS, GORE AREA HATCHING, CROSSWALKS, LANE DESIGNATION ARROWS, AND PAVEMENT MESSAGES.

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
2575	SEED MIXTURE 25-121	61 LBS./ ACRE
2574	FERTILIZER TYPE 3	350 LBS./ ACRE
2575	HYDRAULIC REINFORCED FIBER MATRIX	3900 LBS./ ACRE

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

MNDOT STANDARD PLATES


PLATE NO.	DESCRIPTION
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)
9350B	MAILBOX SUPPORT - SWING-AWAY TYPE

NO	DATE	BY	CKD	APPR	REVISION	
	02/18/2022					9:09:34 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE: 

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY APA DATE 12/01/2021

DESIGN BY APA DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-38-74

STATEMENT OF ESTIMATED QUANTITIES

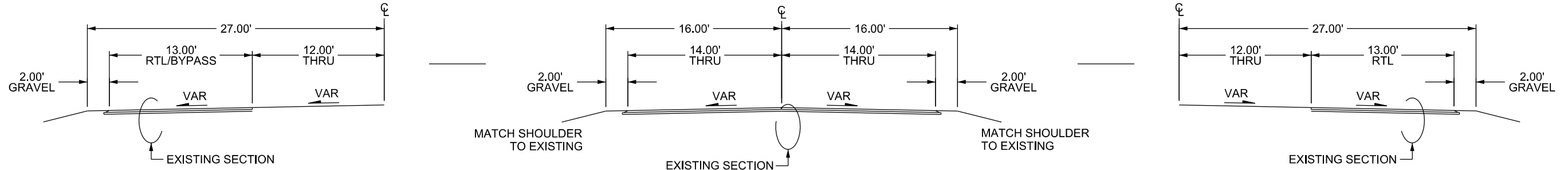
Sheet 2 of 25 Sheets

CR 74 - 221ST AVENUE NE (EXISTING) SECTION

36+30 - 40+98
51+49 - 57+78
62+73 - 68+60

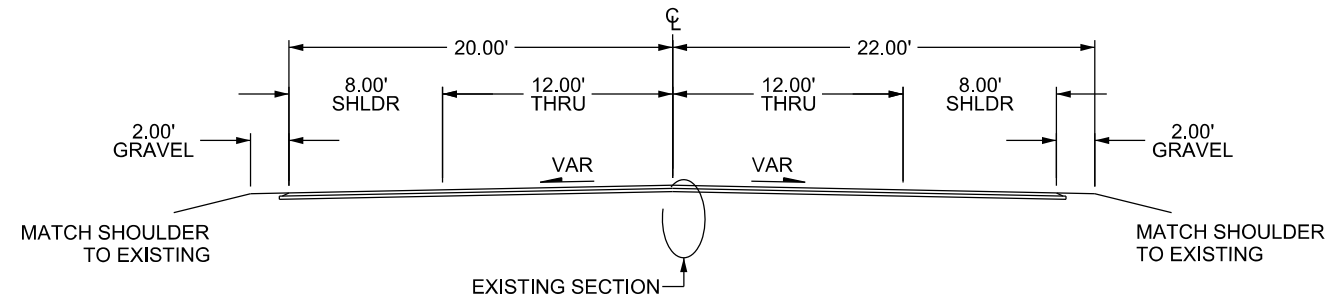
11+43 - 13+90 68+60 - 100+48
19+00 - 36+30 113+30 - 125+86
40+98 - 49+15
57+78 - 62+73

13+90 - 19+00
49+15 - 54+35

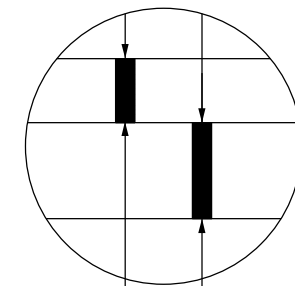


CR 74 - 221ST AVENUE NE (EXISTING) SECTION

100+48 - 109+05
112+82 - 113+30



EXISTING SECTION

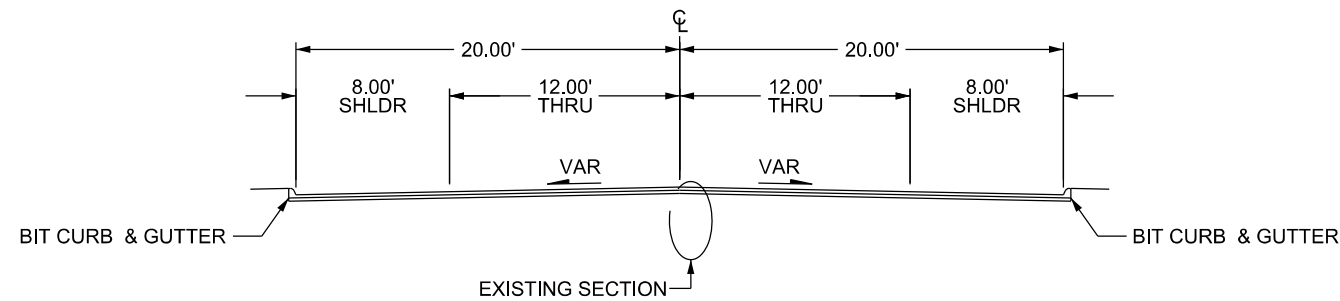


4.25" - 6.5" EXISTING BITUMINOUS

EXISTING GRANULAR BASE

CR 74 - 221ST AVENUE NE (EXISTING) SECTION

109+05 - 112+82



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					11:38:17 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE: *[Signature]*

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY: SRK DATE: 12/01/2021

DESIGN BY: SRK DATE: 12/01/2021

CHECKED BY: CO DATE: 2/01/2022



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-38-74

TYPICAL SECTIONS

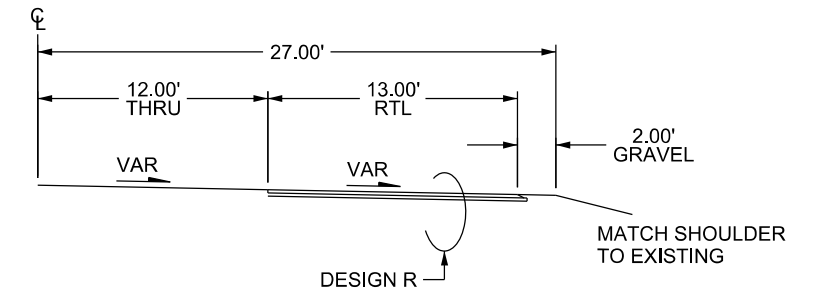
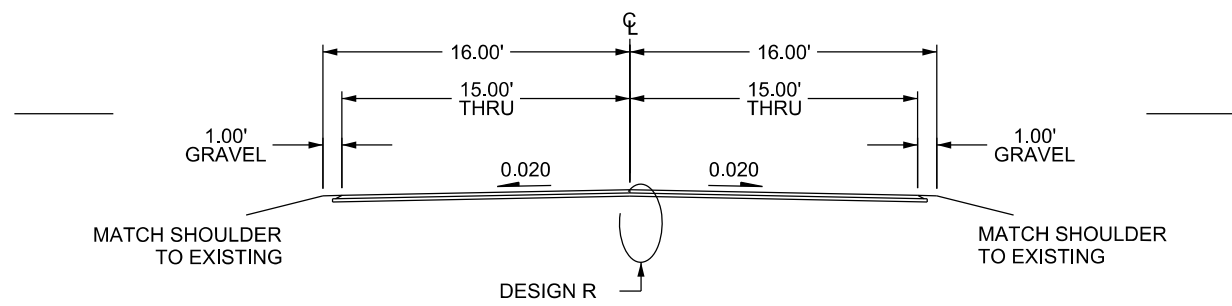
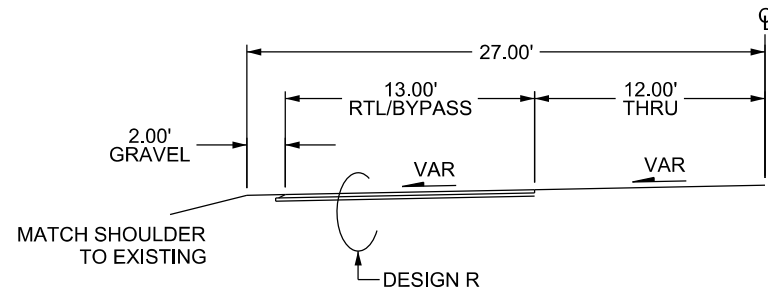
Sheet 3 of 25 Sheets

CR 74 - 221ST AVENUE NE PROPOSED SECTION

11+43 - 13+90 68+60 - 76+83
 19+00 - 36+30 81+63 - 100+48
 40+98 - 49+15 113+30 - 125+86
 57+78 - 58+62

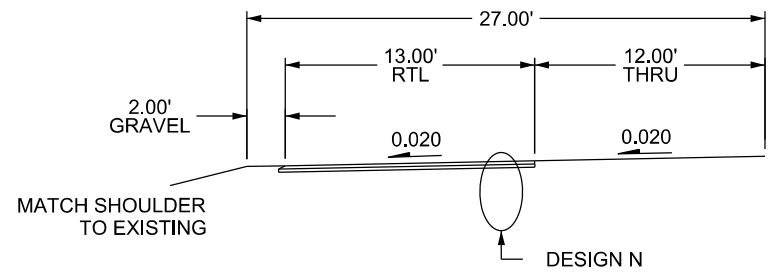
36+30 - 40+98
 51+49 - 57+78
 62+73 - 68+60

13+90 - 19+00
 49+15 - 54+35



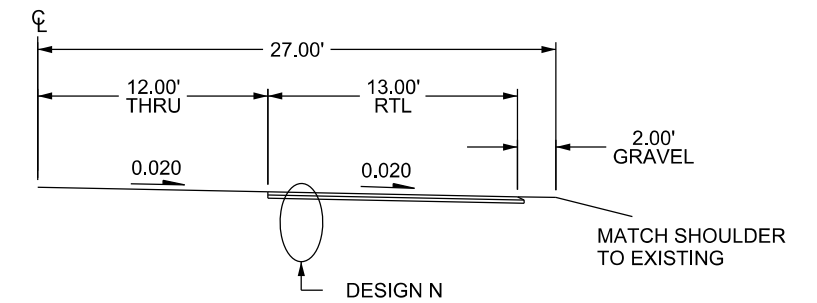
NEW RIGHT TURN LANE PROPOSED SECTION

76+83 - 81+63



NEW RIGHT TURN LANE PROPOSED SECTION

58+62 - 63+42

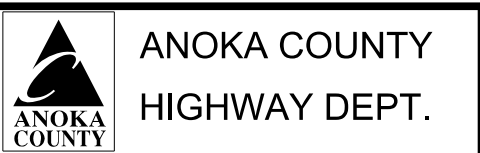


NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					11:38:18 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON
 SIGNATURE: *[Signature]*
 DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021
 DESIGN BY SRK DATE 12/01/2021
 CHECKED BY CO DATE 2/01/2022



COUNTY PROJECT 21-38-74

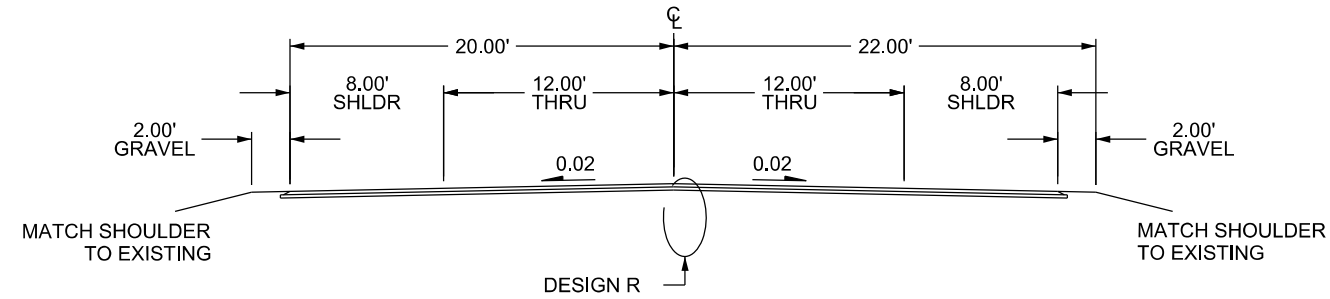
TYPICAL SECTIONS
 Sheet 4 of 25 Sheets

CR 74 - 221ST AVENUE NE

PROPOSED SECTION

100+48 - 109+05

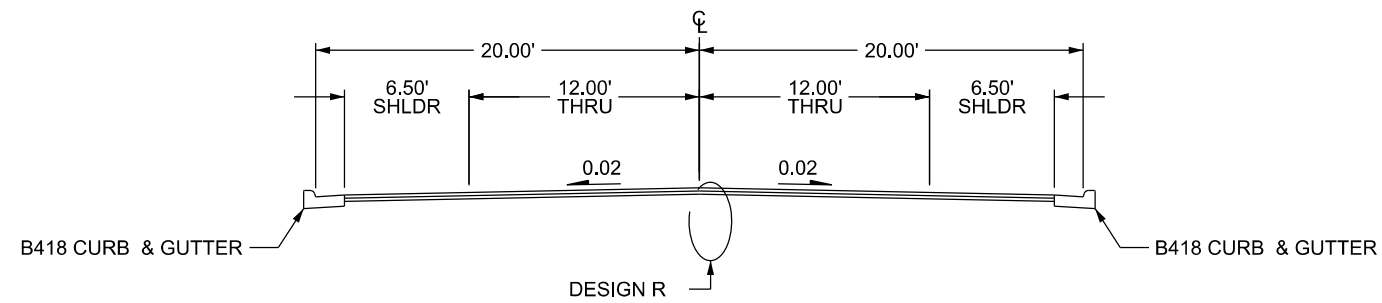
112+82 - 113+30



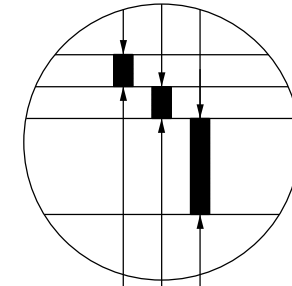
CR 74 - 221ST AVENUE NE

(EXISTING) SECTION

109+05 - 112+82

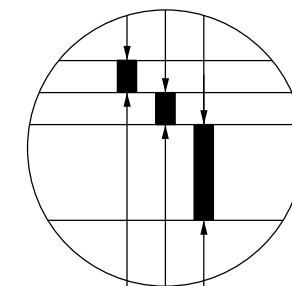


DESIGN R RECLAIM SECTION



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

DESIGN N RIGHT TURN LANE



2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
6" AGGREGATE BASE, CLASS 5

NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					11:38:18 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022



ANOKA COUNTY
HIGHWAY DEPT.

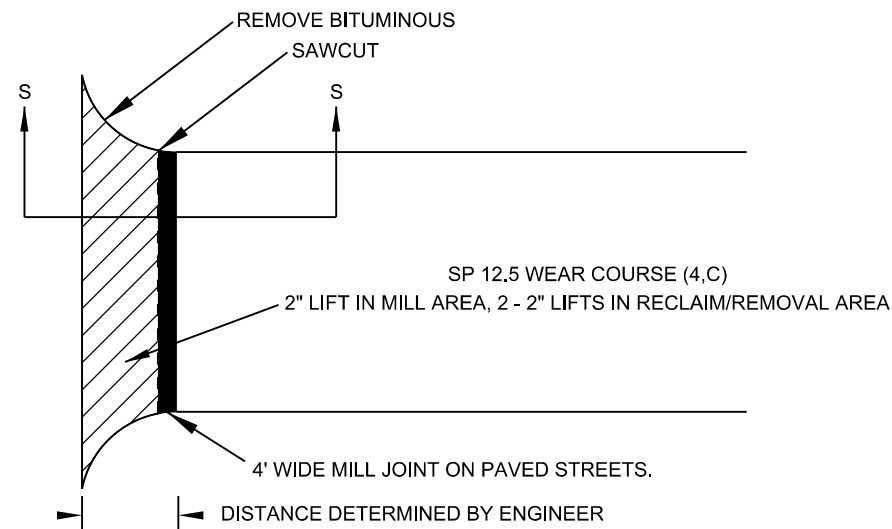
COUNTY PROJECT 21-38-74

TYPICAL SECTIONS

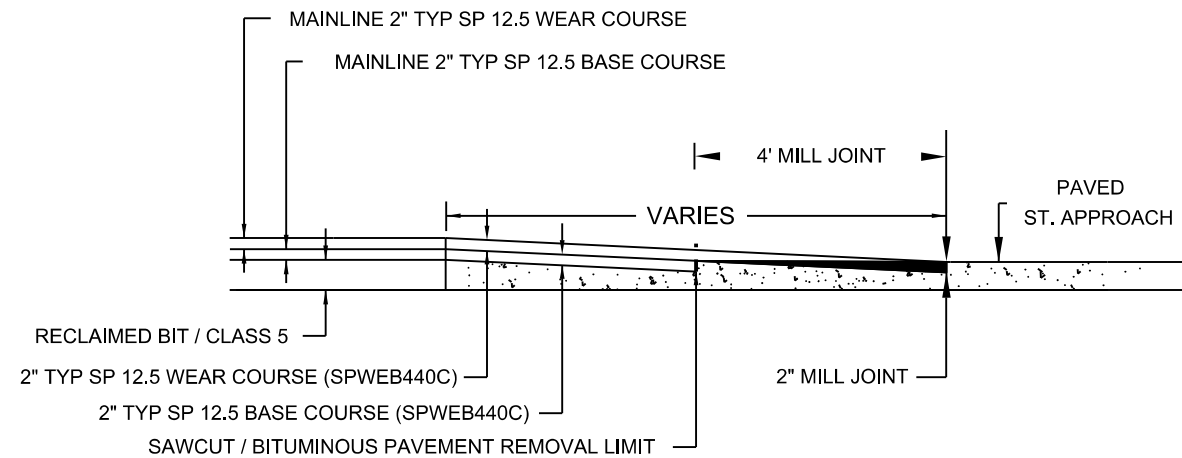
Sheet 5 of 25 Sheets

STREET APPROACH DETAIL (RECLAIM) BITUMINOUS STREET

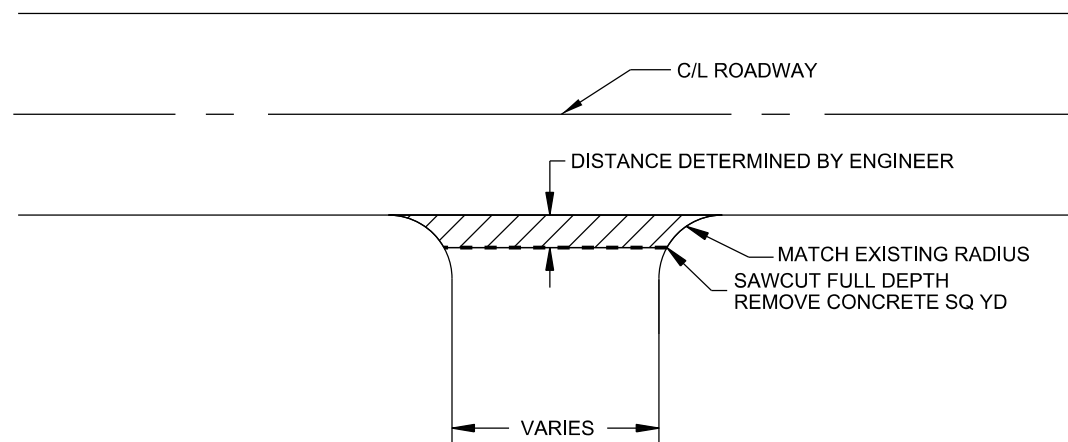
PLAN VIEW



SECTION S - S



DRIVEWAY DETAIL CONCRETE DRIVEWAY



NO	DATE	BY	CKD	APPR	REVISION	02/09/2022	11:38:19 AM
NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022

ANOKA COUNTY
HIGHWAY DEPT.

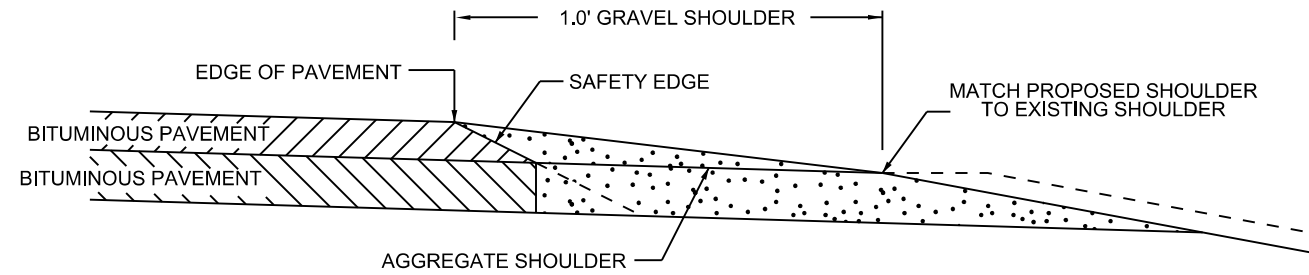
COUNTY PROJECT 21-38-74

DETAILS

Sheet 6 of 25 Sheets

SHOULDER DETAIL

BITUMINOUS SAFETY EDGE
GRAVEL SHOULDER



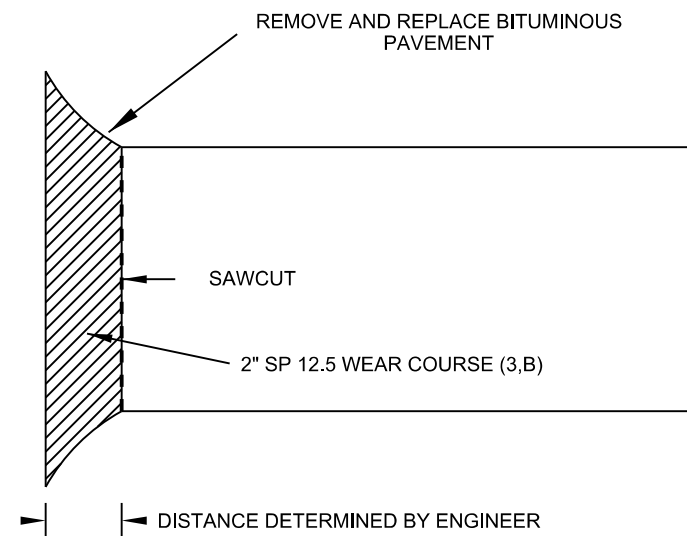
SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

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

RECLAIM AREA - DRIVEWAY DETAIL

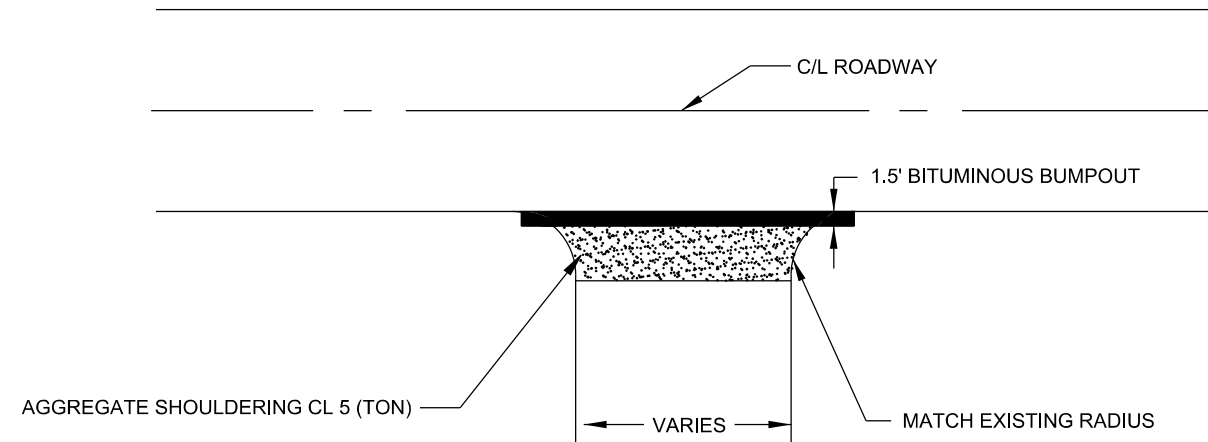
BITUMINOUS

PLAN VIEW



DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
						02/09/2022	11:38:19 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON
 SIGNATURE: *[Signature]*
 DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021
 DESIGN BY SRK DATE 12/01/2021
 CHECKED BY CO DATE 2/01/2022

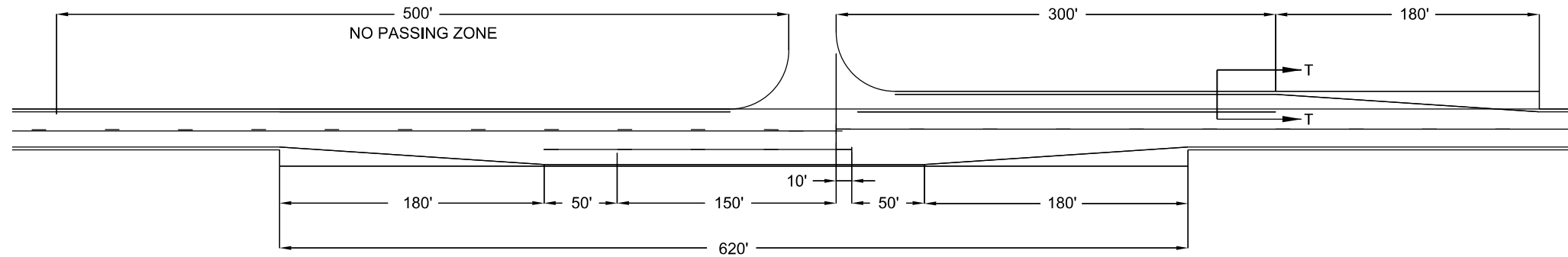


COUNTY PROJECT 21-38-74

DETAILS
 Sheet 7 of 25 Sheets

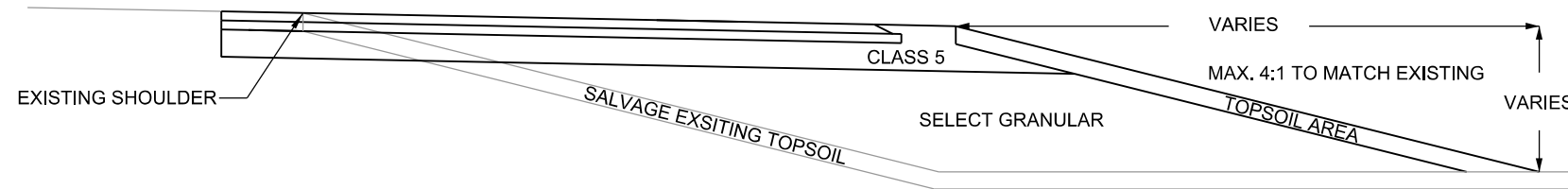
RIGHT TURN AND BYPASS LANE

GENERAL LAYOUT PLAN VIEW



RIGHT TURN AND BYPASS LANE

SECTION T - T



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
						02/09/2022	11:38:19 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022

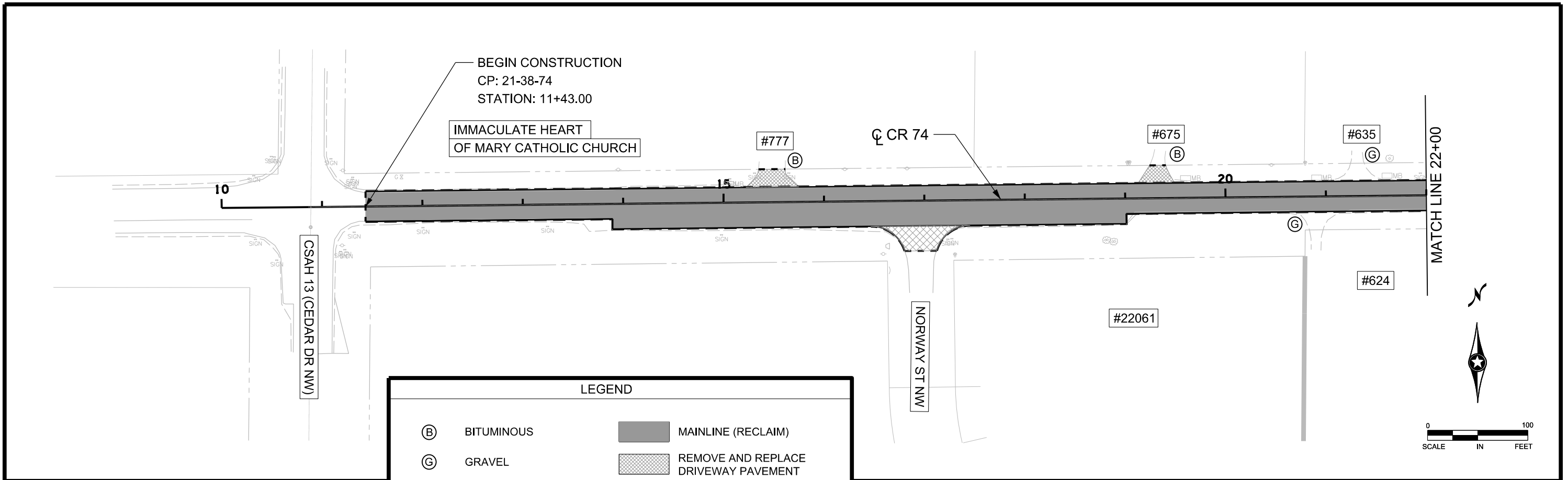


**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-38-74

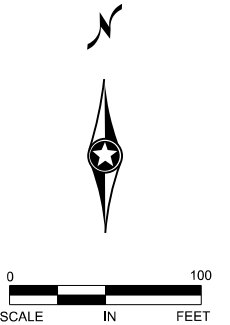
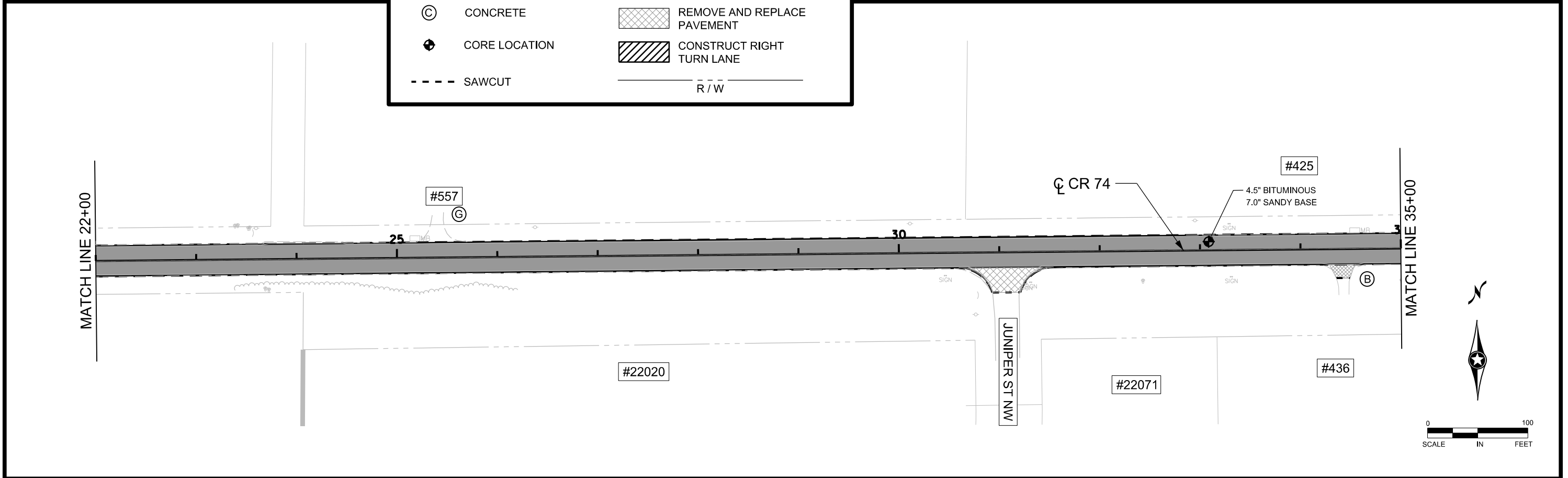
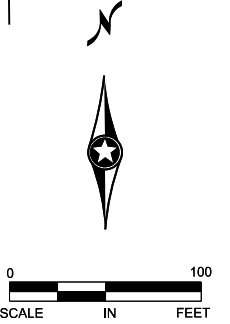
DETAILS

Sheet 8 of 25 Sheets



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE (RECLAIM)
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE DRIVEWAY PAVEMENT
(C)	CONCRETE	[Diagonal Hatched Box]	REMOVE AND REPLACE PAVEMENT
(+)	CORE LOCATION	[Diagonal Hatched Box]	CONSTRUCT RIGHT TURN LANE
- - -	SAWCUT	[Dashed Line]	R / W



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					11:38:21 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

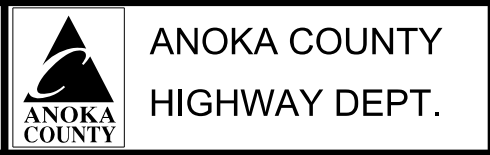
SIGNATURE: *[Signature]*

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 12/01/2021

DESIGN BY: APA DATE: 12/01/2021

CHECKED BY: CO DATE: 2/01/2022

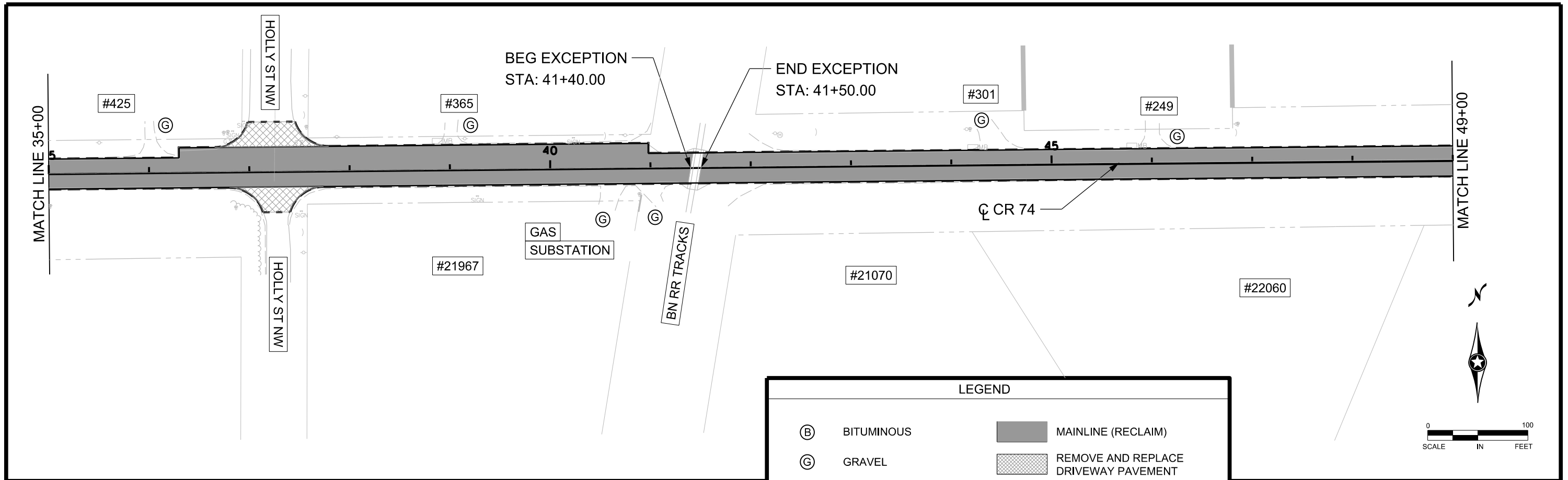


COUNTY PROJECT 21-38-74

CONSTRUCTION PLAN

STA 11+43 TO 35+00

Sheet 9 of 25 Sheets

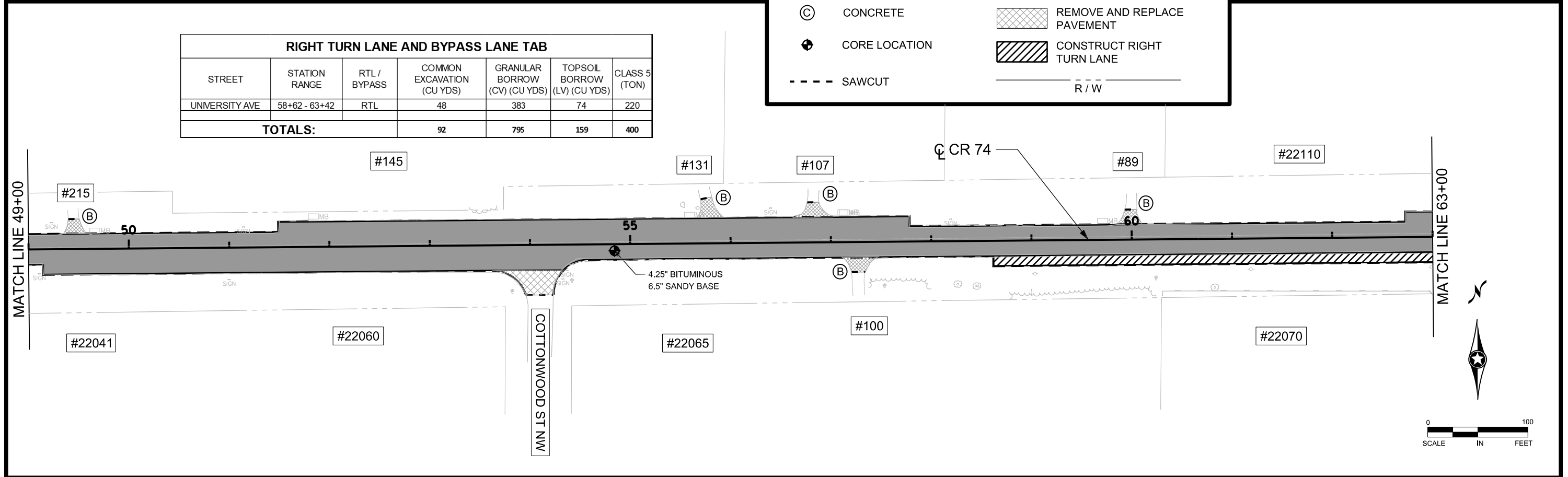


LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE (RECLAIM)
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE DRIVEWAY PAVEMENT
(C)	CONCRETE	[Diagonal Hatched Box]	REMOVE AND REPLACE PAVEMENT
(*)	CORE LOCATION	[Diagonal Hatched Box]	CONSTRUCT RIGHT TURN LANE
- - -	SAWCUT	[Dashed Line]	R / W

RIGHT TURN LANE AND BYPASS LANE TAB

STREET	STATION RANGE	RTL / BYPASS	COMMON EXCAVATION (CU YDS)	GRANULAR BORROW (CV) (CU YDS)	TOPSOIL BORROW (LV) (CU YDS)	CLASS 5 (TON)
UNIVERSITY AVE	58+62 - 63+42	RTL	48	383	74	220
TOTALS:			92	795	159	400



NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					11:38:22 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY APA DATE 12/01/2021

DESIGN BY APA DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022

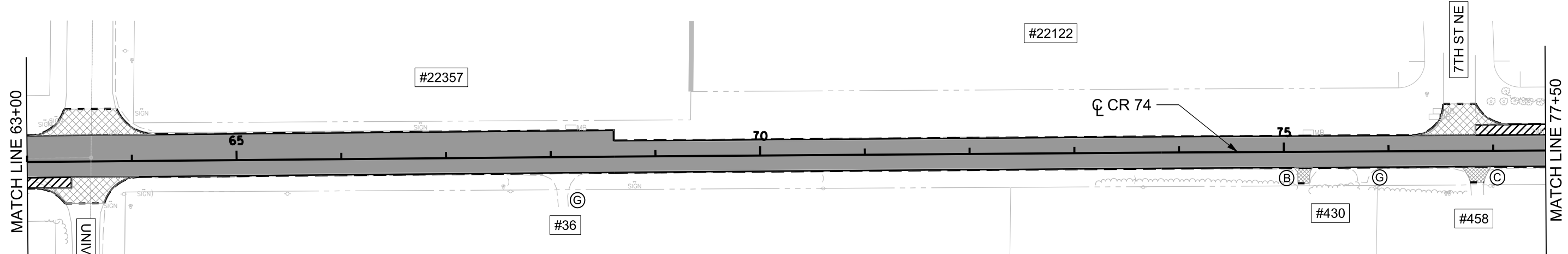
**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-38-74

CONSTRUCTION PLAN

STA 35+00 TO 63+00

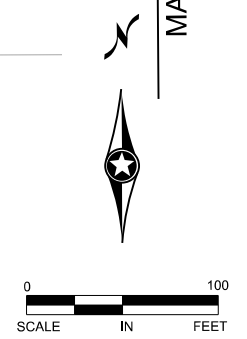
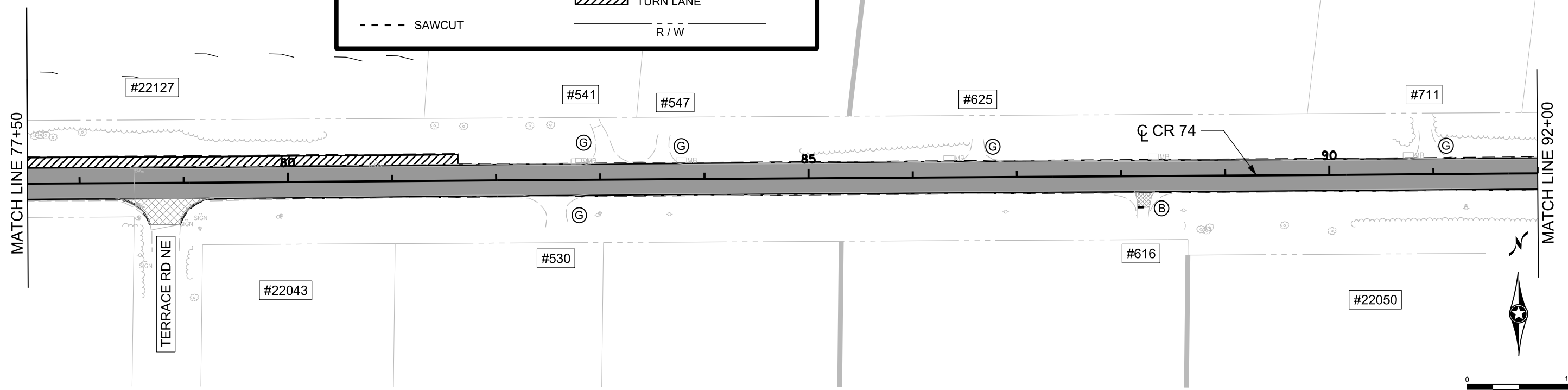
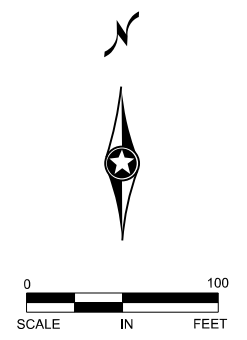
Sheet 10 of 25 Sheets



RIGHT TURN LANE AND BYPASS LANE TAB						
STREET	STATION RANGE	RTL / BYPASS	COMMON EXCAVATION (CU YDS)	GRANULAR BORROW (CV) (CU YDS)	TOPSOIL BORROW (LV) (CU YDS)	CLASS 5 (TON)
UNIVERSITY AVE	58+62 - 63+42	RTL	48	383	74	220
7TH ST NE	76+83 - 81+63	RTL	44	412	85	180
TOTALS:			92	795	159	400

LEGEND

(B)	BITUMINOUS		MAINLINE (RECLAIM)
(G)	GRAVEL		REMOVE AND REPLACE DRIVEWAY PAVEMENT
(C)	CONCRETE		REMOVE AND REPLACE PAVEMENT
⊕	CORE LOCATION		CONSTRUCT RIGHT TURN LANE
- - -	SAWCUT		R / W



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					11:38:23 AM

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY APA DATE 12/01/2021

DESIGN BY APA DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022

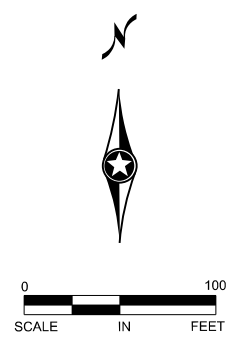
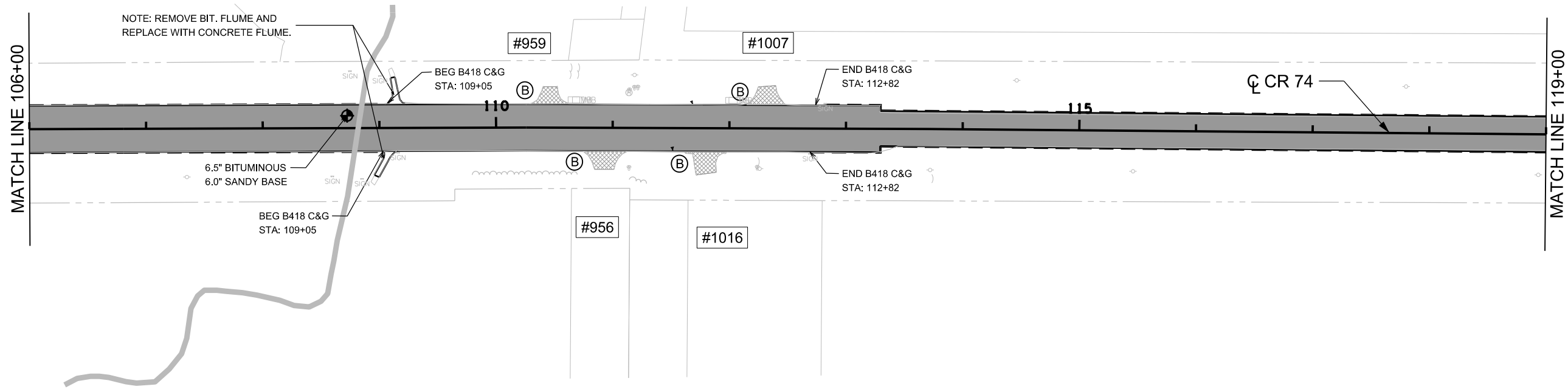
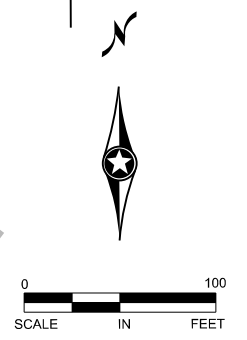
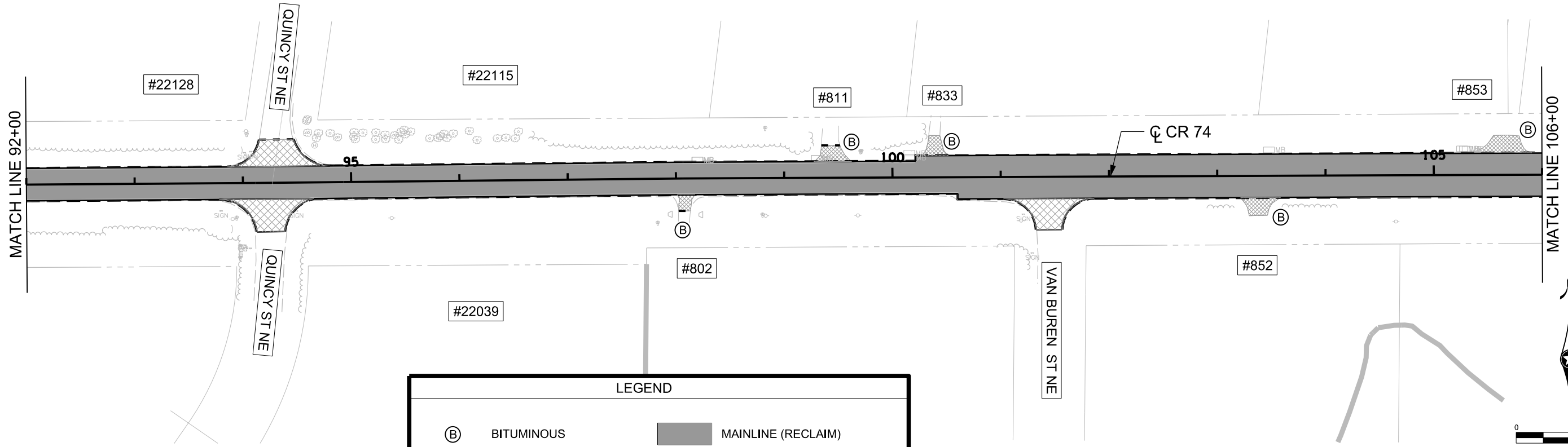
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-38-74

CONSTRUCTION PLAN

STA 63+00 TO 92+00

Sheet 11 of 25 Sheets



NO	DATE	BY	CKD	APPR	REVISION		
	02/09/2022					11:38:24 AM	

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON
 SIGNATURE:
 DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 12/01/2021
 DESIGN BY: APA DATE: 12/01/2021
 CHECKED BY: CO DATE: 2/01/2022

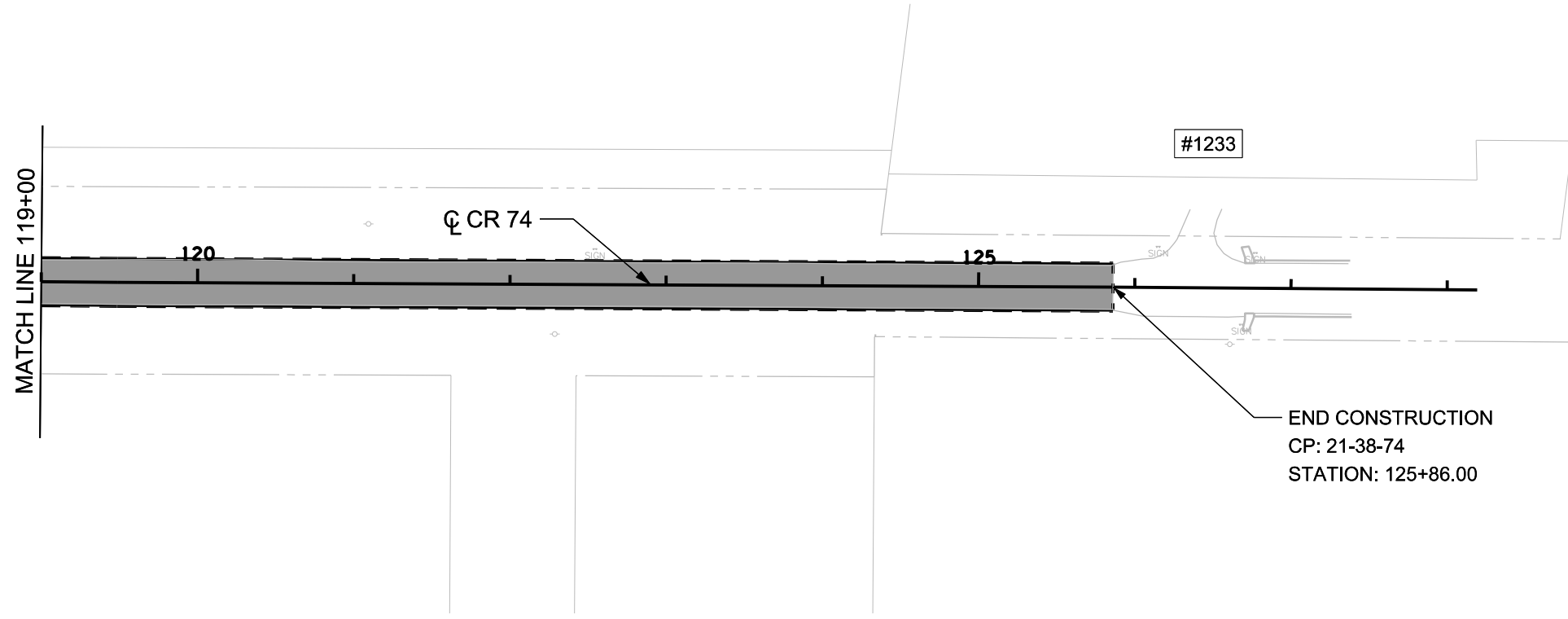
**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-38-74

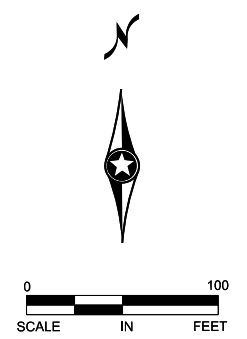
CONSTRUCTION PLAN

STA 92+00 TO 119+00

Sheet 12 of 25 Sheets



LEGEND			
Ⓑ	BITUMINOUS		MAINLINE (RECLAIM)
Ⓒ	GRAVEL		REMOVE AND REPLACE DRIVEWAY PAVEMENT
Ⓒ	CONCRETE		REMOVE AND REPLACE PAVEMENT
⊕	CORE LOCATION		CONSTRUCT RIGHT TURN LANE
- - - -	SAWCUT	- - - -	R / W



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Proposed\CR 74 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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/01/2022 LICENSE NO. 58657

DRAWN BY APA DATE 12/01/2021

DESIGN BY APA DATE 12/01/2021

CHECKED BY CO DATE 2/01/2022



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-38-74

CONSTRUCTION PLAN
STA 119+00 TO 125+86
Sheet 13 of 25 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
4" SOLID LINE WHITE - MULTI COMP	LIN FT	13910
1 8" DOTTED LINE WHITE - MULTICOMP	LIN FT	36
2 4" BROKEN LINE YELLOW - MULTICOMP	LIN FT	1830
4" SOLID LINE YELLOW - MULTICOMP	LIN FT	2920
4" SOLID DOUBLE LINE YELLOW - MULTICOMP	LIN FT	2150
24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC (*PMS)	LIN FT	72
RAILROAD X-ING - PREFORMED THERMOPLASTIC	SQ FT	124

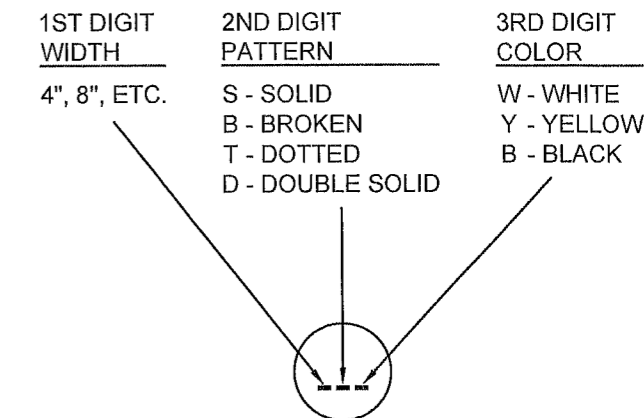
- 1 3' STRIPE, 12' GAP
- 2 10' STRIPE, 40' GAP
- * PAVEMENT MARKING SPECIAL

SYMBOLS & MATERIALS LEGEND

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

STRIPING KEY

- CIRCLE - MULTI COMP
- △ 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

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CR 74_(Cedar-WolfTH65)\Base\Traffic\Perm Pmnt 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: SEAN R. THIEL DATE: 2/9/22

SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/04/21

DESIGN BY: _____ DATE: _____

CHECKED BY: SRT DATE: 11/19/21

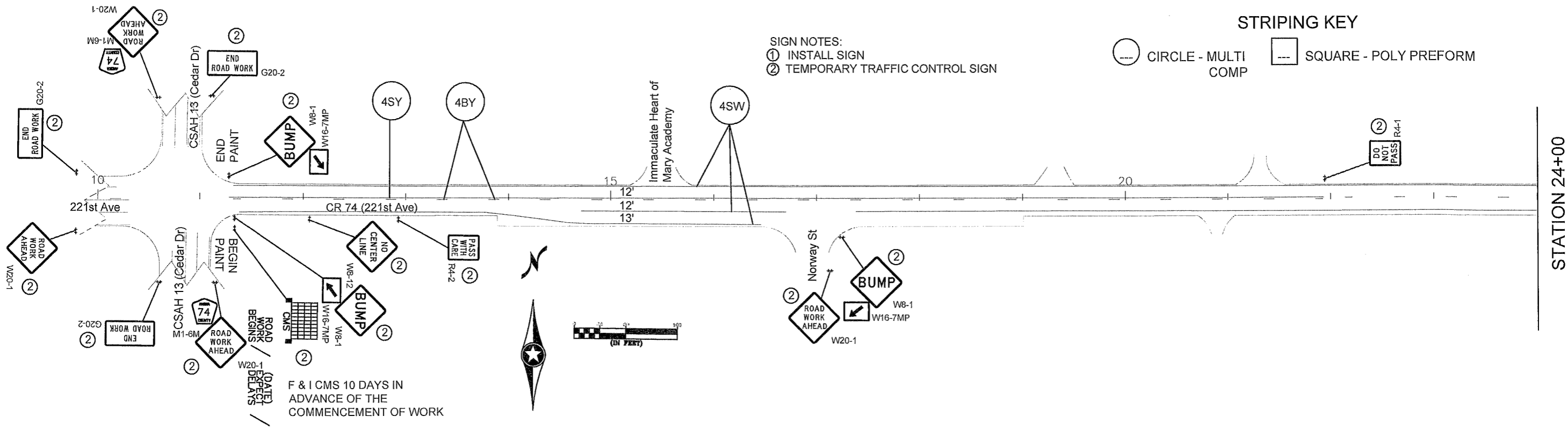


**ANOKA COUNTY
HIGHWAY DEPT.**

CP 21-38-74

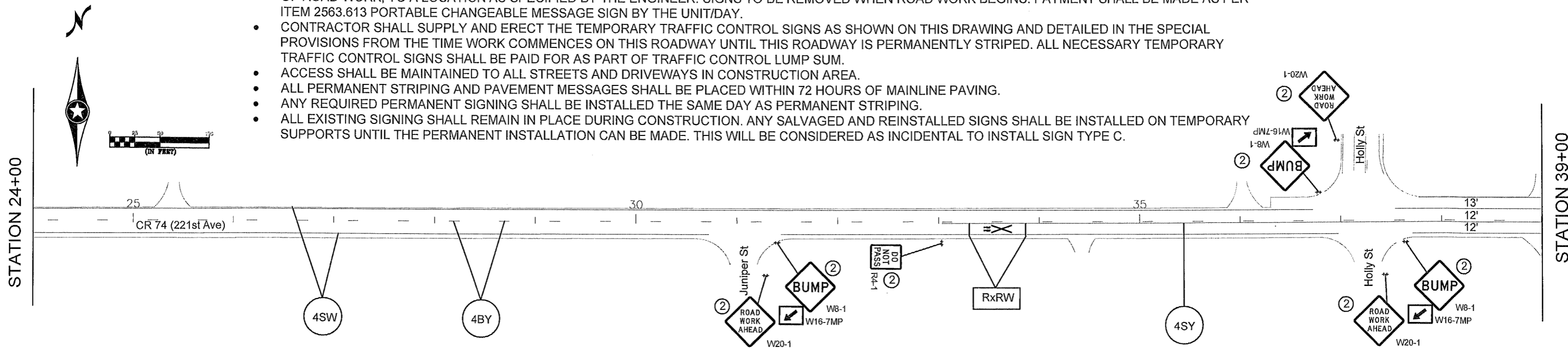
PERMANENT MARKING
TABULATION

SHEET 14 OF 25 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.



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Traffic\Signing & Striping					

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: SEAN R. THIEL DATE: 2/9/22

SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/04/21

DESIGN BY: _____ DATE: _____

CHECKED BY: SRT DATE: 11/19/21



ANOKA COUNTY
HIGHWAY DEPT.

CP 21-38-74

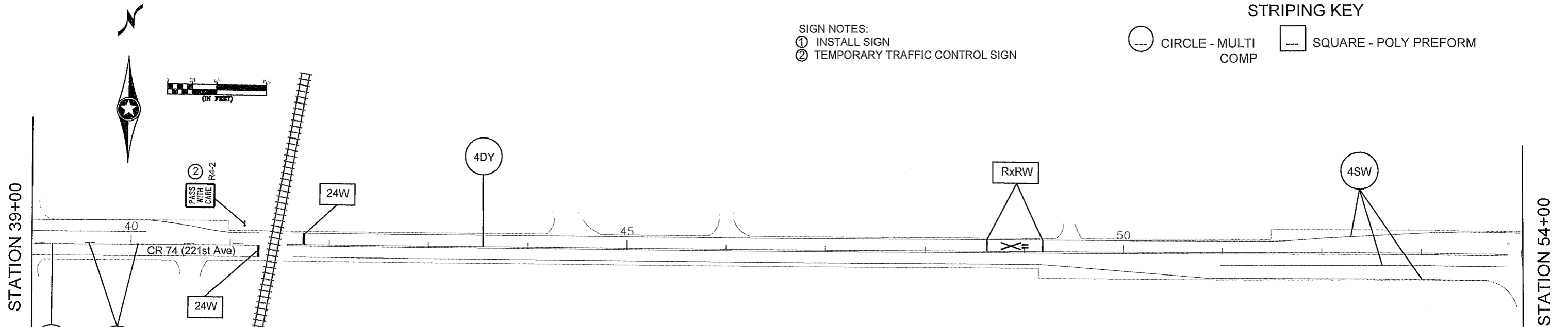
TEMPORARY SIGNING & PERMANENT SIGNING & STRIPING

SHEET 15 OF 25 SHEETS

STRIPING KEY

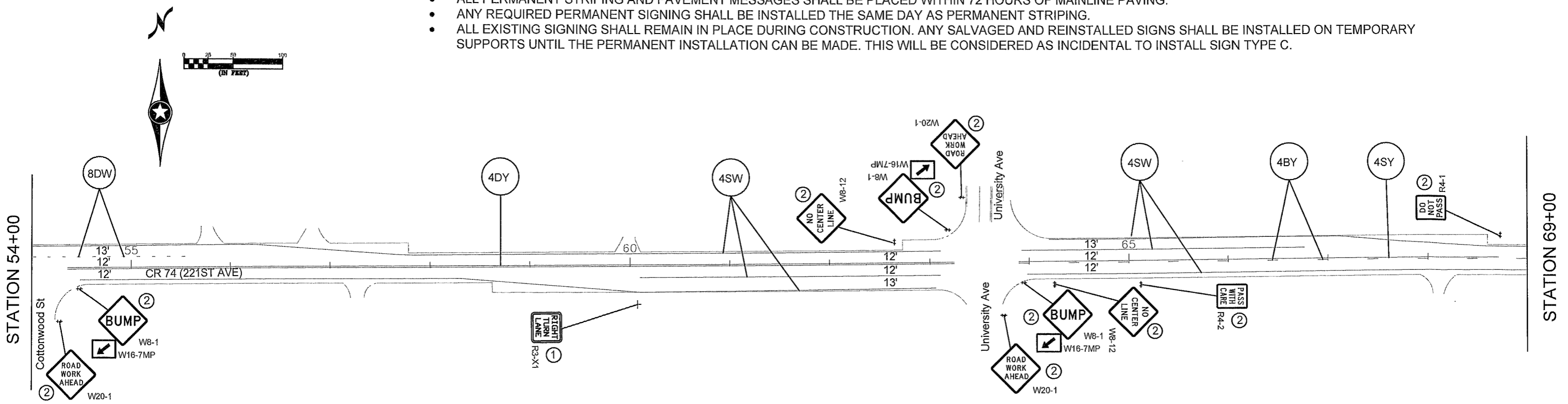
SIGN NOTES:
 ① INSTALL SIGN
 ② TEMPORARY TRAFFIC CONTROL SIGN

○ CIRCLE - MULTI COMP
 □ SQUARE - POLY PREFORM



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.



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\21-01-00\CR_74_(Cedar-WorkH65)\Base\Traffic\Signing & Striping					

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: SEAN R. THIEL DATE: 2/9/22
 SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/04/21
 DESIGN BY: _____ DATE: _____
 CHECKED BY: SRT DATE: 11/19/21

ANOKA COUNTY
HIGHWAY DEPT.

CP 21-38-74

TEMPORARY SIGNING & PERMANENT SIGNING & STRIPING

SHEET 16 OF 25 SHEETS

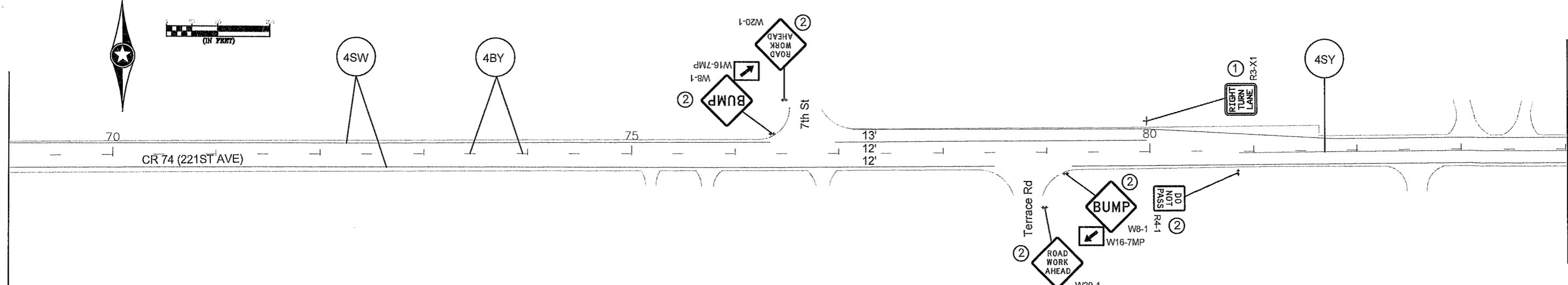
STRIPING KEY

○ CIRCLE - MULTI COMP
 □ SQUARE - POLY PREFORM

SIGN NOTES:
 ① INSTALL SIGN
 ② TEMPORARY TRAFFIC CONTROL SIGN

STATION 69+00

STATION 84+00

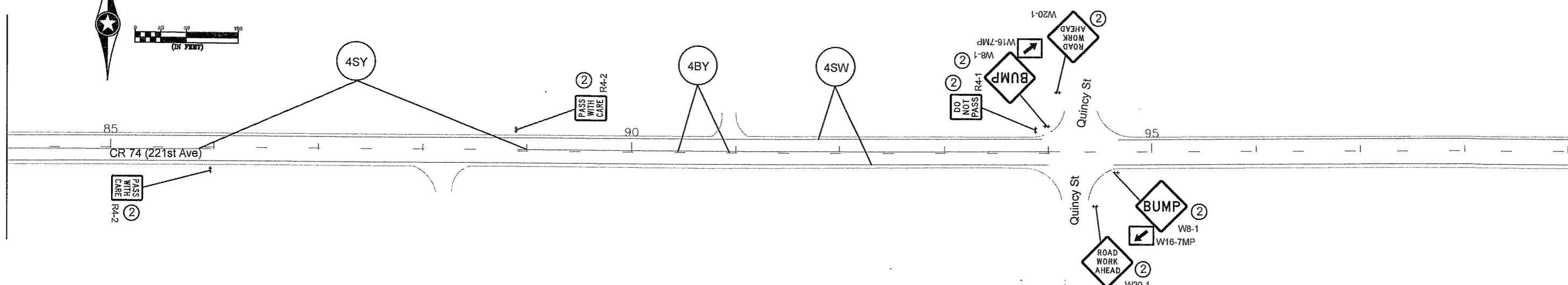


NOTES:

- 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 84+00

STATION 99+00



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:121-01-00\CR_74_(Cedar-WorH65)\Base\Traffic\Signing & Striping

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.

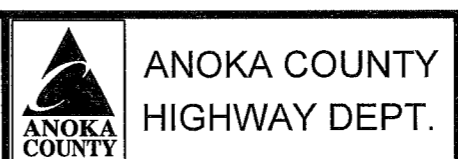
PRINT NAME: SEAN R. THIEL DATE: 2/9/22

SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/04/21

DESIGN BY: DATE:

CHECKED BY: SRT DATE: 11/19/21



CP 21-38-74

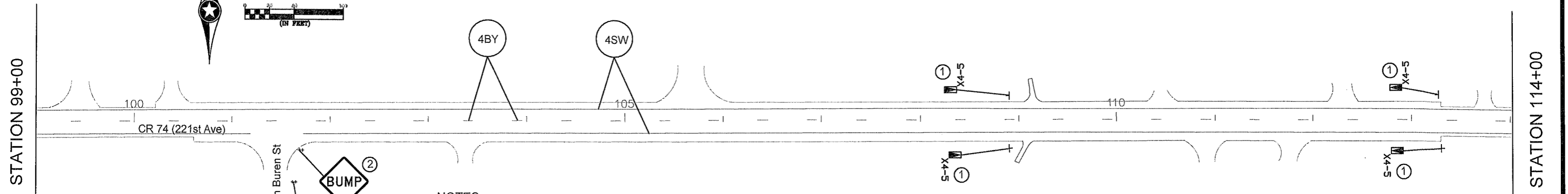
TEMPORARY SIGNING & PERMANENT SIGNING & STRIPING

SHEET 17 OF 25 SHEETS

STRIPING KEY

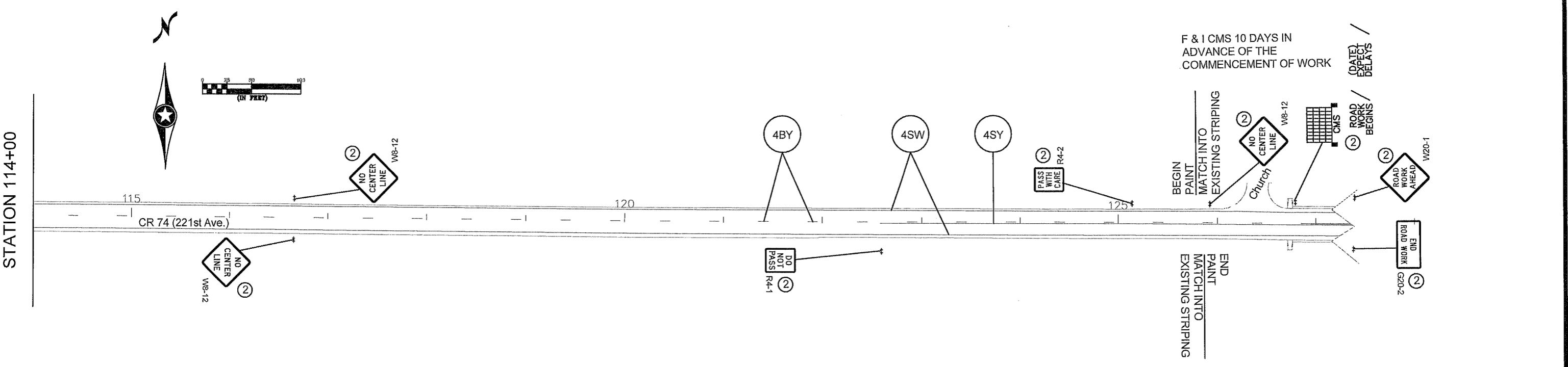
SIGN NOTES:
 ① INSTALL SIGN
 ② TEMPORARY TRAFFIC CONTROL SIGN

○ CIRCLE - MULTI COMP
 □ SQUARE - POLY PREFORM



NOTES:

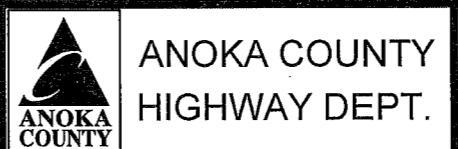
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE 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.



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: SEAN R. THIEL DATE: 2/9/22
 SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/04/21
 DESIGN BY: _____ DATE: _____
 CHECKED BY: SRT DATE: 11/19/21



CP 21-38-74

TEMPORARY SIGNING & PERMANENT SIGNING & STRIPING
 SHEET 18 OF 25 SHEETS

TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-12	48" x 48"		6
R4-1	24" x 30"		6
R4-2	24" x 30"		6
G20-2	36" x 18"		4
W8-1	48" x 48"		14
W16-7P	30" x 18"		14
W3-4	48" x 48"		AS NEEDED
W8-1	48" x 48"		AS NEEDED
W8-8	48" x 48"		AS NEEDED

TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-9	48" x 48"		AS NEEDED
W8-11	48" x 48"		AS NEEDED
W8-23	48" x 48"		AS NEEDED
M1-6M	24" x 24"		2
W20-1	48" x 48"		AS NEEDED (ESTIMATED 16)
W20-4	48" x 48"		AS NEEDED
W20-7	48" x 48"		AS NEEDED
		REFLECTORIZED REBOUNDBLE DRUM	AS NEEDED (ESTIMATED 10)
		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

F & I SIGN PANELS							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	PANEL AREA	TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT To pavement edge
				SQ. FT.	SQ. FT.		
R3-7	30" x 30"		2	6.25	12.50	1	7.0'
X3-5	6" x 12"		2	0.50	1.00	1	4.0'
X3-5	6" x 12"		2	0.50	1.00	1	4.0'
PROJECT TOTAL SQ FT					14.50		

CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

	R	O	A	D	
	W	O	R	K	
B	E	G	I	N	S

<	D	A	T	E	>
E	X	P	E	C	T
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	CKD	APPR	REVISION

NAME: P:\21-01-00\CR_74_(Cedar-WofTH65)\Base\Traffic\Signing & Striping

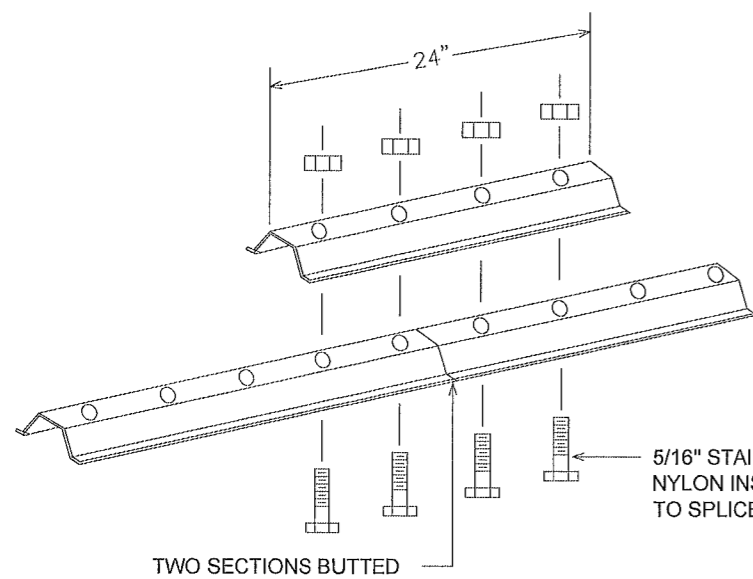
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: SEAN R. THIEL DATE: 2/9/22
SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

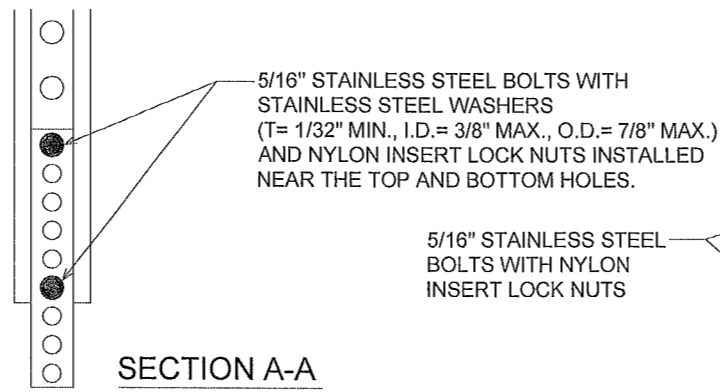
DRAWN BY: TMV DATE: 11/04/21
DESIGN BY: _____ DATE: _____
CHECKED BY: SRT DATE: 11/19/21

ANOKA COUNTY HIGHWAY DEPT.

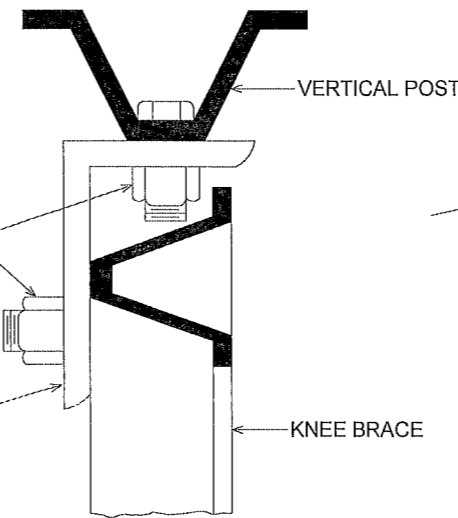
CP 21-38-74



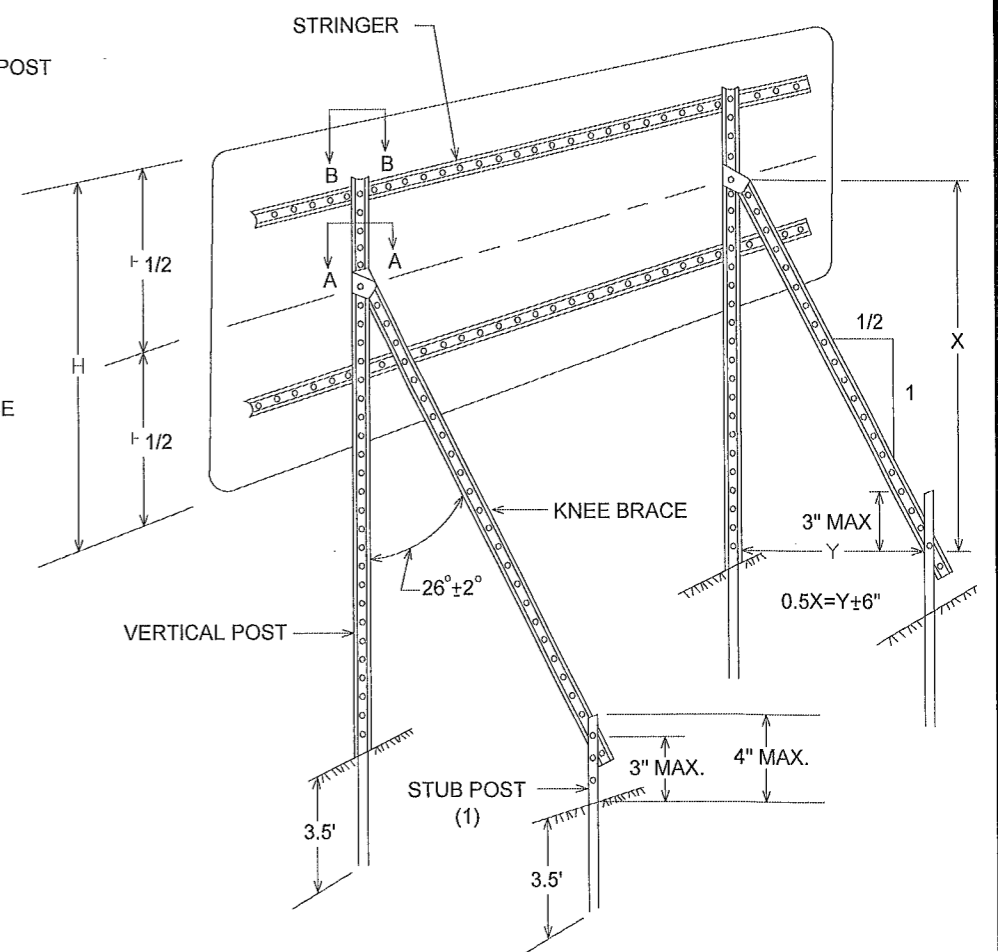
LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)



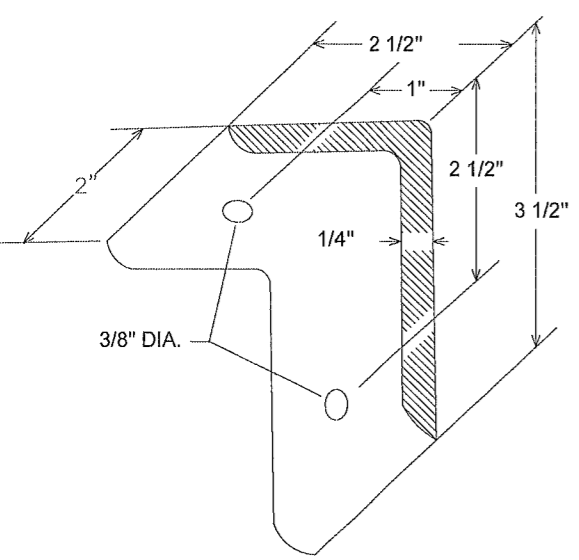
SECTION A-A



BRACKET
KNEE BRACE

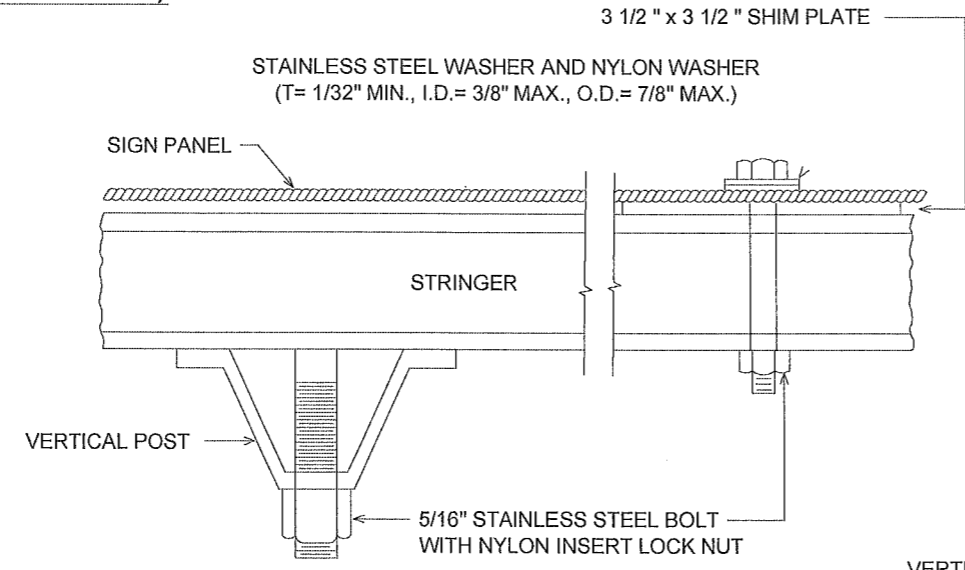


TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS

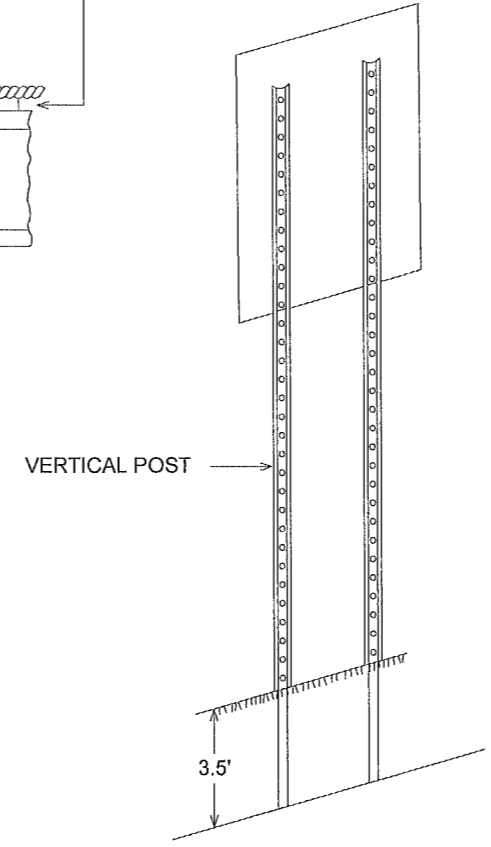


A-FRAME BRACKET

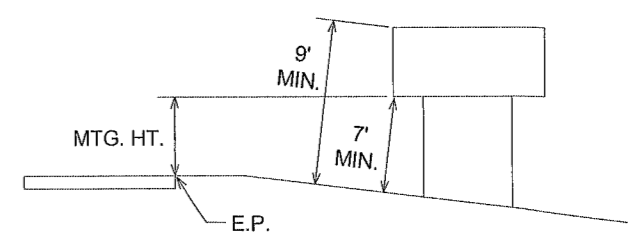
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



SECTION B-B



TYPICAL INSTALLATION 36" AND LARGER
TYPE "C" SIGNS



TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST.

TYPE C & D SIGN
STRUCTURAL DETAILS

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\22-01-00CR_74_(Cedar-Worthington)\Base\Traffic\Sign&Stripe_Details 2019.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: SEAN R. THIEL DATE: 2/9/22

SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 10/15/21

DESIGN BY: DATE:

CHECKED BY: DATE:

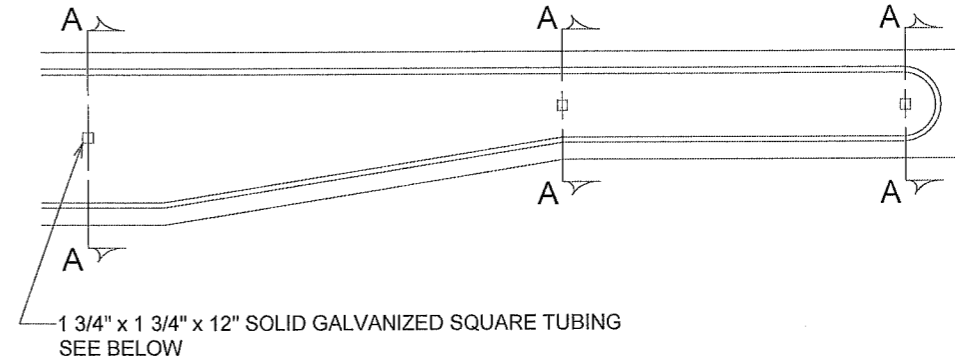
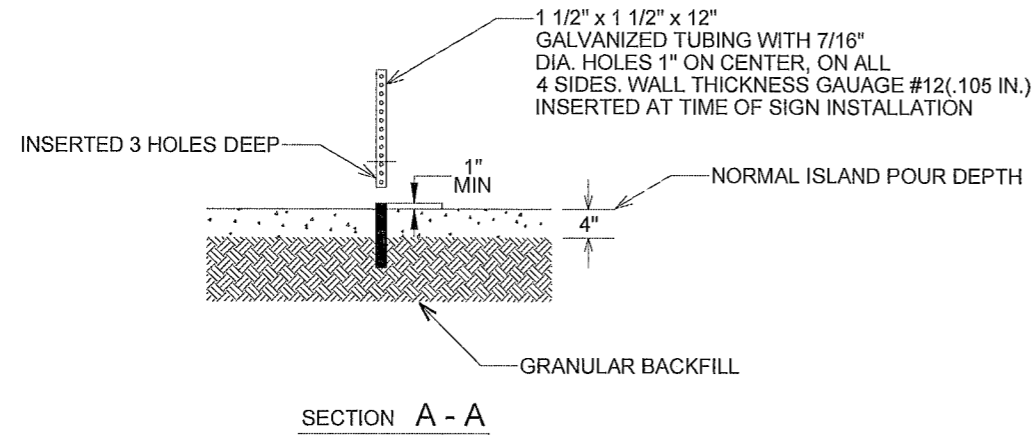


ANOKA COUNTY
HIGHWAY DEPT.

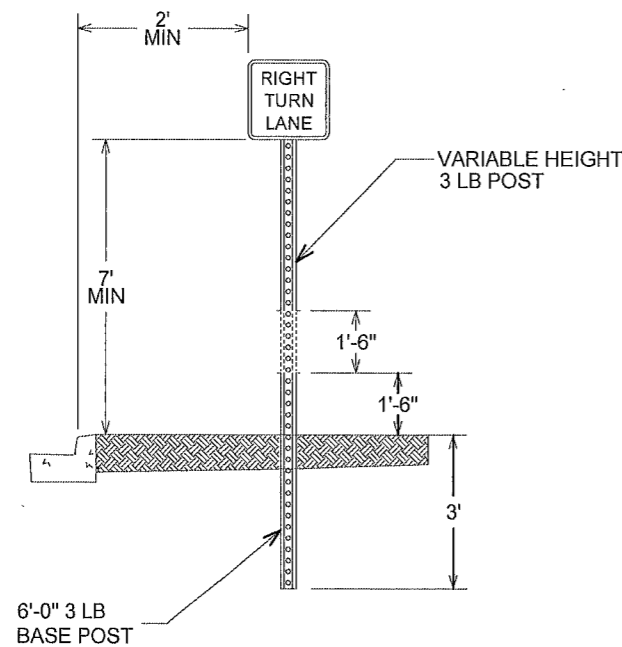
CP 21-38-74

SIGNING & STRIPING
DETAILS

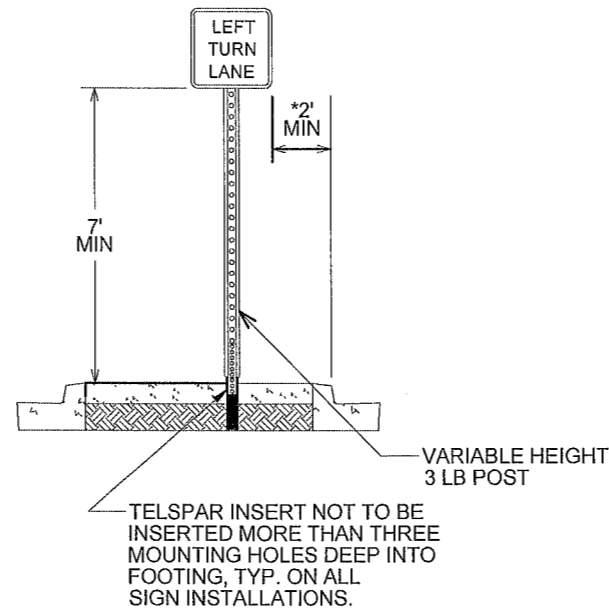
SHEET 20 OF 25 SHEETS



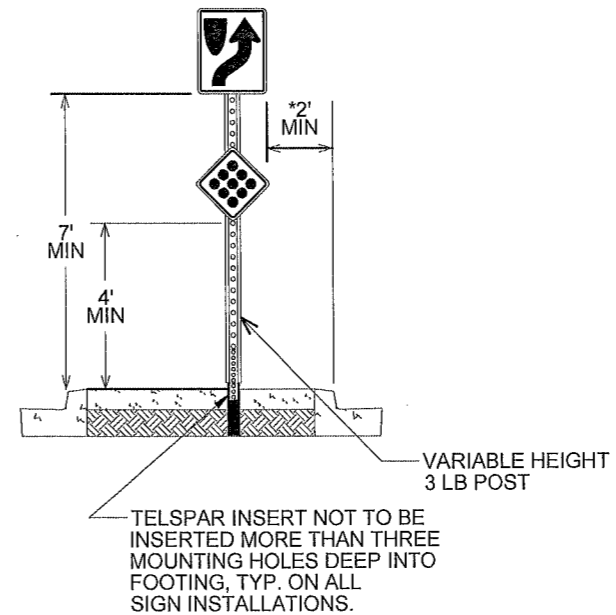
GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



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.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CR_74_(Cedar-WorTH65)\Base\Traffic\Sign&Stripe_Details 2019.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: SEAN R. THIEL DATE: 2/9/22
SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 10/15/21
DESIGN BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____

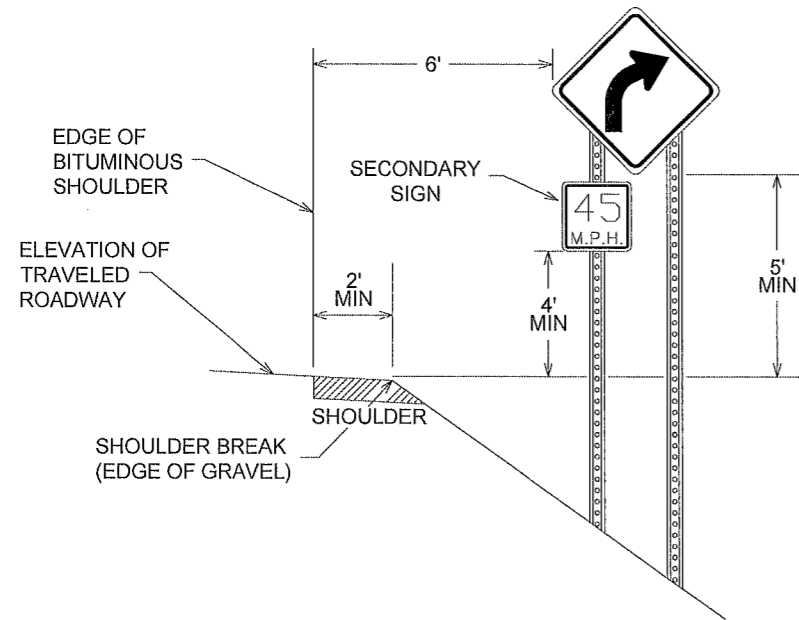


ANOKA COUNTY
HIGHWAY DEPT.

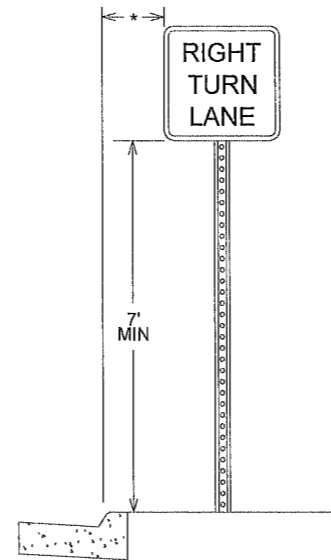
CP 21-38-74

SIGNING & STRIPING
DETAILS
SHEET 21 OF 25 SHEETS

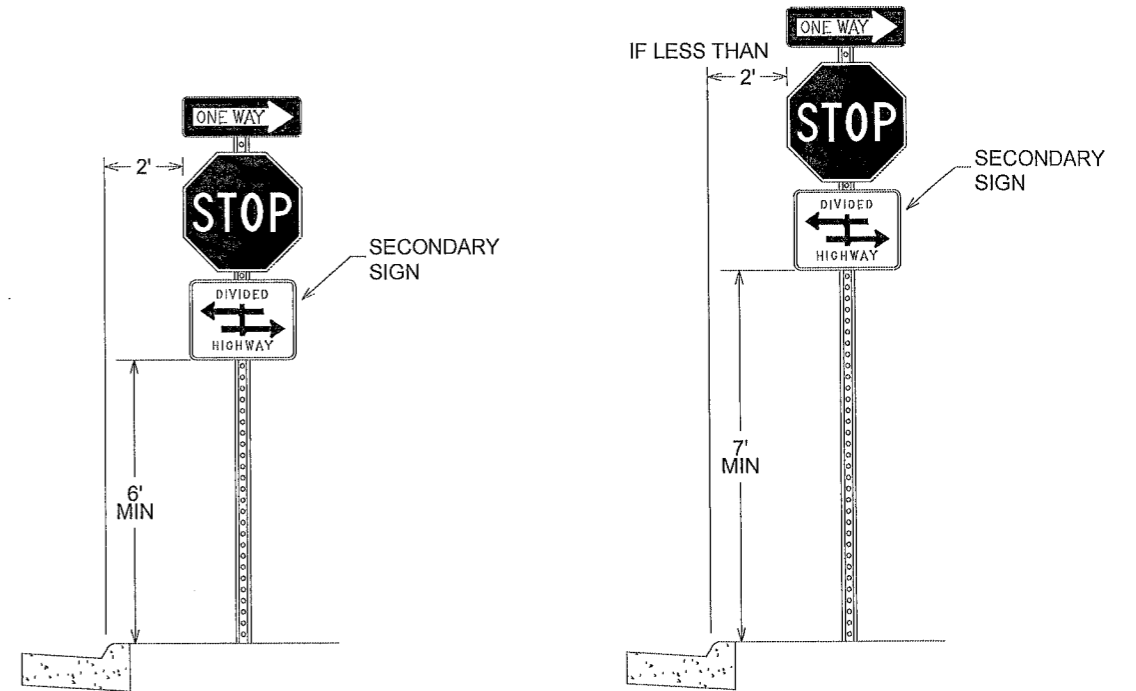
TYPICAL SIGN PLACEMENT
(RURAL)



TYPICAL SIGN PLACEMENT
(URBAN)



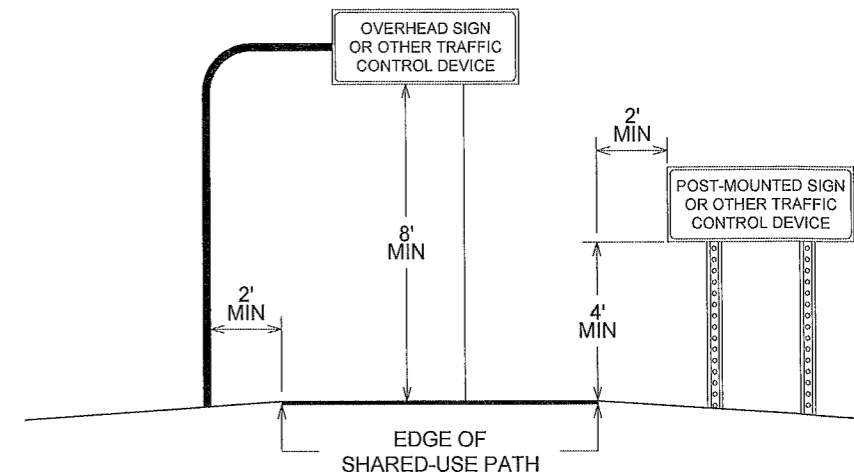
*2' - NARROW BOULEVARD (≤ 8' WIDE)
6' - WIDE BOULEVARD



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
SHARED-USE PATH



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:122-01-001CR_74_(Cedar-WofTH65)BaseTrafficSign&Stripe_Details 2019.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: SEAN R. THIEL DATE: 2/9/22
SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 10/15/21
DESIGN BY: DATE: _____
CHECKED BY: DATE: _____



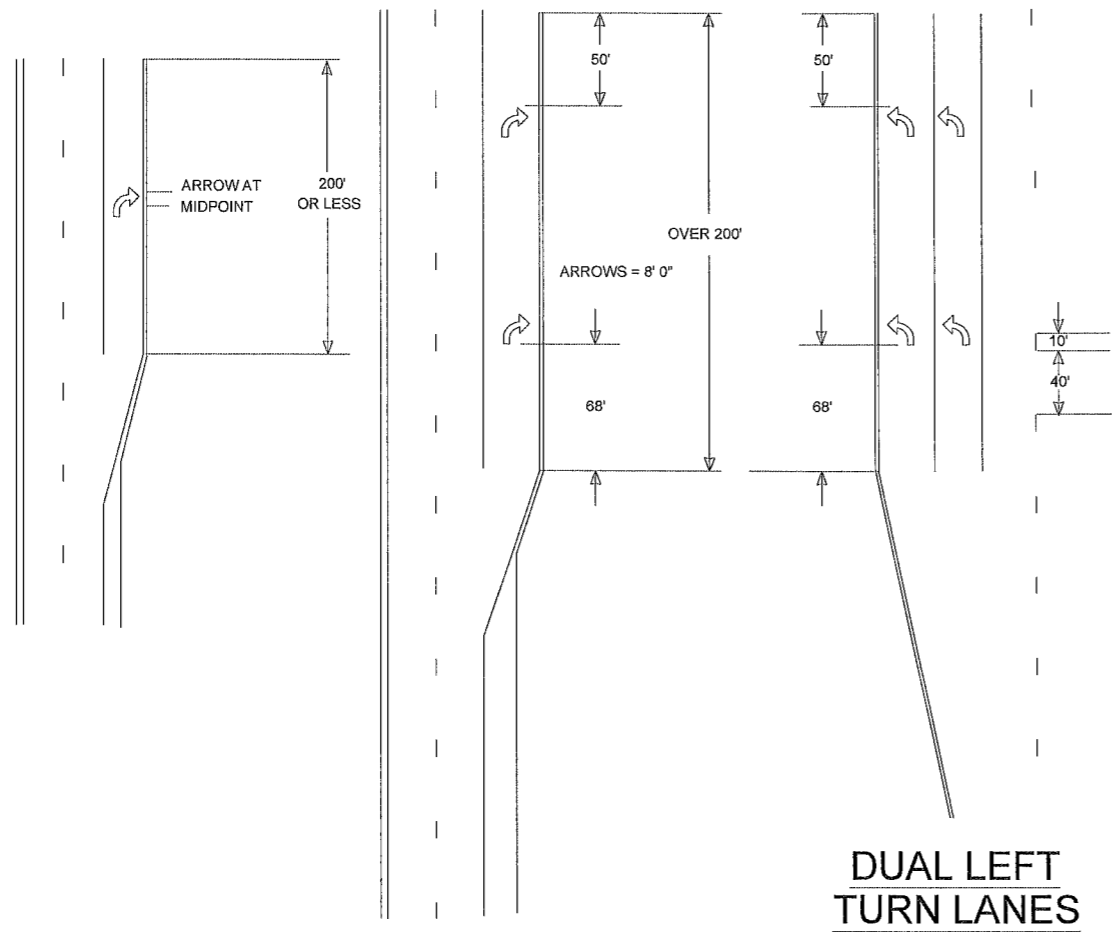
ANOKA COUNTY
HIGHWAY DEPT.

CP 21-38-74

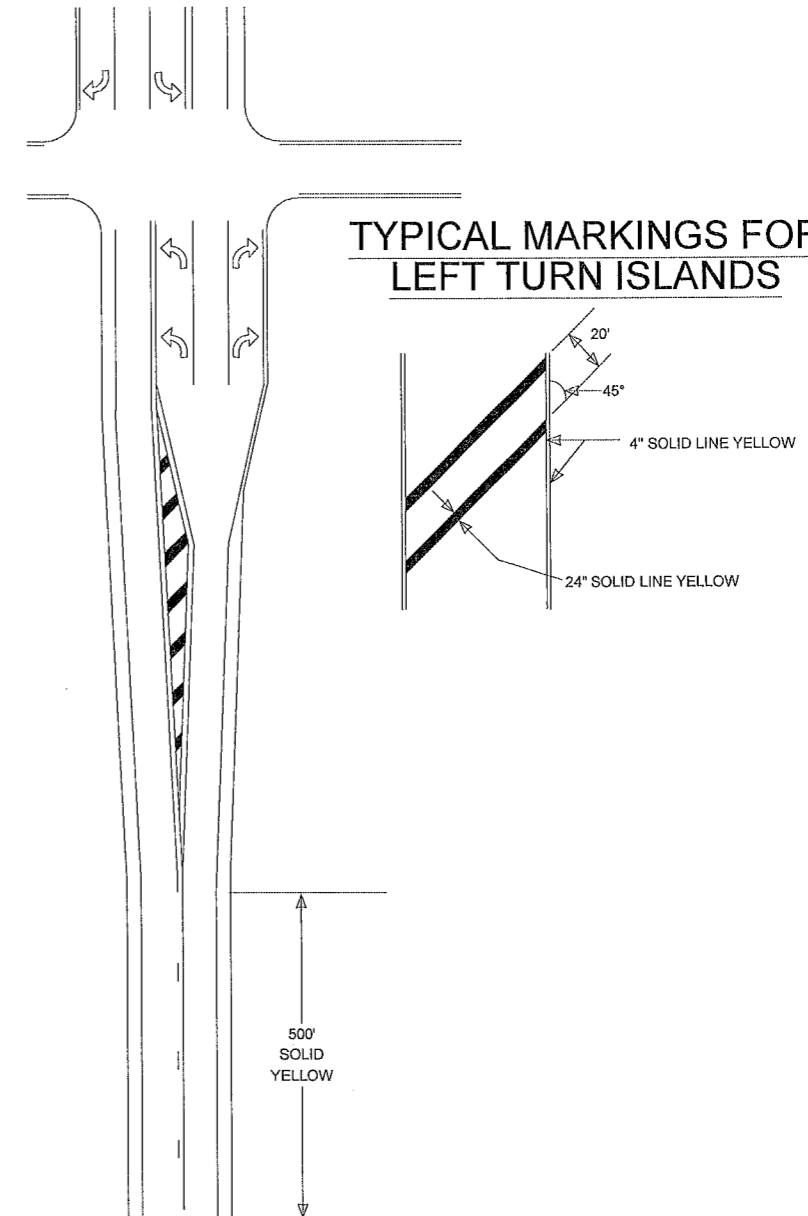
SIGNING & STRIPING
DETAILS

SHEET 22 OF 25 SHEETS

TYPICAL MESSAGE PLACEMENT
FOR TURN LANES



TYPICAL MARKINGS FOR
LEFT TURN ISLANDS



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\22-01-00\CR_74_(Cedar-WofTH65)\Base\Traffic\Sign&Stripe_Details 2019.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: SEAN R. THIEL DATE: 2/9/22

SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 10/15/21

DESIGN BY: DATE:

CHECKED BY: DATE:



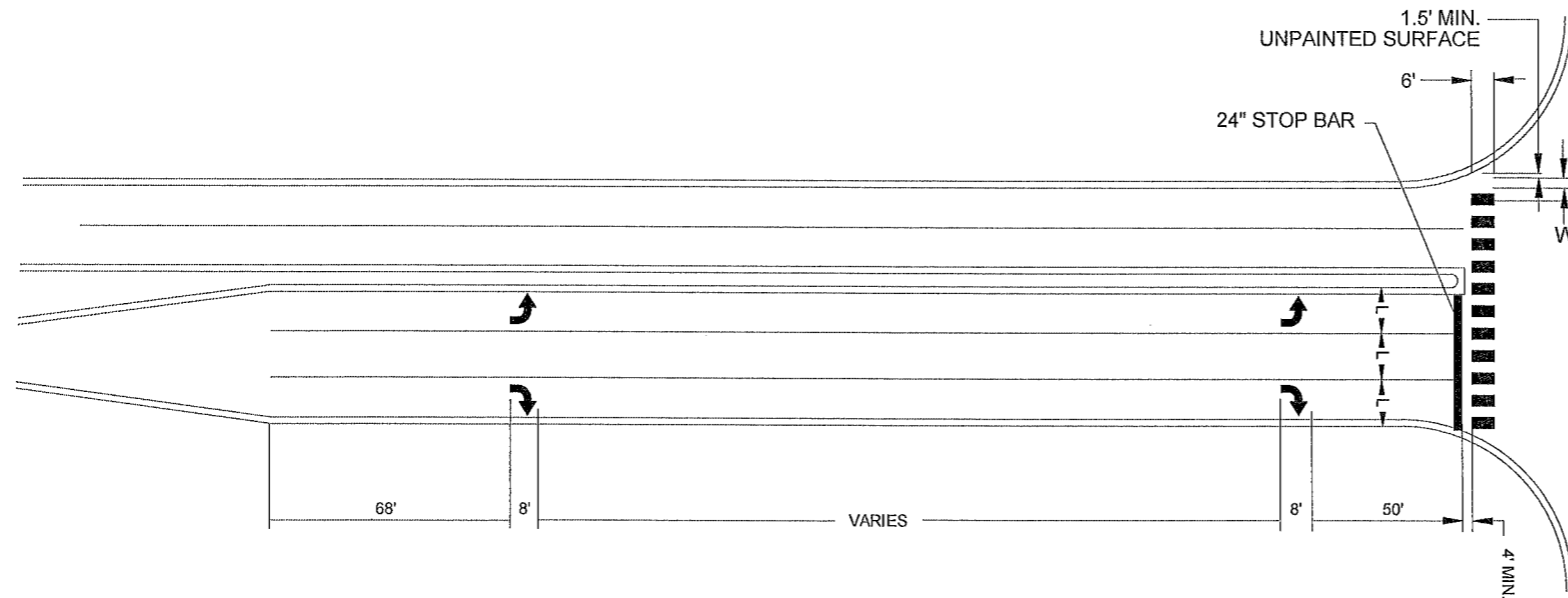
ANOKA COUNTY
HIGHWAY DEPT.

CP 21-38-74

SIGNING & STRIPING
DETAILS

SHEET 23 OF 25 SHEETS

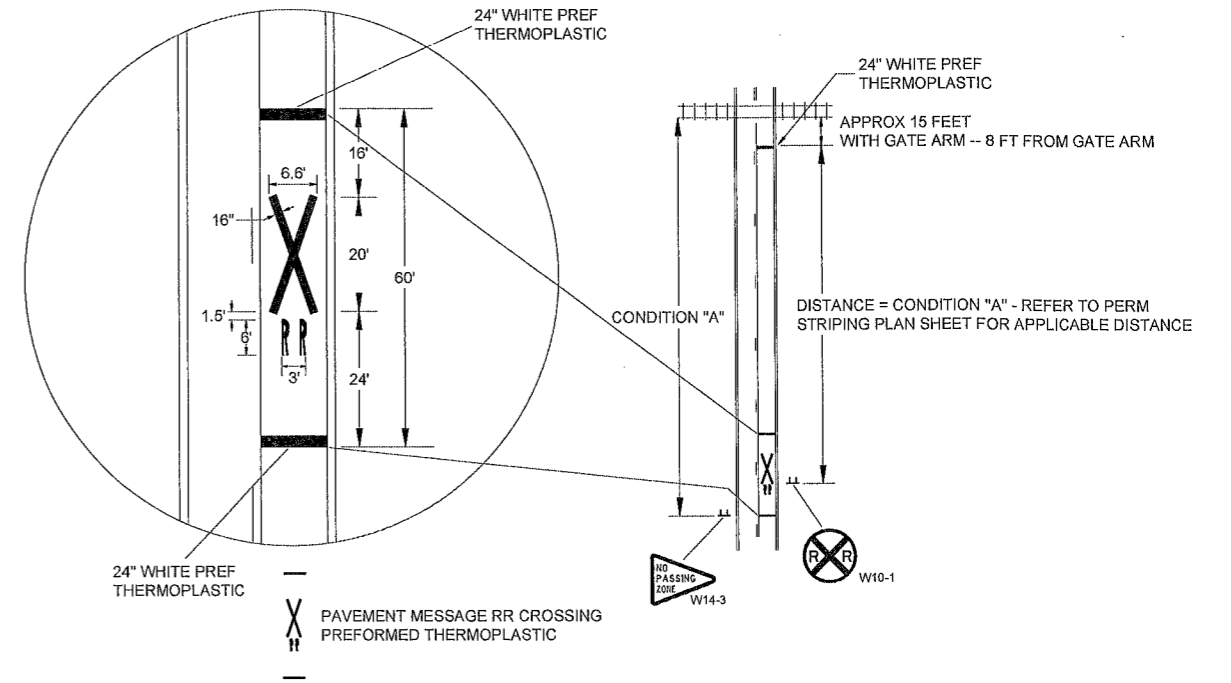
MARKINGS FOR PEDESTRIAN CROSSWALKS



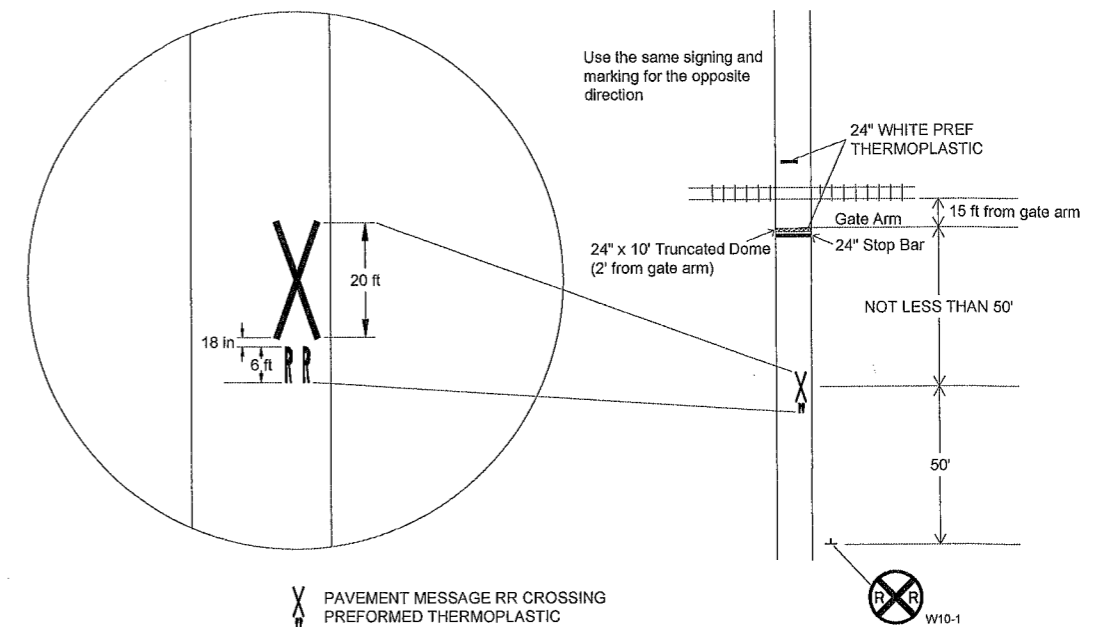
(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

- NOTES: CROSSWALKS:
- 1.) 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 VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
 - 3.) 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.

RAILROAD CROSSING PAVEMENT MARKINGS



RAILROAD CROSSING PAVEMENT MARKINGS TRAIL GRADE CROSSING



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\22-01-00\CR_74_(Cedar-WofTH65)\Base\Traffic\Sign&Stripe_Details 2019.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: SEAN R. THIEL DATE: 2/9/22
 SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 10/15/21
 DESIGN BY: DATE:
 CHECKED BY: DATE:



ANOKA COUNTY HIGHWAY DEPT.

CP 21-38-74

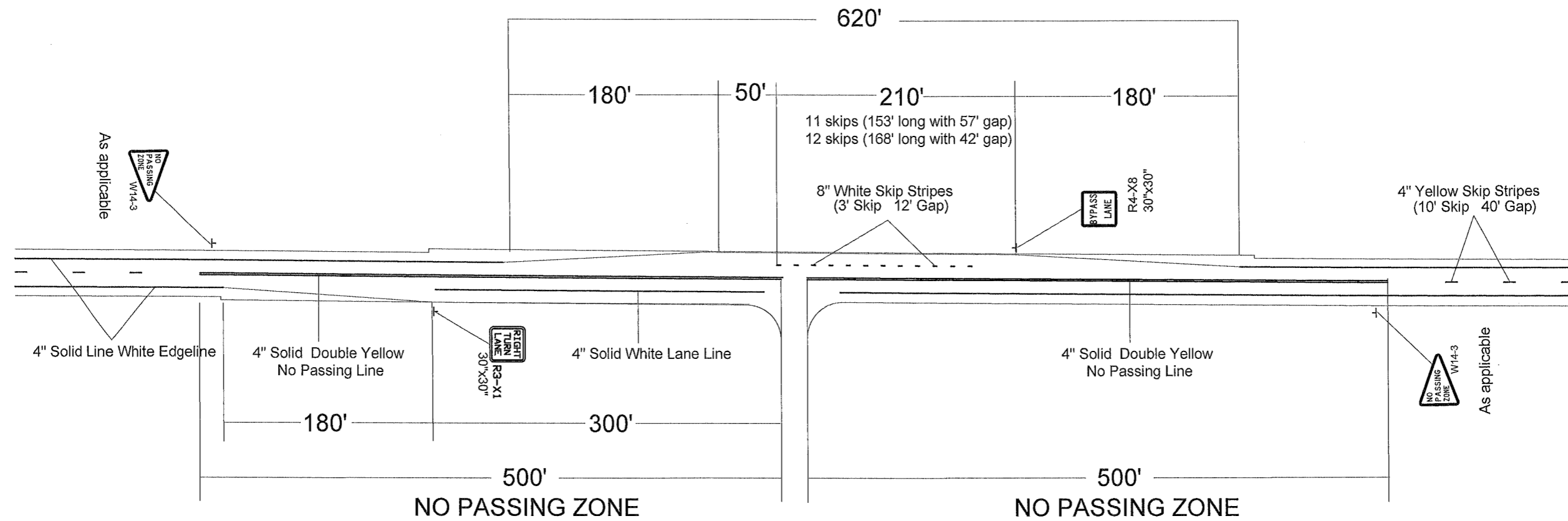
SIGNING & STRIPING DETAILS

SHEET 24 OF 25 SHEETS

A.C.H.D.

BY-PASS TYPICAL

REVISED 10.8.18



6 OF 6

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CR_74 (Cedar-WofTH65)\Base\Traffic\Sign&Stripe_Details 2019.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: SEAN R. THIEL DATE: 2/9/22

SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 10/16/21

DESIGN BY: DATE: _____

CHECKED BY: DATE: _____



ANOKA COUNTY
HIGHWAY DEPT.

CP 21-38-74

SIGNING & STRIPING
DETAILS

SHEET 25 OF 25 SHEETS