

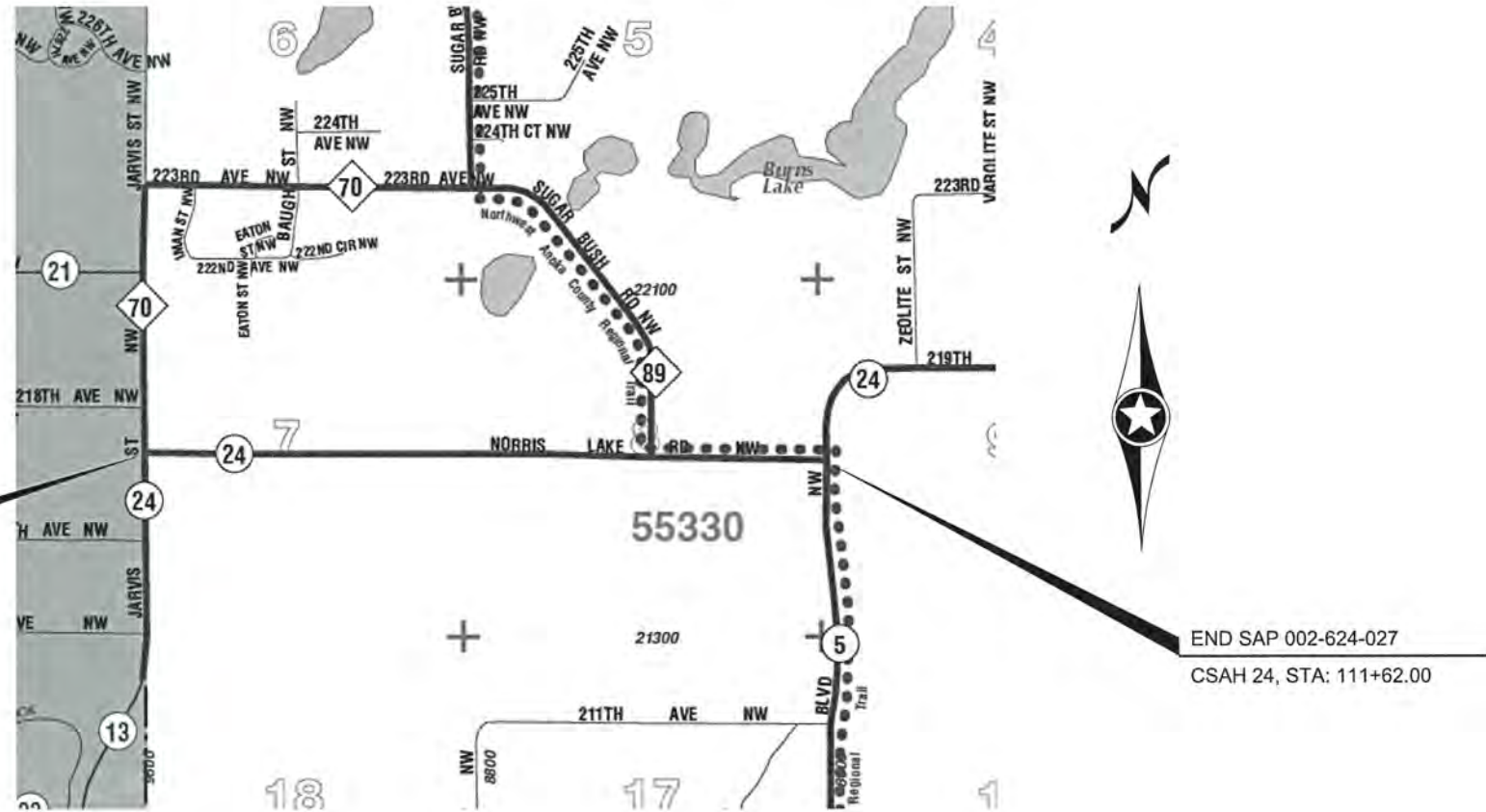
MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR _____ BITUMINOUS RECLAMATION AND BITUMINOUS SURFACING _____

LOCATED ON CSAH 24 BETWEEN CR 70 (JARVIS ST NW) AND CSAH 5 (NOWTHEN BLVD NW)

CSAH 24

GROSS LENGTH	10115.00 FEET	1.916 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	10115.00 FEET	1.916 MILES



BEGIN SAP 002-624-027
CSAH 24, STA: 10+47.00

END SAP 002-624-027
CSAH 24, STA: 111+62.00

PROJECT LOCATION



GOVERNING SPECIFICATIONS
THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

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

THIS PLAN CONTAINS 14 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4-5	DETAILS
6-9	CONSTRUCTION PLAN
10-14	SIGNING AND STRIPING PLANS

Approved 3/31/17
CITY OF NOWTHEN ENGINEER

Approved 3/21/17
ANOKA COUNTY ENGINEER

DATE 4/10/17
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

DATE 4/10/17
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

CITY OF NOWTHEN
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 7, 8
TOWNSHIP 33 NORTHWEST
RANGE 25 WEST

DESIGN DESIGNATION (CSAH 24)			
ESAL 20	230,367	FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
R VALUE	40	NO. OF TRAFFIC LANES	2
ADT (2017)	1950	NO. OF PARKING LANES	0
PROJ. ADT (2037)	1950	DESIGN SPEED	55 MPH
PROJ. HCA DT (2037)	115	STOPPING SIGHT DISTANCE BASED ON:	
SOIL FACTOR	NA	HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT:	
		STA.	TO STA.
			MPH

NO	DATE	BY	CKD	APPR	REVISION		
						03/14/2017	8:43:36 AM

NAME: P:\117-01-00\CSAH_24_(CR70-CSAH5)\Base\PROPOSED\PROPOSED.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: MATTHEW J. JOHN
SIGNATURE:
DATE: 3/14/2017 LICENSE NO. 51639

DRAWN BY: SPH DATE: 1/13/2017
DESIGN BY: SPH DATE: 1/13/2017
CHECKED BY: MJJ DATE: 3/7/2017

ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-624-027

TITLE SHEET
Sheet 1 of 14 Sheets

m:\john

STATEMENT OF ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	NOTES	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
2021.501	MOBILIZATION		LUMP SUM	1
2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	6	SQ YD	82
2104.505	REMOVE BITUMINOUS PAVEMENT		SQ YD	193
2104.511	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	356
2123.503	MOTOR GRADER	9	HOUR	10
2130.501	WATER		MGAL	224
2215.501	FULL DEPTH RECLAMATION		SQ YD	29363
2221.501	SHOULDER BASE AGGREGATE CLASS 5	1	TON	1044
2232.501	MILL BITUMINOUS SURFACE (2.0")	2	SQ YD	255
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GAL	1603
2360.501	TYPE SP 12.5 WEARING COURSE MIX (3,B)	6	TON	18
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,C)		TON	7515
2540.602	MAIL BOX SUPPORT	3	EACH	14
2563.601	TRAFFIC CONTROL	8	LUMP SUM	1
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	7	UDAY	28
2574.525	COMMON TOPSOIL BORROW (LV)	10	CU YD	50
2575.523	EROSION CONTROL BLANKET CATEGORY 0	10, 11	SQ YD	150
2581.501	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	4	LN FT	1305
2582.502	4" SOLID LINE EPOXY	5	LN FT	26700
2582.502	4" BROKEN LINE EPOXY	5	LN FT	2030
2582.502	4" DOUBLE SOLID LINE EPOXY	5	LN FT	110

CONSTRUCTION NOTES

1	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
2	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT.
3	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE LOCAL POSTAL AUTHORITY. MAILBOX REMOVAL AND ALL MATERIALS NECESSARY FOR INSTALLATION ARE INCIDENTAL TO THIS ITEM.
4	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR SHALL REMOVE PRIOR TO FINAL PAINT STRIPING.
5	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
6	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
7	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION AND 7 DAYS PRIOR TO DETOUR; REFERENCE STRIPING PLAN FOR DETAILS.
8	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 PAVEMENT MARKINGS ARE NOT PRESENT.
9	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT.
10	ITEM USED AS DIRECTED BY THE ENGINEER FOR RESTORATION OF DISTURBED AREAS ALONG DRIVEWAY AND STREET APPROACHES.
11	TYPE 1 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM.

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

MNDOT STANDARD PLATES

PLATE NUMBER	DESCRIPTION
8000J	CHANNELIZERS (3 SHEETS)
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

NO	DATE	BY	CKD	APPR	REVISION	
	03/14/2017					7:53:56 AM

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ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-624-027

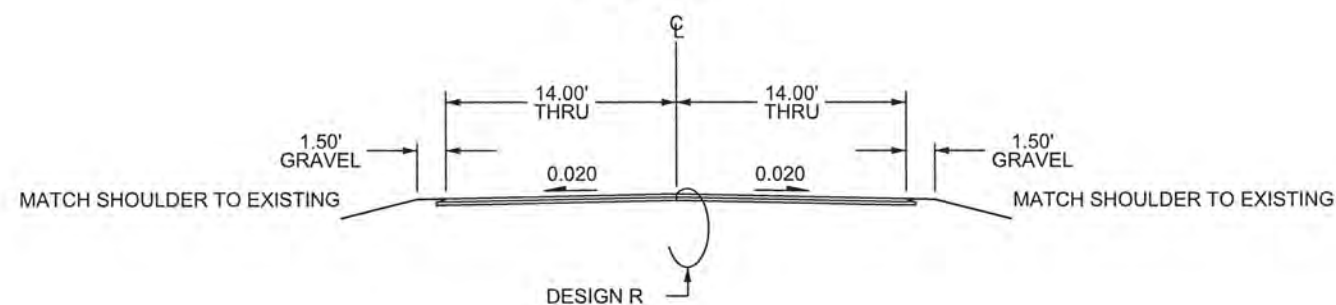
STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 14 Sheets

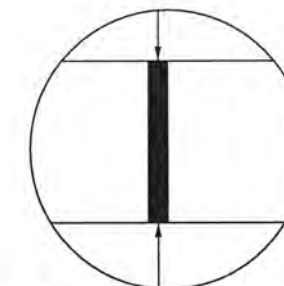
mjohn

CSAH 24- NORRIS LAKE DR. NW (PROPOSED) SECTION

10+47 - 111+62



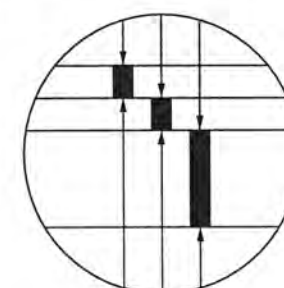
EXISTING SECTION



9.5" EXISTING BITUMINOUS / BIT SAND
NO AGGREGATE BASE

* FOR INFORMATIONAL PURPOSES ONLY
CONTRACTOR SHALL FIELD VERIFY EXISTING SECTION

DESIGN R RECLAIM SECTION



2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
FULL DEPTH RECLAMATION

NO	DATE	BY	CKD	APPR	REVISION		
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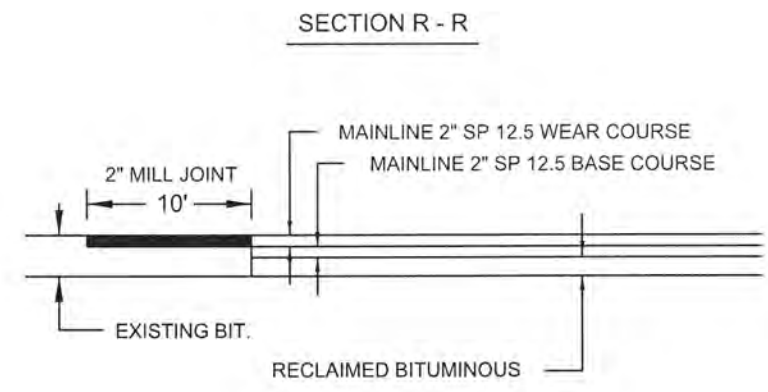
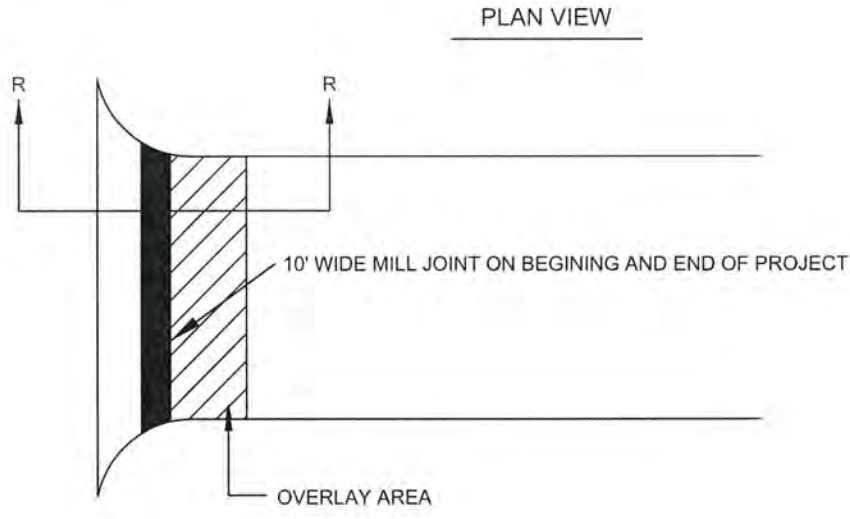
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-624-027

TYPICAL SECTIONS
Sheet 3 of 14 Sheets

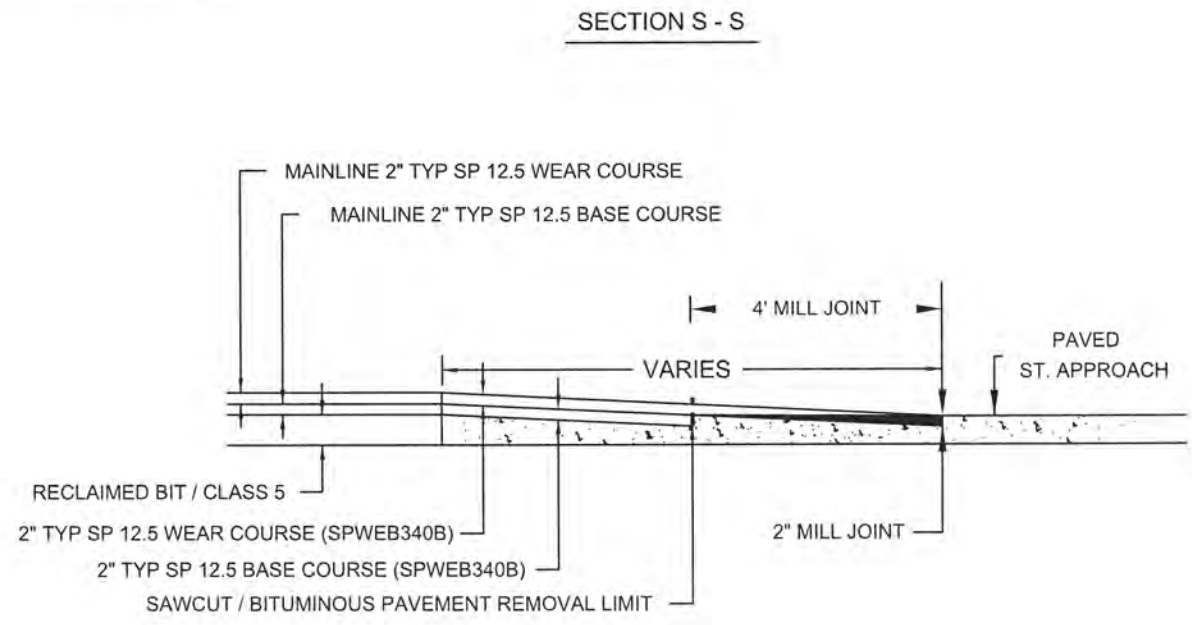
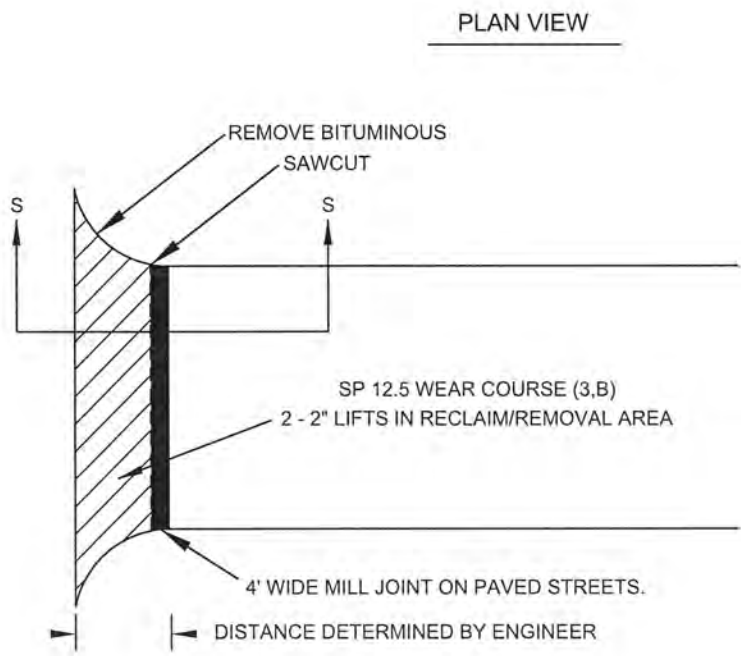
mjohn

MAINLINE JOINT DETAIL (RECLAIM)



STREET APPROACH DETAIL

BITUMINOUS STREET



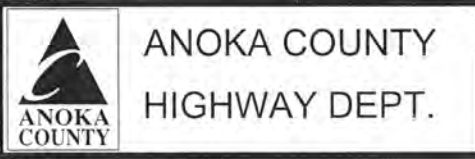
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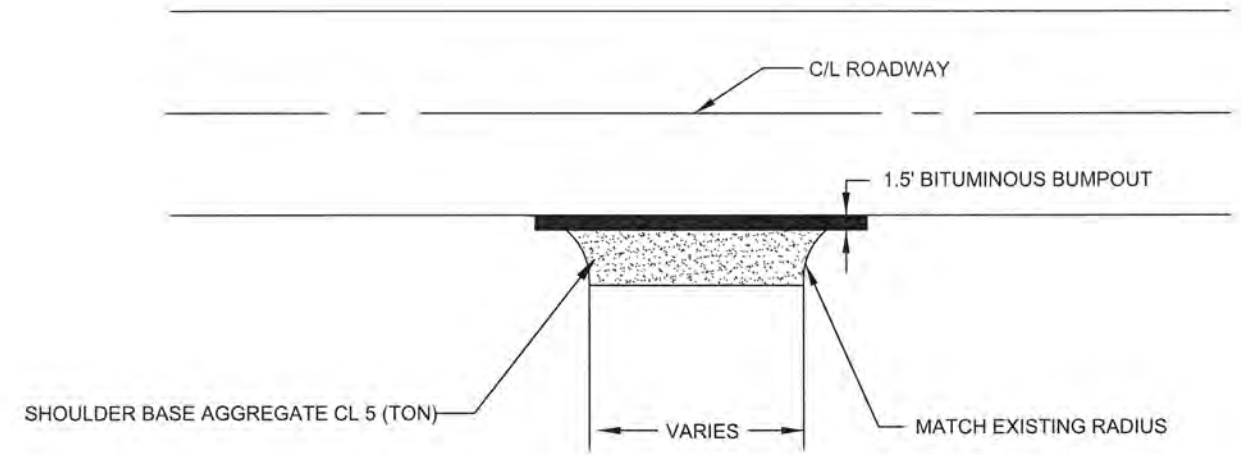
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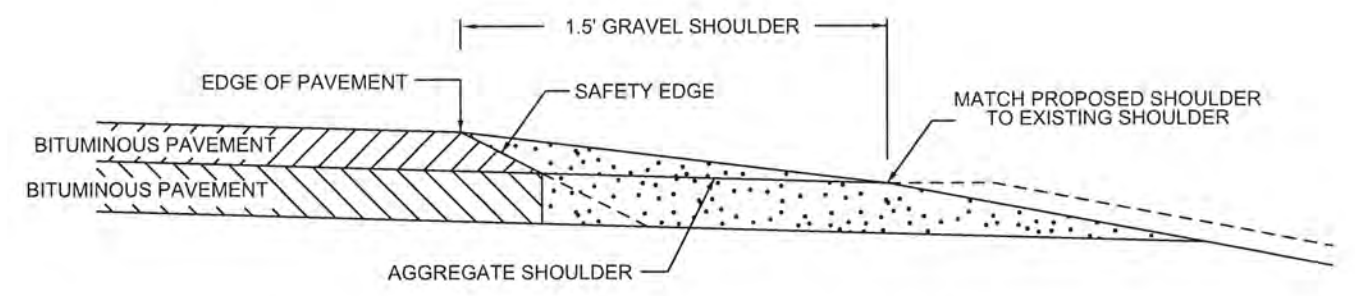
STATE AID PROJECT 002-624-027

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DRIVEWAY DETAIL GRAVEL / FIELD ENTRANCE



SHOULDER DETAIL BITUMINOUS SAFETY EDGE GRAVEL SHOULDER

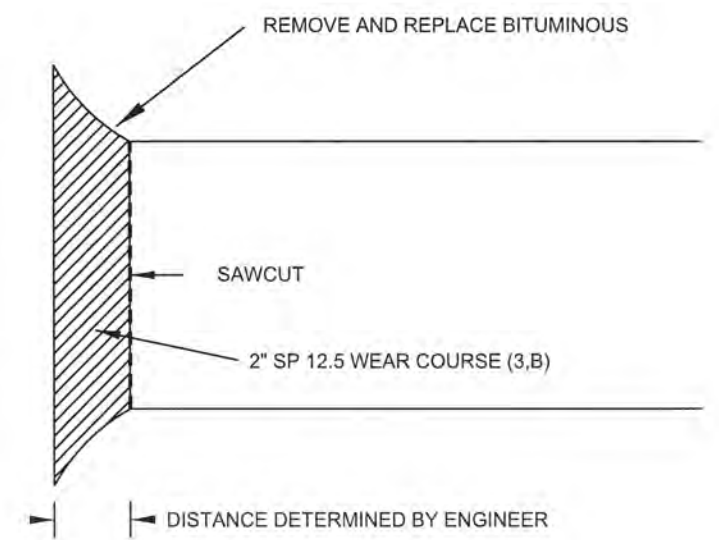


SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

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

RECLAIM AREA - DRIVEWAY DETAIL BITUMINOUS ENTRANCE

PLAN VIEW



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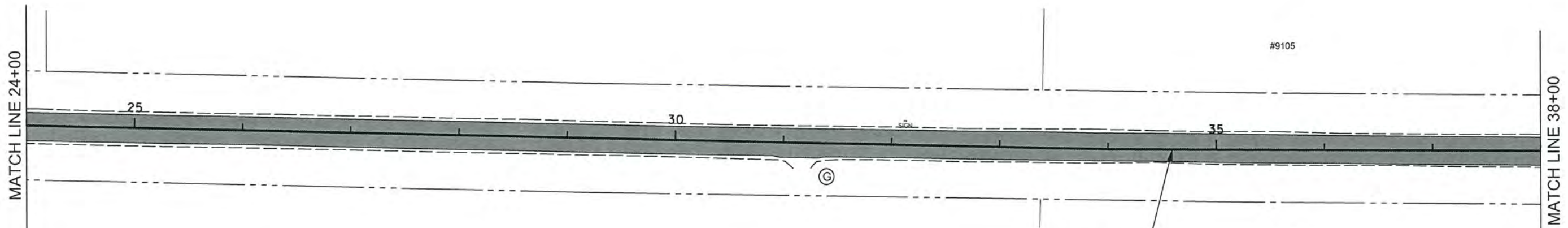
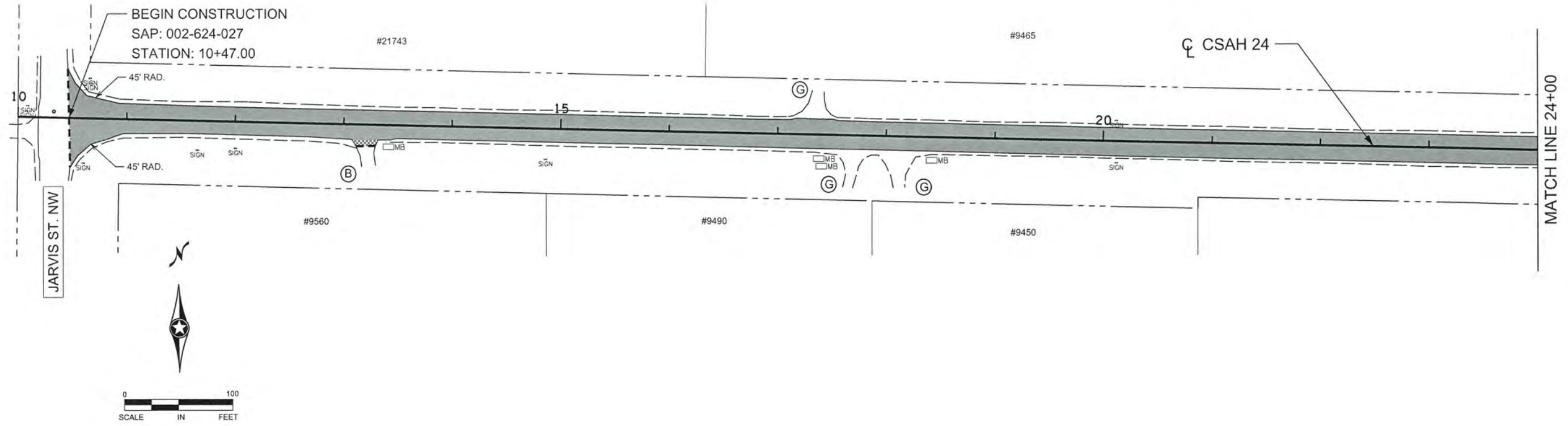
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CHECKED BY: MJJ DATE: 3/7/2017

ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-624-027

DETAILS
Sheet 5 of 14 Sheets

mjohn



LEGEND

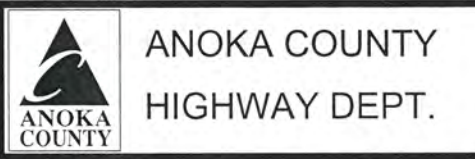
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(G)	GRAVEL		REMOVE AND REPLACE PAVEMENT
(C)	CORE LOCATION		SAWCUT
			R / W

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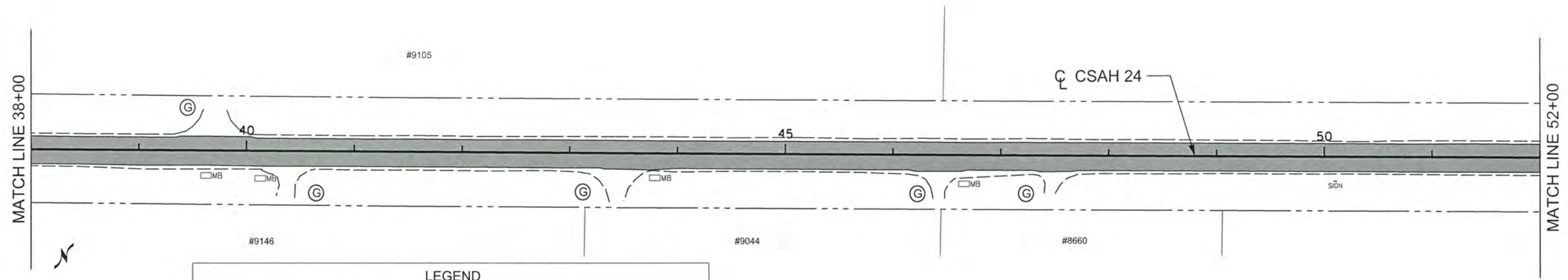
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 CHECKED BY MJJ DATE 3/7/2017







STATE AID PROJECT 002-624-027

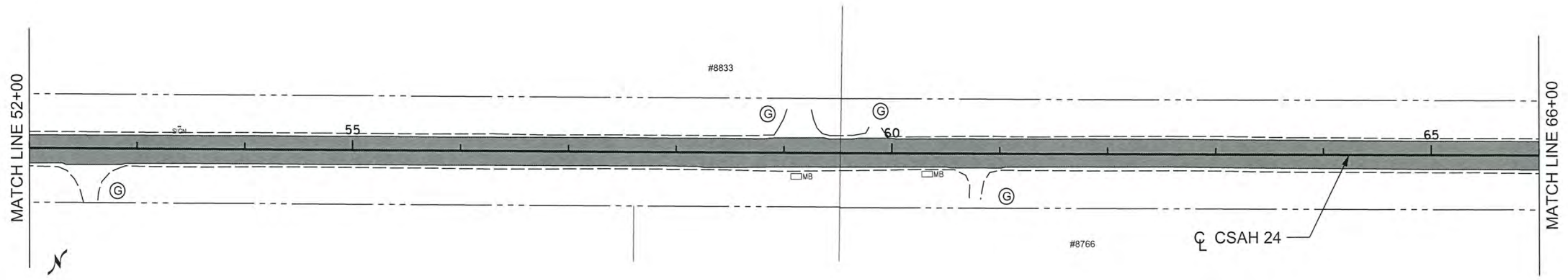
CONSTRUCTION PLAN
 STA 10+47 TO 38+00
 Sheet 6 of 14 Sheets

mjohn



LEGEND

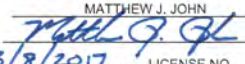
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(G)	GRAVEL		REMOVE AND REPLACE PAVEMENT
	CORE LOCATION		
- - -	SAWCUT		R / W



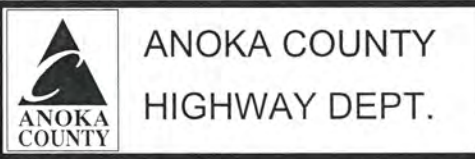
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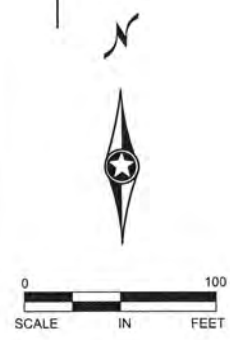
STATE AID PROJECT 002-624-027

CONSTRUCTION PLAN
 STA 38+00 TO 66+00
 Sheet 7 of 14 Sheets

mjohn

MATCH LINE 66+00

MATCH LINE 80+00



LEGEND

- (B) BITUMINOUS
- (G) GRAVEL
- ⊕ CORE LOCATION
- SAWCUT
- R/W
- [Solid Grey Box] MAINLINE RECLAIM
- [Hatched Box] REMOVE AND REPLACE PAVEMENT

MATCH LINE 80+00

MATCH LINE 94+00



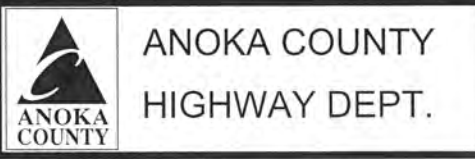
SUGAR BUSH RD. NW

NO	DATE	BY	CKD	APPR	REVISION	03/07/2017	4:28:56 PM
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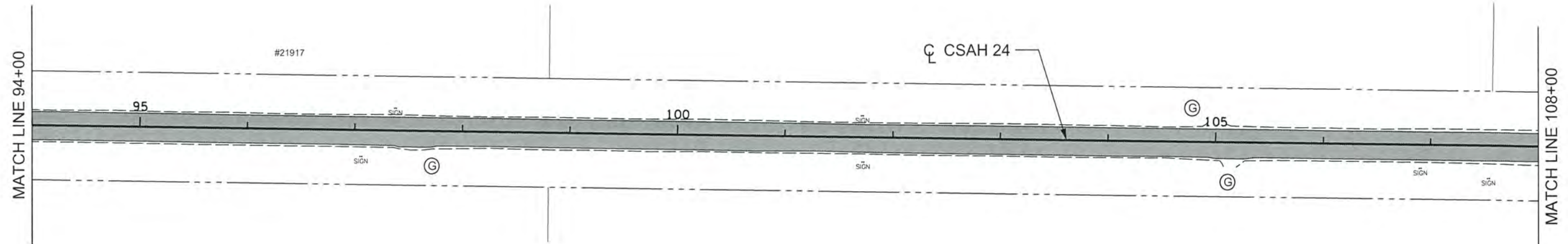
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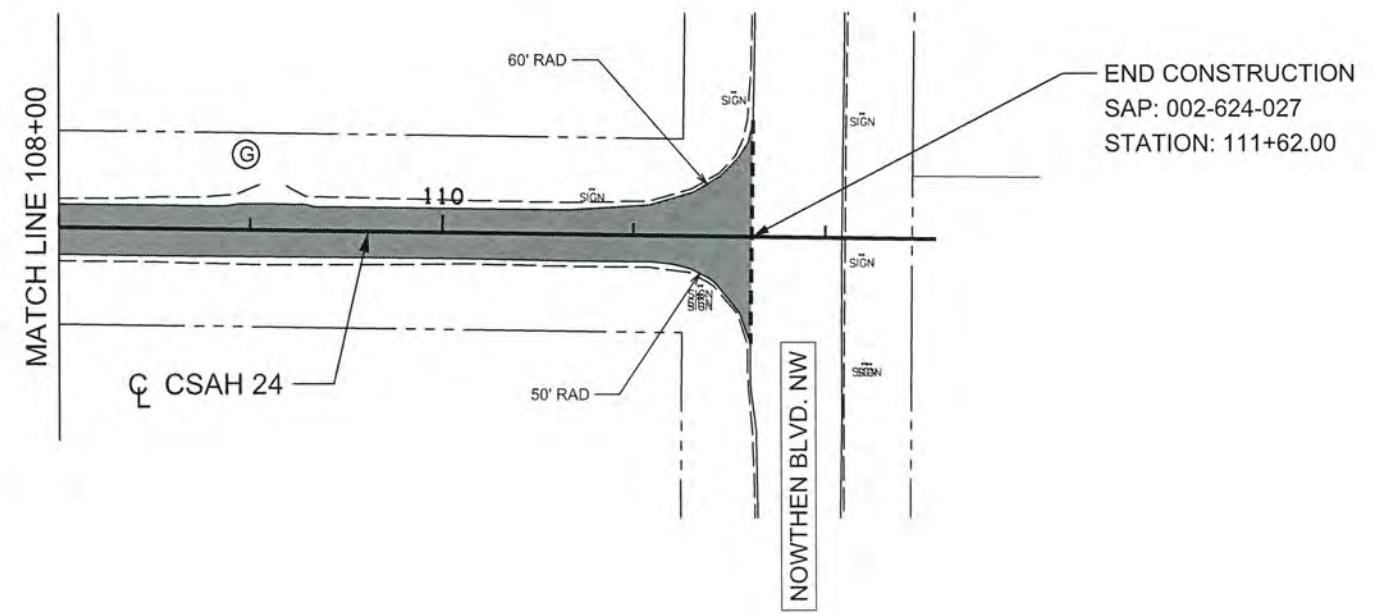
STATE AID PROJECT 002-624-027

CONSTRUCTION PLAN
 STA 66+00 TO 94+00
 Sheet 8 of 14 Sheets

mjohn



LEGEND	
(B)	BITUMINOUS
(G)	GRAVEL
⊙	CORE LOCATION
---	SAWCUT
[Solid Grey Box]	MAINLINE RECLAIM
[Hatched Box]	REMOVE AND REPLACE PAVEMENT
---	R/W



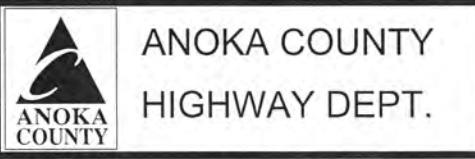
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STATE AID PROJECT 002-624-027

CONSTRUCTION PLAN
 STA 94+00 TO 111+62
 Sheet 9 of 14 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.

EPOXY:

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 BEANS 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.

PERMANENT MARKING QUANTITIES		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	20260
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	6440
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	2030
4" DOUBLE SOLID LINE YELLOW - EPOXY PAINT	LIN FT	110

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

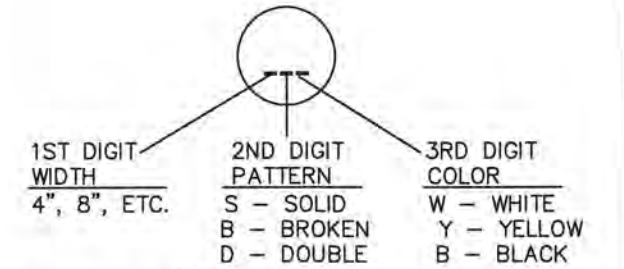
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

STRIPING KEY

○ CIRCLE - EPOXY ◻ SQUARE PREFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

◡ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



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

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: MATTHEW J. JOHN
 SIGNATURE: *[Signature]*
 DATE: 3/8/2017 LICENSE NO. 51639

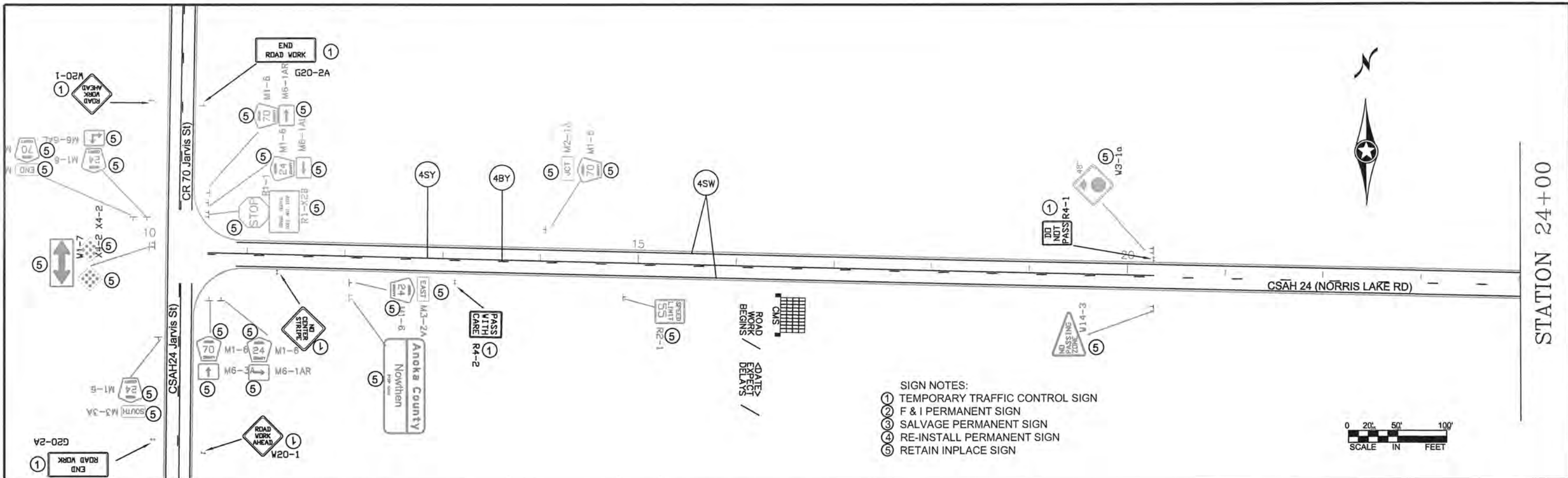
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 DESIGN BY: RLB DATE: 1/24/17
 CHECKED BY: JR DATE: 1/24/17



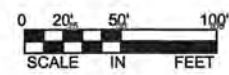
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-624-027
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____

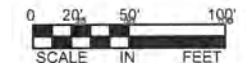
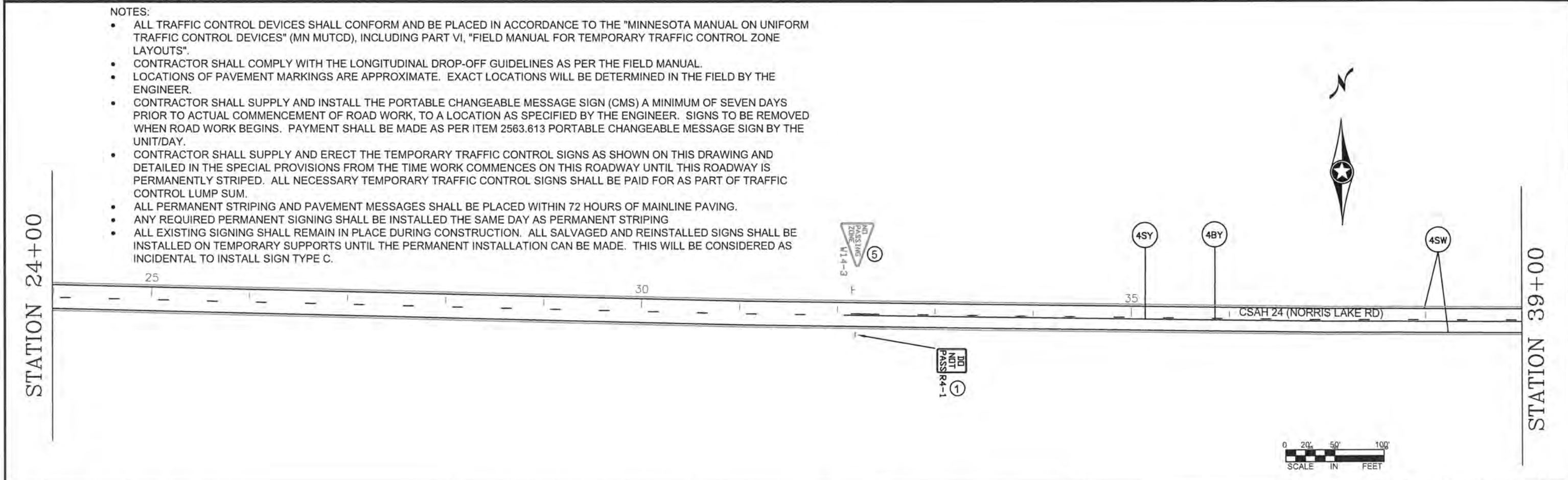
PERMANENT MARKING
TABULATION
 Sheet 10 of 14 Sheets



- SIGN NOTES:**
- ① TEMPORARY TRAFFIC CONTROL SIGN
 - ② F & I PERMANENT SIGN
 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT SIGN
 - ⑤ RETAIN INPLACE SIGN



- 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 INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM OF SEVEN 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.
 - 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. ALL 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:\02-617-19\base\Traffic\Curves from CSAH 18 to CSAH 22.dwg

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PRINT NAME: MATTHEW J. JOHN
 SIGNATURE: *[Signature]*
 DATE: 3/8/2017 REG. NO. 51639

DRAWN BY: RLB DATE: 1/5/17
 DESIGN BY: RLB DATE: 1/5/17
 CHECKED BY: JR DATE: 1/5/17

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-624-027
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____

TEMPORARY SIGNING,
 PERMANENT SIGNING
 AND STRIPING

Sheet 11 of 14 Sheets

STATION 39+00

STATION 64+00

①
PASS WITH CARE R4-2

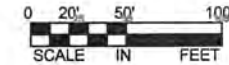
①
PASS WITH CARE R4-2

- SIGN NOTES:
- ① TEMPORARY TRAFFIC CONTROL SIGN
 - ② F & I PERMANENT SIGN
 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT SIGN
 - ⑤ RETAIN INPLACE SIGN

①
DO NOT PASS R4-1

⑤

⑤



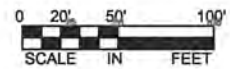
4SY

⑤
NO PASSING ZONE V14-3

①
DO NOT PASS R4-1

STATION 64+00

STATION 79+00



- NOTES:
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①
DO NOT PASS R4-1

⑤
NO PASSING ZONE V14-3

4BY

4SY

4SW

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

PRINT NAME: MATTHEW J. JOHN

SIGNATURE: *[Signature]*

DATE: 3/8/2017 REG. NO. 51639

DRAWN BY: RLB DATE 1/5/17

DESIGN BY: RLB DATE 1/5/17

CHECKED BY: JR DATE 1/5/17



ANOKA COUNTY
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STATE PROJECT NO. _____

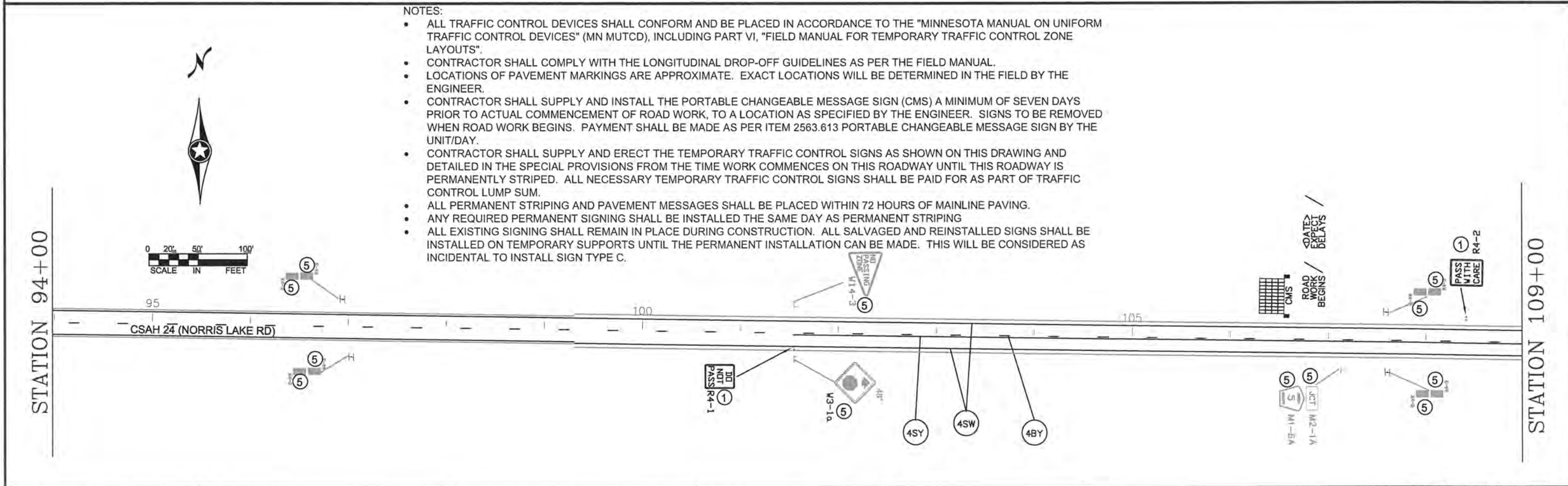
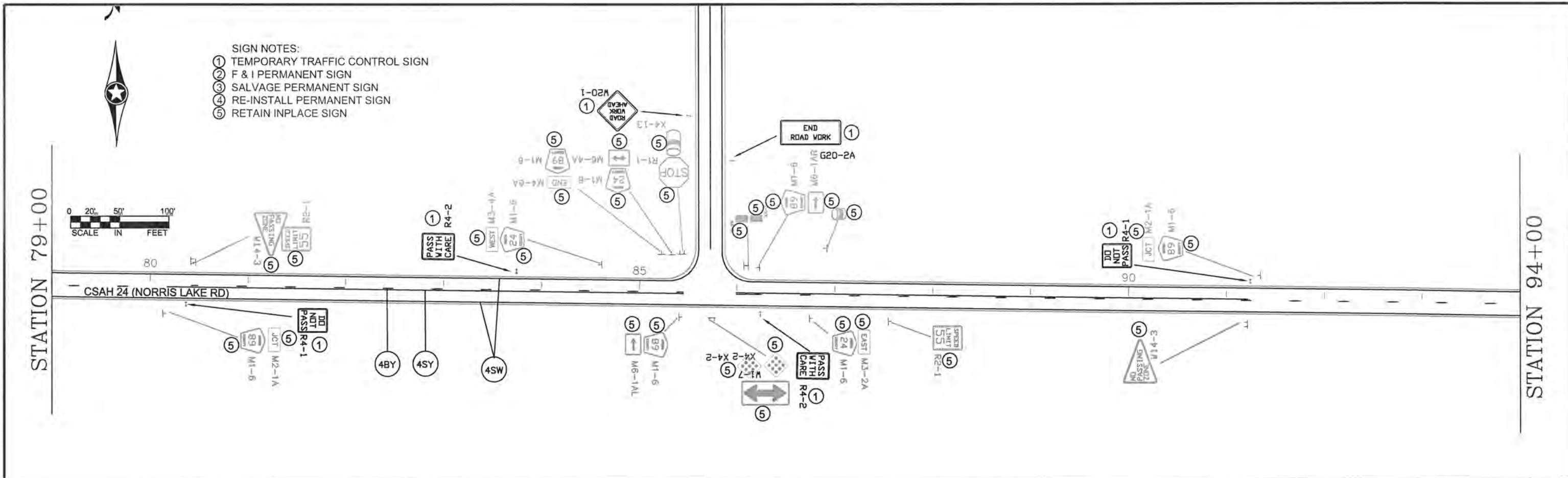
STATE AID PROJECT NO. 002-624-027

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 12 of 14 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-617-19\base\Traffic\Curves from CSAH 18 to CSAH 22.dwg

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PRINT NAME: MATTHEW J. JOHN

SIGNATURE: *Matthew J. John*

DATE: 3/8/2017 REG. NO. 51639

DRAWN BY: RLB DATE: 1/5/15

DESIGN BY: RLB DATE: 1/5/17

CHECKED BY: JR DATE: 1/5/17

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-624-027

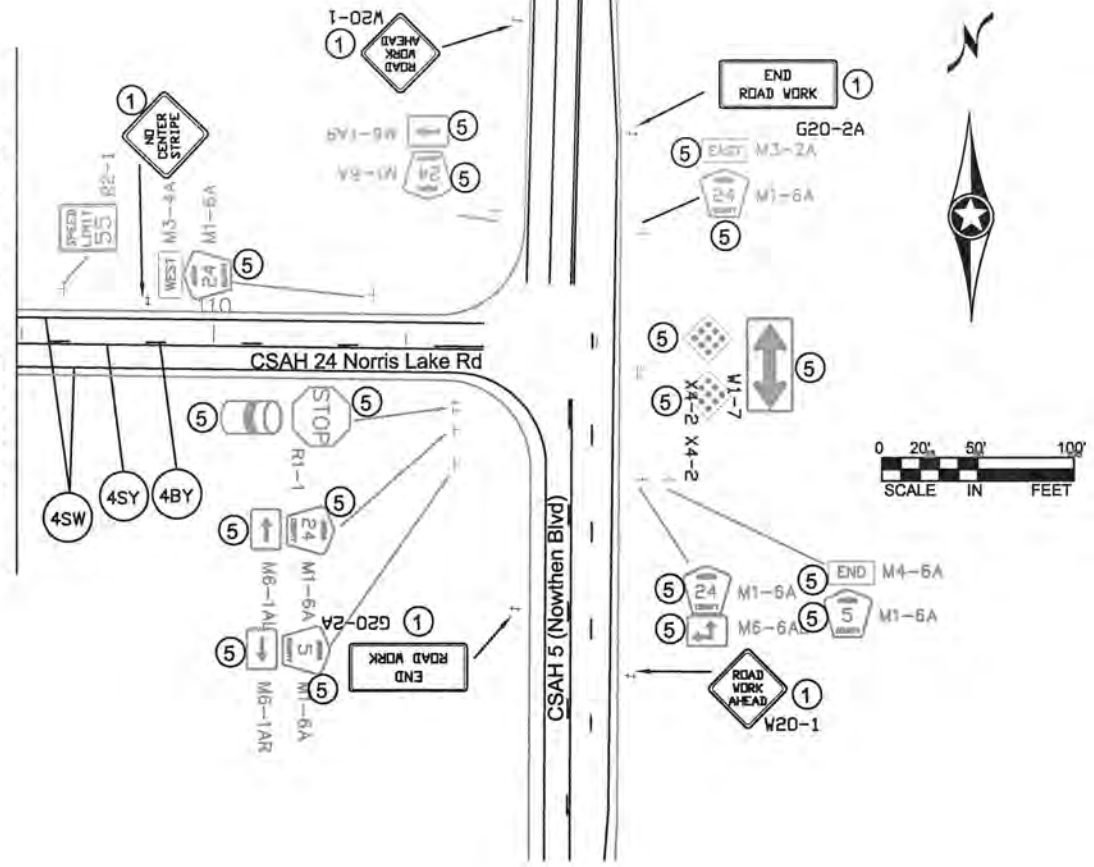
STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

TEMPORARY SIGNING, PERMANENT SIGNING AND STRIPING

Sheet 13 of 14 Sheets

STATION 109+00



- NOTES:
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M.U.T.C.D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY		MOUNTING HEIGHT (TO PANEL/POST EDGES) FT.
					No. POST	
W8-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00		8	1	7.0'
R4-2	24" x 30"	5.00		8	1	7.0'
G20-2A	48" x 24"	8.00		5	2	7.0'
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-8	48" x 48"	16.00		AS NEEDED		
W8-9	48" x 48"	16.00		AS NEEDED		
	48" x 48"	16.00		AS NEEDED		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 5)		
CMS sign to be installed a minimum of seven days prior to actual commencement of road work. Signs to be removed when road work begins.				2		

CMS sign to be installed a minimum of seven days prior to actual commencement of road work. Signs to be removed when road work begins.

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	

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TRAFFIC CONTROL QUANTITY
 Sheet 14 of 14 Sheets