



**STATEMENT OF ESTIMATED QUANTITIES**

Notes	Item Number	ITEM DESCRIPTION	Unit	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
1	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	440
1,2	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	632
3	2123.510	MOTOR GRADER	HOUR	8
	2123.510	DOZER	HOUR	5
	2130.523	WATER	M GALLON	114
4,5	2211.509	AGGREGATE BASE CLASS 5	TON	353
	2215.504	FULL DEPTH RECLAMATION	SQ YD	13053
6	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	80
7	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	532
8	2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	70
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	653
9	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3:B)	TON	75
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4:C)	TON	3002
10	2540.602	MAIL BOX SUPPORT	EACH	17
	2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1
11	2563.601	TRAFFIC CONTROL	LUMP SUM	1
12	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
	2574.507	COMMON TOPSOIL BORROW	CU YD	280
13	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	POUND	901
14	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	153
15	2582.503	4" SOLID LINE MULTI-COMPONENT	LIN FT	8853
15	2582.503	4" BROKEN LINE MULTI-COMPONENT	LIN FT	445
15	2582.503	4" DOUBLE SOLID LINE MULTI-COMPONENT	LIN FT	1676

**CONSTRUCTION NOTES**

1	REFERENCE DETAILS (PAGE 4) FOR REMOVAL DETAILS
2	ITEM FOR BITUMINOUS DRIVEWAYS AND STREET APPROACHES. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
3	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
4	ITEM FOR SUPERELEVATION / GRADE CORRECTION.
5	GRAVEL BASE FOR BITUMINOUS DRIVEWAYS.
6	ITEM USED TO HAUL EXCESS RECLAIM FROM TIE-IN POINTS AND REUSED ON SITE FOR SUPER ELEVATION CORRECTION AREAS.
7	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
8	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.
9	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
10	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY, CONTRACTOR IS RESPONSIBLE FOR CONTACTING POST MASTER AUTHORITY. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
11	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.
12	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
13	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
14	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON MILLED SURFACE AND EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL STRIPING.
15	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING. CANNOT BE INSTALLED SOONER THAN 48 HOURS.
16	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
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)
9350B	MAILBOX SUPPORT - SWING-AWAY TYPE

NO	DATE	BY	CKD	APPR	REVISION	
	03/22/2022					8:08:54 AM

NAME: P:\22-01-00\CSAH\_32\_(S. CO LINE-CSAH21)\Base\Proposed\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: 03-02-2022 LICENSE NO. 58657

DRAWN BY APA DATE 1/28/2022

DESIGN BY APA DATE 1/28/2022

CHECKED BY CO DATE 2/16/2022



**ANOKA COUNTY  
HIGHWAY DEPT.**

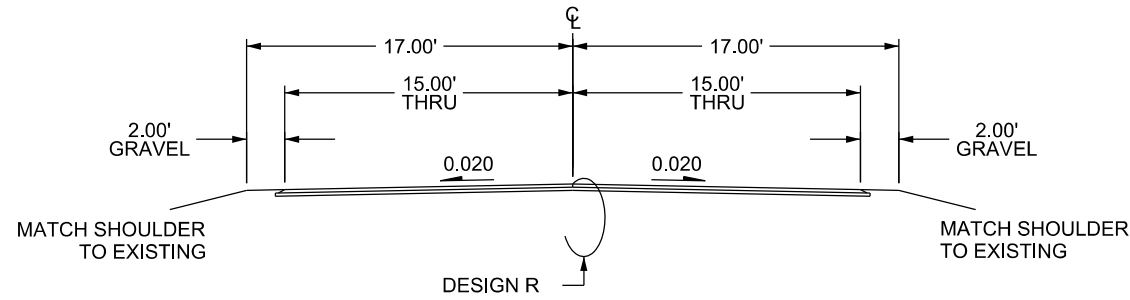
STATE AID PROJECT 002-632-020

STATEMENT OF ESTIMATED QUANTITIES

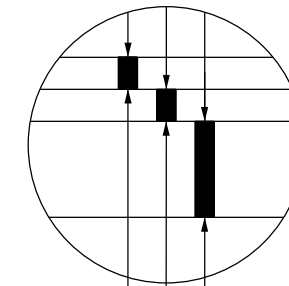
Sheet 2 of 10 Sheets

**CSAH 32 - ASH ST**  
EXISTING/PROPOSED SECTION

11+48.00 - 47+90.00



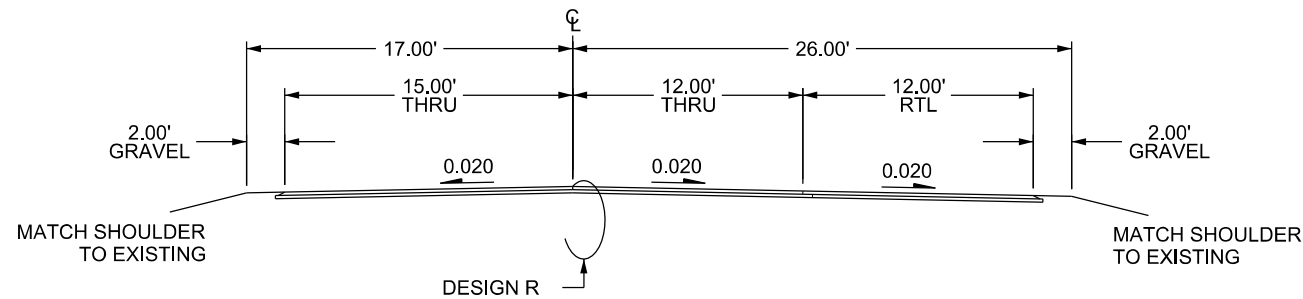
**DESIGN R**  
RECLAIM SECTION



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

**CSAH 32 - ASH ST**  
EXISTING/PROPOSED SECTION

47+90.00 - 49+73.00




**SUPERELEVATION CORRECTION TAB**

STATION	POINT	PROPOSED LT GRADE	PROPOSED RT GRADE
14+00	BEGIN SUPER	-2.00%	-2.00%
14+50		0.00%	-2.00%
15+00		2.00%	-2.00%
15+41	PC	3.80%	-3.80%
15+50		4.00%	-4.00%
16+00	BEGIN FULL SUPER	6.00%	-6.00%
16+50		6.00%	-6.00%
17+00		6.00%	-6.00%
17+50		6.00%	-6.00%
18+00		6.00%	-6.00%
18+50		6.00%	-6.00%
19+00		6.00%	-6.00%
19+50		6.00%	-6.00%
20+00	END FULL SUPER	6.00%	-6.00%
20+50		4.00%	-4.00%
21+00		3.00%	-3.00%
21+10	PT	2.80%	-2.80%
21+50		0.00%	-2.00%
22+00	END SUPER	-2.00%	-2.00%

NO	DATE	BY	CKD	APPR	REVISION
	03/02/2022				12:26:03 PM

NAME: P:\22-01-00\CSAH\_32\_(S. CO LINE-CSAH21)\Base\Proposed\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: 3-2-2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 1/28/2022  
DESIGN BY: APA DATE: 1/28/2022  
CHECKED BY: CO DATE: 2/16/2022



**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE AID PROJECT 002-632-020

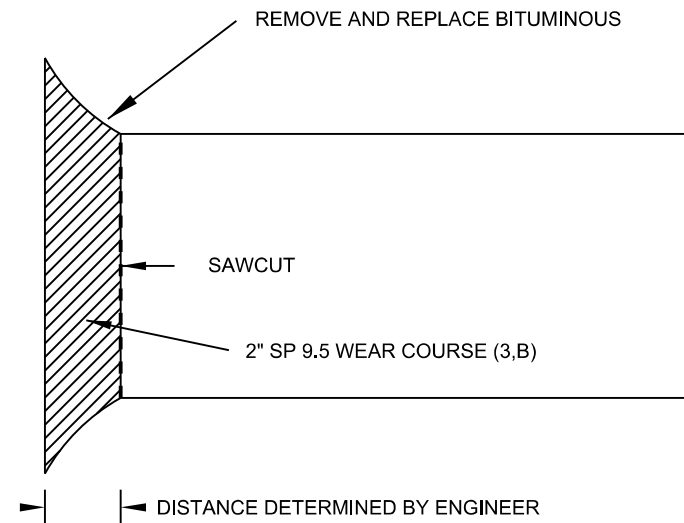
TYPICAL SECTIONS

Sheet 3 of 10 Sheets

### RECLAIM AREA - DRIVEWAY DETAIL

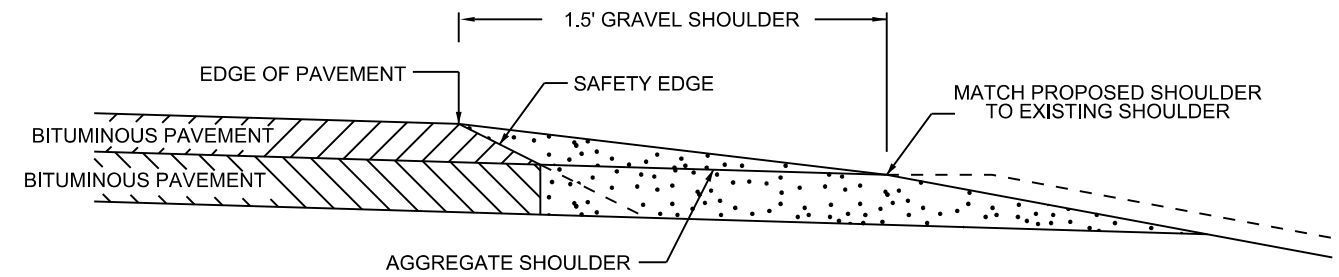
BITUMINOUS

PLAN VIEW



### SHOULDER DETAIL

BITUMINOUS SAFETY EDGE  
GRAVEL SHOULDER

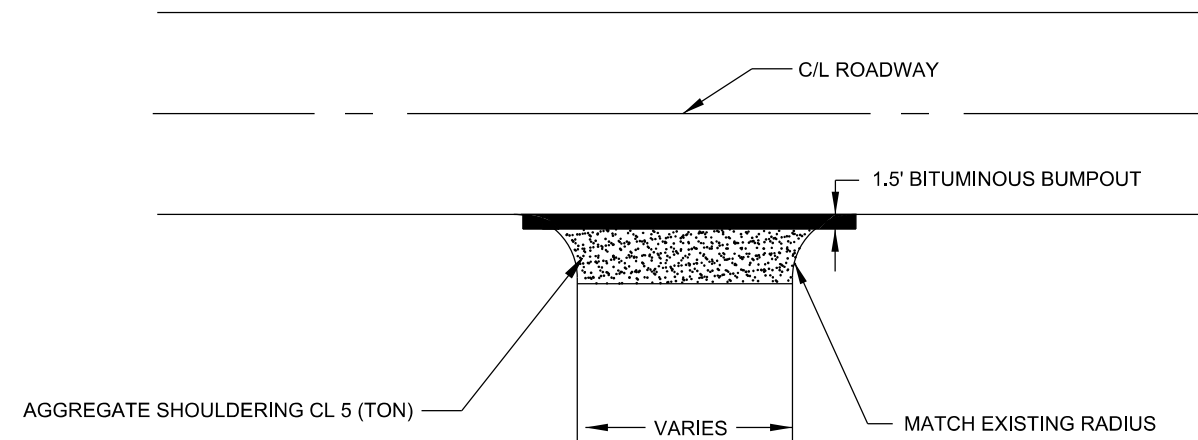


SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

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

### DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE



NO	DATE	BY	CKD	APPR	REVISION	03/02/2022	12:26:04 PM
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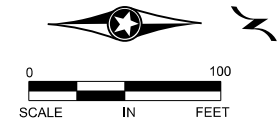
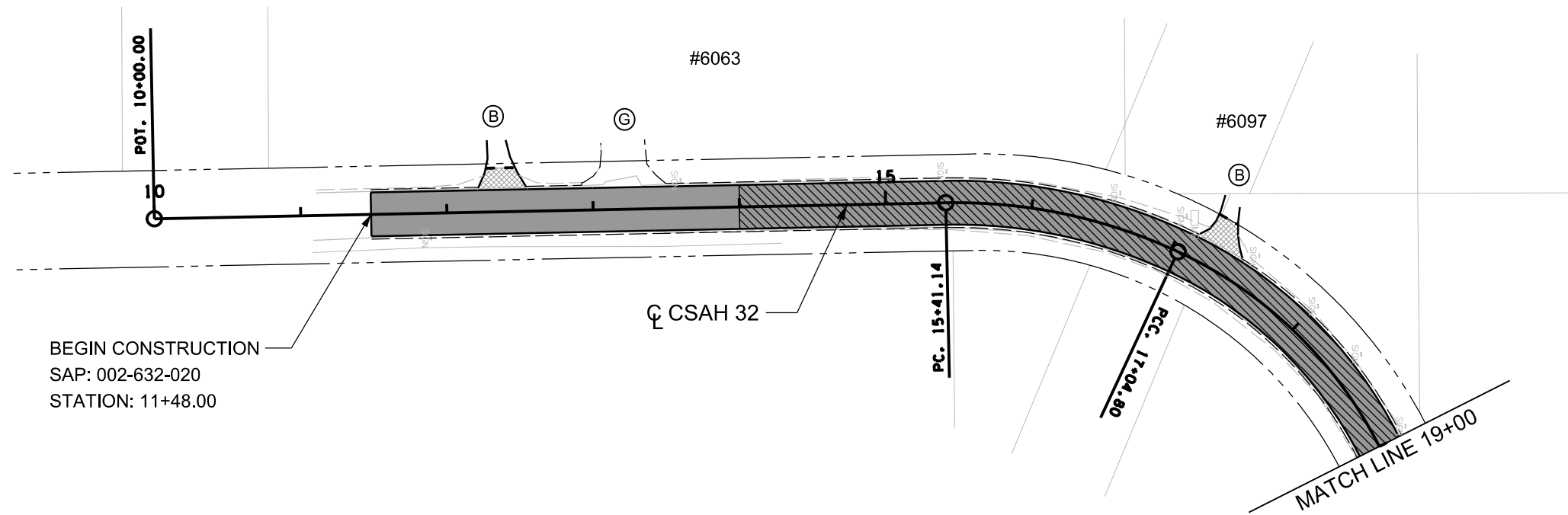
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 PRINT NAME: AARON P. ANDERSON  
 SIGNATURE: *[Signature]*  
 DATE: 03-02-2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 1/28/2022  
 DESIGN BY: APA DATE: 1/28/2022  
 CHECKED BY: CO DATE: 2/16/2022



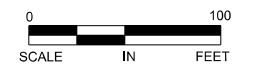
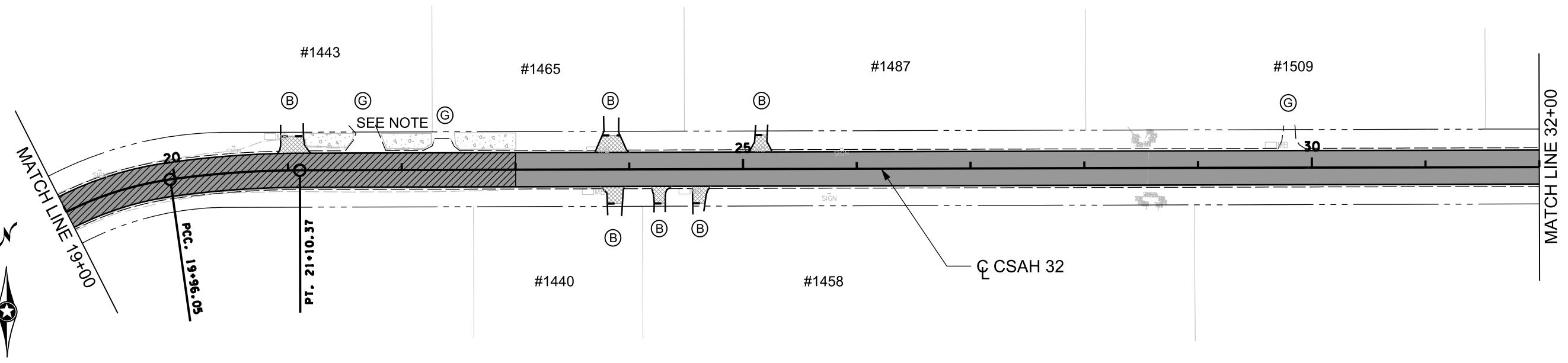
STATE AID PROJECT 002-632-020

DETAILS  
 Sheet 4 of 10 Sheets



**LEGEND**

(B)	BITUMINOUS	[Hatched Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Dotted Box]	REMOVE & REPLACE DRIVEWAY PAVEMENT
⊕	CORE LOCATION	[Diagonal Lines Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Stippled Box]	DITCH GRADING AREA
---	R / W		



\*NOTE: CONSTRUCTION OF DITCH AS DIRECTED BY ENGINEER. \*

NO	DATE	BY	CKD	APPR	REVISION	
	03/02/2022					12:26:05 PM

NAME: P:\22-01-00\CSAH\_32\_(S. CO LINE-CSAH21)\Base\Proposed\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: 03-02-2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 1/28/2022  
 DESIGN BY: APA DATE: 1/28/2022  
 CHECKED BY: CO DATE: 2/16/2022

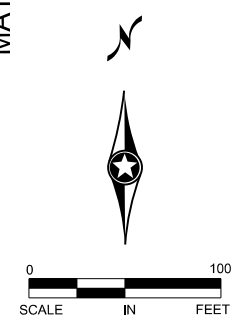
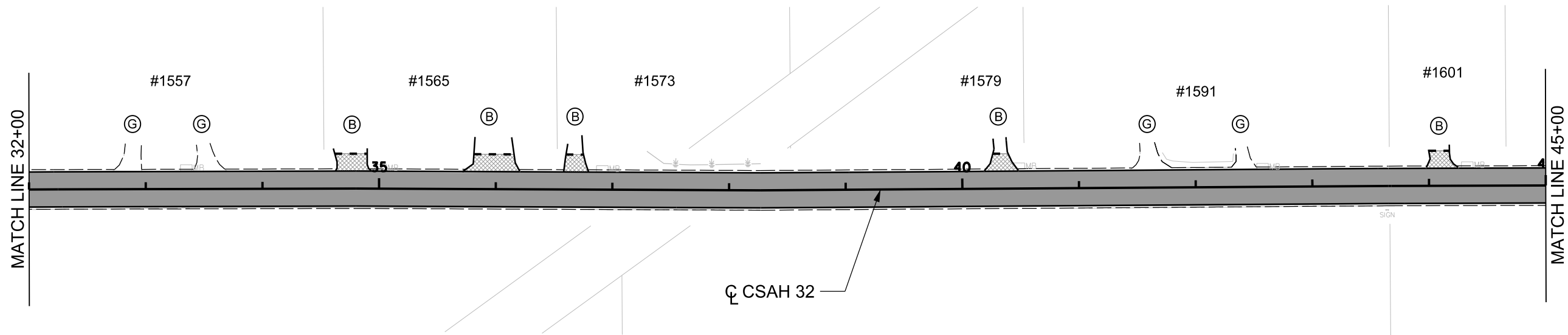
**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE AID PROJECT 002-632-020

**CONSTRUCTION PLAN**

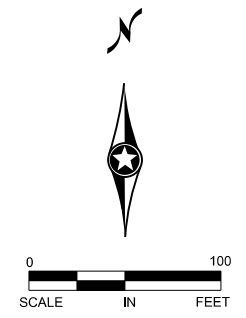
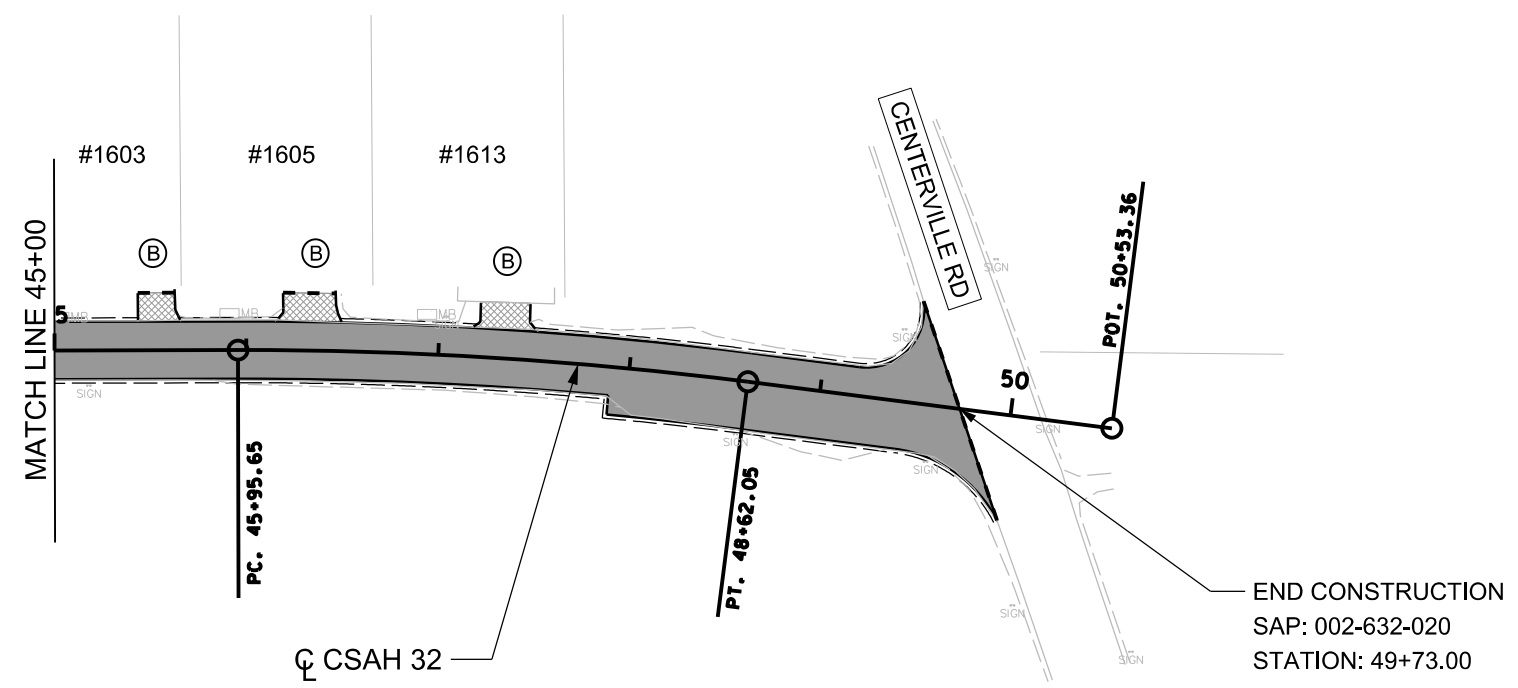
STA 11+48 TO 32+00

Sheet 5 of 10 Sheets



**LEGEND**

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



END CONSTRUCTION  
SAP: 002-632-020  
STATION: 49+73.00

NO	DATE	BY	CKD	APPR	REVISION	
	03/02/2022					12:26:05 PM

NAME: P:\22-01-00\CSAH\_32\_(S. CO LINE-CSAH21)\Base\Proposed\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: 03-02-2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 1/28/2022  
DESIGN BY: APA DATE: 1/28/2022  
CHECKED BY: CO DATE: 2/16/2022

**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE AID PROJECT 002-632-020

**CONSTRUCTION PLAN**

STA 32+00 TO 49+73

Sheet 6 of 10 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	7900
1 4" BROKEN LINE YELLOW - MULTI COMP	LIN FT	445
4" SOLID LINE YELLOW - MULTI COMP	LIN FT	953
4" SOLID DOUBLE LINE YELLOW - MULTICOMP	LIN FT	1676

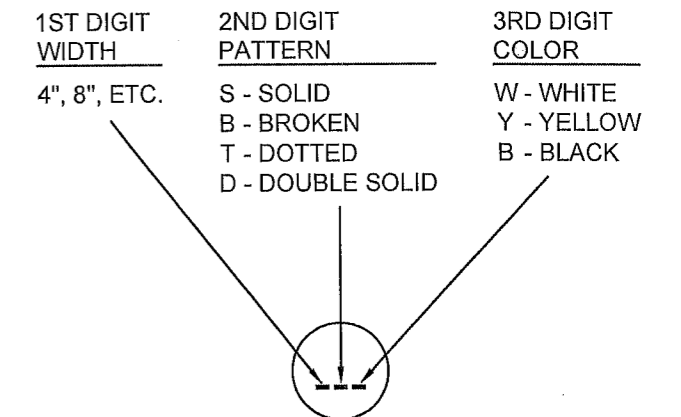
1 10' STRIPE, 40' GAP

**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\CSAH\_32\_(S Co Line-CSAH 21)\Base\Traffic\Perm Pvmr Mrkg Guide Notes 2021.dwg

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

PRINT NAME: SEAN R. THIEL DATE: 1/27/22

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

DRAWN BY: TMV DATE: 10/21/21

DESIGN BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CHECKED BY: SRT DATE: 12/01/21



**ANOKA COUNTY  
HIGHWAY DEPT.**

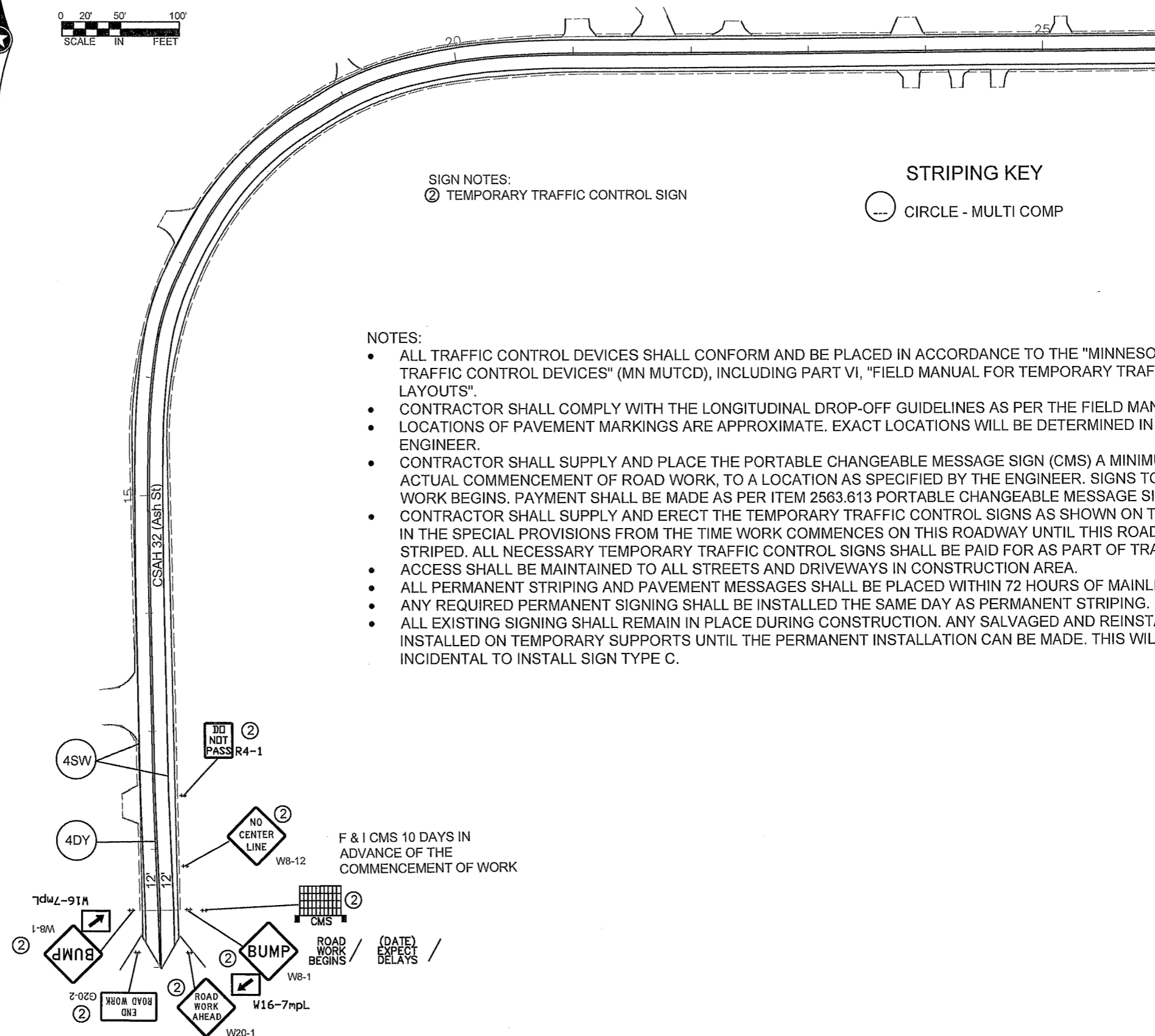
SAP 002-632-020

PERMANENT PAVEMENT  
MARKING PLAN DETAILS

SHEET 7 OF 10 SHEETS



STATION 26+00



SIGN NOTES:  
② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY  
--- CIRCLE - MULTI COMP

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:\22-01-00\CSAH_32_(S Co Line-CSAH21)\Base\Traffic\Temp Sign & Perm Stripe.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.

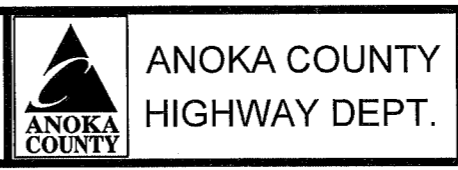
PRINT NAME: SEAN R. THIEL DATE: 1/27/22

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

DRAWN BY: TMV DATE: 10/21/21

DESIGN BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CHECKED BY: SRT DATE: 12/01/21



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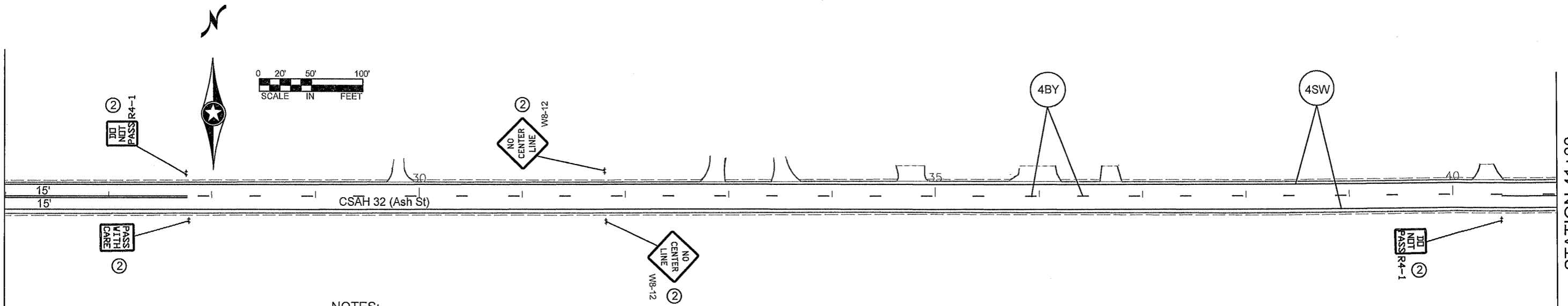
TEMPORARY SIGNING  
PERMANENT STRIPING

SHEET 8 OF 10 SHEETS



STATION 26+00

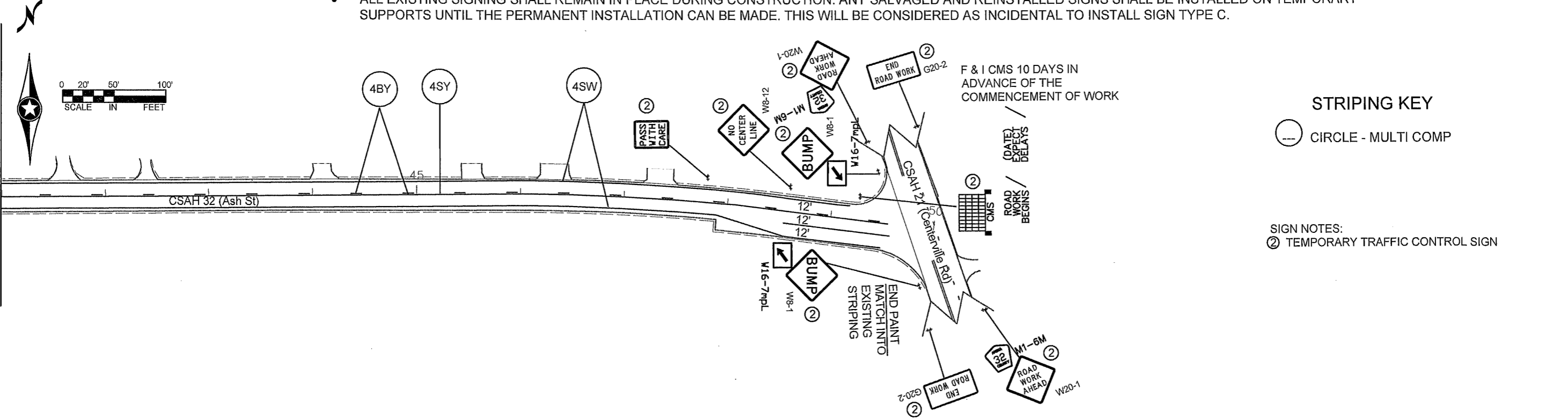
STATION 41+00



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 41+00



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\22-01-00\CSAH_32_(S Co Line-CSAH21)\Base\Traffic\Temp Sign & Perm Stripe.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: 1/27/22

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

DRAWN BY: TMV DATE: 10/21/21

DESIGN BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CHECKED BY: SRT DATE: 12/01/21




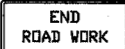
















ANOKA COUNTY  
HIGHWAY DEPT.

SAP 002-632-020

TEMPORARY SIGNING  
PERMANENT STRIPING

SHEET 9 OF 10 SHEETS

TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-12	48" x 48"		4
R4-1	24" x 30"		3
R4-2	24" x 30"		2
G20-2	36" x 18"		3
W8-1	48" x 48"		4
W16-7P	30" x 18"		4
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 3)
W20-4	48" x 48"		AS NEEDED
W20-7	48" x 48"		AS NEEDED (ESTIMATED 2)
REFLECTORIZED REBOUNDABLE 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

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:\22-01-00\CSAH\_32\_(S Co Line-CSAH21)\Base\Traffic\Temp Sign & Perm Stripe.dwg

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PRINT NAME: SEAN R. THIEL DATE: 1/27/22

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

DRAWN BY: TMV DATE: 10/21/21

DESIGN BY: DATE:

CHECKED BY: SRT DATE: 12/01/21



ANOKA COUNTY  
HIGHWAY DEPT.

SAP 002-632-020

TEMPORARY SIGNING QUANTITIES

SHEET 10 OF 10 SHEETS