

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR _____ MILL BITUMINOUS AND BITUMINOUS SURFACING

LOCATED ON _____ CR 10 _____ BETWEEN _____ COTTAGEWOOD TERRACE NE _____ AND _____ ARTHUR ST. NE _____

CR 10

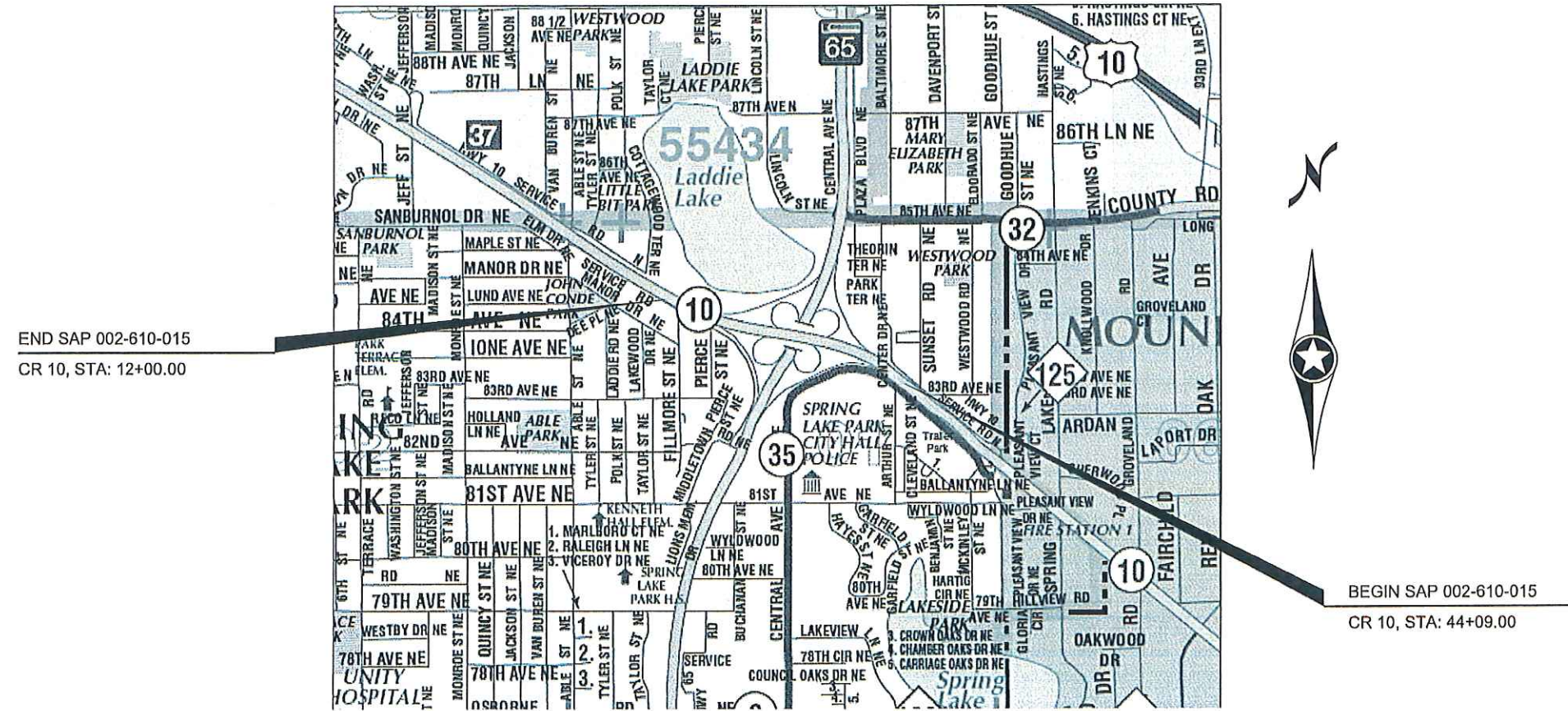
GROSS LENGTH _____ 3209.00 FEET _____ 0.608 MILES
EXCEPTIONS-LENGTH _____ 237.00 FEET _____ 0.045 MILES
NET LENGTH _____ 2972.00 FEET _____ 0.563 MILES

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

THIS PLAN CONTAINS 11 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4	DETAILS
5-7	CONSTRUCTION PLAN
8-11	SIGNING AND STRIPING PLANS



END SAP 002-610-015
CR 10, STA: 12+00.00

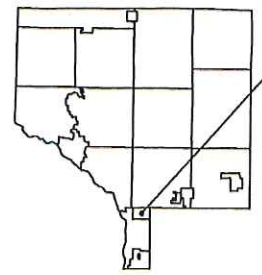
BEGIN SAP 002-610-015
CR 10, STA: 44+09.00



Approved *Paul Ansel* 4/17/2018
CITY OF SPRING LAKE PARK ENGINEER

Approved *Robert J. ...* 4/18/2018
ANOKA COUNTY ENGINEER

PROJECT LOCATION



CITY OF SPRING LAKE PARK
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 01
TOWNSHIP 30 NORTH
RANGE 23 WEST

Julie Dresel DATE 5/2/18
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Julie Dresel DATE 5/2/18
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

DESIGN DESIGNATION (CSAH 10)			
ESAL 20	2,381,642	FUNCTIONAL CLASSIFICATION	A MINOR ARTERIAL
R VALUE	50	NO. OF TRAFFIC LANES	4
ADT (2014)	22,400	NO. OF PARKING LANES	0
PROJ. ADT (2034)	22,400	DESIGN SPEED	50 MPH
PROJ. HCADT (2034)	1322	STOPPING SIGHT DISTANCE BASED ON:	
SOIL FACTOR	N/A	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

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: JOSEPH J. MACPHERSON
SIGNATURE: *Joseph J. MacPherson*
DATE: 4/19/18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 03/23/2018
DESIGN BY: SPH DATE: 03/23/2018
CHECKED BY: HG DATE: 03/23/2018



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 002-610-015

TITLE SHEET
Sheet 1 of 11 Sheets

STATEMENT OF ESTIMATED QUANTITIES

NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	150
6	2231.509	BITUMINOUS PATCHING MIXTURE	TON	50
1	2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	29460
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	1473
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,E)	TON	3388
2	2563.601	TRAFFIC CONTROL	LUMP SUM	1
3	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
4	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	263
5	2582.502	4" BROKEN LINE MULTI COMP	LIN FT	1530
5	2582.503	4" SOLID LINE MULTI COMP	LIN FT	16193

CONSTRUCTION NOTES

1	DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES, AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
2	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.
3	2 MESSAGE BOARDS, ONE ON EACH END OF PROJECT, WILL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
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 IS TO REMOVE PRIOR TO FINAL PAINT STRIPING
5	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
6	ITEM USED AT ENGINEER'S DISCRETION FOR PATCHING AFTER MILLING AND BEFORE FINAL PAVING.

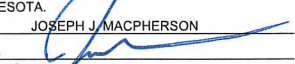
BASIS OF PLANNED QUANTITIES

2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN THICKNESS
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS

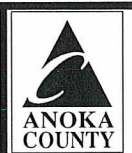
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	04/19/2018				7:47:13 AM

NAME: P:\18-01-00\CSAH_10_(BetweenTH65ramps)\Base\PROPOSED\PROPOSED.dgn

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PRINT NAME: JOSEPH J. MACPHERSON
 SIGNATURE: 
 DATE: 4/19/18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 03/20/2018
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 CHECKED BY: HG DATE: 03/20/2018



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 002-610-015

STATEMENT OF ESTIMATED QUANTITIES

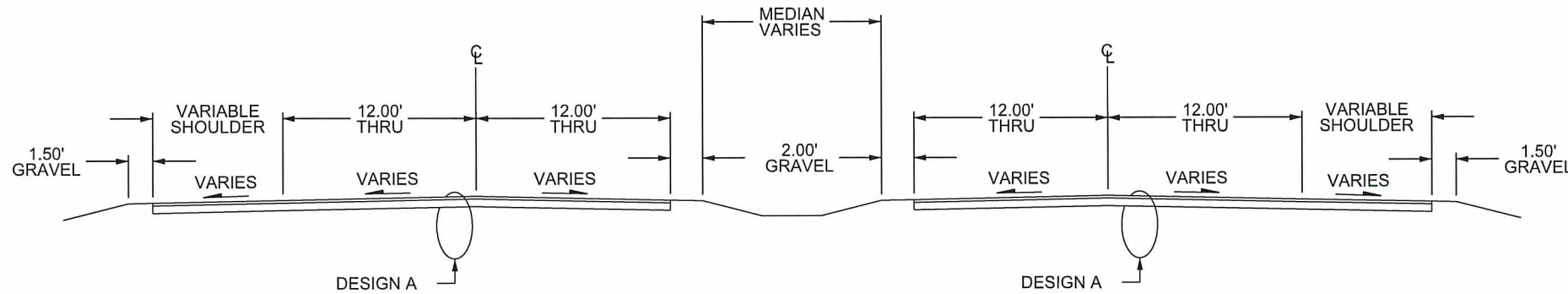
Sheet 2 of 11 Sheets

SPH/ADS

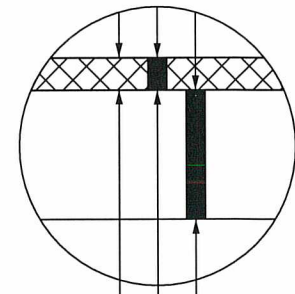
CSAH 10 (PROPOSED) SECTION

101+47 - 104+43
110+31 - 117+21
124+88 - 129+25
133+55 - 135+12

12+00 - 20+37
22+89 - 26+64
34+42 - 39+95



DESIGN A MILL SECTION

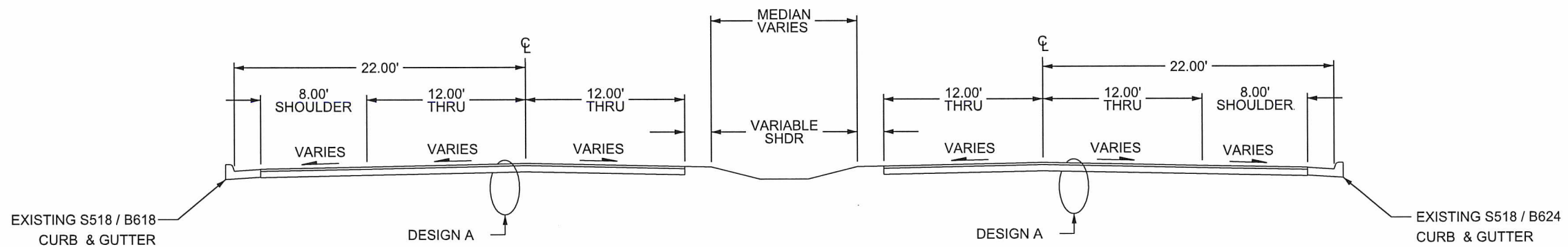


2.0" MILL BITUMINOUS
2.0" BITUMINOUS WEAR (SPWEB440E)
REMAINING BITUMINOUS

CSAH 10 (PROPOSED) SECTION

104+43 - 101+31
117+21 - 119+57
121+94 - 124+88
129+25 - 133+55

20+37 - 22+89
26+64 - 29+68
35+05 - 34+42
39+95 - 44+09



BRIDGE IS EXCLUDED.
STATION 29+68 - 32+05

NOTE: STATIONING BASED OFF LEB ALIGNMENT

NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
						04/20/2018	11:28:30 AM

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: JOSEPH J. MACPHERSON
SIGNATURE: *[Signature]*
DATE: 4-23-18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 03/20/2018
DESIGN BY: SPH DATE: 03/20/2018
CHECKED BY: HG DATE: 03/20/2018



ANOKA COUNTY
HIGHWAY DEPT.

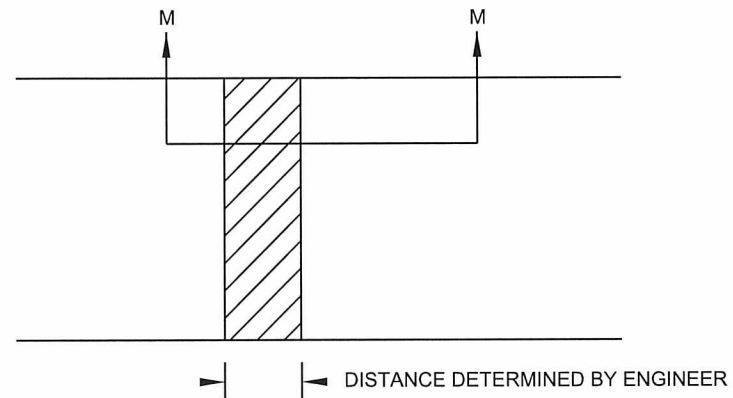
COUNTY PROJECT 002-610-015

TYPICAL SECTIONS
Sheet 3 of 11 Sheets

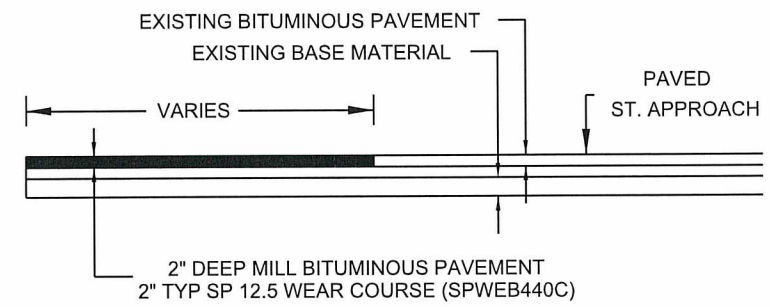
spnccs

ENTRANCE APPROACH DETAIL (MILL & OVERLAY) BITUMINOUS STREET

PLAN VIEW



SECTION M - M



NO	DATE	BY	CKD	APPR	REVISION	04/12/2018	10:53:53 AM

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: JOSEPH J. MACPHERSON

SIGNATURE: *[Signature]*

DATE: 4/19/18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 03/20/2018

DESIGN BY: SPH DATE: 03/20/2018

CHECKED BY: HG DATE: 03/20/2018



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 002-610-015

DETAILS

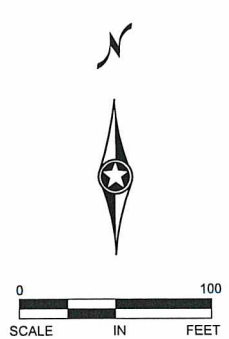
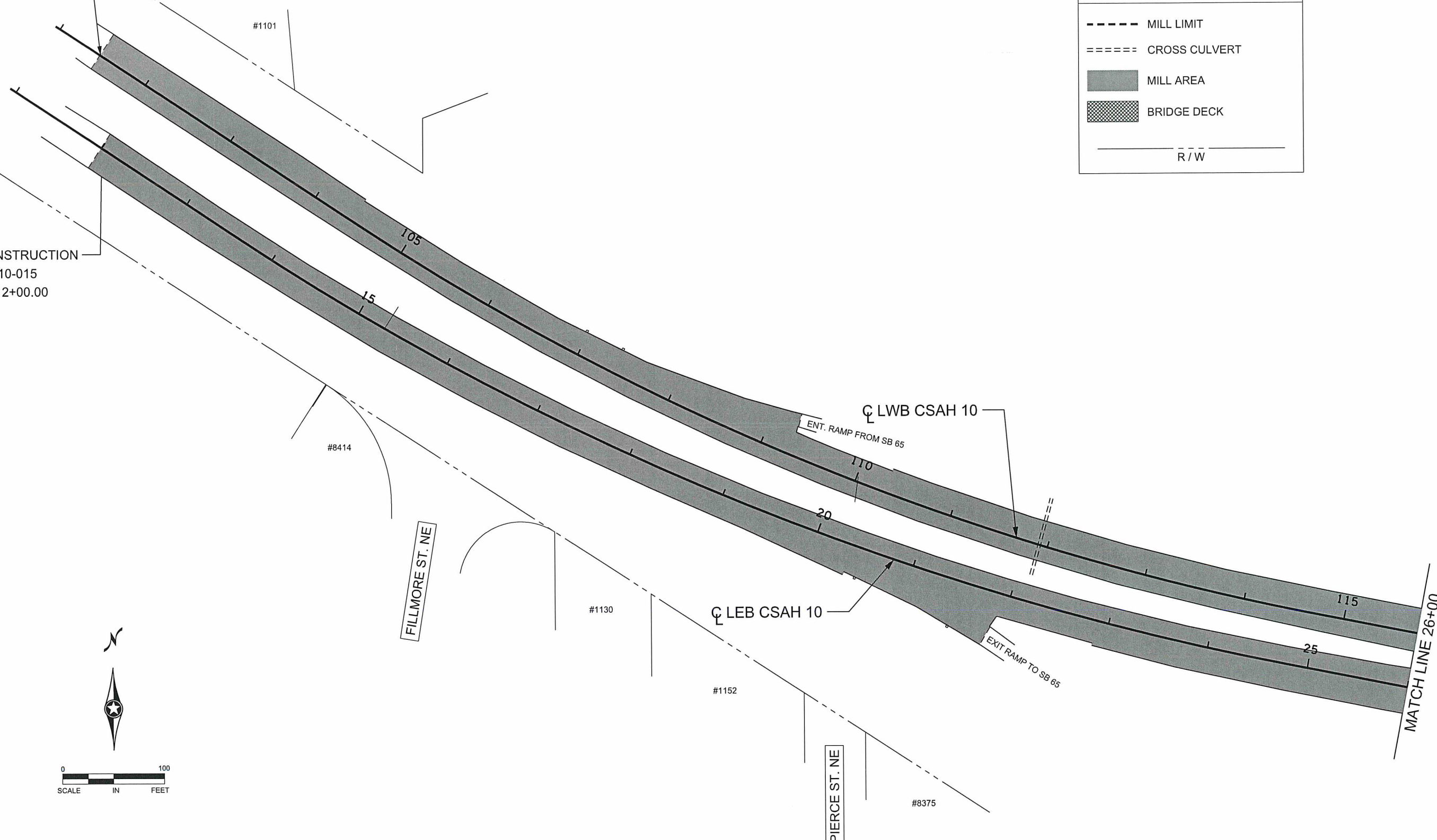
Sheet 4 of 11 Sheets

spnacs

BEGIN CONSTRUCTION
SAP: 002-610-015
STATION: 101+47.00

BEGIN CONSTRUCTION
SAP: 002-610-015
STATION: 12+00.00

LEGEND	
---	MILL LIMIT
- - - - -	CROSS CULVERT
[Solid Grey Box]	MILL AREA
[Hatched Box]	BRIDGE DECK
—	R / W



NO	DATE	BY	CKD	APPR	REVISION	
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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: JOSEPH J. MACPHERSON

SIGNATURE: *[Signature]*

DATE: 4/12/18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 03/20/2018

DESIGN BY: SPH DATE: 03/20/2018

CHECKED BY: HG DATE: 03/20/2018

ANOKA COUNTY
HIGHWAY DEPT.

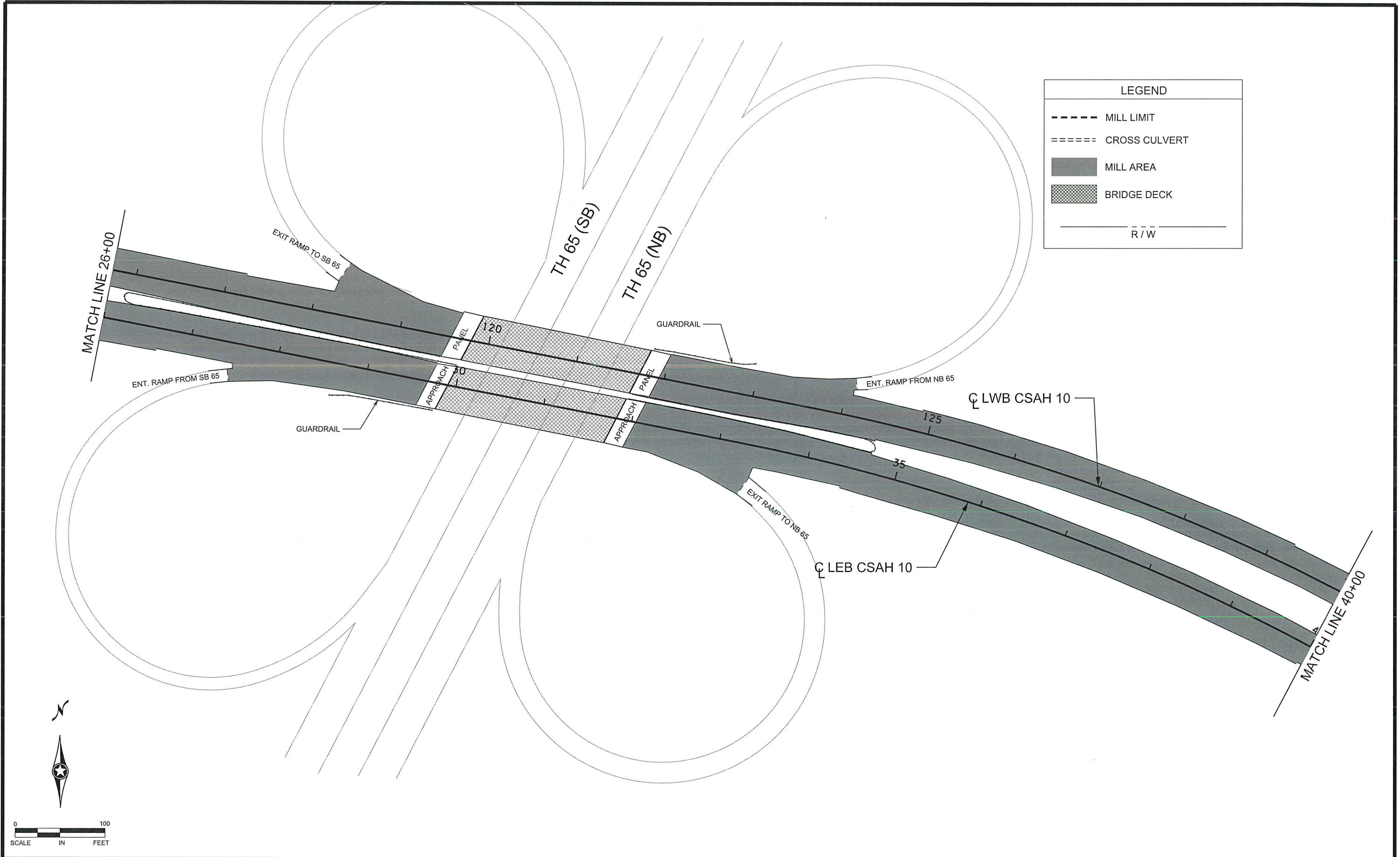
COUNTY PROJECT 002-610-015

CONSTRUCTION PLAN
STA 12+00.00 TO 26+00.00
Sheet 5 of 11 Sheets

dfrey

LEGEND

- MILL LIMIT
- ===== CROSS CULVERT
- MILL AREA
- ▨ BRIDGE DECK
- R/W



NO	DATE	BY	CKD	APPR	REVISION	
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NAME: P:\18-01-00\CSAH_10_(BetweenTH65ramps)\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: JOSEPH J. MACPHERSON
 SIGNATURE: *[Signature]*
 DATE: 4-27-18 LICENSE NO. 46732

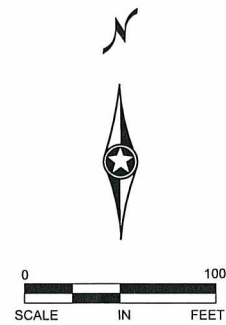
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 CHECKED BY HG DATE 03/20/2018

ANOKA COUNTY HIGHWAY DEPT.

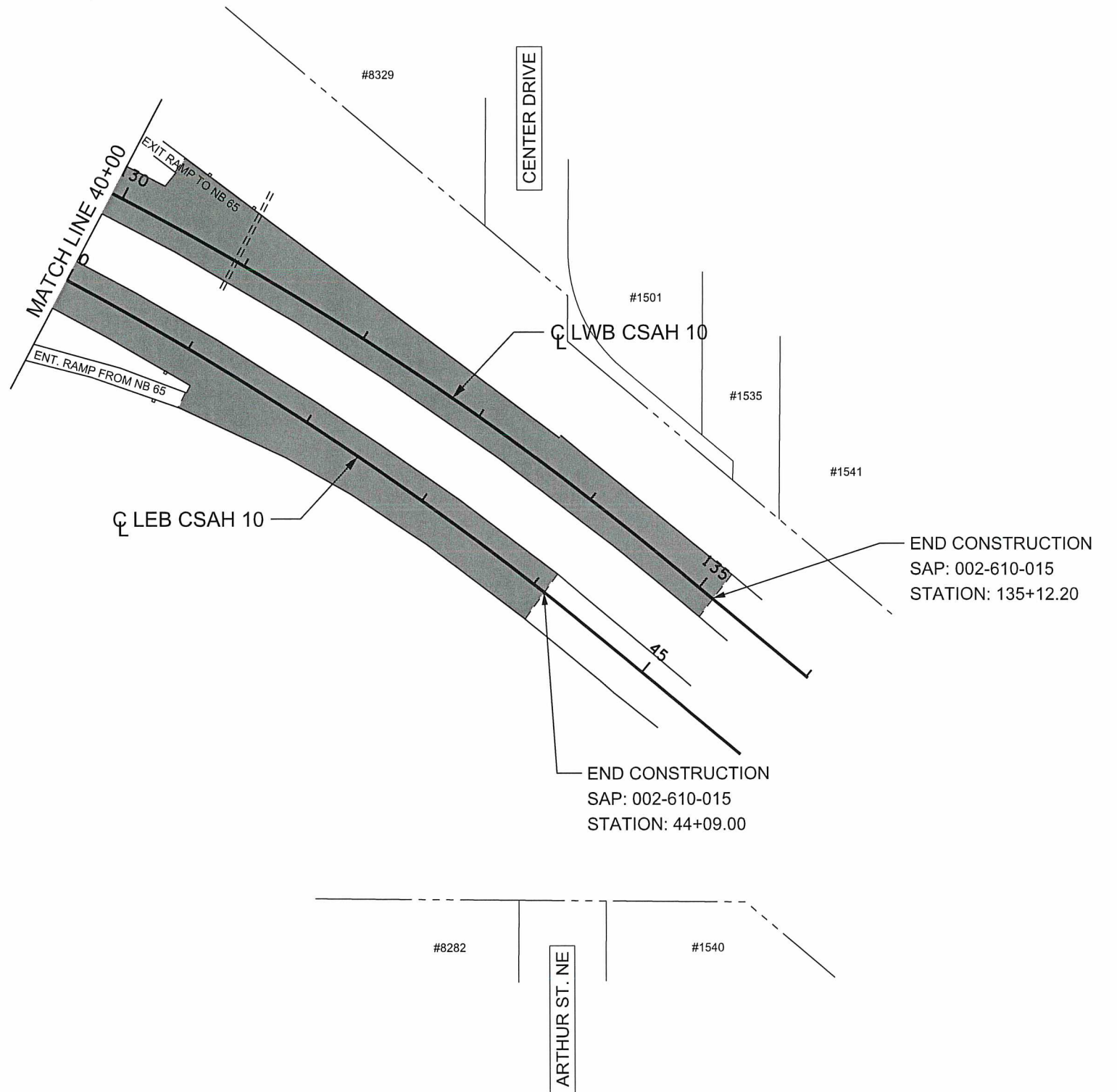
COUNTY PROJECT 002-610-015

CONSTRUCTION PLAN
 STA 26+00.00 TO 40+00.00
 Sheet 6 of 11 Sheets

spnocs



LEGEND	
-----	MILL LIMIT
=====	CROSS CULVERT
	MILL AREA
	BRIDGE DECK
-----	R / W



NO	DATE	BY	CKD	APPR	REVISION	
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NAME: P:\18-01-00\CSAH_10_(BetweenTH65ramps)\Base\PROPOSED\PROPOSED.dgn

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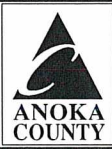
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DATE: 4/19/18 LICENSE NO. 46732

DRAWN BY SPH DATE 03/20/2018

DESIGN BY SPH DATE 03/20/2018

CHECKED BY HG DATE 03/20/2018



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 002-610-015

CONSTRUCTION PLAN
STA 40+00.00 TO 44+09.00
Sheet 7 of 11 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 BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

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

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

PREFORMED THERMOPLASTIC:

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

PAINT:

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

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

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

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

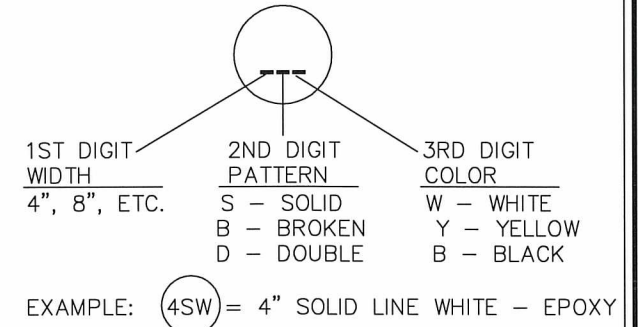
PERMANENT MARKING QUANTITIES		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	9616
4" BROKEN LINE WHITE - EPOXY PAINT	LIN FT	1530
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	6577

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



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\16-01-00\CR 60\Bases\TRAFFIC\Perm pvmt mrkg guide notes_guidelines.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: DOUGLAS W. FISCHER

SIGNATURE: *[Signature]*

DATE: 4/18/18 LICENSE NO. 20235

DRAWN BY: RLB DATE: 1/31/18

DESIGN BY: RLB DATE: 1/31/18

CHECKED BY: JR DATE: 1/31/18



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

STATE AID PROJECT NO. 002-610-015

COUNTY PROJECT NO. _____

PERMANENT MARKING
TABULATION

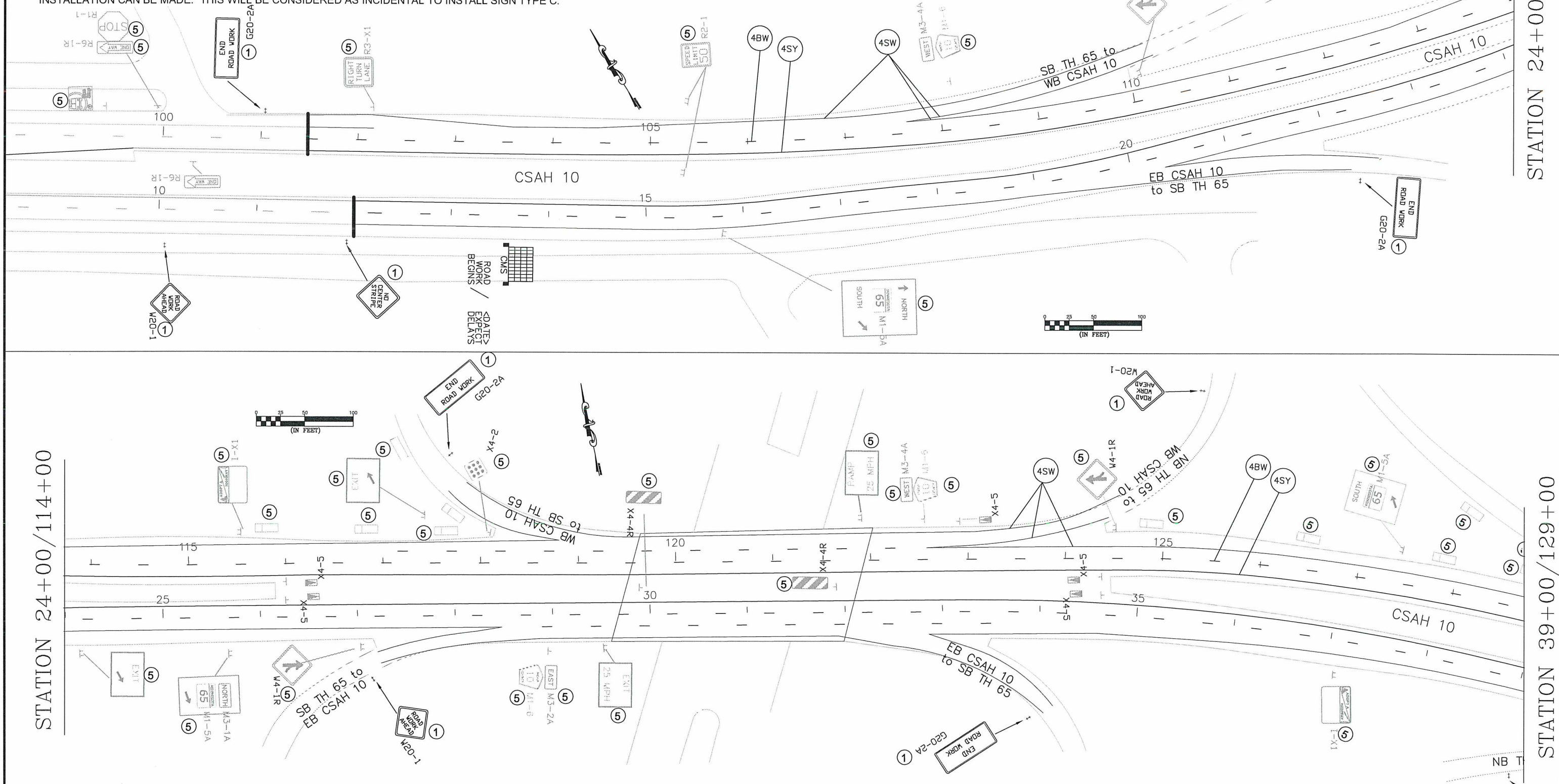
Sheet 8 of 11 Sheets

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 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.

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



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\16-01-00\CR 60\base\Traffic\Signing_Striping.dwg

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: DOUGLAS W. FISCHER

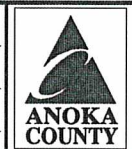
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DATE: 4/29/18 REG. NO. 20235

DRAWN BY: RLB DATE: 1/10/18

DESIGN BY: RLB DATE: 1/10/18

CHECKED BY: JR DATE: 1/10/18



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

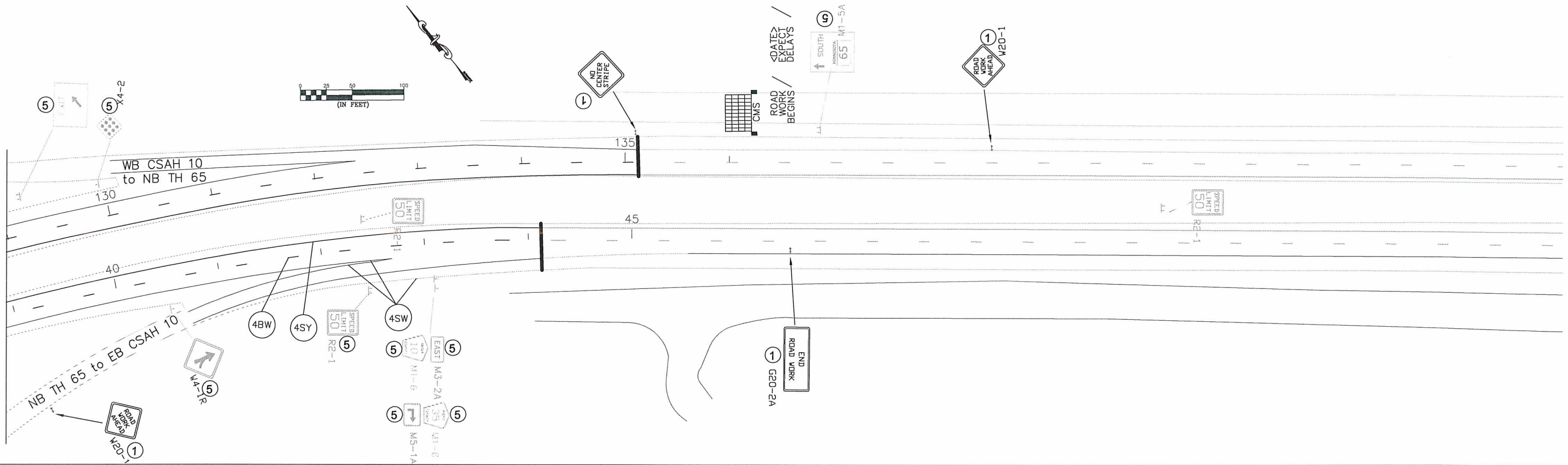
STATE AID PROJECT NO. 002-610-015

COUNTY PROJECT NO. _____

TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 9 of 11 Sheets

STATION 39+00/129+00



- 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:\16-01-00\CR 60\base\Traffic\Signing_Striping.dwg

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: DOUGLAS W. FISCHER

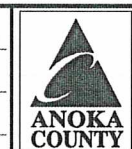
SIGNATURE: *[Signature]*

DATE: 4/27/18 REG. NO. 20235

DRAWN BY: RLB DATE: 1/10/18

DESIGN BY: RLB DATE: 1/10/18

CHECKED BY: JR DATE: 1/10/18



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____




STATE AID PROJECT NO. 002-610-015

COUNTY PROJECT NO. _____

TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 10 of 11 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS

M.U.T.C.D. CODE	SIZE	PANEL AREA	INSERT	QUANTITY		MOUNTING HEIGHT (TO PAVEMENT EDGE) FT.
		FT. ²			No. POST	
W8-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00		0	1	7.0'
R4-2	24" x 30"	5.00		0	1	7.0'
G20-2A	48" x 24"	8.00		6	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 6)		
CMS sign to be installed a minimum of ten days prior to actual commencement of road work. Signs to be removed when road work begins.				2		

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.
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CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

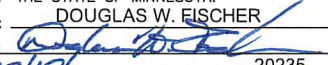
		R	O	A	D		
		W	O	R	K		
		B	E	G	I	N	S

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		E	X	P	E	C	T
		D	E	L	A	Y	S

CMS sign to be installed 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:\16-01-00\CR 60\base\Traffic\Signing_Striping.dwg

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: DOUGLAS W. FISCHER
 SIGNATURE: 
 DATE: 4/18/18 REG. NO. 20235

DRAWN BY: RLB DATE: 1/10/18
 DESIGN BY: RLB DATE: 1/10/18
 CHECKED BY: JR DATE: 1/10/18



ANOKA COUNTY
 HIGHWAY DEPT.

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 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. 002-610-015
 COUNTY PROJECT NO. _____

TRAFFIC CONTROL
 QUANTITY
 Sheet 11 of 11 Sheets