

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR RECLAIM AND BITUMINOUS PAVING
 LOCATED ON CSAH 14 FROM OPAL ST. TO 4TH AVE
 STATE AID PROJ. NO. 002-614-042

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.

PLAN SYMBOLS

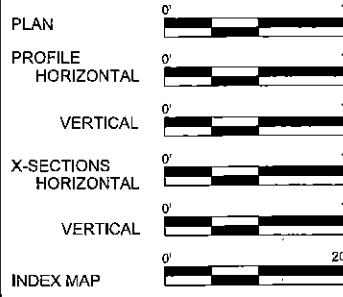
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- EXISTING RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- STONE WALL OR FENCE
- HEDGE

- LOWLAND
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F-FRAME C-CONCRETE
- S-STONE T-TILE
- B-BRICK ST-STUCCO
- RAILROAD CROSSING BELL
- RAILROAD CROSSING GATE
- MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CAST IRON MONUMENT
- IRON PIN
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITY SYMBOLS

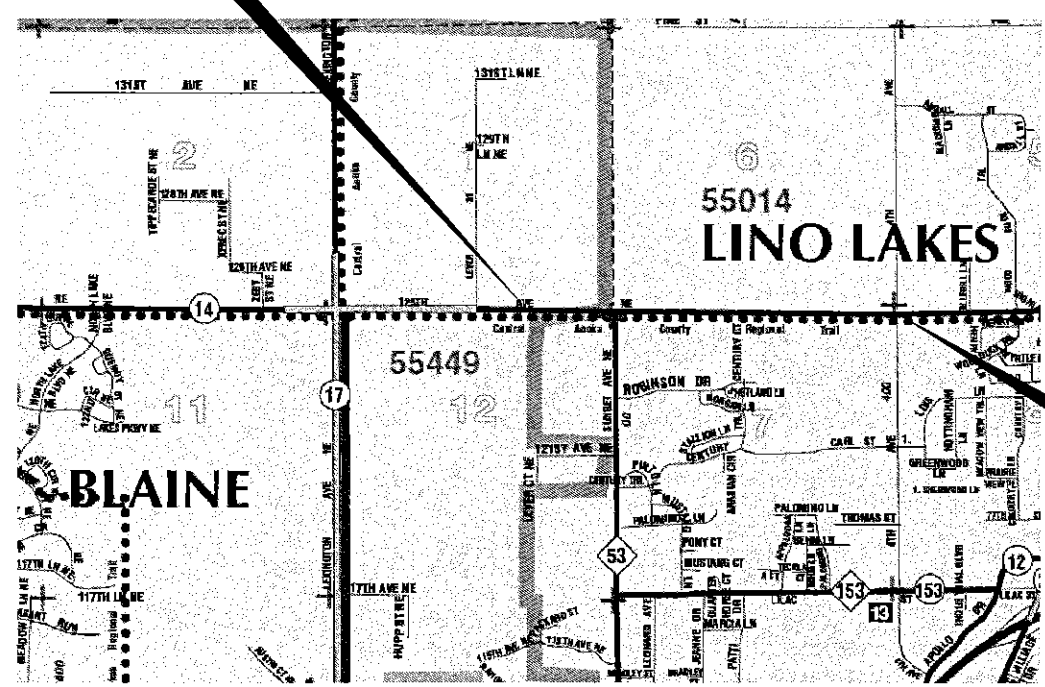
- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE & POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL (Cable Terminal)
- GAS MAIN
- WATERMAIN
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- SEWER (Sanitary or Storm)
- SEWER MANHOLE

SCALES



CSAH 14			
GROSS LENGTH	6550 FEET	1.240 MILES	
BRIDGES-LENGTH	0.00 FEET	0.000 MILES	
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES	
NET LENGTH	6550 FEET	1.240 MILES	

BEGIN SP 002-042-014
 CSAH 14 STA. 100+00.00
 (OPAL ST)

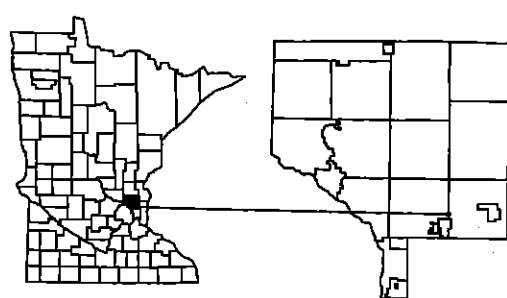


END SP 002-042-014
 CSAH 14 STA. 165+50.00
 (4TH AVE)

SHEET NO.	INDEX
1	TITLE SHEET
2	GENERAL LAYOUT
3	SEQ. BASIS OF QTY'S, STANDARD PLATES, INDEX TABS
4 - 6	TAB SHEETS
7	SOILS AND CONSTRUCTION NOTES
8 - 9	MISCELLANEOUS DETAILS
10	ALIGNMENT TABULATION
11 - 12	TYPICAL SECTIONS
13 - 15	REMOVAL PLAN
16 - 21	CONSTRUCTION PLAN AND PROFILE
22 - 25	TRAFFIC CONTROL PLAN
26	PERMANENT MARKING TABULATION
27 - 30	PERMANENT SIGNING AND STRIPING PLAN
31 - 32	SIGNING & STRIPING DETAILS

THIS PLAN CONTAINS 32 SHEETS

PROJECT LOCATION



ANOKA COUNTY
 CITY OF BLAINE
 CITY OF LINO LAKES
 MN/DOT TRANSP.
 DISTRICT - METRO
 BLAINE SEC. 1
 LINO LAKES SEC. 6
 TOWNSHIP T31N
 RANGE R22W & R23W

CSAH 14 DESIGN DESIGNATION	
ESAL 20	1,440,854
R VALUE	60
ADT (2015)	11602
ADT (2018) PROJECT YEAR =	11681
Proj. ADT (2038) =	12498
Proj. HCADT (2038) =	737
Soil Factor R-Value	60
10 TON DESIGN	
Functional Classification	PRINCIPAL ARTERIAL
No. of Traffic Lanes	2 ex shldr. width 12', prop. 12'
Design Speed	55 MPH CSAH 14, MAIN ST.
Based on Stopping Sight Distance	N/A
Height of eye	3.5' Height of object 2.0'

UTILITY NOTE: THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

Approved: *[Signature]* 2/28/18
 ANOKA COUNTY ENGINEER

Approved: *[Signature]* 02/28/18
 CITY OF BLAINE ENGINEER

Approved: *[Signature]* 2/28/18
 CITY OF LINO LAKES ENGINEER

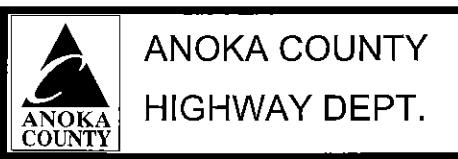
REVIEWED FOR COMPLIANCE WITH STATE AID AND FEDERAL AID RULES/POLICY
[Signature] 3/5/18
 DISTRICT STATE AID ENGINEER

APPROVED FOR STATE AID AND / OR FEDERAL AID FUNDING
[Signature] 3/5/18
 STATE AID ENGINEER

NO.	DATE	BY	REVISION
1	01/29/2018	JCF	HG JEO
2	01/29/2018	JCF	HG JEO
3	01/29/2018	JCF	HG JEO
4	01/29/2018	JCF	HG JEO
5	01/29/2018	JCF	HG JEO
6	02/01/2018	JCF	HG JEO

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: NICHOLAS GOBDA
 SIGNATURE: *[Signature]*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY: JCF DATE: 09/25/17
 DESIGN BY: JCF DATE: 09/25/17
 CHECKED BY: JEO DATE: 10/27/17



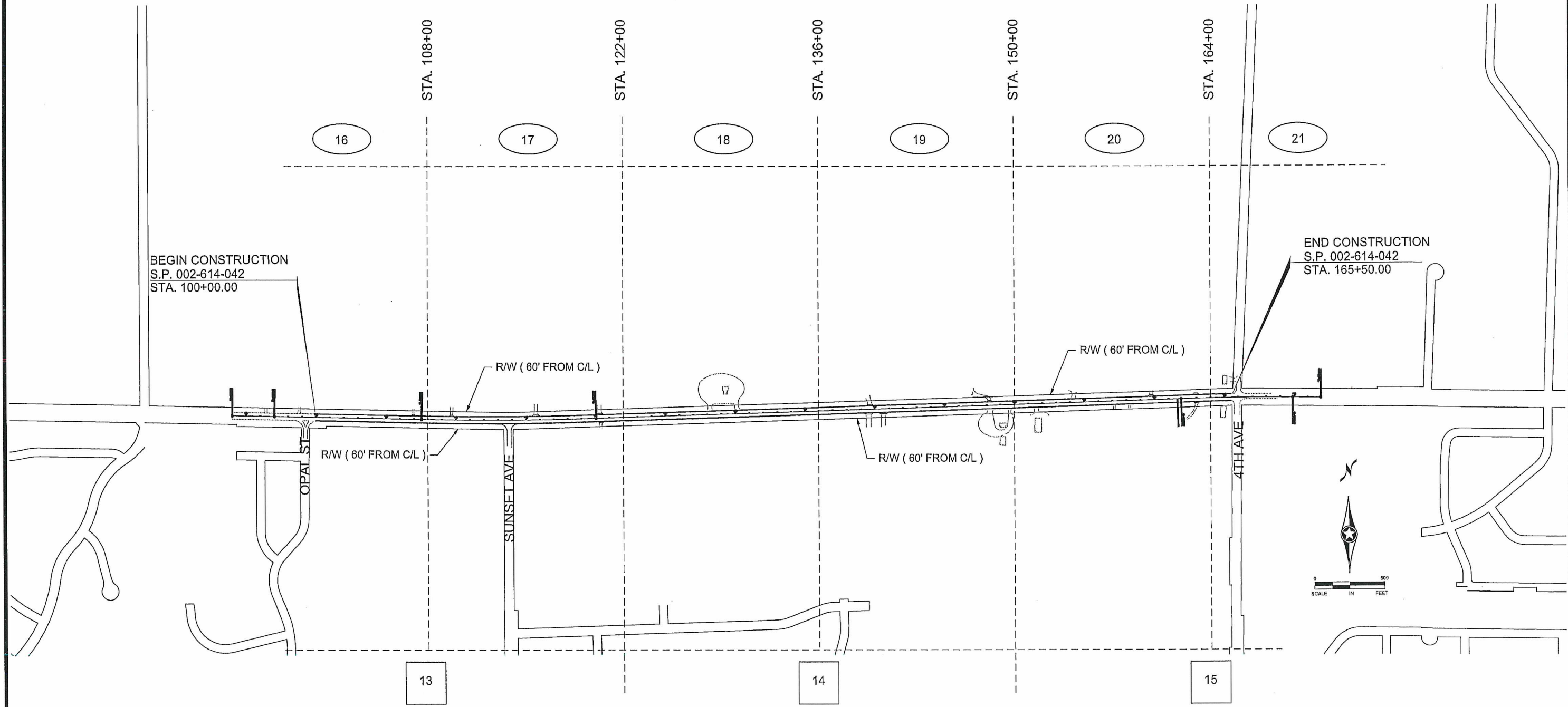
ANOKA COUNTY
 HIGHWAY DEPT.
 STATE PROJECT NO. 002-614-042

TITLE SHEET
 Sheet 1 of 32 Sheets

LEGEND

XX REMOVAL PLAN SHEETS 13-15

XX PLAN AND PROFILE SHEETS 16 - 21




1 OF 1

1	01/29/2018	JCF	HG	JEO	ADDED SHEET NUMBERS TO LEGEND
2	01/29/2018	JCF	HG	JEO	ADDED AND LABELED R/W
3	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGNS					\$DATES \$TIME\$

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DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17


**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042

GENERAL LAYOUT

Sheet 2 of 32 Sheets

STATEMENT OF ESTIMATED QUANTITIES						
TAB	NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES	002-614-042
						PARTICIPATING-FEDERAL FUNDS ANOKA COUNTY 002-614-042 ROADWAY
					ESTIMATED	QUANTITIES
		2021.501	MOBILIZATION	LUMP SUM	1	1
A	[19]	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	361	361
H	[16]	2104.509	REMOVE SIGN TYPE C	EACH	39	39
A	[19]	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	339	339
	[1]	2123.503	MOTOR GRADER	WATER	16	16
		2130.501	WATER	MGAL	210	210
A	[2]	2215.501	FULL DEPTH RECLAMATION	SQ YD	34934	34934
	[1]	2215.502	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	80	80
B	[3]	2211.501	AGGRGATE BASE CLASS 5	TON	2101	2101
B	[4]	2221.501	SHOULDER BASE AGGREGATE CLASS 5	TON	395	395
A	[5]	2232.501	MILL BITUMINOUS SURFACE (2.5")	SQ YD	54	54
C		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1031	1031
C	[6]	2360.501	TYPE SP 9.5 WEARING COURSE MIX(3,B) DRWAY / ST APP.	TON	111	111
C	[7],[21]	2360.501	TYPE SP 12.5 WEARING COURSE MIX(4,C)	TON	8054	8054
A	[8]	2506.522	ADJUST FRAME AND RING CASTING	EACH	2	2
D	[9]	2540.502	MAIL BOXSUPPORT	EACH	3	3
D	[10]	2540.502	RELOCATE MAIL BOX	EACH	3	3
F	[11],[14]	2563.501	TRAFFIC CONTROL	LUMP SUM	1	1
F	[11]	2563.513	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20	20
I	[17],[18]	2564.531	SIGN PANELS TYPE C	SQ FT	169.8	169.8
E	[12],[20]	2574.525	COMMON TOPSOIL BORROW	CU YD	69	69
	[13]	2581.501	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT	262	262
G	[15]	2582.502	4" SOLID LINE EPOXY	LIN FT	17520	17520
G	[15]	2582.502	4" BROKEN LINE EPOXY	LIN FT	222	222

NOTES:	
ALL WORK WILL BE DONE UNDER TRAFFIC WITH NO ROAD CLOSER.	
[1] ITEM USED TO REMOVE EXCESS RECLAIMED MATERIAL IN THE 400' TRANSITION AREA AT BEGINNING AND END OF PROJECT. RECLAIMED MATERIAL TO BE USED ON PROJECT. EXCESS RECLAIMED MATERIAL NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR.	
[2] MAINLINE FULL DEPTH RECLAMATION, 48' x 6550'.	
[3] INCLUDES BOTH CLASS 5 ADDED TO RECLAIMED BITUMINOUS SHOULDER TO MATCH FIRST LIFT OF PAVING - PRIOR TO PAVING WEAR COURSE & CLASS 5 ADDED TO DRIVEWAYS.	
[4] 2' GRAVEL SHOULDER	
[5] 2.5" DEEP MILL JOINTS, BEGINNING AND END PROJECT STA. 100+00 , STA. 165+50 AND 2.0" SUNSET AVE. SEE DETAILS.	
[6] CR 53 ST. APPROACH AND BITUMINOUS DRIVEWAYS.	
[7] MAINLINE PAVING. 2 - 2.5" LIFTS OF 12.5 WEAR COURSE.	
[8] 2 EXISTING STORM MANHOLE CASTINGS ON LWB SHOULDER, STA 162+10 & STA 163+90.	
[9] INCLUDES ALL TIME AND MATERIALS TO INSTALL NEW MAIL BOXSUPPORT WITH OWNERS EXISTING MAIL BOX	
[10] CONTRACTOR RESPONSIBLE TO CONTACT POSTAL AUTHORITY AND HOME OWNERS PRIOR TO DISTURBING MAIL BOXES. CONTRACTOR TO FOLLOW ALL POSTAL AUTHORITY GUIDELINES AS TO THE TEMPORARY PLACEMENT OF MAIL BOXES.	
[11] PORTABLE CHANGEABLE MESSAGE SIGNS ARE BROKEN OUT SEPARATELY FROM TRAFFIC CONTROL LUMP SUM AND PAID FOR BY THE UNIT DAY. 2 MESSAGE BOARDS, ONE ON EACH END OF PROJECT WILL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION.	
[12] ITEM USED FOR RE-ESTABLISHING DISTURBED AREAS ALONG DRIVEWAYS AND STREETS AS DIRECTED BY ENGINEER. ITEM INCLUDES TOPSOIL, PLACEMENT, SEEDING, SEED MIXTURE 25-121 AND FERTILIZER TYPE 3. THESE SHALL BE INCIDENTAL TO ITEM " COMMON TOPSOIL BORROW ".	
[13] YELLOW CENTERLINE AND WHITE 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 SKIPS PRIOR TO FINAL STRIPING.	
[14] 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 AND NO CENTER STRIPE SIGNS SHALL BE INPLACE WHENEVER PAVEMENT MARKINGS ARE NOT PRESENT.	
[15] FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HRS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.	
[16] TYPE C SIGNS AND POSTS INDICATED ON TRAFFIC PLANS TO BE REMOVED SHALL BECOME THE PROPERTY OF CONTRACTOR.	
[17] SEE PERMANENT SIGNING AND STRIPING PLAN FOR LOCATIONS AND QUANTITIES OF SIGNS TO BE REPLACED.	
[18] INCLUDES SIGN TYPE C, POSTS AND HARDWARE FOR INSTALLATION.	
[19] BITUMINOUS DRIVEWAYS TO BE SAW CUT AND REMOVED. LOCATION OF SAWCUT TO BE LAYED OUT BY ENGINEER.	
[20] NO EROSION CONTROL BLANKET IS CALLED OUT ON PLAN, NOR IS IT A ITEM IN THE SEQ. IN THE EVENT THE ENGINEER DEEMS IT NECESSARY DUE TO UNFORSEEN CIRCUMSTANCES - ANY BLANKET USED MUST BE BIO-NETTING / NATURAL-NETTING. NO PLASTIC.	
[21] ALL PAVING SHALL BE PULLED IN THE SAME DIRECTION AS TRAFFIC FOR THAT LANE OF TRAVEL.	

BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2123.503	MOTOR GRADER	WATER
2211.501	AGGREGATE BASE CLASS 5 (CV)	1.8 TONS / CU YD
2221.501	SHOULDERING BASE AGGREGATE CLASS 5 (LV)	1.4 TONS / CU YD
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL X SQ YD X LIFT
2360.501	TYPE SP12.5 WEARING COURSE MIXTURE	115 LBS X SQ YD X IN / 2000 = TONS
2575.502	SEED MIXTURE 25-121	61 LBS / ACRE
2575.532	FERTILIZER TYPE 3 (25-5-10)	300 LBS / ACRE
2581.501	REMOVABLE PREFORMED MARKING TAPE	2' AT 50' INTERVALS

STANDARD PLATES	
PLATE NO.	DESCRIPTION
4108F	ADJUSTING RINGS FOR CATCH BASINS & MANHOLES
8000J	CHANNELIZERS (3 SHEETS)
8150C	INSTALLATION OF CULVERT MARKERS
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

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B	AGGREGATE	5
C	BITUMINOUS SUMMARY	6
D	MAILBOXES	6
E	TURF ESTABLISHMENT	6
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H	EXISTING SIGN TABULATION	30
I	PERMANENT SIGN TABULATION	30
J	SIGNING AND STRIPING DETAILS	31-32

1	01/29/2018	JCF	HG	JEO	CHANGED SHOULDER BASE AGGREGATE ITEM NUMBER
2	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED PROJECT NUMBER
3	01/29/2018	JCF	HG	JEO	CHANGED LEB TO LWB IN NOTE NUMBER 8
4	01/31/2018	JCF	HG	JEO	ADDED MOTOR GRADER / HOUR TO BASIS OF QUANTITIES
5	02/02/2018	JCF	HG	JEO	ADDED ITEM " HAUL FULL DEPTH RECLAMATION" TO SEQ.
6	02/02/2018	JCF	HG	JEO	UPDATED BIT AND GRAVEL DEPTH QTY IN SEQ. & NOTE 5 & 7
7	02/13/2018	JCF	HG	JEO	ADDED NOTE NUMBER 21

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PRINT NAME: NICHOLAS DOBDA

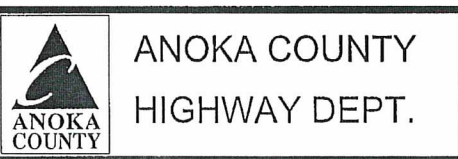
SIGNATURE: *Nicholas Dobda*

DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/25/17

DESIGN BY JCF DATE 09/25/17

CHECKED BY JEO DATE 10/27/17



STATE PROJECT NO. 002-614-042

STATEMENT OF ESTIMATED QUANTITIES
BASIS OF QUANTITIES
STANDARD PLATES
INDEX OF TABS

Sheet 3 of 32 Sheets

REMOVALS, SAWING, MILLING, RECLAIM AND ADJUST								A
LOCATION	LT / RT	STATION TO STATION	REMOVE	SAWING	MILLING	RECLAIM	ADJUST	NOTES
			BITUMINOUS PAVEMENT	BIT. PAVEMENT	JOINTS 2"	BIT. PAVEMENT	FRAME AND RING CASTING	
			SQ YD	LIN FT	SQ YD	SQ YD	EACH	
MAINLINE	LT/RT	100+00		48	21			[1]
MAINLINE	LT/RT	100+00 - 165+50				34934		[2]
CR 53	RT	113+67 - 114+00			12			[3]
#77 W	LT	127+78 - 128+64	54	39				[4]
#77 E	LT	129+69 - 130+55	53	39				[4]
#310 W	RT	147+80 - 148+71	59	42				[4]
#310 M	RT	149+25 - 150+09	39	24				[4]
#310 E	RT	151+14 - 152+00	53	36				[4]
FE 10	LT	153+86 - 154+68	49	34				[4]
#350	RT	157+00 - 157+40	33	17				[4]
#332	RT	158+00 - 158+30	21	12				[4]
STRM MH	LT	162+10					1	[5]
STRM MH	LT	163+90					1	[5]
MAINLINE	LT/RT	165+50		48	21			[1]
PROJECT TOTAL			361	339	54	34934	2	

REMOVAL NOTES:

[1] BEGIN / END PROJECT SAWCUT FULL DEPTH & 4' WIDE MILL JOINT.
[2] FULL DEPTH RECLAIM, 48' WIDE X 6550'
[3] 4' WIDE MILL JOINT ON CR 53 END RAD.
[4] SAWCUT LOCATION DETERMINED BY ENGINEER. REMOVE BITUMINOUS AND ADD GRAVEL PRIOR TO PAVING DRIVEWAY AS DIRECTED BY ENGINEER.
[5] INCLUDES REMOVAL OF CASTINGS AND RINGS FOR RECLAIMING, ADJUST AND RING CASTING TO NEW BITUMINOUS SURFACE. LEB SHOULDER.

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGN\$					\$DATES \$TIMES

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: NICHOLAS DOBDA
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**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042

TABULATIONS
Sheet 4 of 32 Sheets

AGGREGATE												B
ADDRESS / LOCATION	DESCRIPTION	LT / RT ALI 14	STA.	TO	STA.	SQ FT	DEPTH	CU FT	BASE CLASS 5	DRWAY BASE CLASS 5	SHLDR BASE CLASS 5	NOTES
									TON	TON	TON	
	GRVL SHLDR	LT	100+00	-	106+66	1332	0.33	440			23	[1]
	PAV-SHLDR	RT	100+00	-	108+89	10668	0.21	2240	149			[2]
	PAV-SHLDR	LT	100+00	-	111+28	13536	0.21	2843	190			[2]
	GRVL SHLDR	RT	100+00	-	113+67	2734	0.33	902			47	[1]
FE-1	FIELD ENT	LT	106+66	-	107+24	198	0.33	65		4		[3]
	GRVL SHLDR	LT	107+24	-	109+29	410	0.33	135			7	[1]
FE-2	FIELD ENT	LT	109+29	-	110+12	263	0.33	87		6		[3]
	GRVL SHLDR	LT	110+12	-	115+31	1038	0.33	343			18	[1]
	GRVL SHLDR	RT	114+00	-	119+91	1182	0.33	390			20	[1]
	PAV-SHLDR	RT	114+42	-	160+87	55740	0.21	11705	780			[2]
FE-3	FIELD ENT	LT	115+31	-	116+14	495	0.33	163		11		[3]
	GRVL SHLDR	LT	116+14	-	119+90	752	0.33	248			13	[1]
	PAV-SHLDR	LT	117+50	-	165+50	57600	0.21	12096	806			[2]
FE-4	FIELD ENT	LT	119+90	-	120+74	474	0.33	156		10		[3]
FE-5	FIELD ENT	RT	119+91	-	120+87	300	0.33	99		7		[3]
	GRVL SHLDR	LT	120+74	-	127+79	1410	0.33	465			24	[1]
	GRVL SHLDR	RT	120+87	-	139+04	3634	0.33	1199			62	[1]
#77 W	PAVED ENT	LT	127+79	-	128+65	483	0.33	159		11		[4]
	GRVL SHLDR	LT	128+65	-	129+70	210	0.33	69			4	[1]
#77 E	PAVED ENT	LT	129+70	-	130+55	481	0.33	159		11		[4]
	GRVL SHLDR	LT	130+55	-	139+05	1700	0.33	561			29	[1]
FE-6	FIELD ENT	LT	139+05	-	140+08	397	0.33	131		9		[3]
FE-7	FIELD ENT	RT	139+04	-	140+02	552	0.33	182		12		[3]
	GRVL SHLDR	RT	139+90	-	140+25	70	0.33	23			1	[1]
	GRVL SHLDR	LT	140+08	-	147+94	1572	0.33	519			27	[1]
FE-8	FIELD ENT	RT	140+18	-	141+10	557	0.33	184		12		[3]
	GRVL SHLDR	RT	141+10	-	147+81	1342	0.33	443			23	[1]
FE-9	FIELD ENT	LT	147+94	-	148+63	302	0.33	100		7		[3]
#310 W	PAVED ENT	RT	147+94	-	148+71	534	0.33	176		12		[4]
	GRVL SHLDR	LT	148+63	-	153+86	1046	0.33	345			18	[1]
	GRVL SHLDR	RT	148+71	-	149+26	110	0.33	36			2	[1]
#310 M	PAVED ENT	RT	149+26	-	150+10	353	0.33	116		8		[4]
	GRVL SHLDR	RT	150+10	-	151+15	210	0.33	69			4	[1]
#310 E	PAVED ENT	RT	151+15	-	152+00	479	0.33	158		11		[4]
	GRVL SHLDR	RT	152+00	-	156+78	956	0.33	315			16	[1]
FE-10	PAVED ENT	LT	153+86	-	154+68	443	0.33	146		10		[4]
	GRVL SHLDR	LT	154+68	-	159+39	942	0.33	311			16	[1]
#350	PAVED ENT	RT	156+90	-	157+40	297	0.33	98		7		[4]
	GRVL SHLDR	RT	157+50	-	157+83	66	0.33	22			1	[1]
#332	PAVED ENT	RT	158+00	-	158+30	192	0.33	63		4		[4]
	GRVL SHLDR	RT	158+54	-	162+78	848	0.33	280			15	[1]
FE-11	FIELD ENT	LT	159+39	-	160+15	383	0.33	126		8		[3]
	GRVL SHLDR	RT	160+15	-	165+50	1070	0.33	353			18	[1]
#382	DRWAY	RT	162+78	-	163+36	372	0.33	123		8		[3]
FE-12	FIELD ENT	LT	162+78	-	163+36	385	0.33	127		8		[3]
	GRVL SHLDR	RT	163+36	-	165+50	428	0.33	141			7	[1]
PROJECT TOTAL									1925	176	395	

AGGREGATE NOTES:

- [1] 4.0" SHOULDERING BASE CLASS 5 ADDED TO 2' GRAVEL SHOULDER FOLLOWING WEAR COURSE.
- [2] 2.5" CLASS 5 BASE TO BE ADDED / COMPACTED TO RECLAIMED 12.0' PAVED SHOULDER AREA, TO ELEVATION OF BITUMINOUS MAINLINE 1ST LIFT.
- [3] BASE CLASS-5 TO BE ADDED TO FIELD ENTERANCES AND GRAVEL DRIVEWAYS FOLLOWING SHOULDER PAVING. QTY BASED ON GRAVEL OUT TO 10' FROM EM.
- [4] BASE CLASS-5 TO BE ADDED TO BITUMINOUS DRIVEWAY REMOVAL AREA AS DIRECTED BY ENGINEER PRIOR TO PAVING.

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	CHANGED SHOULDER BASE CLASS 5 ITEM, REMOVED (LV)
3	02/01/2018	JCF	HG	JEO	ADDED 0.5" TO GRAVEL DEPTH ON PAVED SHOULDER AREA
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGN\$					\$DATE\$ \$TIMES\$

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: NICHOLAS DOBDA
 SIGNATURE: *[Signature]*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY: JCF DATE: 09/25/17
 DESIGN BY: JCF DATE: 09/25/17
 CHECKED BY: JEO DATE: 10/27/17



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042

TABULATIONS

Sheet 5 of 32 Sheets

BITUMINOUS SUMMARY									C
DESCRIPTION	STA TO STA	LOC	PROPOSED BIT THICKNESS	AREA		BITUMINOUS			NOTES
						SP 12.5 WEAR (4,C)	SP 9.5 WEAR (3,B)	BIT TACK COAT	
			INCHES	SQ FT	SQ YDS	TON	TON	GAL	
THROUGH LANES	100+00 - 165+50	CL	5	163750	18194	5231		910	[1]
SHLDR	100+00 - 108+89	RT	2.5	10668	1185	170			[2]
SHLDR	100+00 - 111+29	LT	2.5	13548	1505	216			[2]
RTL	108+89 - 114+42	RT	5	6636	737	212		37	[3]
BYPASS	111+29 - 117+49	LT	5	7740	827	238		41	[3]
CR 53 APP.	113+20 - 114+23	RT	5	2177	242		70	12	[4]
SHLDR	114+43 - 160+87	RT	2.5	55728	6192	890			[2]
SHLDR	117+50 - 165+50	LT	2.5	57600	6400	920			[2]
#77 W	127+79 - 128+65	RT	2	483	54		6		[5]
#77 E	129+70 - 130+55	LT	2	481	53		6		[5]
#310 W	147+80 - 148+71	RT	2	534	59		7		[5]
#310 M	149+25 - 150+09	RT	2	353	39		4		[5]
#310 E	151+14 - 152+00	RT	2	479	53		6		[5]
FE 10	153+86 - 154+68	LT	2	443	49		6		[5]
#350	156+78 - 157+50	RT	2	297	33		4		[5]
#332	157+83 - 158+54	RT	2	192	21		2		[5]
RTL	160+87 - 165+50	RT	5	5556	617	177		31	[3]
PROJECT TOTAL						8054	111	1031	

BITUMINOUS SUMMARY NOTES:

[1] MAIN LINE PAVING, 25' BASE COURSE WIDTH, 24' WEAR COURSE WIDTH. 2 - 2.5" LIFTS 12.5 WEAR MIX (FIRST LIFT AREA CALC USING 25.0' WIDTH X 6550' LIN FT)

[2] 12.0' PAVED SHOULDER, 1 - 2.5" LIFT 12.5 WEAR MIX

[3] 12.0' RIGHT TURN LANE / BYPASS LANE, 12.0' BASE COURSE, 12.0' WEAR COURSE. 2 - 2.5" LIFTS WEAR MIX

[4] OVERLAY EXISTING STREET APPROACH

[5] 2.0" BITUMINOUS DRIVEWAY, SAWCUT REMOVE EXISTING BITUMINOUS, ADD CLASS 5 AND PAVE AS DIRECTED BY ENGINEER.

MAILBOXES					D
ADDRESS	STATION	BOX LOCATED LT / RT OF CENTERLINE	RELOCATE MAILBOX	INSTALL MAILBOX SUPPORT	NOTES
# 350	157+50	RT	1	1	[1], [2]
# 332	158+50	RT	1	1	[1], [2]
# 382	163+35	RT	1	1	[1], [2]
PROJECT TOTAL			3	3	

MAILBOX NOTES:

[1] BOXES TO BE RELOCATED OUTSIDE OF CLOSED AREA FOR MAIL SERVICE. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH POSTAL SERVICE FOR APPROVED LOCATION AND NOTIFYING HOME OWNERS PRIOR TO RELOCATING.

[2] ITEM "INSTALL MAIL BOX SUPPORT" INCLUDES ALL HARDWARE TIME AND MATERIALS TO COMPLETE INSTALLATION OF FINISHED MAIL BOX

TURF ESTABLISHMENT			E
LOCATION			COMMON TOPSOIL BORROW
ADDRESS / ENT.	STA	OFFSET LT / RT	CU YDS
F.E. 1	107+00	LT	3
F.E. 2	109+75	LT	3
CR 53 STREET APPROACH	113+90	RT	9
F.E. 3	115+80	LT	3
F.E. 4	120+25	LT	3
F.E. 5	120+30	RT	3
#77 W	128+20	LT	3
#77 E	130+10	LT	3
F.E. 6	139+70	LT	3
F.E. 7	139+70	RT	3
F.E. 8	140+70	RT	3
F.E. 9	148+25	LT	3
#310 W	148+25	RT	3
#310 M	149+75	RT	3
#310 E	151+70	RT	3
F.E. 10	154+15	LT	3
#350	157+10	RT	3
#332	158+10	RT	3
F.E. 11	159+90	LT	3
F.E. 12	163+00	LT	3
#382	163+00	RT	3
PROJECT TOTAL			69

TURF ESTABLISHMENT GENERAL NOTES:

[1] ITEM USED FOR RE-ESTABLISHING DISTURBED AREAS ALONG DRIVEWAYS AND STREETS AS DIRECTED BY ENGINEER.

[2] SEEDING, SEED MIXTURE 25-121 AND FERTILIZER TYPE 3 TO BE USED ON ALL TOPSOIL LOCATIONS AND SHALL BE INCIDENTAL TO ITEM " COMMON TOPSOIL BORROW ".

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	02/01/2018	JCF	HG	JEO	ADDED 1.0" BITUMINOUS TO BIT. SECTION, 2-2.5" LIFTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGNS					\$DATES \$TIMES

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: NICHOLAS DOBDA

SIGNATURE: *Nicholas Dobda*

DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/26/17

DESIGN BY JCF DATE 09/26/17

CHECKED BY JEO DATE 10/27/17



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

TABULATIONS


Sheet 6 of 32 Sheets

1. AGGREGATE SHOULDERING MATERIAL FOR THIS PROJECT SHALL BE CLASS 5 GRADATION IN ACCORDANCE WITH MNDOT 2221 AND 3138.
2. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF MNDOT SPEC. 3138, CLASS 5.
3. COMPACTION OF ALL AGGREGATE BASE MATERIAL SHOULD BE IN ACCORDANCE WITH MNDOT "PENETRATION INDEX METHOD".
4. CONTRACTOR SHALL BLADE THE EXISTING RECLAIMED AGGREGATE MATERIAL ON PAVED SHOULDER AREA TO GRAVEL SHOULDER AREA PRIOR TO PLACING THE NEW CLASS 5 AGGREGATE ON THE SHOULDER. BLADING / BLENDING AND COMPACTION OF AGGREGATE / RECLAIM MATERIAL SHALL BE INCIDENTAL.
5. COMPACTION OF ALL PERMANENT BITUMINOUS MIXTURES SHALL BE THE " MAXIMUM DENSITY METHOD".
6. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE OF RIGHT OF WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
7. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING PAVEMENTS. THE BITUMINOUS TACK COAT SHALL BE APPLIED AT A RATE OF 0.05 GALLONS / SQ YD BETWEEN BITUMINOUS LAYERS AND 0.07 - 0.10 GALLONS / SQ YD ON BITUMINOUS MILLED SURFACE PRIOR TO BEING OVERLAID.
8. ANY DEBRIS WHICH MAY BE ENCOUNTERED / CREATED DURING GRADING SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT R/W IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
9. UNSUITABLE SOILS ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT R/W IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	CORRECTED SPELLING ERRORS NOTE 6
3	02/13/2018	JCF	HG	JEO	REMOVED NOTE 10.
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGN\$					\$DATES \$TIMES

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PRINT NAME: NICHOLAS DOBDA

SIGNATURE: 

DATE: 2/27/18 LICENSE NO. 49046

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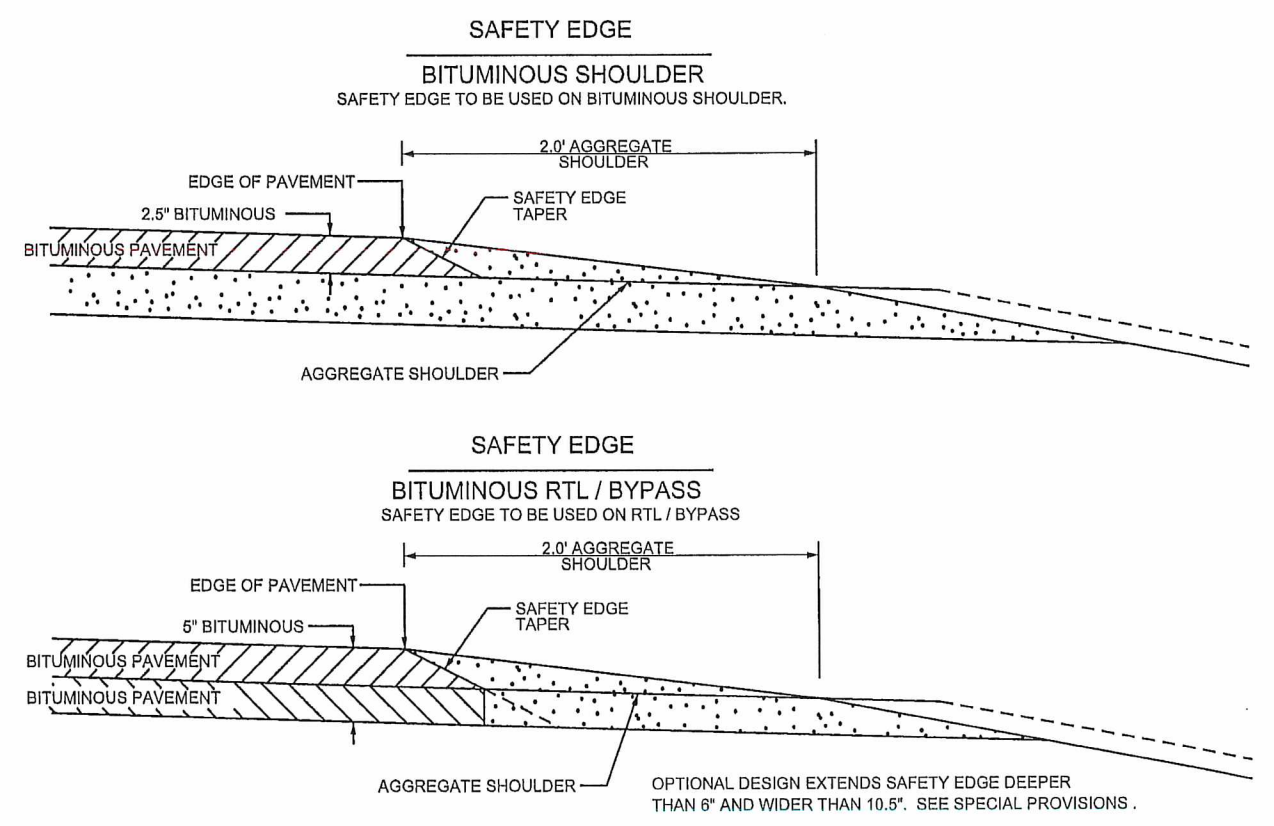
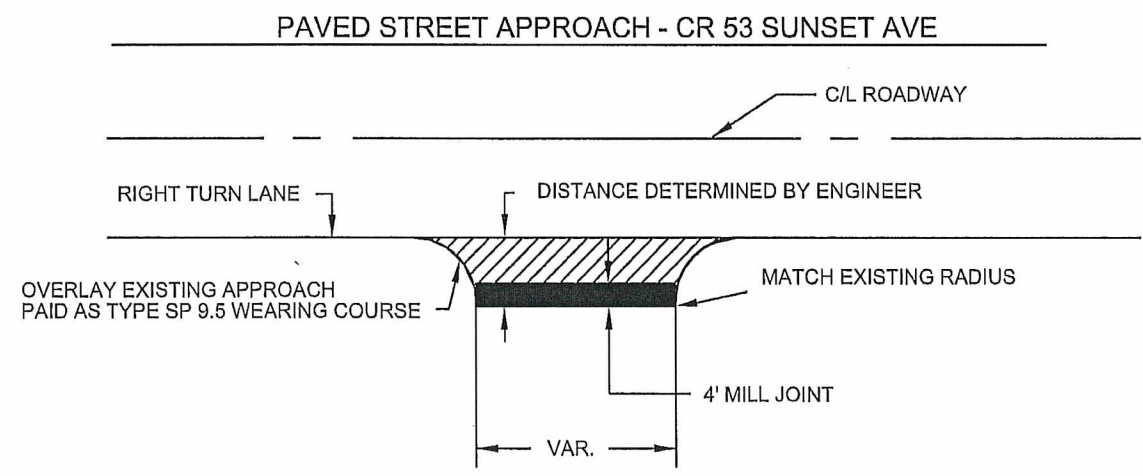
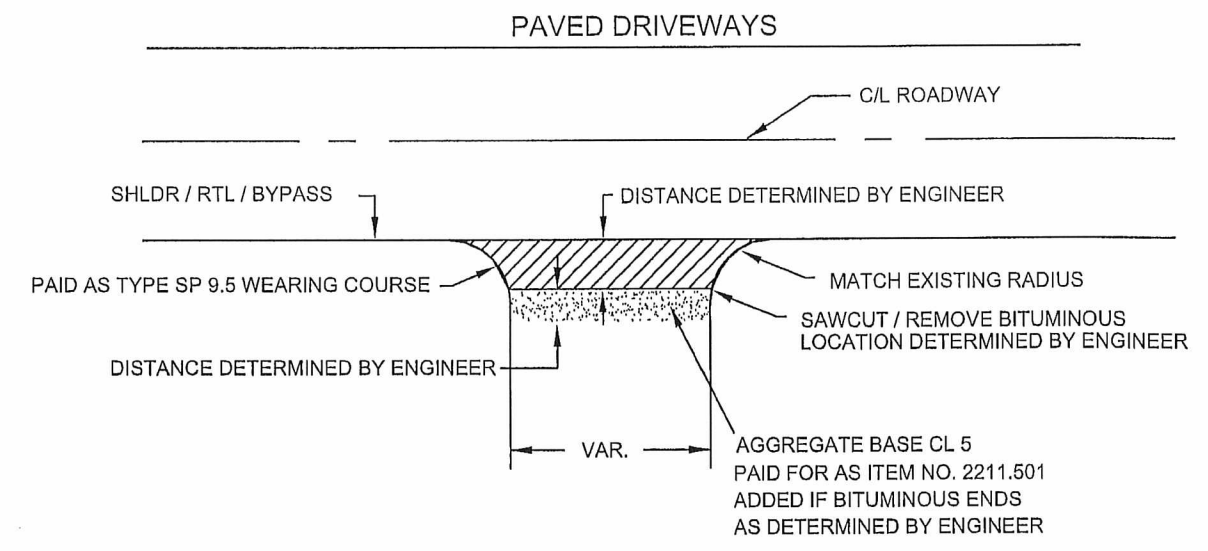
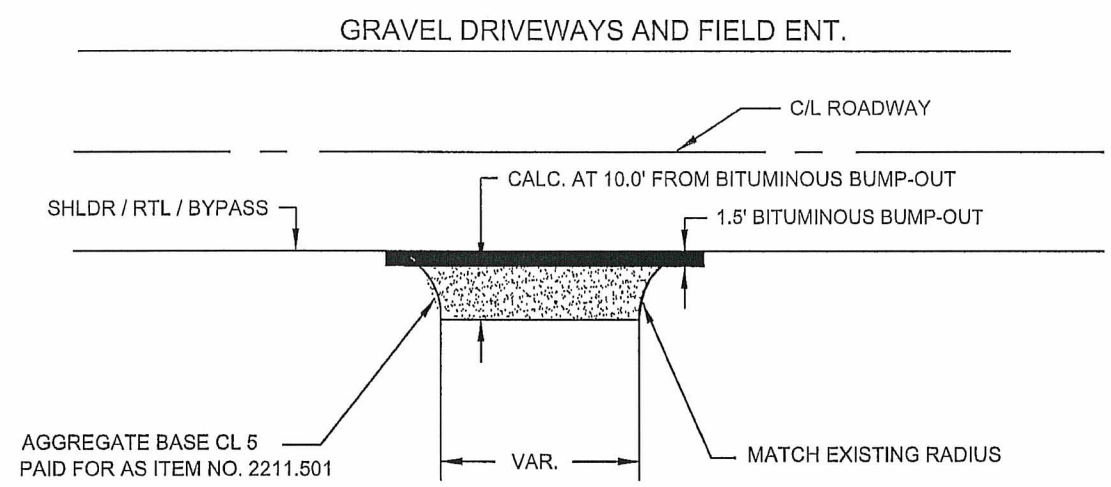


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

SOILS
&
CONSTRUCTION NOTES

Sheet 7 of 32 Sheets

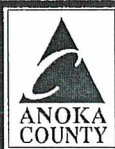


1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	02/02/2018	JCF	HG	JEO	CHANGED BITUMINOUS THICKNESS IN SAFTY EDGE DETAILS.
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGNS					\$DATES \$TIMES

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PRINT NAME: NICHOLAS DOBDA
 SIGNATURE: *[Signature]*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/26/17
 CHECKED BY JEO DATE 10/27/17



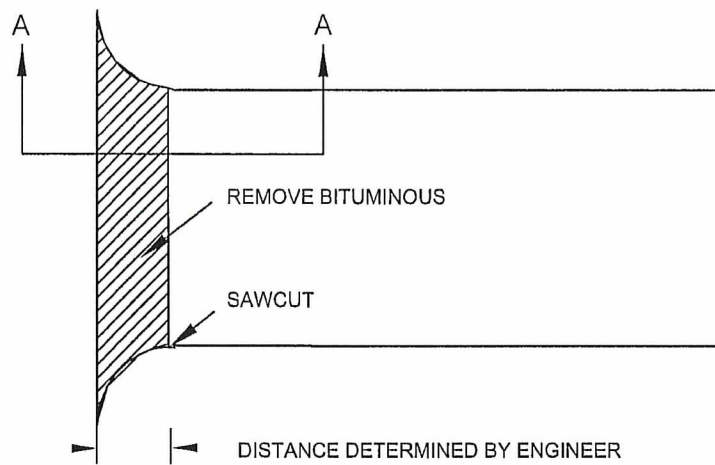
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042

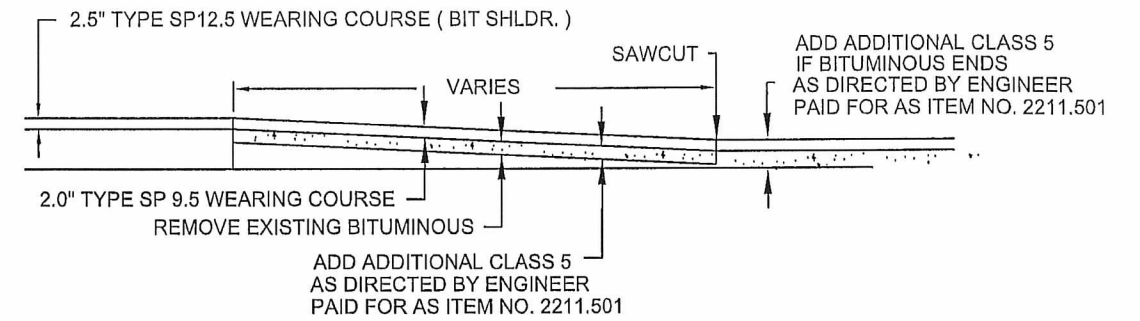
MISC. DETAILS
 Sheet 8 of 32 Sheets

PAVED DRIVEWAYS

DETAILS

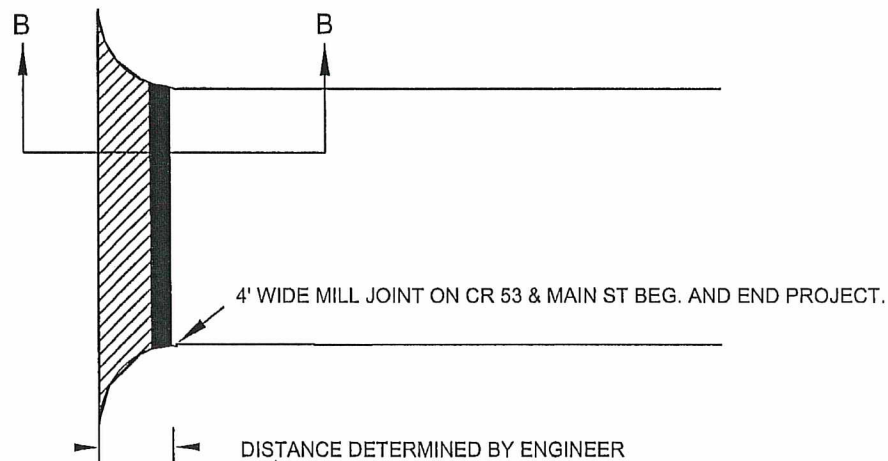


DRIVEWAY DETAILS A - A

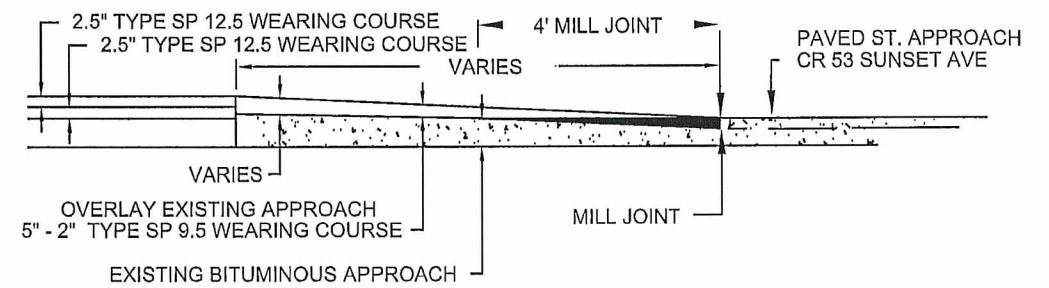


PAVED STREET APPROACH

JOINT DETAILS



CR 53 APPROACH JOINT DETAILS B - B



1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	02/02/2018	JCF	HG	JEO	CHANGED BITUMINOUS THICKNESS IN DRIVEWAY & CR53 DETAIL.
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGN\$					\$DATE\$ \$TIMES\$

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 PRINT NAME: NICHOLAS DOBDA
 SIGNATURE: *Nicholas Dobda*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/25/17
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 CHECKED BY JEO DATE 10/27/17



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

MISC. DETAILS

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ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
☉ C.S.A.H. 14 <ALI_14>										
		☉ C.S.A.H. 14								
5000	POT	94+00.000						530,020.7243	158,790.1555	
5001	POT	97+00.057						530,320.7243	158,784.3130	
	PC	107+55.513						531,375.9808	158,763.7722	S 88° 39' 58.88" E
14AL11	PI	113+80.699	3° 23' 25.17" LT	0° 16' 16.41"	21,124.853'	625.186'	1,250.007'	532,000.9975	158,749.2213	PI
	CC							531,867.6490	179,882.9030	
	PT	120+05.521						532,625.7808	158,771.6581	N 87° 56' 35.95" E
	PC	161+90.085						536,808.2404	158,904.3652	N 87° 52' 04.22" E
14AL12	PI	165+90.167	2° 58' 11.24" RT	0° 22' 16.43"	15,434.033'	400.082'	799.986'	537,208.0458	158,919.2501	PI
	CC							537,382.4579	143,481.0179	
	PT	169+90.071						537,608.0855	158,913.4014	S 89° 09' 44.54" E
5002	POT	171+90.156						537,808.1629	158,911.5709	

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
NO	DATE	BY	CKD	APPR	REVISION
NAME: \$DGN\$	SDATE\$	STIME\$			

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 SIGNATURE: *Nicholas Dobda*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17

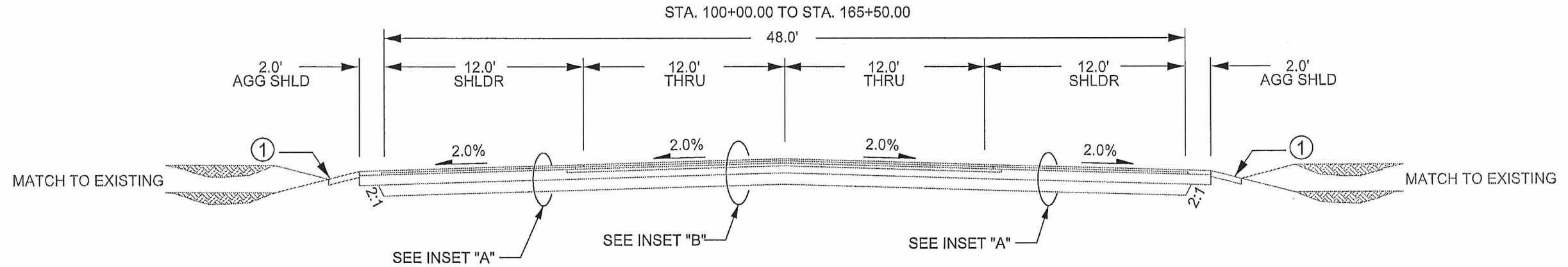


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

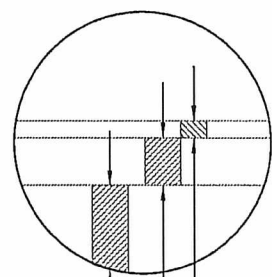
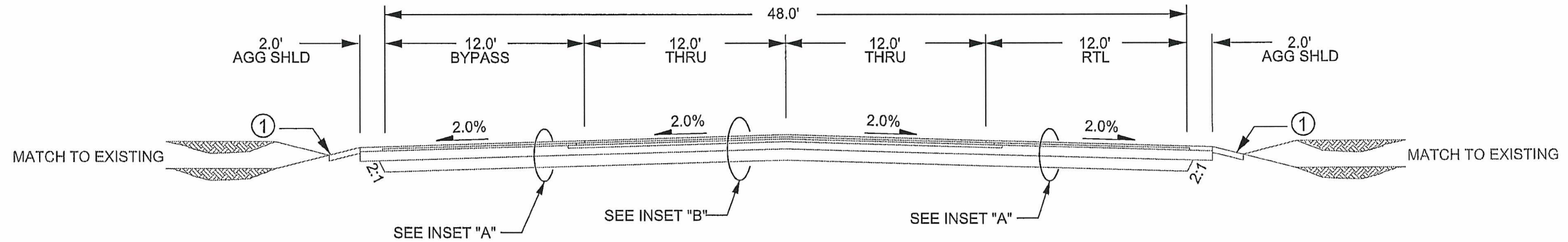
ALIGNMENT TABULATION
Sheet 10 of 32 Sheets

C.S.A.H. 14 (MAIN STREET.) EXISTING TYPICAL SECTION



C.S.A.H. 14 (MAIN STREET.) EXISTING TYPICAL RTL / BYPASS SECTION

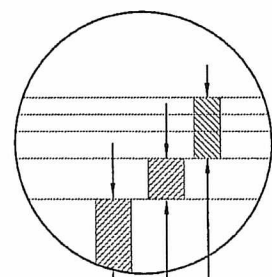
RTL EB STA. 108+89.00 TO STA. 114+42.00
 BYPASS WB STA. 111+29.00 TO STA. 117+49.00
 RTL EB STA. 160+87 TO STA. 165+50.00



INSET "A"

②

4.0" - 5.0" EXISTING BITUMINOUS
 6.0" EXISTING AGGREGATE BASE
 EXISTING SUBGRADE



INSET "B"

②

5.0" - 6.0" EXISTING BITUMINOUS
 4.0" EXISTING AGGREGATE BASE
 EXISTING SUBGRADE

EXISTING TYPICAL NOTES

- ① EXISTING 1 : 4 SLOPE
- ② BITUMINOUS AND AGGREGATE BASE DEPTHS ARE APPROXIMATE. DEPTHS SHOWN ARE FROM CORES TAKEN BY ANOKA COUNTY. SEE LOCATIONS ON REMOVAL PLAN.
- CORE 1, 6" BITUMINOUS, 4.0" AGG. BASE.
- CORE 2, 4 -3/4" BITUMINOUS, 6.0" AGG. BASE.
- CORE 3, 4-1/4" BITUMINOUS, 6.0" AGG. BASE.
- CORE 4, 5" BITUMINOUS, 6.0" AGG. BASE.
- CORE 5, 5-1/4" BITUMINOUS, 4.0" AGG. BASE.
- CORE 6, 5-1/4" BITUMINOUS, 6.0" AGG. BASE.
- CORE 7, 5-5/8" BITUMINOUS, 4.0" AGG. BASE.
- CORE 8, 6-1/4" BITUMINOUS, 4.0" AGG. BASE.

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	02/02/2018	JCF	HG	JEO	UPDATED EXISTING TYPICAL NOTES, AGG BASE.
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGNS					SDATES \$TIMES

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: NICHOLAS DOBDA
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DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17



ANOKA COUNTY
 HIGHWAY DEPT.

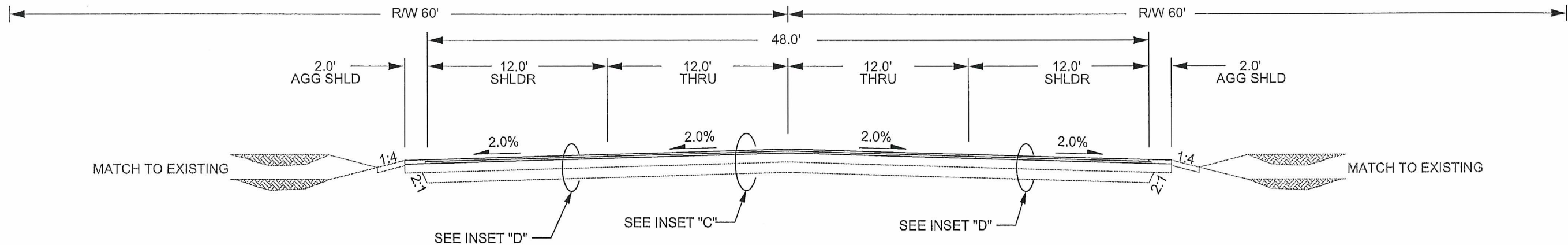
STATE PROJECT NO. 002-614-042

EXISTING
 TYPICAL SECTIONS

Sheet 11 of 32 Sheets

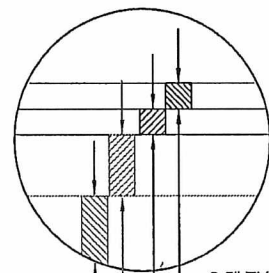
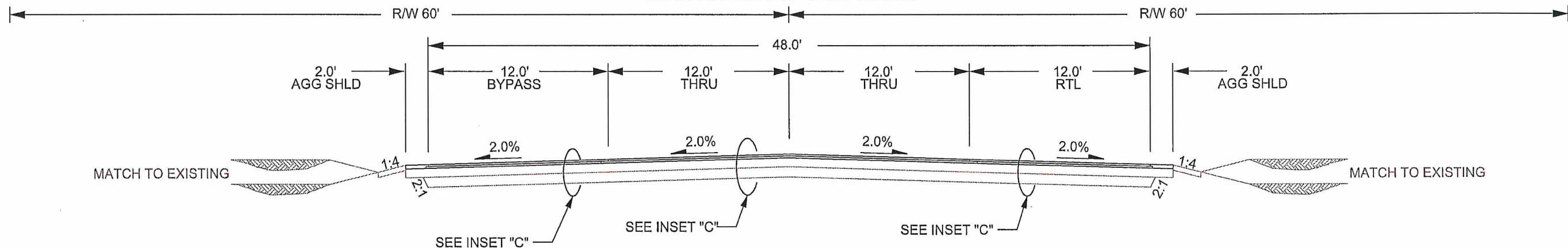
C.S.A.H. 14 (MAIN STREET) PROPOSED TYPICAL

STA. 100+00.00 TO STA. 165+50.00



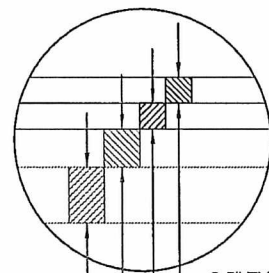
C.S.A.H. 14 (MAIN STREET.) PROPOSED TYPICAL RTL / BYPASS SECTION

RTL EB STA. 108+89.00 TO STA. 114+42.00
 BYPASS WB STA. 111+29.00 TO STA. 117+49.00
 RTL EB STA. 160+87.00 TO STA. 165+50.00



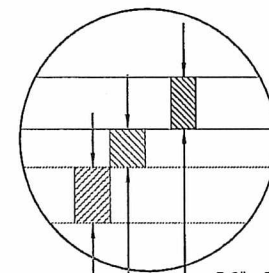
INSET "C"

- 2.5" TYPE SP12.5 WEARING COURSE SPWEB440C
- 2.5" TYPE SP12.5 WEARING COURSE SPWEB440C
- 10.0" RECLAIMED BITUMINOUS / AGGREGATE BASE
- EXISTING SUBGRADE



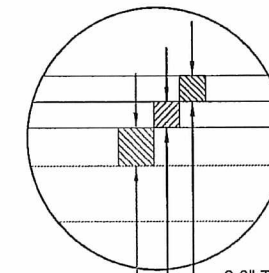
INSET "D"

- 2.5" TYPE SP12.5 WEARING COURSE SPWEB440C
- 2.5" ADDITIONAL AGGREGATE BASE CLASS 5
- 10.0" RECLAIMED BITUMINOUS SHLDR / AGGREGATE BASE
- EXISTING SUBGRADE



BIT. STREET APPROACH (CR 53)

- 5.0" - 2.0" TYPE SP9.5 WEARING COURSE OVERLAY - SPWEB340B
- EXISTING BITUMINOUS
- EXISTING SUBGRADE



BIT. DRIVEWAY

- 2.0" TYPE SP9.5 WEARING COURSE SPWEB340B
- ADDITIONAL AGGREGATE BASE CLASS 5 AS DIRECTED BY ENGINEER.
- EXISTING DRIVEWAY

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED R/W TO PROPOSED TYPICALS
3	01/29/2018	JCF	HG	JEO	ADDED SHOULDER SLOPE TO PROPOSED TYPICALS
4	01/29/2018	JCF	HG	JEO	ADDED MATERIAL TYPE CODES & UPDATED INSET BIT & GRVL
5	01/29/2018	JCF	HG	JEO	ADDED RECLAIMED EXISTING BITUMINOUS AND AGGREGATE DEPTH
6	02/02/2018	JCF	HG	JEO	CHANGED BITUMINOUS LIFT THICKNESS TO 2.5"
NAME: \$DGN\$		\$DATES		\$TIMES	

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.
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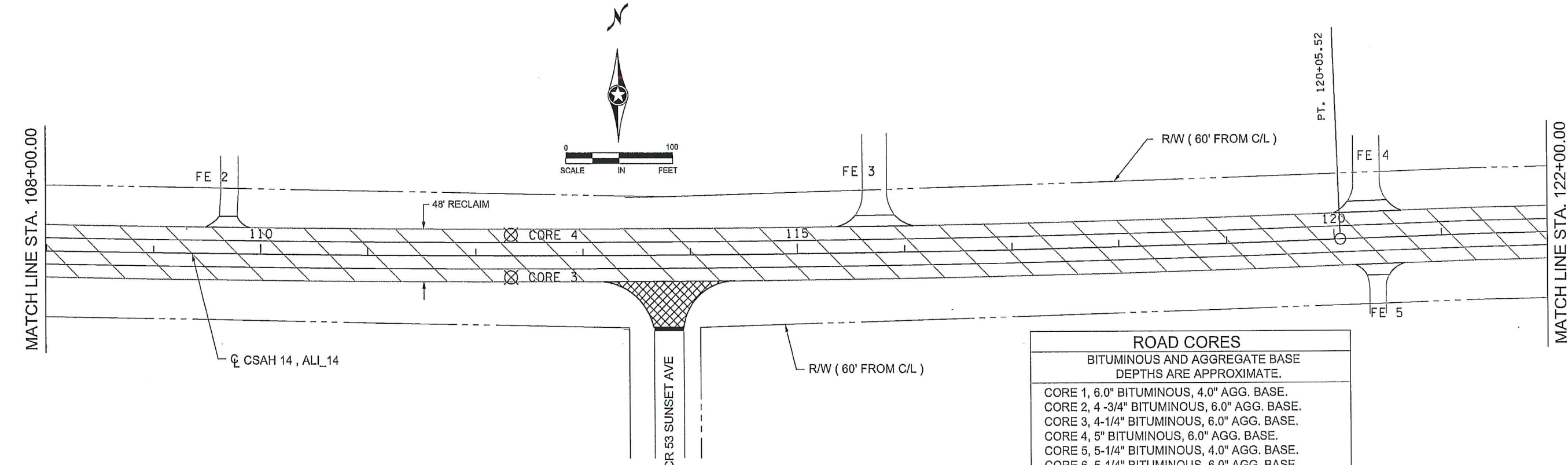
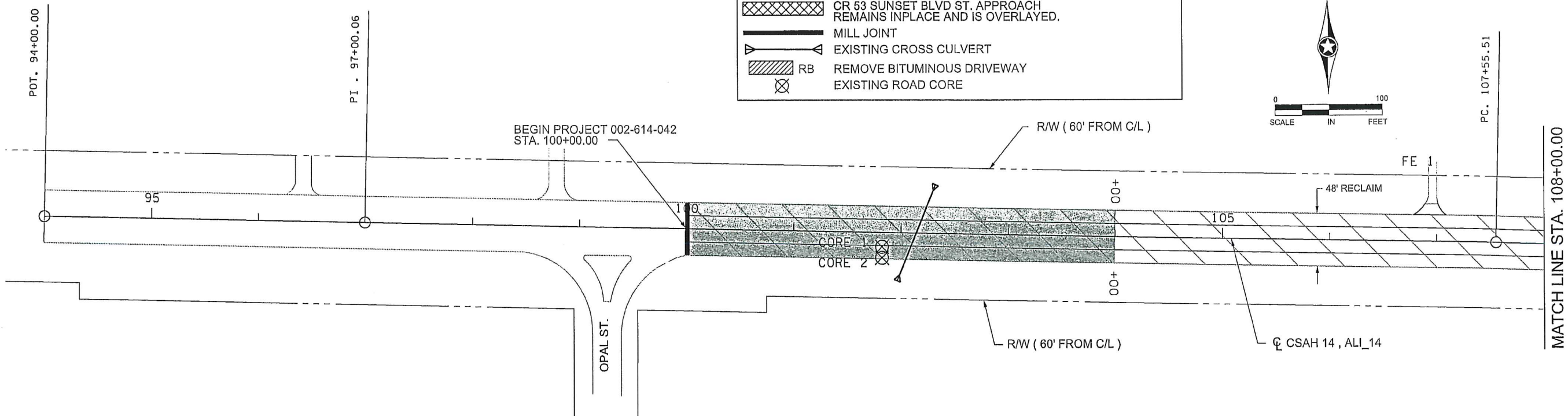
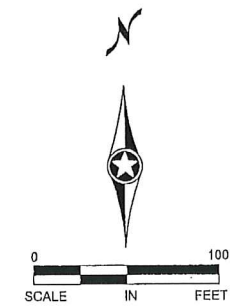
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

PROPOSED
 TYPICAL SECTIONS

Sheet 12 of 32 Sheets

	FULL DEPTH RECLAIM
	REMOVE RECLAIM MATERIAL 400' TRANSITION TO MATCH EXISTING BITUMINOUS. SEE PLAN AND PROFILE.
	CR 53 SUNSET BLVD ST. APPROACH REMAINS INPLACE AND IS OVERLAYED.
	MILL JOINT
	EXISTING CROSS CULVERT
	RB REMOVE BITUMINOUS DRIVEWAY
	EXISTING ROAD CORE



ROAD CORES	
BITUMINOUS AND AGGREGATE BASE DEPTHS ARE APPROXIMATE.	
CORE 1,	6.0" BITUMINOUS, 4.0" AGG. BASE.
CORE 2,	4 -3/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 3,	4-1/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 4,	5" BITUMINOUS, 6.0" AGG. BASE.
CORE 5,	5-1/4" BITUMINOUS, 4.0" AGG. BASE.
CORE 6,	5-1/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 7,	5-5/8" BITUMINOUS, 4.0" AGG. BASE.
CORE 8,	6-1/4" BITUMINOUS, 4.0" AGG. BASE.

NO	DATE	BY	CHKD	APPR	REVISION
1	01/29/2018	JCF	HG	JEO	ADDED CROSS CULVERT AND CORE SYMBOLS TO LEGEND
2	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
3	01/29/2018	JCF	HG	JEO	HATCHED REMOVE BITUMINOUS DRIVEWAY, LAYOUT & LEGEND

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: NICHOLAS DOBDA
 SIGNATURE: *[Signature]*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17



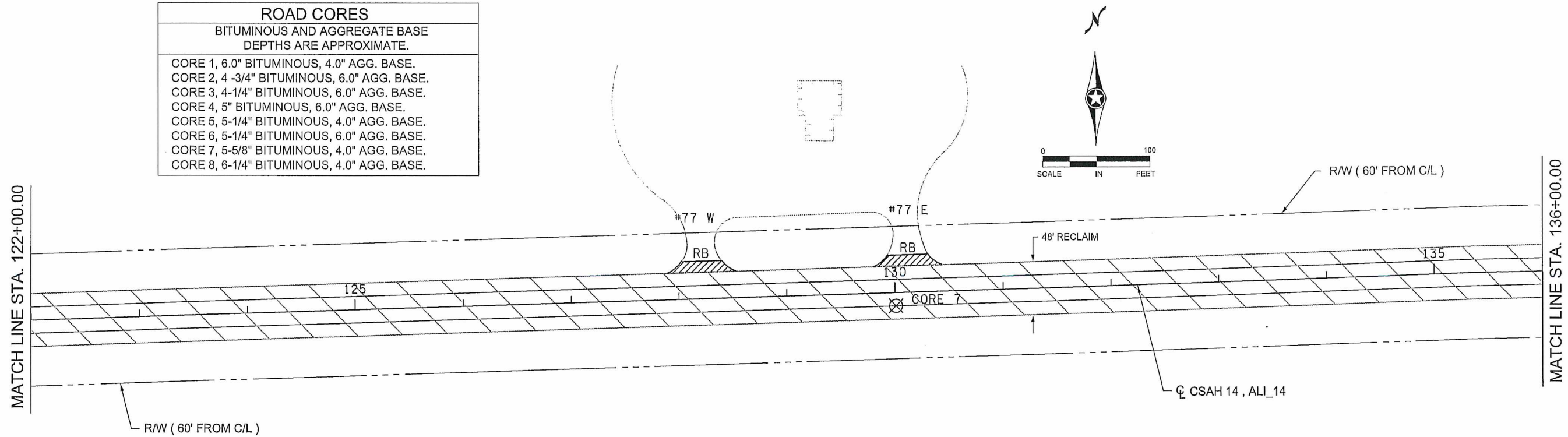
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042

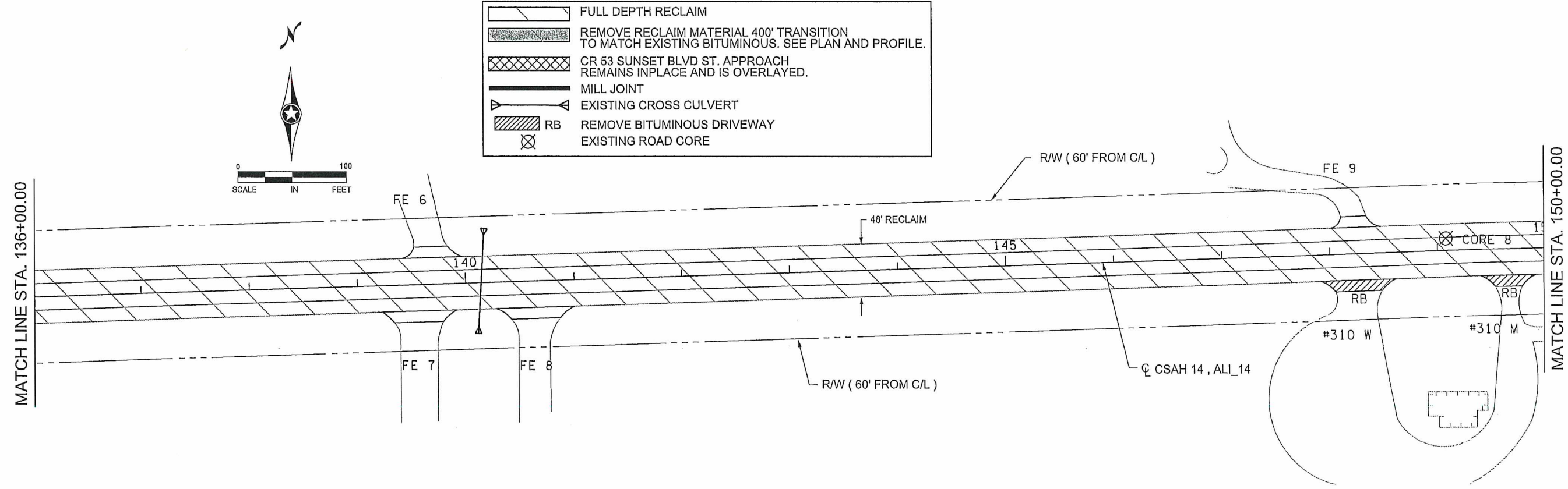
1 OF 3

REMOVALS
 STA 94+00.00 TO 122+00.00
 Sheet 13 of 32 Sheets

ROAD CORES	
BITUMINOUS AND AGGREGATE BASE DEPTHS ARE APPROXIMATE.	
CORE 1,	6.0" BITUMINOUS, 4.0" AGG. BASE.
CORE 2,	4 -3/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 3,	4-1/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 4,	5" BITUMINOUS, 6.0" AGG. BASE.
CORE 5,	5-1/4" BITUMINOUS, 4.0" AGG. BASE.
CORE 6,	5-1/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 7,	5-5/8" BITUMINOUS, 4.0" AGG. BASE.
CORE 8,	6-1/4" BITUMINOUS, 4.0" AGG. BASE.



	FULL DEPTH RECLAIM
	REMOVE RECLAIM MATERIAL 400' TRANSITION TO MATCH EXISTING BITUMINOUS. SEE PLAN AND PROFILE.
	CR 53 SUNSET BLVD ST. APPROACH REMAINS INPLACE AND IS OVERLAYED.
	MILL JOINT
	EXISTING CROSS CULVERT
	REMOVE BITUMINOUS DRIVEWAY
	EXISTING ROAD CORE



2 OF 3

1	01/29/2018	JCF	HG	JEO	ADDED CROSS CULVERT AND CORE SYMBOLS TO LEGEND
2	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
3	01/29/2018	JCF	HG	JEO	HATCHED REMOVE BITUMINOUS DRIVEWAY, LAYOUT & LEGEND
NO	DATE	BY	CKD	APPR	REVISION
NAME: \$DGN\$					\$DATES \$TIMES\$

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: NICHOLAS BOBDA
 SIGNATURE: *N. Bobda*
 DATE: 2/27/18 LICENSE NO. 49046

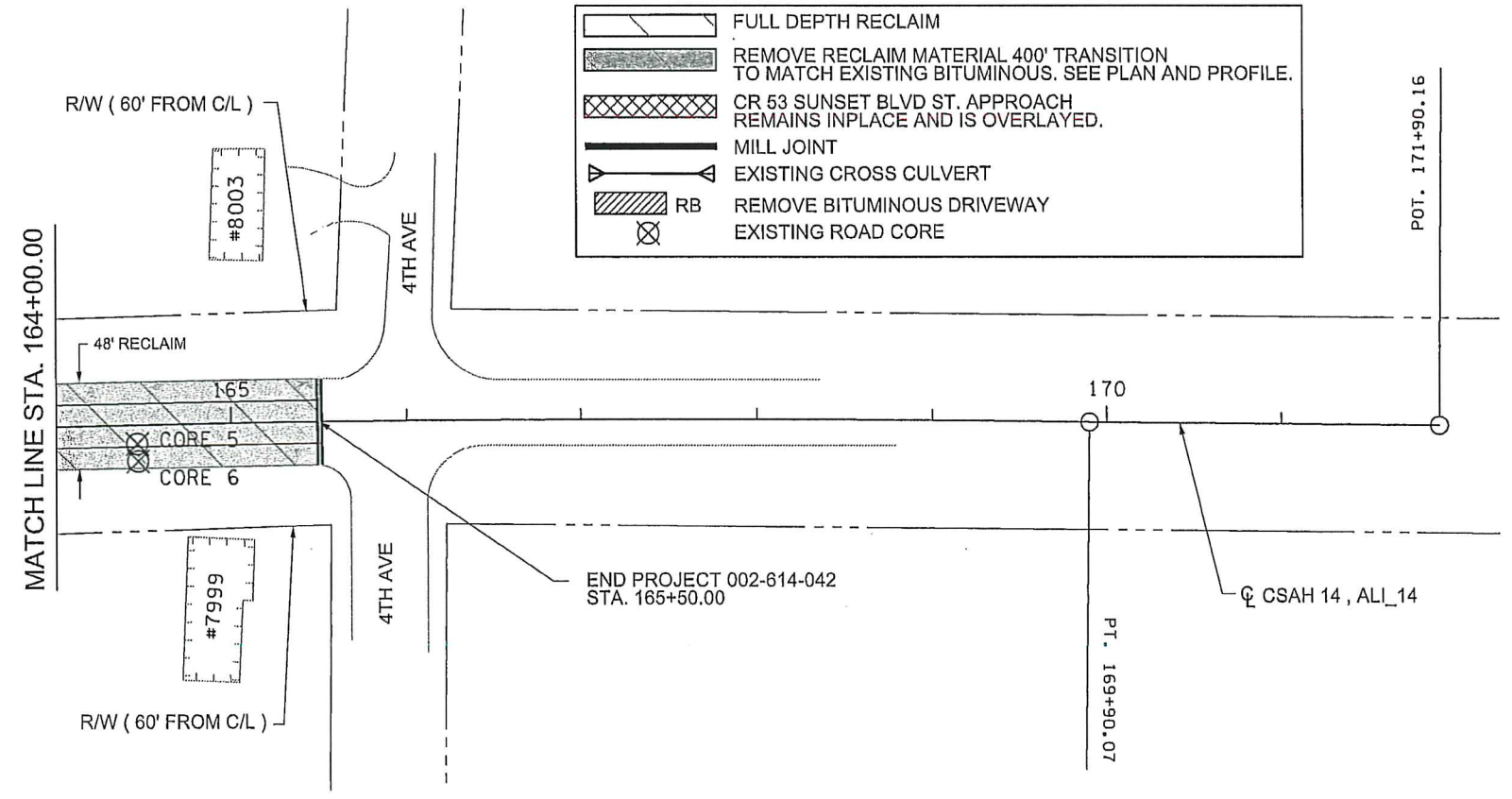
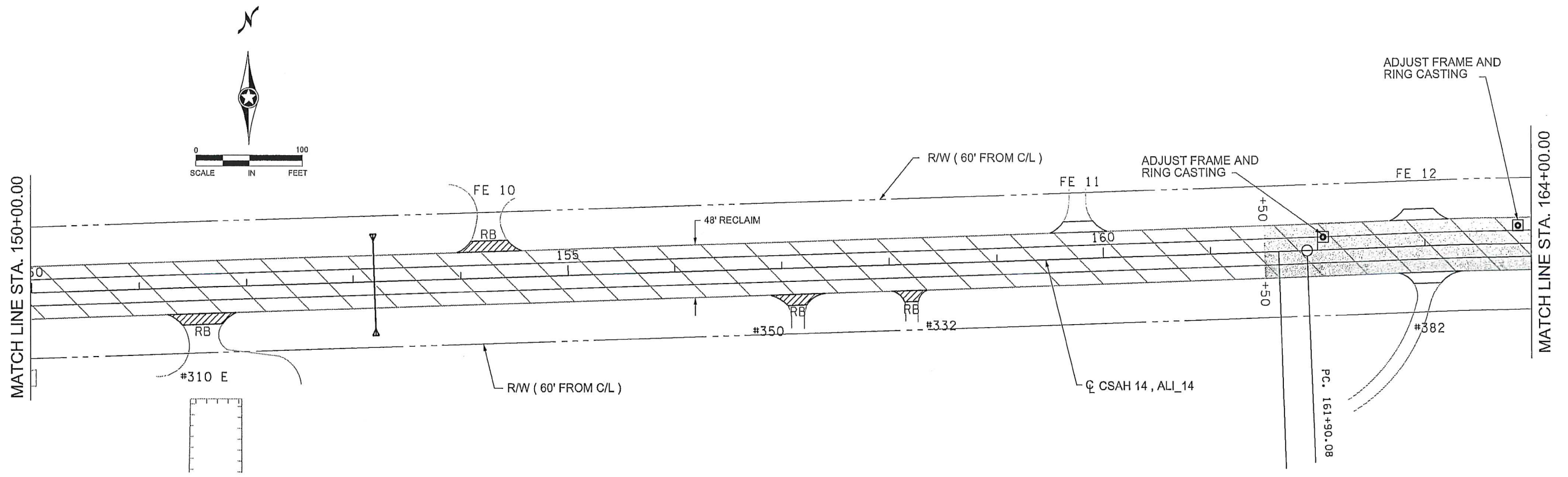
DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

REMOVALS
 STA 122+00.00 TO 150+00.00
 Sheet 14 of 32 Sheets



- FULL DEPTH RECLAIM
- REMOVE RECLAIM MATERIAL 400' TRANSITION TO MATCH EXISTING BITUMINOUS. SEE PLAN AND PROFILE.
- CR 53 SUNSET BLVD ST. APPROACH REMAINS INPLACE AND IS OVERLAYED.
- MILL JOINT
- EXISTING CROSS CULVERT
- RB REMOVE BITUMINOUS DRIVEWAY
- EXISTING ROAD CORE

ROAD CORES	
BITUMINOUS AND AGGREGATE BASE DEPTHS ARE APPROXIMATE.	
CORE 1,	6.0" BITUMINOUS, 4.0" AGG. BASE.
CORE 2,	4 -3/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 3,	4-1/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 4,	5" BITUMINOUS, 6.0" AGG. BASE.
CORE 5,	5-1/4" BITUMINOUS, 4.0" AGG. BASE.
CORE 6,	5-1/4" BITUMINOUS, 6.0" AGG. BASE.
CORE 7,	5-5/8" BITUMINOUS, 4.0" AGG. BASE.
CORE 8,	6-1/4" BITUMINOUS, 4.0" AGG. BASE.

1	01/29/2018	JCF	HG	JEO	ADDED CROSS CULVERT AND CORE SYMBOLS TO LEGEND
2	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
3	01/29/2018	JCF	HG	JEO	HATCHED REMOVE BITUMINOUS DRIVEWAY , LAYOUT & LEGEND
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGN\$					SDATE\$ STIMES\$

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: NICHOLAS DOBDA
 SIGNATURE: *[Signature]*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17



ANOKA COUNTY
HIGHWAY DEPT.

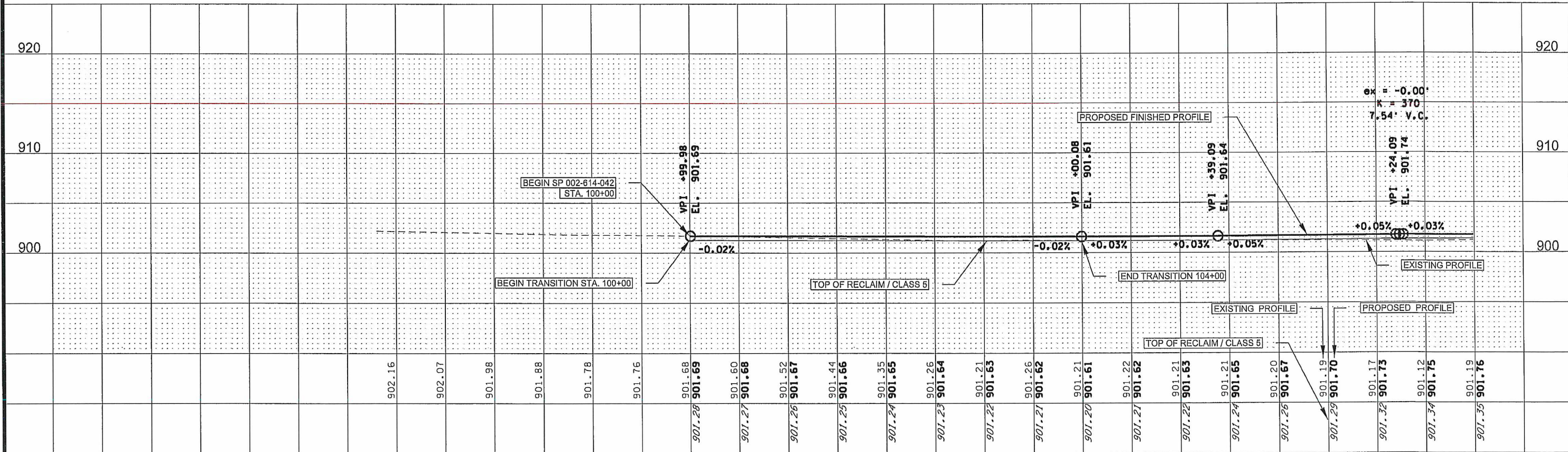
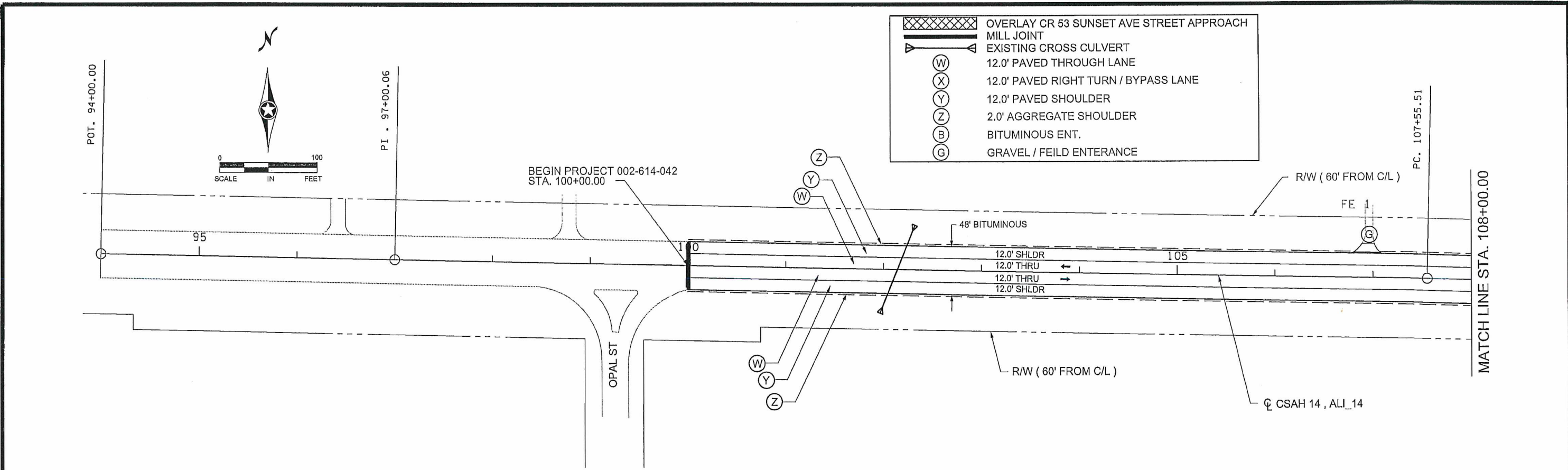
STATE PROJECT NO. 002-614-042

3 OF 3

REMOVALS

STA 150+00.00 TO 171+90.16

Sheet 15 of 32 Sheets

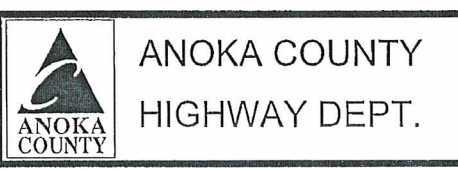


94+00	95+00	96+00	97+00	98+00	99+00	100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00
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1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED BEGIN SP 002-614-042 STA 100+00 TO PROFILE
3	01/29/2018	JCF	HG	JEO	ADDED EXISTING CROSS CULVERT TO LEGEND
4	02/09/2018	JCF	HG	JEO	ADJUSTED PROFILE TO REFLECT 5.0" PROPOSED BIT.
NO	DATE	BY	CKD	APPR	REVISION
NAME: \$DGN\$					\$DATES \$TIMES\$










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: NICHOLAS DOBDA
 SIGNATURE: *Nicholas Dobda*
 DATE: 2/27/18 LICENSE NO. 49046

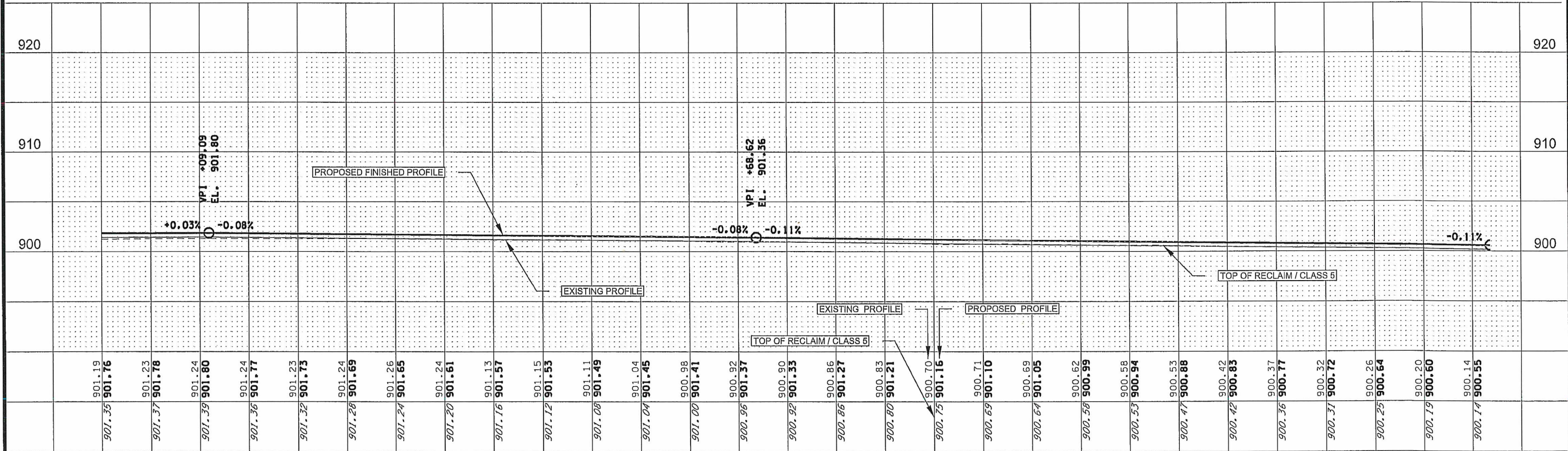
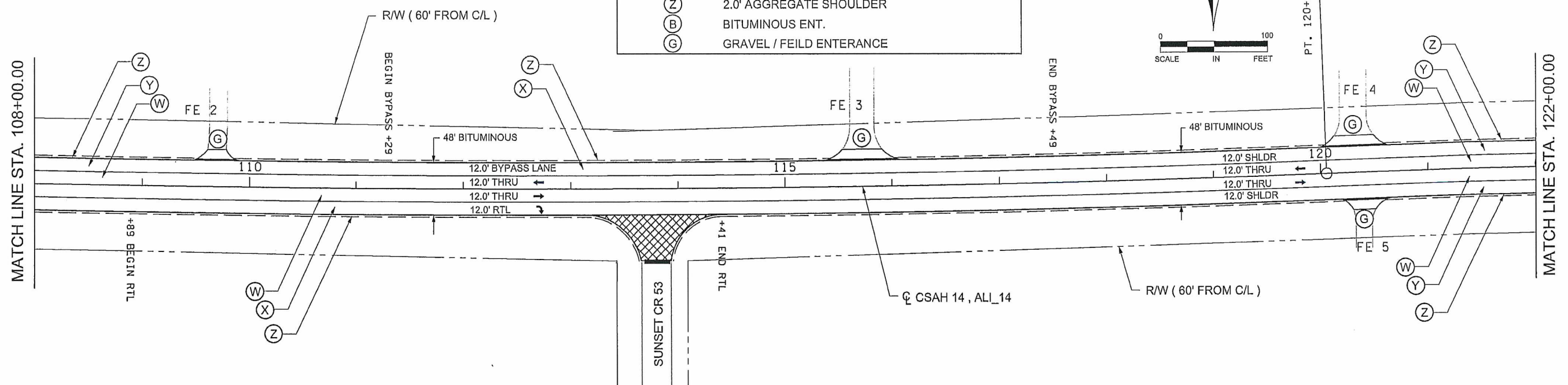
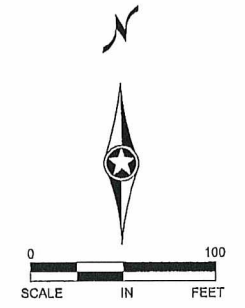
DRAWN BY JCF DATE 09/25/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17



STATE PROJECT NO. 002-614-042

PLAN AND PROFILE
 STA 94+00.00 TO 108+00.00
 Sheet 16 of 32 Sheets

-  OVERLAY CR 53 SUNSET AVE STREET APPROACH
-  MILL JOINT
-  EXISTING CROSS CULVERT
-  12.0' PAVED THROUGH LANE
-  12.0' PAVED RIGHT TURN / BYPASS LANE
-  12.0' PAVED SHOULDER
-  2.0' AGGREGATE SHOULDER
-  BITUMINOUS ENT.
-  GRAVEL / FEILD ENTERANCE




	901.19	901.176	901.23	901.78	901.24	901.80	901.24	901.77	901.23	901.73	901.24	901.69	901.26	901.65	901.24	901.61	901.13	901.57	901.15	901.53	901.11	901.49	901.04	901.45	900.98	901.41	900.92	901.37	900.90	901.33	900.86	901.27	900.83	901.21	900.70	901.16	900.71	901.10	900.69	901.05	900.62	900.99	900.58	900.94	900.53	900.88	900.42	900.83	900.37	900.77	900.32	900.72	900.26	900.64	900.20	900.60	900.14	900.55	
	108+00	109+00	110+00	111+00	112+00	113+00	114+00	115+00	116+00	117+00	118+00	119+00	120+00	121+00	122+00																																												

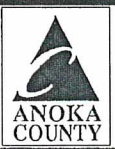
2 OF 6

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED EXISTING CROSS CULVERT TO LEGEND
3	02/05/2018	JCF	HG	JEO	ADJUSTED PROFILE TO REFLECT 5.0' PROPOSED BIT.
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGN\$					\$DATES \$TIMES

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: NICHOLAS DOBDA
 SIGNATURE: 
 DATE: 2/27/18 LICENSE NO. 49046

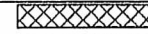
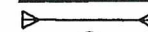







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 DESIGN BY: JCF DATE: 09/25/17
 CHECKED BY: JEO DATE: 10/27/17



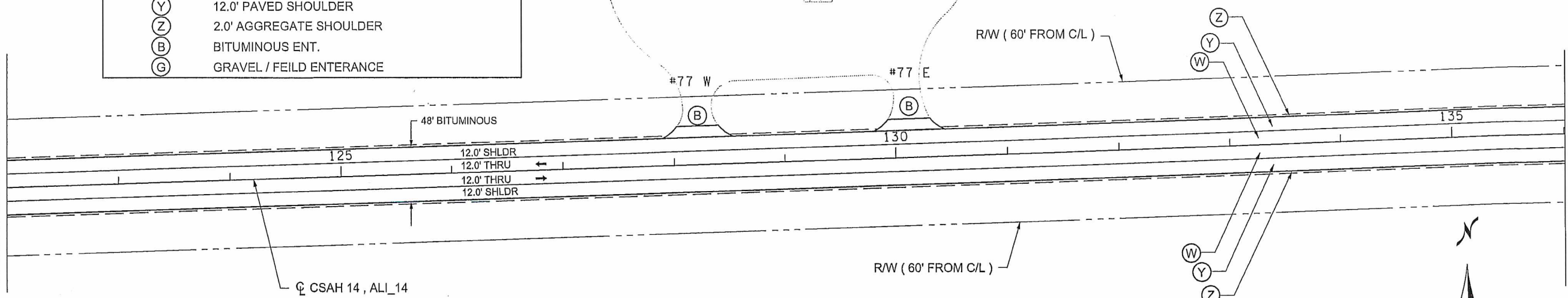
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

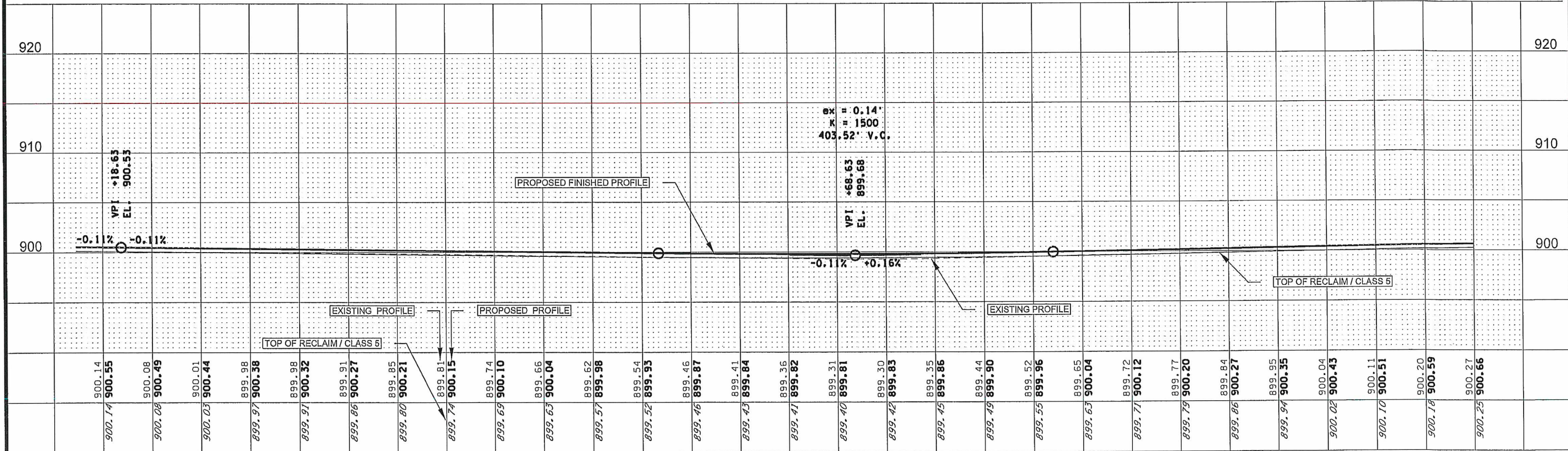
PLAN AND PROFILE
 STA 108+00.00 TO 122+00.00
 Sheet 17 of 32 Sheets

-  OVERLAY CR 53 SUNSET AVE STREET APPROACH
-  MILL JOINT
-  EXISTING CROSS CULVERT
-  12.0' PAVED THROUGH LANE
-  12.0' PAVED RIGHT TURN / BYPASS LANE
-  12.0' PAVED SHOULDER
-  2.0' AGGREGATE SHOULDER
-  BITUMINOUS ENT.
-  GRAVEL / FEILD ENTERANCE

MATCH LINE STA. 122+00.00



MATCH LINE STA. 136+00.00

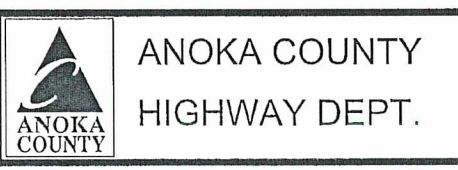


122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED EXISTING CROSS CULVERT TO LEGEND
3	02/05/2018	JCF	HG	JEO	ADJUSTED PROFILE TO REFLECT 5.0' PROPOSED BIT.
NO	DATE	BY	CKD	APPR	REVISION
NAME: SDGNS					SDATES \$TIMES

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: NICHOLAS DOBDA
 SIGNATURE: *Nicholas Dobda*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY: JCF DATE: 09/26/17
 DESIGN BY: JCF DATE: 09/25/17
 CHECKED BY: JEO DATE: 10/27/17



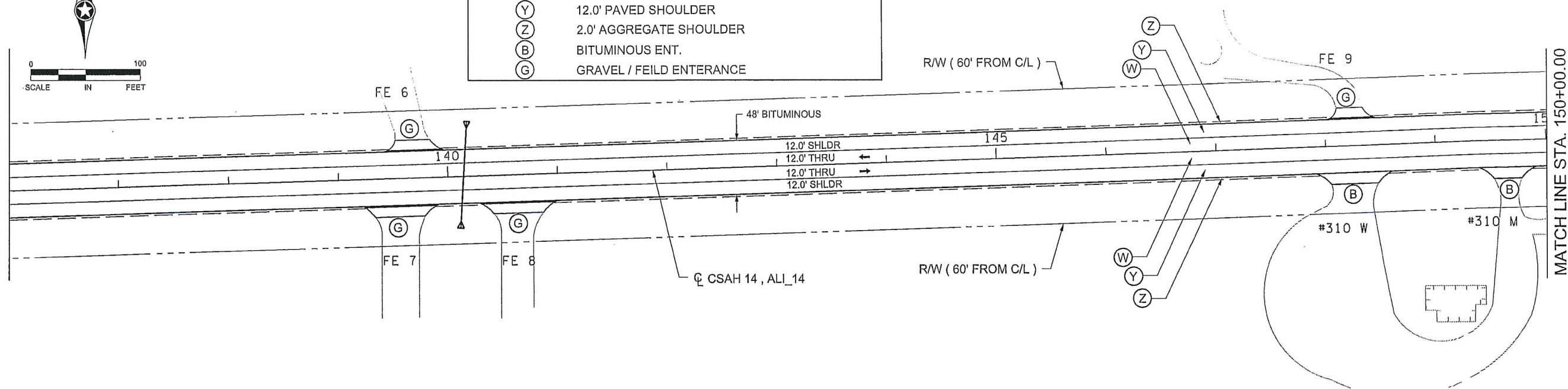
STATE PROJECT NO. 002-614-042

3 OF 6
 PLAN AND PROFILE
 STA 122+00.00 TO 136+00.00
 Sheet 18 of 32 Sheets

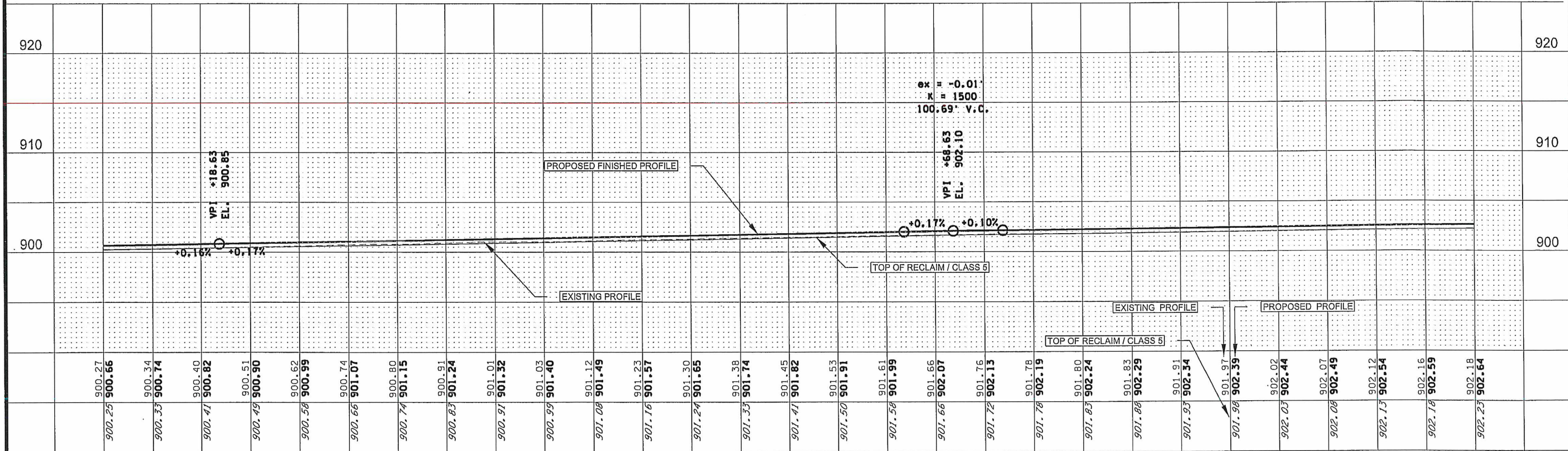
MATCH LINE STA. 136+00.00



- OVERLAY CR 53 SUNSET AVE STREET APPROACH
- MILL JOINT
- EXISTING CROSS CULVERT
- 12.0' PAVED THROUGH LANE
- 12.0' PAVED RIGHT TURN / BYPASS LANE
- 12.0' PAVED SHOULDER
- 2.0' AGGREGATE SHOULDER
- BITUMINOUS ENT.
- GRAVEL / FEILD ENTRANCE



MATCH LINE STA. 150+00.00



900.27	900.56	900.34	900.74	900.40	900.82	900.51	900.90	900.62	900.99	900.74	901.07	900.80	901.15	900.91	901.24	901.01	901.32	901.03	901.40	901.12	901.49	901.23	901.57	901.30	901.65	901.38	901.74	901.45	901.82	901.53	901.91	901.61	901.99	901.66	902.07	901.76	902.13	901.78	902.19	901.80	902.24	901.83	902.29	901.91	902.34	901.97	902.39	902.02	902.44	902.07	902.49	902.12	902.54	902.16	902.59	902.18	902.64
900.25	900.74	900.41	900.49	900.56	900.66	900.74	900.83	900.91	900.99	901.07	901.15	901.24	901.32	901.40	901.49	901.57	901.65	901.74	901.82	901.91	901.99	902.07	902.13	902.19	902.24	902.29	902.34	902.39	902.44	902.49	902.54	902.59	902.64																								

4 OF 6

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED EXISTING CROSS CULVERT TO LEGEND
3	02/05/2018	JCF	HG	JEO	ADJUSTED PROFILE TO REFLECT 5.0' PROPOSED BIT.
NO	DATE	BY	CKD	APPR	REVISION
NAME: \$DGH\$					\$DATES \$TIMES

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: NICHOLAS DOBDA
 SIGNATURE: *Nicholas Dobda*
 DATE: 2/27/18 LICENSE NO. 49046

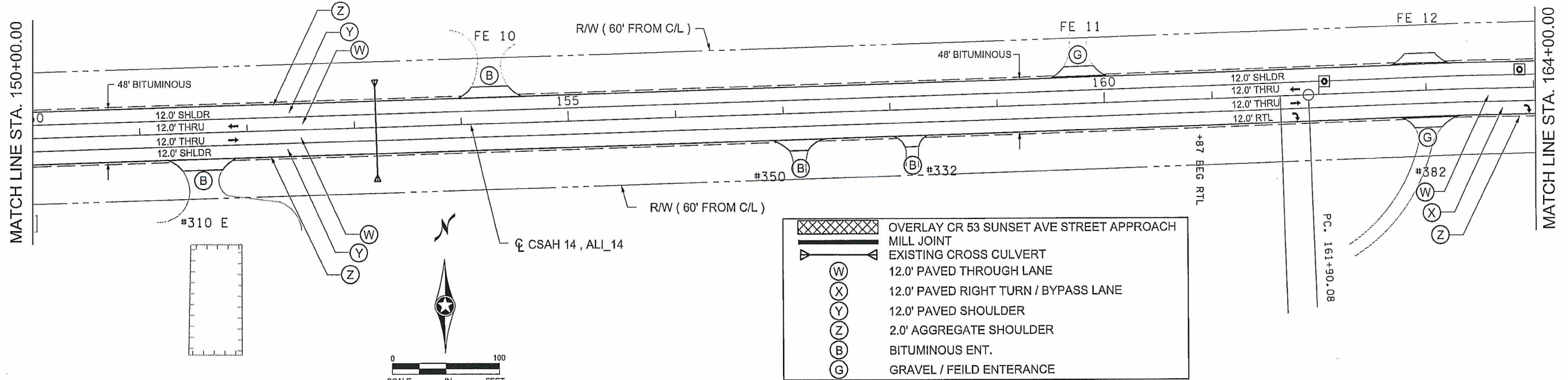
DRAWN BY JCF DATE 09/26/17
 DESIGN BY JCF DATE 09/25/17
 CHECKED BY JEO DATE 10/27/17



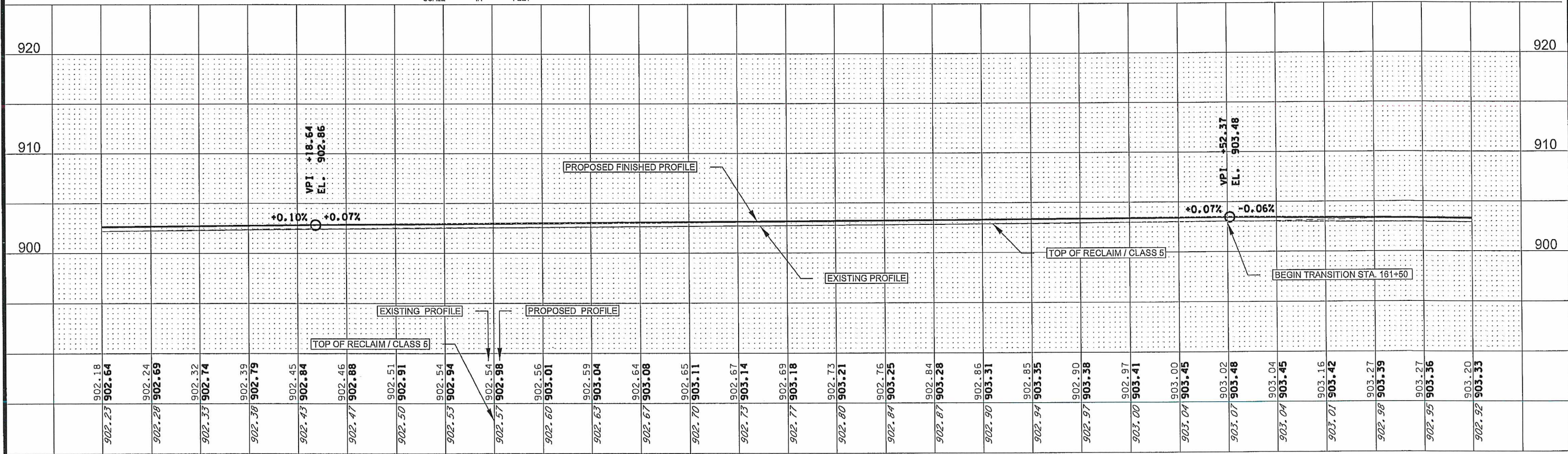
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

PLAN AND PROFILE
 STA 136+00.00 TO 150+00.00
 Sheet 19 of 32 Sheets



	OVERLAY CR 53 SUNSET AVE STREET APPROACH
	MILL JOINT
	EXISTING CROSS CULVERT
	12.0' PAVED THROUGH LANE
	12.0' PAVED RIGHT TURN / BYPASS LANE
	12.0' PAVED SHOULDER
	2.0' AGGREGATE SHOULDER
	BITUMINOUS ENT.
	GRAVEL / FEILD ENTERANCE



902.18	902.24	902.32	902.39	902.45	902.46	902.51	902.54	902.56	902.59	902.64	902.65	902.67	902.69	902.73	902.76	902.84	902.85	902.90	902.97	903.00	903.04	903.16	903.27	903.27	903.20	903.20
902.23	902.28	902.33	902.38	902.43	902.47	902.50	902.53	902.57	902.60	902.63	902.67	902.70	902.73	902.77	902.80	902.84	902.87	902.90	902.94	902.97	903.00	903.04	903.07	903.10	903.13	903.16
150+00	151+00	152+00	153+00	154+00	155+00	156+00	157+00	158+00	159+00	160+00	161+00	162+00	163+00	164+00												

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED EXISTING CROSS CULVERT TO LEGEND
3	02/05/2018	JCF	HG	JEO	ADJUSTED PROFILE TO REFLECT 6.0' PROPOSED BIT.
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: NICHOLAS DORDA
 SIGNATURE: *Nicholas Dorda*
 DATE: 2/27/18 LICENSE NO. 49046

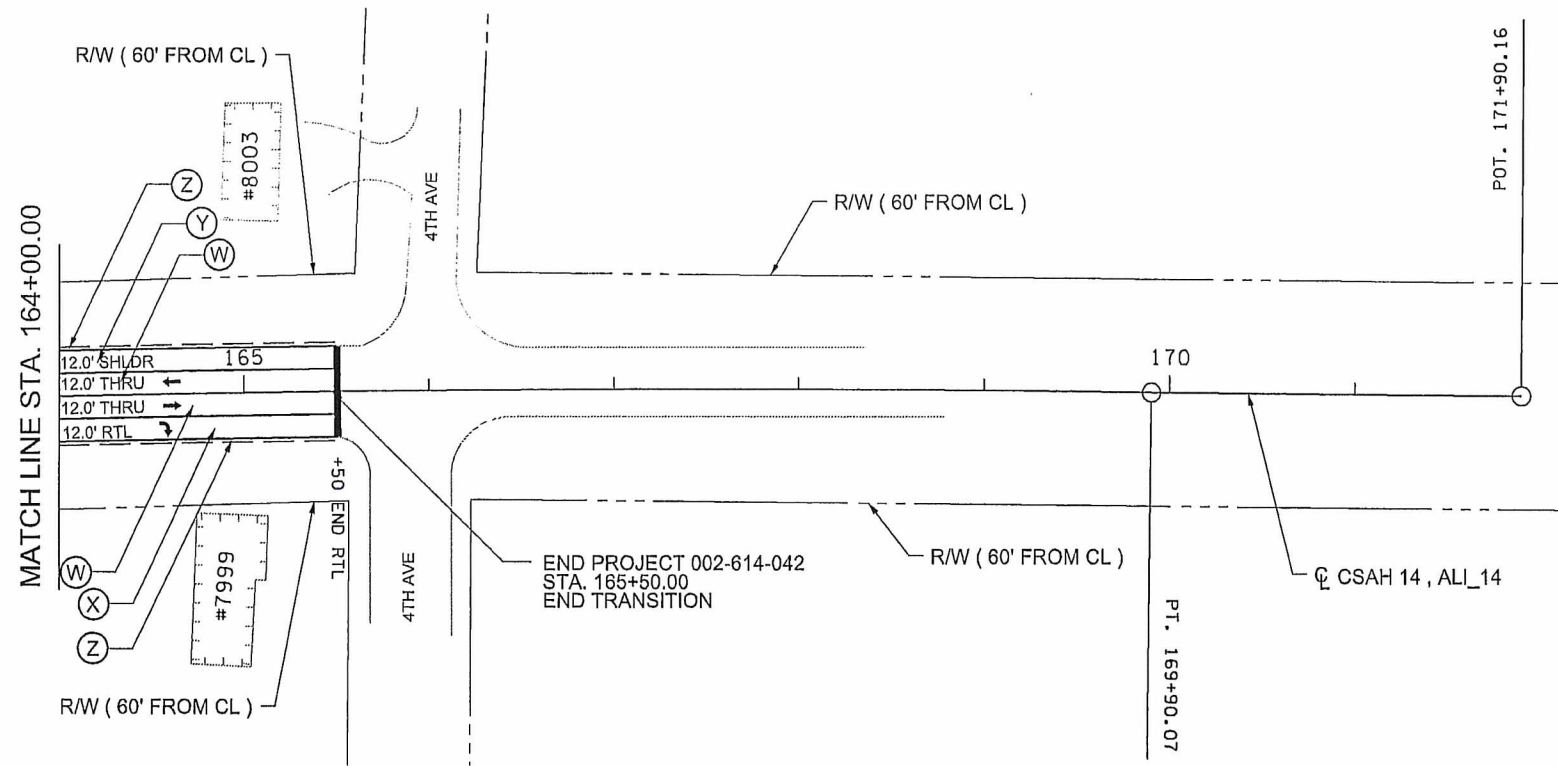
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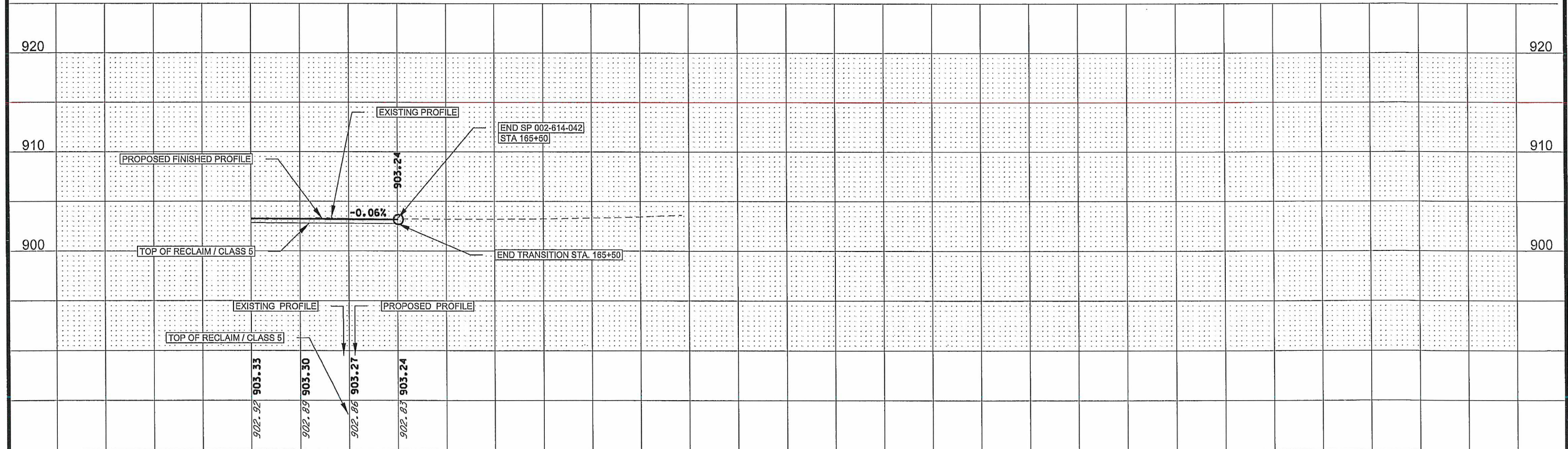
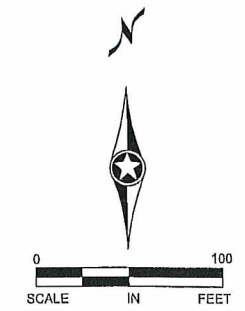
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

PLAN AND PROFILE
 STA 150+00.00 TO 164+00.00
 Sheet 20 of 32 Sheets



	OVERLAY CR 53 SUNSET AVE STREET APPROACH
	MILL JOINT
	EXISTING CROSS CULVERT
	12.0' PAVED THROUGH LANE
	12.0' PAVED RIGHT TURN / BYPASS LANE
	12.0' PAVED SHOULDER
	2.0' AGGREGATE SHOULDER
	BITUMINOUS ENT.
	GRAVEL / FEILD ENTERANCE



164+00 165+00 166+00 167+00

6 OF 6

1	01/29/2018	JCF	HG	JEO	REMOVED PREVIOUSLY CONSTRUCTED NUMBER
2	01/29/2018	JCF	HG	JEO	ADDED EXISTING CROSS CULVERT TO LEGEND
3	01/29/2018	JCF	HG	JEO	LABELED R/W
4	02/06/2018	JCF	HG	JEO	ADJUSTED PROFILE TO REFLECT 5.0' PROPOSED BIT.
NO	DATE	BY	CKD	APPR	REVISION
					SDGNS \$DATES \$TIMES

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: NICHOLAS DOBDA
 SIGNATURE: *Nicholas Dobda*
 DATE: 2/27/18 LICENSE NO. 49046

DRAWN BY: JCF DATE: 09/25/17
 DESIGN BY: JCF DATE: 09/25/17
 CHECKED BY: JEO DATE: 10/27/17

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

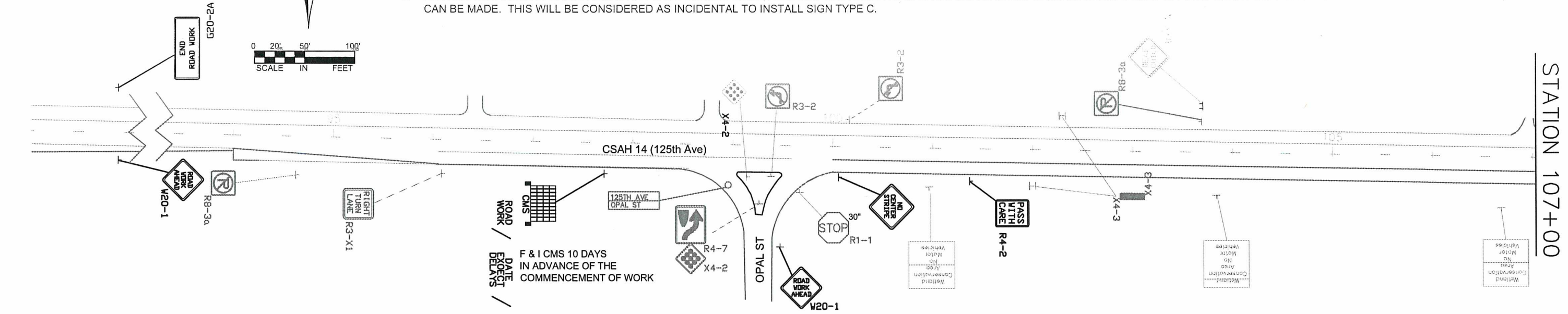
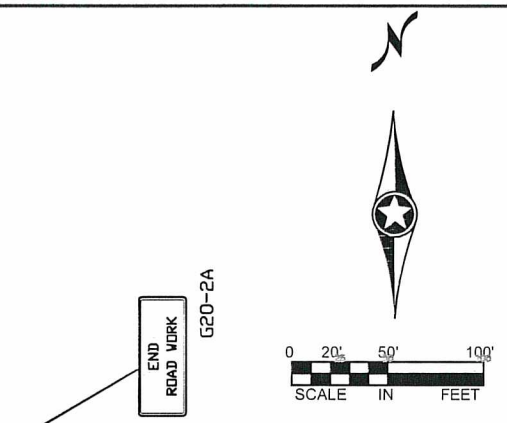
PLAN AND PROFILE

STA 164+00.00 TO 171+90.16

Sheet 21 of 32 Sheets

NOTES:

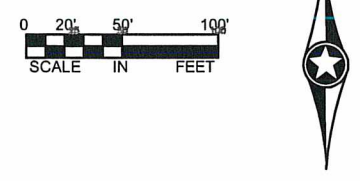
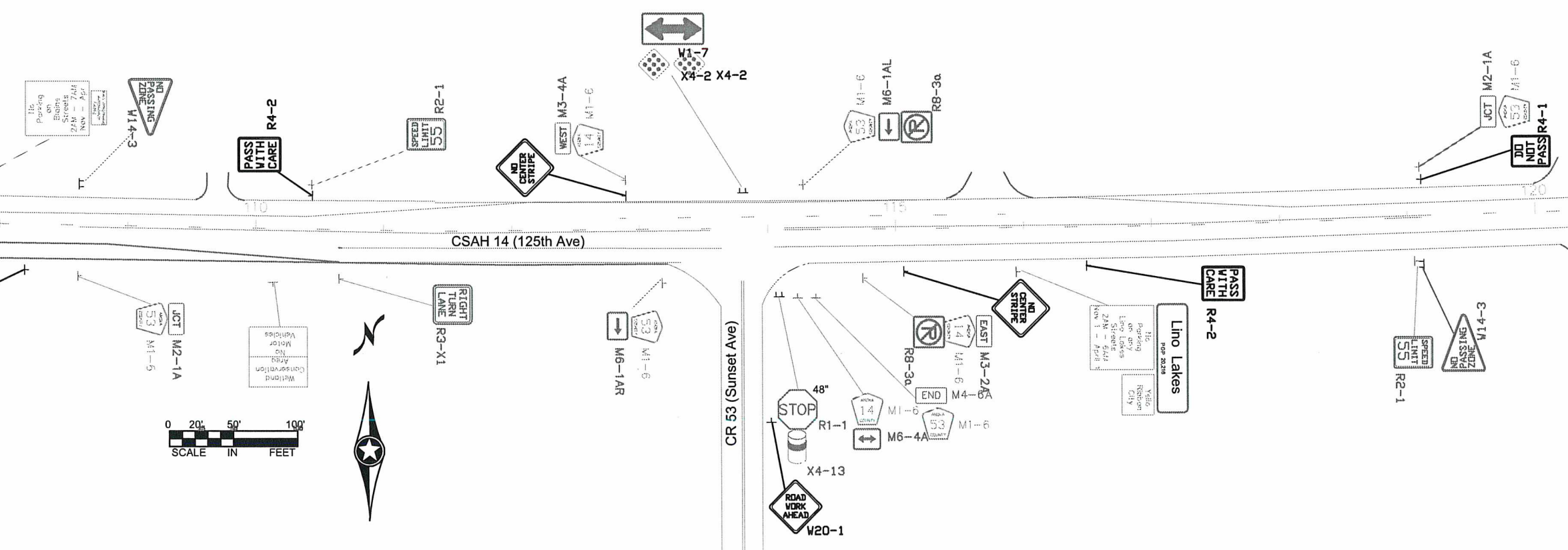
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4. CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAD FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
5. ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
6. ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL REMOVED 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 107+00

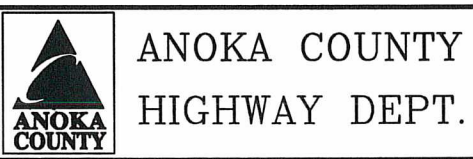
STATION 107+00

STATION 122+00



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, P.E.
 SIGNATURE: *[Signature]*
 DATE: 2/23/18 LICENSE NO. 20235

DRAWN BY: IMV DATE: 10/09/17
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____



STATE PROJECT NO. 002-614-042
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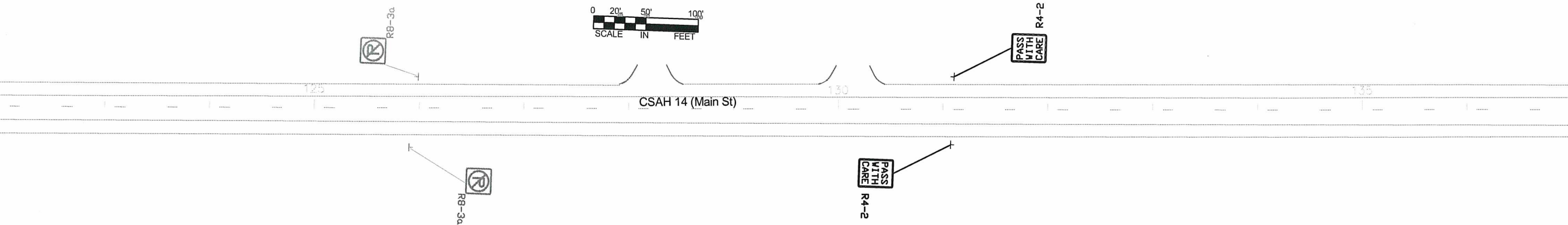
TRAFFIC CONTROL PLAN
 Sheet 22 of 32 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P002-614-042\Base\Traffic\Traffic Control Plan

STATION 122+00

STATION 137+00



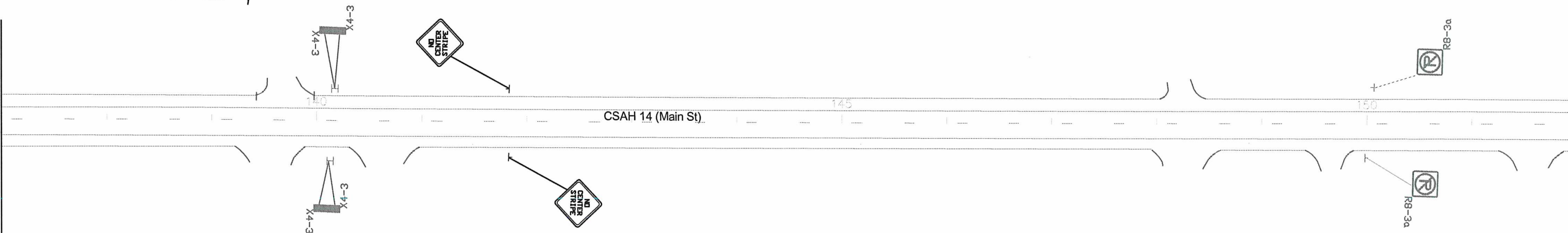
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STATION 137+00

STATION 152+00



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SIGNATURE: *[Signature]*

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DRAWN BY: TMV DATE 10/09/17

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042

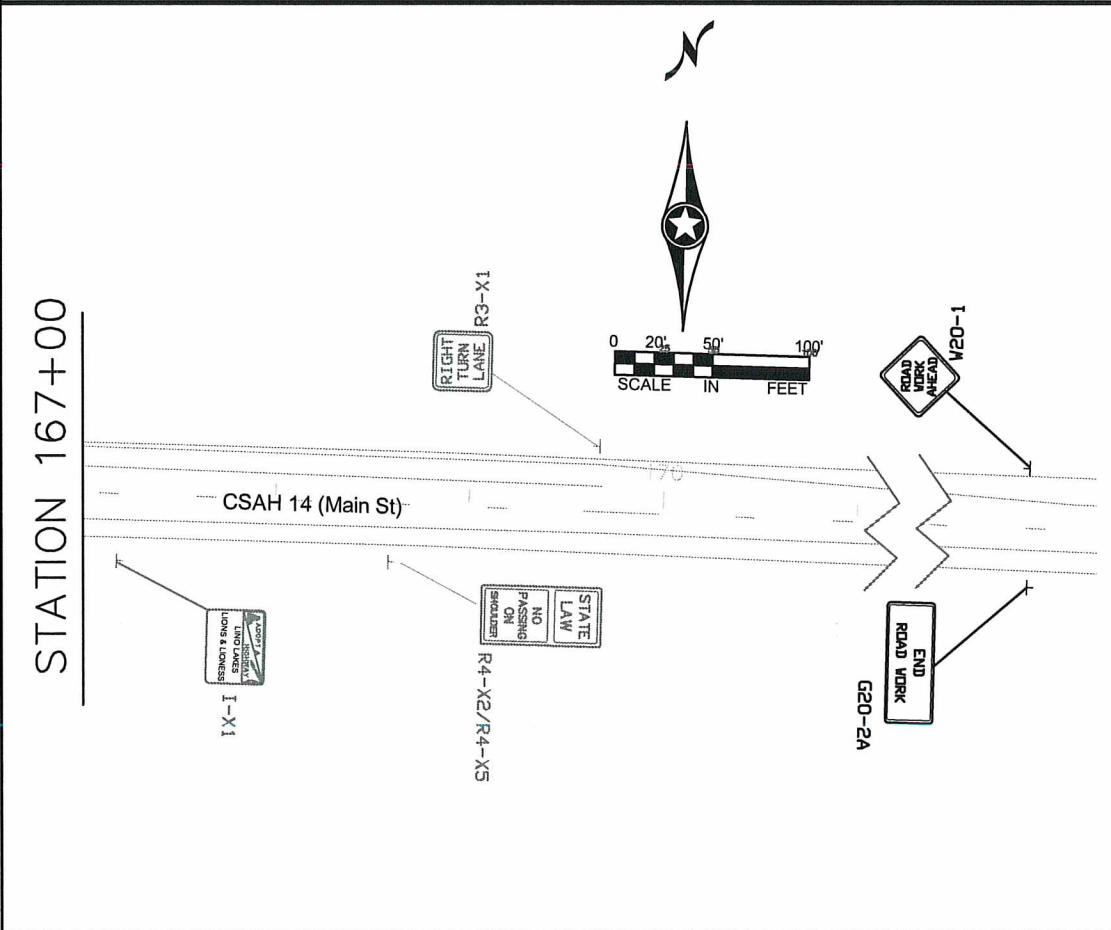
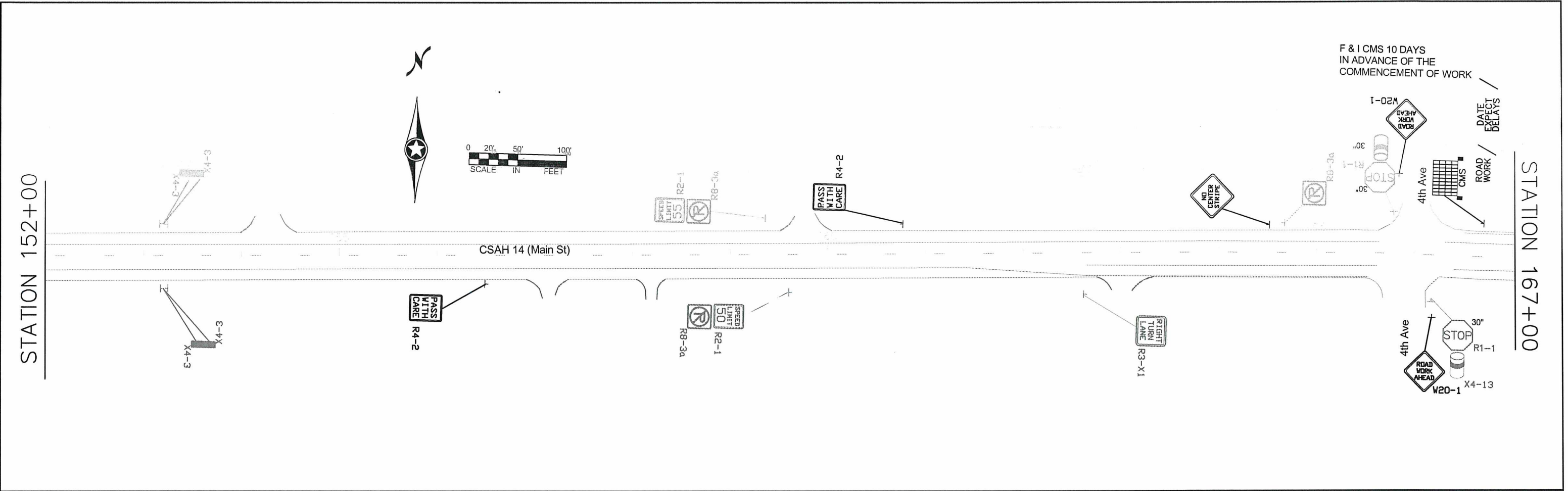
STATE AID PROJECT NO. _____

CITY PROJECT NO. _____

COUNTY PROJECT NO. _____

TRAFFIC CONTROL PLAN

Sheet 23 of 32 Sheets



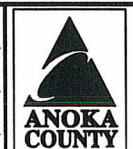
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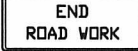








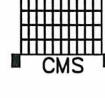
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**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042
 STATE AID PROJECT NO.
 CITY PROJECT NO.
 COUNTY PROJECT NO.

TRAFFIC CONTROL PLAN
 Sheet 24 of 32 Sheets

F TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
R4-1	24" x 30"		2
R4-2	24" x 30"		7
W8-12	48" x 48"		6
G20-2A	48" x 24"		2
W8-1A	48" x 48"		AS NEEDED
W8-1A	48" x 48"		AS NEEDED
W8-8	48" x 48"		AS NEEDED
W8-9	48" x 48"		AS NEEDED
W21-X1	48" x 48"		AS NEEDED
W8-11	48" x 48"		AS NEEDED
W20-1	48" x 48"		AS NEEDED (ESTIMATED 6)
			AS NEEDED
CMS sign to be installed a minimum 10 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".
- LOCATIONS OF ALL PERMANENT STRIPING AND PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL MAINLINE PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- SEE PERMANENT SIGN TABULATIONS FOR ADDITIONAL INFORMATION.
- ALL SEGMENT STRIPE LINES SHALL BE EPOXY. PERMANENT MESSAGES AND ARROWS SHALL BE PREFORMED THERMOPLASTIC.
- ALL SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.

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

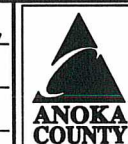
CMS sign to be installed a minimum of ten days prior to actual commencement of road work. Signs to be removed when road work begins.

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NAME: P:002-614-042\Base\Traffic\Traffic Control Plan

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DRAWN BY: TMV DATE 10/09/17
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ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. 002-614-042
 STATE AID PROJECT NO.
 CITY PROJECT NO.
 COUNTY PROJECT NO.

TRAFFIC CONTROL PLAN
 Sheet 25 of 32 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.

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

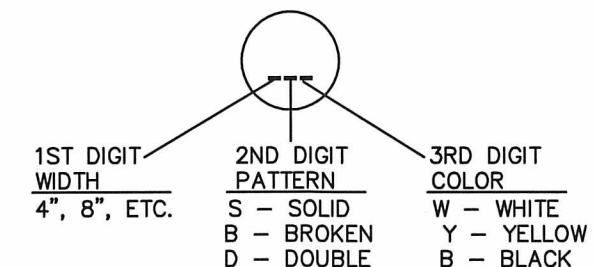
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

STRIPING KEY

○ CIRCLE - EPOXY □ SQUARE PREFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



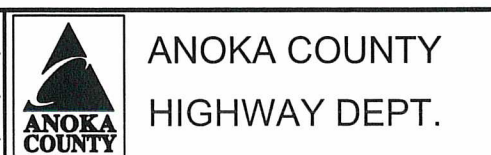
EXAMPLE: (4SW) = 4" SOLID LINE WHITE - EPOXY

G PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	16520
4" BROKEN LINE WHITE - EPOXY PAINT	LIN FT	70
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	152
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	1000

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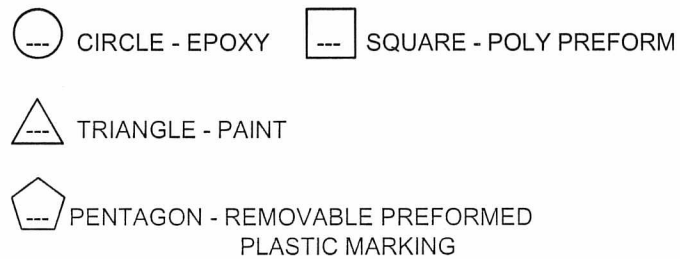
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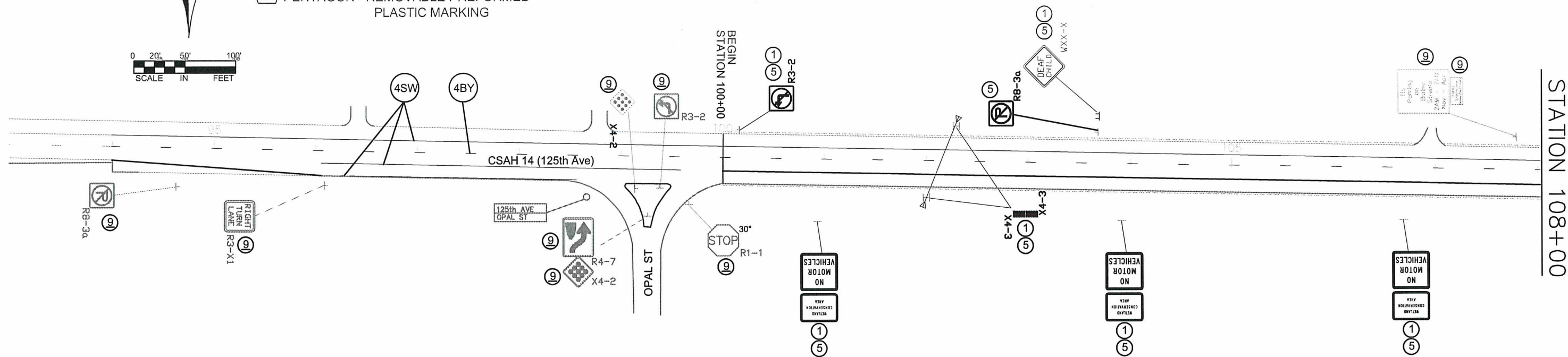
STATE PROJECT NO. 002-614-042
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 COUNTY PROJECT NO. _____

PERMANENT MARKING TABULATION
 Sheet 26 of 32 Sheets

STRIPING KEY

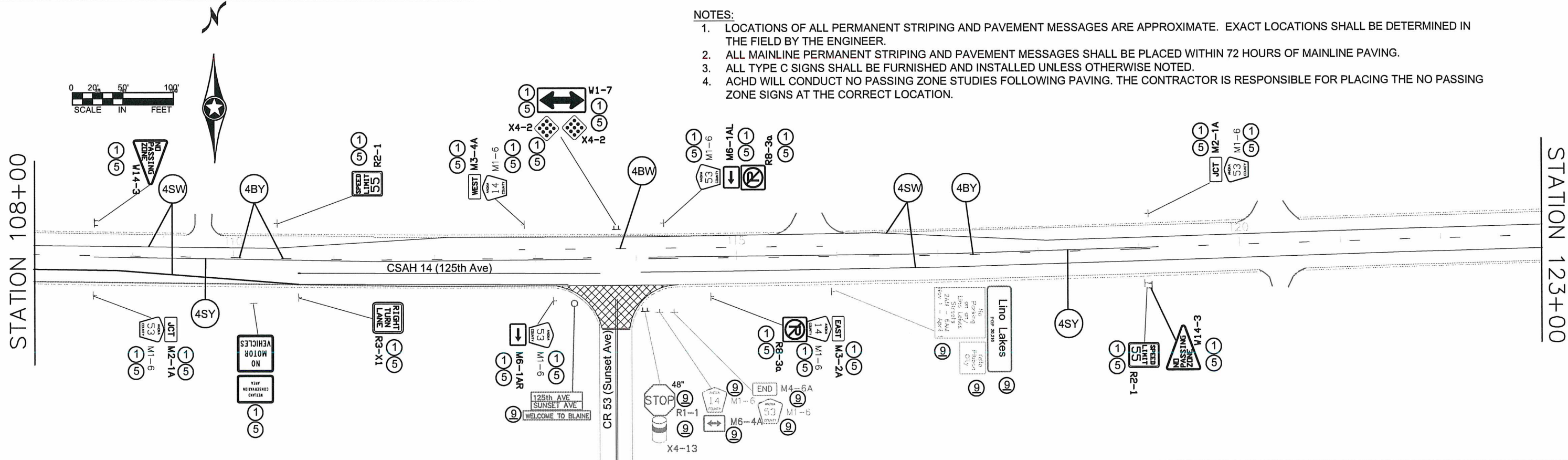


SIGNING NOTES:
 ① FURNISH & INSTALL SIGN PANEL TYPE C
 ⑤ REMOVE SIGN TYPE C
 ⑨ RETAIN INPLACE SIGN



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**ANOKA COUNTY
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PERMANENT SIGNING &
 STRIPING PLAN
 Sheet 27 of 32 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-614-042\Base\Traffic\Perm S & S

STRIPING KEY

-  CIRCLE - EPOXY
-  SQUARE - POLY PREFORM
-  TRIANGLE - PAINT
-  PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

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STATION 123+00

STATION 138+00

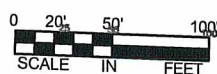


CSAH 14 (Main St)



TRAFFIC NOTES:

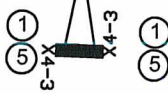
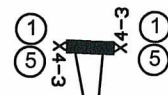
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STATION 138+00

STATION 153+00

CSAH 14 (Main St)



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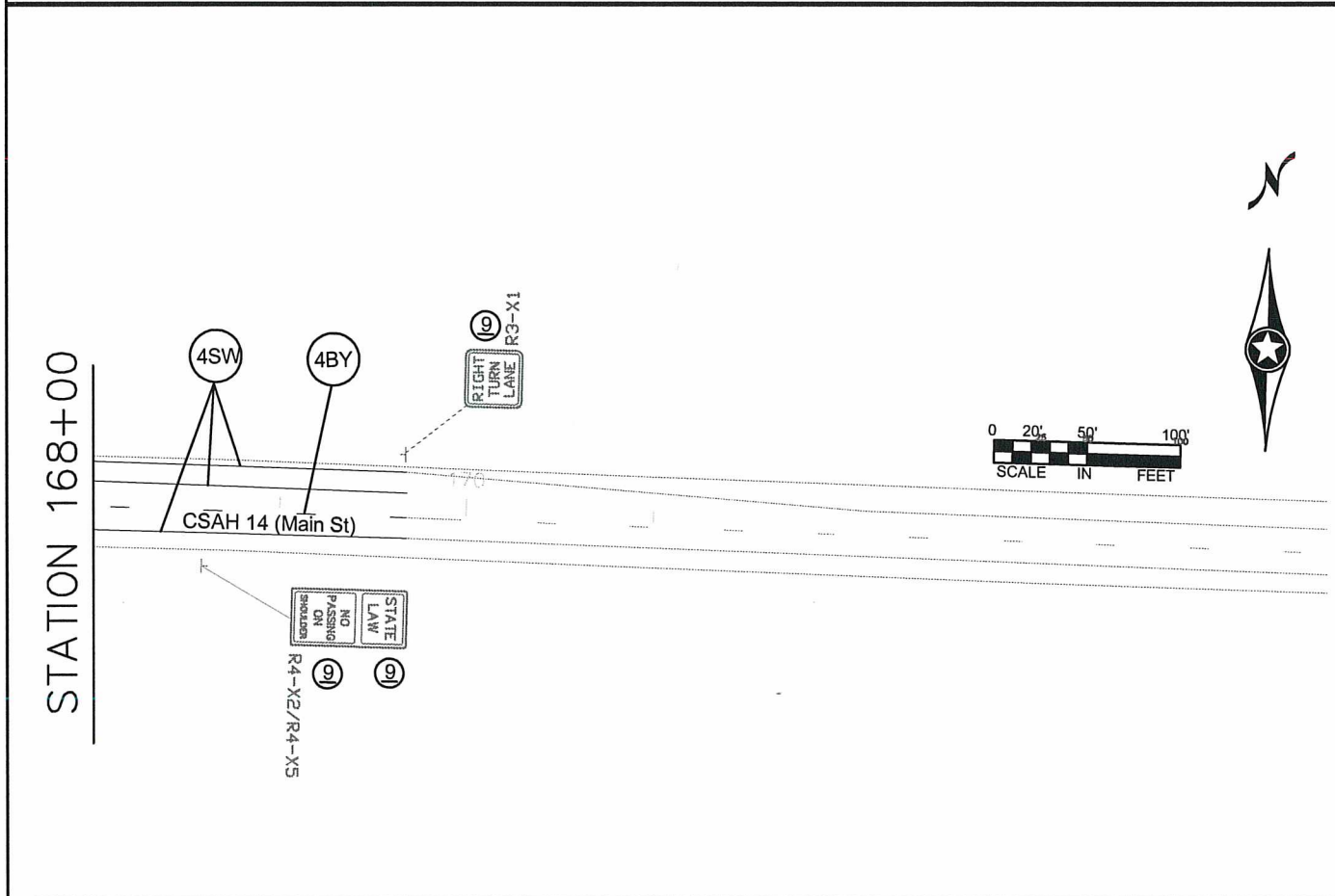
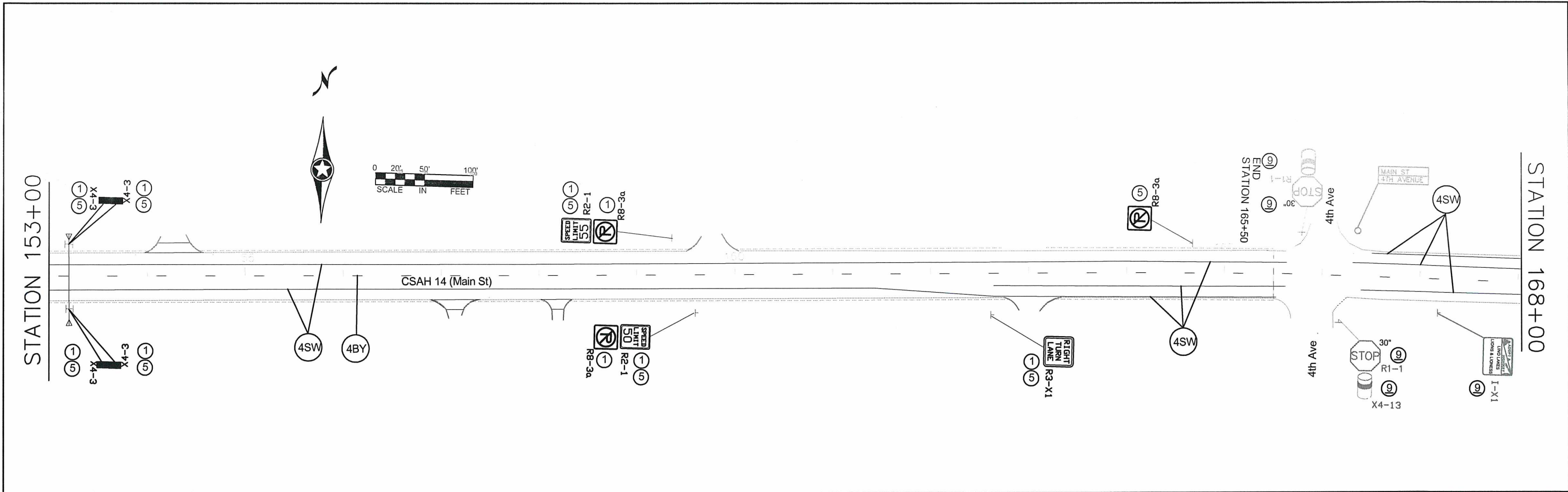
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**ANOKA COUNTY
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PERMANENT SIGNING &
 STRIPING PLAN



STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

SIGNING NOTES:

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- ⑨ RETAIN INPLACE SIGN

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4. ALL TYPE C SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.
5. ACHD WILL CONDUCT NO PASSING ZONE STUDIES FOLLOWING PAVING. THE CONTRACTOR IS RESPONSIBLE FOR PLACING THE NO PASSING ZONE SIGNS AT THE CORRECT LOCATION.

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: DOUGLAS W. FISCHER, P.E.
 SIGNATURE: *[Signature]*
 DATE: 2/28/18 LICENSE NO. 20235

DRAWN BY: TMV DATE 10/09/17
 DESIGN BY: DATE
 CHECKED BY: DATE



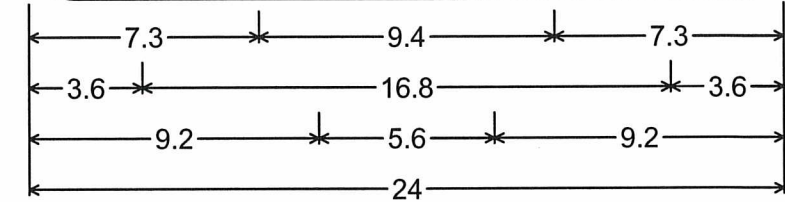
**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE PROJECT NO. 002-614-042
 STATE AID PROJECT NO. _____
 CITY PROJECT NO. _____
 COUNTY PROJECT NO. _____

PERMANENT SIGNING &
 STRIPING PLAN
 Sheet 29 of 32 Sheets

H EXISTING SIGN TAB				
STATION	ADDRESS/ DESCRIPTION (NOTES)	REMOVE SIGN TYPE C	SIGN NUMBER	SIGN LEGEND
		EACH		
100+20	Lt	1	R3-2	NO LEFT TURN
101+00	Rt	1		WETLAND
102+00	Rt	2	X4-3	CULVERT MRKR
102+30	Lt	2	X4-3	CULVERT MRKR
103+70	Lt	1	R8-3a	NO PARKING
103+70	Rt	1	R8-3a	NO PARKING
103+85	Rt	1		WETLAND
106+70	Rt	1		NO VEHICLES
108+60	Lt	1	W14-3	NO PASS ZONE
108+60	RT	1	M2-1A	JCT
			M1-6	53 RTE MRKR
110+00	Rt	1		WETLAND
110+45	Lt	1	R2-1	55 SPD LMT
110+70	Rt	1	R3-X1	RIGHT TURN LN
112+90	Lt	1	M3-4A	WEST
			M1-6	14 RTE MRKR
113+20	Rt	1	M1-6	53 RTE MRKR
			M6-1AR	RT ARROW
113+80	Lt	1	W1-7	DBLE ARROW
			X4-2	9 BUTTON
			X4-2	9 BUTTON
114+30	Lt	1	M1-6	53 RTE MRKR
			M6-1AL	LEFT ARROW
			R8-3a	NO PARKING
114+70	Rt	1	M3-2a	EAST
			M1-6	14 RTE MRKR
			R8-3a	NO PARKING
119+00	Rt	1	R2-1	55 SPD LMT
119+00	Rt	1	W14-3	NO PASS ZONE
			M2-1A	JCT
119+05	Lt	1	M1-6	53 RTE MRKR
			R8-3a	NO PARKING
125+95	Lt	1	R8-3a	NO PARKING
125+95	Rt	1	R8-3a	NO PARKING
140+15	LT	2	X4-3	CULVERT MRKR
140+15	Rt	2	X4-3	CULVERT MRKR
150+00	Lt	1	R8-3a	NO PARKING
150+00	Rt	1	R8-3a	NO PARKING
153+20	Lt	2	X4-3	CULVERT MRKR
153+20	Rt	2	X4-3	CULVERT MRKR
159+40	Lt	1	R2-1	55 SPD LMT
			R8-3a	NO PARKING
159+40	Rt	1	R2-1	50 SPD LMT
			R8-3a	NO PARKING
162+60	Rt	1	R3-X1	RIGHT TURN LN
165+70	Lt	1	R8-3a	NO PARKING
TOTAL		39		

I TYPE C SIGN PANELS							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	PANEL AREA	TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
				SQ. FT.	SQ. FT.		
R2-1	24" x 30"		1	5.00	5.00	1	7.0'
R8-3a	24" x 24"		1	4.00	5.00		
R2-1	24" x 30"		3	5.00	15.00	1	7.0'
R8-3a	24" x 24"		1	4.00	4.00		
R3-7	30" x 30"		2	6.25	12.50	1	7.0'
R3-2	24" x 24"		1	4.00	4.00	1	7.0'
W1-7	48" x 24"		1	8.00	8.00	2	7.0'
X4-2	18" x 18"		2	2.25	4.50		
W14-3	48" x 36"		2	12.00	24.00	2	7.0'
W14-3	36" x 36"		1	9.00	9.00	2	7.0'
M3-2A	24" x 12"		1	2.00	2.00	1	7.0'
M3-4A	24" x 12"		1	2.00	2.00		
M1-6A	24" x 24"		2	4.00	8.00		
R8-3a	24" x 24"		1	4.00	4.00		
M2-1A	21" x 15"		2	2.19	4.38	1	7.0'
M1-6A	24" x 24"		4	4.00	16.00		
M6-1AL	21" x 15"		1	2.19	2.19		
M1-1AR	21" x 15"		1	2.19	2.19		
R8-3a	24" x 24"		1	4.00	4.00		
X4-3	6" x 12"		12	00.50	6.00	1	4.0'
	24" x 18"		4	3.00	12.00	1	7.0'
R5-3	24" X 24"		4	4.00	16.00		
PROJECT TOTAL SQ FT					169.76		



1.5" Radius, 0.4" Border, 0.4" Indent, White on Brown;
[WETLAND] C specified length;
[CONSERVATION] C specified length; [AREA] C;

- 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".
 - LOCATIONS OF ALL PERMANENT STRIPING AND PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ALL MAINLINE PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
 - SEE PERMANENT SIGN TABULATIONS FOR ADDITIONAL INFORMATION.
 - ALL SEGMENT STRIPE LINES SHALL BE EPOXY. PERMANENT MESSAGES AND ARROWS SHALL BE PREFORMED THERMOPLASTIC.
 - ALL SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.
 - SIGN TYPE SPECIAL ARE TO REMAIN VISIBLE AT ALL TIMES. SHALL BE PAID BY THE EACH, WHEN RELOCATION IS REQUIRED.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\002-614-042\Base\Traffic\Perm S & S

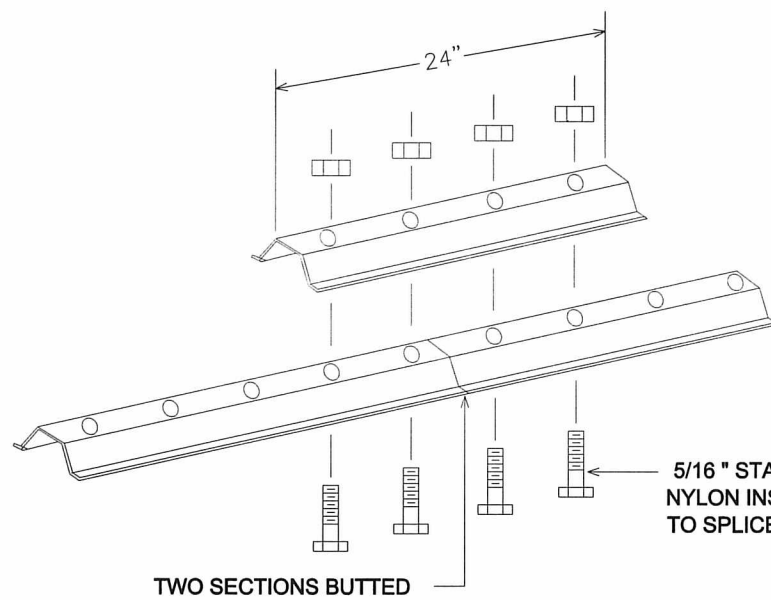
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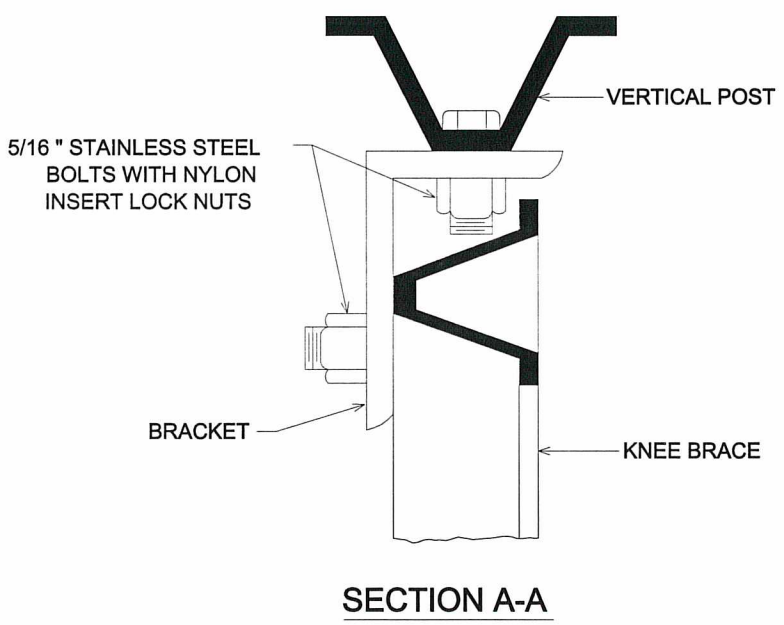
ANOKA COUNTY HIGHWAY DEPT.

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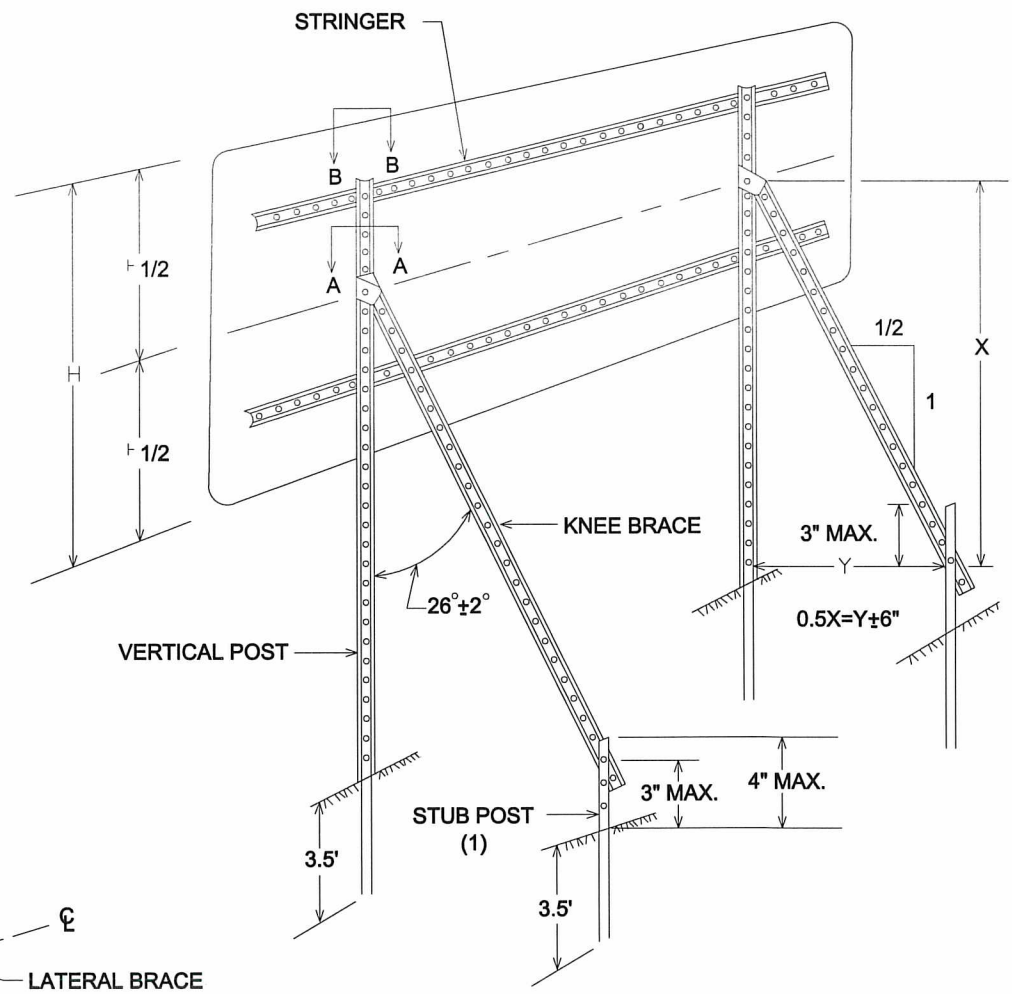
PERMANENT SIGNING & STRIPING PLAN
Sheet 30 of 32 Sheets



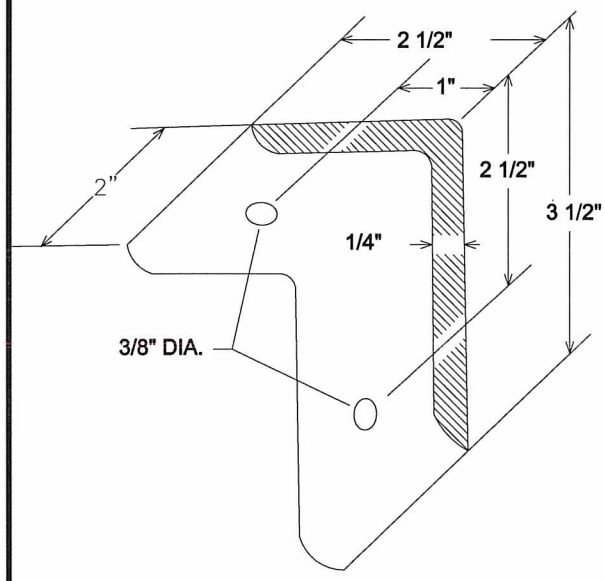
**LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)**



SECTION A-A

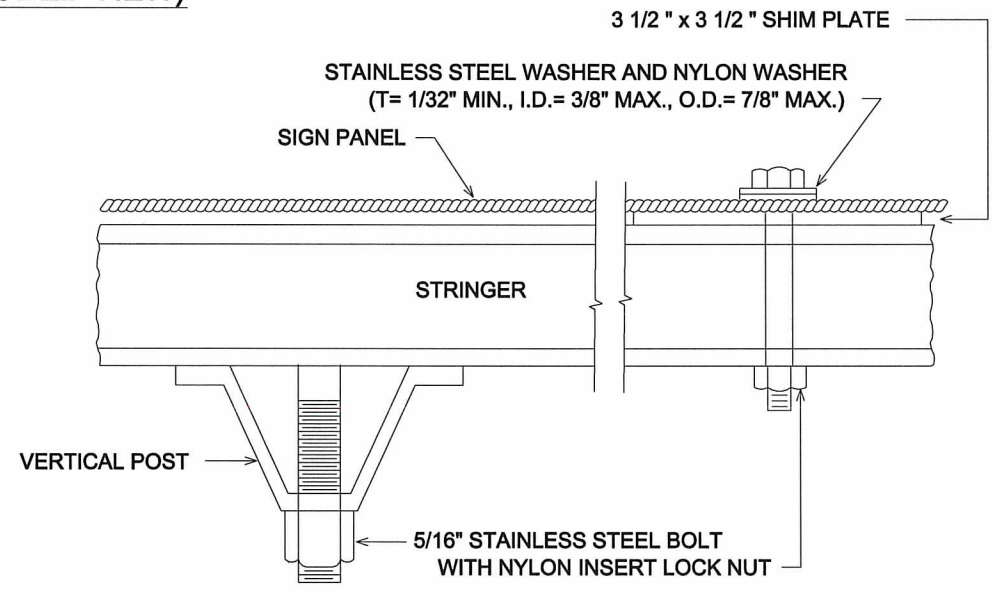


**TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS**

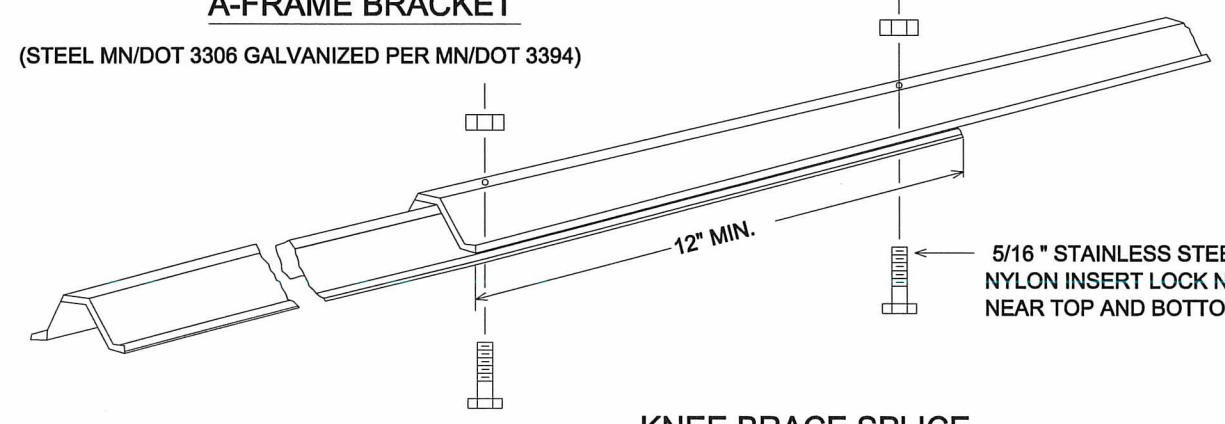


A-FRAME BRACKET

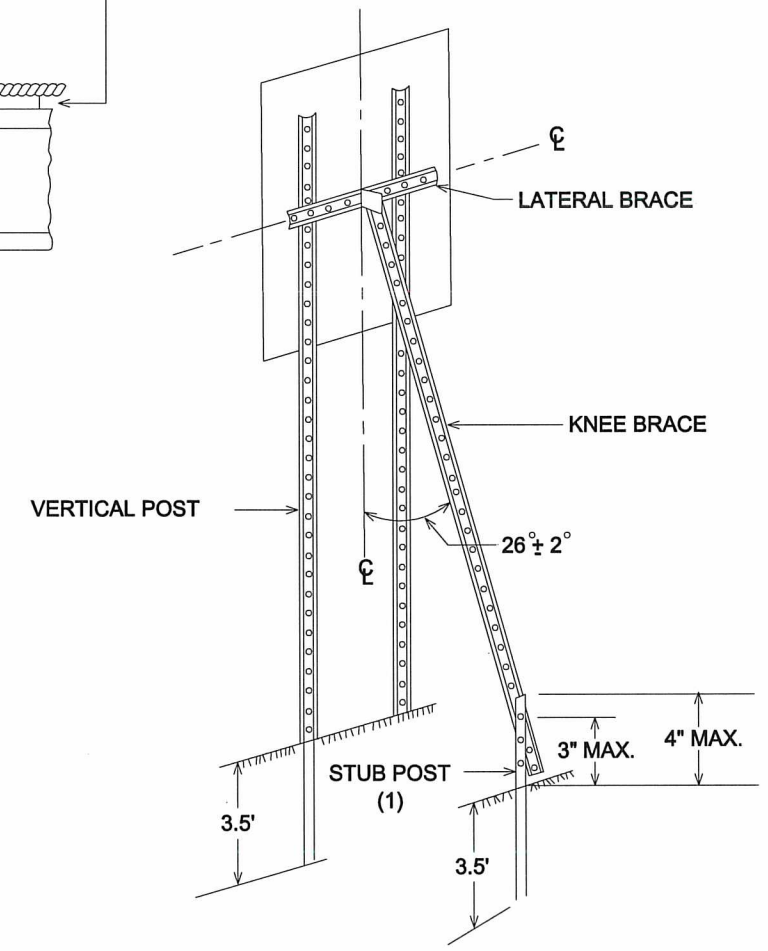
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



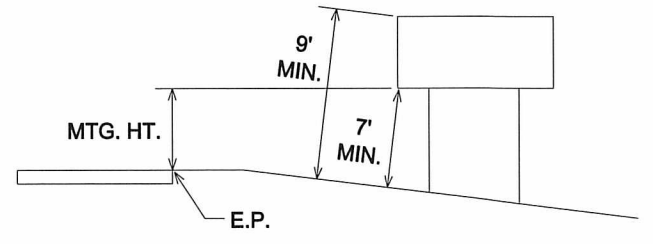
SECTION B-B



KNEE BRACE SPLICE



**TYPICAL "A-FRAME" INSTALLATION
TYPE "C" SIGNS**



TYPICAL MOUNTING

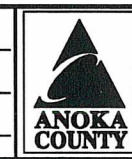
(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST.

**TYPE C & D SIGN
STRUCTURAL DETAILS**

NO	DATE	BY	CKD	APPR	REVISION

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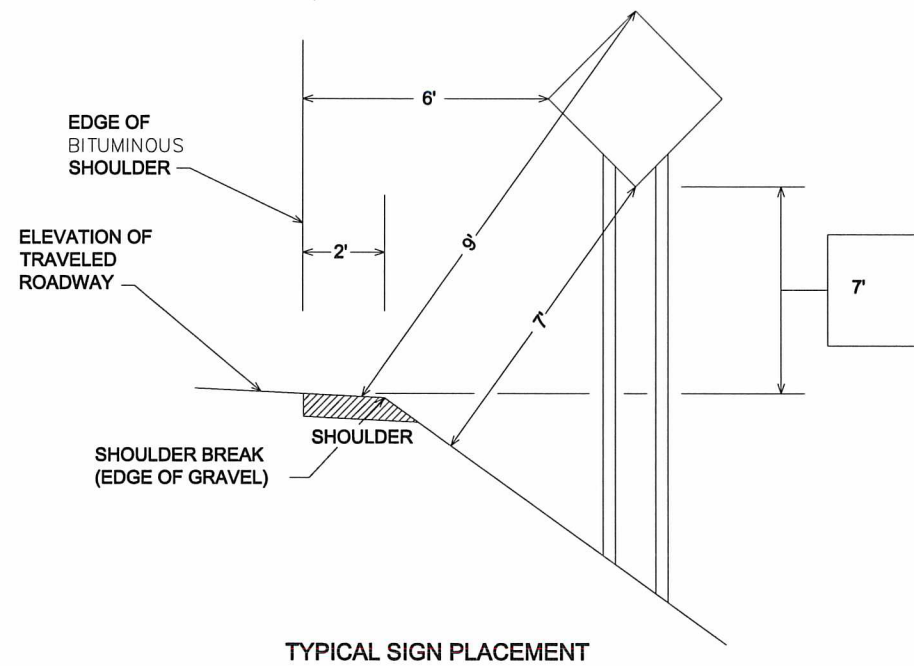


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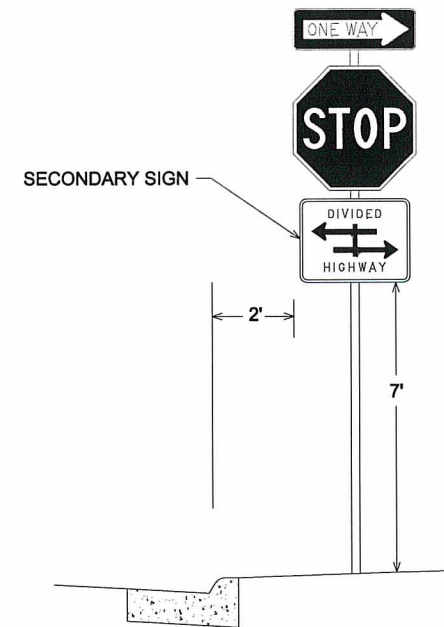
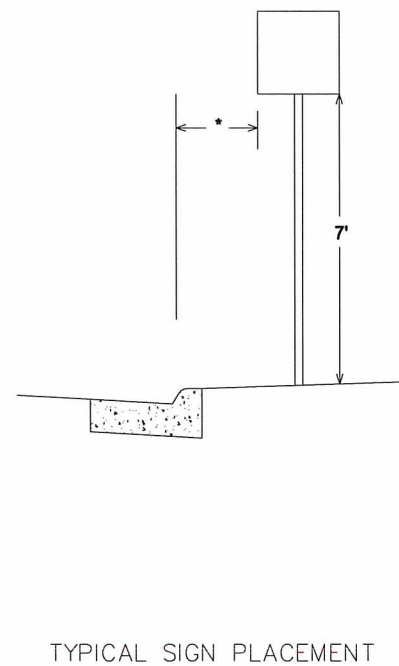
**SIGNING & STRIPING
DETAILS**
 Sheet 31 of 32 Sheets

RURAL



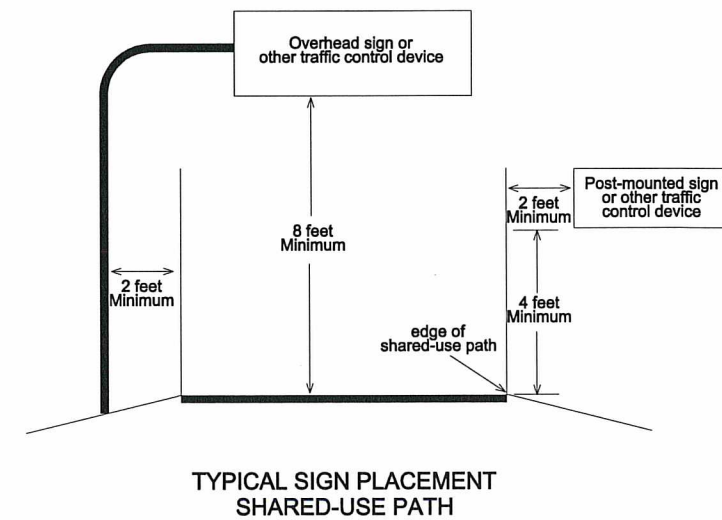
URBAN

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



NOTE:

- ALL DIMENSIONS ARE MINIMUMS
- MAINTAIN 2' CLEAR FROM SIGNS TO BITUMINOUS TRAIL



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Sheet 32 of 32 Sheets