

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

- PLAN _____ 0' 100'
- PROFILE _____ 0' 100'
- HORIZONTAL _____ 0' 10'
- VERTICAL _____ 0' 10'
- X-SECTIONS _____ 0' 10'
- HORIZONTAL _____ 0' 10'
- VERTICAL _____ 0' 3500'
- INDEX MAP _____

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR CONCRETE PAVING, BITUMINOUS PAVING, BITUMINOUS MILLING, BITUMINOUS RECLAIM, RTL / BYPASS CONST.
AGGREGATE SHOULDERING, PORKCHOP ISLAND REMOVAL AND INCIDENTALS

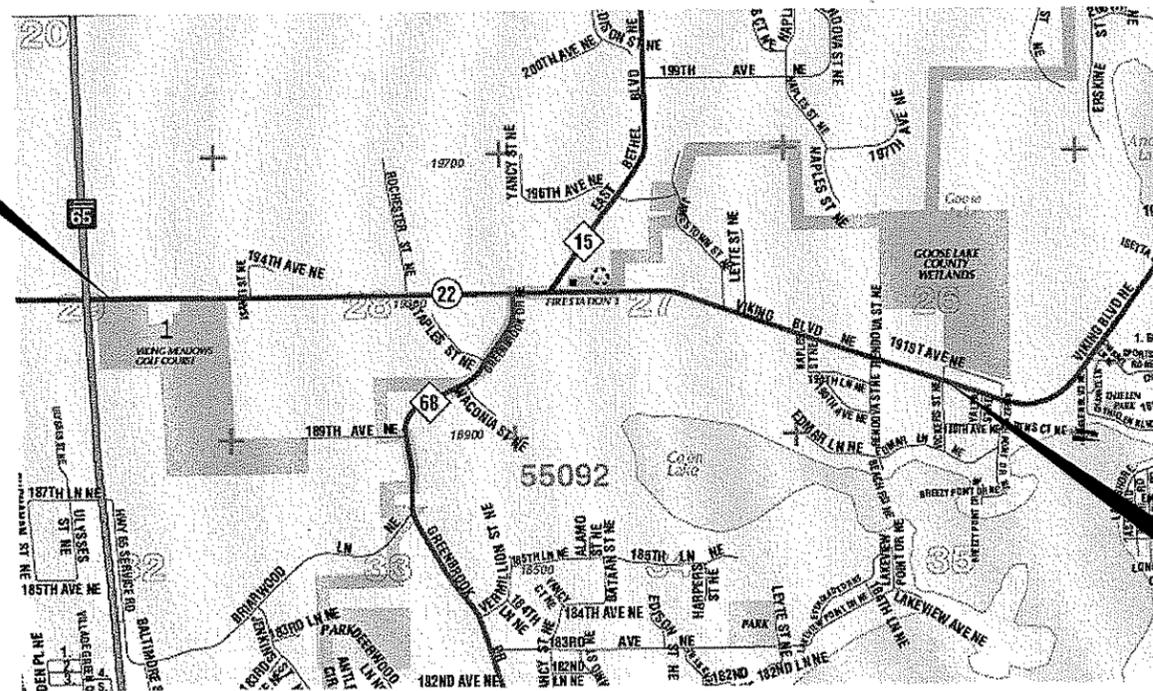
LOCATED ON CSAH 22 BETWEEN 90° E. OF TH HWY 65 AND VICKERS ST

CP 12-14-22

GROSS LENGTH	16106 FEET	3.05 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	16106 FEET	3.05 MILES

CITY OF EAST BETHEL

BEGIN CP-12-14-22
STA. 299+20



END CP-12-14-22
STA. 460+26



PROJECT LOCATION

ANOKA COUNTY
CITY OF EAST BETHEL
MN/DOT TRANSPORTATION DISTRICT - METRO
EAST BETHEL SECTIONS 26, 27, 28, 29
EAST BETHEL TOWNSHIP T33 NORTH
EAST BETHEL RANGE R23 WEST

MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 2005 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."

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THIS PLAN CONTAINS 69 SHEETS

DESIGN DESIGNATION

ESAL 20	952,342
R VALUE	50
ADT (2011) =	6730
Proj. ADT (2032) =	11024
Proj. HCADT (2032) =	650
Soil Factor	NA
<u>10</u> TON DESIGN	

Functional Classification A-MINOR COLLECTOR
 No. of Traffic Lanes 2 No. of Parking Lanes 0
 Design Speed 55 MPH
 Based on Stopping Sight Distance 492'
 Height of eye 3.5' Height of object 2.0'
 Design Speed not achieved at:
 STA. --- TO STA. --- MPH ---

Approved *[Signature]*
ANOKA COUNTY ENGINEER

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: CHARLES M. CADENHEAD JR.
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/12/12
 DESIGN BY: JF DATE: 4/12/12
 CHECKED BY: JD DATE: 5/1/2012



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

TITLE SHEET

Sheet 1 of 69 Sheets

STATEMENT OF ESTIMATED QUANTITIES					
ITEM NO.	ITEM	NOTE	TAB	UNIT	TOTAL EST. QUANT.
2011.601	CONSTRUCTION SURVEYING	6	A	LUMP SUM	1.0
2021.501	MOBILIZATION			LUMP SUM	1.0
2102.502	PAVEMENT MARKING REMOVAL			LIN FT	16106.0
2104.503	REMOVE CONCRETE NOSE	1	B	SQ FT	48.0
2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	2	C	SQ YD	196.1
2104.505	REMOVE BITUMINOUS PAVEMENT	3	D	SQ YD	27.0
2104.511	SAWING CONCRETE PAVEMENT FULL DEPTH	2	E	LIN FT	91.6
2104.513	SAWING BITUMINOUS PAVEMENT FULL DEPTH	3	F	LIN FT	586.0
2104.523	SALVAGE SIGN PANEL TYPE C	22, 23		EACH	28.0
2104.523	SALVAGE SIGN PANEL TYPE D	22, 23		EACH	1.0
2105.602	CONSTRUCT TURN LANE (EA)	4	G	EACH	7.0
2105.602	CONSTRUCT TURN LANE (EA) JAMESTOWN / LEYTE	4, 5	H	EACH	1.0
2105.602	CONSTRUCT BYPASS LANE (EA)	4	I	EACH	7.0
2105.602	CONSTRUCT BYPASS LANE (EA) JAMESTOWN / LEYTE	4, 5	J	EACH	1.0
2112.619	SHOULDER PREPERATION	7	K	ROAD STA	322.0
2211.501	AGGREGATE BASE CLASS 5	8	L	TON	623.0
2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	9	M	CY	1040.6
2221.501	AGGREGATE SHOULDERING CLASS 5	10	N	TON	1030.0
2232.501	MILL BITUMINOUS SURFACE (2")	11	O	SQ YD	45318.3
2301.502	CONCRETE PAVEMENT STANDARD WIDTH 6"	12	P	SQ YD	42736.0
2301.511	STRUCTURAL CONCRETE	12	Q	CU YD	7123.0
2331.604	BITUMINOUS PAVEMENT RECLAMATION	13	R	SQ YD	34688.9
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	14	S	GALLON	720.7
2360.501	TYPE SP12.5 WEARING COURSE MIX (4 , B)	17	V	TON	472.3
2360.501	TYPE SP 12.5 WEAR COURSE MIX (4 , E)	15, 31	T	TON	5625.0
2360.502	TYPE SP 12.5 NON-WEAR COURSE MIX (4 , B)	16	U	TON	2241.1
2501.511	24"RC PIPE CULVERT CLASS V	30		LIN FT	8.0
2501.511	36" RC PIPE CULVERT CLASS V	30		LIN FT	8.0
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	18	W	SQ YD	196.1
2540.602	INSTALL MAIL BOX SUPPORT	19	X	EACH	66.0
2540.602	RELOCATE MAILBOX	20	Y	EACH	66.0
2563.601	TRAFFIC CONTROL	21		LUMP SUM	1.0
2564.531	SIGN PANEL TYPE C	23		SQ FT	71.0
2564.536	INSTALL SIGN PANEL TYPE C	23		EACH	23.0
2564.536	INSTALL SIGN PANEL TYPE D	23		EACH	1.0
2565.602	NMC LOOP DETECTOR 6' X 6'	24		EACH	1.0
2573.550	EROSION CONTROL SUPERVISOR	25		LUMP SUM	1.0
2573.602	CULVERT PROTECTION	26	Z	EACH	9.0
2575.523	EROSION CONTROL BLANKET CATEGORY 3	29	AA	SQ YD	8026.8
2582.502	4" SOLID WHITE LINE-EPOXY	27		LIN FT	35400.0
2582.502	4" BROKEN LINE WHITE-EPOXY	27		LIN FT	360.0
2582.502	4" SOLID LINE YELLOW - EPOXY	27		LIN FT	7998.0
2582.502	4" BROKEN LINE YELLOW-EPOXY	27		LIN FT	2940.0
2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	27		LIN FT	1385.0
2582.602	FORMED 4" GROOVE FOR EPOXY TRAFFIC ITEMS	28		LIN FT	69714.0
2582.602	PAVT MSSG (RT ARROW) PREF THERMOPLASTIC	27		EACH	1.0

INDEX OF TABULATION CHARTS		
TAB.	DESCRIPTION	PAGE NO.
A	CONSTRUCTION SURVEYING	3
B	REMOVE CONCRETE NOSE	3
C	REMOVE CONCRETE DRIVEWAY PAVEMENT	3
D	REMOVE BITUMINOUS PAVEMENT	3
E	SAWING CONCRETE PAVEMENT FULL DEPTH	3
F	SAWING BITUMINOUS PAVEMENT FULL DEPTH	3
G	CONSTRUCT TURN LANE (EACH)	3
H	CONSTRUCT TURN LANE (EA) JAMESTOWN / LEYTE	3
I	CONSTRUCT BYPASS LANE (EACH)	3
J	CONSTRUCT BYPASS LANE (EA) JAMESTOWN / LEYTE	3
K	SHOULDER PREPERATION	3
L	AGGREGATE BASE CLASS 5 (DR. WAYS)	3
M	AGGREGATE BASE CLASS 5 (P) (LEVELING)	3
N	AGGREGATE SHOULDERING CLASS 5	4
O	MILL BITUMINOUS SURFACE (2")	4
P	CONCRETE PAVEMENT STANDARD WIDTH 6"	4
Q	STRUCTURAL CONCRETE (MX)	4
R	BITUMINOUS PAVEMENT RECLAMATION	4
S	BITUMINOUS MATERIAL FOR TACK COAT	4
T	TYPE SP 12.5 WEAR COURSE MIX (SPWEB440 E)	4
U	TYPE SP 12.5 NON-WEAR COURSE MIX (SPNWB440B)	4
V	TYPE SP12.5 WEARING COURSE MIX (SPWEB440 B)	4
W	6" CONCRETE DRIVEWAY PAVEMENT	4
X	INSTALL MAIL BOX SUPPORT	5
Y	RELOCATE MAILBOX	5
Z	CULVERT PROTECTION	5
AA	EROSION CONTROL BLANKET CAT. 3	5

- NOTES**
- PORKCHOP ISLAND TO BE REMOVED AT CR 15, NOT TO BE RE-CONSTRUCTED.
 - CONCRETE DR. WAYS TO BE SAW CUT / REMOVED AT JOINT, LOCATION DETERMINED BY ENGINEER.
 - BITUMINOUS DR. WAYS TO BE SAW CUT / BITUMINOUS REMOVED, LOCATION DETERMINED BY ENGINEER.
 - INCLUDES TIME AND MATERIALS TO CONSTRUCT. - SELECT GRANULAR, AGG. BASE CL-5, SILT FENCE AND RAPID STABILIZATION TYPE 3 INCLUDING(SEED TYPE 250 @ A RATE OF 70LBS PER ACRE AND FERTILIZER TYPE 3 @ A RATE OF 350LBS PER ACRE.) EST. CALCS CAN BE FOUND IN PLAN DETAILS. - NOTE - BITUMINOUS FOR RTL / BYPASS IS INCLUDED IN MAIN SEQ.
 - RTL / BYPASS FOR JAMESTOWN / LEYTE ST OVERLAP LEB - LWB , THEIR LENGTHS ARE COMBINED FOR ESTIMATED QUANTITIES
 - CONSTRUCTION SURVEYING. CONTRACTOR / SUB. RESPONSIBLE FOR ALL CONSTRUCTION STAKING REQUIRED FOR PROJECT, INCLUDING BUT NOT LIMITED TO SILT FENCE, MILLING PROFILE STAKING, CONCRETE PAVING PROFILE STAKING, RTL / BYPASS STAKING, NEW RAD. FOR CR 15. (PROPOSED VERTICAL / HORIZONTAL CONTROL AND NEW RAD PNT'S CAN BE FOUND IN THIS PLAN.)
 - FOR SHAPING OF BITUMINOUS SHOULDERS, PRIOR TO GRAVEL PLACEMENT.
 - CL 5 GRAVEL TO BE ADDED TO GRAVEL DR. WAYS. ALSO BIT AND CONC. DR. WAYS PRIOR TO REPAVING FOR ADJUSTING TO NEW GRADE.
 - 2" CLASS 5 BASE ADDED TO 8' SHLDR. FOR LEVELING PRIOR TO PAVING SHOULDER. (P)
 - MATERIAL FOR FINISH 1.5' GRVL. SHLDR.
 - MILL EXISTING MAINLINE. CONTRACTOR SHALL USE MILLING MACHINE WITH MINIMUM CAPACITY OF 12' PER PASS. MAINLINE AND 4' ON BITUMINOUS STREET APPROACHES. SHALL INCLUDE VARIABLE DEPTH FOR VERTICAL TRANSITION AT END OF PROJECT.
 - CONCRETE JOINTS SHALL BE SEALED. CONCRETE SEALER MNDOT SPEC. 3725 HOT POUR. SEALER INCIDENTAL TO CONCRETE PAVEMENT.
 - FULL DEPTH RECLAIM EXISTING BITUMINOUS SHOULDERS AND EXISTING (2)RIGHT TURN LANES. WORK TO BE COMPLETED AFTER CONC. MAINLINE PAVING.
 - TACK COAT IS TO BE APPLIED TO BIT STREET APPROACHES ON EXISTING BIT SURFACE AND IN BETWEEN WEAR / NON-WEAR COURSES.
 - 3" BITUMINOUS WEAR MAINLINE SHOULDER, RTL'S AND BYPASSES. INCLUDES EXISTING ST. APPROACH OVERLAYS.
 - 3" BITUMINOUS NON-WEAR BASE RTL'S AND BYPASSES.
 - VARIABLE DEPTH TRANSITION FROM 3" SHLDR. / RTL / BYPASS TO 2" AT SAWCUT / JOINT. (CAULCULATION BASED ON 3")
 - REMOVE CONCRETE DRIVEWAYS / REPLACE CONCRETE DRMEWAYS WITH 6" CONCRETE DRIVEWAY PAVEMENT.
 - MAILBOXES TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION. MAILBOX MATERIALS INCIDENTAL TO INSTALLATION.
 - MAILBOXES TO BE TEMP. RELOCATED FROM SHLDR OF ROAD TO MULTPLE COMBINED LOCATIONS ON SIDE STREETS. CONTRACTOR TO CORRDIANATE WITH POST OFFICE AND NOTIFY HOMEOWNERS OF TEMP LOCATIONS.
 - THE CONTRACTOR IS REQUIRED TO COORDINATE WITH EAST BETHEL FIRE DEPT. RE: EMERGENCY VEHICAL ASSESSIBILITY AT THE FIRE STATION. ALL TRAFFIC CONTROL METHODS SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE AND BUMP/BUMP AHEAD SIGNS TO BE INPLACE DURING CONSTRUCTION.
 - SALVAGED SIGNS , REMOVING SIGNS IN PORKCHOP ISLAND AT CR 15 AND REMOVING SIGNS IN RTL / BYPASS CONST. SIGNS THAT ARE NOT BEING REINSTALLED ARE TO BE DELIVERED TO ANOKA COUNTY HWY DEPT, 1440 BUNKER LK BLVD, ANDOVER.
 - SEE SALVAGE AND RE-INSTALL PERMANENT SIGNS QTY'S ON TRAFFIC CONTROL LAYOUT.
 - " ADVANCE LOOP D4 - 1 " MAINLINE LWB CSAH 22 WILL NEED TO BE DISCONNECTED AND A NEW LOOP INSTALLED IN CONCRETE OVERLAY. CONTRACTOR REQUIRED TO CONTACT MNDOT AND FOLLOW MNDOT'S PROTOCOL FOR SERVICING / REPLACING ADVANCE LOOP.
 - EROSION PREVENTION AND SEDIMENT CONTROL BMP'S TO BE INSTALLED , INSPECTED AND MAINTAINED THROUGHT CONSTRUCTION.
 - INSTALL AT CULVERT LOCATIONS AT END OF RTL / BYPASS WIDENING AREAS WHERE SILT FENCE DOESNT TIE INTO INSLOPE. INSTALATION TO CONTAIN ANY SILT FROM LEAVING CONSTRUCTION AFFECTED AREAS.
 - CEMENT CONCRETE SURFACES SHALL BE SANDBLASTED CLEAN TO REMOVE ANY SURFACE TREATMENTS AND / OR LAITANCE. THIS SHALL BE CONSIDERD INCIDENTAL TO THE PAINT ITEMS. STIPING ITEMS CAN BE FOUND IN THE PERM. PAVEMENT MARKING PLAN. PERMANENT MARKINGS TO BE INPLACE WITHIN 72 HRS OF FINAL CONCRETE PAVING.
 - THE CONTRACTOR HAS THE OPTION OF GRINDING THE CONCRETE OR FORMING A GROVE DURING THE FINISHING OPERATIONS FOR THE STRIPING.
 - EROSION CONTROL BLANKET FOR STEEP / HIGH EROSION AREAS DISTURBED IN RTL / BYPASS AREAS. PLACEMENT AT THE DISCRETION OF THE ENGINEER.
 - REMOVE EXISTING CROSS PIPE APRON IN RTL / BYPASS WIDENING AREA, STA 372+80 AND STA 456+75 . INSTALL / EXTEND PIPE 8' , RE-INSTALL EX-APRON TO ALLOW FOR A 4 : 1 SLOPE TO TOP OF PIPE. REMOVAL AND PLACEMENT OF PIPE APRON IS INCIDENTAL TO ITEM.
 - ITEM INCLUDES CONSTRUCTION OF SAFETY EDGE, REFER TO SPECIAL PROVISIONS.

BASIS OF PLANNED QUANTITIES		
2105.602	CONSTRUCT TURN LANE	SEE PLAN DETAILS FOR CALCS
2105.602	CONSTRUCT BY-PASS LANE	SEE PLAN DETAILS FOR CALCS
2211.501	AGGREGATE BASE CLASS 5 (ENTRANCES)	CU YDS * 1.8 = TONS
2221.503	AGGREGATE BASE CLASS 5 (P)	CU YDS
2221.503	AGGREGATE SHOULDERING CLASS 5	CU YDS * 1.8 = TONS
2301.502	CONCRETE PAVEMENT, STANTARD WIDTH 6.0"	SQ YD
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	.05 GAL / SQ YD
2360.501	TYPE SP 12.5 WEARING COURSE (SPWEB440 E)	115 LBS*SQYD*IN THICKNESS/2000=TONS
2360.502	TYPE SP 12.5 NON WEARING COURSE (SPNWB430 B)	115 LBS*SQYD*IN THICKNESS/2000=TONS
2360.505	TYPE SP 12.5 WEARING COURSE (SPWEB440 B)	115 LBS*SQYD*IN THICKNESS/2000=TONS

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\11 ALL CONCBASE\PROPOSED\2_SEQ.dgn 04/10/2012 1:09:26 PM

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: CHARLES M. CAHENHEAD JR

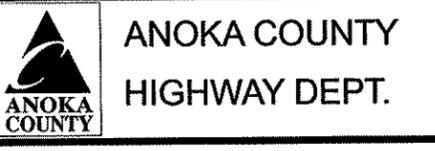
SIGNATURE: *[Signature]*

DATE: 4/12/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012

DESIGN BY: JF DATE: 4/1/2012

CHECKED BY: JO DATE: 5/1/2012



COUNTY PROJECT NO. CP 12-14-22

A CONSTRUCTION SURVEYING		
WORKING DAYS	HR/DAY	HRS
30	8	240.0

B REMOVE CONCRETE NOSE		
CR 15 PORKCHOP	46.0	SQ FT

C REMOVE CONC. DR.WAY PAVEMENT				
ADDRESS	STA	LOC	SQ FT	SQ YD
1878	327+00	RT	184.7	20.5
GAR. DOOR	353+00	RT	453.9	50.4
2817	392+00	LT	655.5	72.8
2913	398+00	LT	255.6	28.4
3605	446+00	LT	215.8	24.0
TOTAL SQ YDS			196.1	

D REMOVE BITUMINOUS PAVEMENT				
ADDRESS	STA	LOC		SQ YD
CR 15	387+00	LT		27.0
TOTAL SQ YDS				27.0

E SAW CONC. DR.WAY PAVEMENT				
ADDRESS	STA	LOC	LIN FT	
1878	327+00	RT	10.6	
GR. DR	353+00	RT	18.0	
2817	392+00	LT	36.5	
2913	398+00	LT	14.3	
3605	446+00	LT	12.2	
TOTAL LIN FT			91.6	

F SAW BITUMINOUS PAVEMENT				
ADDRESS	STA	LOC	LIN FT	
SAARELA INS	306+50	LT	11.9	
CHURCH	308+50	RT	26.3	
CHURCH	311+00	RT	25.3	
CHURCH	313+00	RT	23.2	
CHURCH	314+25	RT	8.7	
VIKING GOLF	323+00	RT	29.3	
WILLIAMS CT	323+00	LT	24.5	
BODY SHOP	325+75	LT	24.9	
GORDYS	330+00	LT	29.1	
1911	330+50	LT	12.3	
2085	343+25	LT	10.5	
2353	360+75	LT	16.9	
2385	361+50	LT	15.1	
2419	365+50	LT	21.1	
2670	383+00	RT	16.2	
FIRE DEPT	388+00	LT	59.4	
RECYCNTR	390+00	LT	67.5	
2929	399+75	LT	17.1	
FE	401+00	LT	13.2	
3158	416+00	RT	20.6	
3211	417+25	LT	15.5	
BECKS	423+50	LT	32.6	
3301	425+25	LT	22.2	
3450	437+00	RT	10.1	
3530	442+50	RT	12.0	
3608	447+75	RT	10.3	
3634	448+50	RT	10.2	
TOTAL LIN FT			586.0	

G CONSTRUCT TURN LANE - EACH			
ITEMS INCLUDED	QTY	UNIT	
SELECT GRANULAR	539.1	TON	
AGG BASE CLASS 5	122.0	TON	
SILT FENCE MACHINE SLICED	480.0	LIN FT	
RAPID STABIL. METH. 3	960.0	SQ YD	

H CONST RTL - JAMESTOWN/LEYTE			
ITEMS INCLUDED	QTY	UNIT	
SELECT GRANULAR	1016.5	TON	
AGG BASE CLASS 5	229.0	TON	
SILT FENCE MACHINE SLICED	905.0	LIN FT	
RAPID STABIL. METH. 3	1810.0	SQ YD	

I CONSTRUCT BYPASS LANE - EACH			
ITEMS INCLUDED	QTY	UNIT	
SELECT GRANULAR	696.4	TON	
AGG BASE CLASS 5	157.0	TON	
SILT FENCE MACHINE SLICED	620.0	LIN FT	
RAPID STABIL. METH. 3	1240.0	SQ YD	

J CONST. BP LANE JAMESTOWN/LEYTE			
ITEMS INCLUDED	QTY	UNIT	
SELECT GRANULAR	1173.7	TON	
AGG BASE CLASS 5	265.0	TON	
SILT FENCE MACHINE SLICED	1045.0	LIN FT	
RAPID STABIL. METH. 3	2090.0	SQ YD	

K SHLDR PREPERATION		
MAINLINE	STATION TO STATION	LIN FT
LEB	300+00 - 460+26	16106.0
LWB	300+00 - 460+26	16106.0
TOTAL LIN FT		32212.0
ROAD STA.		322.0

L AGGREGATE BASE CLASS 5 (DR)				
	AGG DR WAYS	STA	LOC.	TON
	FE	300+35	RT	7.0
	LANDSCAPE	305+75	LT	10.0
	FE	307+00	RT	7.0
	1543	307+30	LT	7.0
	1555	309+30	LT	10.0
	1623	311+80	LT	7.0
	1655	313+25	LT	7.0
	FE	315+25	RT	7.0
	1655	315+50	LT	7.0
	1918	330+50	RT	7.0
	1923	332+80	LT	7.0
	2010	338+00	RT	7.0
	2042	340+00	RT	7.0
	2104	343+25	RT	7.0
	2152	348+50	RT	7.0
	FE	349+80	LT	7.0
	2206	350+75	RT	7.0
	CEDER STEP	352+00	RT	7.0
	2219	352+50	LT	7.0
	2251	352+75	LT	7.0
	2246	353+50	RT	7.0
	FE	355+00	LT	7.0
	2403	363+25	LT	7.0
	2403	365+00	LT	7.0
	FE	366+00	RT	7.0
	FE	367+80	LT	7.0
	2486	368+50	RT	7.0
	2522	372+25	RT	7.0
	2736	383+50	RT	7.0
	2740	386+80	RT	7.0
	2810	390+50	RT	7.0
	2820	392+25	RT	7.0
	2849	394+50	LT	7.0
	2903	395+25	LT	7.0
	2903	396+25	LT	7.0
	FE	400+75	RT	7.0
	2949	401+50	LT	10.0
	3014	404+00	RT	7.0
	3120	407+25	RT	7.0
	3140	413+25	RT	10.0
	3152	414+00	LT	7.0
	3152	414+50	LT	7.0
	FE	419+00	RT	7.0
	FE	422+25	RT	7.0
	3304	425+75	RT	7.0

	FE	430+00	LT	7.0
	3356	430+25	RT	7.0
	3502	439+25	RT	7.0
	3518	441+00	RT	7.0
	3551	442+50	LT	7.0
	3660	450+00	RT	7.0
	3665	450+00	LT	7.0
	3700	453+25	RT	7.0
	3719	454+50	LT	7.0
BIT DR WAYS				
	SAARELA INS	306+50	LT	7.0
	CHURCH	308+50	RT	7.0
	CHURCH	311+00	RT	7.0
	CHURCH	313+00	RT	7.0
	CHURCH	314+25	RT	7.0
	VIKING GOLF	323+00	RT	7.0
	WILLIAMS CT	323+00	LT	7.0
	BODY SHOP	325+75	LT	7.0
	GORDYS	330+00	LT	7.0
	1911	330+50	LT	7.0
	2085	343+25	LT	7.0
	2353	360+75	LT	7.0
	2385	361+50	LT	7.0
	2419	365+50	LT	7.0
	2670	383+00	RT	7.0
	FIRE DEPT	388+00	LT	10.0
	RCYLE CNTR	390+00	LT	10.0
	2929	399+75	LT	7.0
	FE	401+00	LT	7.0
	3158	416+00	RT	7.0
	3211	417+25	LT	7.0
	BECKS	423+50	LT	7.0
	3301	425+25	LT	7.0
	3450	437+00	RT	7.0
	3530	442+50	RT	7.0
	3608	447+75	RT	7.0
	3634	448+50	RT	7.0
CONCRETE DR WAYS				
	1878	327+00	RT	7.0
	GAR. DOOR	353+00	RT	10.0
	2817	392+00	LT	7.0
	2913	398+00	LT	7.0
	3605	446+00	LT	7.0
TOTAL TONS			623.0	

M AGGREGATE BASE CLASS 5 (ML)			
MICROSTATION			
SQ FT	DEPTH (FT)	CU FT	CU YD
165276.6	0.17	28097.022	1040.6

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:112-01-00ICSAH_22 (RR-Vickers)1 ALL CONCBase1PROPOSED3_MISC TABS04/02/2012 1:09:59 PM

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: CHARLES M. CADENHEAD JR

SIGNATURE: *[Signature]*

DATE: *[Date]* LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012

DESIGN BY: JF DATE: 4/1/2012

CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

PROJECT TABULATIONS

Sheet 3 of 69 Sheets

N AGGREGATE SHOULDERING CLASS 5 (P)						
ML	STATION	STATION	L (FT)	W (FT)	4" D (FT)	CU YD
LEB	299+20	460+26	16106.0	1.5	0.33	295.3
LWB	299+20	460+26	16106.0	1.5	0.33	295.3
SUBTOTAL (CU YD)						590.6
SUBTRACT STREET OPENINGS						
N	ISANTI ST		100.0	1.5	0.33	1.8
N	ROCHESTER ST		100.0	1.5	0.33	1.8
S	CR 68		100.0	1.5	0.33	1.8
N	CR 15		100.0	1.5	0.33	1.8
N	JAMESTOWN ST		100.0	1.5	0.33	1.8
N	LEYTE ST		100.0	1.5	0.33	1.8
S	NAPLES ST		100.0	1.5	0.33	1.8
S	RENDOVA ST		100.0	1.5	0.33	1.8
S	VICKERS ST		100.0	1.5	0.33	1.8
N	VICKERS ST		100.0	1.5	0.33	1.8
SUBTRACT(CU YD)						18.3
TOTAL CU YD						572.2
TOTAL TONS						1030.0

O MILL BITUMINOUS SURFACE 2"				
LOC	L	W	SQ YDS	
MAINLINE	15626.0	26.0	45141.8	
300+00			20.0	
460+26			18.0	
BIT STREETS				
ISANTI ST			10.9	
ROCHESTER ST			13.6	
CR 68			16.9	
CR 15			26.7	
ST			16.6	
LEYTE ST			10.7	
NAPLES ST			10.3	
RENDOVA ST			11.2	
VICKERS ST			10.8	
VICKERS ST			10.8	
TOTAL SQ YDS			45318.3	

P CONCRETE PAVEMENT STANDARD WIDTH 6"				
	LENGTH (FT)	WIDTH (FT)	SQ FT	SQ YD
MAINLINE	16026	24.0	384624	42736.0
TOTAL SQ YDS			42736.0	

Q STRUCTURAL CONCRETE (MIX)				
SQ YD	SQ FT	CONC. DEPTH (FT)	CU FT	CU YD
42736.0	384624.0	0.5	192312.0	7123.0
TOTAL CU YDS			7123.0	

R RECLAIM BITUMINOUS FULL DEPTH (SHLDR/RTL)				
LOCATION	L (FT)	W (FT)	SQ FT	SQ YDS
LEB	16026.0	9.5	152247.0	16916.3
LWB	16026.0	9.5	152247.0	16916.3
EXISTING RTL @ 65	324.0	4	1296.0	144.0
EXISTING RTL @ CR 15	400.0	4	1600.0	177.8
CR 15 ST APPROACH		MICRO	4810.2	534.5
TOTAL SQ YDS			34688.9	

S BITUMINOUS MATERIAL FOR TACK				
BIT STEETS APP.	SQ FT	SQ YDS	GAL/SQ YD	GALLONS
ISANTI ST	556.6	61.8	0.05	3.1
ROCHESTER ST	550.8	61.2	0.05	3.1
CR 68	1378.1	153.1	0.05	7.7
CR 15	4814.6	535.0	0.05	26.7
JAMESTOWN ST	1533.3	170.4	0.05	8.5
LEYTE ST	888.6	98.7	0.05	4.9
NAPLES ST	791.5	87.9	0.05	4.4
RENDOVA ST	587.8	65.3	0.05	3.3
VICKERS ST N	857.4	95.3	0.05	4.8
VICKERS ST S	821.3	91.3	0.05	4.6
RTL / BYPASS				
HWY 65	RTL	450.00	0.05	22.5
ISANTI ST	RTL	666.67	0.05	33.3
ISANTI ST	BYPASS	861.11	0.05	43.1
ROCHESTER ST	RTL	666.67	0.05	33.3
ROCHESTER ST	BYPASS	861.11	0.05	43.1
CR 68	RTL	666.67	0.05	33.3
CR 68	BYPASS	861.11	0.05	43.1
CR 15	BYPASS	861.11	0.05	43.1
CR 15	RTL	666.67	0.05	33.3
JAMESTOWN/LEYTE	RTL	1256.94	0.05	62.8
JAMESTOWN/LEYTE	BYPASS	1451.39	0.05	72.6
NAPLES ST	RTL	666.67	0.05	33.3
NAPLES ST	BYPASS	861.11	0.05	43.1
RENDOVA ST	RTL	666.67	0.05	33.3
RENDOVA ST	BYPASS	861.11	0.05	43.1
VICKERS ST	RTL	666.67	0.05	33.3
TOTAL SQ YDS			720.7	
TOTAL TONS			720.7	

T TYPE SP 12.5 WEARING COURSE (SPWEB440 E)			
		SQ YD	TON
MICROSTATION PAVED SHOULDER		32605.8	5625.0
TOTAL TONS			5625.0

U TYPE SP 12.5 NON WEAR COURSE (SPNWB430 B)					
RTL / BYPASS BASE COURSE			LENGTH	WIDTH	SQ YDS
LWB	HWY 65	RTL	324	12.5	450.0
LWB	ISANTI ST	RTL	480	12.5	666.7
LEB	ISANTI ST	BYPASS	620	12.5	861.1
LWB	ROCHESTER ST	RTL	480	12.5	666.7
LEB	ROCHESTER ST	BYPASS	620	12.5	861.1
LEB	CR 68	RTL	480	12.5	666.7
LWB	CR 68	BYPASS	620	12.5	861.1
LEB	CR 15	BYPASS	620	12.5	861.1
LWB	CR 15	RTL	480	12.5	666.7
LWB	JAMESTOWN/LEYTE ST	RTL	905	12.5	1256.9
LEB	JAMESTOWN/LEYTE ST	BYPASS	1045	12.5	1451.4
LEB	NAPLES ST	RTL	480	12.5	666.7
LWB	NAPLES ST	BYPASS	620	12.5	861.1
LEB	RENDOVA ST	RTL	480	12.5	666.7
LWB	RENDOVA ST	BYPASS	620	12.5	861.1
LEB	VICKERS ST	RTL	480	12.5	666.7
TOTAL SQ YDS					12991.8
TOTAL TONS					2241.1

V TYPE SP 12.5 WEAR COURSE (SPWEB440 B)				
BIT STREETS			SQ FT	SQ YD
ISANTI ST			556.6	61.8
ROCHESTER ST			550.8	61.2
CR 68			1378.1	153.1
CR 15			4814.6	535.0
JAMESTOWN ST			1533.3	170.4
LEYTE ST			888.6	98.7
NAPLES ST			791.5	87.9
RENDOVA ST			587.8	65.3
VICKERS ST			821.3	91.3
VICKERS ST			857.4	95.3
BIT ENTRANCES				
SAARELA INS.			261.9	29.1
CHURCH			563.8	62.6
CHURCH			551.3	61.3
CHURCH			479.8	53.3
CHURCH			189.4	21.0
VIKING GOLF			642.3	71.4
WILLIAMS CT			579.6	64.4
BODY SHOP			490.8	54.5
GORDYS			495.3	55.0
1911			249.6	27.7
2085			273.2	30.4
2353			276.6	30.7
2385			250.9	27.9
2419			406.3	45.1
2670			355.0	39.4
FIRE DEPT			1336.4	148.5
CENTER			1182.0	131.3
2929			308.7	34.3
F-ENT			282.1	31.3
3158			414.8	46.1
3211			253.7	28.2
BECKS MARKET			704.0	78.2
3301			483.1	53.7
3450			201.3	22.4
3530			214.0	23.8
3608			211.3	23.5
3634			204.5	22.7
TOTAL SQ YD			2737.8	
TOTAL TONS			472.3	

W 6" CONCRETE DRIVEWAY PAVEMENT				
ADDRESS	STATION	DIR	SQ FT	SQ YDS
1878	327+00	RT	184.7	20.5
GAR. DOOR	353+00	RT	453.9	50.4
2817	392+00	LT	655.5	72.8
2913	398+00	LT	255.6	28.4
3605	446+00	LT	215.8	24.0
TOTAL SQ YDS			196.1	

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:112-01-001CSAH_22 (RR-Vickers)1 ALL CONC BASE PROPOSED V3_MISC TABS 04/10/2012 1:10:14 PM

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: CHARLES M. CADENHEIM, JR.

SIGNATURE: *[Signature]*

DATE: 4/11/2012 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/11/2012

DESIGN BY: JF DATE: 4/11/2012

CHECKED BY: JO DATE: 5/1/2012



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

PROJECT TABULATIONS

Sheet 4 of 69 Sheets

X INSTALL MAILBOX SUPPORT					
ADDRESS	DR LOC.	QTY	ADDRESS	DR LOC.	QTY
INS.	LT	1	2740	RT	1
1543	LT	1	FIRE DEPT	LT	1
1555	LT	1	CENTER	LT	1
CHURCH	RT	1	2810	RT	1
1623	LT	1	2817	LT	1
1655	LT	1	2820	RT	1
VIKING GOLF	RT	1	2849	LT	1
WILLIAMS CT	LT	1	2903	LT	1
BODY SHOP	LT	1	2913	LT	1
1878	RT	1	2929	LT	1
GORDYS	LT	1	2949	LT	1
1911	LT	1	3014	RT	1
1918	RT	1	3120	RT	1
1923	LT	1	3140	RT	1
2010	RT	1	3152	LT	1
2042	RT	1	3158	RT	1
2085	LT	1	3211	LT	1
2104	RT	1	MARKET	LT	1
2152	RT	1	3301	LT	1
2206	RT	1	3304	RT	1
CEDER STEP	RT	1	3356	RT	1
2219	LT	1	3450	RT	1
2251	LT	1	3502	RT	1
GAR DR	RT	1	3518	RT	1
2246	RT	1	3530	RT	1
2353	LT	1	3551	LT	1
2385	LT	1	3605	LT	1
2403	LT	1	3608	RT	1
2419	LT	1	3634	RT	1
2486	RT	1	3660	RT	1
2522	RT	1	3665	LT	1
2670	RT	1	3700	RT	1
2736	RT	1	3719	LT	1
ROW TOTAL		33	ROW TOTAL		33
			TOTAL INSTALL		66.0

Y RELOCATE MAILBOX					
ADDRESS	DR LOC.	QTY	ADDRESS	DR LOC.	QTY
INS.	LT	1	2740	RT	1
1543	LT	1	FIRE DEPT	LT	1
1555	LT	1	CENTER	LT	1
CHURCH	RT	1	2810	RT	1
1623	LT	1	2817	LT	1
1655	LT	1	2820	RT	1
VIKING GOLF	RT	1	2849	LT	1
WILLIAMS CT	LT	1	2903	LT	1
BODY SHOP	LT	1	2913	LT	1
1878	RT	1	2929	LT	1
GORDYS	LT	1	2949	LT	1
1911	LT	1	3014	RT	1
1918	RT	1	3120	RT	1
1923	LT	1	3140	RT	1
2010	RT	1	3152	LT	1
2042	RT	1	3158	RT	1
2085	LT	1	3211	LT	1
2104	RT	1	MARKET	LT	1
2152	RT	1	3301	LT	1
2206	RT	1	3304	RT	1
CEDER STEP	RT	1	3356	RT	1
2219	LT	1	3450	RT	1
2251	LT	1	3502	RT	1
GAR DR	RT	1	3518	RT	1
2246	RT	1	3530	RT	1
2353	LT	1	3551	LT	1
2385	LT	1	3605	LT	1
2403	LT	1	3608	RT	1
2419	LT	1	3634	RT	1
2486	RT	1	3660	RT	1
2522	RT	1	3665	LT	1
2670	RT	1	3700	RT	1
2736	RT	1	3719	LT	1
ROW TOTAL		33	ROW TOTAL		33
			TOTAL RELOCATE		66.0

Z CULVERT PROTECTION			
	ISANTIST	LT	1.0
	1923	LT	1.0
	GR DOOR	RT	1.0
	ROCHESTER ST	LT	1.0
	CR 68	RT	1.0
	JAMESTOWN ST	LT	1.0
	NAPLES ST	RT	1.0
	RENDOVA ST	RT	1.0
	VICKERS ST S	RT	1.0
	TOTAL		9.0

AA EROSION CONTROL BLANKET CAT 3					
	RTL / BYPASS		LENGTH	WIDTH	SQ YDS
LWB	HWY 65	RTL	324	8	288.0
LWB	ISANTIST	RTL	480	8	426.7
LEB	ISANTIST	BYPASS	620	8	551.1
LWB	ROCHESTER ST	RTL	480	8	426.7
LEB	ROCHESTER ST	BYPASS	620	8	551.1
LEB	CR 68	RTL	480	8	426.7
LWB	CR 68	BYPASS	620	8	551.1
LEB	CR 15	BYPASS	620	8	551.1
LWB	CR 15	RTL	480	8	426.7
LWB	JAMESTOWN / LEYTE ST	RTL	905	8	804.4
LEB	JAMESTOWN / LEYTE ST	BYPASS	1045	8	928.9
LEB	NAPLES ST	RTL	480	8	426.7
LWB	NAPLES ST	BYPASS	620	8	551.1
LEB	RENDOVA ST	RTL	480	8	426.7
LWB	RENDOVA ST	BYPASS	620	8	551.1
LEB	VICKERS ST	RTL	480	8	426.7
	TOTAL SQ YDS				8026.8

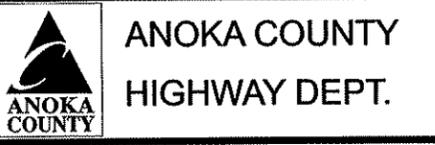
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC Base\PROPOSED\3_MISC TABS\6/30/2012 1:10:26 PM

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: CHARLES M. CADENHEAD JR
SIGNATURE: *[Signature]*
DATE: *4/11/2012* LICENSE NO. 40416

DRAWN BY: JF DATE: 4/11/2012
DESIGN BY: JF DATE: 4/11/2012
CHECKED BY: JO DATE: 5/1/2012



COUNTY PROJECT NO. CP 12-14-22

PROJECT TABULATIONS
Sheet 5 of 69 Sheets

- 1 MILLING / FINISHED CONCRETE SURVEY NOTES SUPPLIED BY ANOKA COUNTY, AVAILBLE UPPON CONTRACTOR REQUEST.
- 2 AGGREGATE SHOULDERING MATERIAL FOR THIS PROJECT SHALL BE CLASS 5 GRADATION IN ACCORDANCE WITH MN/DOT 2221 AND 3138.
- 3 AGGREGATE BASE MATERIAL SHALL BE 100% CRUSHED AND MEET THE REQUIREMENTS OF MN/DOT SPEC. 3138, CLASS 5.
- 4 COMPACTION OF ALL AGGREGATE BASE MATERIAL SHOULD BE IN ACCORDANCE WITH MN/DOT " QUALITY COMPACTION METHOD "
- 5 CONTRACTOR SHALL BLADE THE EXISTING AGGREGATE MATERIAL ONTO THE SHOULDER PRIOR TO PLACING THE NEW CLASS 5 AGGREGATE ON THE SHOULDER. BLADING AND COMPACTION OF EXISTING AGGREGATE MATERIAL ON THE SHOULDER SHALL BE INCIDENTAL.
- 6 COMPACTION OF ALL PERMANENT BITUMINOUS MIXTURES SHALL BE THE " MAXIMUM DENSITY METHOD ".
- 7 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 THE RIGHT OF WAY IN ACCORDENCE WITH SPEC. 2104.3C3.
- 8 STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN RIGHT TURN LANE / BYPASS CONSTRUCTION AREAS THIS MATERIAL IS TO BE RE-USED TO DRESS NEW SLOPES.
- 9 USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING PAVEMENT. THE BITUMINOUS TACK COAT SHALL BE APPLIED AT A RATE OF 0.03 - 0.05 GALLONS/SQ YD BETWEEN BITUMINOUS LAYERS AND 0.07 - 0.10 GALLONS/SQ YD ON CONCRETE / BITUMINOUS MILLED SURFACE PRIOR TO BEING OVERLAID.
- 10 ANY DEBRIS WHICH MAY BE ENCOUNTERED / CREATED DURING GRADING SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT RW IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
- 11 UNSUITABLE SOILS NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT RW IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
- 12 THE MILLED MATERIAL SHALL BE PROCESSED TO PROVIDE A NOMINAL 1" MAXIMUM SIZE. A TOLERANCE TO THE PERCENT RETAINED ON A 1" SIEVE WILL BE PERMITTED, PROVIDED ALL MATERIAL PASSES 1 1.5" SIEVE.
- 13 SILT FENCE MAY ONLY BE OMITTED IN BERM AREAS WHERE RUNOFF FROM CONSTRUCTION WILL NOT TAKE PLACE. THIS WILL BE AT THE DISCRETION OF THE ENGINEER. (SILT FENCE SHALL BE PLACED NO FURTHER THAN 48' FROM PROPOSED CL. CLOSEST R/W FROM PROPOSED CL ON PROJECT IS 50')

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\4_SOILS&CONSTR\012 1:11:02 PM

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: CHARLES M. CADENHEAD JR

SIGNATURE: *[Signature]*

DATE: 4/13/12 LICENSE NO. 40116

DRAWN BY JF DATE 4/1/2012

DESIGN BY JF DATE 4/1/2012

CHECKED BY JO DATE 5/1/2012



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

SOILS & CONSTRUCTION NOTES

Sheet 6 of 69 Sheets

NEW STANDARD 480' RTL WIDENING 4' WIDENING CALC.

* NOTE CALC. BASED ON A EST. AVERAGE FINISHED DITCH DEPTH OF 3'

END AREA SQ FT
 SELECT GRANULAR BORROW
 (S) 16.85 SQ FT
 BASE CLASS 5
 3.80 SQ FT

CU YDS PER 100'
 (S) SELECT GRANULAR BORROW
 16.85 SQ FT X 100' = 1685 CU FT / 27 = 62.40 CU YDS
 BASE CLASS 5
 3.80 SQ FT X 100' = 380 CU FT / 27 = 14.07 CU YDS

* NOTE - RTL FOR JAMESTOWN / LEYTE ST.,
COMBINED FOR NON-STANDARD LENGTH
CHECK SUMMARY CHART FOR QTY'S

SUMMARY 480' RTL

(S) SELECT GRANULAR BORROW
 62.40 CU YDS (PER 100') X 4.80 RTL = 299.52 CU YDS X 1.8 = 539.13 TONS (CV)
 BASE CLASS 5
 14.07 CU YDS (PER 100') X 4.80 RTL = 67.53 CU YDS X 1.8 = 121.56 TONS (CV)

NEW STANDARD 620" BYPASS WIDENING 4' WIDENING CALC.

* NOTE CALC. BASED ON A EST. AVERAGE FINISHED DITCH DEPTH OF 3'

END AREA SQ FT
 SELECT GRANULAR BORROW
 (S) 16.85 SQ FT
 BASE CLASS 5
 3.80 SQ FT

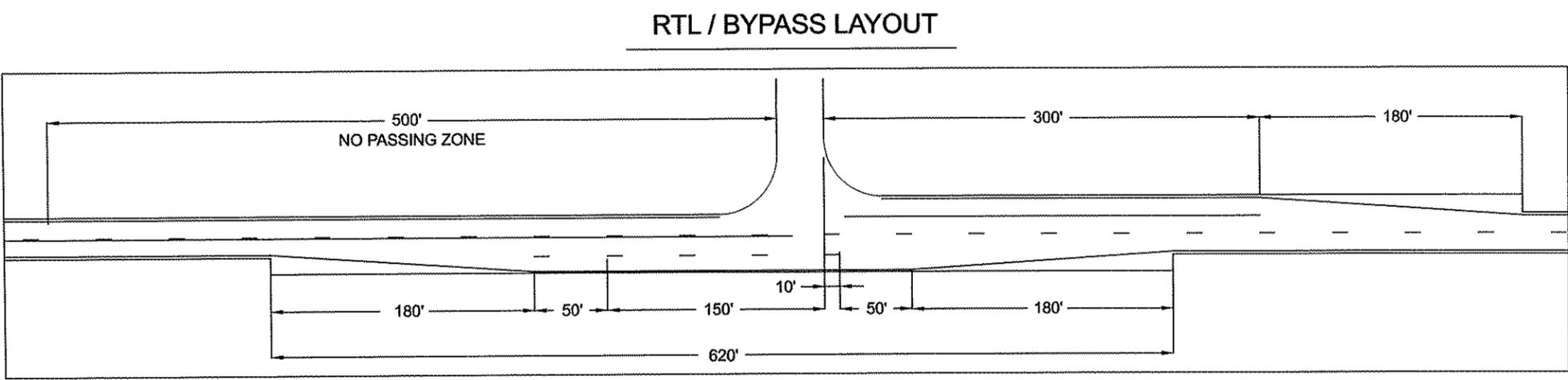
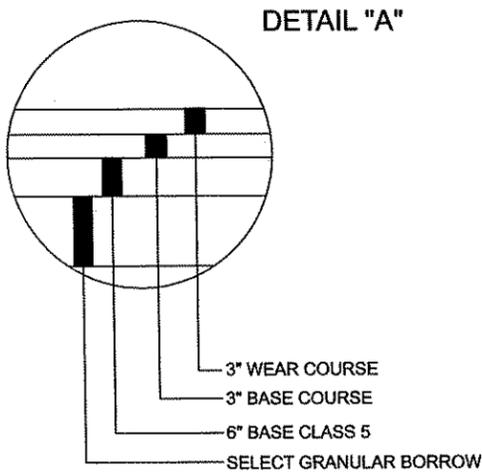
CU YDS PER 100'
 (S) SELECT GRANULAR BORROW
 16.85 SQ FT X 100' = 1685 CU FT / 27 = 62.40 CU YDS
 BASE CLASS 5
 3.80 SQ FT X 100' = 380 CU FT / 27 = 14.07 CU YDS

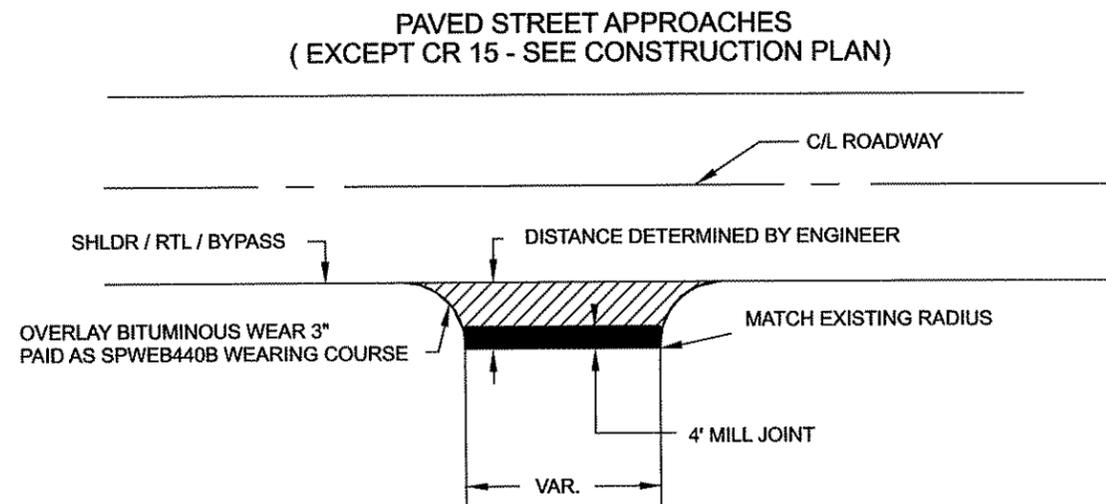
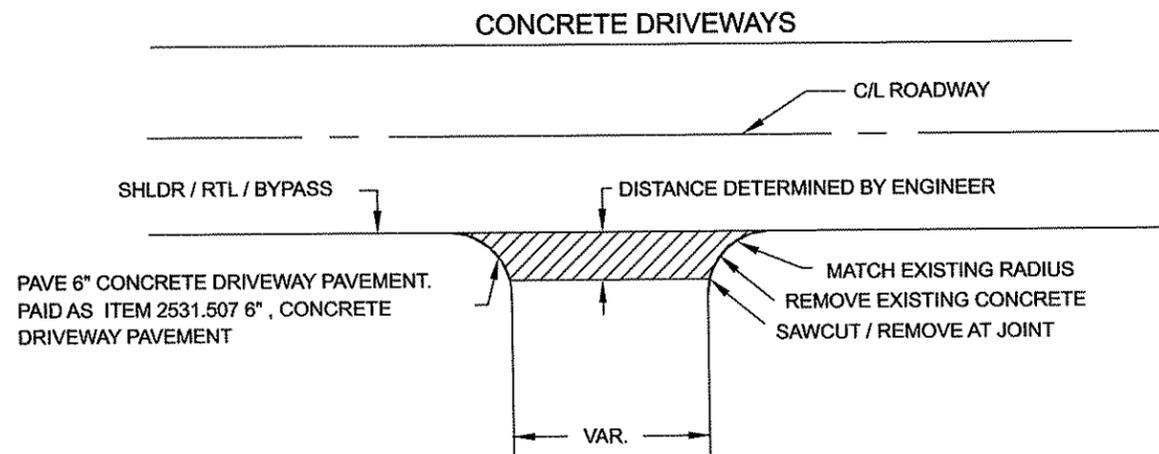
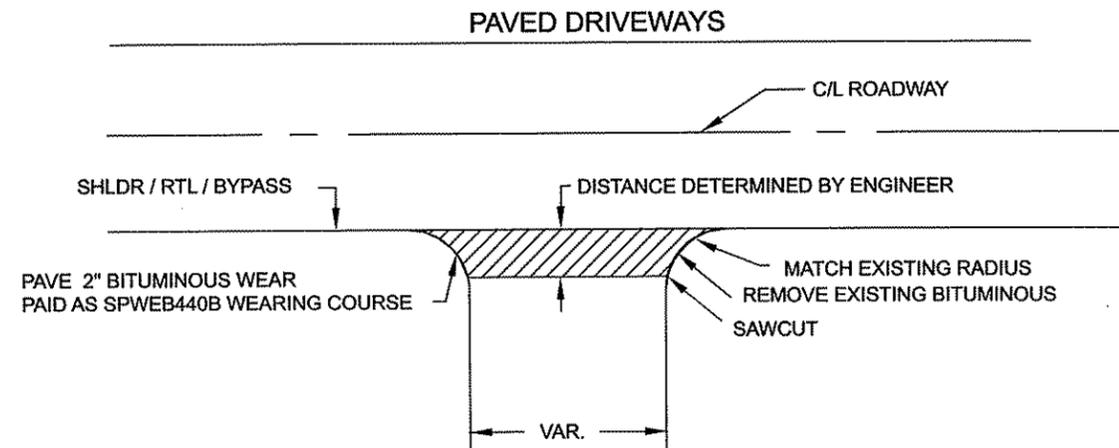
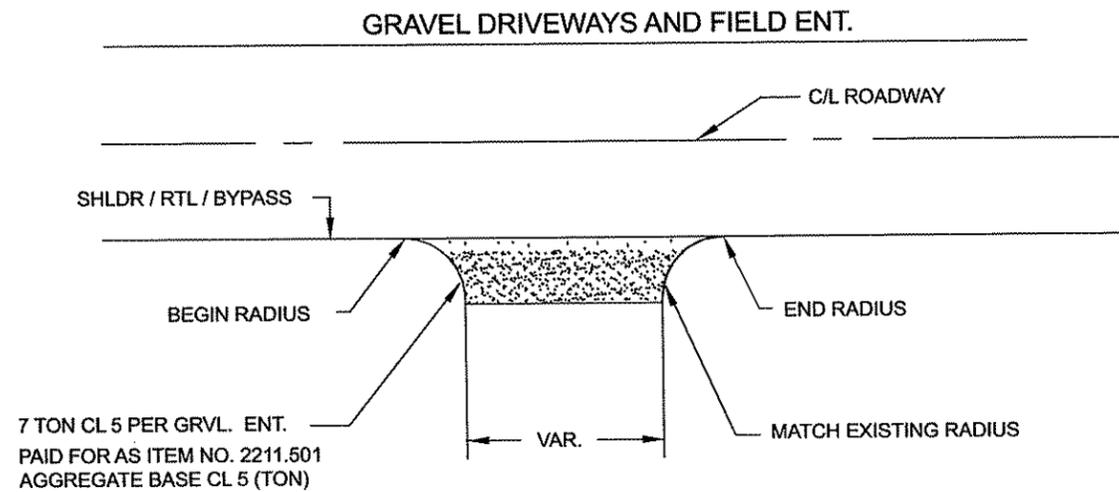
* NOTE - BYPASS FOR JAMESTOWN / LEYTE ST.,
COMBINED FOR NON-STANDARD LENGTH
CHECK SUMMARY CHART FOR QTY'S

SUMMARY 620' BYPASS

(S) SELECT GRANULAR BORROW
 62.40 CU YDS (PER 100') X 6.20 BYPASS = 386.88 CU YDS X 1.8 = 696.38 TONS (CV)
 BASE CLASS 5
 14.07 CU YDS (PER 100') X 6.2 BYPASS = 87.23 CU YDS X 1.8 = 157.02 TONS (CV)

ITEMS INCLUDED IN CONSTRUCT NEW RTL / BYPASS BY THE EACH TOTALS								
STREET	DIR.	RTL / BYPASS	ADD. BIT. WIDTH NEEDED	LENGTH (FT)	SELECT GRANULAR BORROW 2106.522 (TON)	AGG BASE CLASS 5 2211.501 (TON)	SILT FENCE MACHINE SLICED 2573.502 (LIN FT)	RAPID STABILIZATION METHOD 3 2576.601 (SQ YD)
HWY 65	WB	RTL	NONE	NONE	NONE	NONE	NONE	NONE
ISANTI ST	WB	RTL	4'	480	539.13	121.56	480.00	960.00
ISANTI ST	EB	BYPASS	4'	620	696.38	157.02	620.00	1240.00
ROCHESTER ST	WB	RTL	4'	480	539.13	121.56	480.00	960.00
ROCHESTER ST	EB	BYPASS	4'	620	696.38	157.02	620.00	1240.00
CR 68	EB	RTL	4'	480	539.13	121.56	480.00	960.00
CR 68	WB	BYPASS	4'	620	696.38	157.02	620.00	1240.00
CR 15	EB	BYPASS	4'	620	696.38	157.02	620.00	1240.00
CR 15	WB	RTL	NONE	NONE	NONE	NONE	NONE	NONE
JAMESTOWN / LEYTE ST	WB	RTL	4'	905	1016.49	229.20	905.00	1810.00
JAMESTOWN / LEYTE ST	EB	BYPASS	4'	1045	1173.74	264.65	1045.00	2090.00
NAPLES ST	EB	RTL	4'	480	539.13	121.56	480.00	960.00
NAPLES ST	WB	BYPASS	4'	620	696.38	157.02	620.00	1240.00
RENDOVA ST	EB	RTL	4'	480	539.13	121.56	480.00	960.00
RENDOVA ST	WB	BYPASS	4'	620	696.38	157.02	620.00	1240.00
VICKERS ST	EB	RTL	4'	480	539.13	121.56	480.00	960.00
EST. TOTALS					9603.29	2166.33	8560.00	17100.00





NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\BASE\PROPOSED\5_CONST DET\152012 1:11:52 PM

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: CHARLES M. GADENHEAD JR.
SIGNATURE: *[Signature]*
DATE: 4/10/12 LICENSE NO. 40116

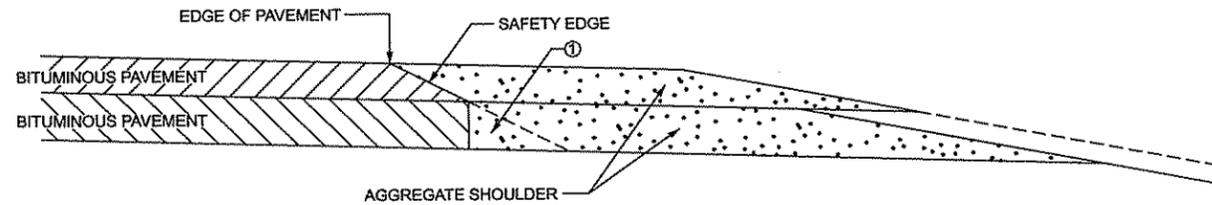
DRAWN BY: JF DATE: 4/1/2012
DESIGN BY: JF DATE: 4/1/2012
CHECKED BY: JO DATE: 5/1/2012



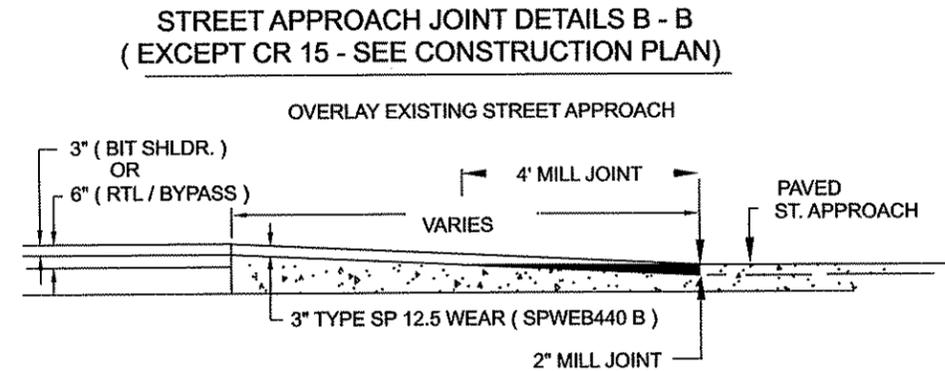
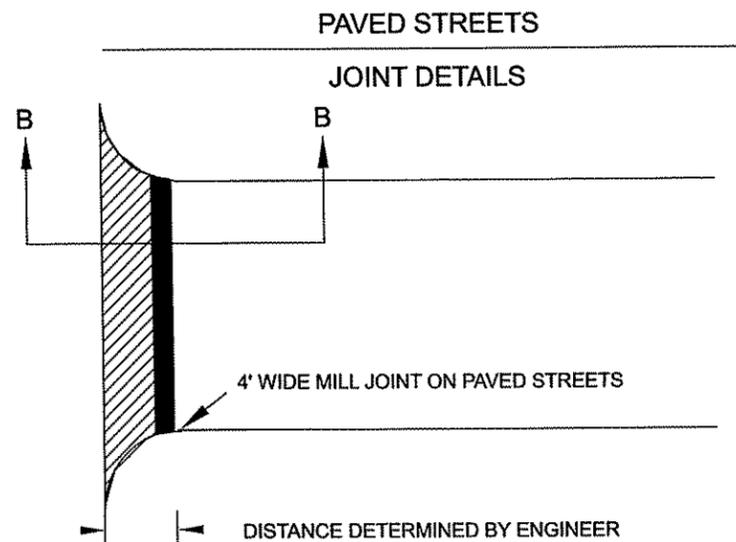
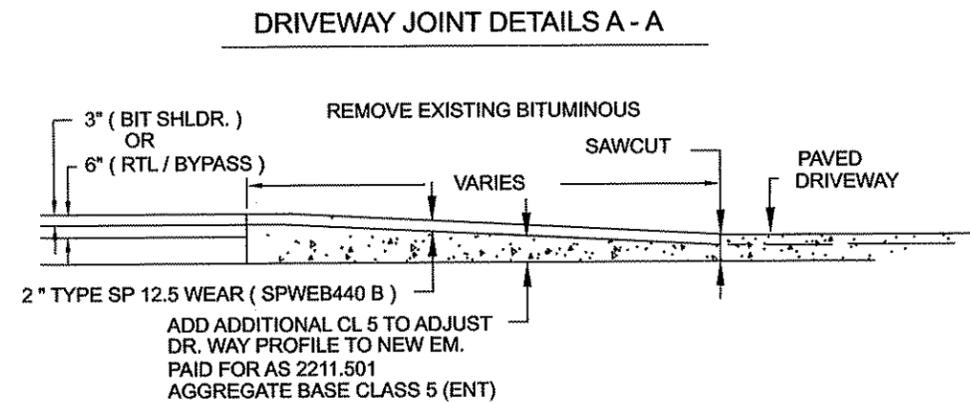
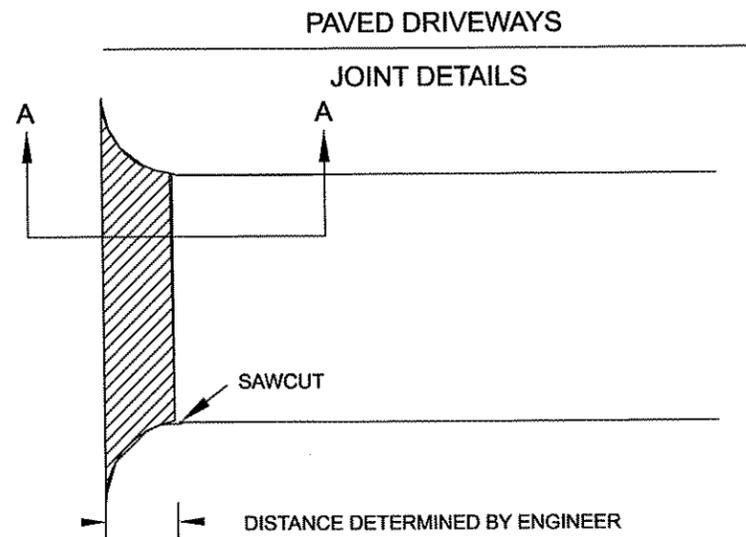
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

CONSTRUCTION DETAILS
Sheet 8 of 69 Sheets



**FIGURE B
BITUMINOUS PAVEMENT**
① OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5". SEE SPECIAL PROVISIONS.



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:112-01-00\CSAH_22 (RR-Vickers)\1 ALL CONC\Bases\PROPOSED\5_CONST DET\112012.dwg 1:12:03 PM

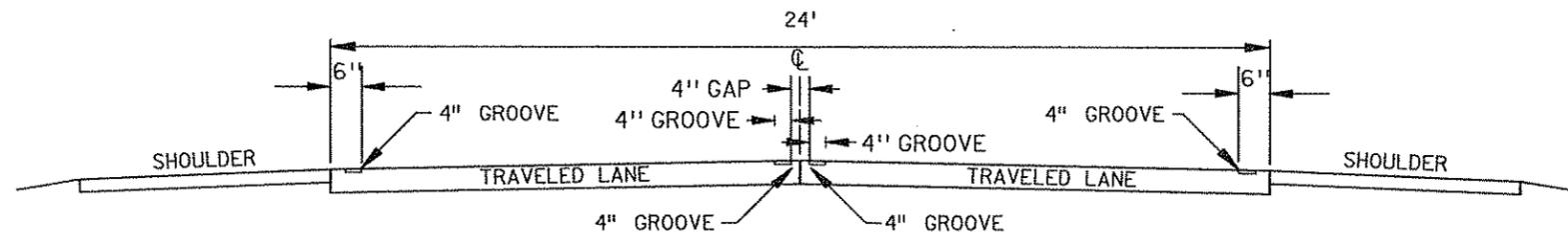
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: CHARLES M. CABENHEAD JR.
SIGNATURE: *[Signature]*
DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY JF DATE 4/1/2012
DESIGN BY JF DATE 4/1/2012
CHECKED BY JO DATE 5/1/2012

**ANOKA COUNTY
HIGHWAY DEPT.**

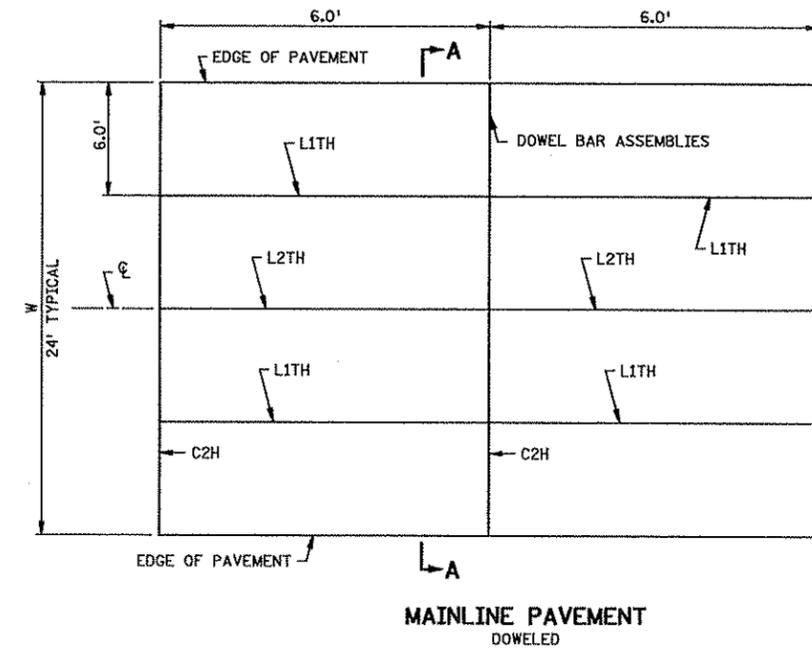
COUNTY PROJECT NO. CP 12-14-22

GROOVED PAINT STRIPE DETAIL

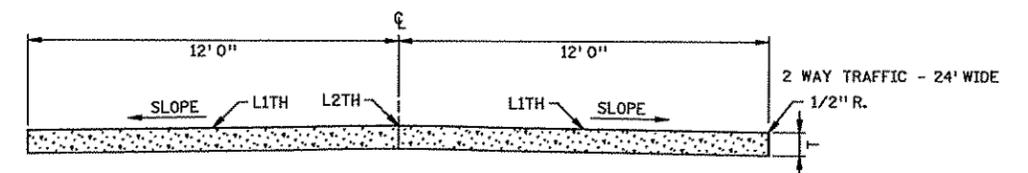


- 1) GROOVED PAINT AREA SHALL BE A MINIMUM OF 0.10 INCH TO A MAXIMUM OF 0.20 INCH IN DEPTH.
- 2) CONTRACTOR HAS THE OPTION OF GRINDING THE CONCRETE SURFACE OR FORMING A GROOVE IN THE FINISHING OPERATIONS.
- 3) THE CONTRACTOR SHALL BE REQUIRED TO HALT OPERATIONS AND MAKE ADJUSTMENTS WHEN THE GROOVE DEPTH MEASURES GREATER THAN THE MAXIMUM TOLERANCE OF 0.20 INCH.
- 4) IF CONTRACTOR CHOOSES TO USE A GROOVED FORM, AREAS OUTSIDE OF THE GROOVE TOLERANCE SHALL BE GROUND TO AN ACCEPTABLE DEPTH. DEPTH MEASUREMENT OF GROOVES FOR ACCEPTANCE SHALL BE MADE AFTER THE CONCRETE PAVEMENT HAS CURED.
- 5) THE CONTRACTOR SHALL ELIMINATE CONCRETE EDGELINE GROOVES AT INTERSECTIONS AS DIRECTED BY THE ENGINEER IN THE FIELD.
- 6) CENTERLINE GROOVES WILL BE SEPARATED, ONE ON EACH SIDE OF CENTERLINE.

DIRECTION OF TRAFFIC →



MAINLINE PAVEMENT
DOWELED



SECTION A-A

NOTE: L2TH IS CALLED OUT DUE TO PAVEMENT
BEING PLACED HALF AT A TIME

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Victors)\1 ALL CONC\Bases\PROPOSED\10_CONC.PAV\12-22\12.dgn 1:55:45 PM

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: Charles Odenheiser
SIGNATURE: *[Signature]*
DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
DESIGN BY: JF DATE: 4/1/2012
CHECKED BY: JO DATE: 5/1/2012

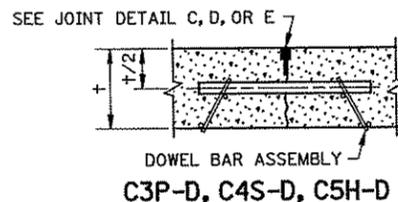
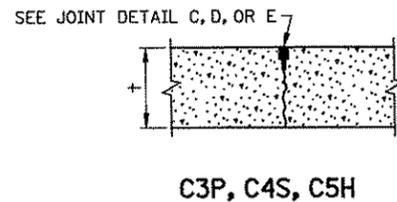
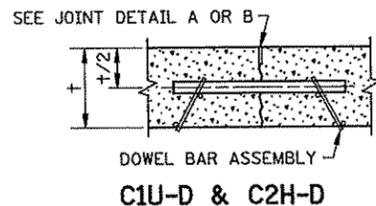
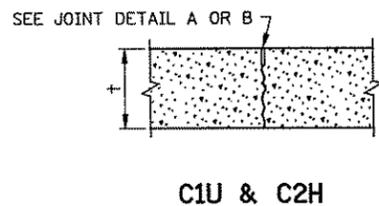


ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

CONCRETE DETAILS

Sheet 10 of 69 Sheets



CONTRACTION JOINT REFERENCE, DETAIL & SEALER SPEC. TABLE

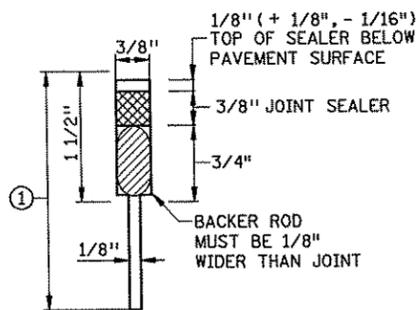
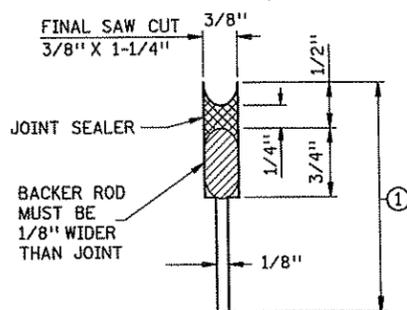
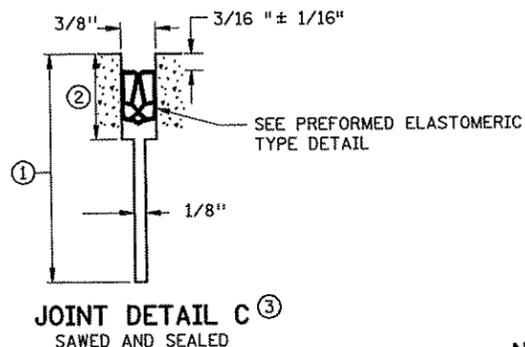
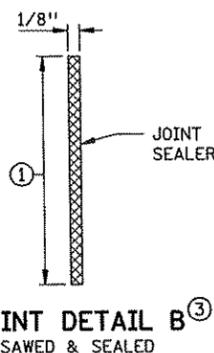
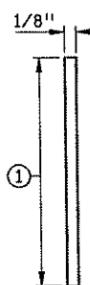
JOINT REFERENCE		JOINT DETAIL	JOINT SEALER SPEC.	JOINT WIDTH
WITHOUT DOWELS	WITH DOWELS			
C1U	C1U-D	A	UNSEALED	1/8"
C2H	C2H-D	B	3725	1/8"
C3P	C3P-D	C	3721	3/8"
C4S	C4S-D	D	3722	3/8"
C5H	C5H-D	E	3725	3/8"

LEGEND
 C = CONTRACTION JOINT
 NO. = JOINT REFERENCE
 U = UNSEALED
 H = HOT POURED
 P = PREFORMED
 S = SILICONE
 -D = DOWEL BARS

EXAMPLE
 C2H-D

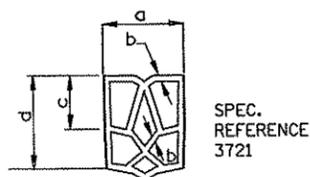
DOWEL BAR DIAMETER TABLE

PAVEMENT THICKNESS †	DOWEL BAR DIAMETER
LESS THAN 6"	NONE
6" - 6 1/2"	1"
7" - 10"	1 1/4"
10 1/2" - 14"	1 1/2"



REQUIRED DIMENSIONS

JOINT TYPE	TRANSVERSE NOMINAL SEALER SIZE
a	11/16" USE IN ALL 3/8" JOINTS
b	0.69" + 0.13" - 0.05"
c	0.08" ± 0.02"
d	0.25" MIN.
d	0.63" MIN.



PREFORMED ELASTOMERIC TYPE DETAIL

CONTRACTION JOINTS DESIGN C

NOTES:

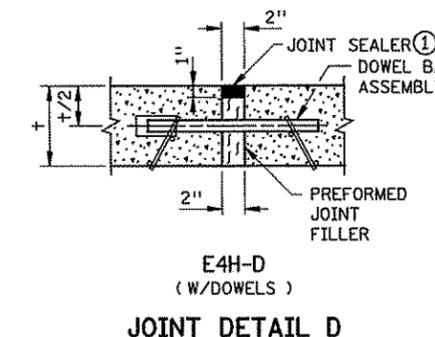
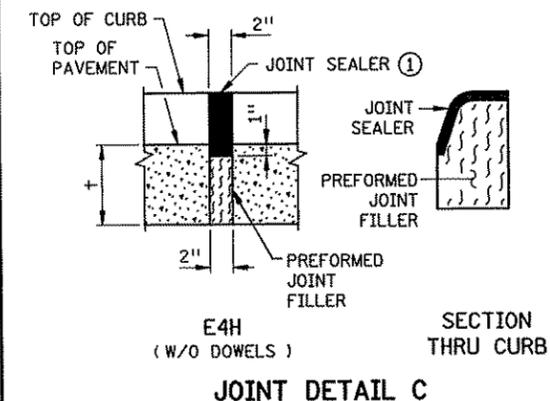
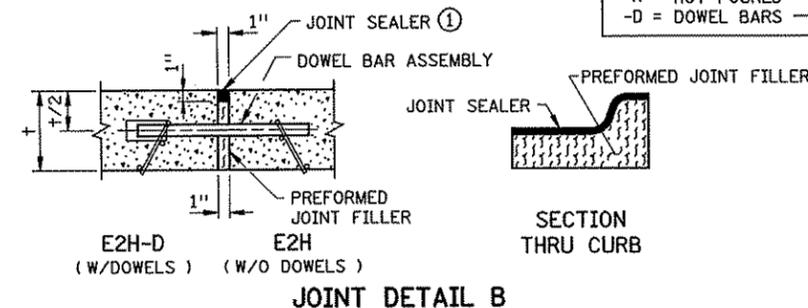
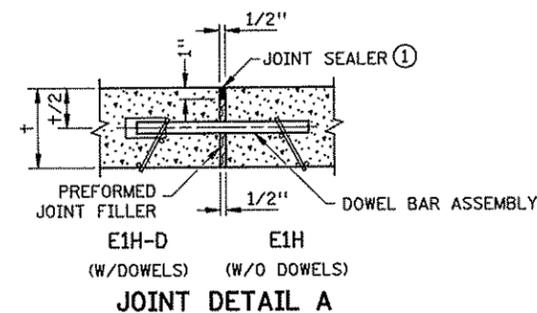
- SEE STANDARD PLATE 1103 FOR DOWEL BAR ASSEMBLY.
- SEE STANDARD PLATE 1150 FOR CONSTRUCTION OF HEADER JOINTS.
- JOINT WIDTH TOLERANCE IS + 1/16" TO - 1/32"
- FURNISH AND INSTALL ALL JOINT SEALER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- SEE STANDARD PLANS 5-297.217 AND 5-297.219, FOR CONCRETE MAINLINE/RAMP PAVEMENT.
- SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.
- ① JOINT DEPTH SHALL BE: FOR CONCRETE OVERLAYS - 1/3 THE PAVEMENT THICKNESS FOR CONCRETE PAVEMENT - 1/4 THE PAVEMENT THICKNESS
- ② SEE CONTRACTION JOINT SEALER DETAIL. WHEN USING PREFORMED JOINT SEALER, THE DEPTH SHALL BE 1/4" MORE THAN THE PREFORMED SEALER, WHEN COMPRESSED, TO FIT THE JOINT DESIGN WIDTH. "a" DIMENSION SHALL APPLY AT ANY POINT THROUGHOUT "c" DEPTH. SHARP INTERNAL CORNERS WILL NOT BE PERMITTED. ALL CORNERS SHALL BE PROVIDED WITH SUITABLE FILLET.
- ③ WHEN SEALING, THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING.
- ④ PRIOR TO SEALING THE JOINT, A 1/2" DIA. CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 1/2" BELOW THE SURFACE OF THE PAVEMENT. NON SELF-LEVELING SILICONE SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEAL AND BEAD THICKNESS OF 1/4".
- ⑤ PRIOR TO SEALING THE JOINT, A 1/2" DIA. CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F. SHALL BE PLACED 1/2" BELOW THE TOP OF PAVEMENT.

EXPANSION JOINT REFERENCE, DETAIL & SEALER SPEC. TABLE

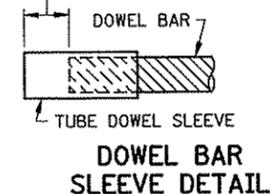
JOINT REFERENCE WITHOUT DOWELS	JOINT REFERENCE WITH DOWELS	JOINT DETAIL	JOINT SEALER SPEC.	JOINT WIDTH
E1H	E1H-D	A	3725	1/2"
E2H	E2H-D	B	3725	1"
E4H		C	3725	2"
	E4H-D	D	3725	2"
E8H		STANDARD PLAN 5-297.229	3725	4"

LEGEND
 E = EXPANSION JOINT
 NO. = JOINT REFERENCE
 H = HOT POURED
 -D = DOWEL BARS

EXAMPLE
 E4H-D



SPACE FROM END OF DOWEL BAR TO END OF SLEEVE TO BE EQUAL TO EXPANSION JOINT WIDTH (1" MIN.)



NOTES:

- PREFORMED JOINT FILLER MATERIAL, SPEC. 3702.
- FOR DOWEL BAR ASSEMBLY, SEE STANDARD PLATE 1103.
- ① JOINT SEALER SPEC. 3725. THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. TOP OF SEALER, FLUSH TO 1/8" BELOW TOP OF PAVEMENT SURFACE. MAKE TOP OF SEALER FOR CURB SECTION D JOINTS FLUSH WITH SURFACE ±1/8".

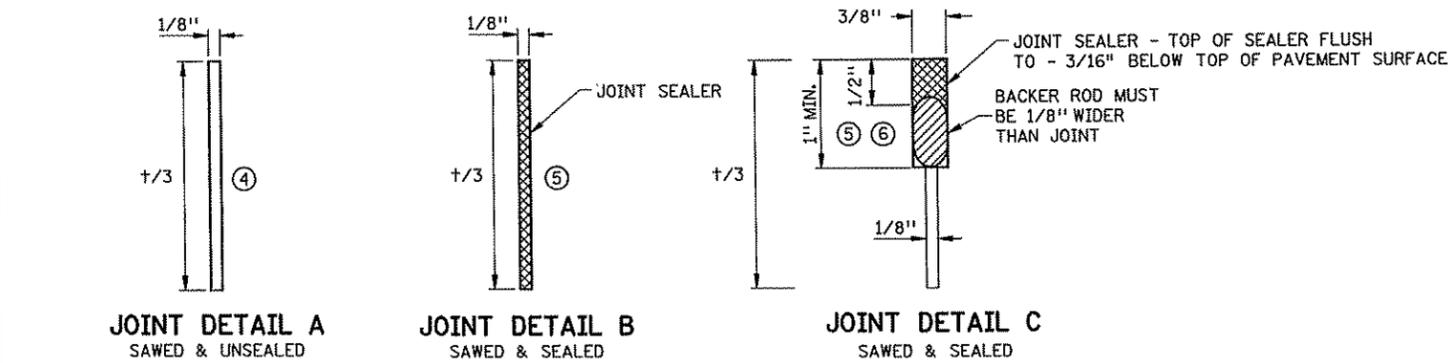
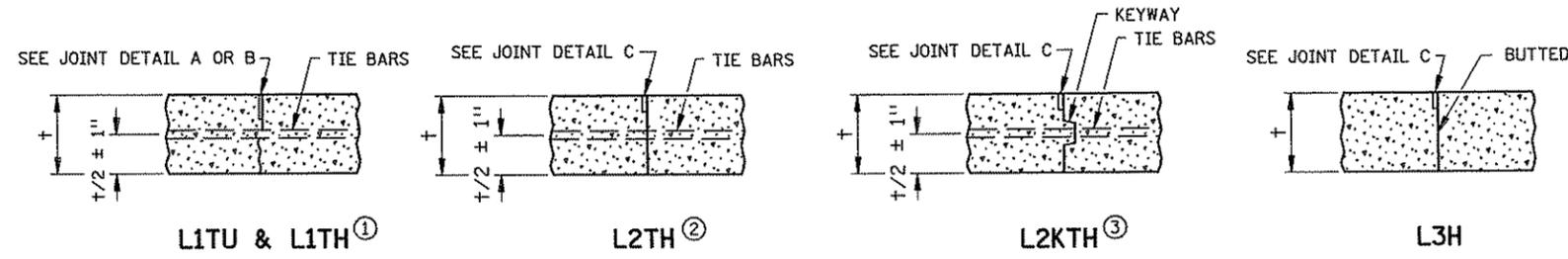
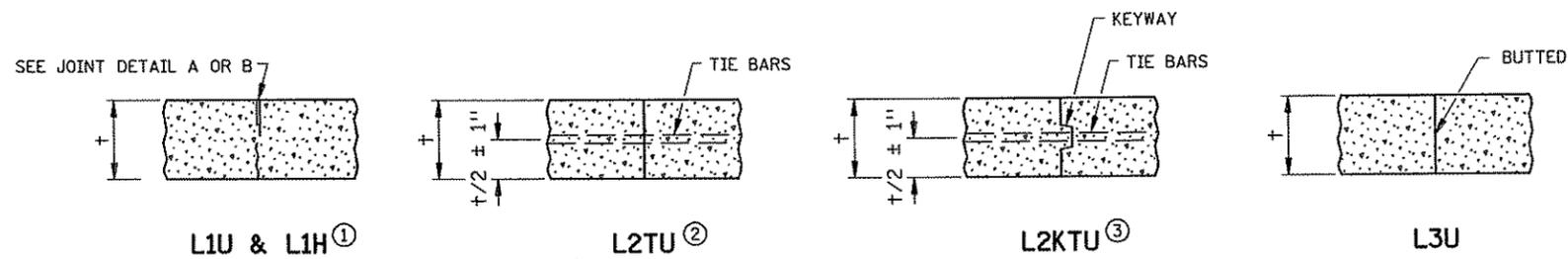
EXPANSION JOINTS DESIGN E

STANDARD SHEET NO. 5-297.221 (1 OF 2)
 STANDARD APPROVED: APRIL 14, 2010

TITLE: **PAVEMENT JOINTS**
 CONTRACTION (DESIGN C) AND EXPANSION (DESIGN E)

STATE PROJ. NO.

SHEET NO. 11 OF 69 SHEETS



TIEBAR TABLE

PAVEMENT THICKNESS	TIEBAR SIZE	LENGTH
< 10-1/2"	NO. 13	30"
≥ 10-1/2"	NO. 16	36"
ALL THICKNESS WHEN TYING TO CURB AND GUTTER	NO. 13	30"

ALL REBARS ARE IN METRIC DESIGNATIONS

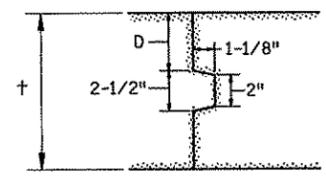
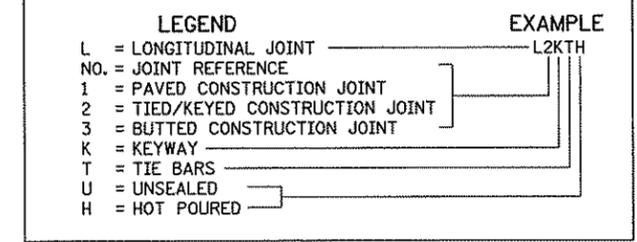
THE TIE BAR SPACING FOR ALL L2T AND L2KT JOINTS SHALL BE 3'-0" CENTER TO CENTER AND BENT 60° AS SHOWN, EXCEPT WHEN NOTED OTHERWISE IN THE PLANS.

TIE BARS IN THE L2T AND L2KT JOINTS SHALL BE THE SAME SIZE AND LENGTH AS USED FOR THE L1T JOINTS, WHEN TYING PAVEMENT TO PAVEMENT. TIE BARS IN THE L2KT JOINTS SHALL BE NO. 13 X 2' - 6", WHEN TYING CURB & GUTTER TO PAVEMENT.

ALL TIE BARS SHALL BE EPOXY COATED AND COMPLY WITH SPEC. 3301.

LONGITUDINAL JOINT REFERENCE, DETAIL & SEALER SPECIFICATION TABLE

JOINT REFERENCE			JOINT DETAIL	JOINT SEALER SPEC	JOINT WIDTH
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS			
L1U	L1TU		A	UNSEALED	1/8"
L1H	L1TH		B	3725	1/8"
	L2TU	L2KTU	NONE	UNSEALED	
	L2TH	L2KTH	C	3725	3/8"
L3U			NONE	UNSEALED	
L3H			C	3725	3/8"

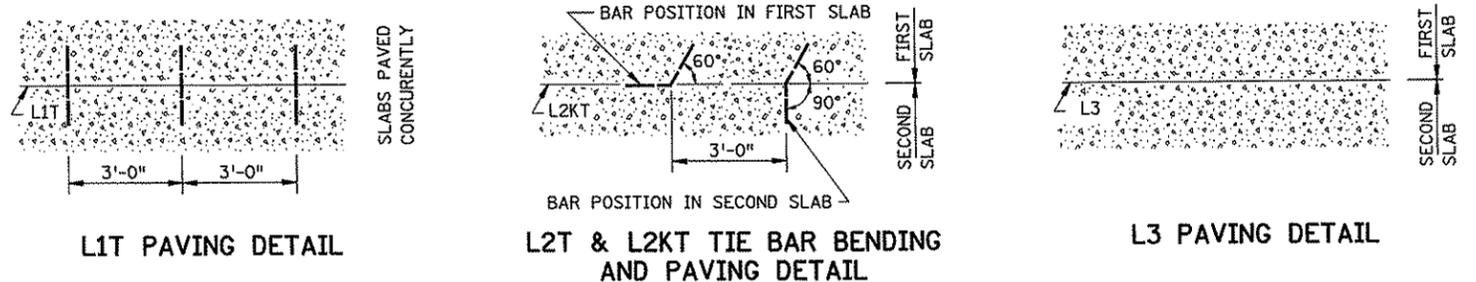


PAVEMENT KEYWAY DETAIL

KEYWAY DIMENSION TABLE

+	D
PAVEMENT THICKNESS	(TOLERANCE ± 1/4")
< 7"	NO KEYWAY
7" TO 7-1/2"	3"
8" TO 10"	4"
≥ 10-1/2"	5"

KEYWAY (1-1/8" x 2" x 2-1/2") MAY BE FORMED WITH MOLD OR METAL FORM. OTHER APPROVED KEYWAY SHAPES GIVING EQUIVALENT CONSTRUCTION FEATURES MAY BE USED WITH APPROVAL OF THE ENGINEER.



NOTES:

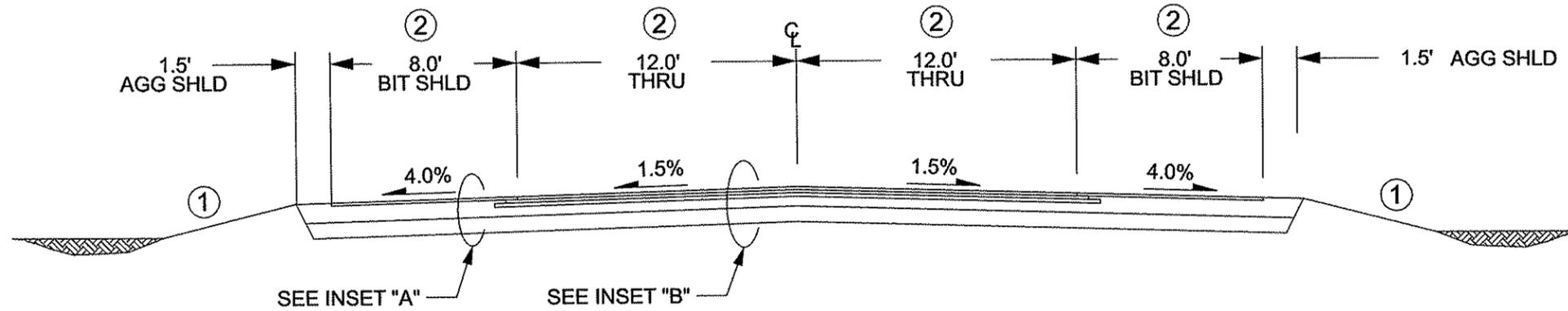
- NORMALLY, TIED PAVEMENT WIDTHS SHALL NOT EXCEED FOUR LANES, EXCEPT BRIDGE APPROACH PANELS AND PAVEMENT TAPERS.
- JOINT WIDTH TOLERANCE IS + 1/16 IN. TO - 1/32 IN.
- FURNISH AND INSTALL ALL JOINT SEALER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- TIED/KEYED AND BUTTED CONSTRUCTION JOINTS SHALL BE UNSEALED EXCEPT AS OTHERWISE NOTED IN THE PLAN OR REQUIRED BY THE ENGINEER.
- SEE STANDARD PLANS 5-297.217 AND 5-297.219 FOR CONCRETE MAINLINE AND RAMP PAVEMENT.
- SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATIONS TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

WHEN CURB AND GUTTER IS PLACED ADJACENT TO CONCRETE MAINLINE, THE TIEBARS SHALL BE PLACED A MINIMUM OF 2" ABOVE THE CURB AND GUTTER GRADE.

- SEE THE LONGITUDINAL JOINT REFERENCE, DETAIL & SEALER SPECIFICATION TABLE TO DETERMINE JOINT DETAIL.
- CONCRETE PAVEMENTS LESS THAN 7" SHALL USE L2TU AND L2TH JOINTS UNLESS OTHERWISE ALLOWED BY THE ENGINEER.
- CONCRETE PAVEMENTS GREATER THAN OR EQUAL TO 7" SHALL USE L2KTU AND L2KTH JOINTS UNLESS OTHERWISE ALLOWED BY THE ENGINEER.
- THE JOINT FACES SHALL BE CLEANED WITH WATER DURING THE SAW CUTTING OPERATION OR BY WATER BLASTING AFTER SAWING.
- THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING.
- PRIOR TO SEALING THE JOINT, A 1/2" DIAMETER CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F. SHALL BE PLACED 1/2" BELOW THE TOP OF THE PAVEMENT.

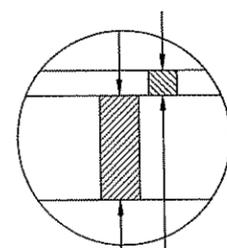
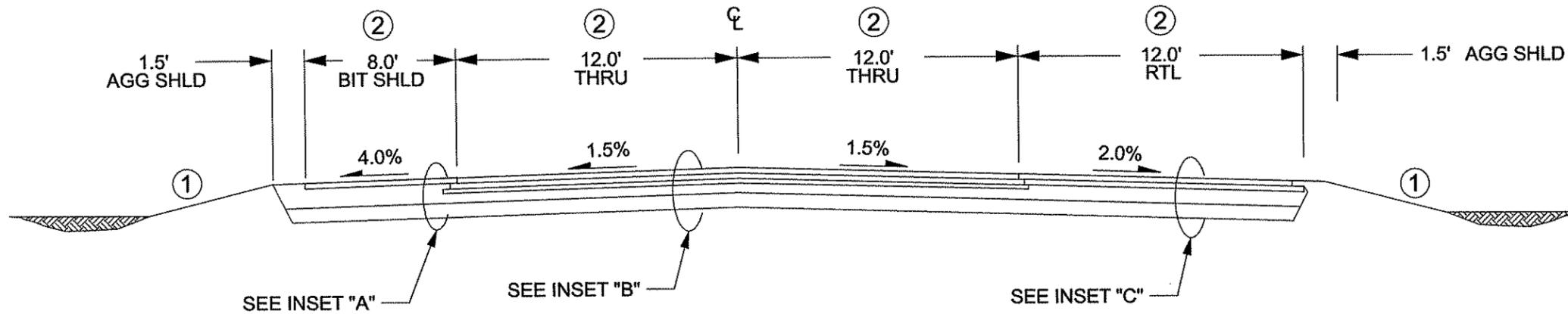
C.S.A.H. 22 (VIKING BLVD.) EXISTING TYP. SECTION

STA. 300+00 TO STA. 460+26



C.S.A.H. 22 (VIKING BLVD.) EXISTING TYP. RTL / BYPASS

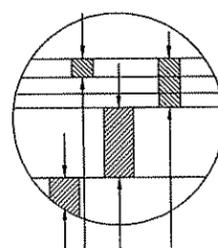
STA. 300+00 TO STA. 460+26



INSET "A"

③

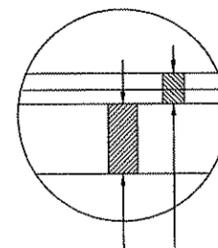
3.0" EXISTING BITUMINOUS
EXIST. VAR. DEPTH BIT SAND BASE



INSET "B"

③

5.0" - 6.0" EXISTING BITUMINOUS
EXIST. VAR. DEPTH BIT SAND
2.0" PROPOSED MILL SURFACE
EXIST. VAR. DEPTH BIT SAND BASE



INSET "C"

③

4.0" EXISTING BITUMINOUS
EXIST. VAR. DEPTH BIT SAND BASE

① 1 : 4 SLOPE

② SEE SUPERELEVATION PLAN SHEETS FOR CROSS SLOPES IN CURVES

③ AGGREGATE BASE AND BITUMINOUS DEPTHS ARE APPROXIMATE. DEPTH SHOWN ARE FROM COUNTY CORES. CONTRACTOR TO VERIFY PRIOR TO PLACING BID.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\BASE\PROPOSED\6_TYPICALS.dwg 1:12:41 PM

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: CHARLES M. CAPENHEAD JR.
 SIGNATURE: *[Signature]*
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DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012



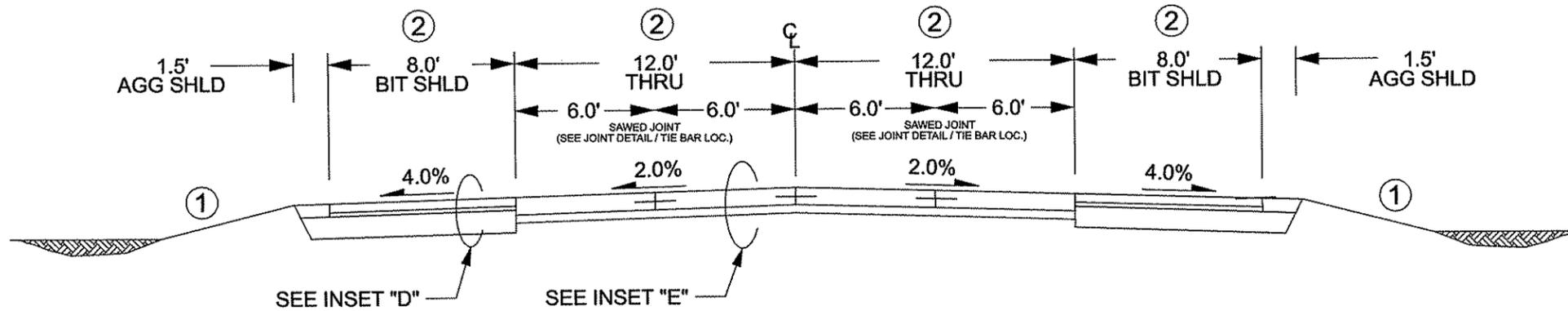
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

TYPICAL SECTIONS
Sheet 13 of 69 Sheets

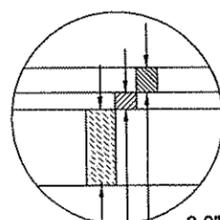
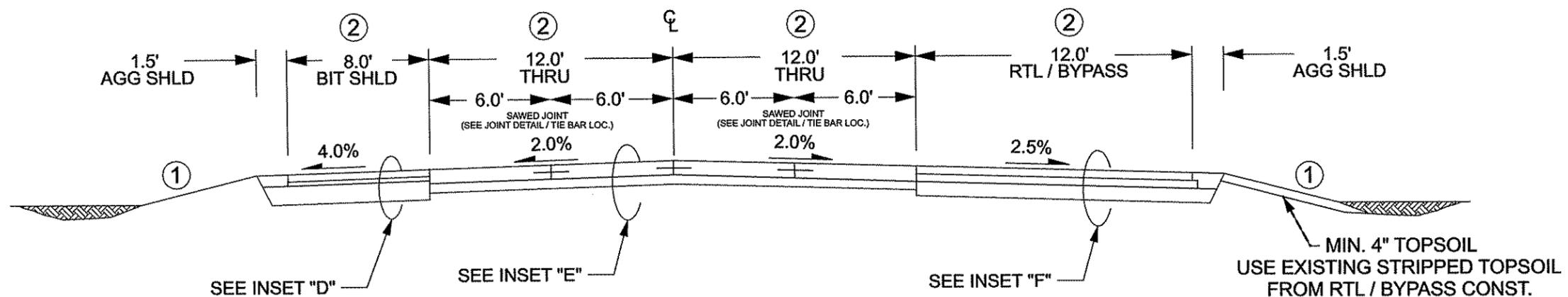
C.S.A.H. 22 (VIKING BLVD.) PROPOSED TYP. SECTION

STA. 300+00 TO STA. 460+26



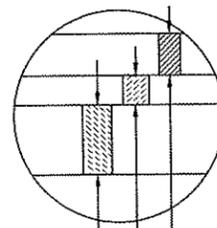
C.S.A.H. 22 (VIKING BLVD.) PROPOSED TYP. SECTION

STA. 300+00 TO STA. 460+26



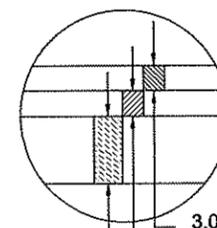
INSET "D"

3.0" TYPE SP 12.5 WEARING COURSE (SPWEB440 E)
2" ADDITIONAL AGGREGATE BASE (CL-5)
RECLAIMED BIT SHLDR / BIT SAND BASE



INSET "E"

6" NON-REINFORCED CONCRETE PAVEMENT
4.0" EXISTING BITUMINOUS (AFTER MILL)
EXIST. VAR. DEPTH BIT SAND BASE



INSET "F"

3.0" TYPE SP 12.5 WEARING COURSE (SPWEB440 E)
3.0" TYPE SP 12.5 NON-WEARING COURSE (SPNWB430 B)
RECLAIMED BIT SHLDR / BIT SAND BASE

- ① 1 : 4 SLOPE
- ② SEE SUPERELEVATION PLAN SHEETS FOR CROSS SLOPES IN CURVES
- ③ AGGREGATE BASE AND BITUMINOUS DEPTHS ARE APPROXIMATE. DEPTH SHOWN ARE FROM COUNTY CORES. CONTRACTOR TO VERIFY PRIOR TO PLACING BID.

NO	DATE	BY	CHKD	APPR	REVISION
1	7/12/2010	BAV	JEO	CMC	SHEET CHANGED PER MN/DOT REVIEW COMMENTS
NAME: P:\12-01-00\CSAH_22 (RR-Vickers)\1 ALL CONC\BASE\PROPOSED\6_TYPICALS\04\10/2012 1:12:52 PM					

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: CHARLES M. CADENHEAD JR.
SIGNATURE: *[Signature]*
DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
DESIGN BY: JF DATE: 4/1/2012
CHECKED BY: JO DATE: 5/1/2012



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT NO. CP 12-14-22

TYPICAL SECTIONS

ALIGNMENT TABULATION

POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
☪ C.S.A.H. 22										
20000	POT	300+00.000						508,158.9400	203,693.3170	
20001	POT	306+45.815						508,804.6920	203,684.2860	
20002	POT	307+75.434						508,934.2950	203,682.2430	
20003	POT	324+11.380						510,570.1200	203,662.3800	
20004	POT	330+55.729						511,214.4210	203,654.4750	
20005	POT	333+77.353						511,536.0430	203,653.3720	
20006	POT	356+08.332						513,767.0050	203,662.1040	
20007	POT	384+10.737						516,569.4020	203,655.5730	
20008	POT	399+94.415						518,153.0780	203,652.7700	
20009	POT	402+92.621						518,451.2810	203,651.6170	
	PC	403+93.747						518,552.4040	203,650.7470	S 89° 41' 37.24" E
22JF-1	PI	406+32.853	17° 46' 53.05" RT	3° 44' 54.44"	1,528.517'	239.105'	474.366'	518,791.5058	203,649.4687	PI
	CC							518,544.2321	202,122.2519	
	PT	408+68.113						519,018.7950	203,575.2330	S 71° 54' 44.19" E
20010	POT	410+44.188						519,185.9160	203,519.7990	
20011	POT	460+26.509						523,894.1930	201,890.1840	

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-09\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\8_ALIGN.dgn 04/10/2012 1:13:39 PM

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: CHARLES M. CADENHEAD JR.
 SIGNATURE: *Charles M. Cadenhead Jr.*
 DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012

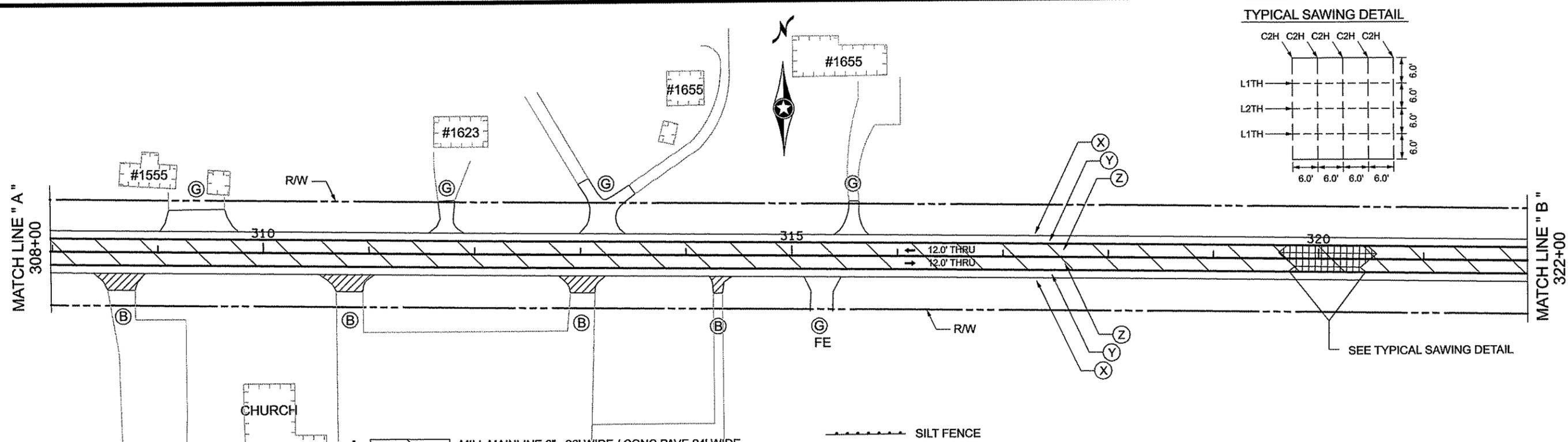
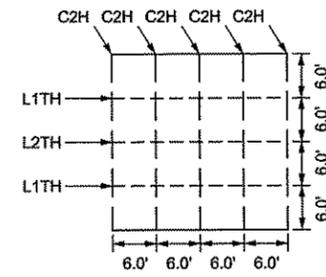


ANOKA COUNTY
HIGHWAY DEPT.

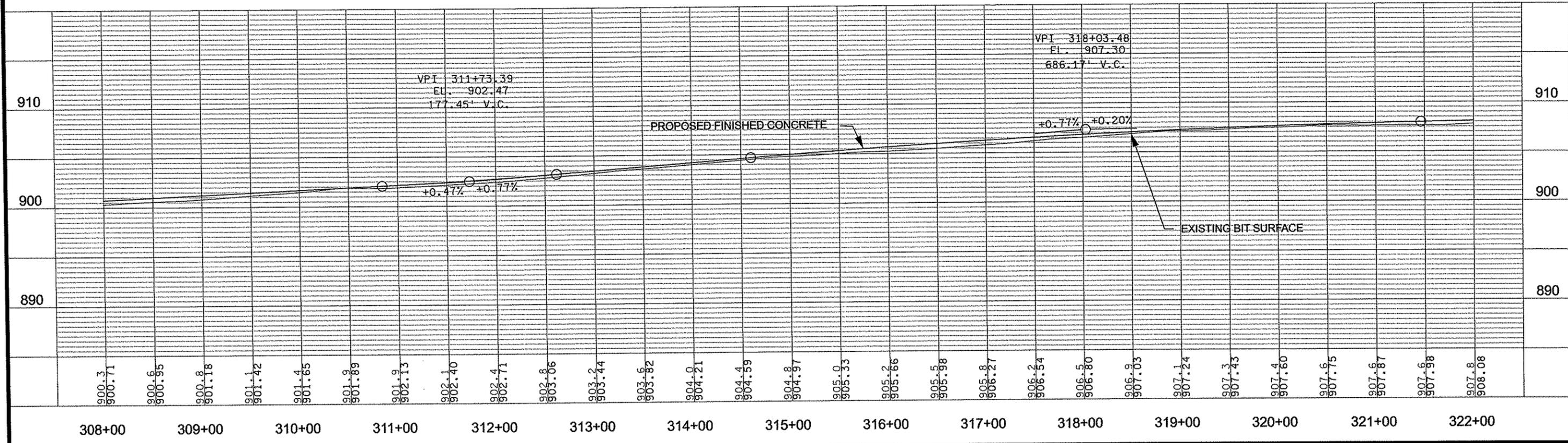
COUNTY PROJECT NO. CP 12-14-22

ALIGNMENT TABULATION
 Sheet 15 of 69 Sheets

TYPICAL SAWING DETAIL



- * MILL MAINLINE 2", 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT. SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS
- SILT FENCE
- MILL JOINT
- GRAVEL
- BIT
- CONC
- 1.5' AGGREGATE SHOULDER
- RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- CONCRETE MAINLINE
- CULVERT END PROTECTION



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\9_CONST.PLAN\02012 1:14:28 PM

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.

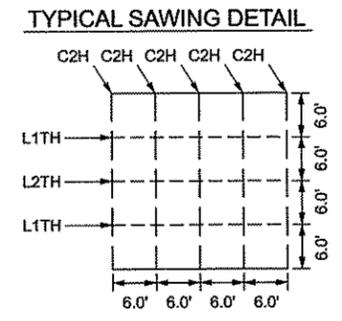
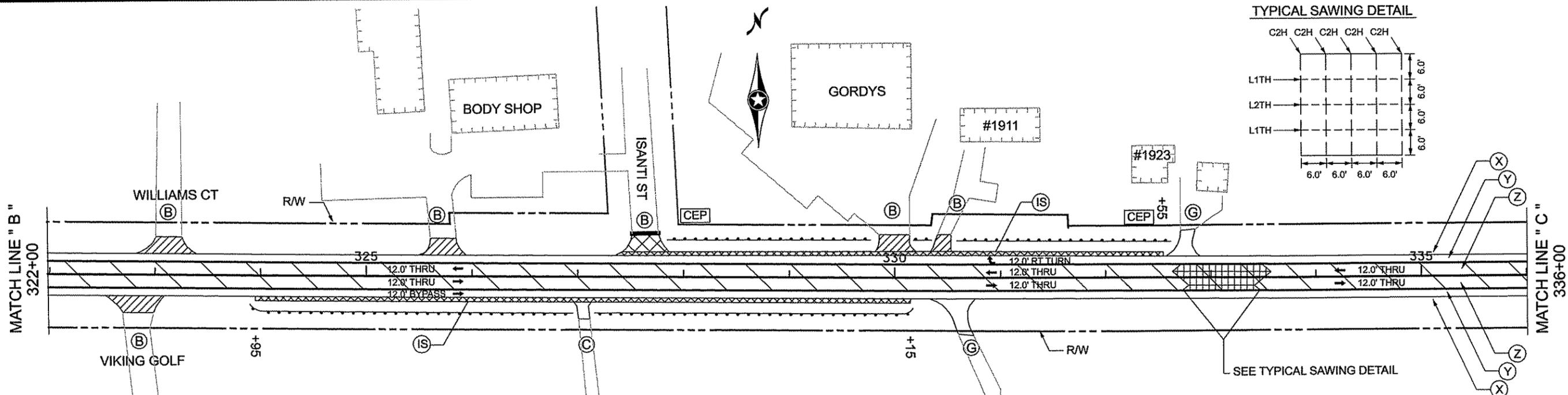
PRINT NAME: CHARLES M. CADENHEAD JR
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40418

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

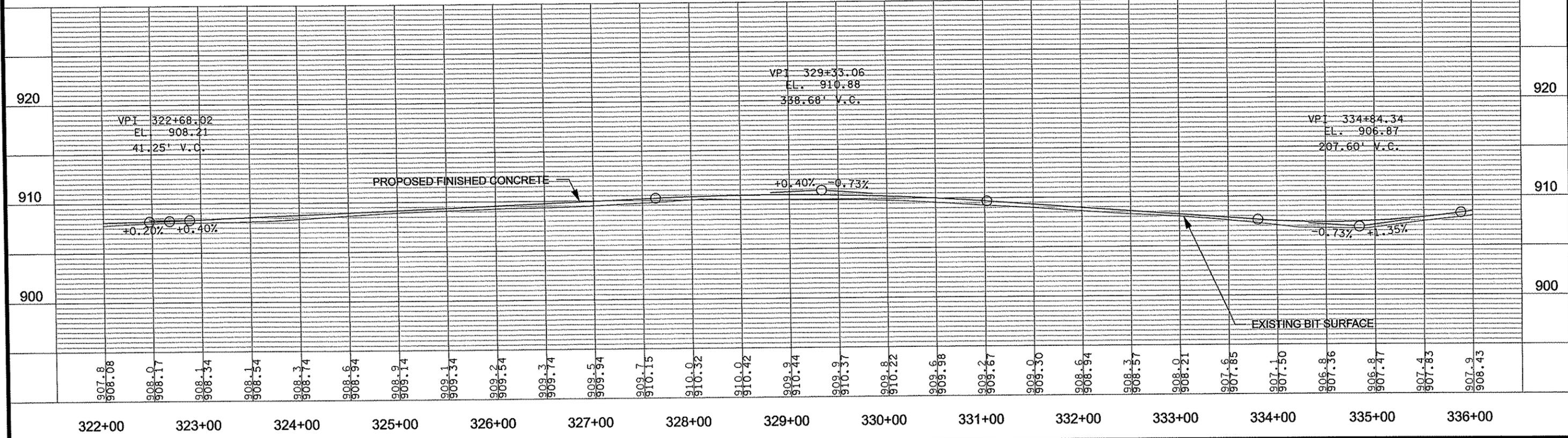
COUNTY PROJECT NO. CP 12-14-22

CONSTRUCTION PLAN AND PROFILE
 STA 308+00 TO 322+00
 Sheet 17 of 69 Sheets



- * MILL MAINLINE 2", 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT. SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- (S) INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS
- (IS)

- SILT FENCE
- MILL JOINT
- (G) = GRAVEL
- (B) = BIT
- (C) = CONC
- (X) 1.5' AGGREGATE SHOULDER
- (Y) RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- (Z) CONCRETE MAINLINE
- (CEP) CULVERT END PROTECTION

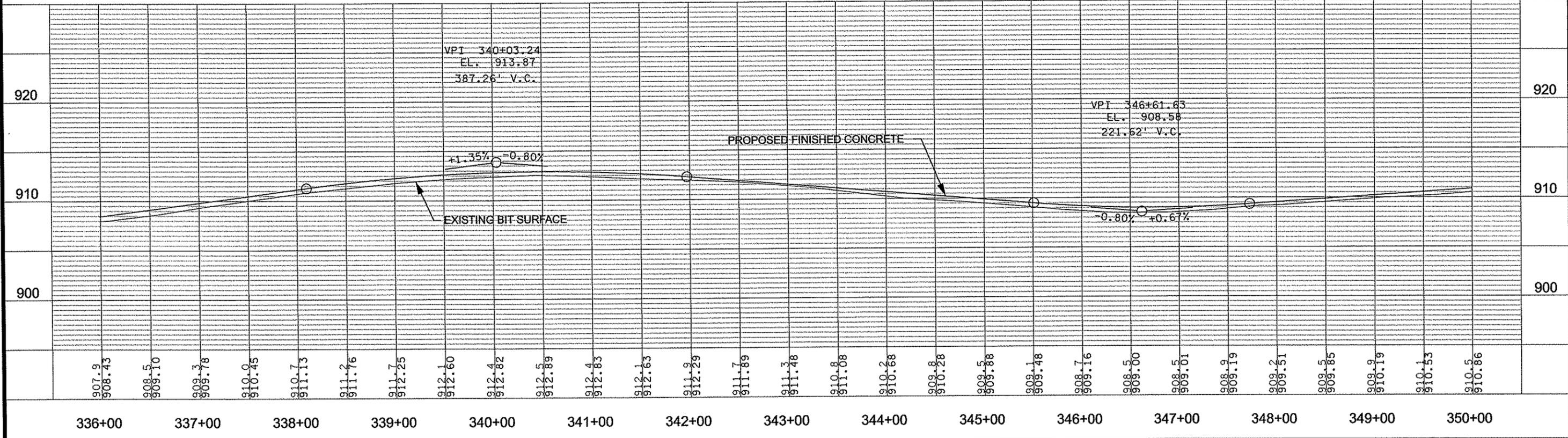
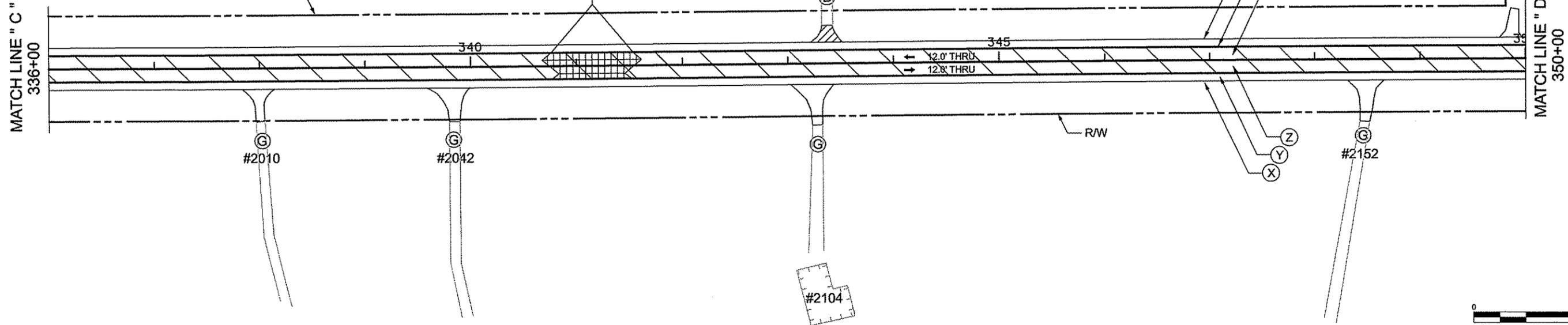
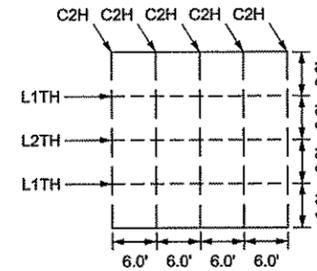


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CHARLES M. CADENHEAD JR. SIGNATURE: <i>[Signature]</i> DATE: 4/23/12 LICENSE NO. 40416	DRAWN BY: JF DATE: 4/12/2012 DESIGN BY: JF DATE: 4/12/2012 CHECKED BY: JO DATE: 5/1/2012		ANOKA COUNTY HIGHWAY DEPT. COUNTY PROJECT NO. CP 12-14-22 CONSTRUCTION PLAN AND PROFILE STA 322+00 TO 336+00 Sheet 18 of 69 Sheets
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- * MILL MAINLINE 2", 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT.
- SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS

- SILT FENCE
- MILL JOINT
- G = GRAVEL B = BIT C = CONC
- X = 1.5' AGGREGATE SHOULDER
- Y = RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- Z = CONCRETE MAINLINE
- CEP = CULVERT END PROTECTION

TYPICAL SAWING DETAIL



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22 [RR-Vickers]\1 ALL CONC\BASE\PROPOSED\9 CONST.PLAN\12-19-12

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: CHARLES M. CADENHEAD JR
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 49416

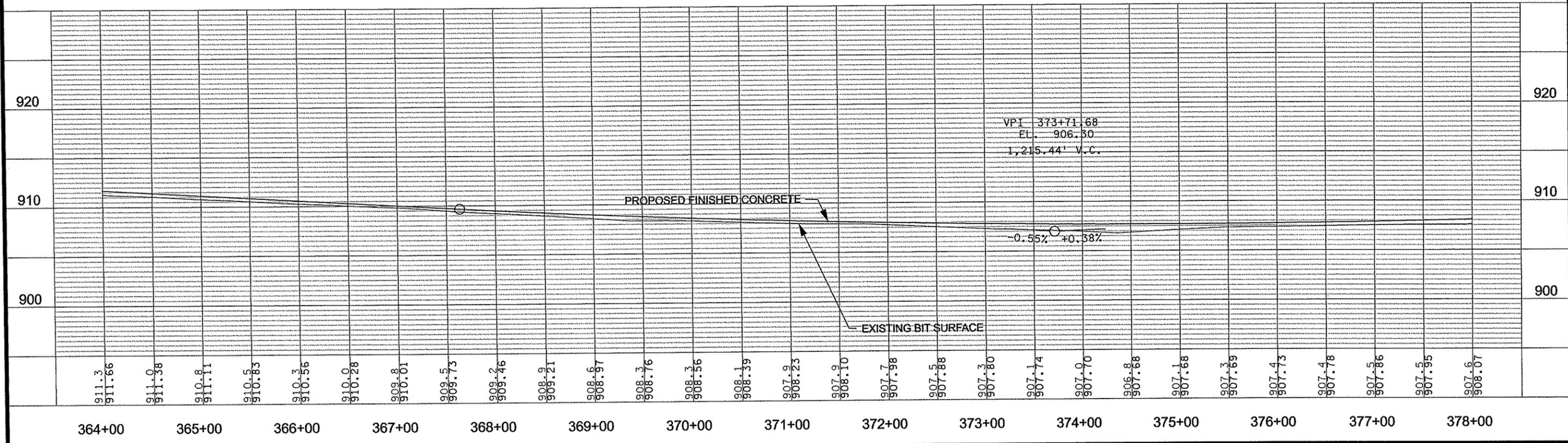
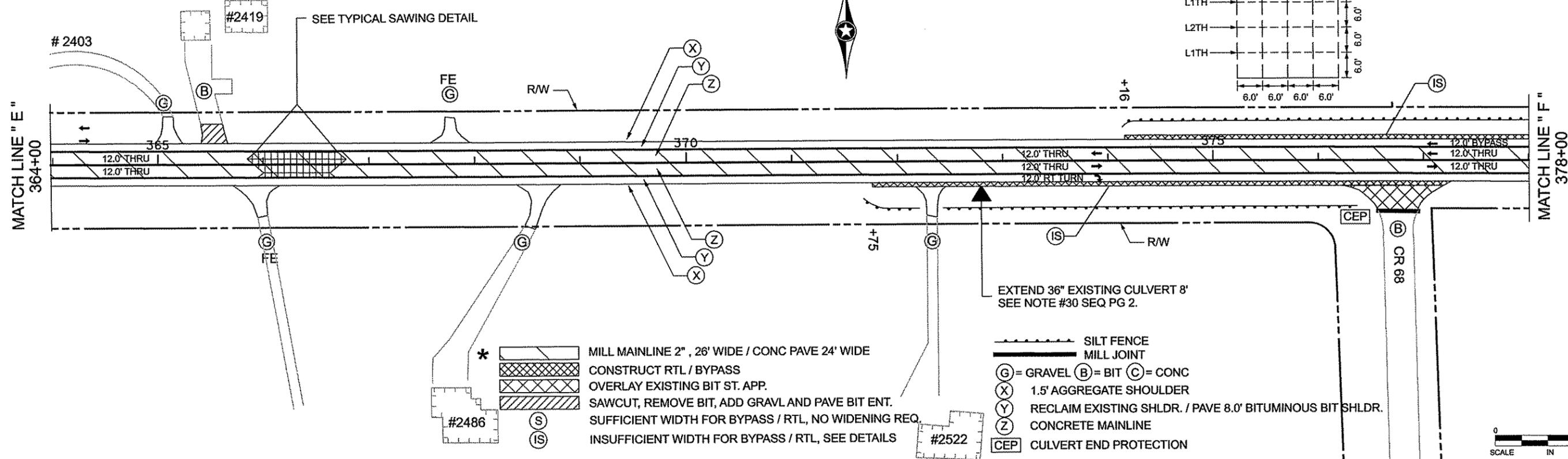
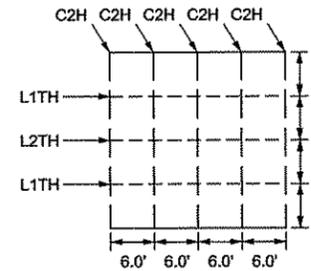
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 CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

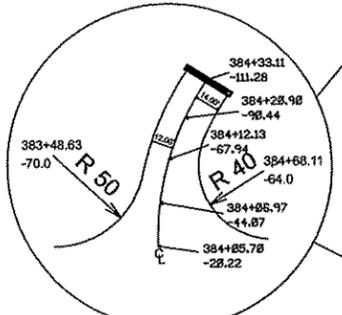
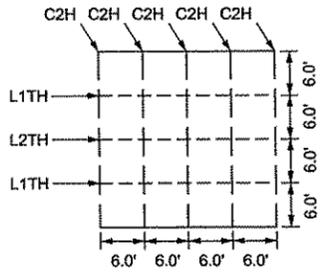
CONSTRUCTION PLAN AND PROFILE
 STA 336+00 TO 350+00
 Sheet 19 of 69 Sheets

TYPICAL SAWING DETAIL



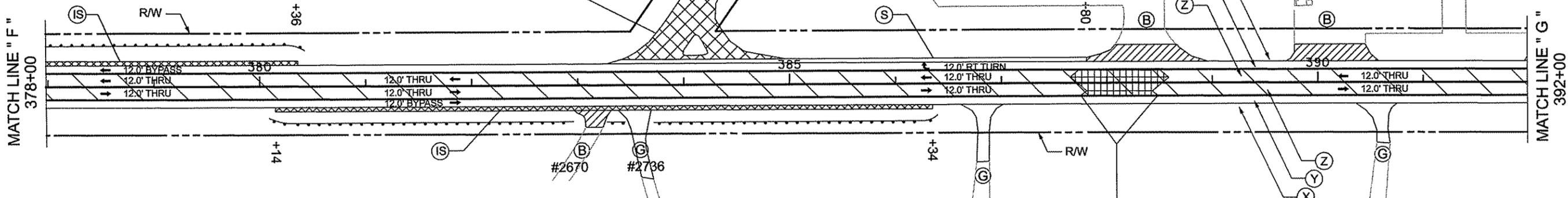
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CHARLES M. GARDENHEAD JR. SIGNATURE: <i>[Signature]</i> DATE: 4/23/12 LICENSE NO. 40416					DRAWN BY: JF DATE: 4/1/2012 DESIGN BY: JF DATE: 4/1/2012 CHECKED BY: JO DATE: 5/1/2012		ANOKA COUNTY HIGHWAY DEPT.		COUNTY PROJECT NO. CP 12-14-22	
CONSTRUCTION PLAN AND PROFILE STA 364+00 TO 378+00 Sheet 21 of 69 Sheets					NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED9_CONST.PL 04/2012 1:15:28 PM					

TYPICAL SAWING DETAIL



- * NEW INTERSECTION DETAIL
- * SALVAGE MEDIAN SIGNS
- * REMOVE INPLACE MEDIAN
- * RECLAIM BIT INTERSECTION

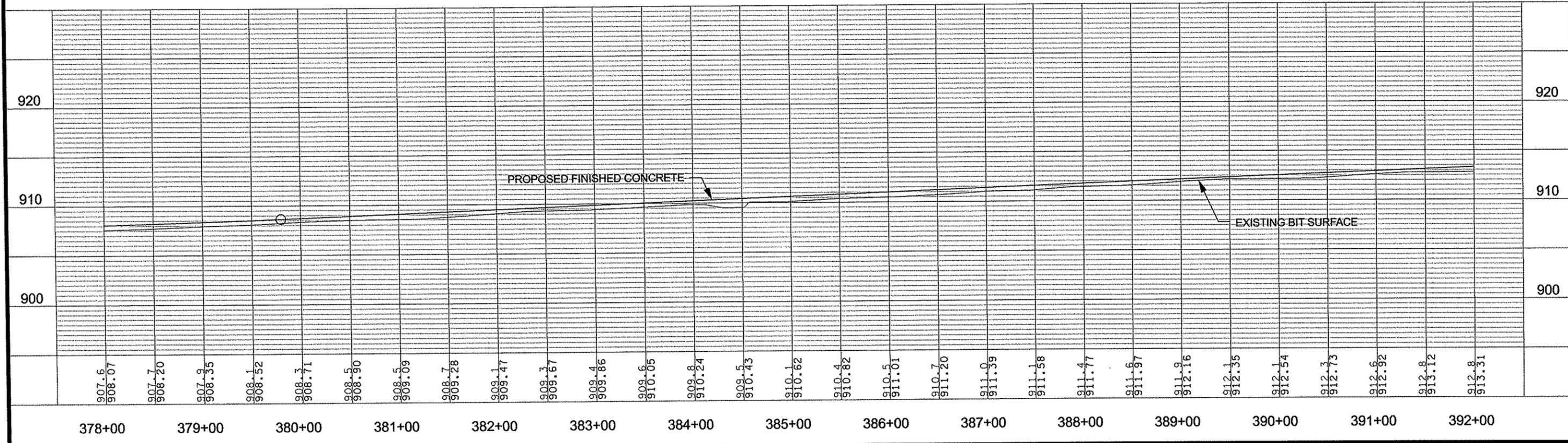
* NOTE - CONTRACTOR SHALL COORDINATE DIRECTLY WITH CITY OF EAST BETHEL FIRE DEPT. REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.



- * MILL MAINLINE 2" , 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT.
- SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS

- SILT FENCE
- MILL JOINT
- G = GRAVEL
- B = BIT
- C = CONC
- X 1.5' AGGREGATE SHOULDER
- Y RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- Z CONCRETE MAINLINE
- CEP CULVERT END PROTECTION

SEE TYPICAL SAWING DETAIL



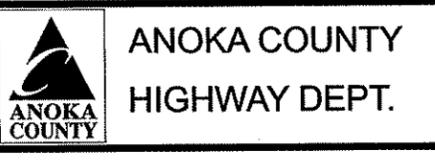
NO	DATE	BY	CKD	APPR	REVISION

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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: CHARLES M. CADENHEAD JR.
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40416

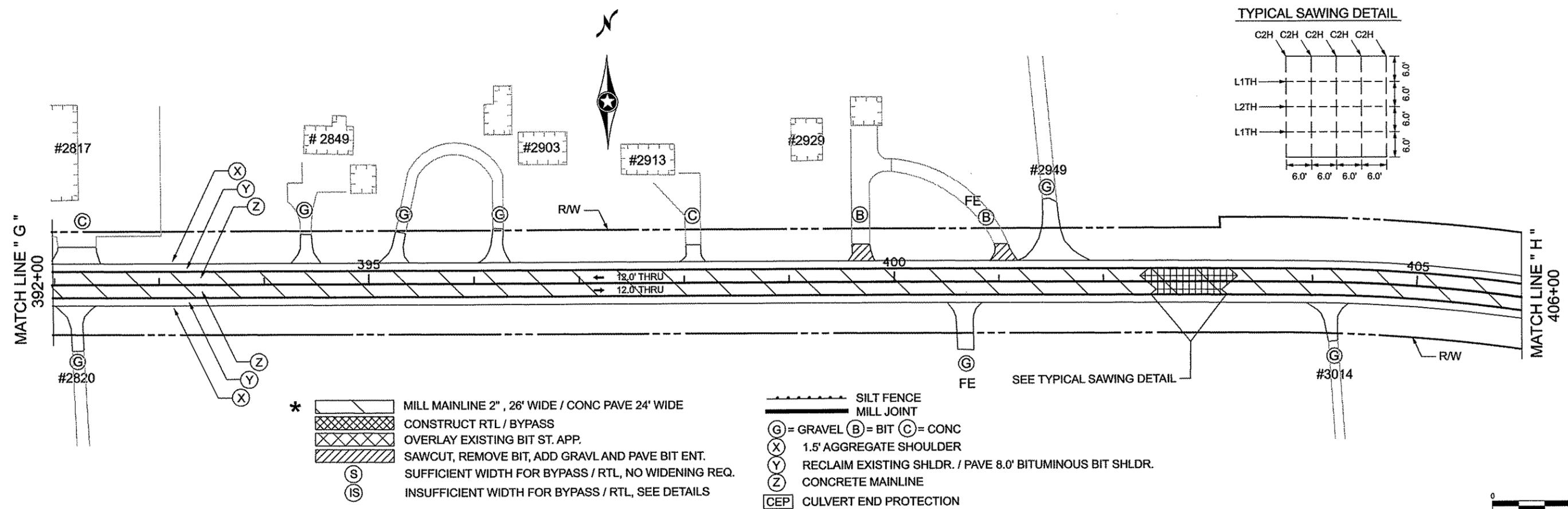
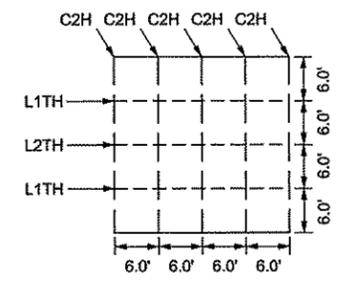
DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012



ANOKA COUNTY
 HIGHWAY DEPT.
 COUNTY PROJECT NO. CP 12-14-22

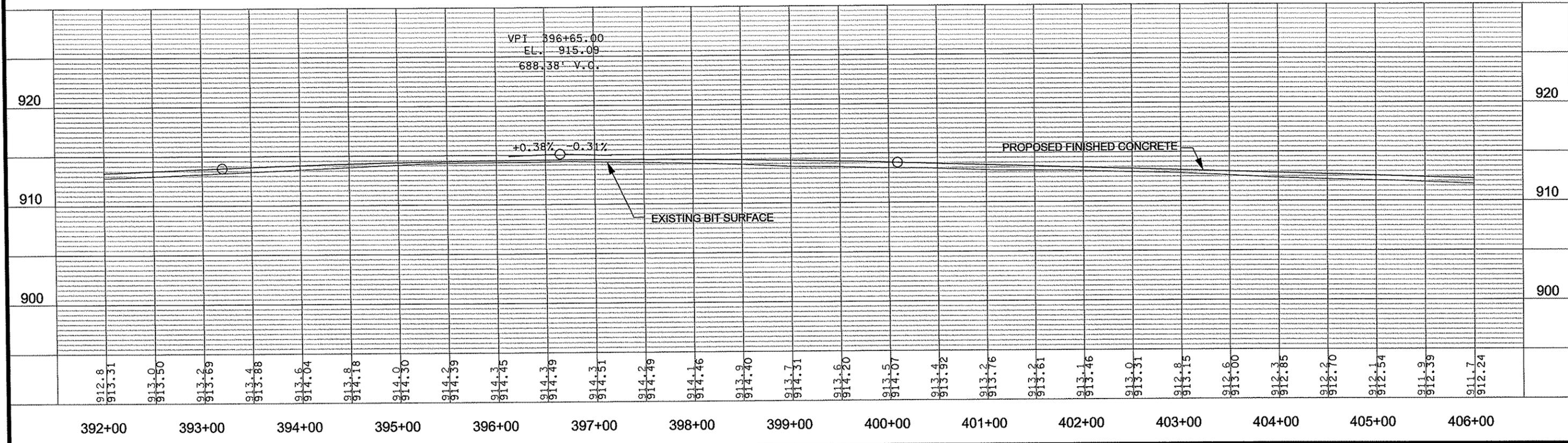
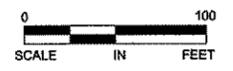
CONSTRUCTION PLAN AND PROFILE
 STA 378+00 TO 392+00
 Sheet 22 of 69 Sheets

TYPICAL SAWING DETAIL



- * MILL MAINLINE 2", 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT.
- SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS

- SILT FENCE
- MILL JOINT
- G = GRAVEL B = BIT C = CONC
- X 1.5' AGGREGATE SHOULDER
- Y RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- Z CONCRETE MAINLINE
- CEP CULVERT END PROTECTION



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22 (RR-Vickers)\1 ALL CONC\BASE\PROPOSED\9 CONST.PLAN\0212 1:16:03 PM

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: CHARLES M. COENHEAD JR
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40416

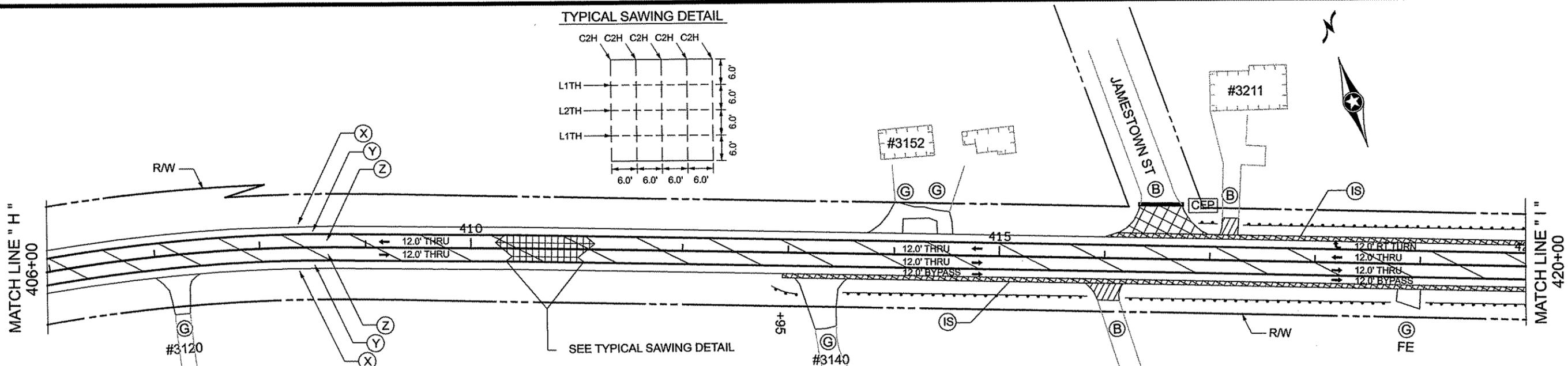
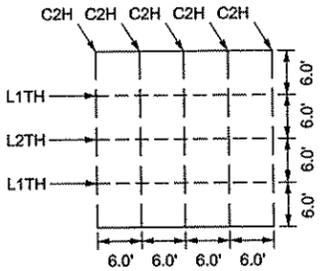
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 CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

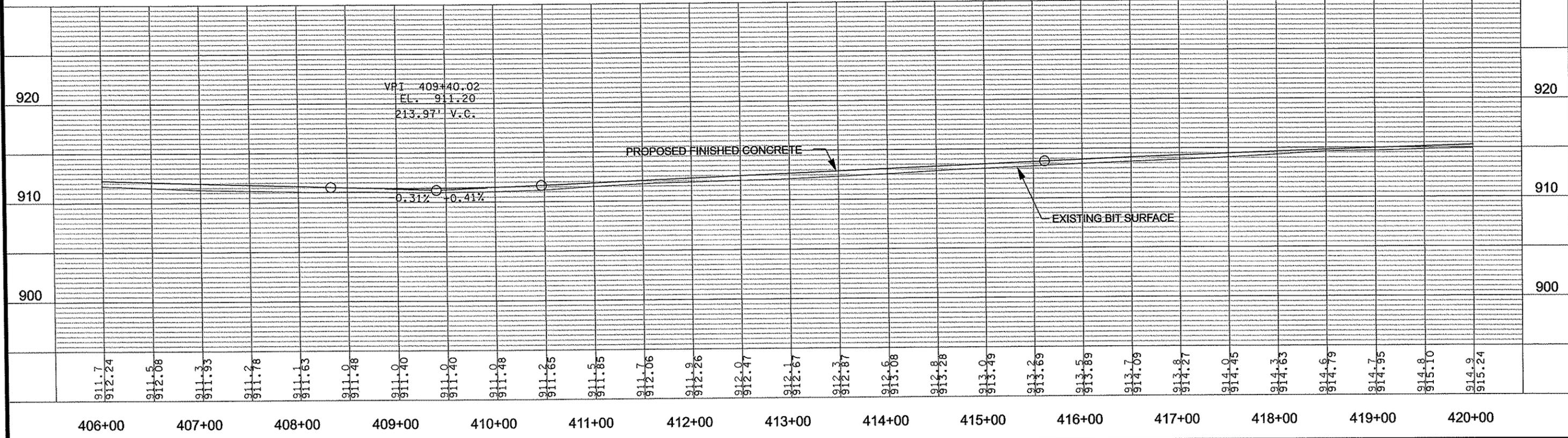
CONSTRUCTION PLAN AND PROFILE
 STA 392+00 TO 406+00
 Sheet 23 of 69 Sheets

TYPICAL SAWING DETAIL



- * MILL MAINLINE 2", 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT.
- SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS

- SILT FENCE
- MILL JOINT
- G = GRAVEL
- B = BIT
- C = CONC
- X = 1.5' AGGREGATE SHOULDER
- Y = RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- Z = CONCRETE MAINLINE
- CEP = CULVERT END PROTECTION



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\BASE\PROPOSED\9_CONST.PLAN\02012 1:16:19 PM

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.

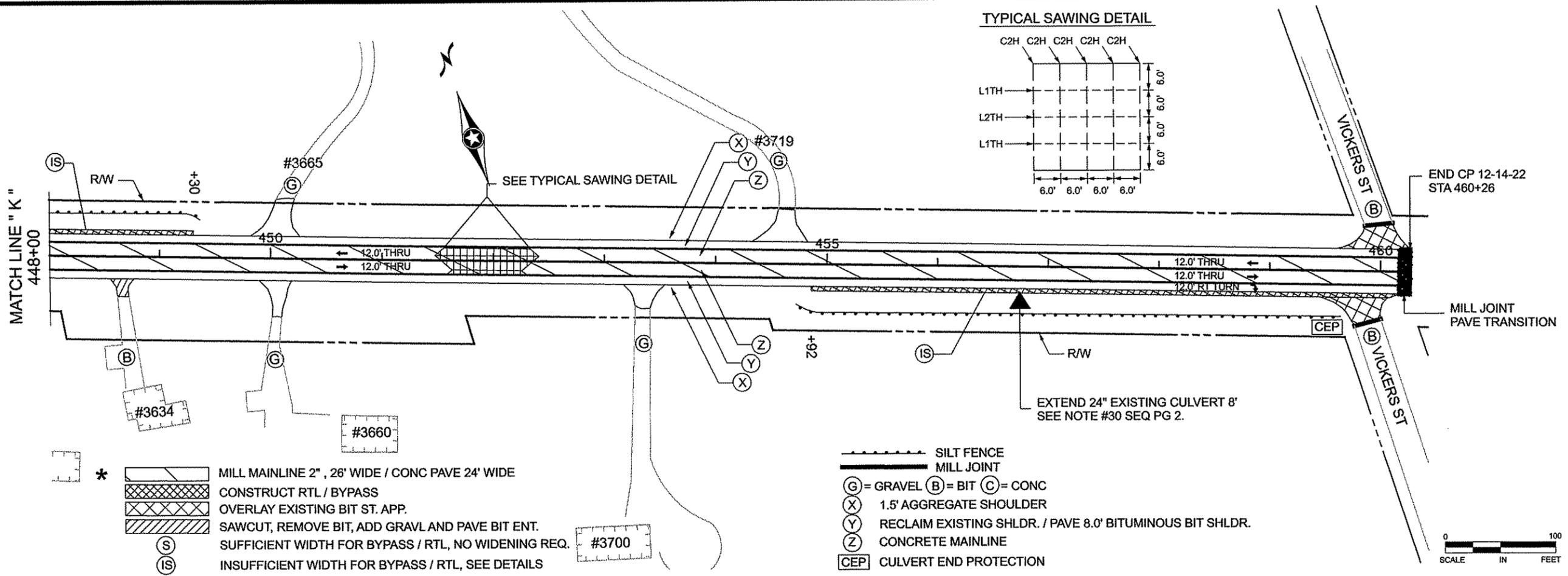
PRINT NAME: CHARLES M. CAENHEAD JR
 SIGNATURE: *Charles M. Caenhead Jr*
 DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

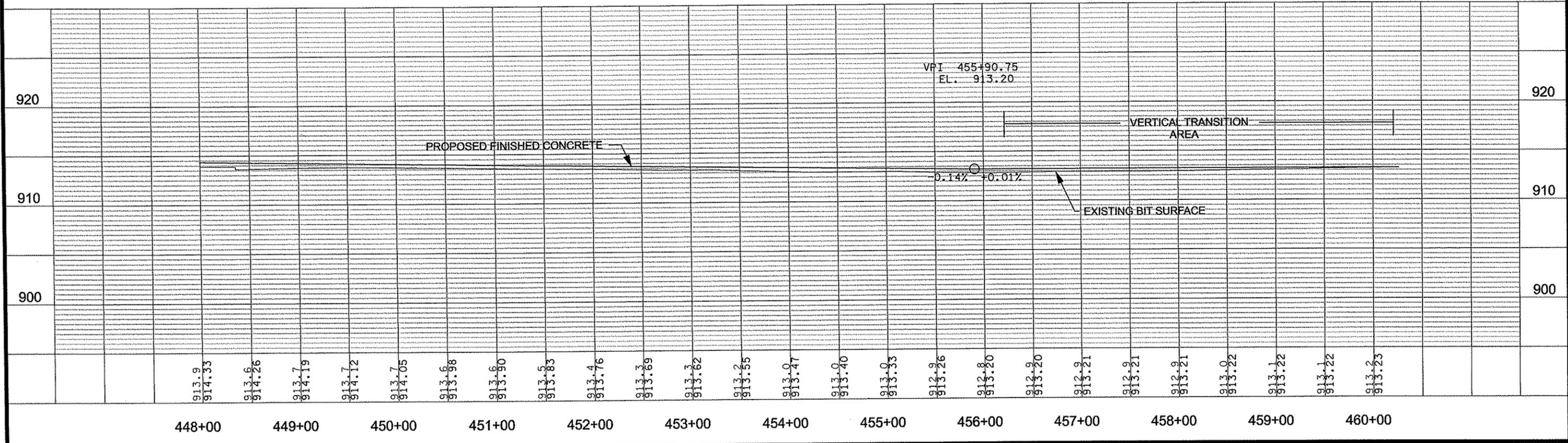
COUNTY PROJECT NO. CP 12-14-22

CONSTRUCTION PLAN AND PROFILE
 STA 406+00 TO 420+00
 Sheet 24 of 69 Sheets



- * MILL MAINLINE 2", 26' WIDE / CONC PAVE 24' WIDE
- CONSTRUCT RTL / BYPASS
- OVERLAY EXISTING BIT ST. APP.
- SAWCUT, REMOVE BIT, ADD GRAVL AND PAVE BIT ENT.
- SUFFICIENT WIDTH FOR BYPASS / RTL, NO WIDENING REQ.
- INSUFFICIENT WIDTH FOR BYPASS / RTL, SEE DETAILS

- SILT FENCE
- MILL JOINT
- G = GRAVEL B = BIT C = CONC
- X = 1.5' AGGREGATE SHOULDER
- Y = RECLAIM EXISTING SHLDR. / PAVE 8.0' BITUMINOUS BIT SHLDR.
- Z = CONCRETE MAINLINE
- CEP = CULVERT END PROTECTION



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\BASE\PROPOSED\CONST.PLAN\12-14-22.dwg 1:17:05 PM

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: CHARLES M. CABENHEAD JR.

SIGNATURE: *[Signature]*

DATE: 4/23/12 LICENSE NO. 49416

DRAWN BY: JF DATE: 4/1/2012

DESIGN BY: JF DATE: 4/1/2012

CHECKED BY: JO DATE: 5/1/2012

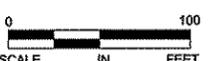
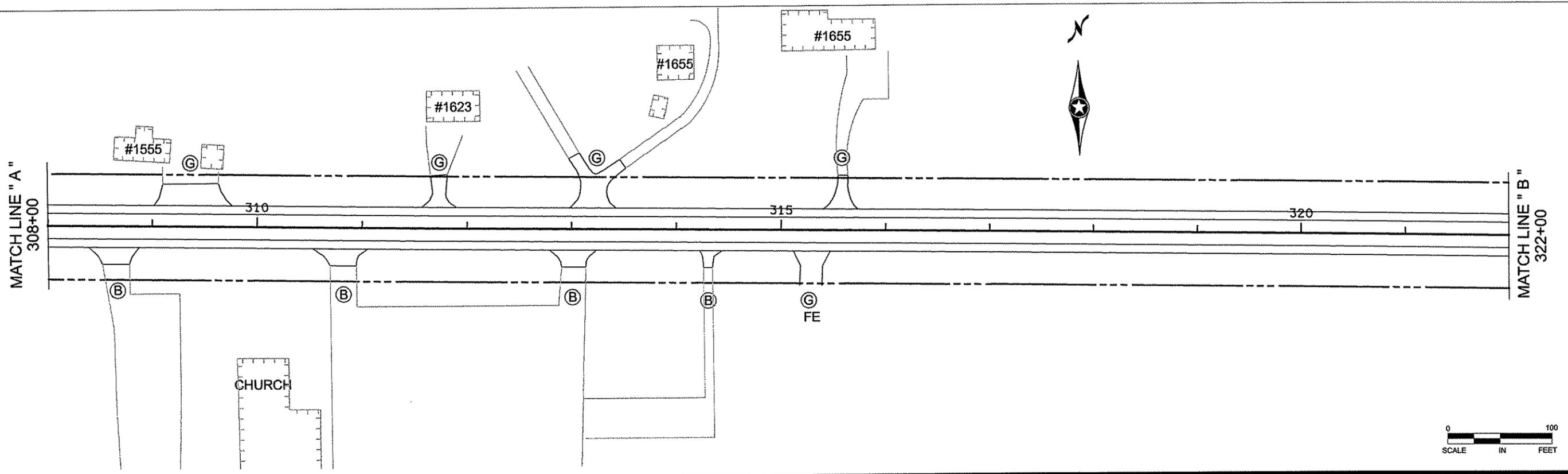
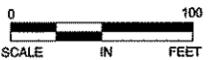
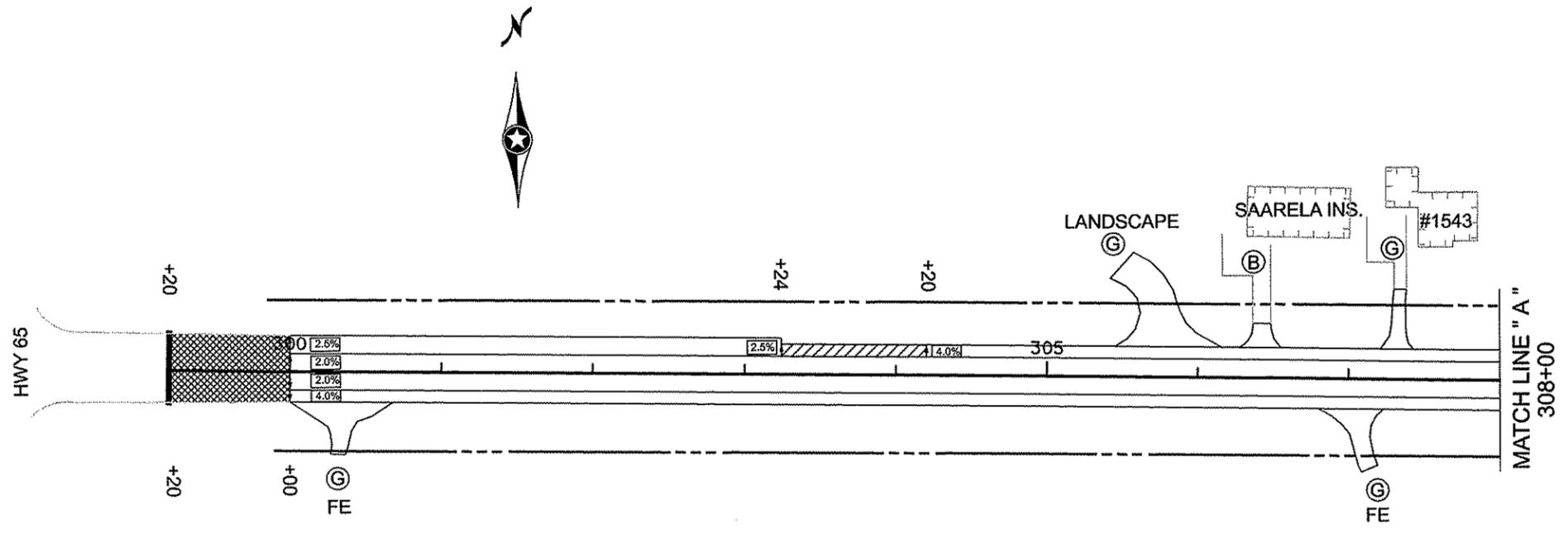
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

CONSTRUCTION PLAN AND PROFILE

STA 448+00 TO 460+00

Sheet 27 of 69 Sheets



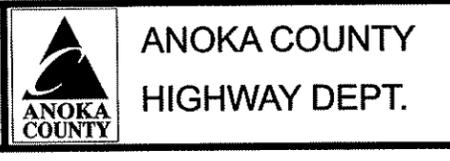
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\11_SUPER PLAN\12-01-12.dwg 1:18:59 PM

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.

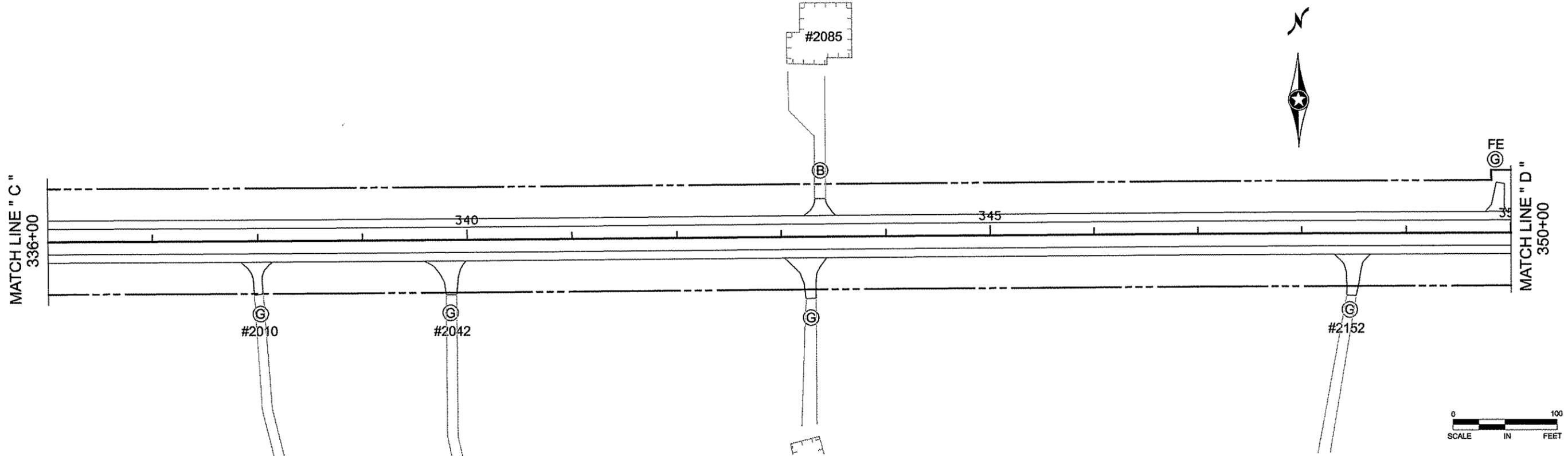
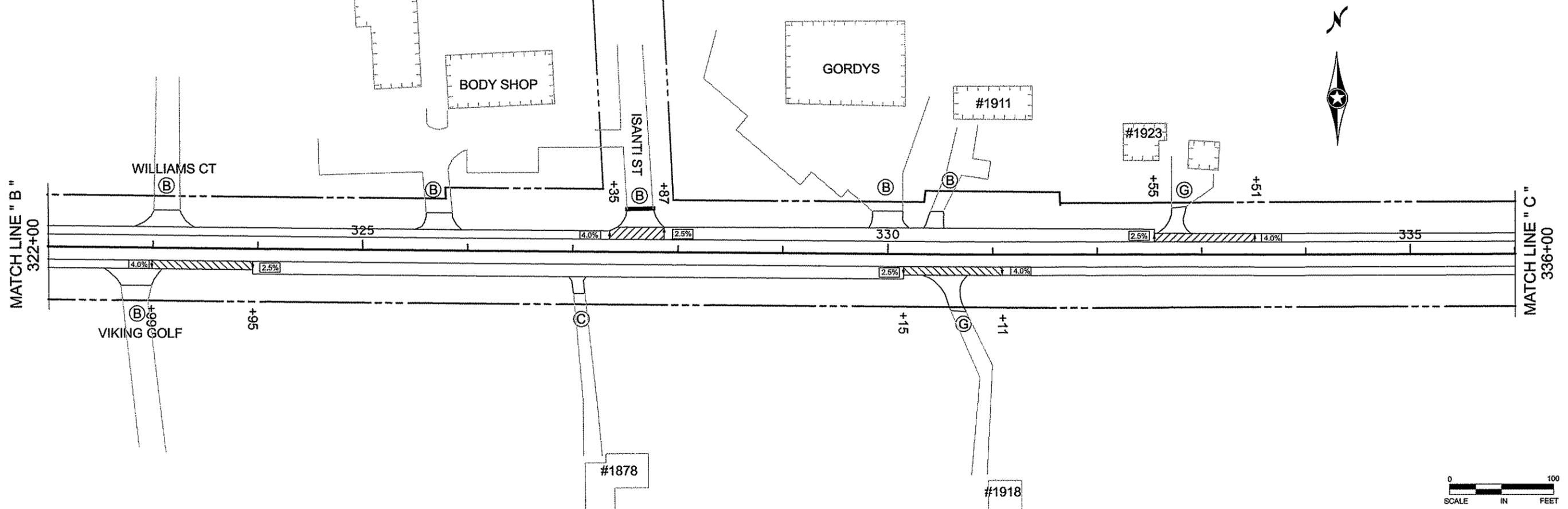
PRINT NAME: CHARLES M. CADENHEAD JR.
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012



COUNTY PROJECT NO. CP 12-14-22

SUPER ELEVATION PLAN
 STA 300+00 TO 322+00
 Sheet 28 of 69 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22 (RR-Vickers)\1 ALL CONC\BASE\PROPOSED\11 SUPER P\12-01-22-29.dwg 1:19:19 PM

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.

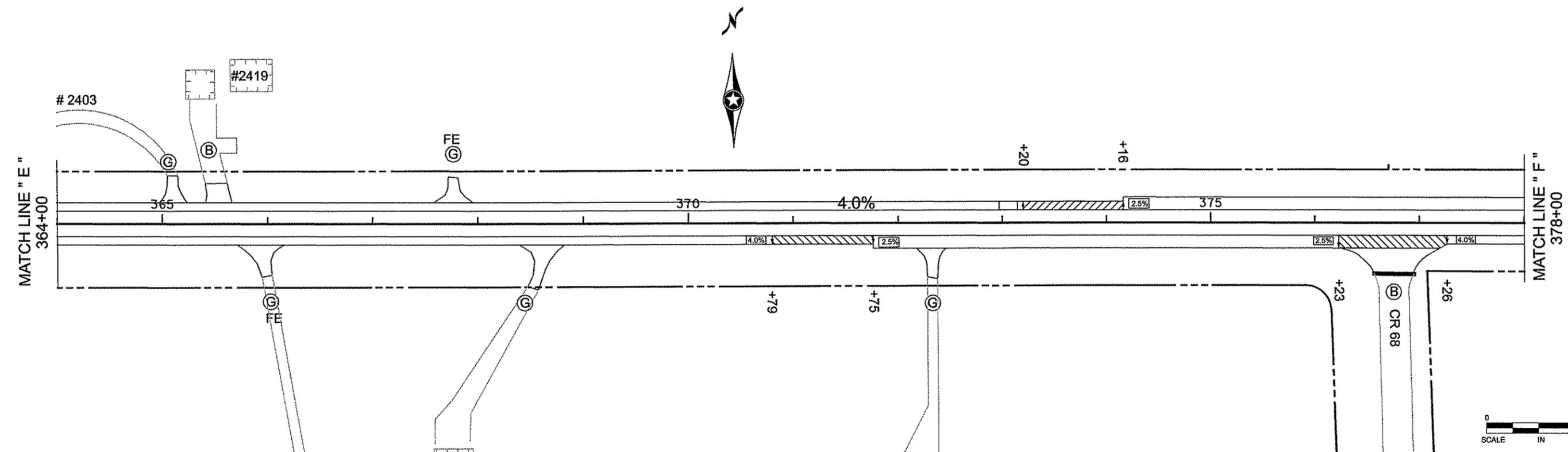
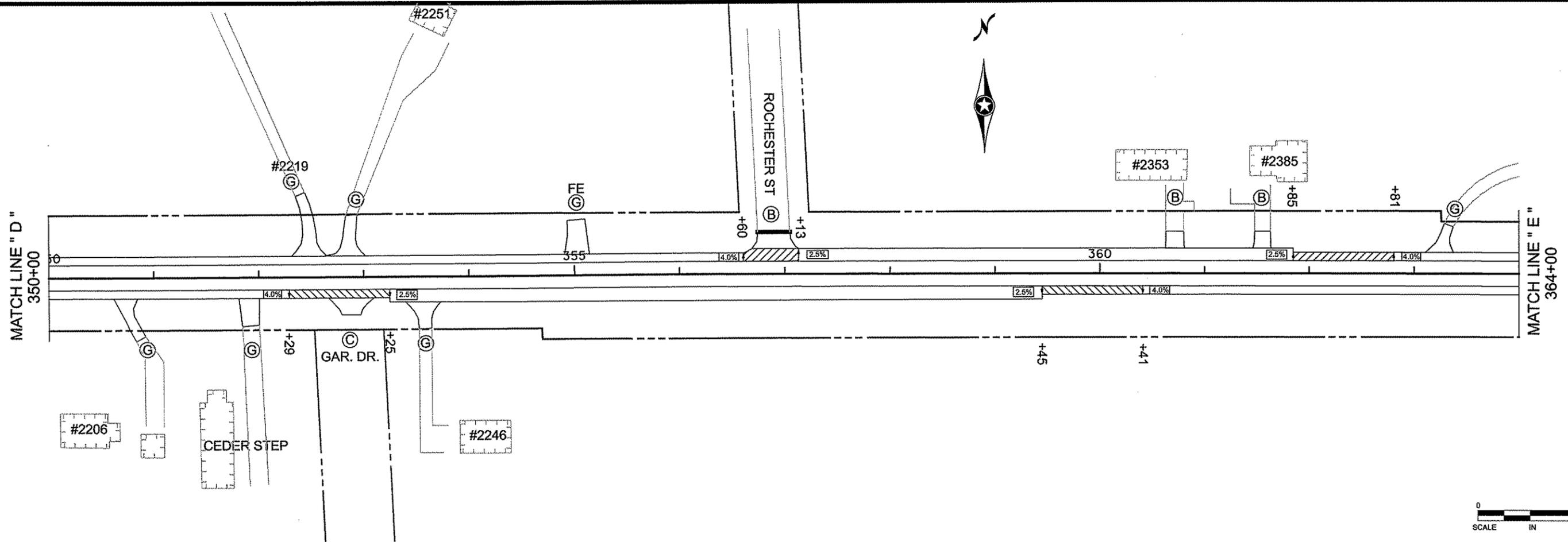
PRINT NAME: CHARLES M. CAPENHEAD, JR.
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

SUPER ELEVATION PLAN
 STA 322+00 TO 350+00
 Sheet 29 of 69 Sheets



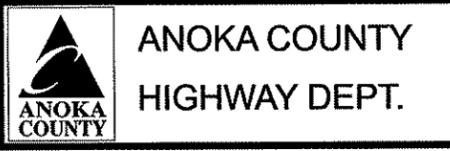
NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\11_SUPER PLAN\0912 1:19:34 PM

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.

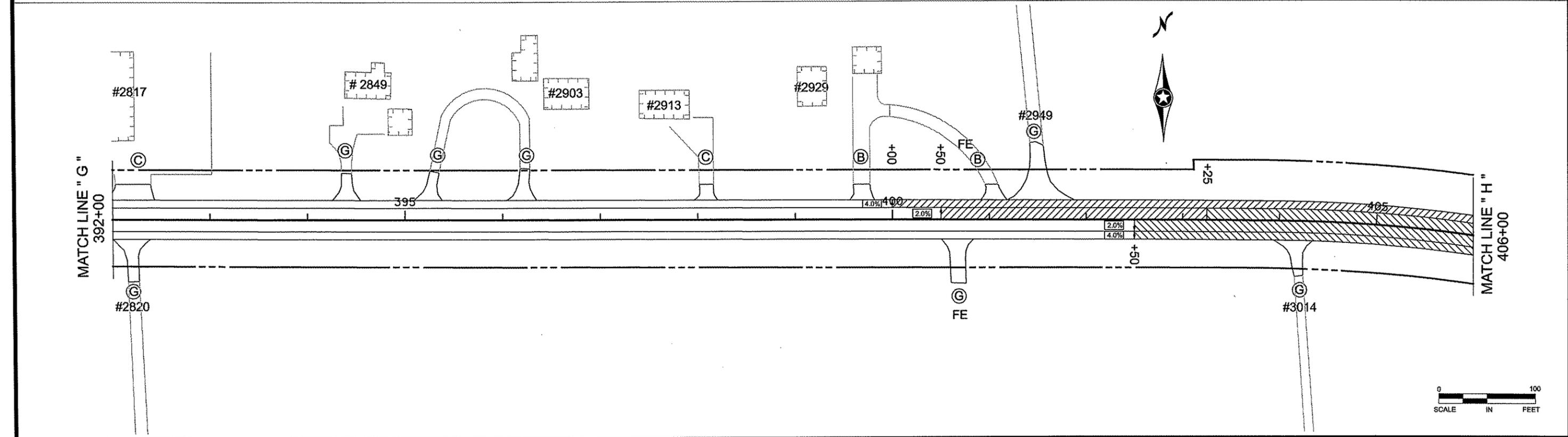
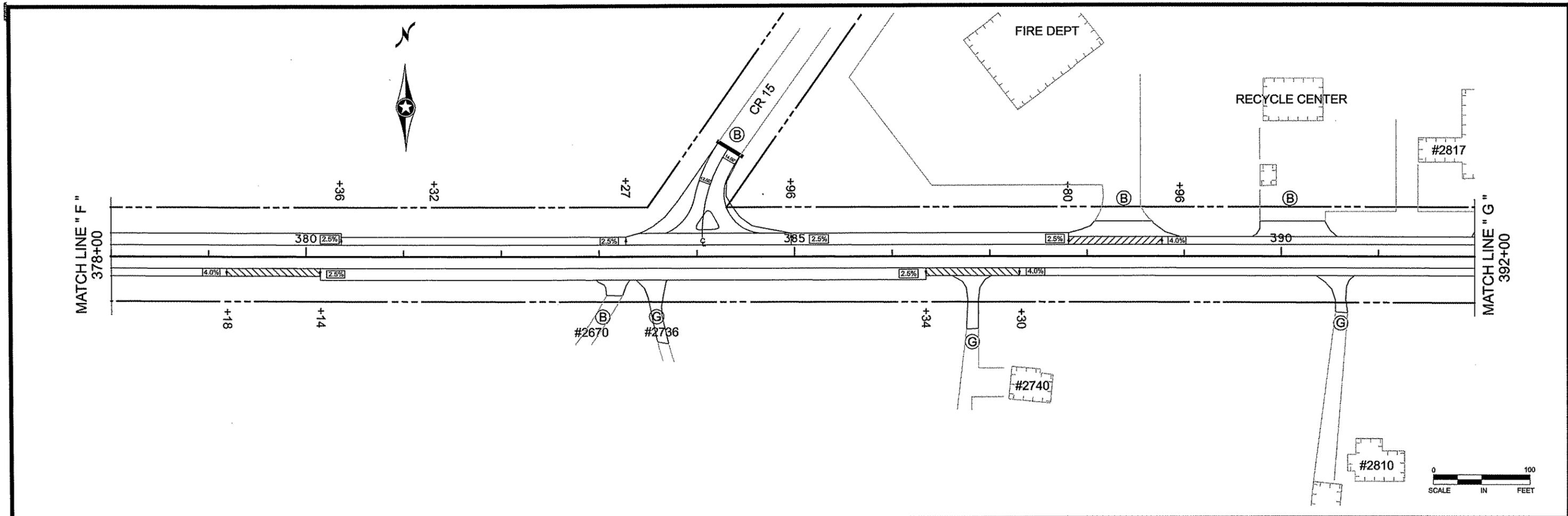
PRINT NAME: CHARLES M. GADENHEAD JR.
 SIGNATURE: *[Signature]*
 DATE: 5/1/2012 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012



COUNTY PROJECT NO. CP 12-14-22

SUPER ELEVATION PLAN
 STA 350+00 TO 378+00
 Sheet 30 of 69 Sheets



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\BASE\PROPOSED\11_SUPER PDM\0912 1:19:52 PM

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: CHARLES M. CADENHEAD JR.
 SIGNATURE: *[Signature]*
 DATE: 4/27/12 LICENSE NO. 40416

DRAWN BY: JF DATE: 4/1/2012
 DESIGN BY: JF DATE: 4/1/2012
 CHECKED BY: JO DATE: 5/1/2012

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

SUPER ELEVATION PLAN
 STA 378+00 TO 406+00
 Sheet 31 of 69 Sheets

MATCH LINE "H" 406+00

05+ 09+ 00+ 50+ 00+ 00+ 86+ 420+00

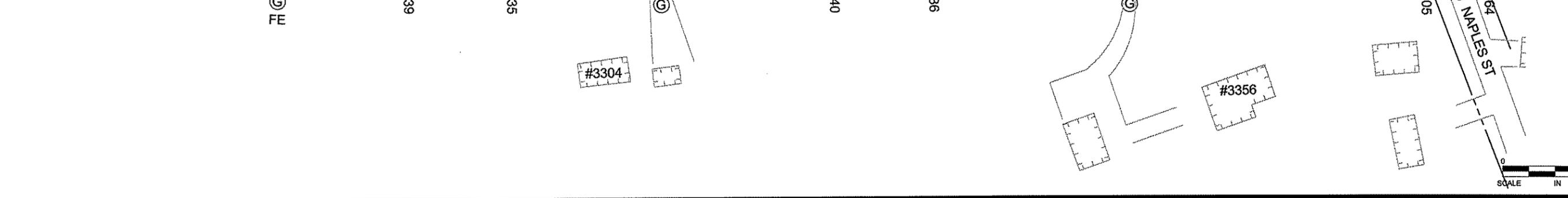
MATCH LINE "I" 420+00



MATCH LINE "I" 420+00

00+ 08+ 07+ 18+ 77+ 434+00

MATCH LINE "J" 434+00



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:12-01-00\CSAH_22_(RR-Vickers)\11 ALL CONCIBase\PROPOSED\11_SUPER PION\0812 1:20:07 PM

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: CHARLES M. CADENHEAD, P.E.

SIGNATURE: *[Signature]*

DATE: 4/25/12 LICENSE NO: 40416

DRAWN BY: JF DATE: 4/1/2012

DESIGN BY: JF DATE: 4/1/2012

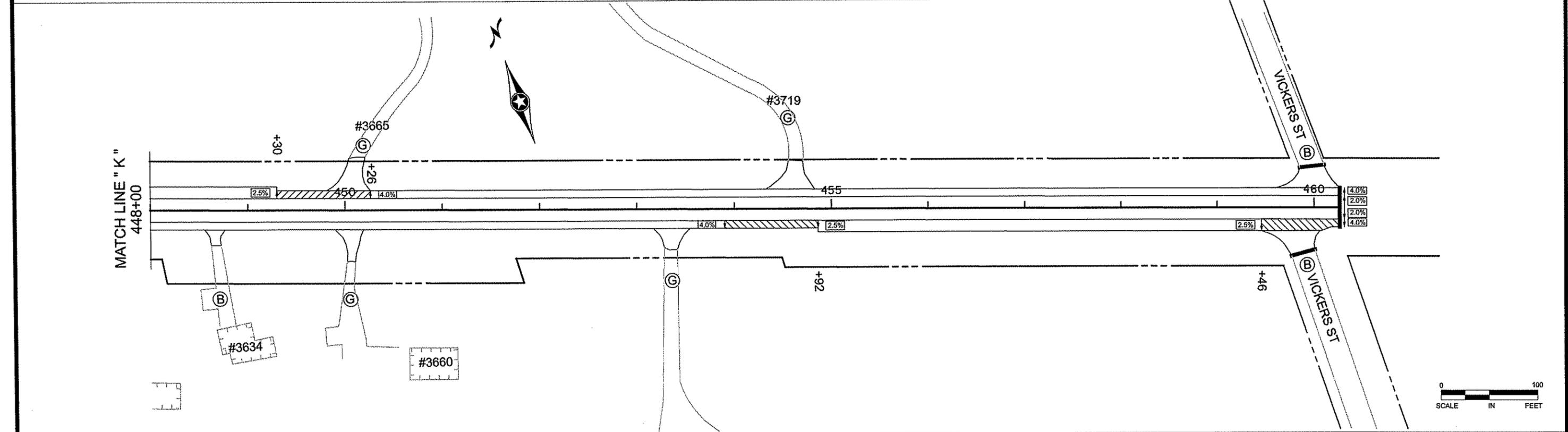
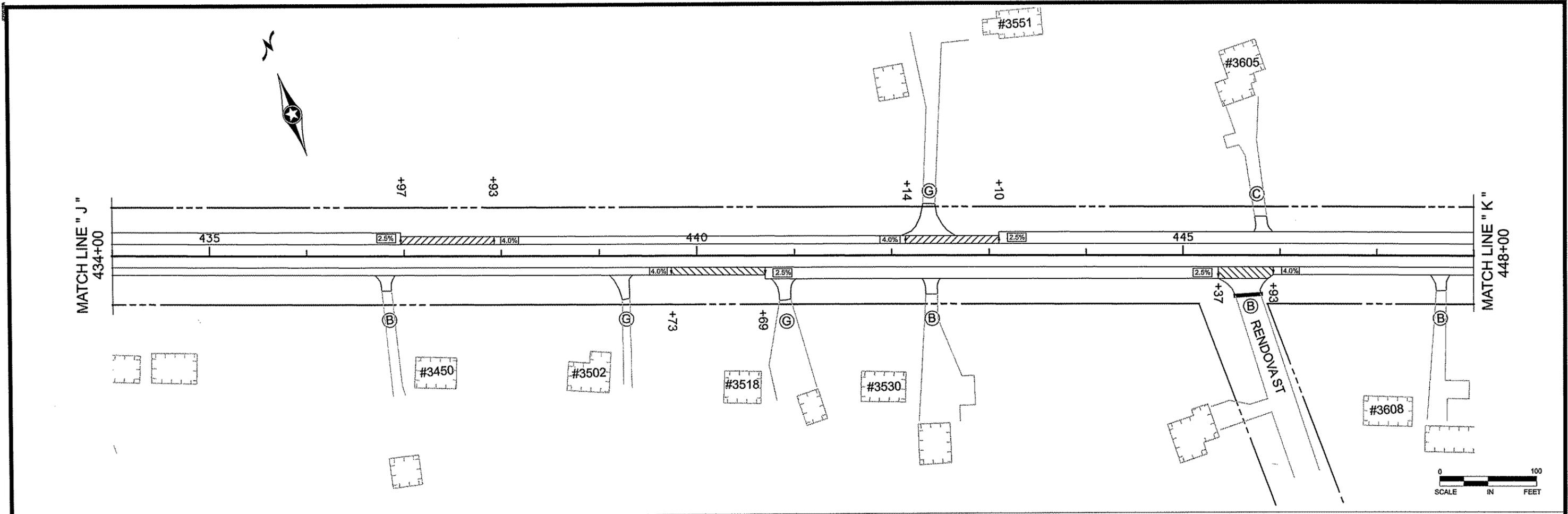
CHECKED BY: JO DATE: 5/1/2012



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

SUPER ELEVATION PLAN
STA 406+00 TO 434+00
Sheet 32 of 69 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Base\PROPOSED\11_SUPER PLOW\029012 1:20:20 PM

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: CHARLES M. CADENHEAD JR.
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 46416

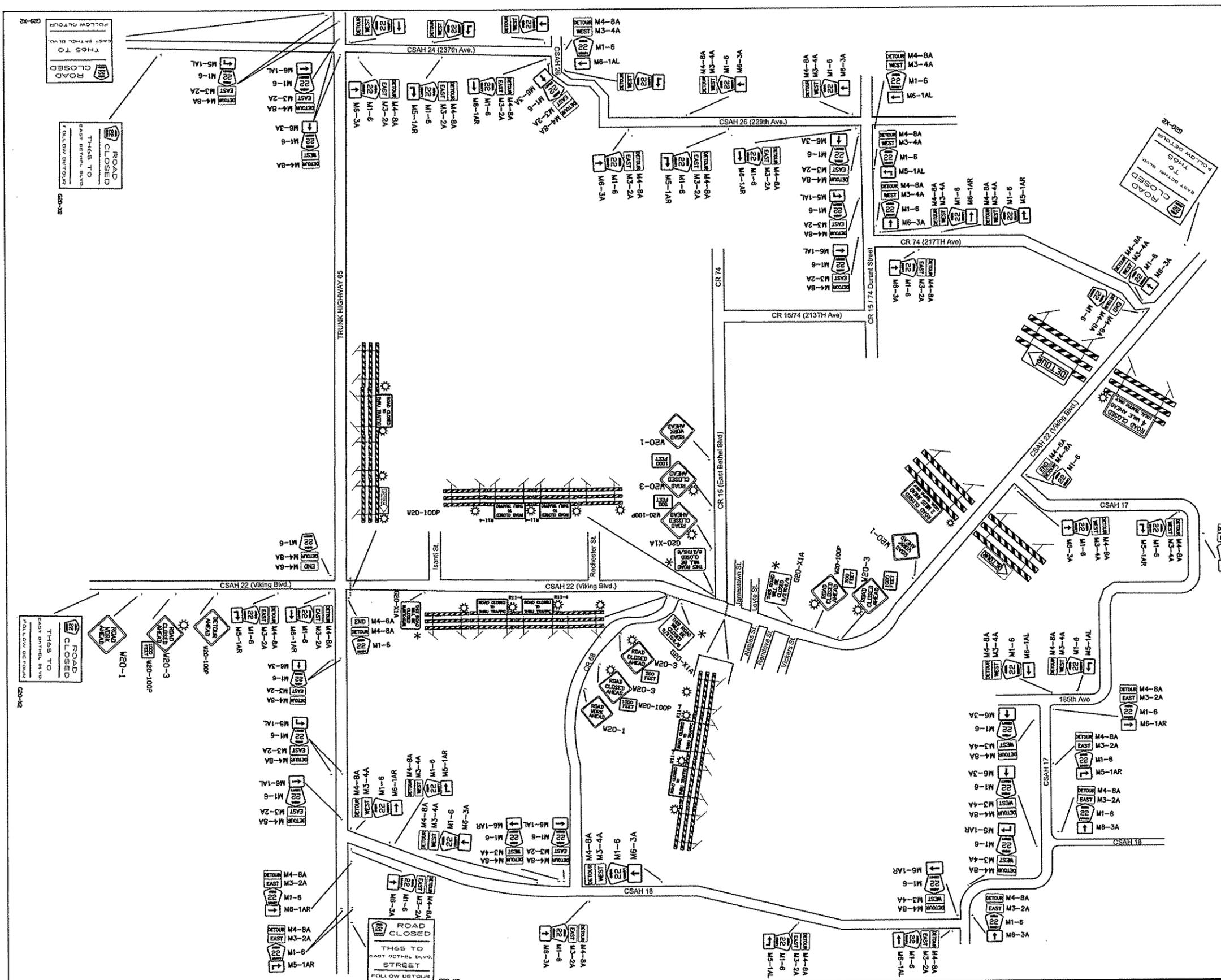
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 CHECKED BY: JO DATE: 5/1/2012



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. CP 12-14-22

SUPER ELEVATION PLAN
 STA 434+00 TO 460+26
 Sheet 33 of 69 Sheets



STANDARD TRAFFIC CONTROL NOTES

- 1) LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) ALL BARRICADES AND SIGNS SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
- 3) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
- 4) ALL BARRICADE MARKINGS SHALL BE SLANTED IN THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 5) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 6) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: *Charles Cadena*
 SIGNATURE: *Charles Cadena*
 DATE: *4/23/12* LICENSE NO. *40916*

DRAWN BY: *JJS* DATE: *4/12/12*
 DRAWN BY: *JJS* DATE: *4/12/12*
 CHECKED BY: *JKR* DATE: *4/12/12*

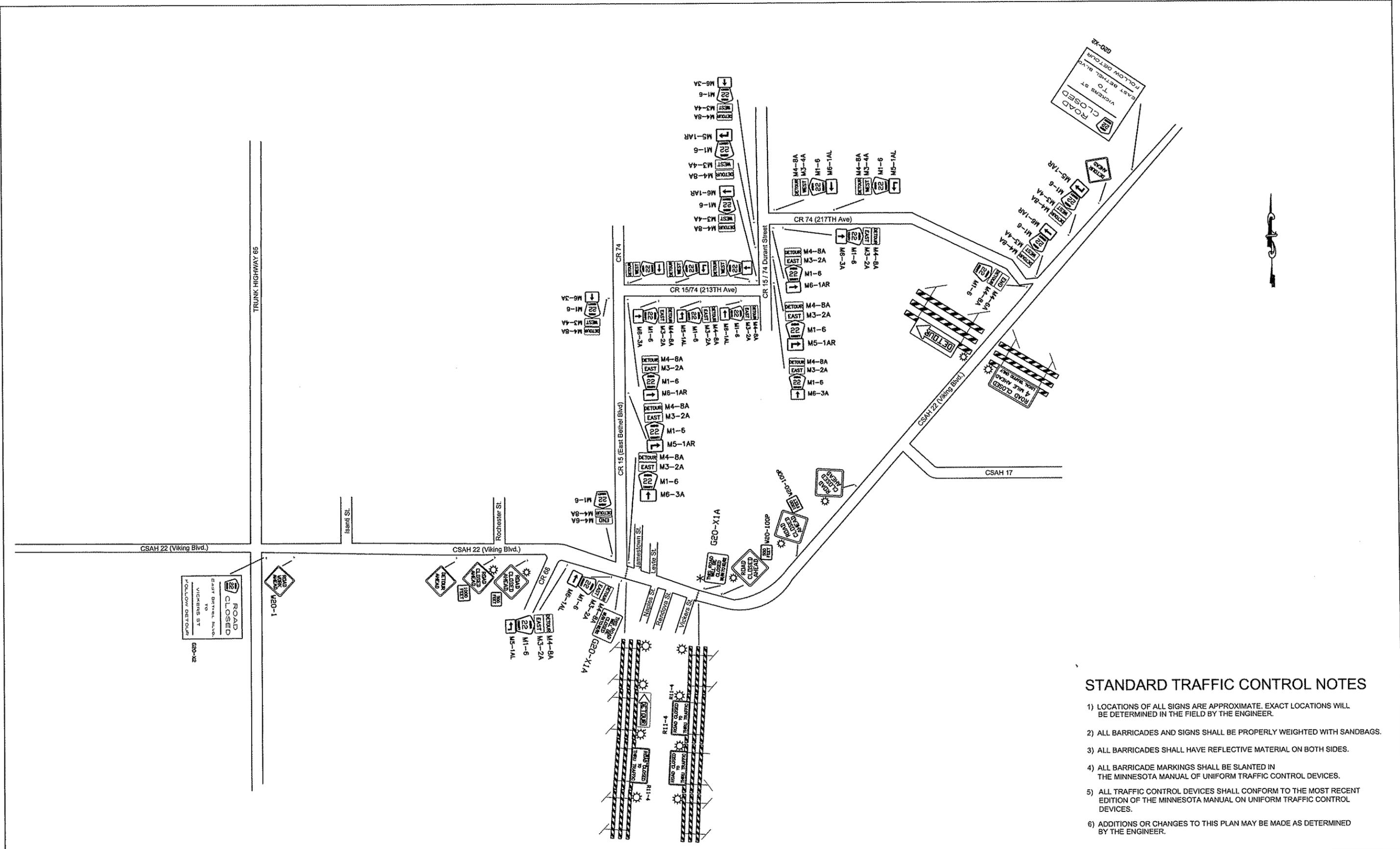
ANOKA COUNTY
HIGHWAY DEPT.



STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

CSAH 22 (Viking Blvd.)
 DETOUR A - Stage 1 & 2

Sheet 34 of 69 Sheets



STANDARD TRAFFIC CONTROL NOTES

- 1) LOCATIONS OF ALL SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) ALL BARRICADES AND SIGNS SHALL BE PROPERLY WEIGHTED WITH SANDBAGS.
- 3) ALL BARRICADES SHALL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
- 4) ALL BARRICADE MARKINGS SHALL BE SLANTED IN THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 5) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 6) ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AS DETERMINED BY THE ENGINEER.

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: *Christopher Ladenberg*

SIGNATURE: *Christopher Ladenberg*

DATE: *4/23/12* LICENSE NO. *402416*

DRAWN BY *JJS* DATE *4/12/12*

DESIGN BY *JJS* DATE *4/12/12*

CHECKED BY *JKR* DATE *4/12/12*



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

STATE AID PROJECT NO. _____

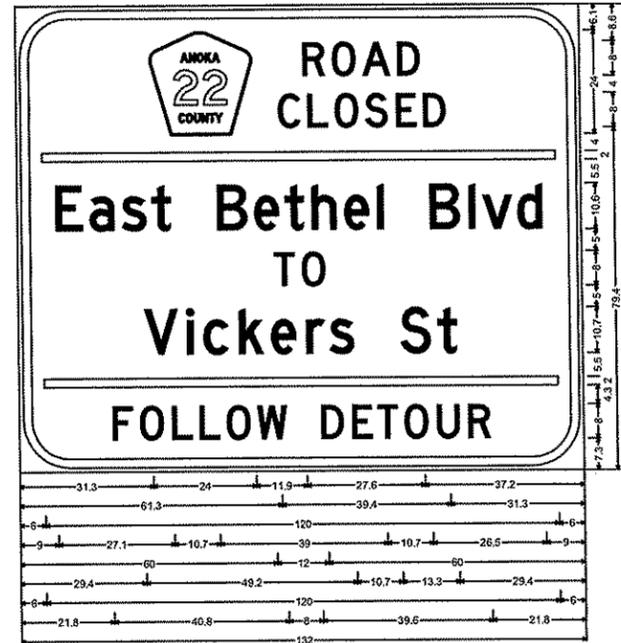
COUNTY PROJECT NO. 12-14-22

CSAH 22 (Viking Blvd.)
DETOUR B - Stage 3 & 4

Sheet 36 of 69 Sheets

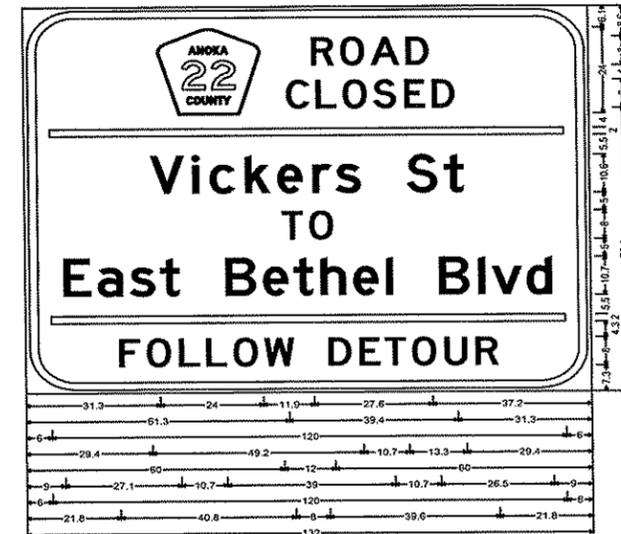
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TYPE III	8 FT.		• 1	W21-4	48"x48"		• 1
				W20-2	48"x48"		• 2
M4-10L	48"x18"		• 1				
TYPE III	8 FOOT		• 1	W20-3	48"x48"		• 5 • 2 • 2
R11-4	96" x 36"		• 3	M4-8	24"x12"	M5-1L	• 2
	8 FOOT		• 3	M3-4	24"x12"	M5-1R	• 2
				M1-6	24"x24"	M6-1L	• 2
					21"x15"	M6-1R	• 2
						M6-3	• 3
TYPE III	8 FOOT		• 4	M4-8	24"x12"	M5-1L	• 2
				M3-2	24"x12"	M5-1R	• 2
				M1-6	24"x24"	M6-1L	• 2
					21"x15"	M6-1R	• 2
						M6-3	• 4
M4-6	24"x12"		• 2	G20-X1	84"x60"		• 2
M4-8	24"x12"		• 2			G20-X1A	• 2
							* TO BE INSTALLED 10 DAYS PRIOR TO CONSTRUCTION
R11-3a	60" x 30"		• 1				
TYPE III	8 FOOT		• 1				

G20-X2 132" x 108"



G20-X2, 132x108; 12.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;
 [ROAD] D; [CLOSED] D; [East Bethel Blvd] D specified length; [TO] D; [Vickers St] D; [FOLLOW] D;
 [DETOUR] D;

G20-X2 132" x 108"



G20-X2, 132x108; 12.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;
 [ROAD] D; [CLOSED] D; [Vickers St] D; [TO] D; [East Bethel Blvd] D specified length; [FOLLOW] D;
 [DETOUR] D;

NO	DATE	BY	CHKD	APPR	REVISION

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: *Shades Ladner*
 SIGNATURE: *[Signature]*
 DATE: *4/23/12* LICENSE NO. *40416*

DRAWN BY JJS DATE 4/12/12
 DESIGN BY JJS DATE 4/12/12
 CHECKED BY JKR DATE 4/12/12



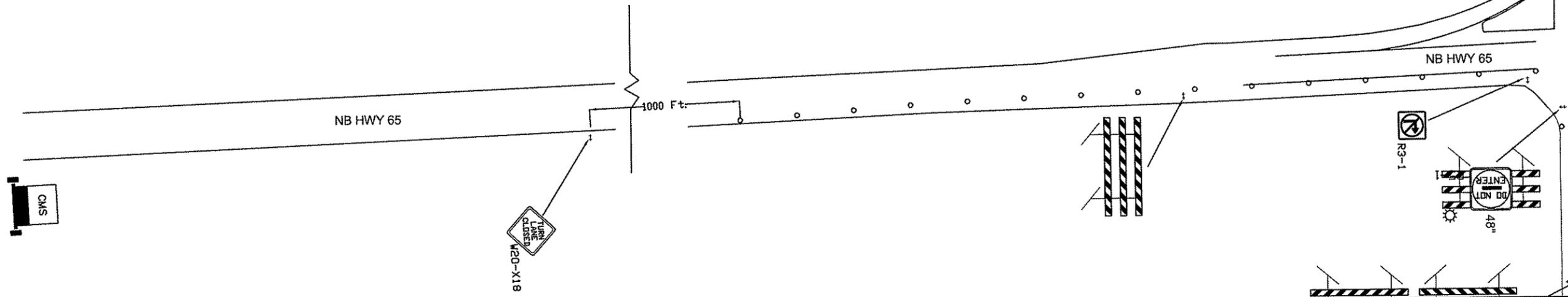
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

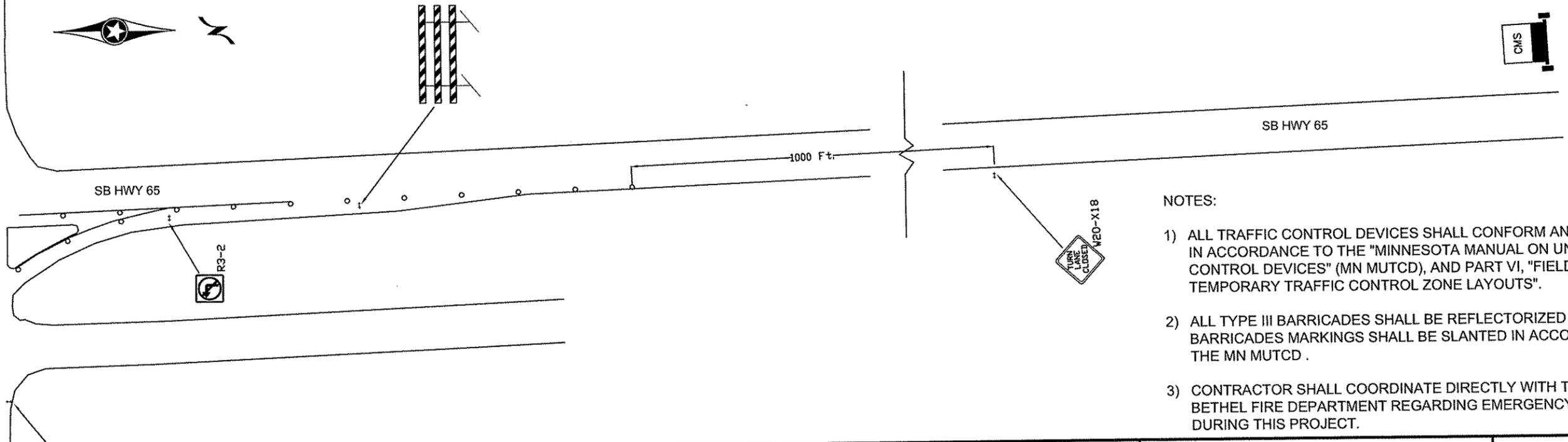
CSAH 22 (Viking Blvd.)
 DETOUR B - Stage 3 & 4
 Quantity Sheet
 Sheet 37 of 69 Sheets



MATCHLINE A



MATCHLINE A



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- 2) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD .
- 3) CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF EAST BETHEL FIRE DEPARTMENT REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CHARLES CADENHEAD

SIGNATURE: *[Signature]*

DATE: 4/23/12 REG. NO. 40416

DRAWN BY: ST DATE 03/10/12

DESIGN BY: ST DATE 03/10/12

CHECKED BY: JR DATE 04/05/12



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

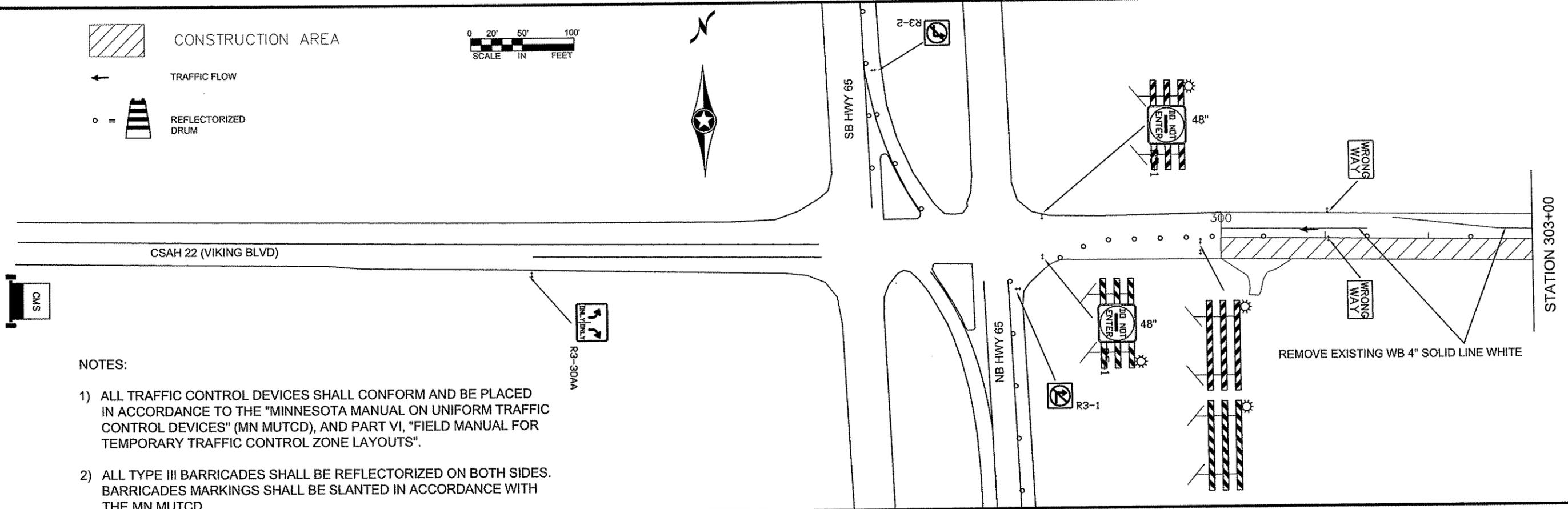
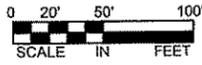
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STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 12-14-22

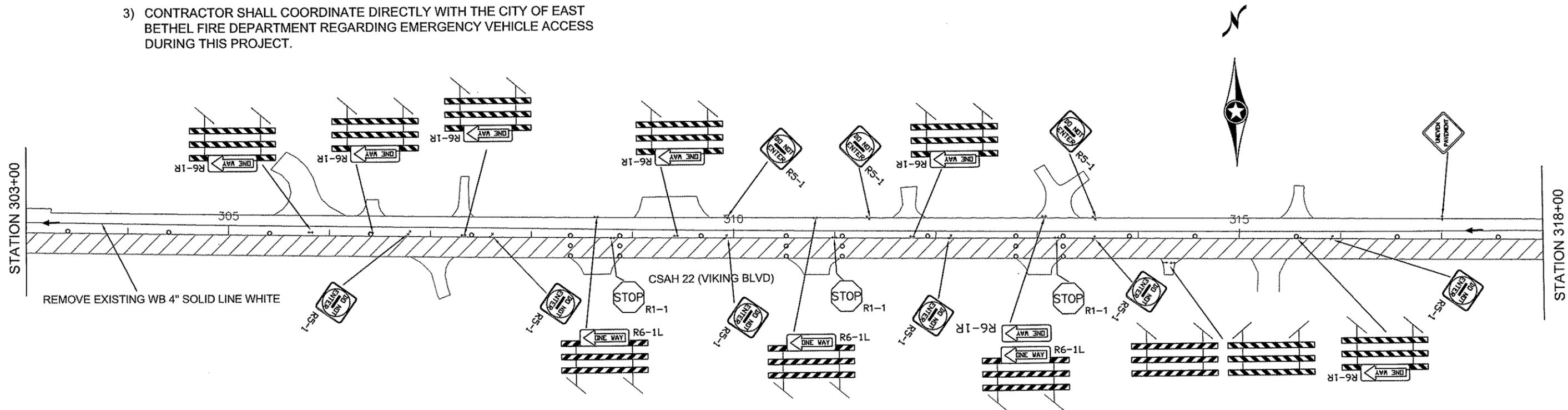
STAGE 1
CONSTRUCTION STAGING
AND TRAFFIC CONTROL

Sheet 38 of 69 Sheets



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- 2) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.
- 3) CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF EAST BETHEL FIRE DEPARTMENT REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONCI\Bases\PROPOSED\12-14-22 Stage1.dwg, 04/17/2012 2:20:05 PM

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: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenehead*
 DATE: 1/23/12 REG. NO. 40416

DRAWN BY: ST DATE 03/10/12
 DESIGN BY: ST DATE 03/10/12
 CHECKED BY: JR DATE 04/05/12

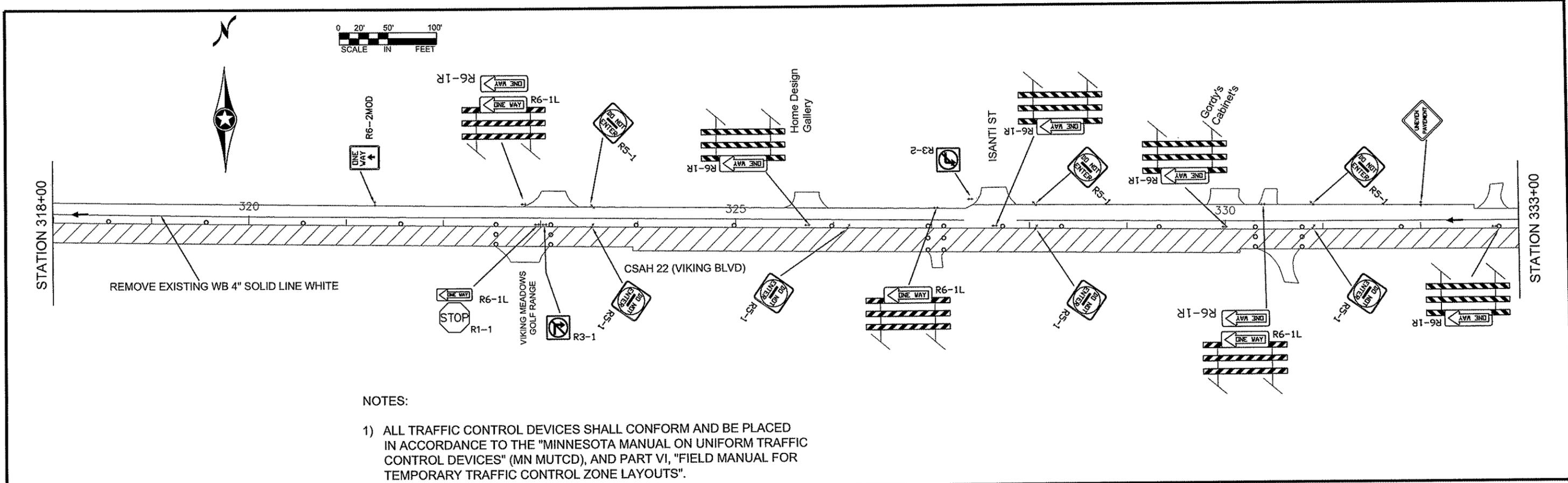


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

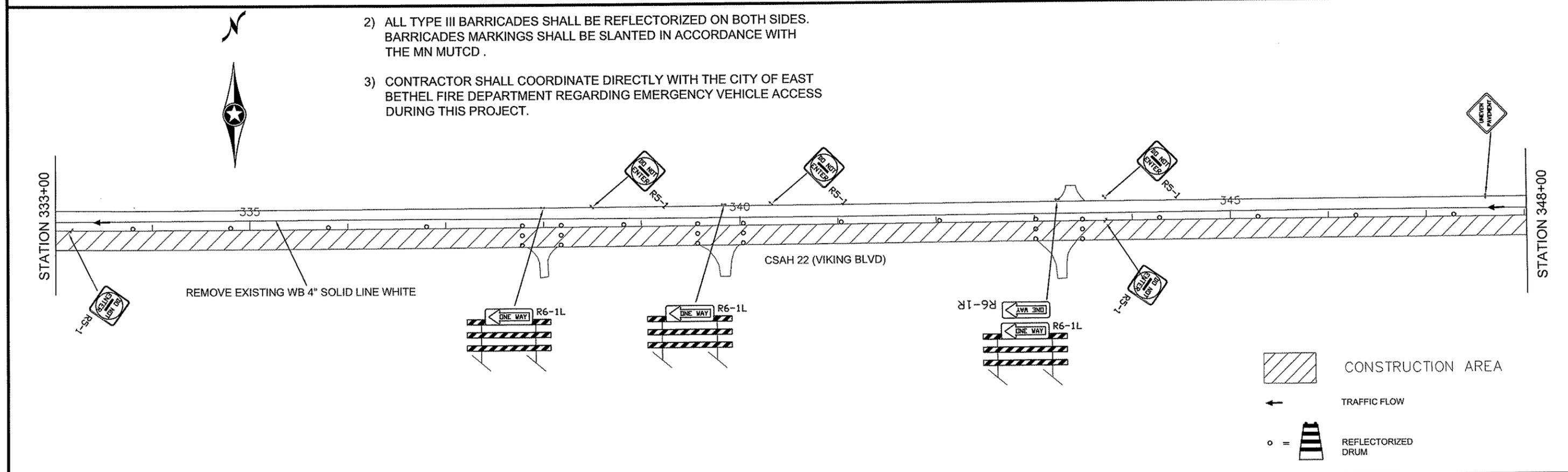
STAGE 1
CONSTRUCTION STAGING
AND TRAFFIC CONTROL

Sheet 39 of 69 Sheets



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- 2) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD .
- 3) CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF EAST BETHEL FIRE DEPARTMENT REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.

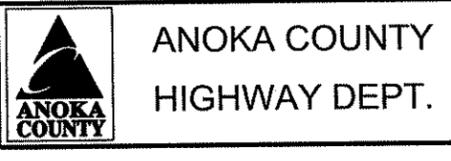


 CONSTRUCTION AREA
 TRAFFIC FLOW
 REFLECTORIZED DRUM

NO	DATE	BY	CHKD	APPR	REVISION

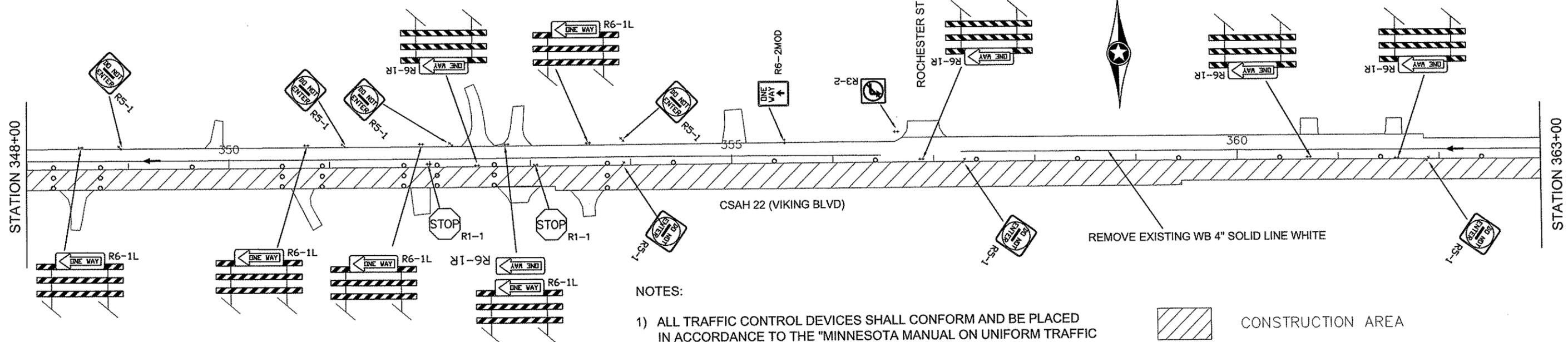
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenhead*
 DATE: 4/23/12 REG. NO. 40416

DRAWN BY: ST DATE 03/10/12
 DESIGN BY: ST DATE 03/10/12
 CHECKED BY: JR DATE 04/05/12



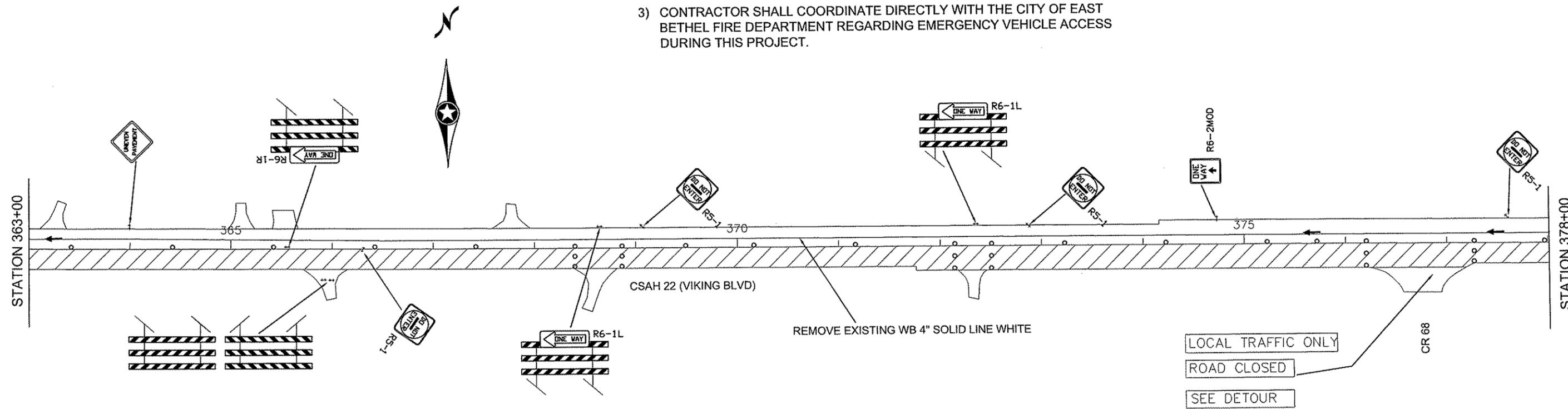
STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

STAGE 1
 CONSTRUCTION STAGING
 AND TRAFFIC CONTROL
 Sheet 40 of 69 Sheets



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- 2) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.
- 3) CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF EAST BETHEL FIRE DEPARTMENT REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.



LOCAL TRAFFIC ONLY
ROAD CLOSED
SEE DETOUR

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\12-14-22 Stage1.dwg, 04/17/2012 2:20:15 PM

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: CHARLES CROENHEAD
SIGNATURE: *Charles Croenhead*
DATE: 4/23/12 REG. NO. 40416

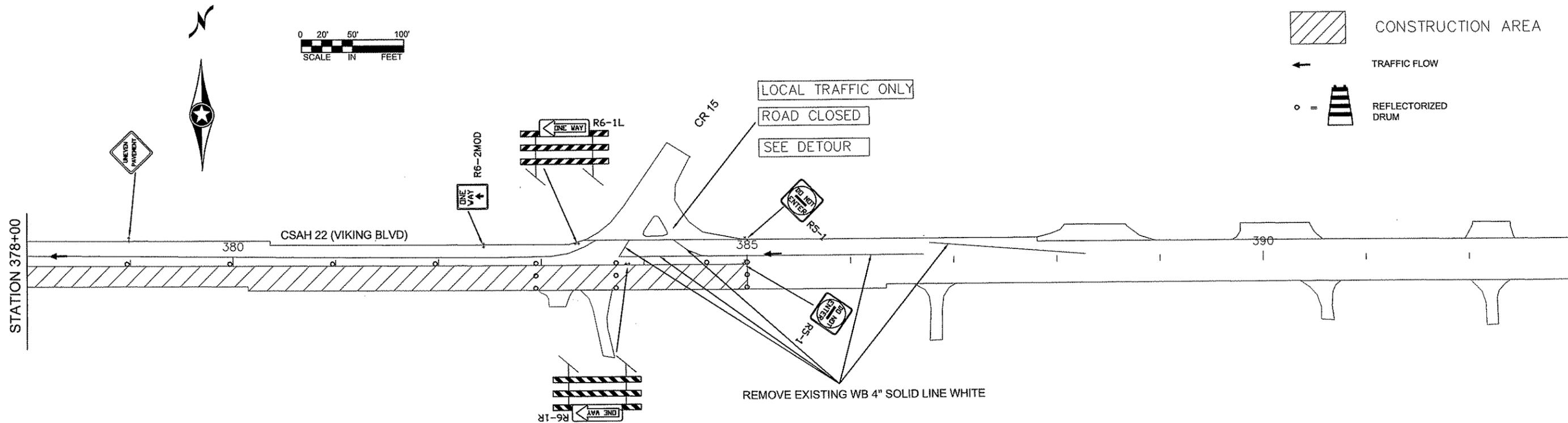
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DESIGN BY: ST DATE: 03/10/12
CHECKED BY: JR DATE: 04/05/12



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 12-14-22

STAGE 1
CONSTRUCTION STAGING
AND TRAFFIC CONTROL
Sheet 41 of 69 Sheets



 CONSTRUCTION AREA
 TRAFFIC FLOW
 REFLECTORIZED DRUM

- NOTES:
- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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 - 3) CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF EAST BETHEL FIRE DEPARTMENT REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\Bases\PROPOSED\12-14-22 Stage1.dwg, 04/17/2012 2:20:20 PM

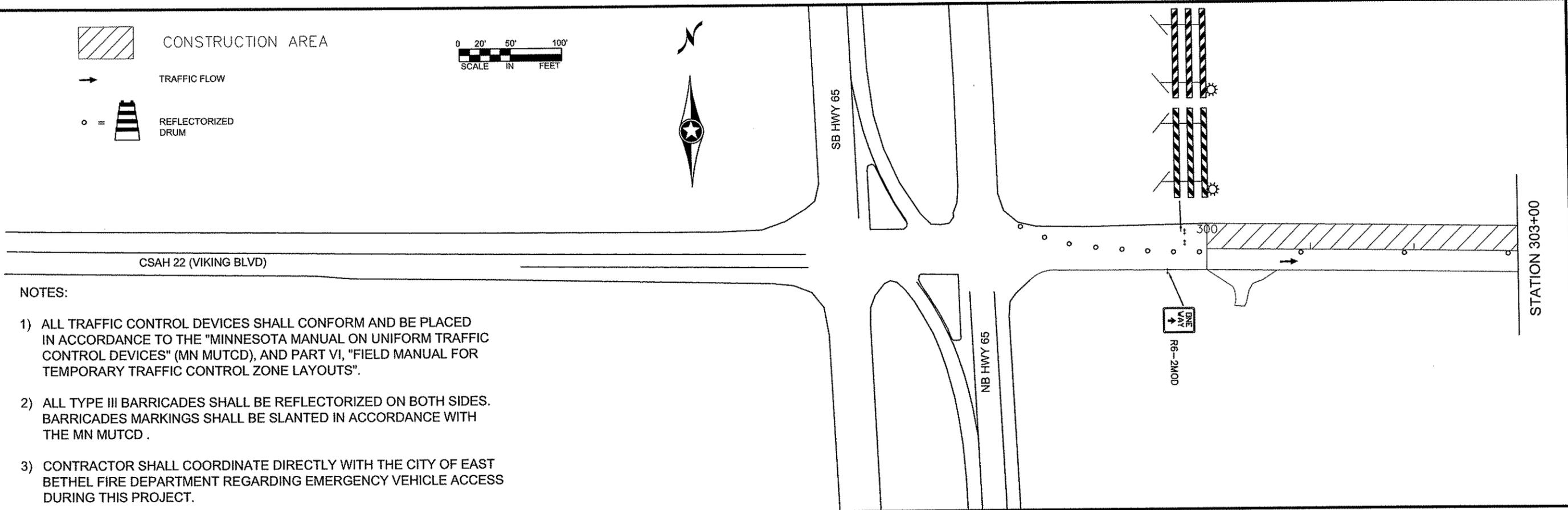
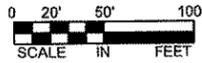
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 REG. NO. 40416

DRAWN BY: ST DATE: 03/10/12
 DESIGN BY: ST DATE: 03/10/12
 CHECKED BY: JR DATE: 04/05/12

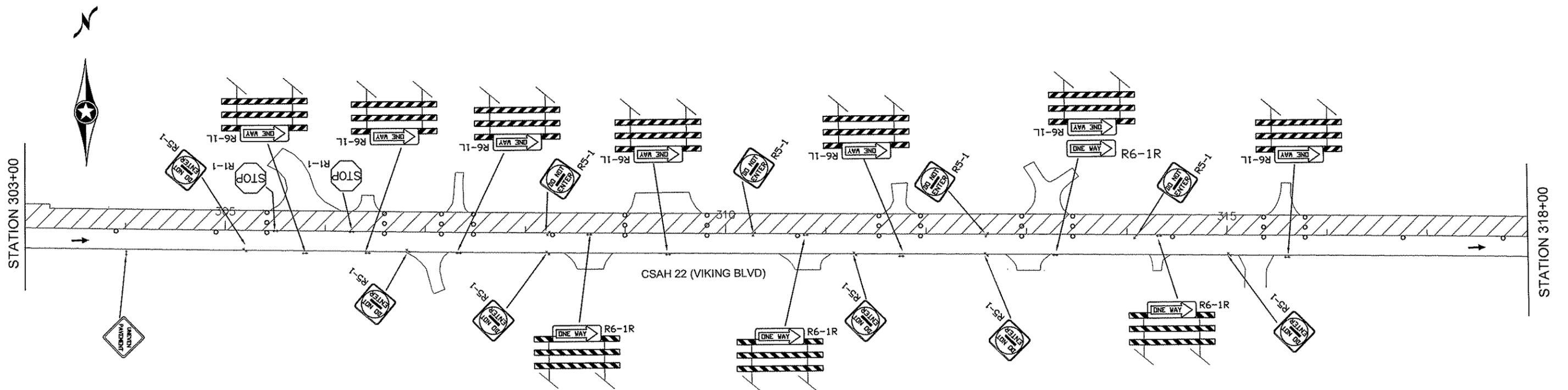

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CHARLES CADENHEAD
SIGNATURE: *Charles Cadenhead*
DATE: 4/23/12 REG. NO. 40416

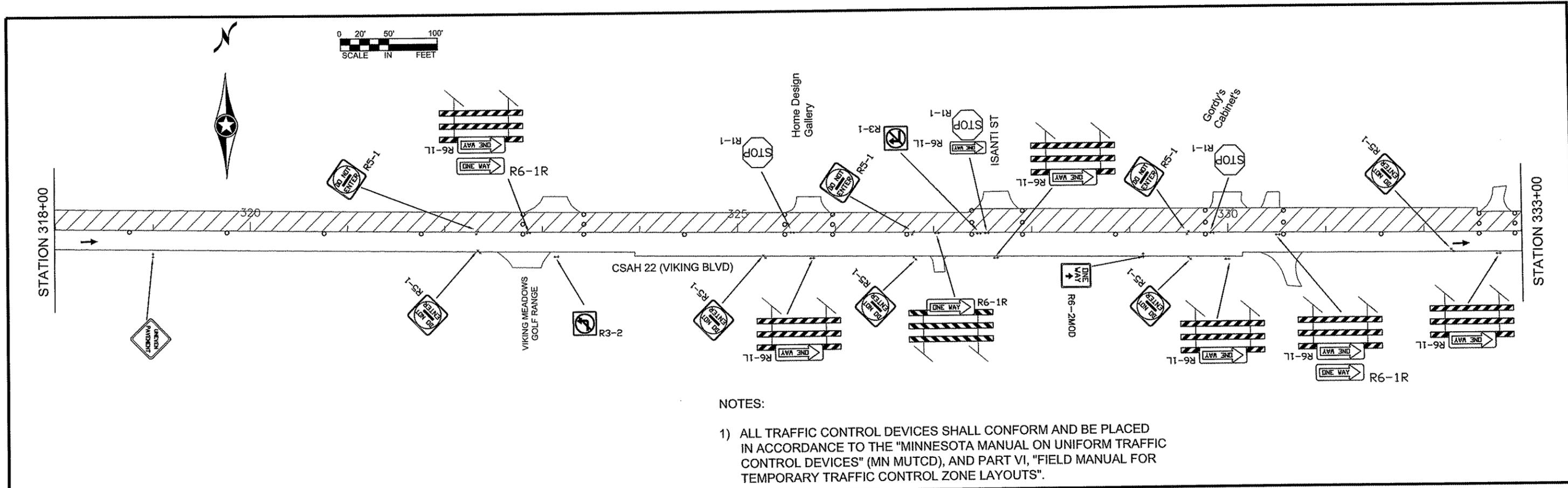
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ANOKA COUNTY
HIGHWAY DEPT.

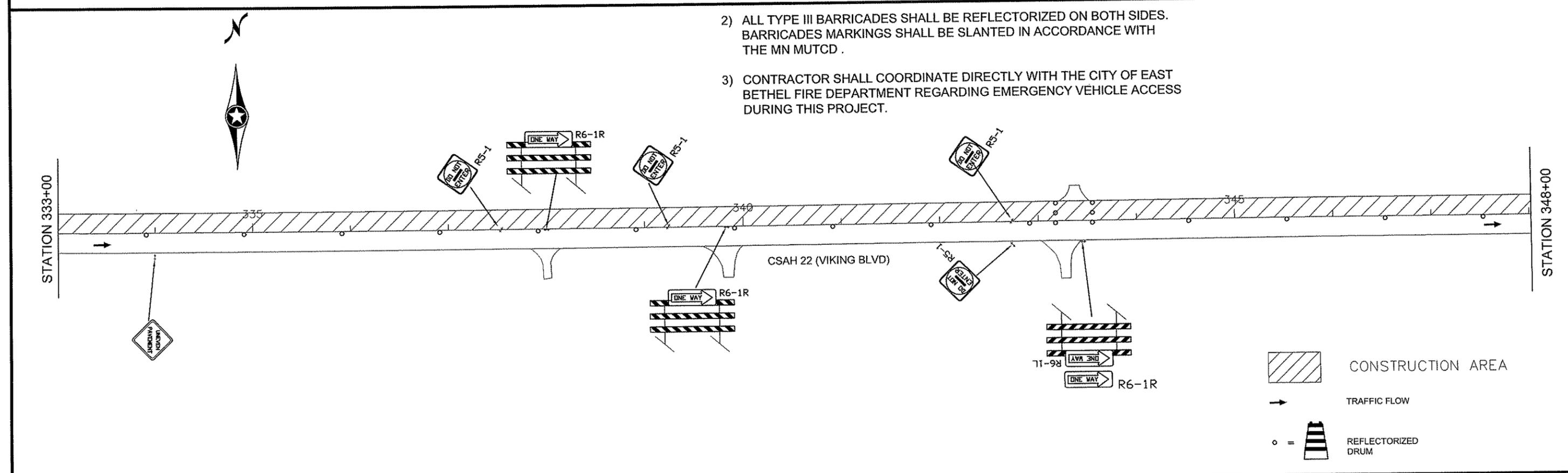
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STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 12-14-22

STAGE 2
CONSTRUCTION STAGING
AND TRAFFIC CONTROL
Sheet 43 of 69 Sheets

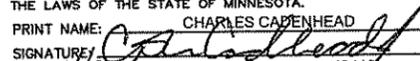


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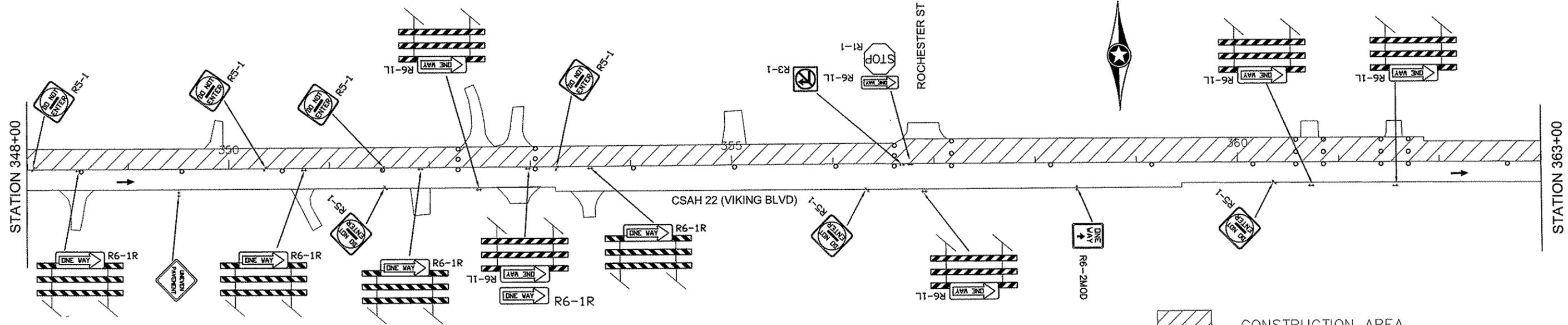
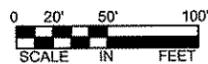
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 CONSTRUCTION AREA
 TRAFFIC FLOW
 REFLECTORIZED DRUM

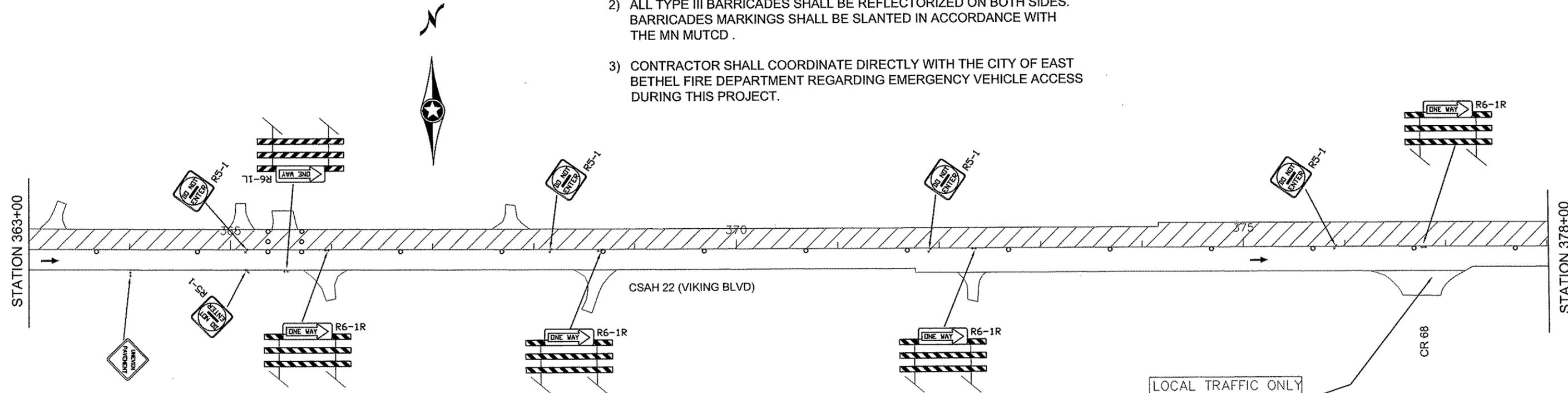
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CHARLES CADENHEAD SIGNATURE:  DATE: 4/27/12 REG. NO. 40418					DRAWN BY: ST DATE 03/10/12 DESIGN BY: ST DATE 03/10/12 CHECKED BY: JR DATE 04/05/12	 ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. _____ STATE AID PROJECT NO. _____ STATE AID PROJECT NO. _____ COUNTY PROJECT NO. 12-14-22	STAGE 2 CONSTRUCTION STAGING AND TRAFFIC CONTROL Sheet 44 of 69 Sheets		
NO	DATE	BY	CKD	APPR	REVISION					

NAME: P:\12-01-00\CSAH_22 (RR-Vickers)\1 ALL CONCIBaselPROPOSED\12-14-22 Stage2.dwg, 04/17/2012 2:20:30 PM



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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LOCAL TRAFFIC ONLY
ROAD CLOSED
SEE DETOUR

NO	DATE	BY	CKD	APPR	REVISION

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 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenhead*
 DATE: 4/23/12 REG. NO. 40416

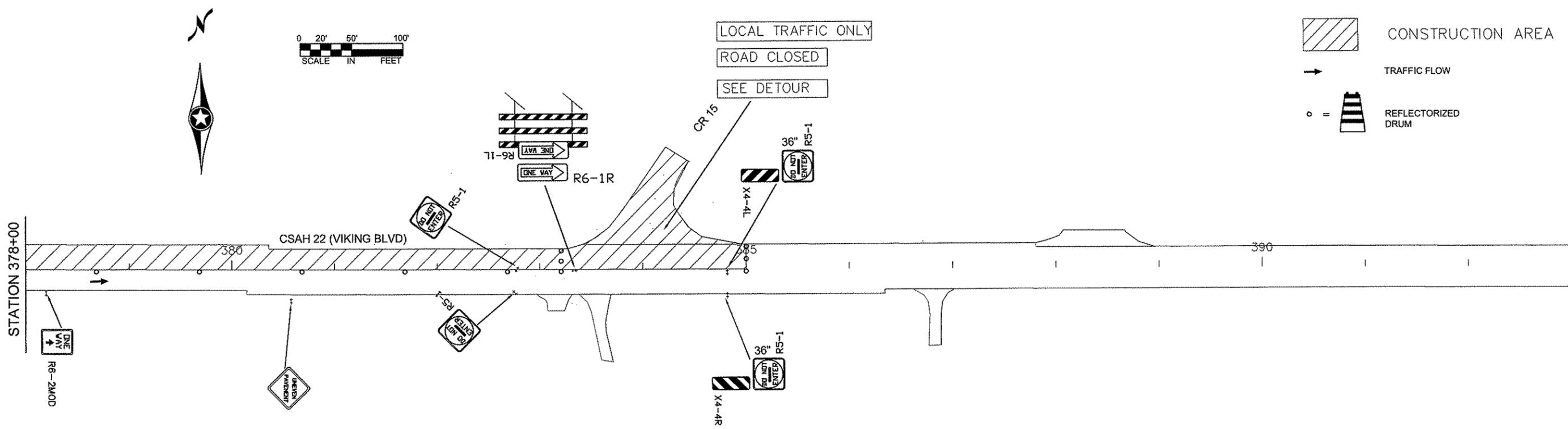
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 CHECKED BY: JR DATE: 04/05/12



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

STAGE 2
CONSTRUCTION STAGING
AND TRAFFIC CONTROL
Sheet 45 of 69 Sheets



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAAH_22 (RR-Vickers)\1 ALL CONCIBase\PROPOSED\12-14-22 Stage2.dwg, 04/17/2012 2:20:40 PM

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: CHARLES CADENHEAD
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 DATE: 4/23/12 REG. NO. 40416

DRAWN BY: ST DATE: 03/10/12
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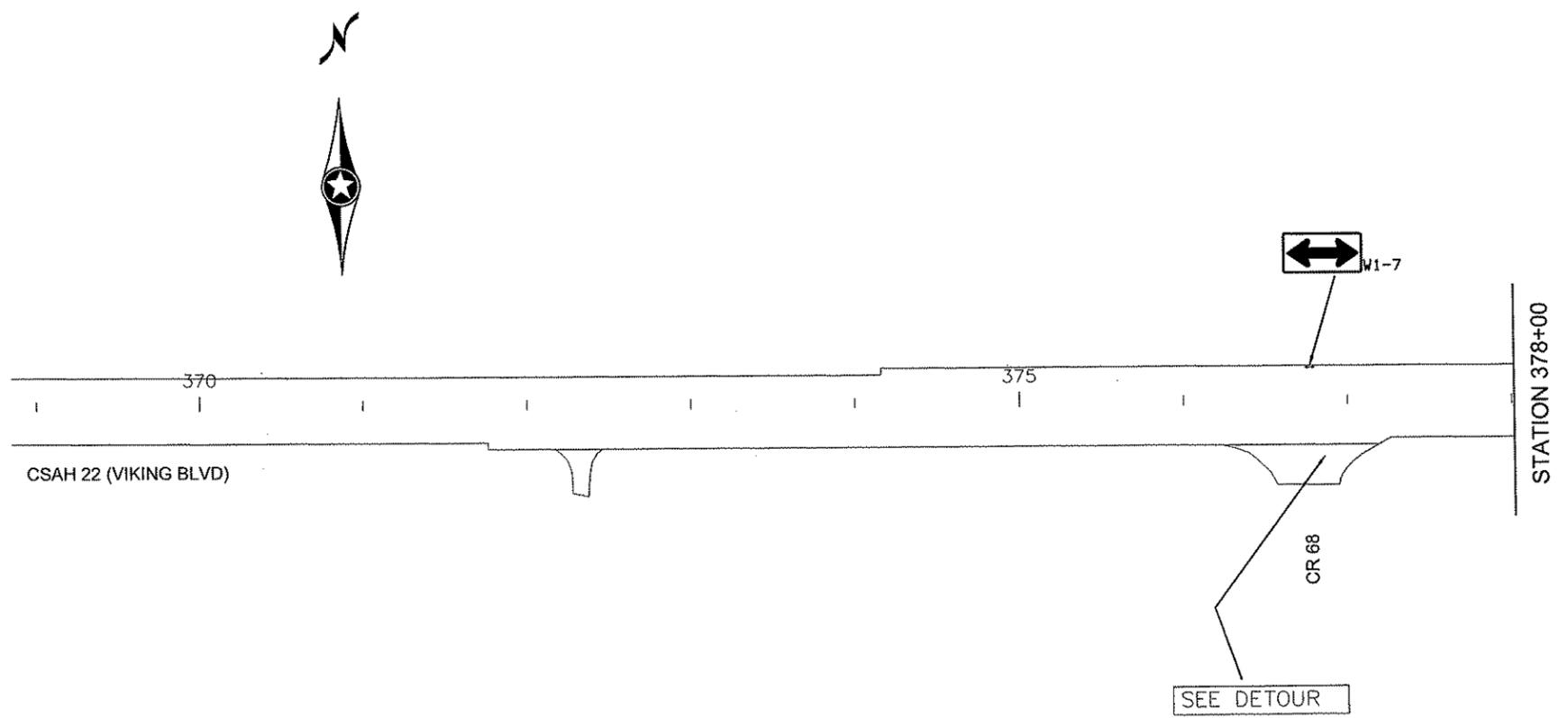
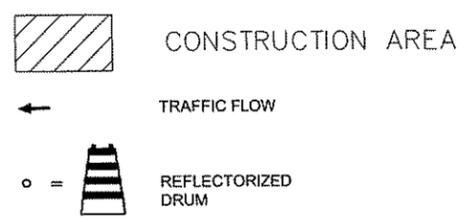
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

STAGE 2
 CONSTRUCTION STAGING
 AND TRAFFIC CONTROL
 Sheet 46 of 69 Sheets

NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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NO	DATE	BY	CHKD	APPR	REVISION

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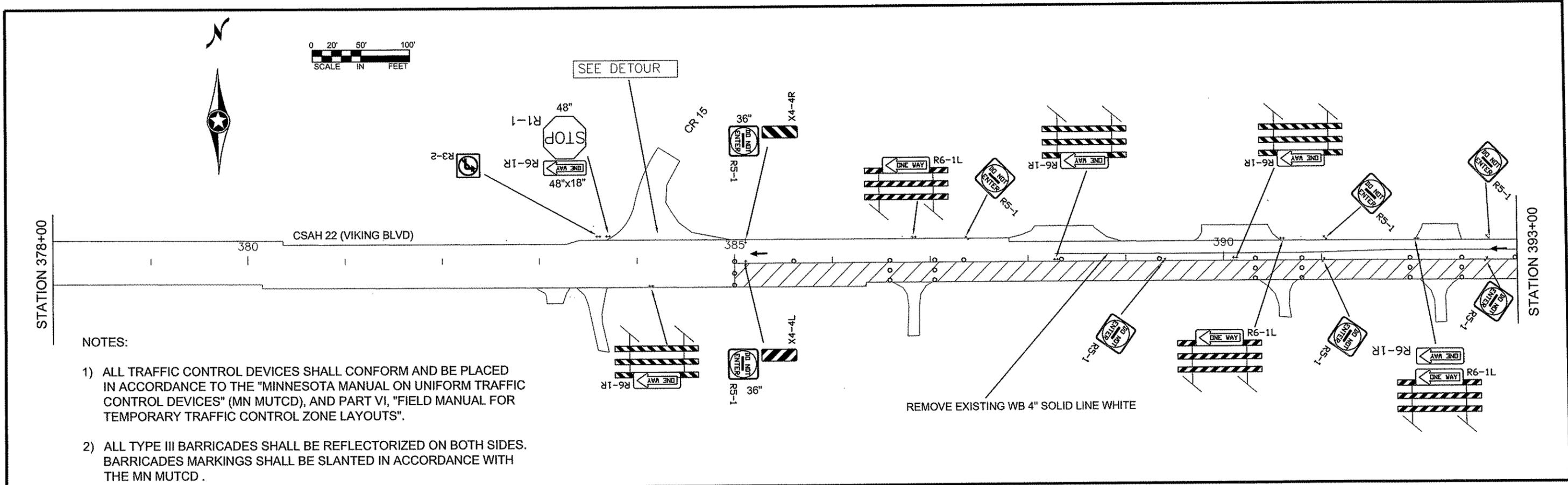
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 DESIGN BY: ST DATE 03/10/12
 CHECKED BY: JR DATE 04/05/12



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

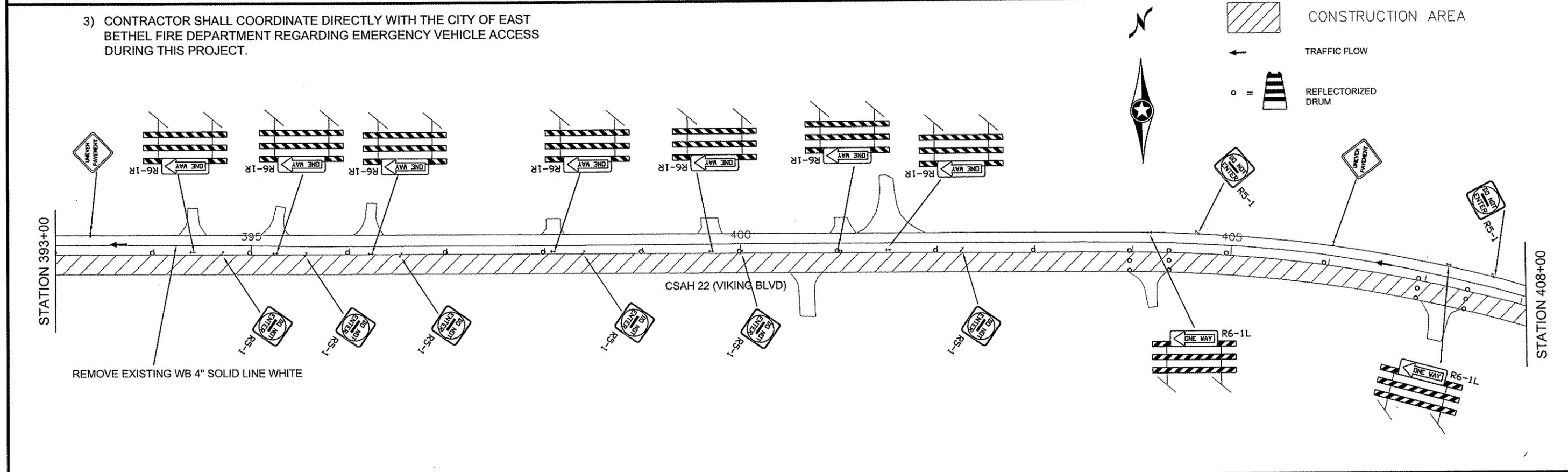
STAGE 3
 CONSTRUCTION STAGING
 AND TRAFFIC CONTROL
 Sheet 47 of 69 Sheets



NOTES:

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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REMOVE EXISTING WB 4" SOLID LINE WHITE



REMOVE EXISTING WB 4" SOLID LINE WHITE

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONCIBase\PROPOSED\12-14-22 Stage3.dwg, 04/17/2012 2:20:51 PM

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.

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 SIGNATURE: *[Signature]*
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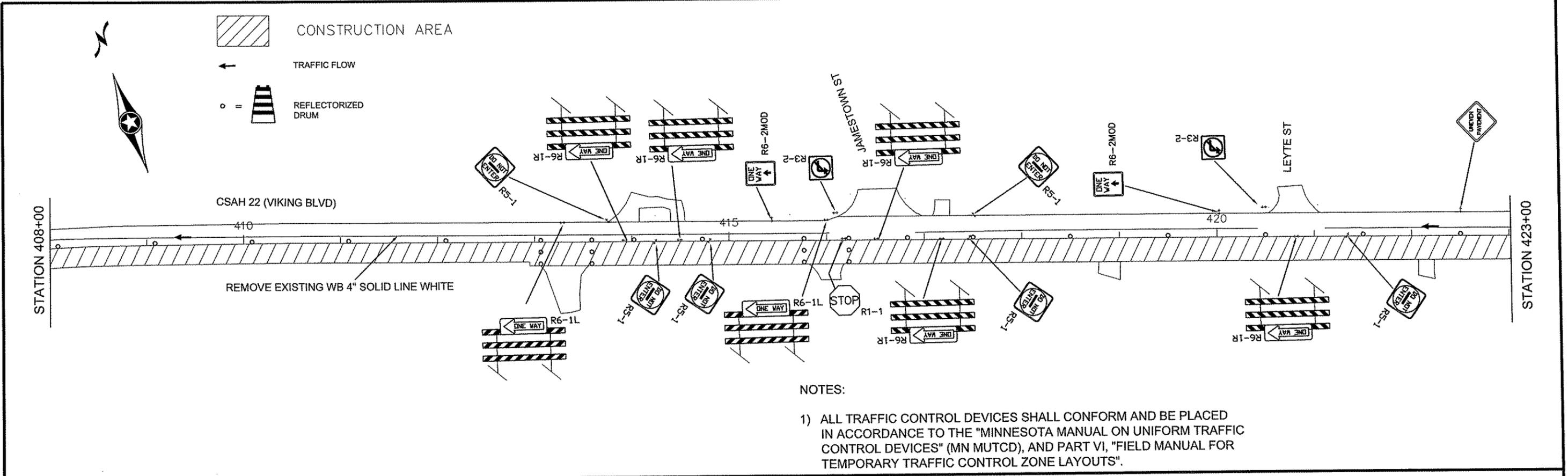


ANOKA COUNTY
HIGHWAY DEPT.

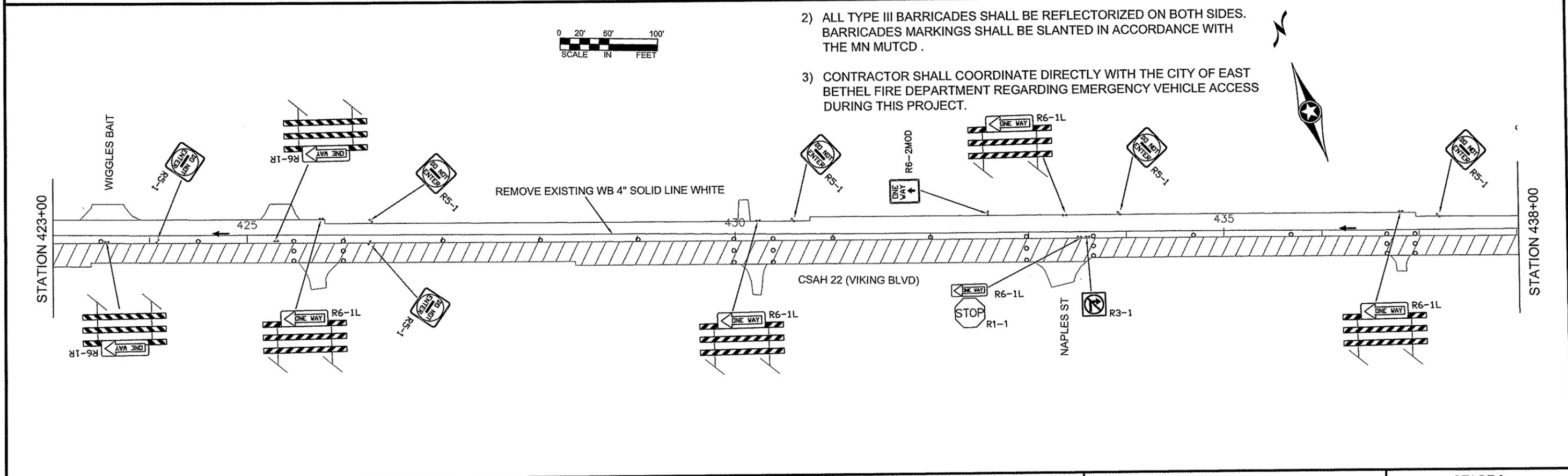
STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

STAGE 3
CONSTRUCTION STAGING
AND TRAFFIC CONTROL

Sheet 48 of 69 Sheets



- NOTES:
- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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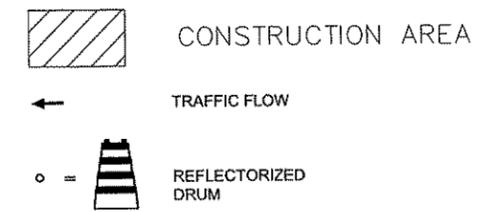
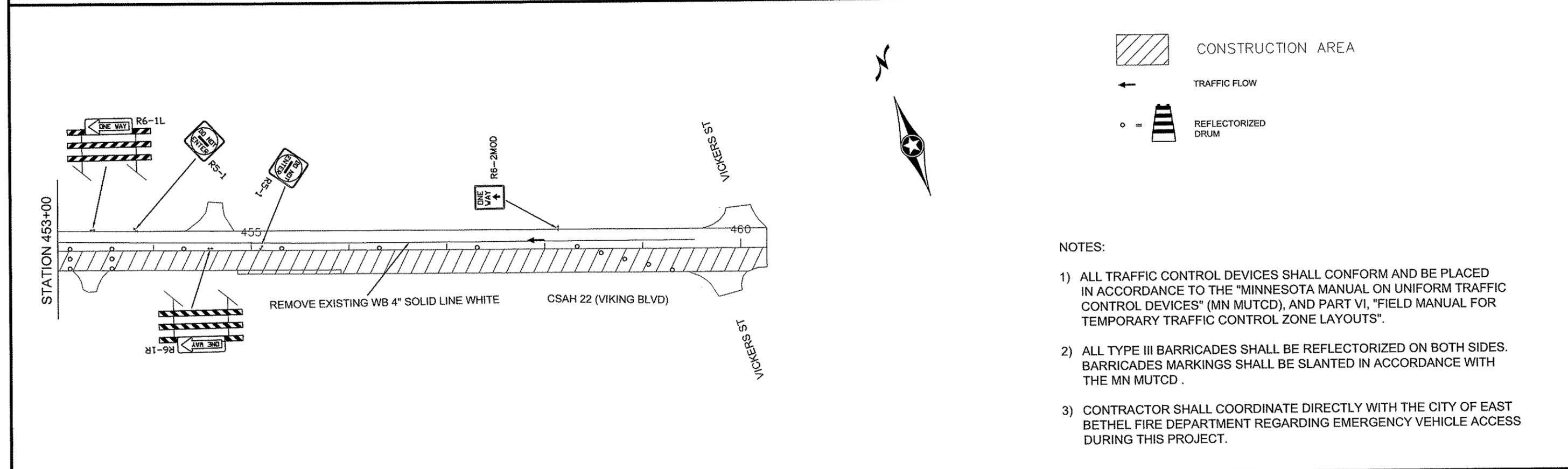
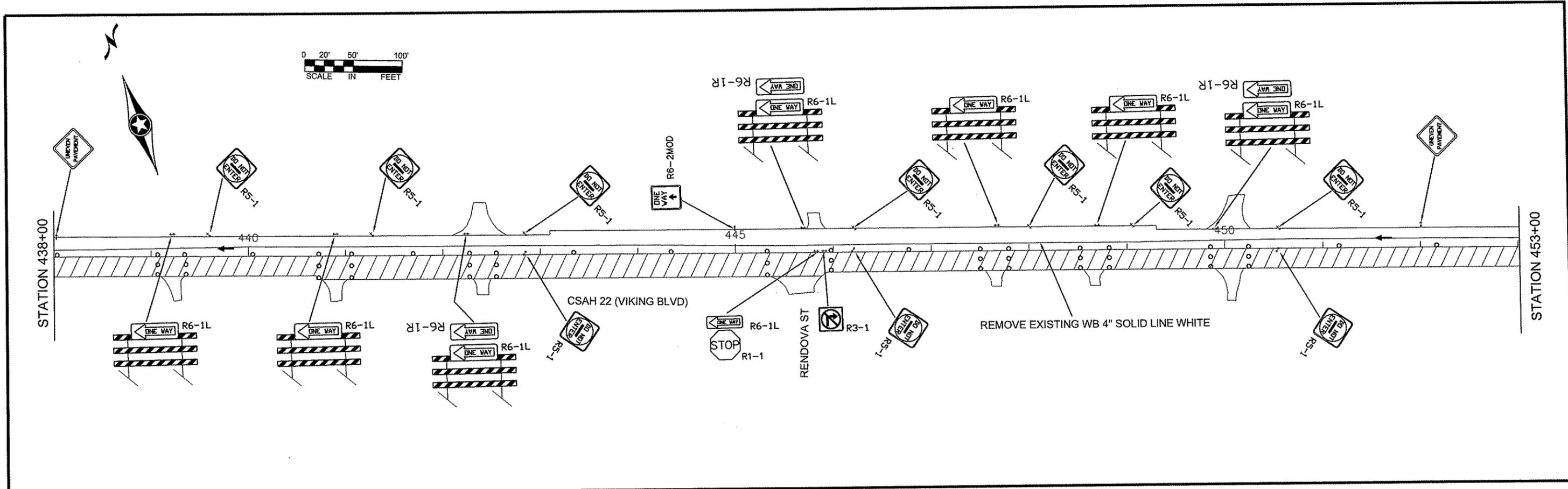


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
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 COUNTY PROJECT NO. 12-14-22

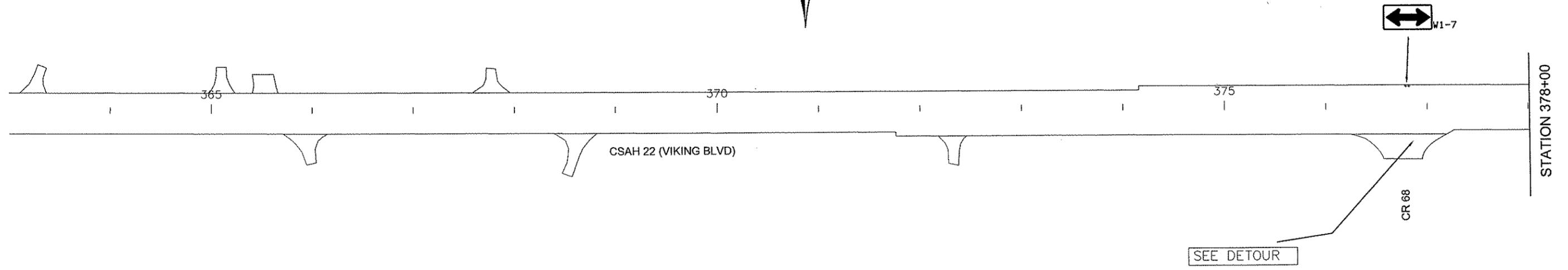
STAGE 3
 CONSTRUCTION STAGING
 AND TRAFFIC CONTROL

Sheet 49 of 69 Sheets



- NOTES:
- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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NO	DATE	BY	CKD	APPR	REVISION												



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- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 REG. NO. 40416

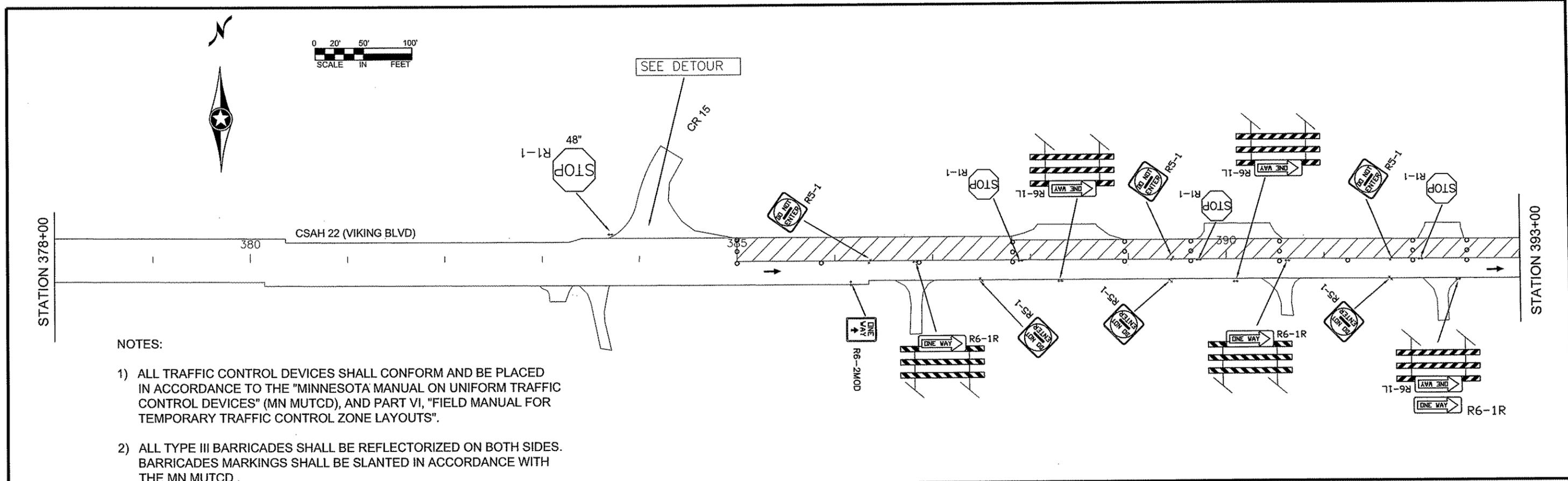
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ANOKA COUNTY
HIGHWAY DEPT.

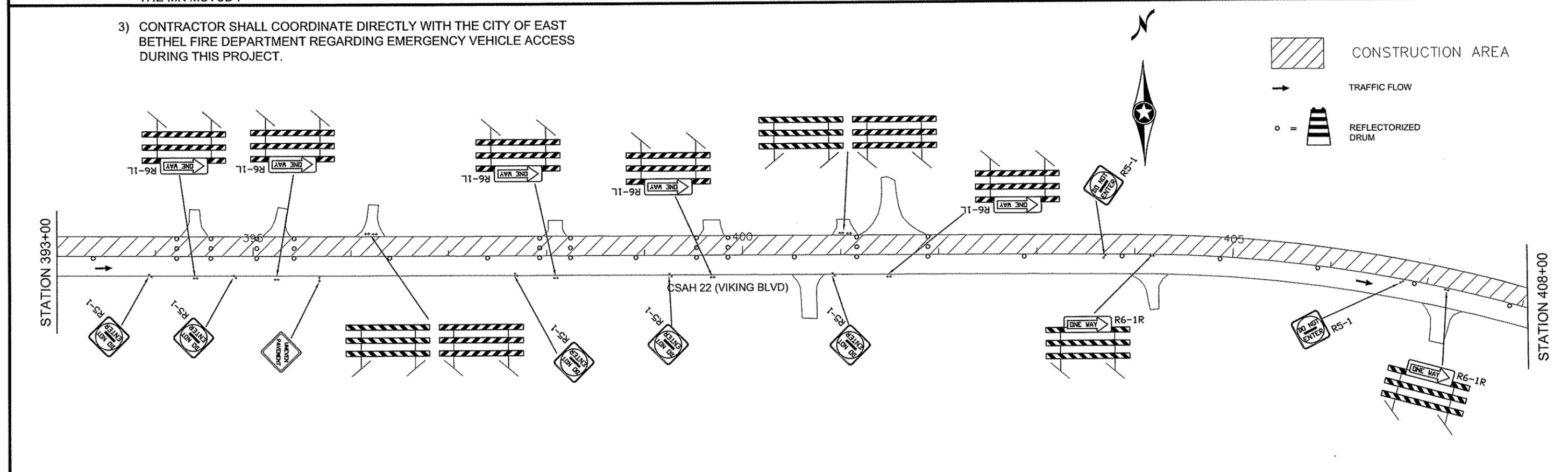
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 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

STAGE 4
 CONSTRUCTION STAGING
 AND TRAFFIC CONTROL
 Sheet 51 of 69 Sheets

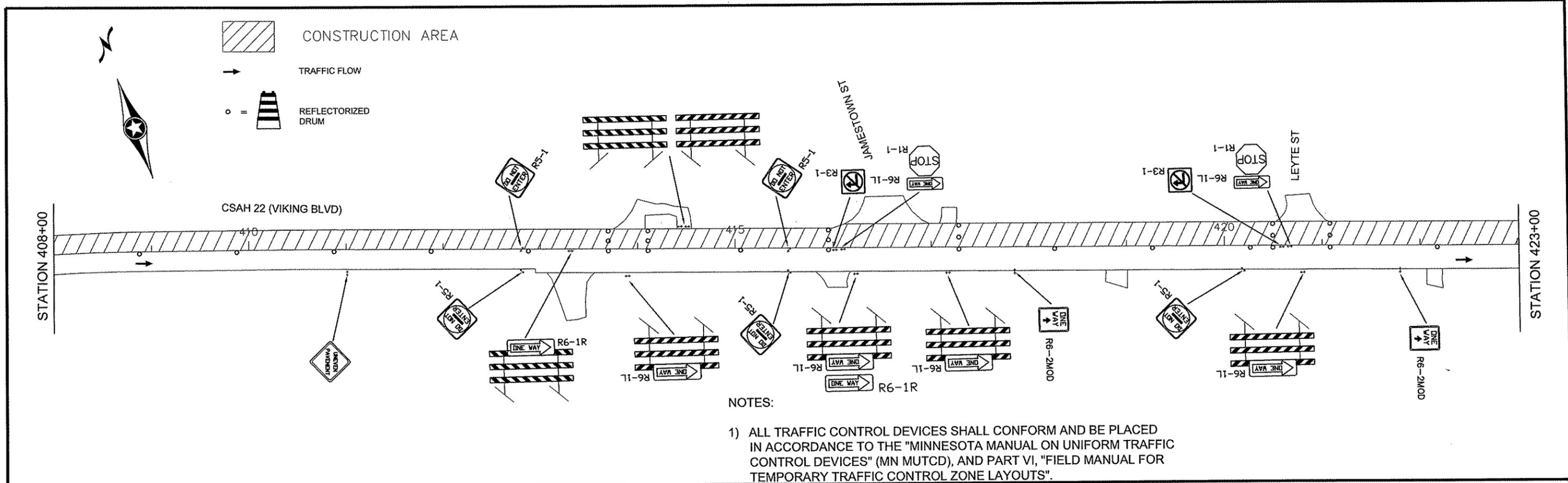


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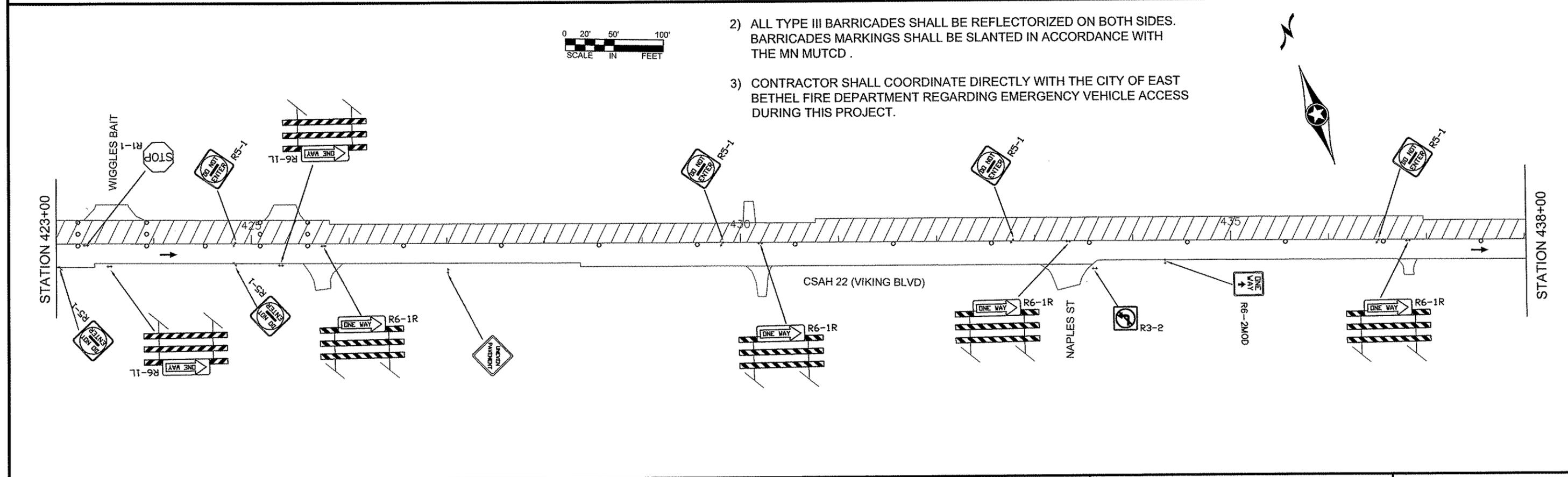
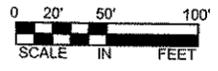


	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CHARLES CADENHEAD SIGNATURE: <i>[Signature]</i> DATE: 4/23/12 REG. NO. 40416	DRAWN BY: ST DATE 03/10/12 DESIGN BY: ST DATE 03/10/12 CHECKED BY: JR DATE 04/05/12	ANOKA COUNTY HIGHWAY DEPT.
STATE PROJECT NO. _____ STATE AID PROJECT NO. _____ STATE AID PROJECT NO. _____ COUNTY PROJECT NO. 12-14-22		STAGE 4 CONSTRUCTION STAGING AND TRAFFIC CONTROL Sheet 52 of 69 Sheets	



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- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONCI\PROPOSED\12-14-22 Stage4.dwg, 04/17/2012 2:21:15 PM

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: CHARLES CADENHEAD
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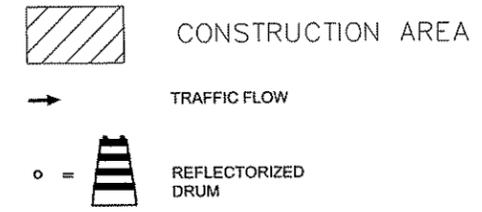
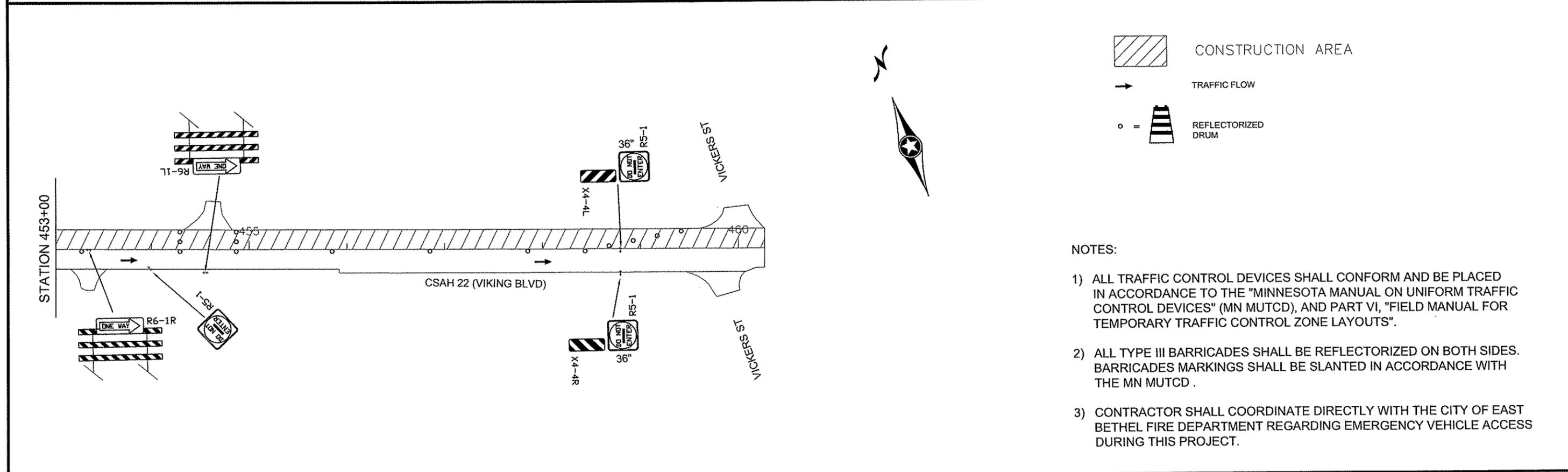
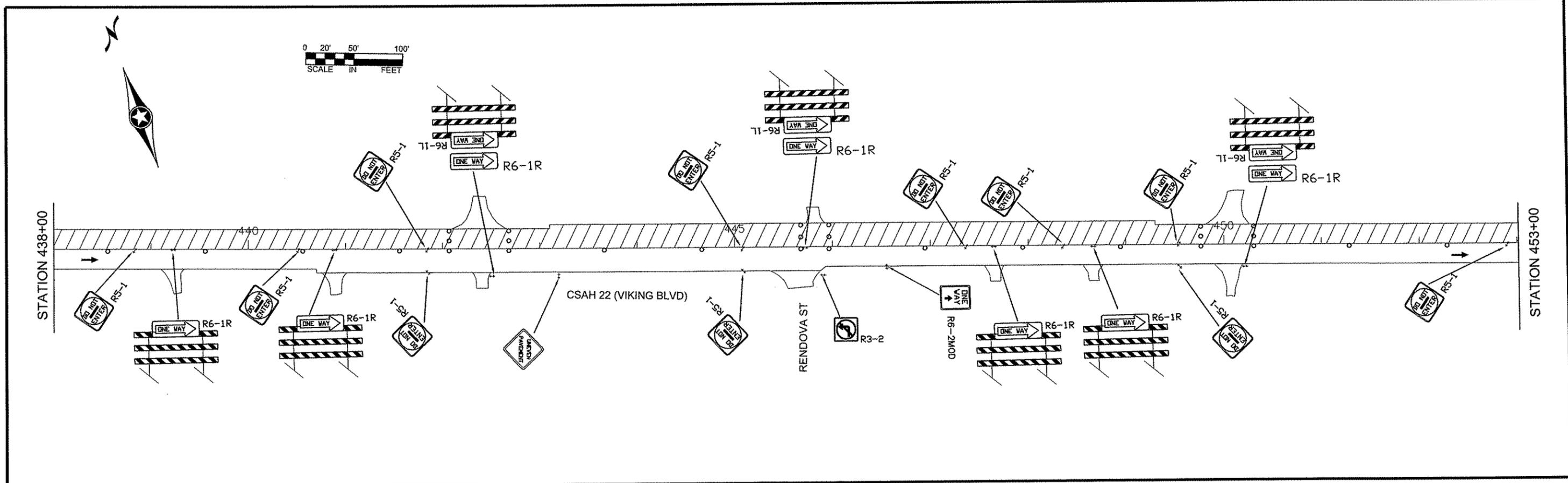
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ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

STAGE 4
 CONSTRUCTION STAGING
 AND TRAFFIC CONTROL
 Sheet 53 of 69 Sheets



- NOTES:
- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
 - 2) ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD .
 - 3) CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF EAST BETHEL FIRE DEPARTMENT REGARDING EMERGENCY VEHICLE ACCESS DURING THIS PROJECT.

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: CHARLES EADENHEAD SIGNATURE: <i>Charles Eadenhead</i> DATE: 4/27/12 REG. NO. 40416					DRAWN BY: ST DATE: 03/10/12 DESIGN BY: ST DATE: 03/10/12 CHECKED BY: JR DATE: 04/05/12		ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. _____ STATE AID PROJECT NO. _____ STATE AID PROJECT NO. _____ COUNTY PROJECT NO. 12-14-22	STAGE 4 CONSTRUCTION STAGING AND TRAFFIC CONTROL Sheet 54 of 69 Sheets	
NO	DATE	BY	CKD	APPR	REVISION					
NAME: P:\12-01-00\CSAH_22_(RR-Vickers)\1 ALL CONC\BASE\PROPOSED\12-14-22 Stage4.dwg, 04/17/2012 2:21:20 PM										

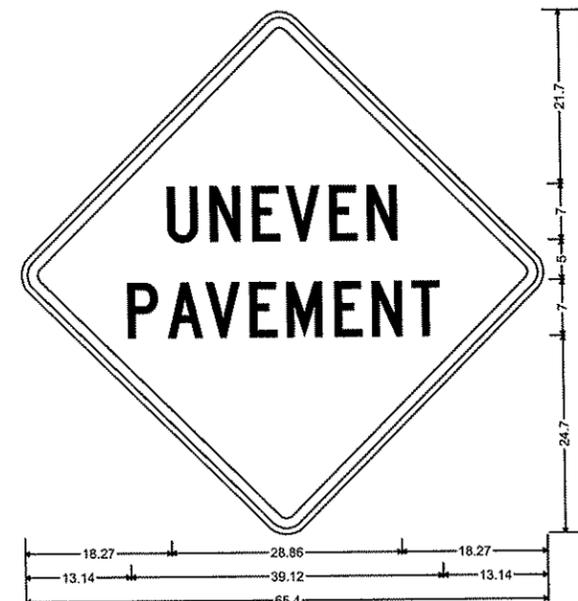
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R1-1	30" x 30"		6	6	3	6
R1-1	48" x 48"		0	0	1	1
R3-1	24" x 24"		2	2	2	2
R3-2	24" x 24"		3	1	3	2
R3-30AA	36" x 30"		1	0	0	0
R5-1	30" x 30"		34	36	38	36
R5-1	36" x 36"		0	2	2	2
R5-1A	36" x 24"		2	0	0	0
R6-1R	48" x 18"		5	6	5	5
R6-1R	36" x 12"		1	2	2	2
R6-2	24" x 30"		4	4	5	5
MOD						
W1-7	48" x 24"		0	0	1	1
W8-X3	48" x 48"		5	6	5	4
MOD						
W20-X18	48" x 48"		2	0	0	0

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4
X4-4L	12" x 36"		0	1	1	1
X4-4R	12" x 36"		0	1	1	1
FLASHER						
R5-1	48" x 48"		1	0	0	0
TYPE III	8 FOOT					
FLASHER						
R5-1	48" x 48"		1	0	0	0
TYPE III	8 FOOT					
R6-1R	48" x 18"		16	14	18	14
TYPE III	8 FOOT					
R6-1L	48" x 18"		17	21	19	18
TYPE III	8 FOOT					
FLASHER						
TYPE III	8 FOOT		4	1	0	3
FLASHER						
TYPE III	8 FOOT		4	1	0	3
REFLECTORIZED REBOUNDABLE DRUM			208	179	174	162
CHANGEABLE MESSAGE SIGN			3	0	0	0

CUSTOM SIGN DETAILS



R6-2_MOD:
1.50" Radius, 0.63" Border, 0.38" Indent, Black on White;
[ONE] D specified length;
[WAY] D:
Arrow Custom - 8.00" 90°;



W8-X3_MOD:
48.00" across sides 3.00" Radius, 1.25" Border, 0.75" Indent, Black on Orange;
[UNEVEN] C; [PAVEMENT] C;

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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: CHARLES M. GADENHEAD JR
 SIGNATURE: *Charles M. Gadenhead Jr*
 DATE: 8/23/12 REG. NO. 40416

DRAWN BY ST DATE 03/10/12
 DESIGN BY ST DATE 03/10/12
 CHECKED BY JR DATE 04/05/12



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE PROJECT NO. 12-14-22

STAGING
 SIGN QUANTITIES
 Sheet 55 of 69 Sheets

PERMANENT PAVEMENT MARKING PLAN
NOTES AND GUIDELINES

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. ANOKA COUNTY HIGHWAY DEPARTMENT WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS, LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS, ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

EPOXY:

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENT AND/OR LAITANCE ON LOW SPEED (SPEED LIMIT 35 MPH OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS. SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEANS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

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

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

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

PERFORMED THERMOPLASTIC:

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

PAINT:

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

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

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

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

PERMANENT PAVEMENT MARKING QUANTITIES

Item	Quantity	Units
4" Double Yellow Striping	1385	Lin Ft
4" Solid Yellow Striping	7998	Lin Ft
4" Broken Yellow Striping (10 ft stripe / 40 ft gap)	2940	Lin Ft
4" Solid White Striping	35400	Lin Ft
4" Broken White Striping (10 ft stripe / 40 ft gap)	360	Lin Ft
Right Turn Arrow Thermoplastic	1	Each

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PERFORMED THERMOPLASTIC

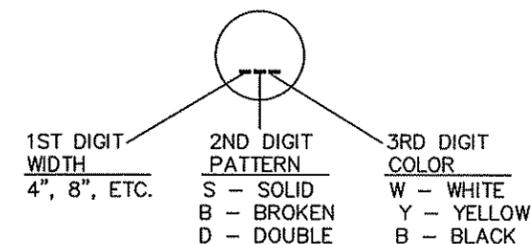
↩ PAVEMENT MESSAGE (LEFT ARROW) PERFORMED THERMOPLASTIC

STRIPING KEY

○ CIRCLE - EPOXY □ SQUARE PERFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

⬠ PENTAGON - REMOVABLE PERFORMED PLASTIC MARKING



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

NO	DATE	BY	CKD	APPR	REVISION

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 PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY: MTH DATE: 2/24/12
 DESIGN BY: MTH DATE: 2/24/12
 CHECKED BY: JR DATE: 2/24/12

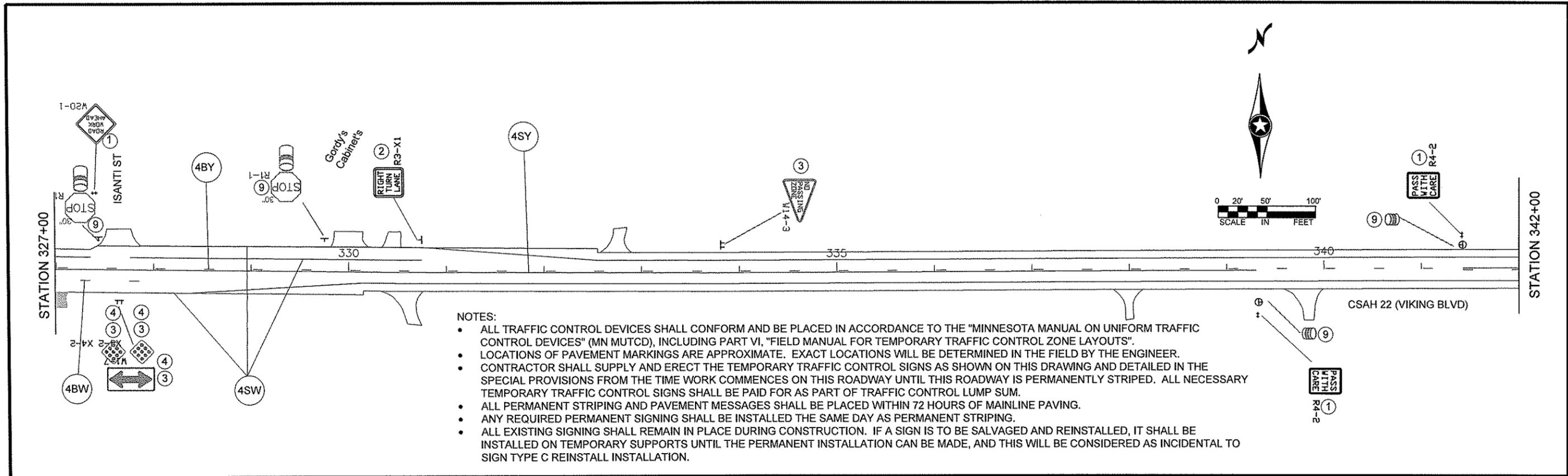


ANOKA COUNTY
HIGHWAY DEPT.

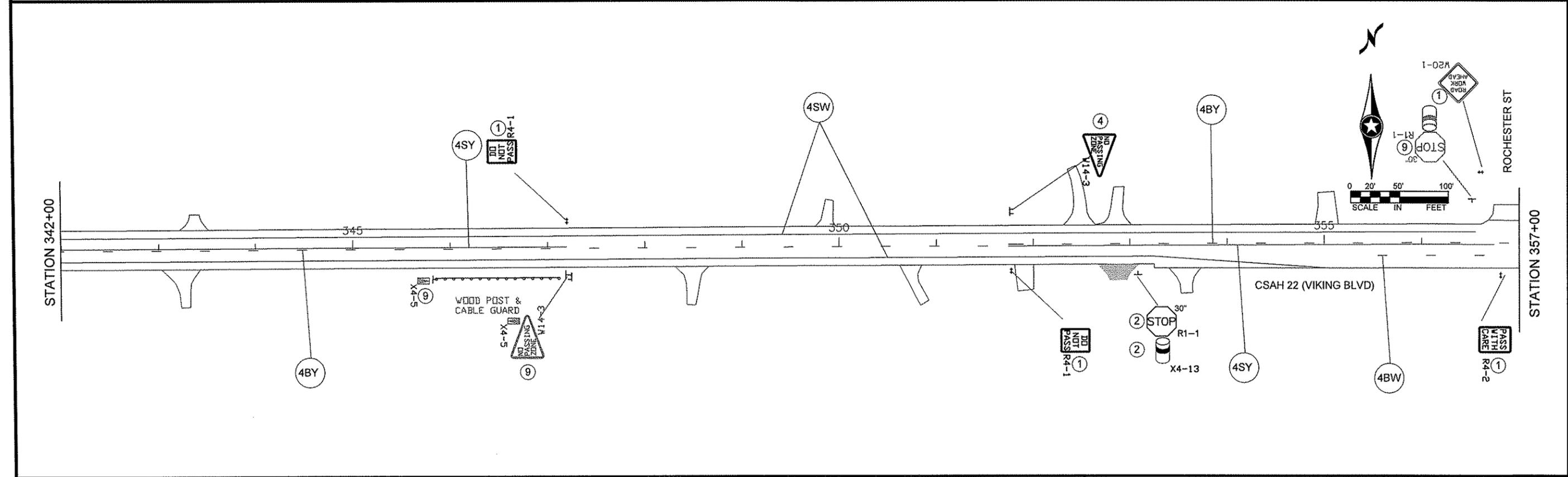
STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

PERMANENT MARKING
NOTES & TABULATION

Sheet 56 of 69 Sheets



- NOTES:
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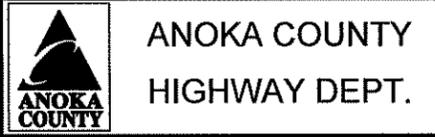


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DRAWN BY: MTH DATE 02/09/12
 DESIGN BY: MTH DATE 02/09/12
 CHECKED BY: JR DATE 02/14/12

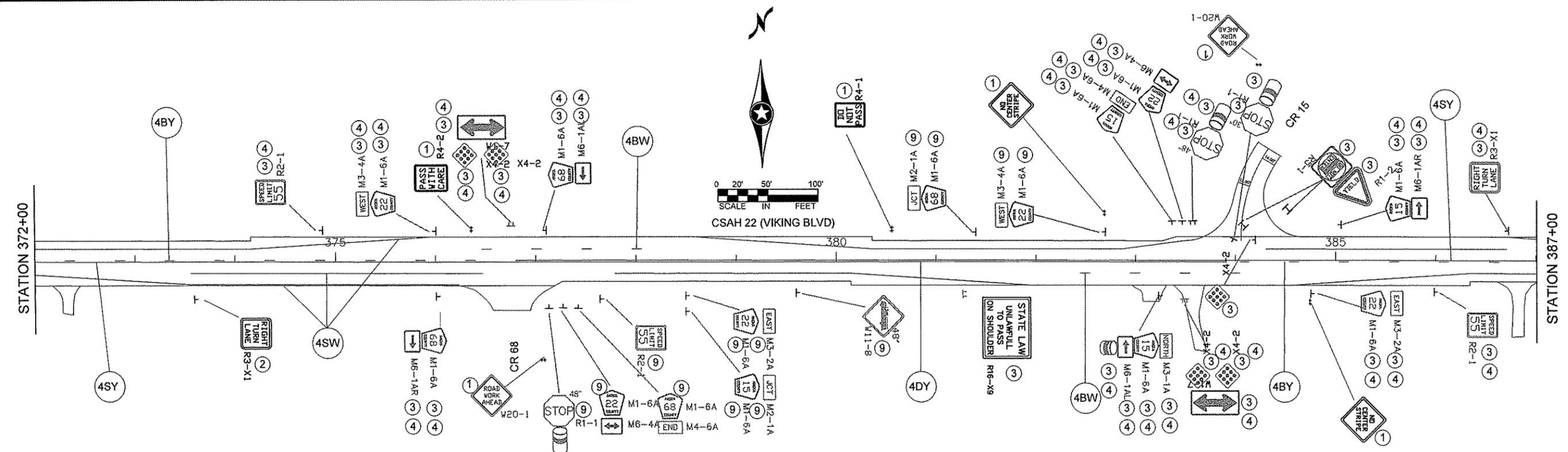
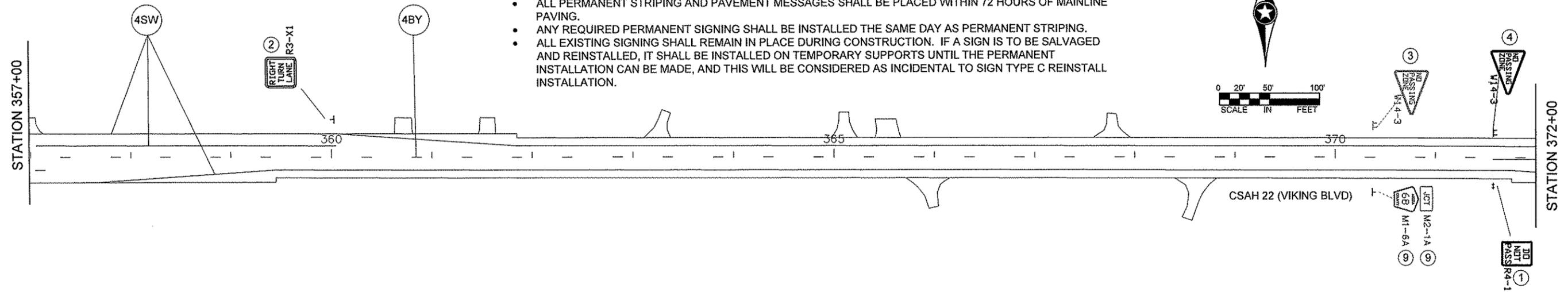


STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
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 COUNTY PROJECT NO. 12-14-22

TEMPORARY SIGNING AND PERMANENT SIGNING & STRIPING LAYOUT
 Sheet 58 of 69 Sheets

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NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: CHARLES CADENHEAD
 SIGNATURE: *Charles Cadenhead*
 DATE: 4/23/12 REG. NO. 40418

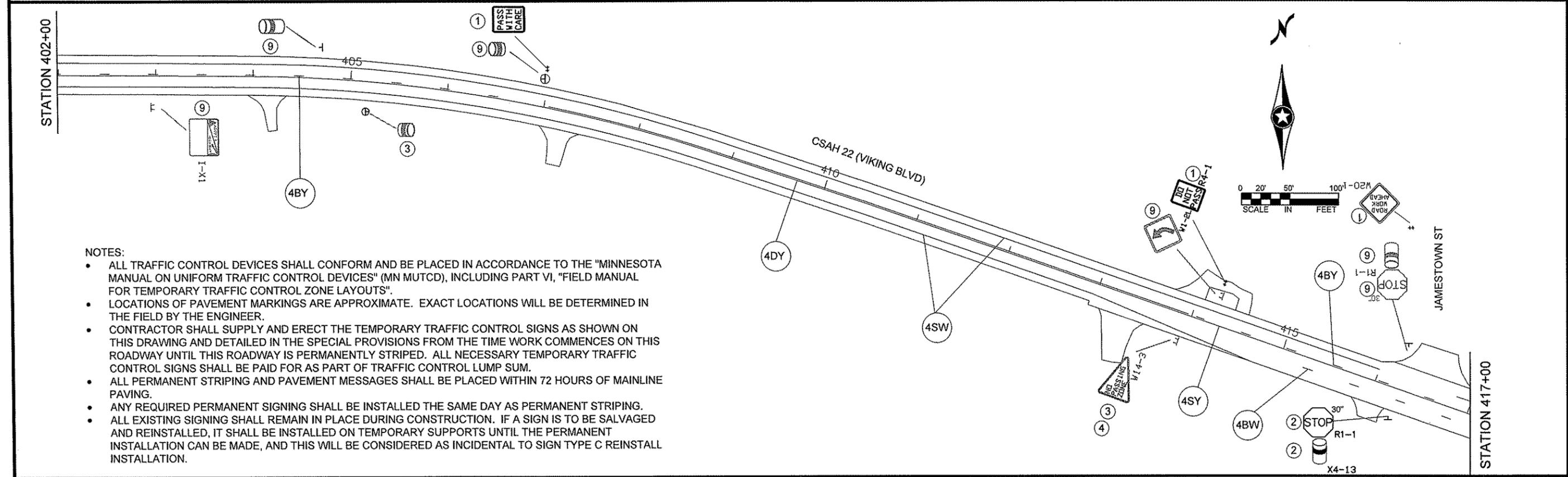
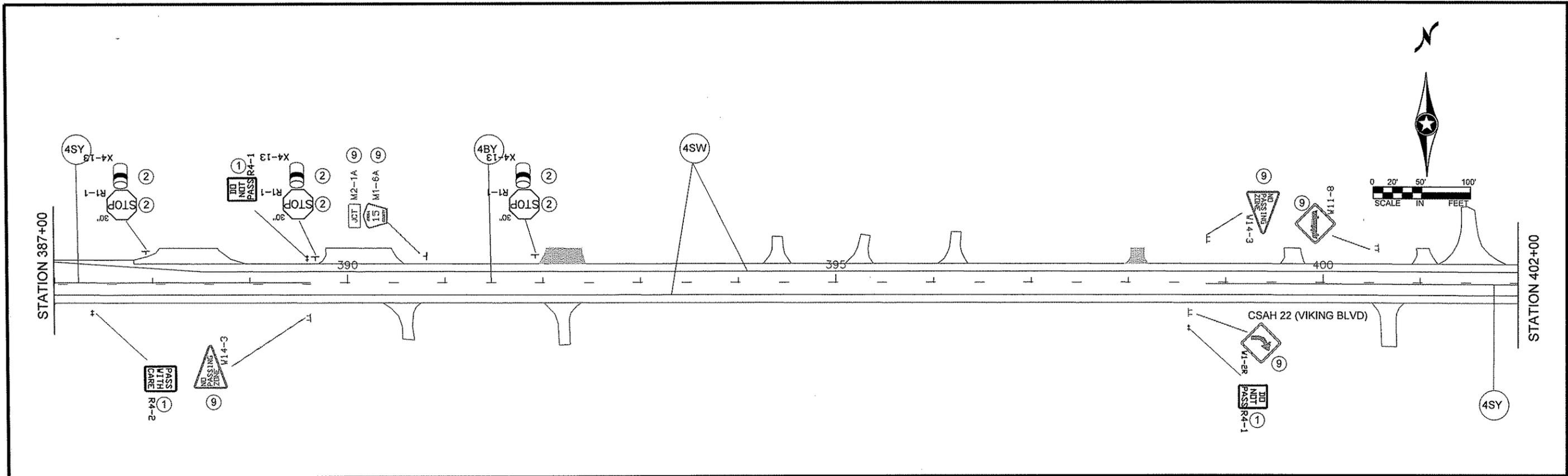
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 DESIGN BY: MTH DATE 02/09/12
 CHECKED BY: JR DATE 02/14/12



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
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 COUNTY PROJECT NO. 12-14-22

TEMPORARY SIGNING AND
 PERMANENT SIGNING &
 STRIPING LAYOUT
 Sheet 59 of 69 Sheets



NOTES:

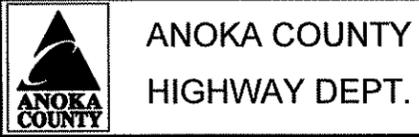
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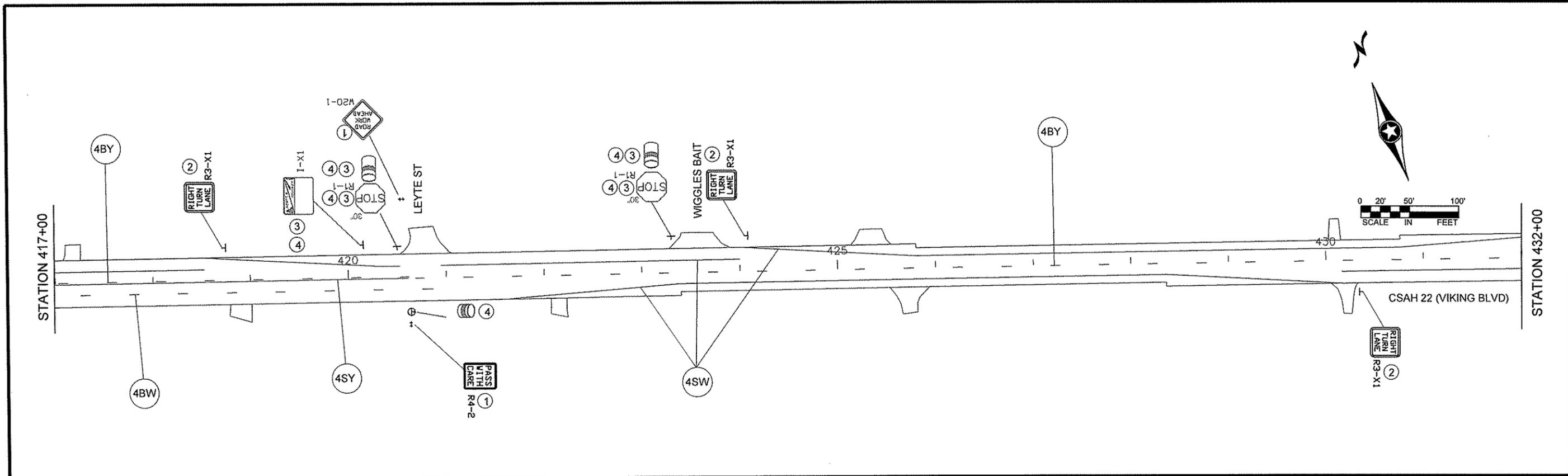
PRINT NAME: CHARLES CAPENHEAD
 SIGNATURE: *Charles Capenhead*
 DATE: 4/23/12 REG. NO. 40416

DRAWN BY: MTH DATE: 02/09/12
 DESIGN BY: MTH DATE: 02/09/12
 CHECKED BY: JR DATE: 02/14/12



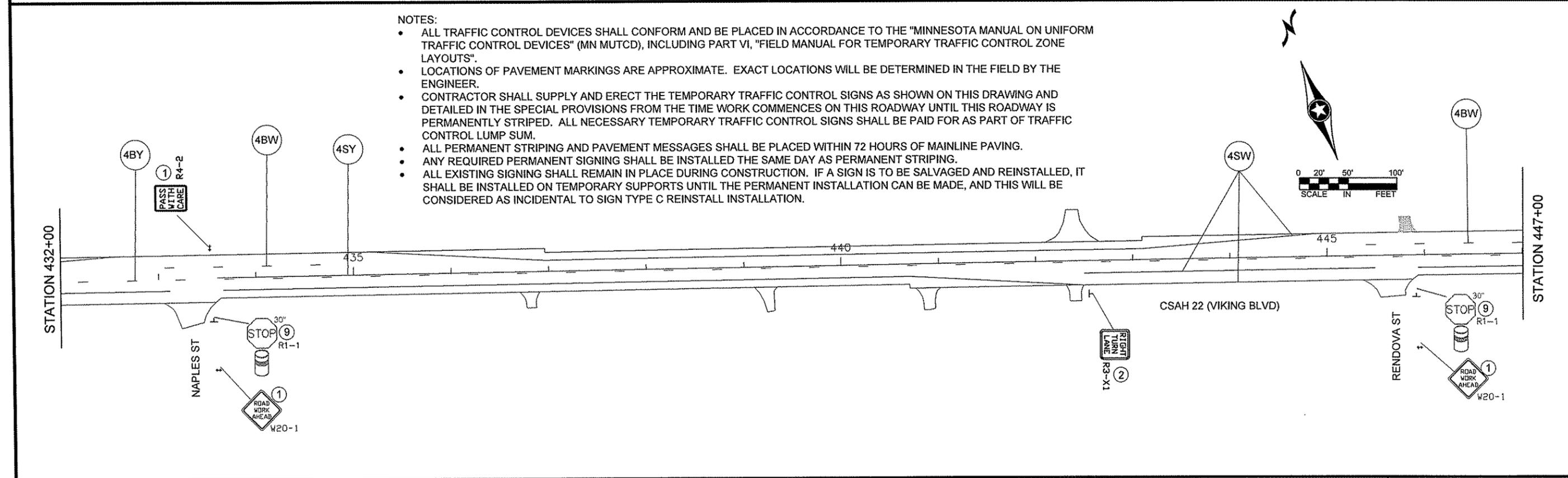
STATE PROJECT NO. _____
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TEMPORARY SIGNING AND PERMANENT SIGNING & STRIPING LAYOUT
 Sheet 60 of 69 Sheets



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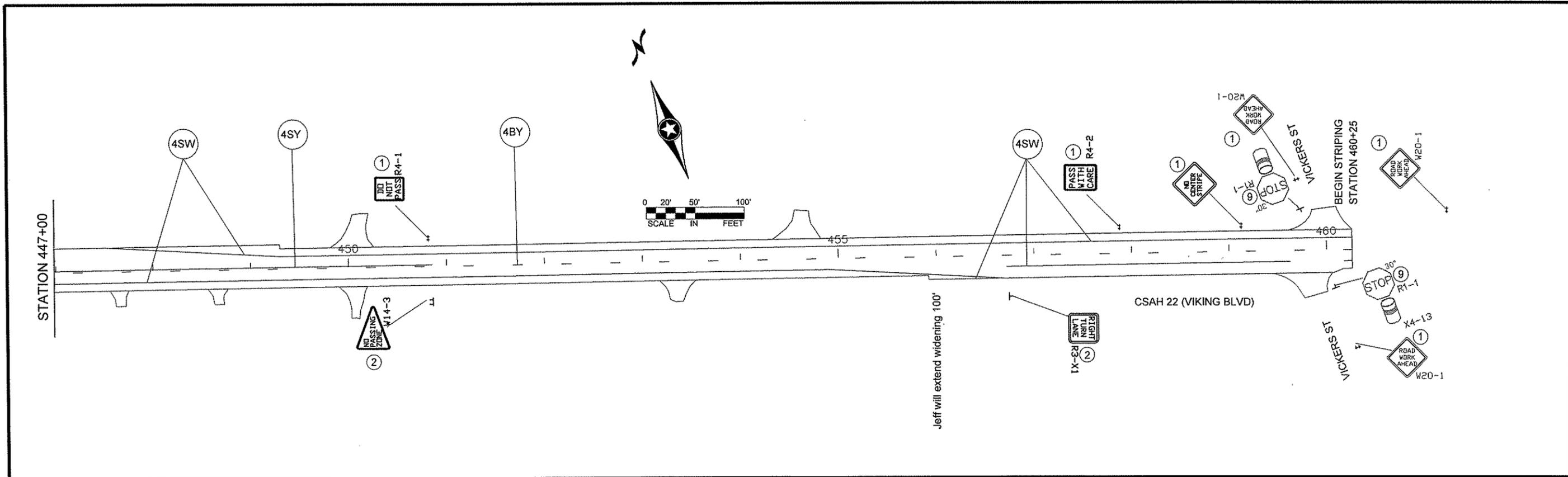
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 DESIGN BY: MTH DATE 02/09/12
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ANOKA COUNTY
 HIGHWAY DEPT.

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 STATE AID PROJECT NO. _____
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TEMPORARY SIGNING AND
 PERMANENT SIGNING &
 STRIPING LAYOUT
 Sheet 61 of 69 Sheets



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PRINT NAME: CHARLES CADRONHEAD
 SIGNATURE: *[Signature]*
 DATE: 4/23/12 REG. NO. 40416

DRAWN BY: MTH DATE: 02/09/12
 DESIGN BY: MTH DATE: 02/09/12
 CHECKED BY: JR DATE: 02/14/12



**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

TEMPORARY SIGNING AND
 PERMANENT SIGNING &
 STRIPING LAYOUT
 Sheet 62 of 69 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY	No. POST	MOUNTING HEIGHT (To P.M.T. EDGE) FT.
W8-12	48" x 48"	16.00		4		7.0
R4-1	24" x 30"	5.00		10		7.0
R4-2	24" x 30"	5.00		9		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		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 13)		

F & I PERMANENT SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY	MOUNTING HEIGHT (To P.M.T. EDGE) FT.	TOTAL AREA FT. ²
R1-1	30" x 30"	6.25		8	7.00	50.00
X4-13	8" x 12"			8	7.00	
R3-X1	30" x 30"	6.25		8	7.00	50.00
W3-3	36" x 36"	9.00		1	7.00	9.00
W14-3	48" x 36"	6.00		2	7.00	12.00
TOTAL PANEL AREA						121.00

SEE SPECIAL PROVISIONS

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

SALVAGE AND RE-INSTALL PERMANENT SIGNS						
STATION		SALVAGE SIGN TYPE C	SALVAGE SIGN TYPE D	INSTALL SIGN TYPE C	INSTALL SIGN TYPE D	SIGN NUMBER
		EACH	EACH	EACH	EACH	
301+40	Lt	1		1		R3-x1
302+30	Lt	1		1		W8-2 / W13-1
303+20	Lt	1		1		M2-1A / M1-5A
327+60	Rt	1		1		W1-7 / X4-2 / X4-2
333+80	Lt	1				W14-3
351+75	Lt			1		W14-3
370+40	Lt	1				W14-3
371+60	Lt			1		W14-3
375+00	Lt	1		1		R2-1
376+00	Lt	1		1		M3-4A / M1-6A
376+00	Rt	1		1		M1-6A / M6-1AR
376+75	Lt	1		1		W1-7 / X4-2 / X4-2
377+10	Lt	1		1		M1-6A / M6-1AL
381+20	Rt	1				R16-X9
383+20	Rt	1		1		M3-1A / M1-6A / M6-1AL / term post
383+50	Rt	1		1		W1-7 / X4-2 / X4-2
383+50	Lt	1		1		M1-6A / M4-6A
383+50	Lt	1		1		M1-6A / M6-4A
383+50	Lt	1		1		R1-1 / delineator
384+00	Lt	1				R1-1 / delineator
384+00	Lt	1				R5-1 / R1-2
384+20	Lt	1				X4-2
384+40	Lt	1				R5-1 / R1-2
384+70	Rt	1		1		M3-2A / M1-6A
385+00	Lt	1		1		M1-6A / M6-1AR
386+00	Rt	1		1		R2-1
386+80	Lt	1		1		R3-X1
405+20	Rt	1				terminal post
414+00	Rt	1		1		W14-3
420+20	Lt	1		1		I-X1
420+60	Rt			1		terminal post
423+30	Lt	1		1		R1-1 / delineator
TOTAL		29	0	24	0	

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 PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 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. IF A SIGN IS TO BE SALVAGED AND REINSTALLED, IT SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE, AND THIS WILL BE CONSIDERED AS INCIDENTAL TO SIGN TYPE C REINSTALL INSTALLATION.

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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CHARLES CALLEHEAD
 SIGNATURE: *Charles Callehead*
 DATE: 4/23/12 REG. NO. 40416

DRAWN BY: MTH DATE 02/09/12
 DESIGN BY: MTH DATE 02/09/12
 CHECKED BY: JR DATE 02/14/12

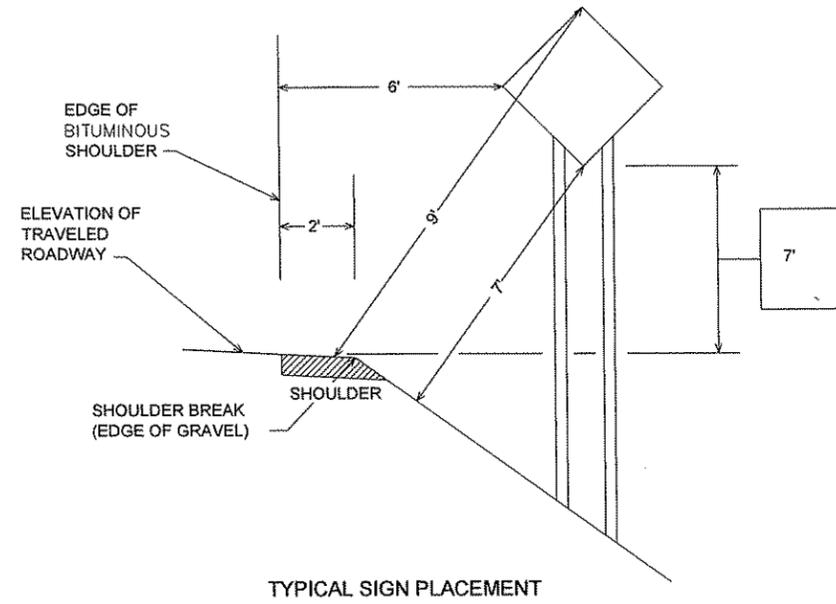


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 12-14-22

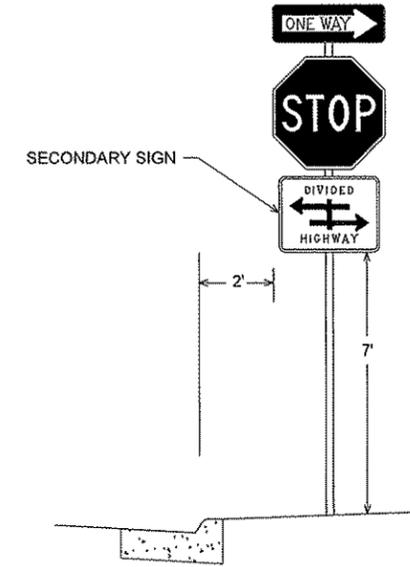
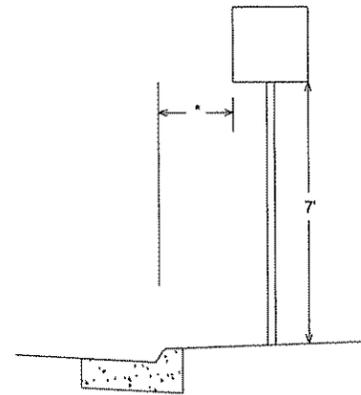
TEMPORARY SIGNING AND
PERMANENT SIGNING &
STRIPING LAYOUT
Sheet 63 of 69 Sheets

RURAL



URBAN

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



NOTE:

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

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR_Vickers)\(1 ALL CONC)\Bose\PROPOSED\Sign&Stripe_Details.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: CHARLES GADENHEAD

SIGNATURE: *Charles Gadenhead*

DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY MTH DATE 3-27-12

DESIGN BY MTH DATE 3-27-12

CHECKED BY JR DATE 3-28-12



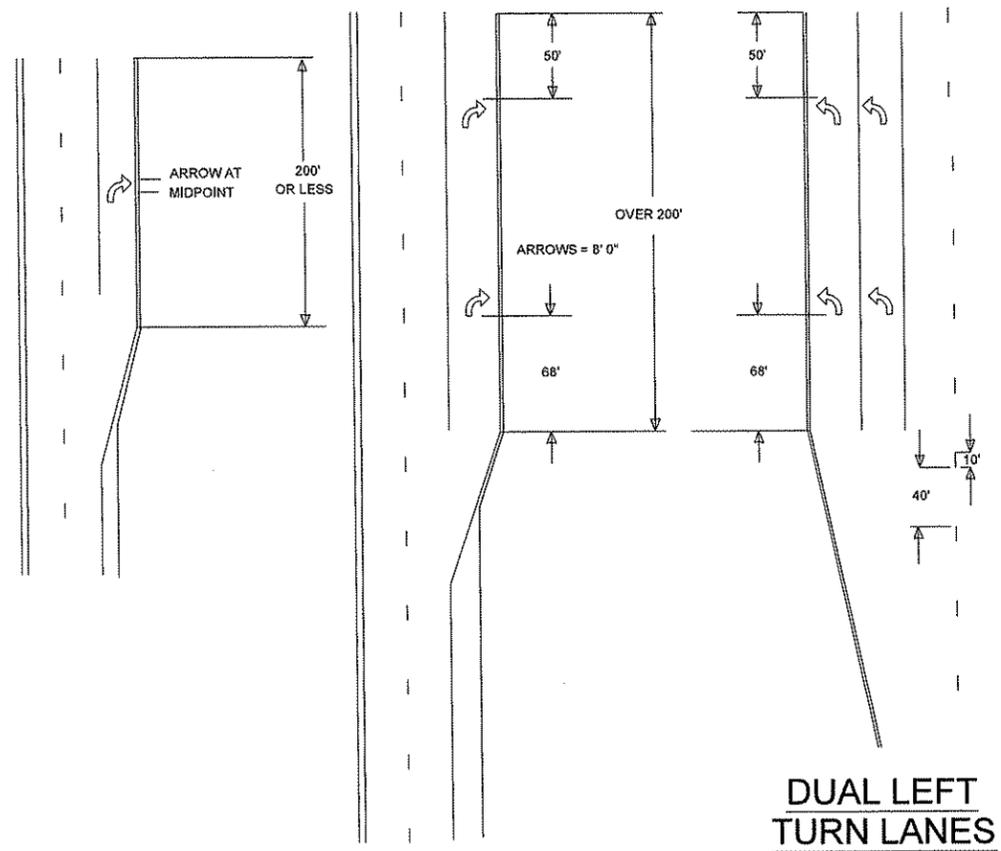
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT NO. 12-14-22

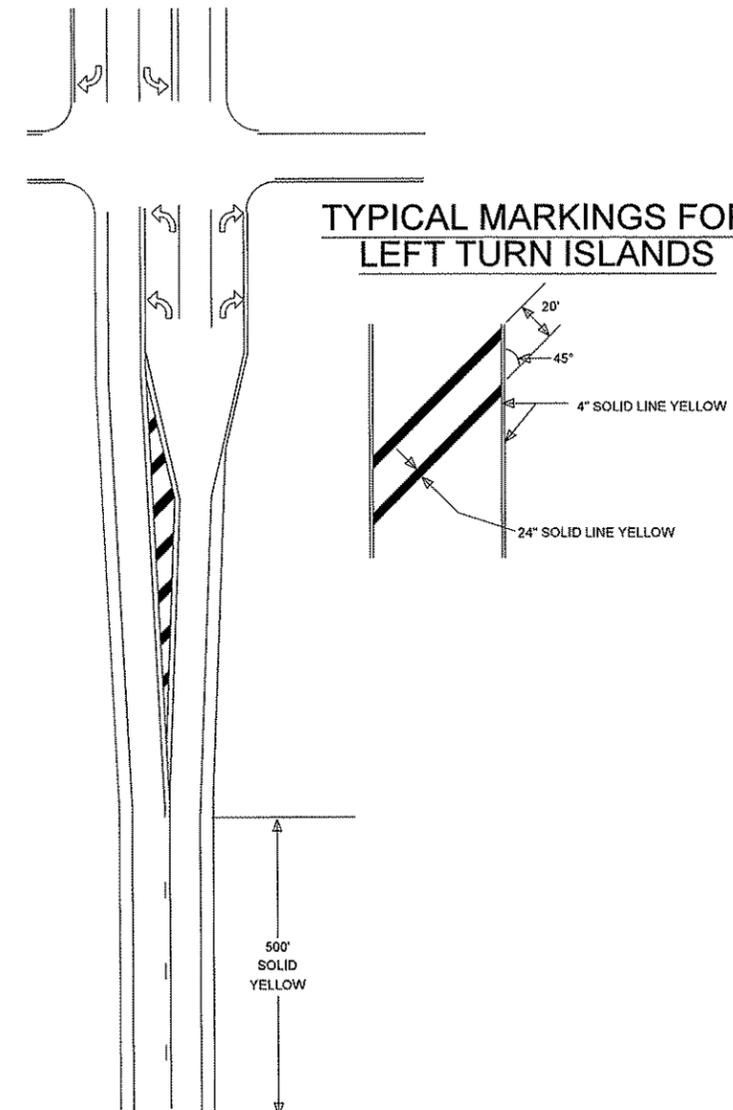
SIGNING DETAILS

Sheet 64 of 69 Sheets

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH_22_(RR_Vickers)\1 ALL CONC\Bose\PROPOSED\Sign&Stripe_Details.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: CHARLES CADENHEAD
SIGNATURE: *Charles Cadenhead*
DATE: 4/23/12 LICENSE NO. 40416

DRAWN BY MTH DATE 3-27-12
DESIGN BY MTH DATE 3-27-12
CHECKED BY JR DATE 3-28-12



**ANOKA COUNTY
HIGHWAY DEPT.**

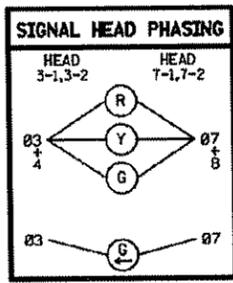
COUNTY PROJECT NO. 12-14-22

PAVEMENT MARKING DETAILS
Sheet 65 of 69 Sheets

SIGNAL FACES

ALL INDICATIONS SHALL BE 300mm

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1				←	←	←
1-2				←	←	←
2-1	●	●	●			
2-2	●	●	●			
2-3	●	●	●			
3-1				←	←	←
3-2				←	←	←
4-1	●	●	●			
4-2	●	●	●			
5-1				←	←	←
5-2				←	←	←
6-1	●	●	●			
6-2	●	●	●			
6-3	●	●	●			
7-1				←	←	←
7-2				←	←	←
8-1	●	●	●			
8-2	●	●	●			



F & I - 1-3/C #14 (CAMERA POWER)
 - COM CABLE (CAMERA)
 - COAXIAL CABLE
 - COM CABLE (ANTENNA)

SALVAGE - 1-COAXIAL CABLE

F & I - 1-3/C #14 (CAMERA POWER)
 - COM CABLE (CAMERA)
 - COAXIAL CABLE

SALVAGE - 1-COAXIAL CABLE

F & I - 1-3/C #14 (CAMERA POWER)
 - COM CABLE (CAMERA)
 - COAXIAL CABLE
 - COM CABLE (ANTENNA)

SALVAGE - 1-COAXIAL CABLE

SALVAGE - RADIO INTERCONNECT ANTENNA
 - COAXIAL CABLE

F & I - 1-7/16" GROUNDING BRAID TO GROUND ROD IN H.H.#1

F & I - 1-3/C #14 (CAMERA POWER)
 - COM CABLE
 - COAXIAL CABLE

F & I - RADIO INTERCONNECT ANTENNA
 - COM CABLE (ANTENNA)

NMC LOOP DETECTORS

NUMBER	SIZE (METERS)	LOCATION
D1-1	1.7 x 1.7	12
D1-2	1.7 x 1.7	3
D2-1	1.7 x 1.7	191
D2-2	1.7 x 1.7	191
D3-1	1.7 x 4.6	AS SHOWN
D4-1	1.7 x 1.7	76
D4-2	2 - 1.7 x 1.7	AS SHOWN
D4-3	2 - 1.7 x 1.7	1.5 & 6
D5-1	1.7 x 1.7	12
D5-2	1.7 x 1.7	3
D6-1	1.7 x 1.7	191
D6-2	1.7 x 1.7	191
D7-1	1.7 x 4.6	AS SHOWN
D8-1	1.7 x 1.7	76
D8-2	2 - 1.7 x 1.7	AS SHOWN
D8-3	2 - 1.7 x 1.7	1.5 & 6

1 LOCATION = DISTANCE FROM STOP LINE OR CROSSWALK TO DETECTOR IN METERS

A EQUIPMENT PAD, SERVICE CABINET, CONTROLLER CABINET AND CONTROLLER

SERVICE CABINET TO CONTROLLER CABINET
 53 mm RSC
 2-1/2" #6
 1-1/2" #6 INS. GR.
 SERVICE CABINET TO HH 1
 53 mm RSC
 2-3/4" #12 (LUM.)
 SERVICE CABINET TO HH 10
 53 mm RSC
 3-1/2" #2
 78 mm RSC STUBBED OUT/THREADED AND CAPPED BOTH ENDS!

CONTROLLER CABINET TO HH 1
 2-78 mm RSC
 5-12/C #12
 11-3/4" #12
 2-3/4" #20
 8-2/C #14

CONTROLLER CABINET TO HH 17
 2 78 mm RSC
 5-12/C #12
 5-3/4" #12
 2-3/4" #20
 8-2/C #14

103 mm RSC
 2-12/C #12
 2-3/4" #12
 1-3/4" #12 (LUM.)
 5 2/C #14

103 mm RSC
 3-12/C #12
 6-3/4" #12
 1-3/4" #12 (LUM.)
 2-3/4" #20
 3-2/C #14

78 mm RSC
 1-12/C #12
 2-3/4" #12
 1-3/4" #12 (LUM.)
 1 3/4" #20
 3-2/C #14

4 PASO POLE FOUNDATION
 TYPE PA90-A-10.7-D9.1-2.7 (DAVIT AT 340°)
 2-SWING AWAY HINGES
 2-ONE WAY SIGNALS OVERHEAD AT 0 m AND 3.4 m
 2-TYPE 10A POLE MOUNTED AT 90° AND 180°
 ONE WAY EYP DETECTOR AND CONFIRMATORY LIGHT PHASES 2&5
 LUMINAIRE-200 W HPS
 2-PED PUSH BUTTONS AND SIGNS (R10-4b)
 EXTEND INTO HH 7
 78 mm RSC
 2-12/C #12
 3 3/4" #12
 1-3/4" #12 (LUM.)
 1-3/4" #20

8 PASO POLE FOUNDATION
 TYPE PA100-A-12.2-D-2.2-2.7 (DAVIT AT 350°)
 2-SWING AWAY HINGES
 2-ONE WAY SIGNALS OVERHEAD AT 0 m AND 3.4 m
 TYPE 10A POLE MOUNTED AT 90°
 TYPE 10B POLE MOUNTED AT 180°
 ONE WAY EYP DETECTOR AND CONFIRMATORY LIGHT PHASES 6&1
 LUMINAIRE-200 W HPS
 PED PUSH BUTTON AND SIGN (R10-4b)
 EXTEND INTO HH 15
 78 mm RSC
 2-12/C #12
 2-3/4" #12
 2-3/4" #12 (LUM.)
 1 3/4" #20

7 PASO POLE FOUNDATION
 TYPE PA90-A-9.1

REMOVE D40-9 (DAVIT AT 350 DEG) S & LUMINAIRE-200 WATT H.P.S. F & I-XG-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG) (INCLUDES LIGHTNING ROD, 7/16" GROUND BRAID AND GROUND ROD)

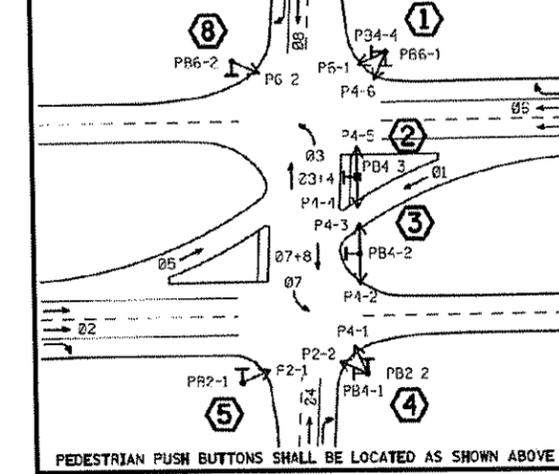
INSTALL 1-VIDEO CAMERA WITH MOUNT

REVISE SIGNAL SYSTEM

A VIDEO CAMERA IS BEING PLACED ON POLE NO. 7. THE EXISTING LUMINAIRE EXTENSION IS BEING REPLACED WITH A COMBINATION CAMERA/LUMINAIRE EXTENSION AND CABLES PLACED TO THE SIGNAL CONTROL CABINET. A ETHERNET RADIO/ANTENNA IS BEING PLACED ON POLE NO. 8

NOTE: ALL ITEMS ARE INPLACE UNLESS NOTED.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



6 PEDESTAL FOUNDATION
 4.6 m PEDESTAL POLE AND BASE
 TYPE 5A
 R9-30 SIGN (NO PED) FACING POLE 5
 EXTEND INTO HH 13
 78 mm RSC
 1-12/C #12

5 PASO POLE FOUNDATION
 TYPE PA90-A-9.1-D12.2-2.7 (DAVIT AT 350°)
 2-SWING AWAY HINGES
 ONE WAY SIGNAL OVERHEAD AT 0 m
 TYPE 10A POLE MOUNTED AT 180°
 TYPE 30A POLE MOUNTED AT 90°
 LUMINAIRE-200 W HPS
 PED PUSH BUTTON AND SIGN (R10-4b)
 EXTEND INTO HH 9
 78 mm RSC
 1-12/C #12
 2-3/4" #12
 1-3/4" #12 (LUM.)

SIGNAL SYSTEM OPERATION

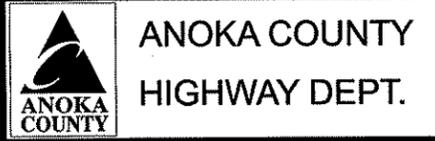
- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- PHASES 1 AND 5 ARE PROTECTED LEFT TURN PHASES.
- PHASES 3 AND 7 ARE INSIDE CLEARANCE PHASES.

PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

NO	DATE	BY	CHKD	APPR	REVISION

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 DESIGN BY JF DATE 4/1/2012
 CHECKED BY JO DATE 5/1/2012



COUNTY PROJECT NO. CP 12-14-22

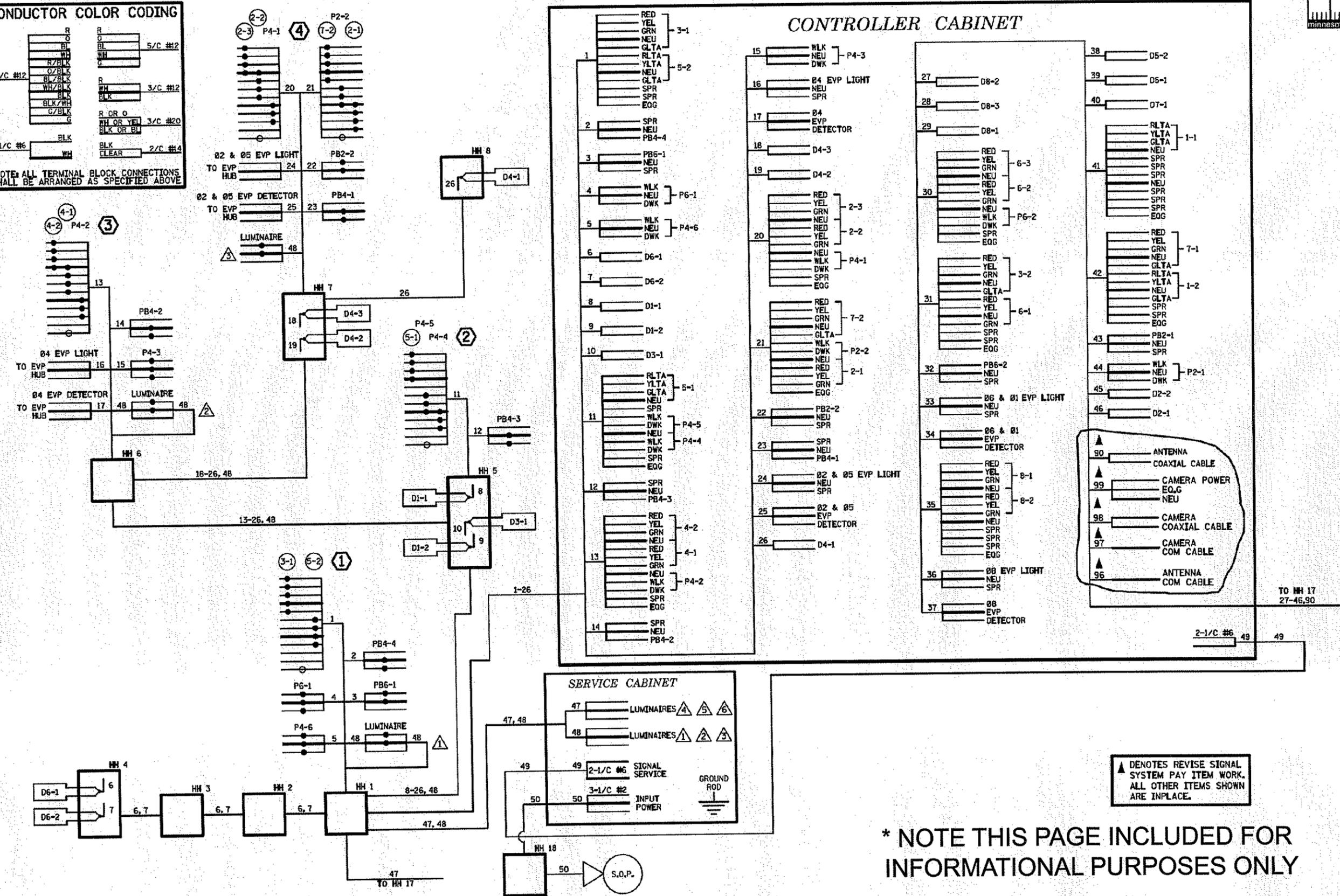
SIGNAL LAYOUT
 Sheet 66 of 69 Sheets



CONDUCTOR COLOR CODING

R	5/C #12
O	
BL	
WH	
R/BLK	
O/BLK	
B/BLK	
WH/BLK	
BLK	
BLK/WH	
G/BLK	
G	
R OR O	3/C #20
WH OR YEL	
BLK OR BU	
BLK	2/C #14
WH	
BLK CLEAR	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



*** NOTE THIS PAGE INCLUDED FOR INFORMATIONAL PURPOSES ONLY**

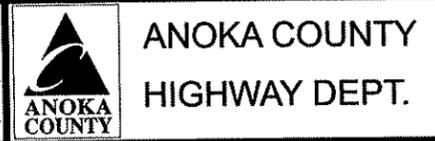
PLOTTED/REVISED: 5/26/2011

DISTRICT #: METRO
PLOT NAME: wiring diagram 1 of 2
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NO	DATE	BY	CKD	APPR	REVISION

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DESIGN BY JF DATE 4/1/2012
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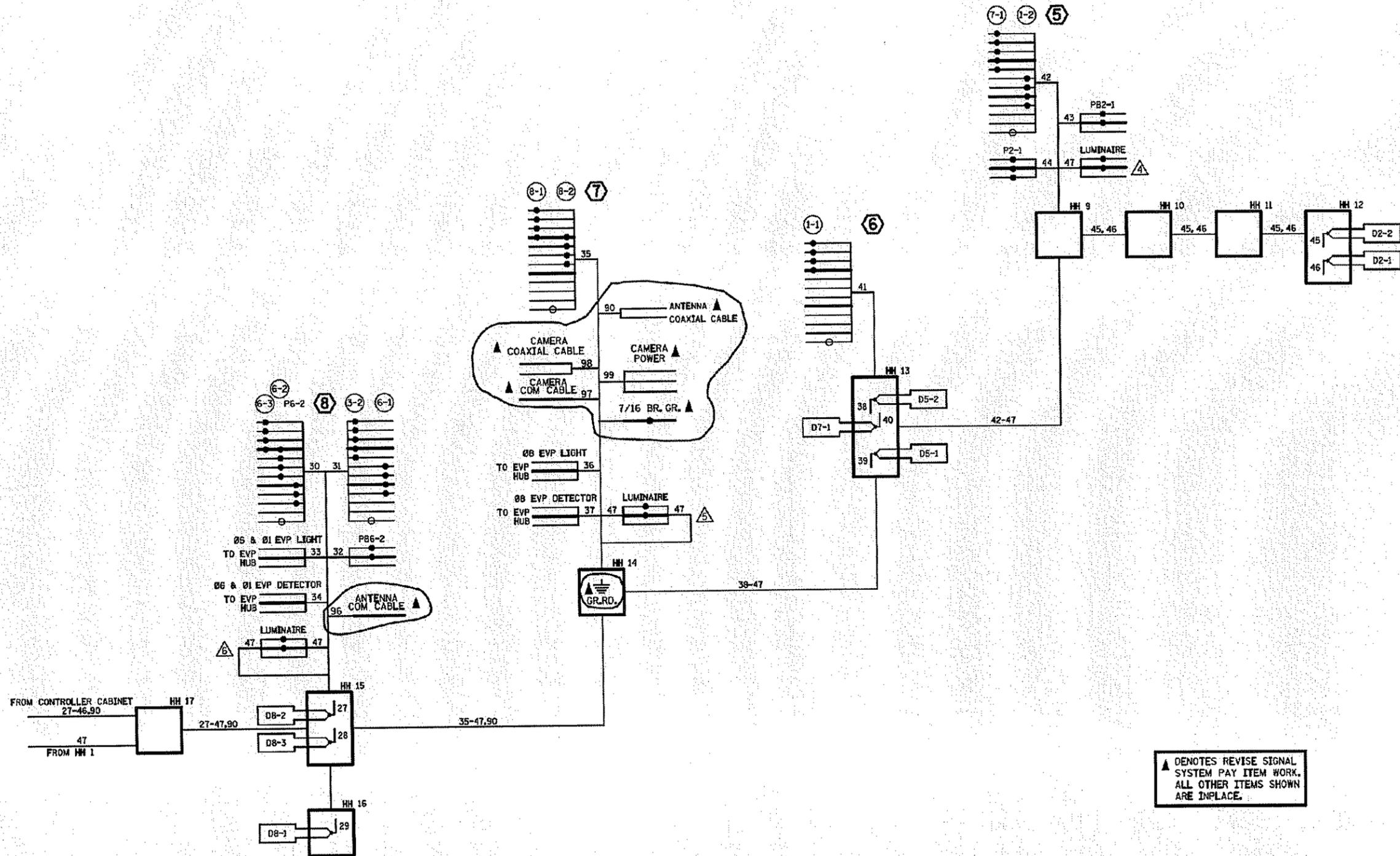
COUNTY PROJECT NO. CP 12-14-22

SIGNAL LAYOUT
Sheet 68 of 69 Sheets



PLOTTED/REVISED: 5/26/2011

DISTRICT: METRO
PLOT NAME: wiring diagram 2 of 2
PATH & FILENAME: ip:\P\1140642\RT2\189_spl.dwg



▲ DENOTES REVISE SIGNAL
SYSTEM PAY ITEM WORK.
ALL OTHER ITEMS SHOWN
ARE INPLACE.

* NOTE THIS PAGE INCLUDED FOR
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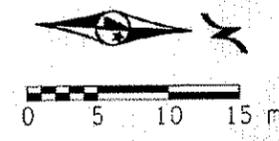
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DESIGN BY JF DATE 4/1/2012
CHECKED BY JO DATE 5/1/2012



ANOKA COUNTY
HIGHWAY DEPT.

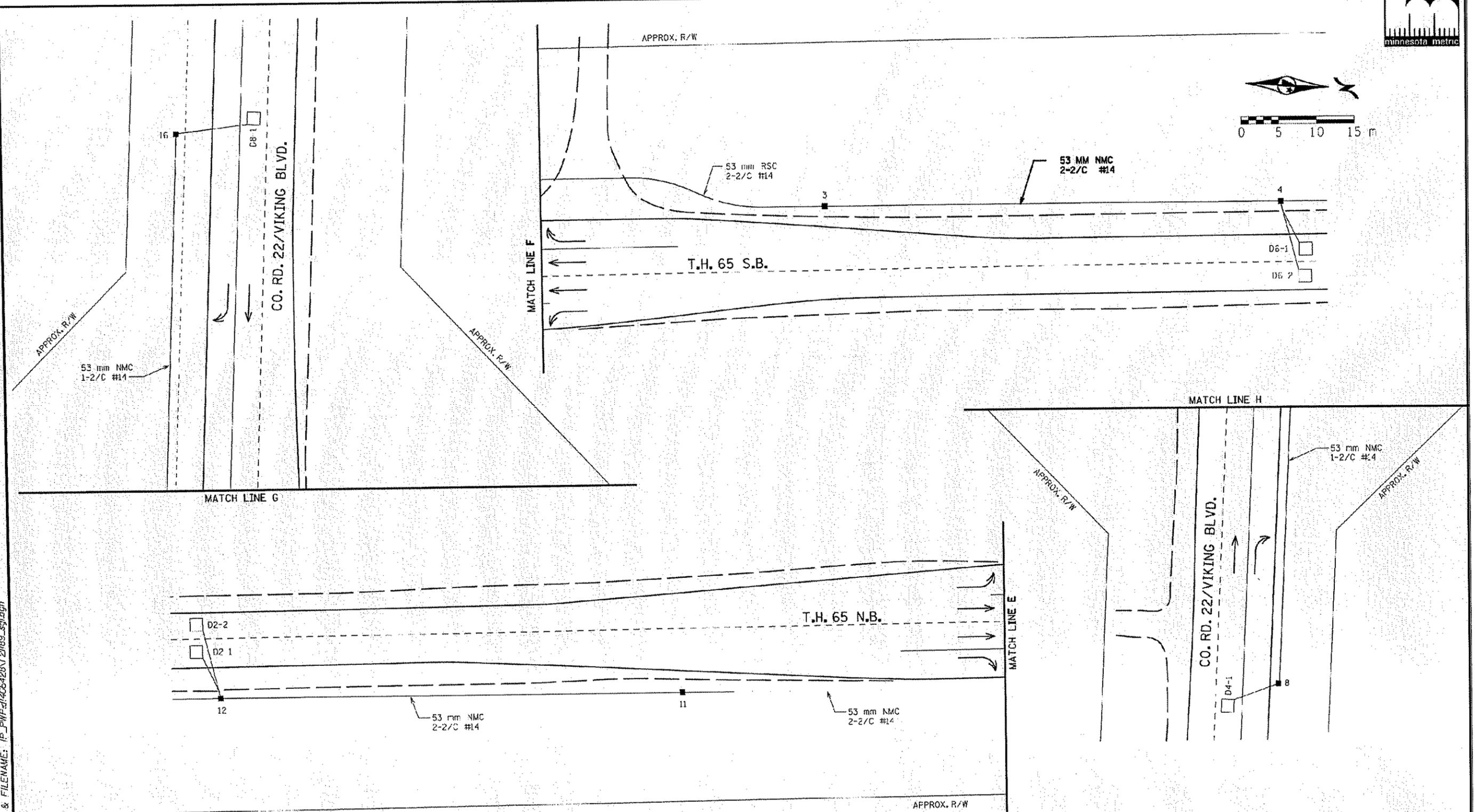
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SIGNAL LAYOUT
Sheet 69 of 69 Sheets



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DISTRICT: METRO
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ANOKA COUNTY
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COUNTY PROJECT NO. CP 12-14-22

SIGNAL LAYOUT
Sheet 67 of 69 Sheets