



### STATEMENT OF ESTIMATED QUANTITIES

ITEM NUMBER	(CODE)	ITEM DESCRIPTION	NOTES	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
2021.501	00010	MOBILIZATION		LUMP SUM	1
2104.501	00023	REMOVE BITUMINOUS CURB		LIN FT	1258
2104.505	00119	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	4	SQ YD	458
2104.505	00120	REMOVE BITUMINOUS PAVEMENT	7	SQ YD	452
2104.509	00116	REMOVE BIUMINOUS FLUME		EACH	4
2104.513	00011	SAWING BIT PAVEMENT (FULL DEPTH)		LIN FT	239
2123.503	00010	MOTOR GRADER	1	HOUR	24
2123.509	00010	DOZER	9	HOUR	10
2130.501	00010	WATER		MGAL	30
2211.501	00050	AGGREGATE BASE CLASS 5	15	TON	91
2215.501	00010	FULL DEPTH RECLAMATION		SQ YD	26768
2215.502	00010	HAUL FULL DEPTH RECLAMATION (LV)	16	CU YD	17
2221.501	00050	SHOULDER BASE AGGREGATE CLASS 5	2	TON	266
2232.501	00050	MILL BITUMINOUS SURFACE (2.0")		SQ YD	64
2357.502	00010	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	1429
2360.501	23200	TYPE SP 12.5 WEARING COURSE MIX (3,B)	4	TON	106
2360.501	24500	TYPE SP 12.5 WEARING COURSE MIX (4,E)	8	TON	6120
2511.501	00012	RANDOM RIPRAP CLASS II	5	CU YD	10
2511.515	00013	GEOTEXTILE FABRIC TYPE III	6	SQ YD	21
2531.501	02060	CONCRETE CURB & GUTTER DESIGN B412		LIN FT	1258
2531.604	00030	CONCRETE DRAINAGE FLUME		SQ YD	16
2540.602	00150	MAIL BOX SUPPORT	14	EACH	15
2563.601	00010	TRAFFIC CONTROL	3	LUMP SUM	1
2563.613	01100	PORTABLE CHANGEABLE MESSAGE SIGN	12	UDAY	14
2575.523	00009	EROSION CONTROL BLANKETS CATEGORY 0	13	SQ YD	1120
2581.501	00010	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	10	LN FT	624
2582.502	41104	4" SOLID LINE WHITE-EPOXY	11	LN FT	15710
2582.502	42104	4" SOLID LINE YELLOW-EPOXY	11	LN FT	4130
2582.502	42404	4" DOUBLE SOLID LINE YELLOW-EPOXY	11	LN FT	2370
2582.502	42204	4" BROKEN LINE YELLOW-EPOXY	11	LN FT	1088

### CONSTRUCTION NOTES

1	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING BITUMINOUS PAVEMENT
2	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
3	DO NOT PASS, PASS WITH CARE AND NO CENTER STRIPE SIGNS TO BE INPLACE DURING MILLING, RECLAIMING OR PAVING OPERATIONS.
4	STREET APPROACHES & DRIVEWAYS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING
5	TO BE PLACED AT THE END OF CONCRETE DRAINAGE FLUME
6	INSTALLED UNDER RIPRAP
7	BITUMINOUS PAVEMENT REMOVAL AT INTERSECTION OF CR 58 & CSAH 78
8	INCLUDES AREA AT INTERSECTION OF CR 58 & CSAH 78
9	FOR GRADING EXISTING BACK FILL MATERIAL BEHIND CONCRETE CURB AND GUTTER.
10	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL PAINT STRIPING.
11	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
12	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
13	TYPE 1 FERTILIZEER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. 4" OF TOPSOIL IS INCIDENTAL TO ALL TURF ESTABLISHMENT.
14	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY, CONTRACTOR IS RESPONSIBLE FOR CONTACTING. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
15	GRAVEL BASE FOR CONCRETE AND BITUMINOUS STREET APPROACHES AND DRIVEWAYS
16	TO BE USED AT ENGINEERS DISGRESSION FOR GRADE & PROFILE CORRECTION

### BASIS OF PLANNED QUANTITIES

2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD
2211	AGGREGATE BASE CLASS 5	1.8 TONS / CU YD
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN THICKNESS
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS

NO	DATE	BY	CKD	APPR	REVISION
	03/18/2015				

NAME: P:\15-01-00\CSAH\_78(181st-Viking Blvd)\Base\PROPOSED\PLAN.dgn

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

PRINT NAME: MATTHEW J. JOHN

SIGNATURE: *[Signature]*

DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: CSO DATE: 1/23/2015

DESIGN BY: CSO DATE: 1/23/2015

CHECKED BY: MJJ DATE: \_\_\_\_\_



**ANOKA COUNTY  
HIGHWAY DEPT.**

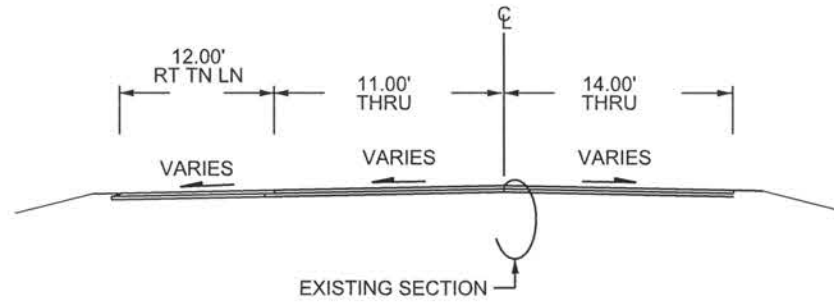
COUNTY PROJECT 15-25-78

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 14 Sheets

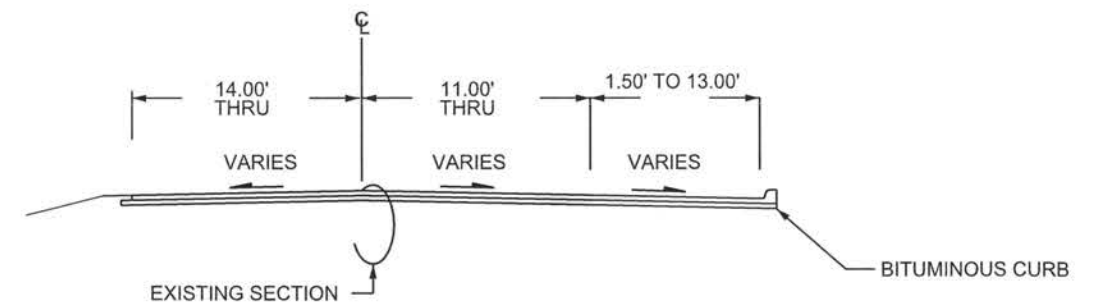
C.S.A.H. 78 (FLAMINGO ST)  
EXISTING SECTION

10+41 TO 15+60



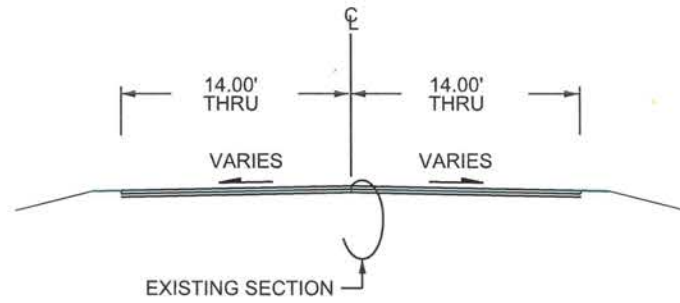
C.S.A.H. 78 (FLAMINGO ST)  
EXISTING SECTION

83+72 TO 85+12



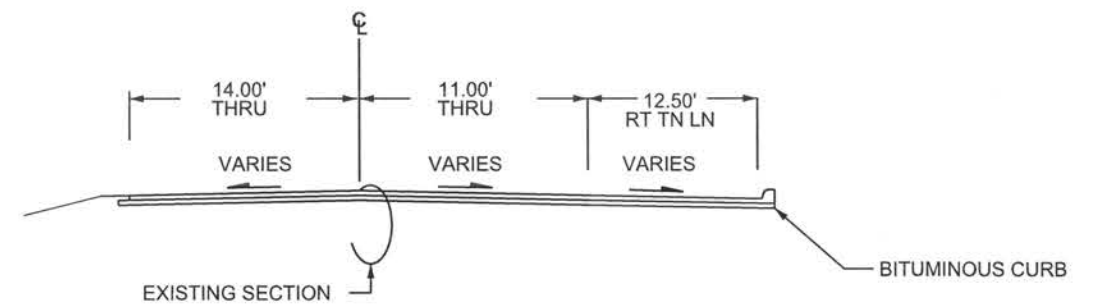
C.S.A.H. 78 (FLAMINGO ST)  
EXISTING SECTION

15+60 TO 78+05  
81+84 TO 83+72



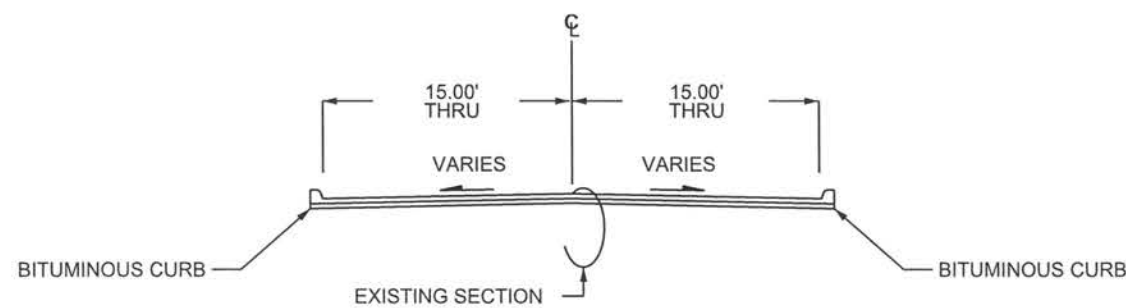
C.S.A.H. 78 (FLAMINGO ST)  
EXISTING SECTION

85+12 TO 88+96

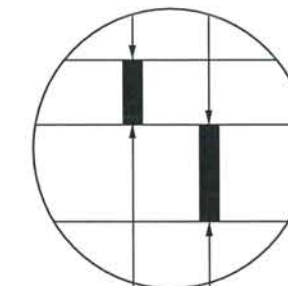


C.S.A.H. 78 (FLAMINGO ST)  
EXISTING SECTION

78+05 TO 81+84



EXISTING SECTION



4 1/4" EXISTING BITUMINOUS

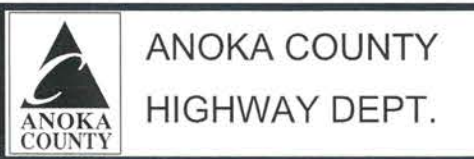
1 1/2" EXISTING BASE

NO	DATE	BY	CKD	APPR	REVISION	TIME
	03/19/2015					9:43:03 AM

NAME: P:\15-01-00\CSAH\_78(181st-VikingBlvd)\Base\PROPOSED\PLAN.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: MATTHEW J. JOHN  
 SIGNATURE: *[Signature]*  
 DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: CSO DATE: 1/23/2015  
 DESIGN BY: CSO DATE: 1/23/2015  
 CHECKED BY: MJJ DATE:



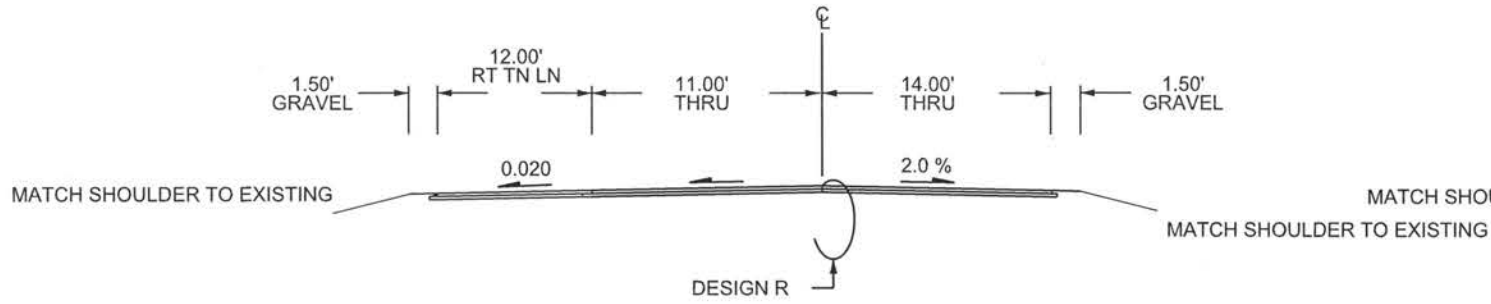
COUNTY PROJECT 15-25-78

TYPICAL SECTIONS  
 Sheet 3 of 14 Sheets

csosterh

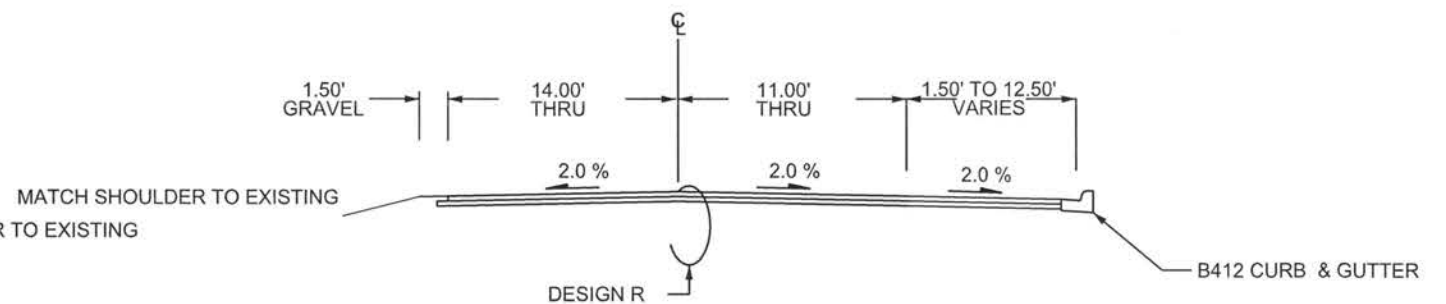
### C.S.A.H. 78 (FLAMINGO ST) PROPOSED SECTION

10+41 TO 15+60



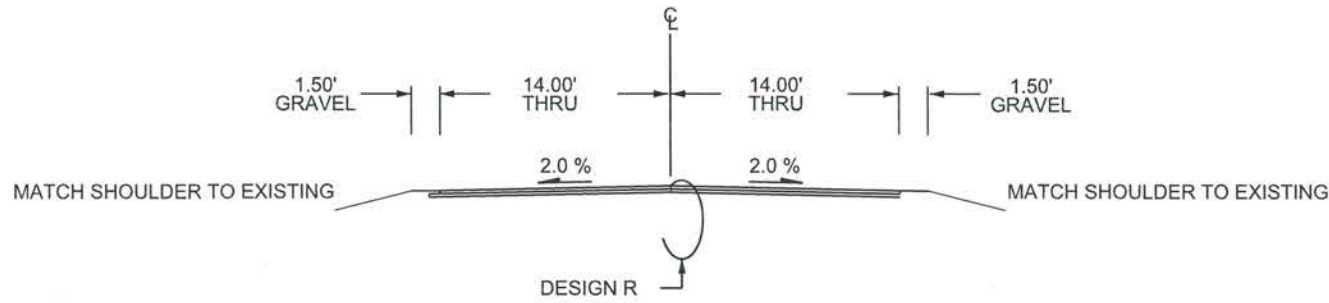
### C.S.A.H. 78 (FLAMINGO ST) PROPOSED SECTION

83+72 TO 85+12



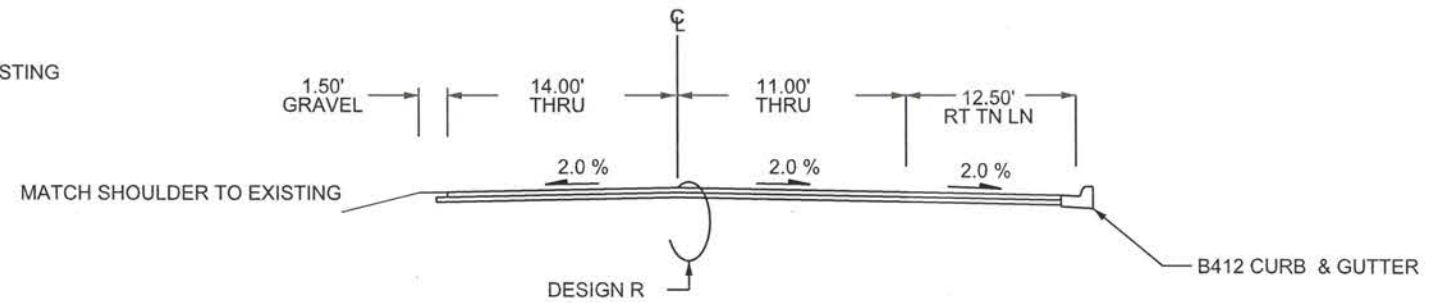
### C.S.A.H. 78 (FLAMINGO ST) PROPOSED SECTION

15+60 TO 78+05  
81+84 TO 83+72



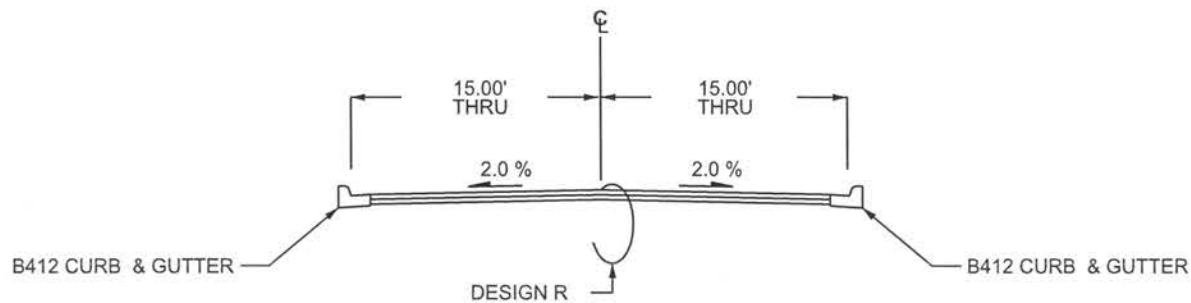
### C.S.A.H. 78 (FLAMINGO ST) PROPOSED SECTION

85+12 TO 88+96

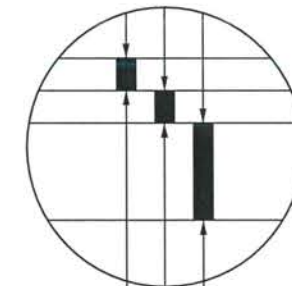


### C.S.A.H. 78 (FLAMINGO ST) PROPOSED SECTION

78+05 TO 81+84



### DESIGN R RECLAIM SECTION



2.0" BITUMINOUS WEAR(SPWEB440E)  
2.0" BITUMINOUS WEAR(SPWEB440E)  
RECLAIMED BITUMINOUS

NO	DATE	BY	CKD	APPR	REVISION	03/18/2015	9:43:08 AM
NAME: P:\15-01-00\CSAH_78(181st-Viking Blvd)\Base\PROPOSED\PLAN.dgn							

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

PRINT NAME: MATTHEW J. JOHN  
SIGNATURE: *[Signature]*  
DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: CSO DATE: 1/23/2015  
DESIGN BY: CSO DATE: 1/23/2015  
CHECKED BY: MJJ DATE: \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

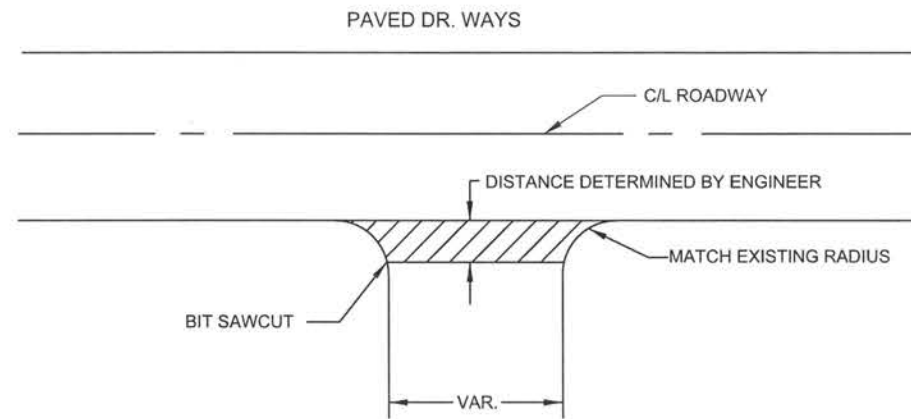
COUNTY PROJECT 15-25-78

TYPICAL SECTIONS  
Sheet 4 of 14 Sheets



DRIVEWAY DETAIL

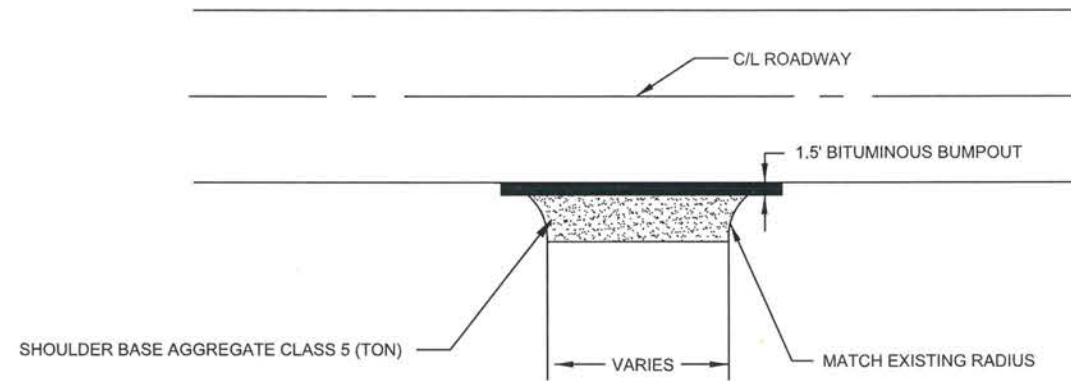
BITUMINOUS DRIVEWAY



DRIVEWAY BUMP OUT PAVED WITH MAINLINE PAID AS MAINLINE.  
DRIVEWAYS PAVED IN DIFFERENT OPERATION FROM MAIN LINE PAVING PAID AS DRIVEWAY OR STREET APPROACH.

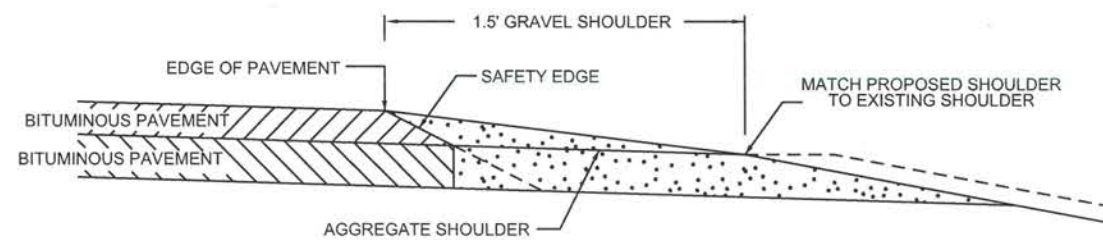
DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE



SHOULDER DETAIL

BITUMINOUS SAFETY EDGE  
GRAVEL SHOULDER



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

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

NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: MATTHEW J. JOHN  
SIGNATURE: *Matthew J. John*  
DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: CSO DATE: 1/23/2015  
DESIGN BY: CSO DATE: 1/23/2015  
CHECKED BY: MJJ DATE: \_\_\_\_\_



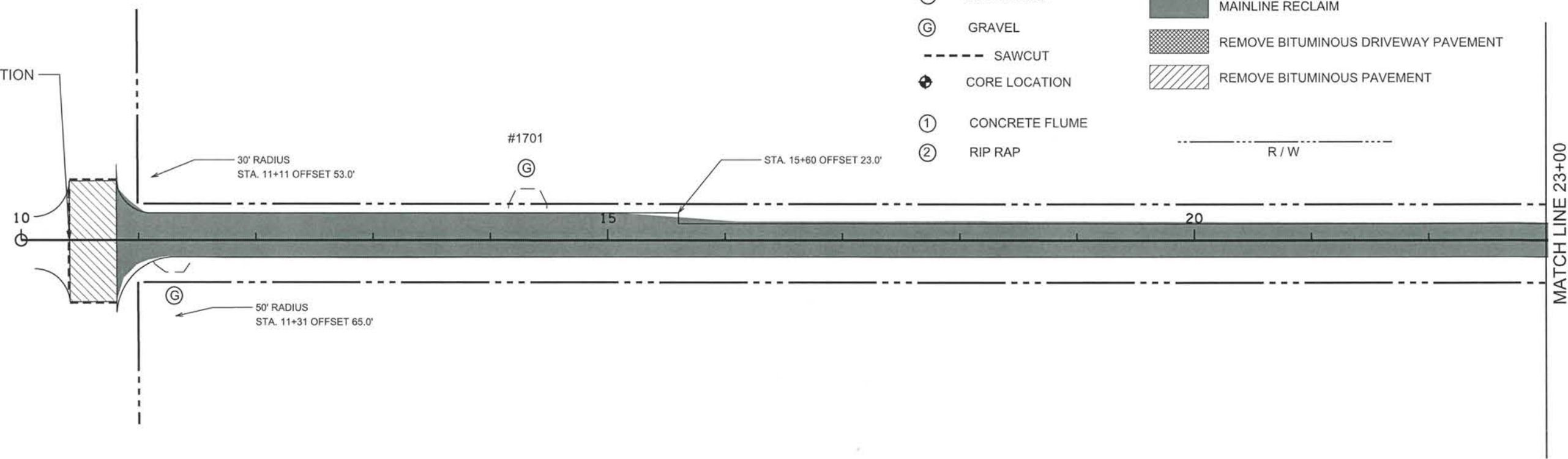
ANOKA COUNTY  
HIGHWAY DEPT.

COUNTY PROJECT 15-25-78

DETAILS  
Sheet 6 of 14 Sheets

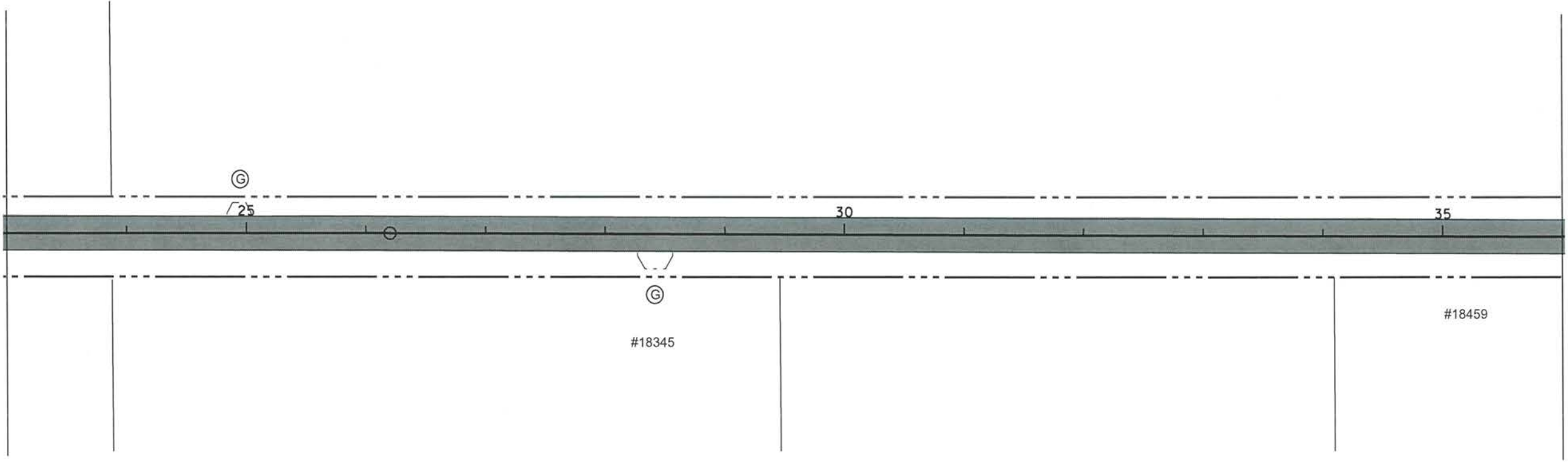
csosterh

BEGIN CONSTRUCTION  
CP: 15-25-78  
STATION: 10+41



- (B) BITUMINOUS
- (G) GRAVEL
- SAWCUT
- CORE LOCATION
- (1) CONCRETE FLUME
- (2) RIP RAP
- MAINLINE RECLAIM
- REMOVE BITUMINOUS DRIVEWAY PAVEMENT
- REMOVE BITUMINOUS PAVEMENT
- R / W

MATCH LINE 23+00



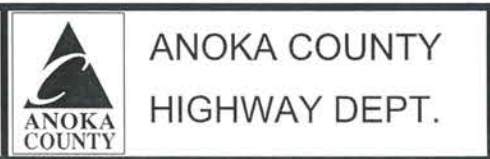
MATCH LINE 36+00

NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
	03/18/2015					03/18/2015	9:43:21 AM

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

PRINT NAME: MATTHEW J. JOHN  
 SIGNATURE: *Matthew J. John*  
 DATE: 4/2/15 LICENSE NO. 51639

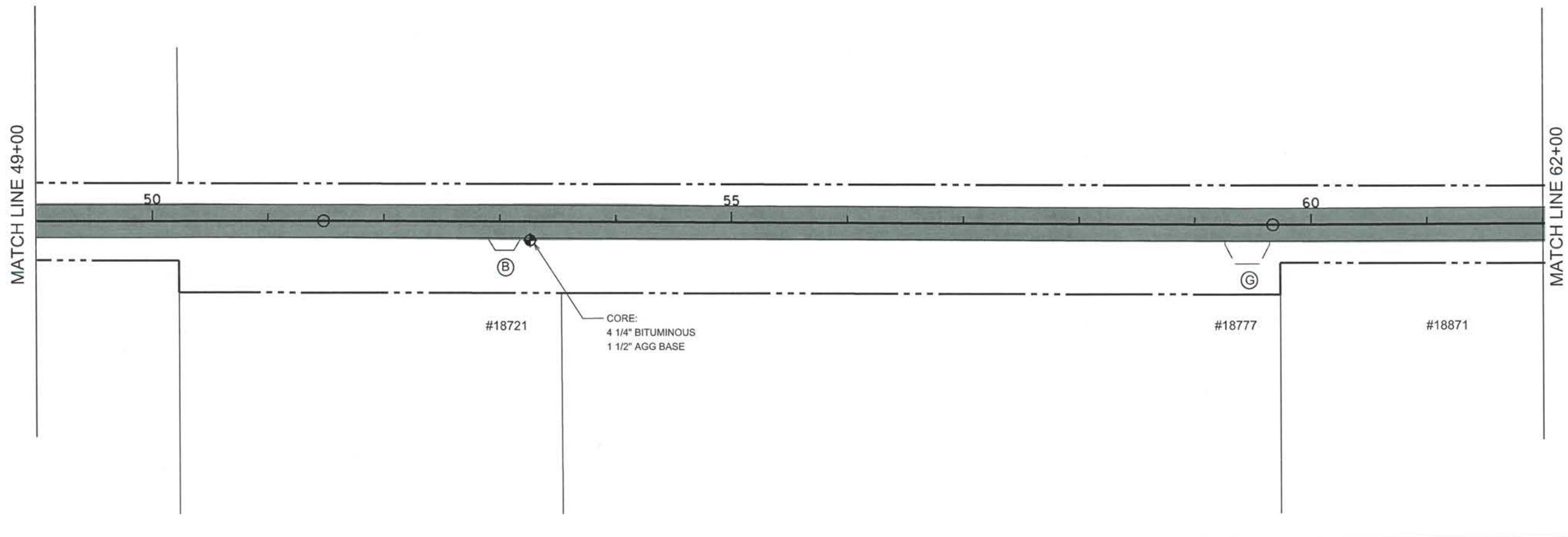
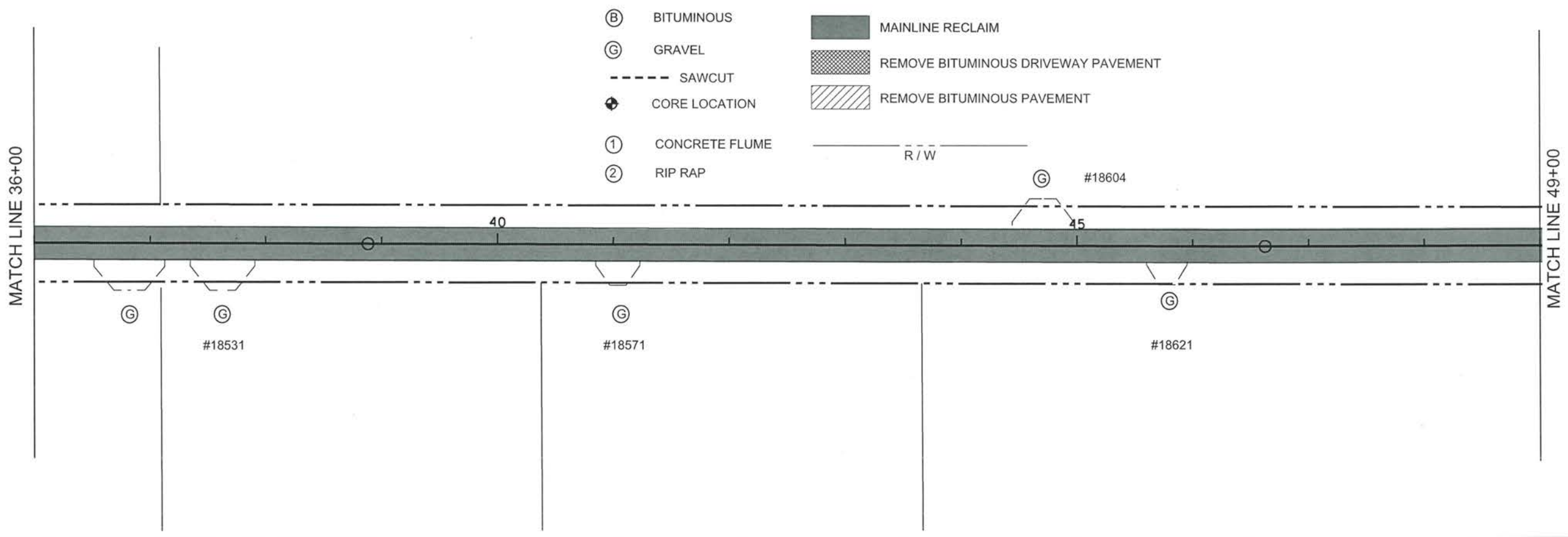
DRAWN BY: CSO DATE: 1/23/2015  
 DESIGN BY: CSO DATE: 1/23/2015  
 CHECKED BY: MJJ DATE:



COUNTY PROJECT 15-25-78

CONSTRUCTION PLAN  
 STA 10+41 TO 36+00  
 Sheet 7 of 14 Sheets

csosterh



- (B) BITUMINOUS
- (G) GRAVEL
- SAWCUT
- ⊕ CORE LOCATION
- ① CONCRETE FLUME
- ② RIP RAP
- █ MAINLINE RECLAIM
- ▨ REMOVE BITUMINOUS DRIVEWAY PAVEMENT
- ▧ REMOVE BITUMINOUS PAVEMENT
- R / W

NO	DATE	BY	CKD	APPR	REVISION	03/18/2015	9:43:24 AM

NAME: P:\15-01-00\CSAH\_78(181st-VikingBlvd)\Base\PROPOSED\PLAN.dgn

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

PRINT NAME: MATTHEW J. JOHN

SIGNATURE: *Matthew J. John*

DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: CSO DATE: 1/23/2015

DESIGN BY: CSO DATE: 1/23/2015

CHECKED BY: MJJ DATE: \_\_\_\_\_



COUNTY PROJECT 15-25-78

CONSTRUCTION PLAN

STA 36+00 TO 62+00

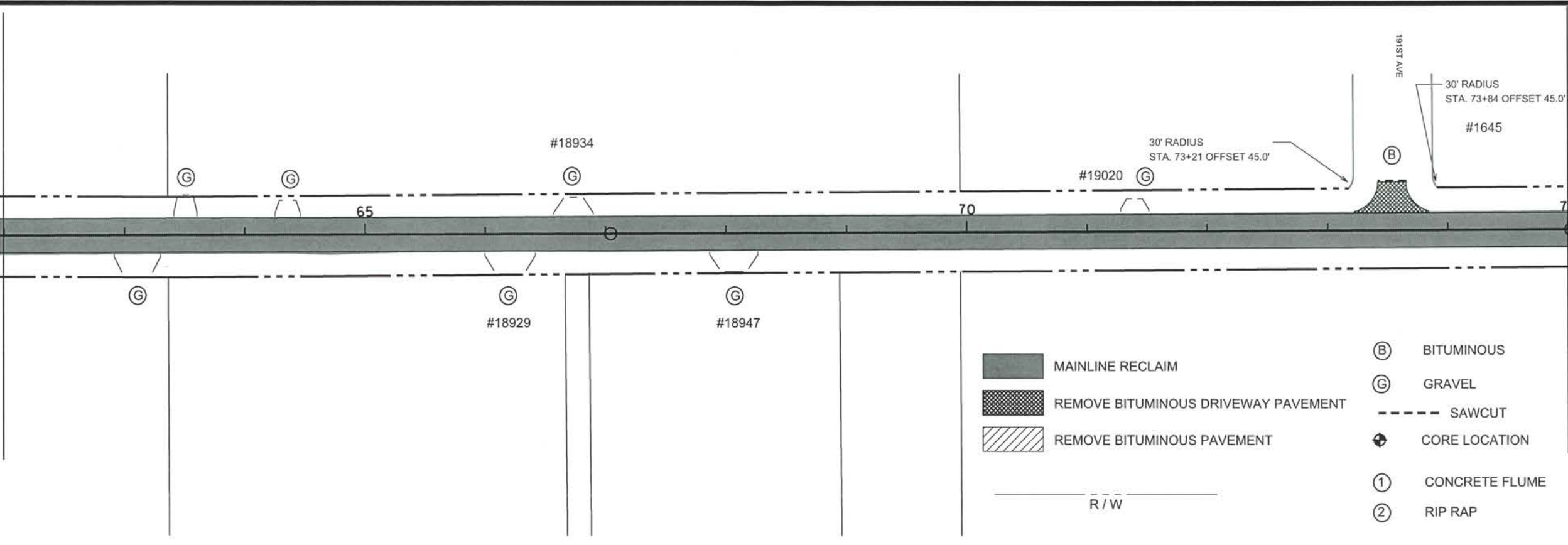
Sheet 8 of 14 Sheets



csosterh

MATCH LINE 62+00

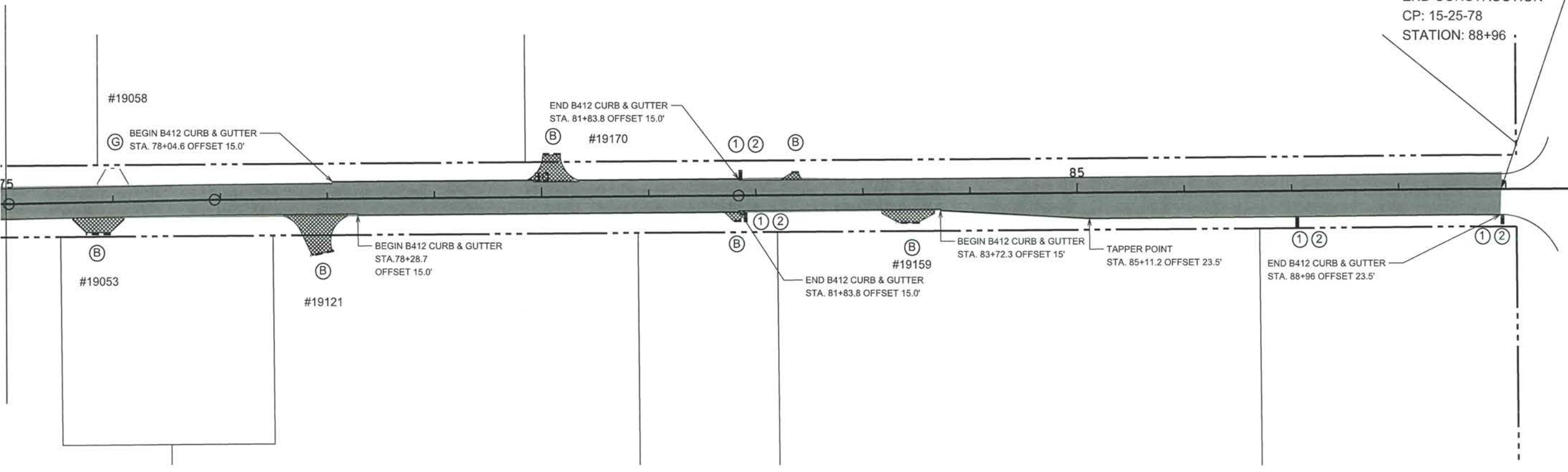
MATCH LINE 75+00



- MAINLINE RECLAIM
- REMOVE BITUMINOUS DRIVEWAY PAVEMENT
- REMOVE BITUMINOUS PAVEMENT
- SAWCUT
- CORE LOCATION
- CONCRETE FLUME
- RIP RAP
- BITUMINOUS
- GRAVEL
- R / W

MATCH LINE 75+00

END CONSTRUCTION  
CP: 15-25-78  
STATION: 88+96



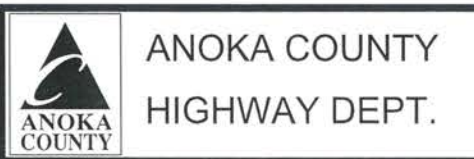
NO	DATE	BY	CKD	APPR	REVISION	03/18/2015	9:43:28 AM

NAME: P:\15-01-00\CSAH\_78(181st-VikingBlvd)\Base\PROPOSED\PLAN.dgn

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

PRINT NAME: MATTHEW J. JOHN  
SIGNATURE: *[Signature]*  
DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: CSO DATE: 1/23/2015  
DESIGN BY: CSO DATE: 1/23/2015  
CHECKED BY: MJJ DATE: \_\_\_\_\_



COUNTY PROJECT 15-25-78

CONSTRUCTION PLAN  
STA 62+00 TO 88+96  
Sheet 9 of 14 Sheets

**PERMANENT PAVEMENT MARKING PLAN**  
NOTES AND GUIDELINES

**GENERAL INFORMATION:**

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

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

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

**EPOXY:**

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

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

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

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

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

**PREFORMED THERMOPLASTIC:**

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

**PAINT:**

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

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

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

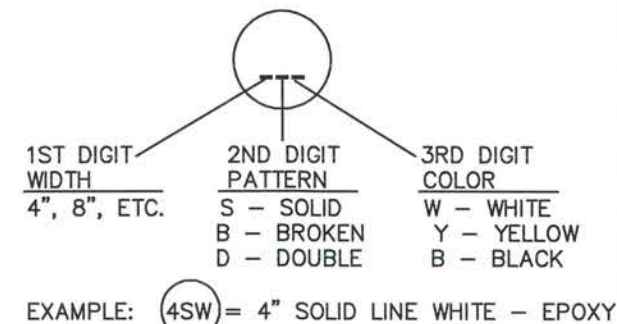
THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

**SYMBOLS & MATERIALS LEGEND**

- CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC
- ↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

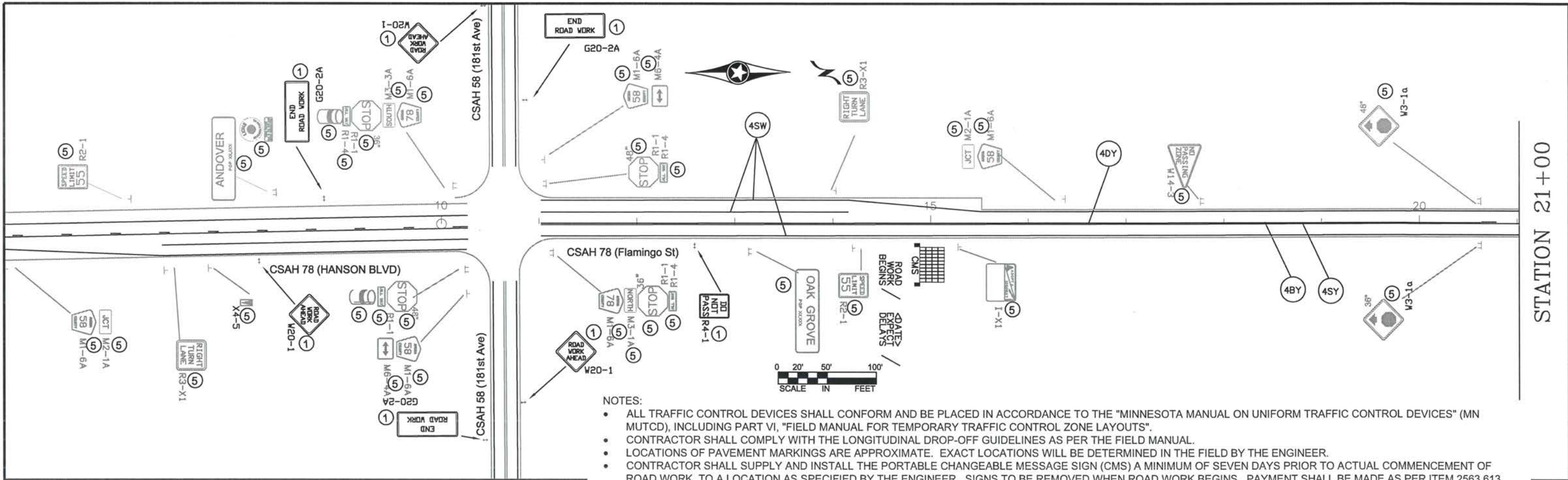
**STRIPING KEY**

- CIRCLE - EPOXY
- SQUARE PREFORMED THERMOPLASTIC
- △ TRIANGLE - PAINT
- ⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



PERMANENT MARKING QUANTITIES		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	15710
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	4130
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	1088
4" DOUBLE SOLID LINE YELLOW - EPOXY PAINT	LIN FT	2370

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: MATTHEW J. JOHN SIGNATURE: <i>[Signature]</i> DATE: 2/12/15 LICENSE NO. 51639					DRAWN BY: RLB DATE: 2/14/14 DESIGN BY: RLB DATE: 2/14/14 CHECKED BY: JR DATE: 2/14/14		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. _____ STATE AID PROJECT NO. _____ STATE AID PROJECT NO. _____ COUNTY PROJECT NO. 15-25-78		PERMANENT MARKING TABULATION Sheet 10 of 14 Sheets	
NO	DATE	BY	CKD	APPR	REVISION				NAME: P:\13-01-00\CSAH 18\Bases\TRAFFIC\Perm pvmt mrrkg guide notes_guidelines.dwg			



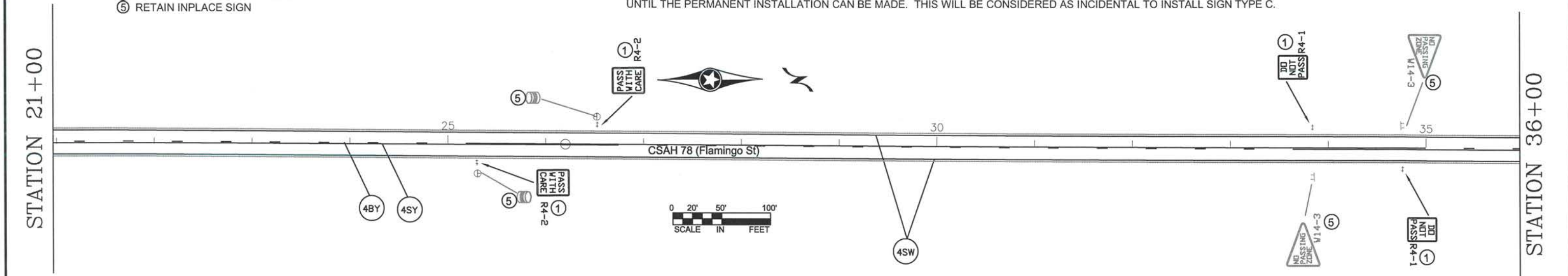
STATION 21+00

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

SIGN NOTES:

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



STATION 21+00

STATION 36+00

NO	DATE	BY	CKD	APPR	REVISION

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

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

PRINT NAME: MATTHEW J. JOHN

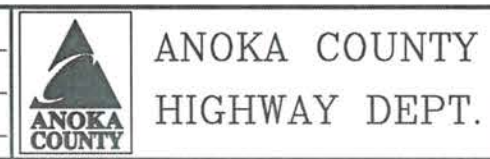
SIGNATURE: *[Signature]*

DATE: 4/2/15 REG. NO. 51639

DRAWN BY: RLB DATE: 1/7/14

DESIGN BY: RLB DATE: 1/7/14

CHECKED BY: JR DATE: 1/7/14



STATE PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

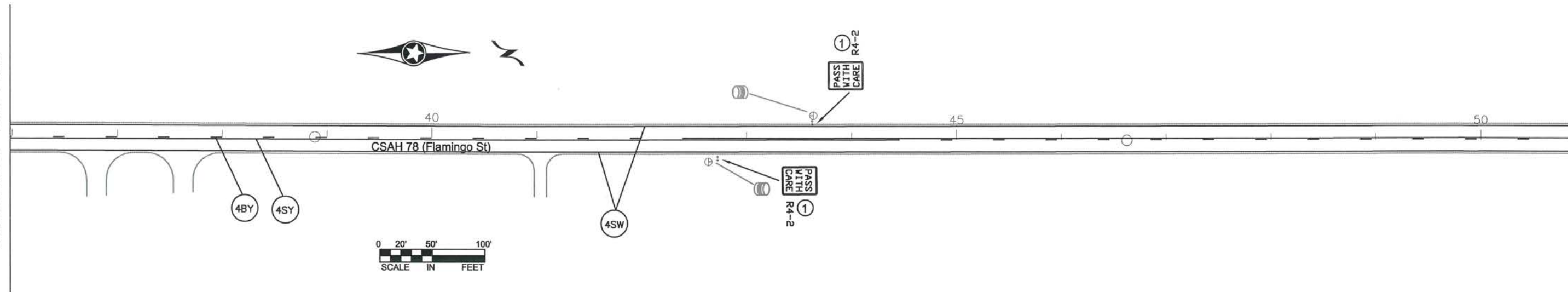
COUNTY PROJECT NO. 15-25-78

TEMPORARY SIGNING, PERMANENT SIGNING AND STRIPING

Sheet 11 of 14 Sheets

STATION 36+00

STATION 51+00



NOTES:

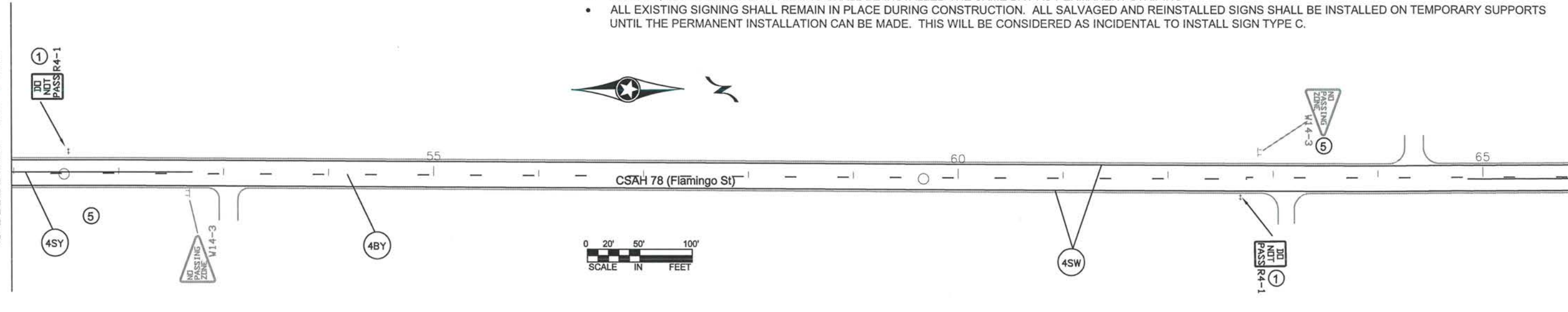
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

SIGN NOTES:

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

STATION 51+00

STATION 66+00



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: MATTHEW J. JOHN

SIGNATURE: *Matthew J. John*

DATE: 4/2/15 REG. NO. 51639

DRAWN BY: RLB DATE 1/7/14

DESIGN BY: RLB DATE 1/7/14

CHECKED BY: JR DATE 1/7/14

**ANOKA COUNTY**  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

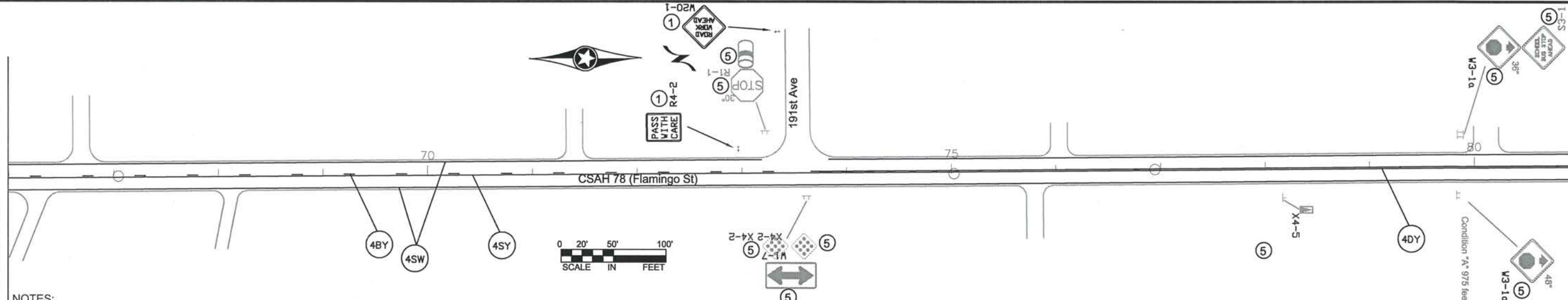
COUNTY PROJECT NO. 15-25-78

TEMPORARY SIGNING,  
PERMANENT SIGNING  
AND STRIPING

Sheet 12 of 14 Sheets

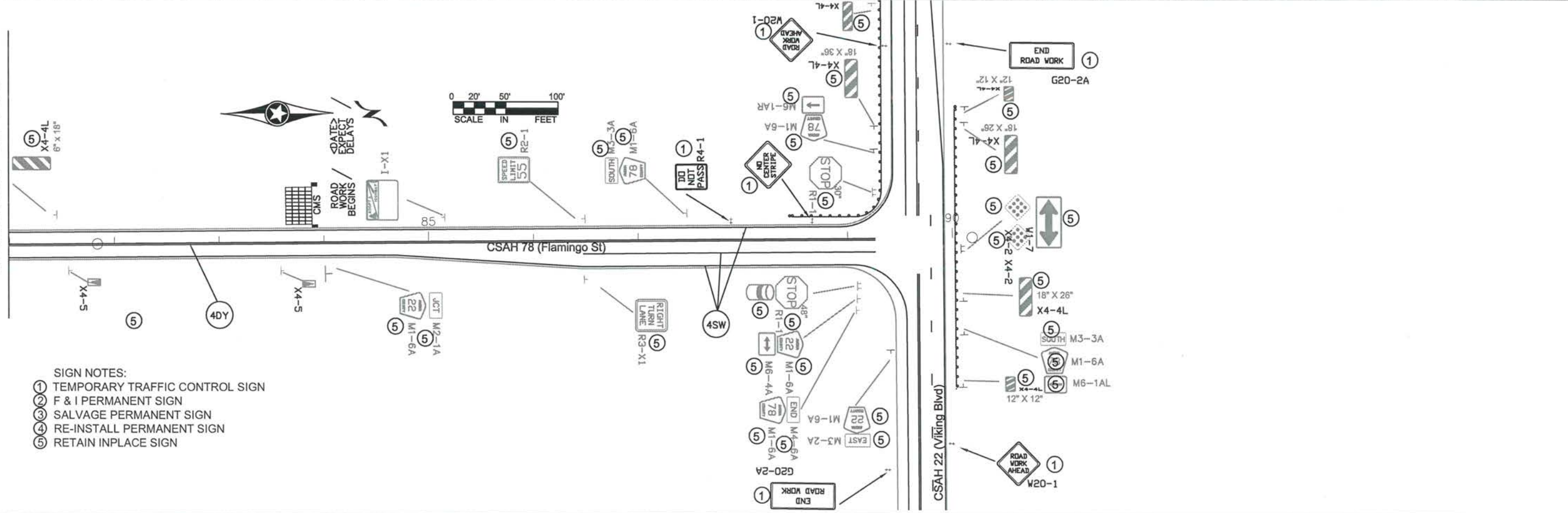
STATION 66+00

STATION 81+00



- NOTES:
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
  - CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
  - LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
  - CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
  - ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
  - ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
  - ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

STATION 81+00



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

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: MATTHEW J. JOHN  
 SIGNATURE: *Matthew J. John*  
 DATE: 4/2/15 REG. NO. 51639

DRAWN BY: RLB DATE: 1/7/14  
 DESIGN BY: RLB DATE: 1/7/14  
 CHECKED BY: JLR DATE: 1/7/14



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 15-25-78

TEMPORARY SIGNING,  
 PERMANENT SIGNING  
 AND STRIPING  
 Sheet 13 of 14 Sheets

NO	DATE	BY	CKD	APPR	REVISION

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

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA FT. <sup>2</sup>	INSERT	QUANTITY		MOUNTING HEIGHT TO PAVEMENT (EDGE) FT.
					No. POST	
W8-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00		6	1	7.0'
R4-2	24" x 30"	5.00		5	1	7.0'
G20-2A	48" x 24"	8.00		5	2	7.0'
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-8	48" x 48"	16.00		AS NEEDED		
W8-9	48" x 48"	16.00		AS NEEDED		
	48" x 48"	16.00		AS NEEDED		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 6)		
CMS sign to be installed a minimum of seven days prior to actual commencement of road work. Signs to be removed when road work begins.				2		

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

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

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

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

NO	DATE	BY	CHKD	APPR	REVISION

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

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: MATTHEW J. JOHN  
 SIGNATURE:   
 DATE: 4/2/15 REG. NO. 51639

DRAWN BY: RLB DATE: 1/26/15  
 DESIGN BY: RLB DATE: 1/26/15  
 CHECKED BY: JR DATE: 1/30/15

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 15-25-78

TRAFFIC CONTROL QUANTITY  
 Sheet 14 of 14 Sheets