

# MINNESOTA DEPARTMENT OF TRANSPORTATION

## ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS RECLAMATION, BITUMINOUS SURFACING.

LOCATED ON CSAH 14 BETWEEN 4TH AVE AND 120' WEST OF AENON PL

11-12-14

GROSS LENGTH	4710 FEET	0.892 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	4710 FEET	0.892 MILES

CITY OF LINO LAKES



BEGIN COUNTY PROJECT 11-12-14  
CSAH 14 STA. 40+00

END COUNTY PROJECT 11-12-14  
CSAH 14 STA. 87+10

### 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

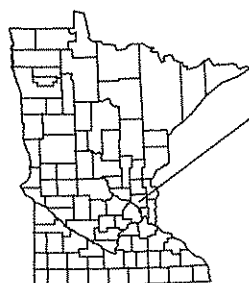
- LOWLAND
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F-FRAME C-CONCRETE
- S-STONE T-TILE
- B-BRICK ST-STUCCO
- RAILROAD CROSSING BELL
- RAILROAD CROSSING GATE
- MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- 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
- WATER MAIN
- 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' to 100'
PROFILE	0' to 100'
HORIZONTAL	0' to 10'
VERTICAL	0' to 10'
X-SECTIONS	0' to 10'
HORIZONTAL	0' to 10'
VERTICAL	0' to 2000'
INDEX MAP	



PROJECT LOCATION

CITY LINO LAKES  
ANOKA COUNTY  
MN/DOT TRANSPORTATION DISTRICT - METRO  
SECTIONS 5, 8  
TOWNSHIP 31 NORTH  
RANGE 22 WEST

### 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 PAR VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3-5	TYPICAL SECTIONS
6-7	MISCELLANEOUS DETAILS
8-9	CONSTRUCTION PLAN
10-15	STRIPING PLAN

THIS PLAN CONTAINS 15 SHEETS

### DESIGN DESIGNATION

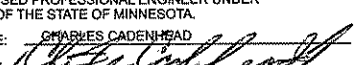
ESAL 20	995,202
R VALUE	50
ADT (2010) =	7,670
Proj. ADT (2030) =	10,738
Soil Factor	NA
9 TON DESIGN	

Functional Classification	PRINCIPAL ARTERIAL
No. of Traffic Lanes	2
No. of Parking Lanes	0
Design Speed	50 MPH
Based on Stopping Sight Distance	N/A
Height of eye	3.5'
Height of object	2.0'
Design Speed not achieved at:	
STA. 40+00 TO STA. 87+10	MPH

Approved:  3/4/2012  
ANOKA COUNTY ENGINEER

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\112-01-00\CSAH\_14 (4th-CSAH23)\Plant1 Title.dgn 02/28/2012 12:27:41 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 CADENHEAD  
SIGNATURE:   
DATE: 3/2/12 LICENSE NO. 40416

DRAWN BY: JJ DATE: 2-28-2012  
DESIGN BY: JJ DATE: 2-28-2012  
CHECKED BY: BL/JD DATE: 2-28-2012



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 11-12-14

TITLE SHEET  
Sheet 1 of 15 Sheets

CSAH 14		STATEMENT OF ESTIMATED QUANTITIES		
ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL EST. QUANT.
2011.601	CONSTRUCTION SURVEYING		LUMP SUM	1
2021.501	MOBILIZATION		LUMP SUM	1
2104.501	REMOVE CURB AND GUTTER	7	LIN FT	25
2104.503	REMOVE CONCRETE WALK		SQ FT	55
2104.505	REMOVE BITUMINOUS DRWEWAY PAVEMENT		SQ YD	573
2104.605	REMOVE BITUMINOUS PAVEMENT		SQ YD	884
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	352
2105.522	SELECT GRANULAR BORROW (LV)		CU YD	130
2123.503	MOTOR GRADER		HOUR	10
2130.501	WATER		MGAL	56
2211.501	AGGREGATE BASE CLASS 5		TON	766
2221.501	AGGREGATE SHOULDERING CLASS 5		TON	246
2232.501	MILL BITUMINOUS SURFACE (2.0") ( JOINTS )	1	SQ YD	110
2331.604	BITUMINOUS PAVEMENT RECLAMATION	9	SQ YD	25486
2331.607	HAUL BITUMINOUS PAVEMENT RECLAMATION (LV)	6	CU YD	880
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	1007
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,E)	10	TON	2931
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,B)	7	TON	159
2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (4,B)		TON	1880
2451.513	FINE FILTER AGGREGATE (LV)		CU YD	28
2502.501	PRECAST CONCRETE HEADWALL		EACH	4
2502.541	4" PERF PE PIPE DRAIN	5	LIN FT	3950
2504.602	ADJUST GATE VALVE	7	EACH	3
2506.503	RECONSTRUCT DRAINAGE STRUCTURE		LIN FT	2
2506.516	CASTING ASSEMBLY		EACH	4
2506.602	GROUT CATCH BASIN OR MANHOLE		EACH	1
2511.502	RANDOM RIPRAP CLASS II	10	CU YD	1
2521.501	6" CONCRETE WALK		SQ FT	55
2531.501	CONCRETE CURB & GUTTER DESIGN B618		LIN FT	25
2531.618	TRUNCATED DOMES		SQ FT	8
2540.602	INSTALL MAIL BOX SUPPORT		EACH	18
2563.601	TRAFFIC CONTROL	3	LUMP SUM	1
2564.533	FURNISH SIGN PANEL TYPE C	8	SQ FT	5
2573.508	BITUMINOUS LINED FLUME		SQ YD	2
2575.523	EROSION CONTROL BLANKETS CATEGORY 3		SQ YD	1500
2581.501	REMOVABLE PREFORMED PLASTIC MARKING	2	LIN FT	376
2582.502	4" SOLID LINE WHITE - EPOXY	4	LIN FT	10119
2582.502	4" SOLID LINE YELLOW - EPOXY	4	LIN FT	637
2582.502	4" BROKEN LINE YELLOW-EPOXY	4	LIN FT	790
2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	4	LIN FT	630
2582.603	24" WHITE PREF THERMOPLASTIC	4	LIN FT	24
2582.618	3 X 6 ZEBRA CROSSWALK PREFORMED THERMOPLASTIC	4	SQ FT	126

CSAH 14		CONSTRUCTION NOTES
1		LOCATION TO BE DETERMINED BY ENGINEER
2		MARKINGS SHALL BE PLACED AT THE END OF DAYS PAVING
3		DO NOT PASS, PASS WITH CARE, AND NO CENTER STRIPE SIGNS TO BE INPLACE DURING RECLAIM / PAVING OPERATIONS
4		PERMANENT MARKINGS TO BE IN PLACE WITHIN 72 HOURS OF FINAL MAINLINE PAVING.
5		THIS INCLUDES T JOINTS AND ELBOW JOINTS
6		ITEM FOR REMOVING 4" OF RECLAIM IN CURB AREAS
7		PAVING STREET APPROACHES OF DRWEWAYS
8		ITEM INCLUDES FURNISHING SIGN POST
9		INPLACE MH IN THE ROAD MUST BE PROTECTED AT ALL TIMES. IF DISTURBED, IT IS CONTRACTORS RESPONSIBILITY TO REPLACE CASTING AND RINGS.
10		INCLUDES SAFTEY EDGE (SEE MISCELLANEOUS DETAILS PAGE 6)

CSAH 14		BASIS OF PLANNED QUANTITIES
2211.501	AGGREGATE BASE CLASS 5	CU YDS * 1.8 = TONS
2221.501	AGGREGATE SHOULDERING CLASS 5	CU YDS * 1.8 = TONS
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	.05 GAL / SQ YD
2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,E)	115 LBS/SQYD/IN THICKNESS
2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (4,B)	115 LBS/SQYD/IN THICKNESS
2580.603	REMOVABLE PREFORMED PLASTIC MARKING	2' AT 50' INTERVALS FOR SKIPS

CASTING ASSEMBLIES SUMMARY					
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	STANDARD PLAT NO.	QUANTITY
A-7D	700-7	715		4101, 4110	4
ALL CASTING HIEGHTS ARE TO BE DETERMINED IN THE FIELD.					
ALL MANHOLE CASTINGS NEED TO HAVE "SANITARY SEWER" OR "WATER" STAMPED ON THEM.					

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\12-01-00\CSAH\_14\_(4th-CSAH23)\Plan12 Seq.dgn 03/01/2012 7:02:36 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: CHARLES CADENHEAD

SIGNATURE: *[Signature]*

DATE: 7/2/12 LICENSE NO. 40416

DRAWN BY JJ DATE 2-28-2012

DESIGN BY JJ DATE 2-28-2012

CHECKED BY BL / JO DATE 2-28-2012



ANOKA COUNTY  
HIGHWAY DEPT.

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

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

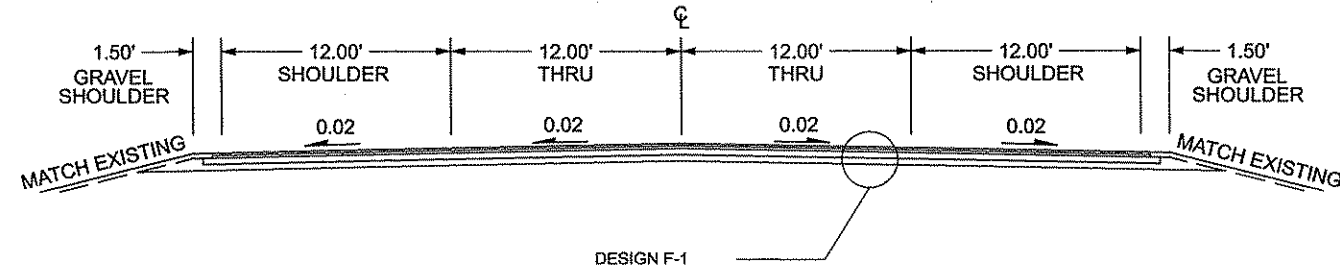
CITY PROJECT NO. \_\_\_\_\_

COUNTY PROJECT NO. 11-12-14

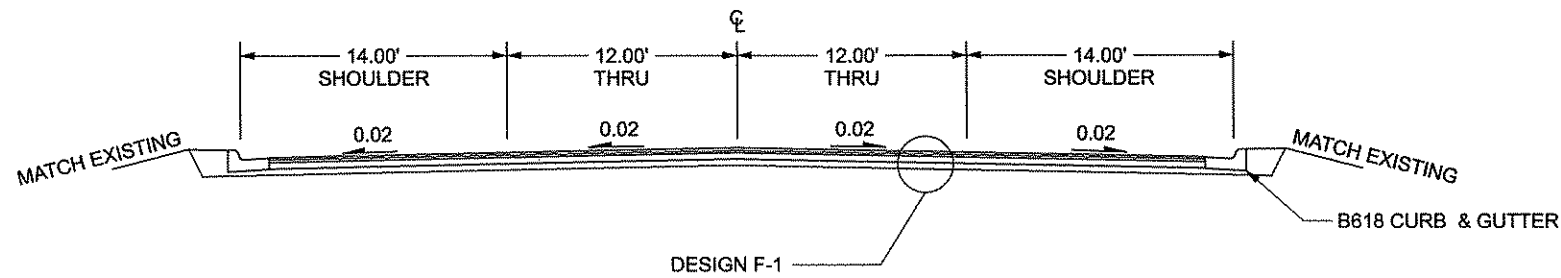
STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 15 Sheets

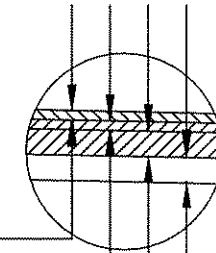
**C.S.A.H. 14**  
**EXISTING ROAD - RURAL SECTION**  
 STA 40+00 - STA 69+84 LT RT  
 STA 73+04 - STA 78+86 LT    STA 73+04 - STA 79+65 RT



**C.S.A.H. 14**  
**EXISTING ROAD - URBAN SECTION**  
 STA 69+84 - STA 73+04  
 STA 78+86 LT - STA 87+10 LT  
 STA 79+65 RT - STA 87+10 RT



**DESIGN F-1**



- 1.5" 2341 WEAR COURSE
- 1.5" 2331 BINDER COURSE
- 4" 2331 BASE COURSE
- 4" 2211 AGGREGATE BASE CLASS 5A

**GENERAL NOTES:**

- ALL CROSS SLOPES ARE APPROXIMATE
- UNLESS OTHERWISE SPECIFIED, THE CLASS 5 CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH\_14 (4th-CSAH23)\Plan3 typicals.dgn      02/28/2012      12:29:38 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 CADENHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 3/2/12      LICENSE NO. 40416

DRAWN BY JJ      DATE 2-28-2012  
 DESIGN BY JJ      DATE 2-28-2012  
 CHECKED BY BL/JQ      DATE 2-28-2012



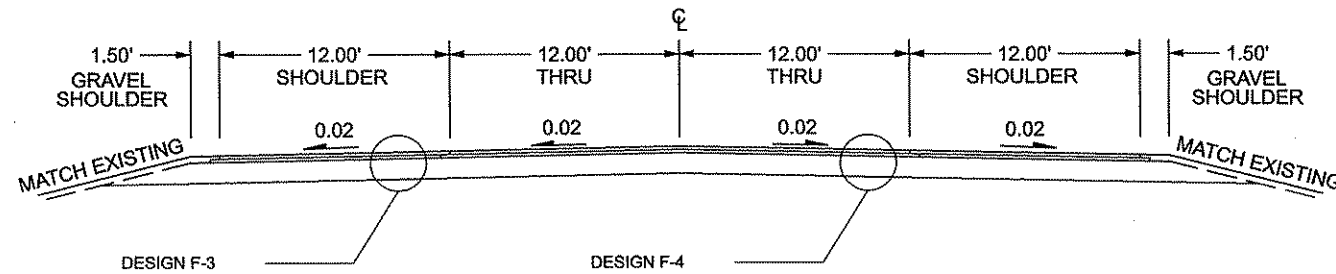
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

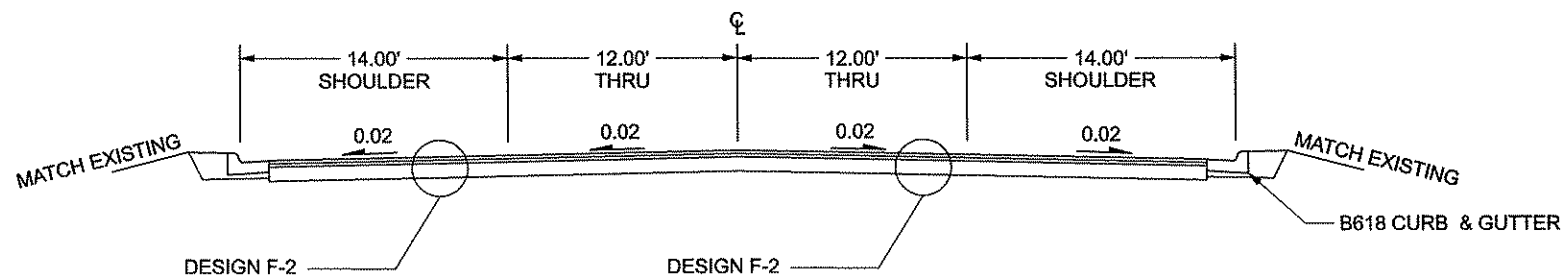
TYPICAL SECTIONS

Sheet 3 of 15 Sheets

**C.S.A.H. 14**  
**PROPOSED ROAD - RURAL SECTION**  
 STA 40+00 - STA 68+34  
 STA 74+54 - STA 77+29

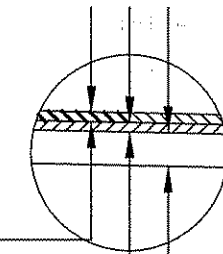


**C.S.A.H. 14**  
**PROPOSED ROAD - URBAN SECTION**  
 STA 68+34 - STA 74+54  
 STA 77+29 - STA 87+10



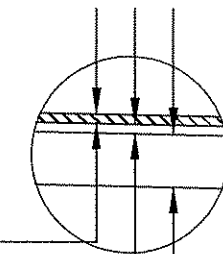
**DESIGN F-2**

2" WEAR COURSE 12.5 SPWEB440E  
 2" NON WEAR COURSE 12.5 SPNWB430B  
 7" RECLAIMED BITUMINOUS



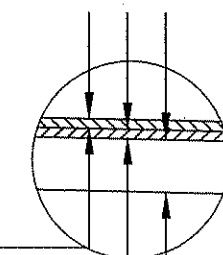
**DESIGN F-3**

2" WEAR COURSE 12.5 SPWEB440E  
 2" AGGREGATE BASE CLASS 5  
 11" RECLAIMED BITUMINOUS



**DESIGN F-4**

2" WEAR COURSE 12.5 SPWEB440E  
 2" NON WEAR COURSE 12.5 SPNWB430B  
 11" RECLAIMED BITUMINOUS



**GENERAL NOTES:**

- ALL CROSS SLOPES ARE APPROXIMATE
- UNLESS OTHERWISE SPECIFIED, THE CLASS 5 CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\112-01-00\CSAH\_14 (4th-CSAH23)\Plan3 typicals.dgn  
 02/28/2012 12:47:31 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 CADENHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 3/2/12 LICENSE NO. 40416

DRAWN BY JJ DATE 2-28-2012  
 DESIGN BY JJ DATE 2-28-2012  
 CHECKED BY BL / JO DATE 2-28-2012

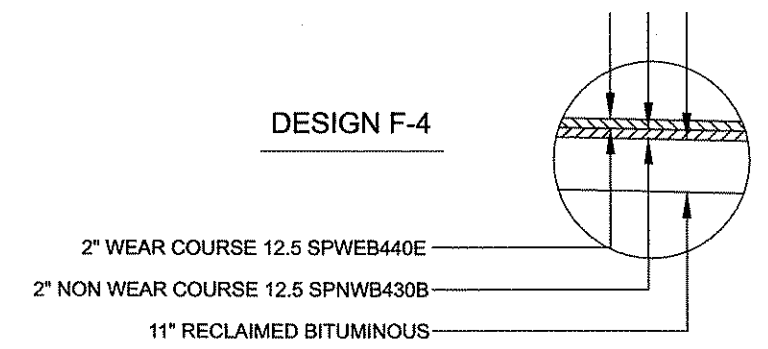
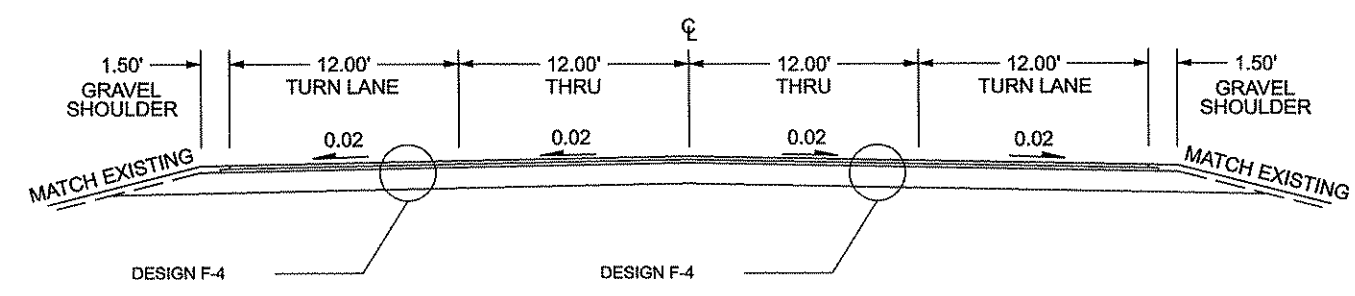


**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

TYPICAL SECTIONS  
 Sheet 4 of 15 Sheets

**C.S.A.H. 14**  
**PROPOSED ROAD - RURAL SECTION - TURN LANES**  
 STA 40+72 - 45+52 LT    STA 57+77 - 62+57 RT  
 STA 54+28 - 59+08 LT    STA 77+29 - 82+19 RT  
 STA 62+87 - 67+67 LT



**GENERAL NOTES:**

- ALL CROSS SLOPES ARE APPROXIMATE
- UNLESS OTHERWISE SPECIFIED, THE CLASS 5 CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.

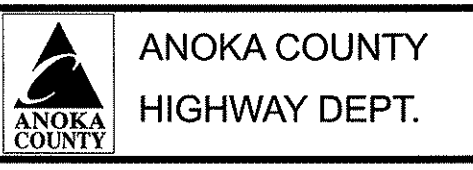
NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH\_14\_(4th-CSAH23)\Plan\3 typical.dgn      02/28/2012      12:47:44 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 CADENHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 2/2/12      LICENSE NO. 40418

DRAWN BY JJ      DATE 2-28-2012  
 DESIGN BY JJ      DATE 2-28-2012  
 CHECKED BY BL / JO      DATE 2-28-2012



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

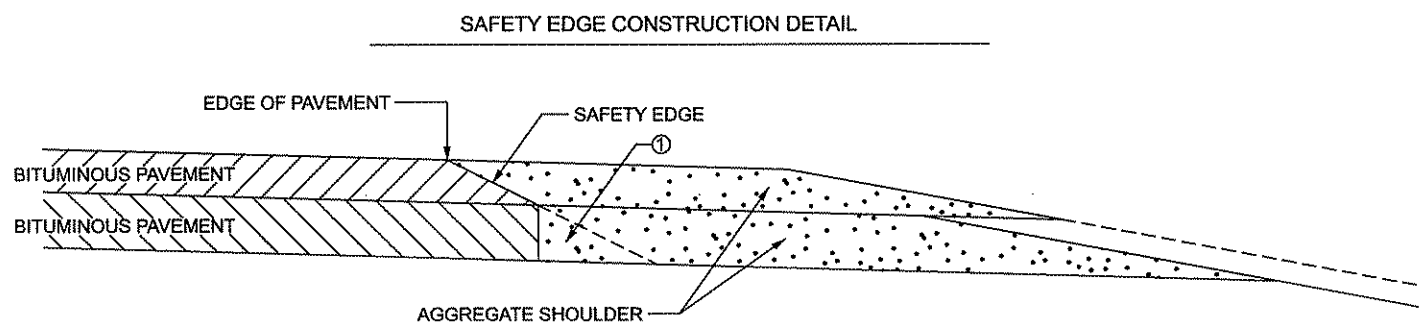
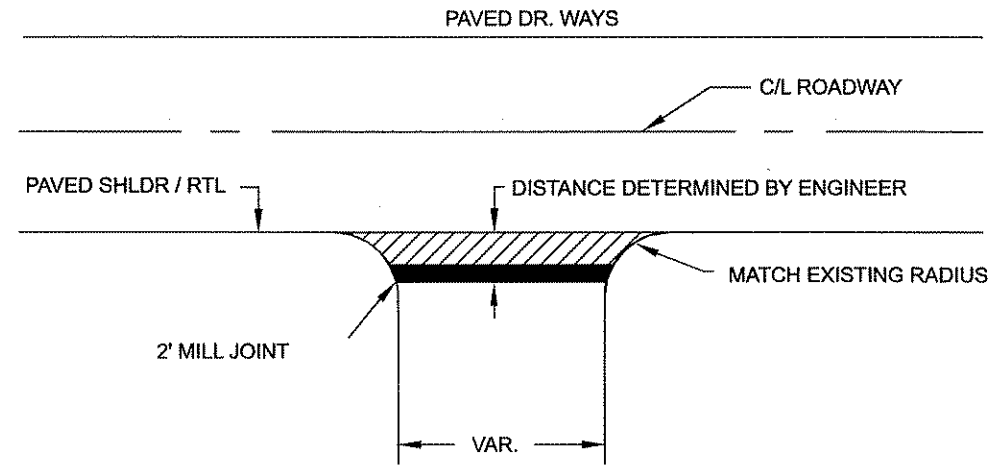
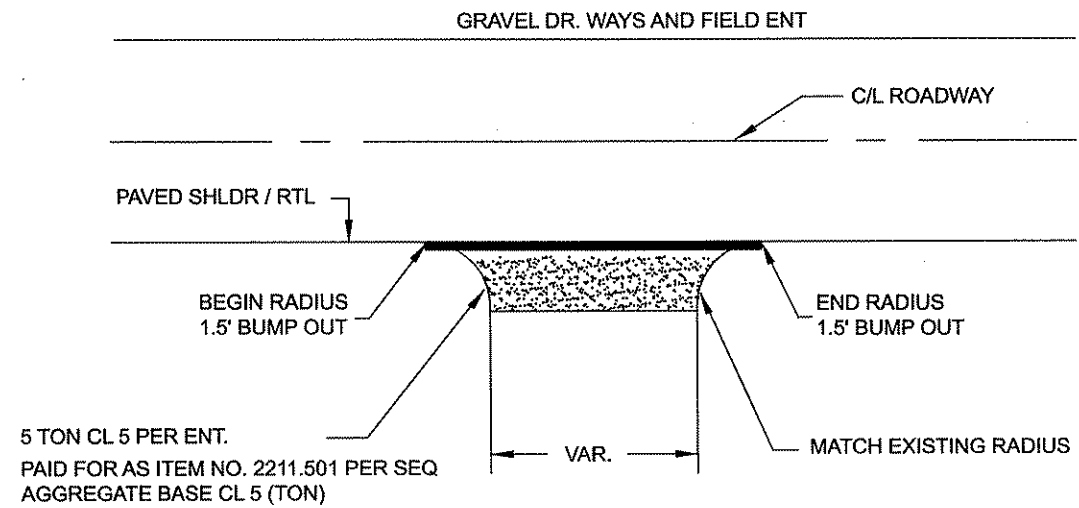
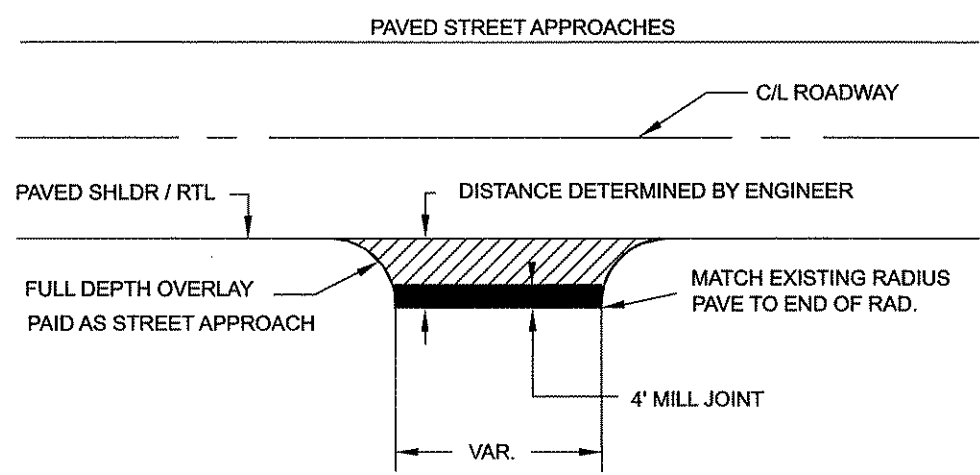


FIGURE B  
BITUMINOUS PAVEMENT

① OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5". SEE PLAN DESIGN DETAILS.



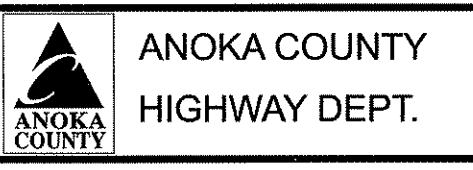
DRIVEWAYS TO BE PAVED IN SEPARATE OPERATION FROM MAINLINE WEAR.  
PAID AS STREET APPROACH WEAR

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH\_14\_(4th-CSAH23)\Plan\4 Details.dgn  
02/28/2012 12:30:57 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 CADENHEAD  
SIGNATURE: *[Signature]*  
DATE: 2/2/12 LICENSE NO. 49416

DRAWN BY JJ DATE 2-28-2012  
DESIGN BY JJ DATE 2-28-2012  
CHECKED BY BL / JO DATE 2-28-2012

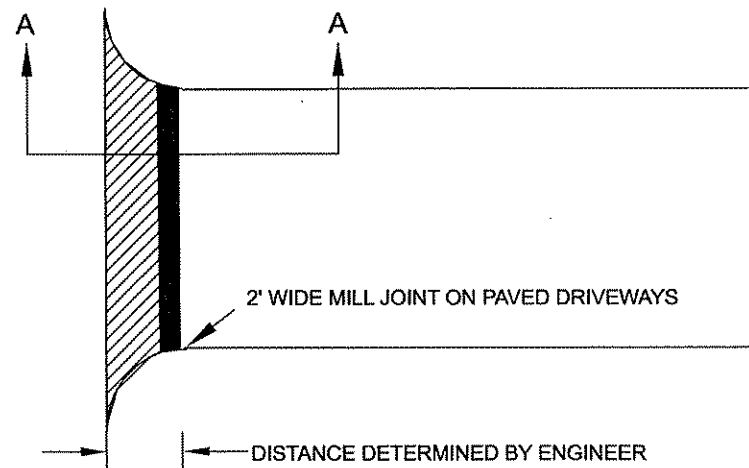


STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 11-12-14

MISCELLANEOUS DETAILS  
Sheet 6 of 15 Sheets

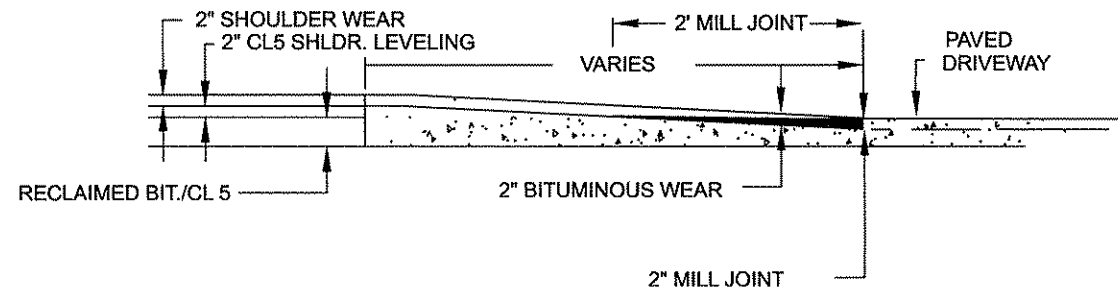
PAVED DRIVEWAYS

JOINT DETAILS



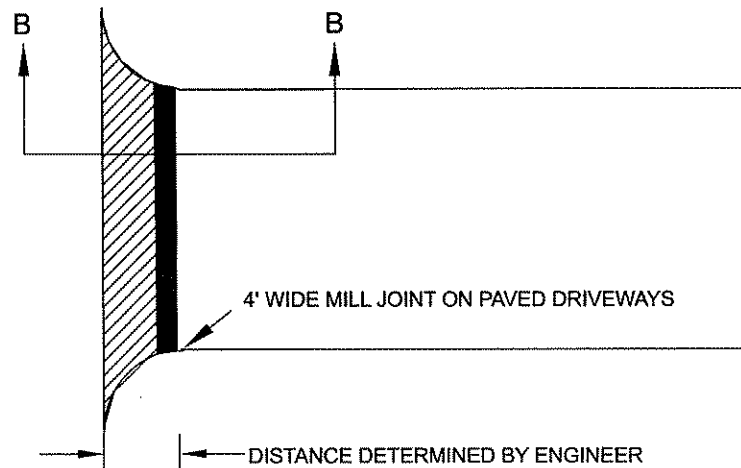
DRIVEWAYS TO BE PAVED IN SEPARATE OPERATION OTHER THAN MAINLINE WEAR.  
PAID AS DRIVEWAY/STREET APPROACH WEAR

DRIVEWAY JOINT DETAILS



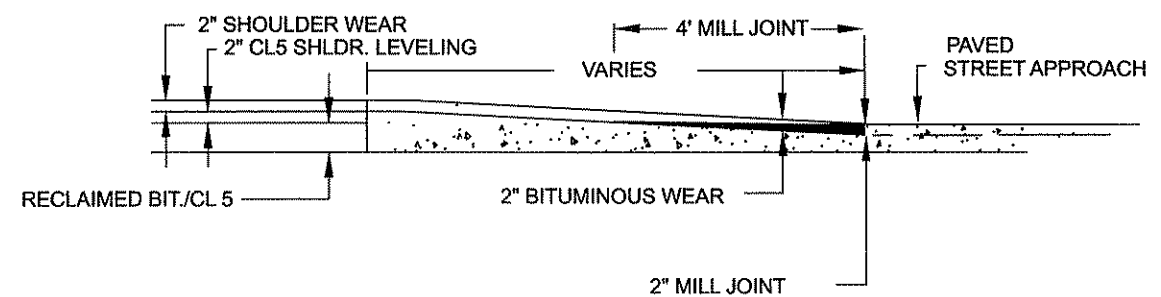
PAVED STREETS

JOINT DETAILS



OVERLAY EXISTING STEET APPROACH, DO NOT RECLAIM  
STREETS TO BE PAVED IN SEPARATE OPERATION OTHER THAN MAINLINE WEAR.  
PAID AS DRIVEWAY/STREET APPROACH BASE AND WEAR

STREET APPROACH JOINT DETAILS



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\12-01-00\CSAH\_14\_(4th-CSAH23)\Plan4 Details.dgn 02/28/2012 12:31:19 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 CADENHEAD  
SIGNATURE: *[Signature]*  
DATE: 3/2/12 LICENSE NO. 40416

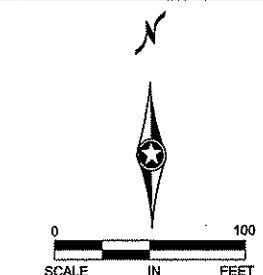
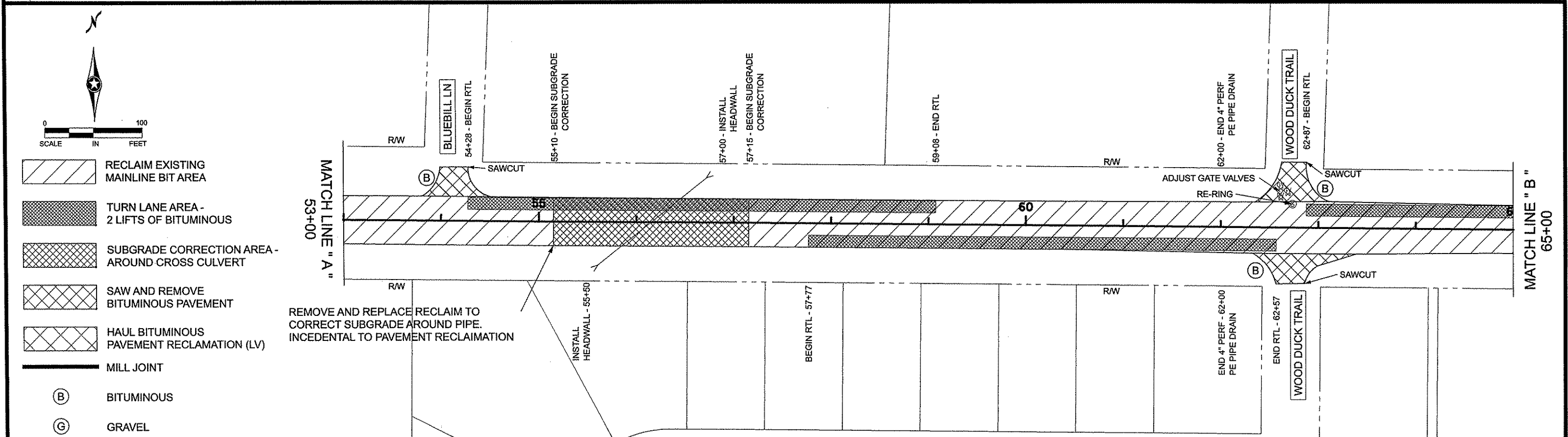
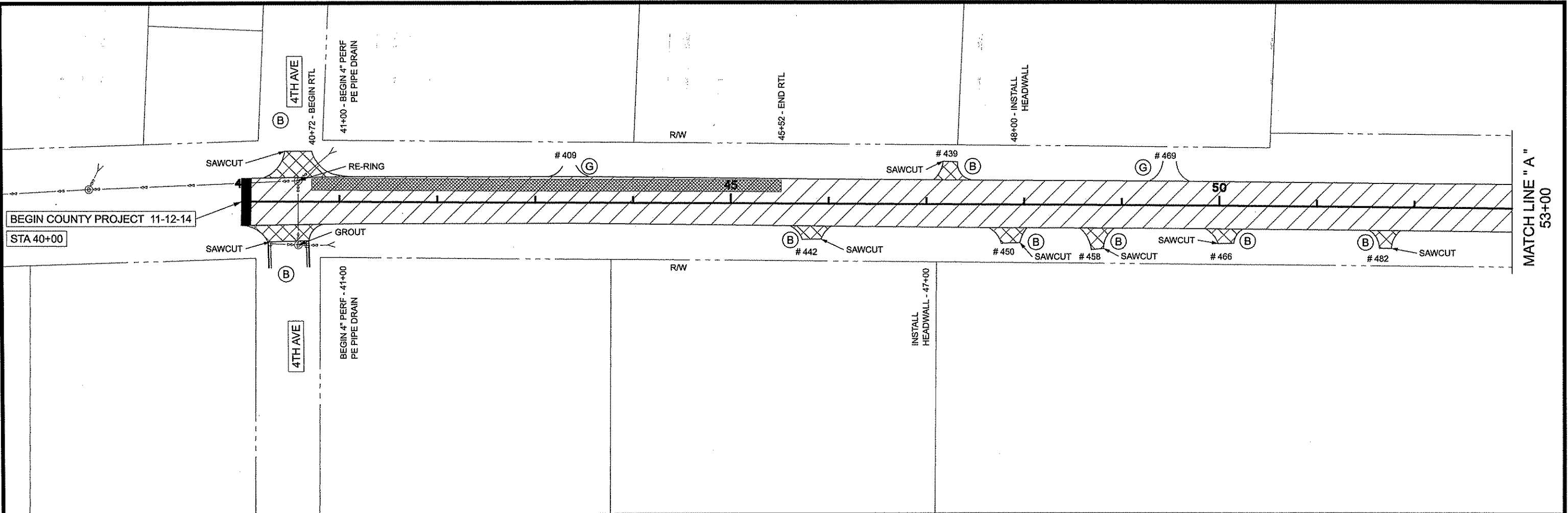
DRAWN BY JJ DATE 2-28-2012  
DESIGN BY JJ DATE 2-28-2012  
CHECKED BY BL / JO DATE 2-28-2012



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 11-12-14

MISCELLANEOUS  
DETAILS  
Sheet 7 of 15 Sheets



- RECLAIM EXISTING MAINLINE BIT AREA
- TURN LANE AREA - 2 LIFTS OF BITUMINOUS
- SUBGRADE CORRECTION AREA - AROUND CROSS CULVERT
- SAW AND REMOVE BITUMINOUS PAVEMENT
- HAUL BITUMINOUS PAVEMENT RECLAMATION (LV)
- MILL JOINT
- BITUMINOUS
- GRAVEL

REMOVE AND REPLACE RECLAIM TO CORRECT SUBGRADE AROUND PIPE. INCIDENTAL TO PAVEMENT RECLAMATION

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\12-01-00\CSAH_14 (40-CSAH23)\Plan5 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: CHARLES CADENHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 3/2/12 LICENSE NO. 40416

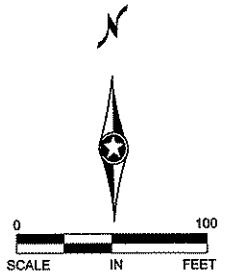
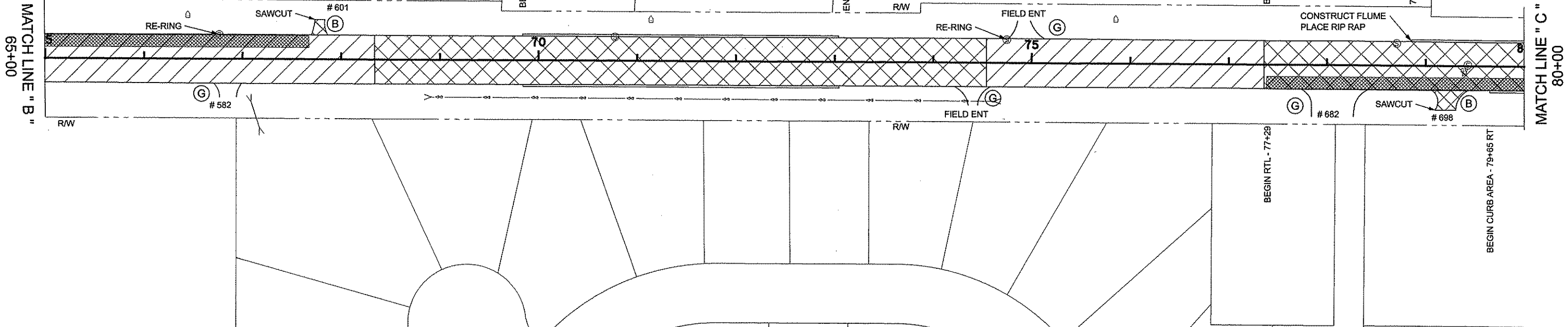
DRAWN BY JJ DATE 2-28-2012  
 DESIGN BY JJ DATE 2-28-2012  
 CHECKED BY BL / JO DATE 2-28-2012

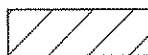






**ANOKA COUNTY HIGHWAY DEPT.**

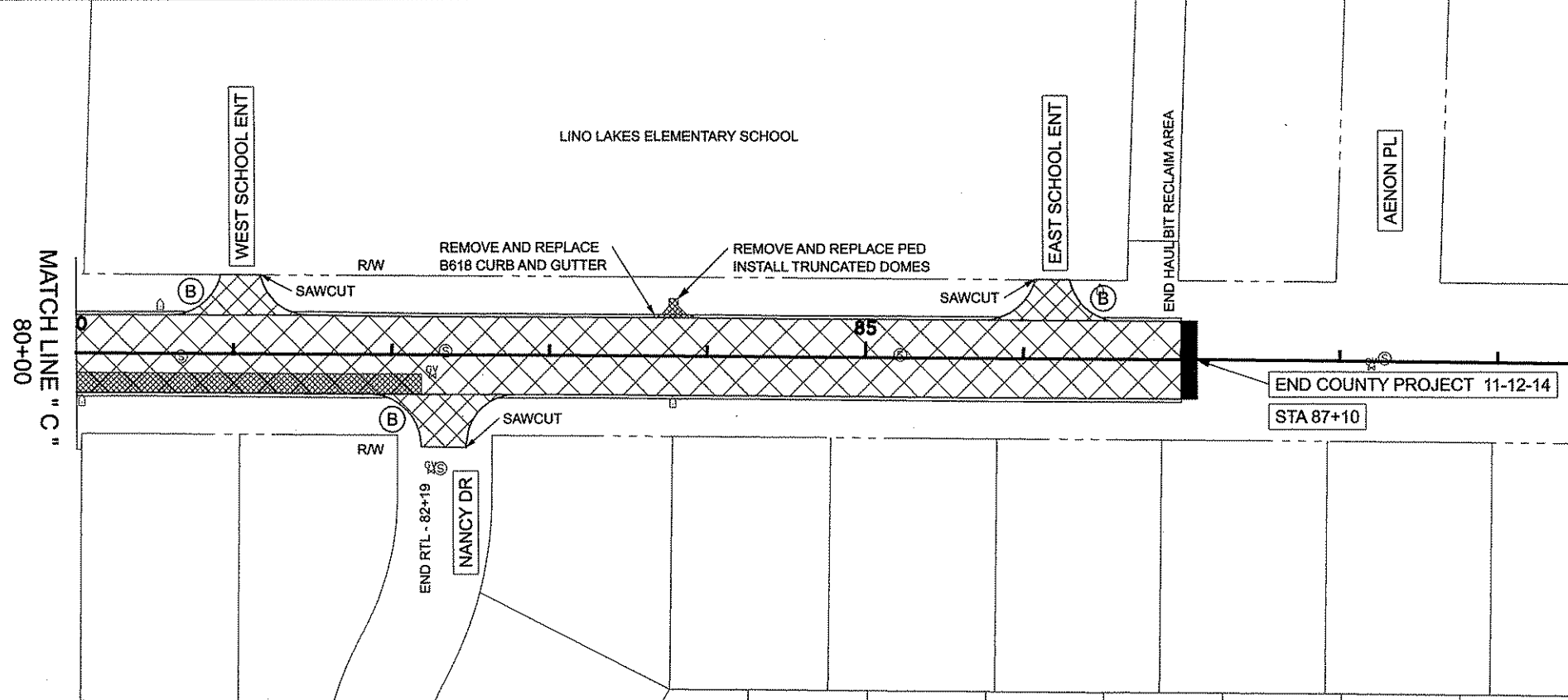
STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

CONSTRUCTION PLAN  
 STA 40+00 TO 65+00  
 Sheet 8 of 15 Sheets





-  RECLAIM EXISTING MAINLINE BIT AREA
-  TURN LANE AREA - 2 LIFTS OF BITUMINOUS
-  SAW AND REMOVE BITUMINOUS PAVEMENT
-  HAUL BITUMINOUS PAVEMENT RECLAMATION (LV)
-  MILL JOINT
-  BITUMINOUS
-  GRAVEL



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:112-01-00\CSAH\_14 (4th-CSAH23)\Plan5 plan.dgn 02/28/2012 12:33:36 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 CADEMHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 2/2/12 LICENSE NO. 40416

DRAWN BY JJ DATE 2-28-2012  
 DESIGN BY JJ DATE 2-28-2012  
 CHECKED BY BL/JQ DATE 2-28-2012



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

**CONSTRUCTION PLAN**  
 STA 65+00 TO 87+10  
 Sheet 9 of 15 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 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.

**SYMBOLS & MATERIALS LEGEND**

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

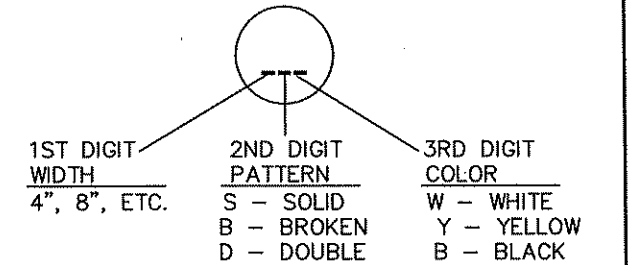
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

**STRIPING KEY**

○ CIRCLE - EPOXY      □ SQUARE PREFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



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

**PAVEMENT MARKING QUANTITIES**

Item	Quantity	Units
4" Double Solid Line Yellow - Epoxy	630	Lin Ft
4" Solid Line Yellow - Epoxy	637	Lin Ft
4" Broken Line Yellow - Epoxy (10 ft stripe / 40 ft gap)	790	Lin Ft
4" Solid Line White - Epoxy	10119	Lin Ft
24" White Pref Thermoplastic	24	Lin Ft
3'x6' Zebra Crosswalk Preformed Thermoplastic	126	SQ FT

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: 3/2/12 LICENSE NO. 40416

DRAWN BY: MTH DATE: 1/03/12  
DESIGN BY: MTH DATE: 1/03/12  
CHECKED BY: JR DATE: 2/14/12



**ANOKA COUNTY  
HIGHWAY DEPT.**

COUNTY PROJECT NO. 11-12-14

**PERMANENT MARKING  
TABULATION**

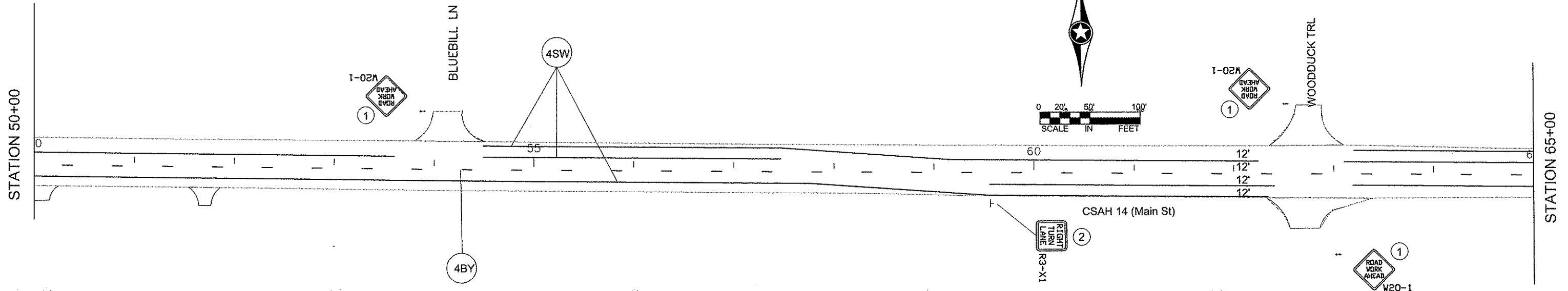
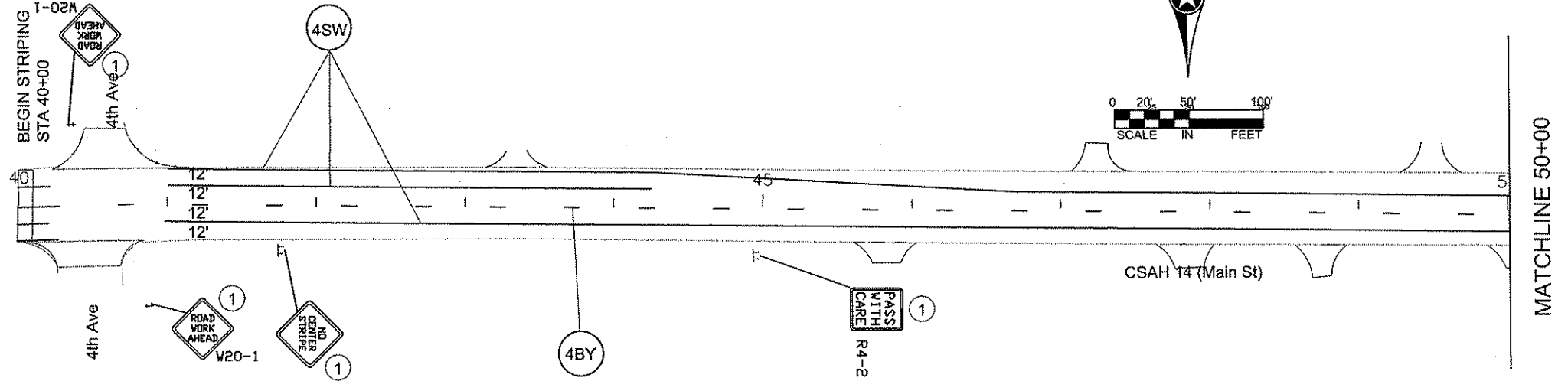
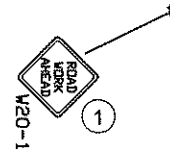
Sheet 10a of 15 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: T:\Traffic\dwg\CSAH 14\11-12-14\Perm punt mrkg guide notes\_guidelines.dwg

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.
- ALL PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
- 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.



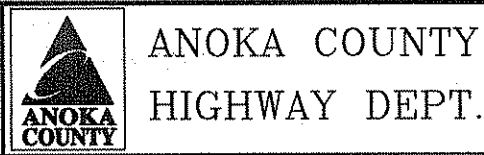
NO	DATE	BY	CKD	APPR	REVISION

NAME: T:\Traffic\dwg\CSAH 14 (Main St)\11-12-14\11-12-14.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: *[Signature]*  
 DATE: 3/2/12 LICENSE NO. 40416

DRAWN BY: MTH DATE: 1/03/12  
 DESIGN BY: MTH DATE: 1/25/11  
 CHECKED BY: JR DATE: 3/01/11



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

CSAH 14 (MAIN ST)  
 TEMPORARY SIGNING  
 PERMANENT SIGNING & STRIPING  
 AND PAVEMENT MESSAGES

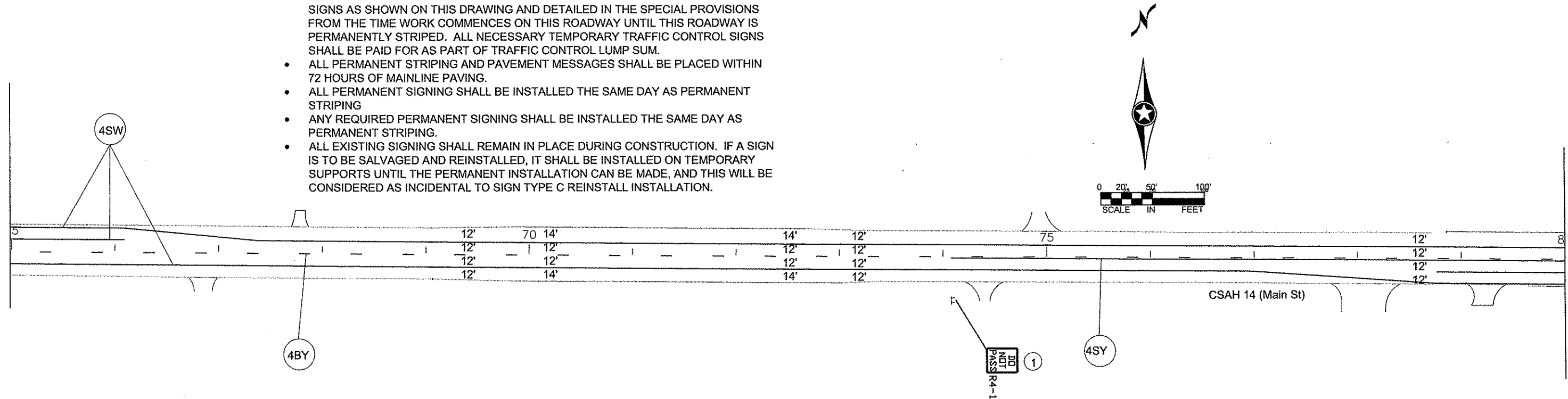
Sheet 10 of 15 Sheets

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- 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.
- ALL PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
- 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.

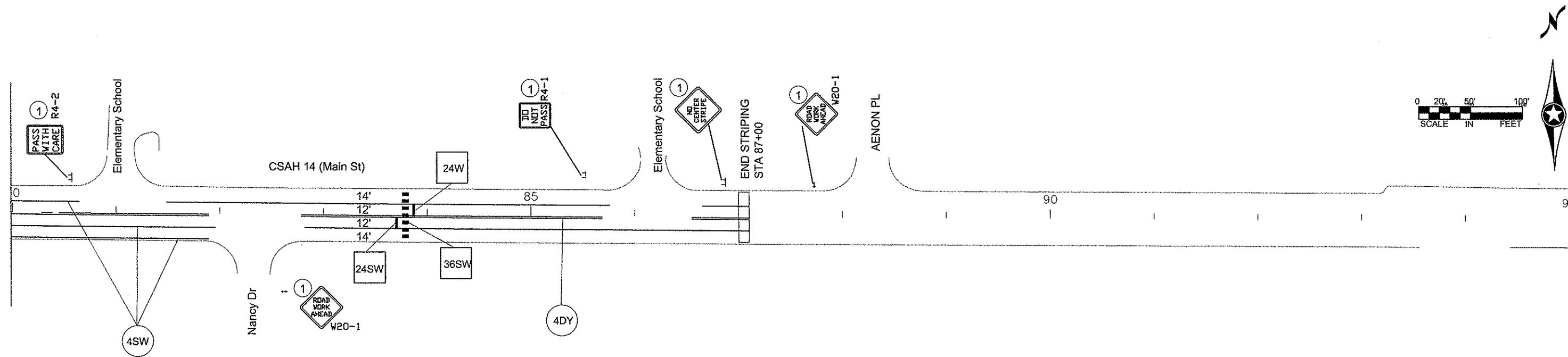
STATION 65+00

STATION 80+00



STATION 80+00

95



NO	DATE	BY	CKD	APPR	REVISION

NAME: T:\Traffic\dwg\CSAH 14 (Main St)\11-12-14\11-12-14.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: *[Signature]*  
 DATE: 1/2/12 LICENSE NO. 40416

DRAWN BY: MTH DATE: 1/03/12  
 DESIGN BY: MTH DATE: 1/25/11  
 CHECKED BY: JR DATE: 3/01/11












ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

CSAH 14 (MAIN ST)  
 TEMPORARY SIGNING  
 PERMANENT SIGNING & STRIPING  
 AND PAVEMENT MESSAGES

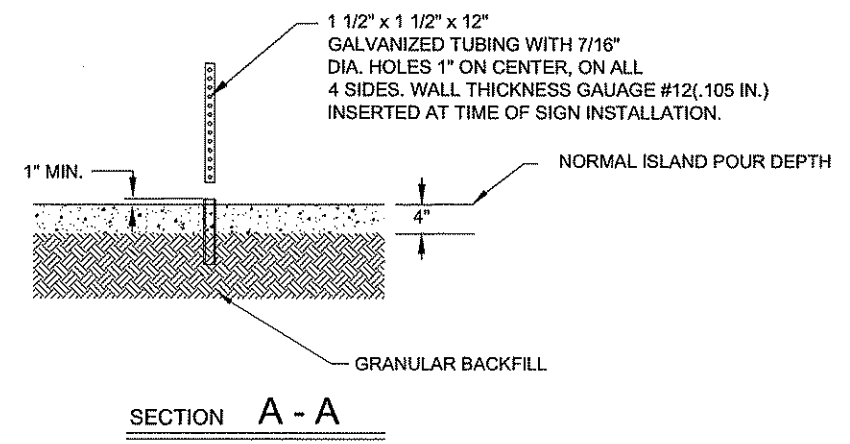
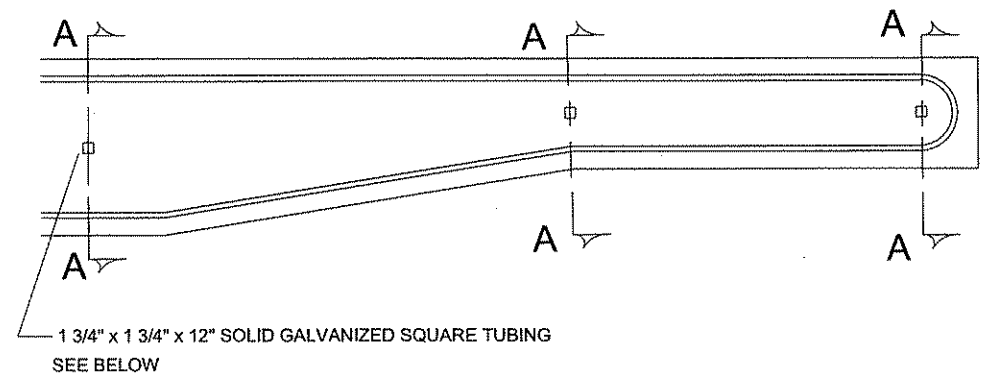
Sheet 11 of 15 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA	INSERT	QUANTITY		MOUNTING HEIGHT TO POST (FEET)
		FT. <sup>2</sup>				
W8-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00	 R4-1	2	1	7.0'
R4-2	24" x 30"	5.00	 R4-2	2	1	7.0'
W8-1A	48" x 48"	16.00	 W8-1A	AS NEEDED		
W8-1A	48" x 48"	16.00	 W8-1A	AS NEEDED		
W8-8	48" x 48"	16.00	 W8-8	AS NEEDED		
W8-11	48" x 48"	16.00	 W8-11	AS NEEDED		
W8-11	48" x 48"	16.00	 W20-1	AS NEEDED (ESTIMATED 8)		

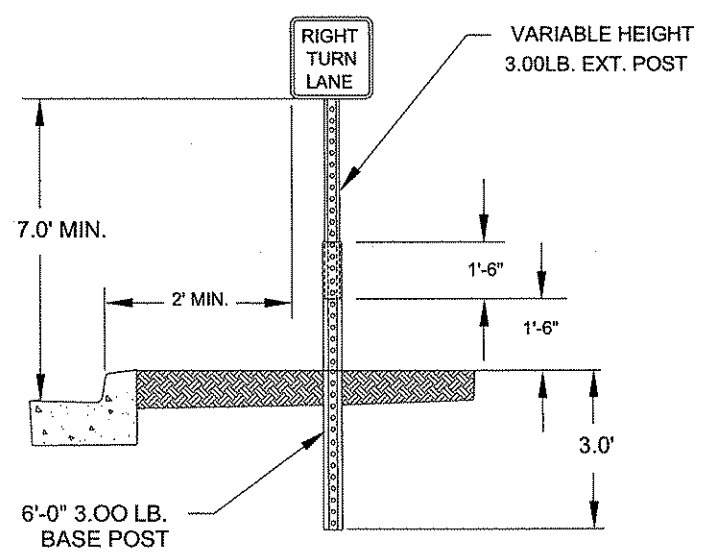
F & I PERMANENT SIGNS							
M.U.T.C.D. CODE	SIZE	PANEL AREA	INSERT	QUANTITY		MOUNTING HEIGHT TO POST (FEET)	TOTAL PANEL AREA
		FT. <sup>2</sup>					
R3-X1	30" x 30"	6.25		1	1	7.0'	6.25
TOTAL PANEL AREA							6.25

SEE SPECIAL PROVISIONS  
 ① TEMPORARY TRAFFIC CONTROL SIGN  
 ② F & I PERMANENT SIGN  
 ③ SALVAGE PERMANENT SIGN  
 ④ RE-INSTALL PERMANENT SIGN

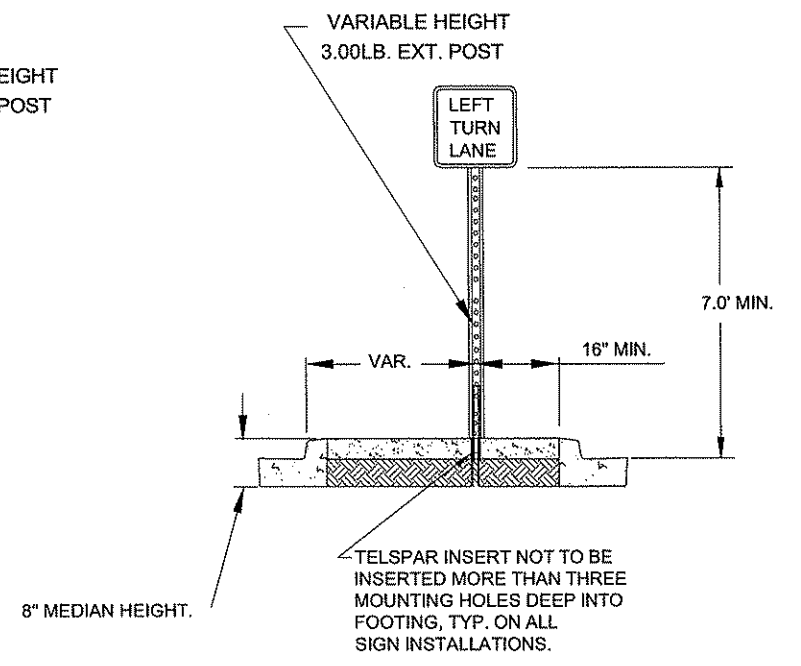
- NOTES:
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
  - LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL 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.
  - ALL PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING
  - 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.



GROUND POST MOUNT SIGN  
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN  
INSTALLATION TYPICAL



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 CADENHEAD  
 SIGNATURE: *[Signature]*  
 DATE: 3/2/12 LICENSE NO. 40416

DRAWN BY MTH DATE 3-01-11  
 DESIGN BY #ZZB DATE 8-19-08  
 CHECKED BY JR DATE 3-01-11

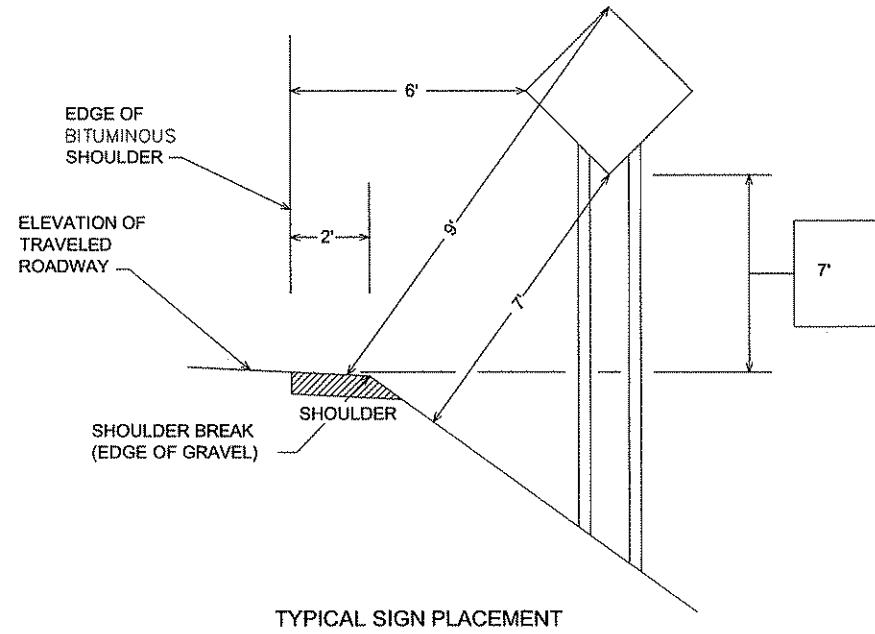


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE PROJECT NO. \_\_\_\_\_  
 STATE PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

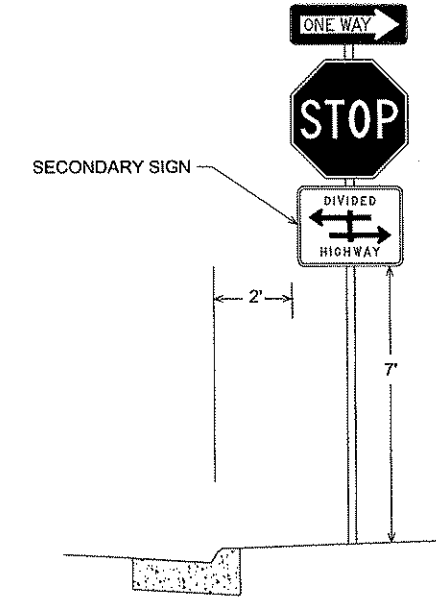
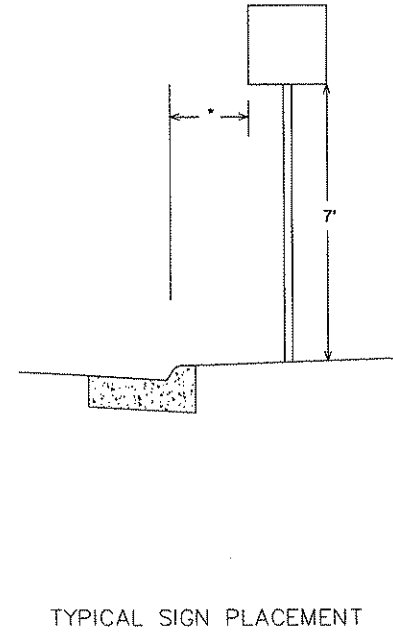
SIGNING & STRIPING DETAILS  
 Sheet 13 of 15 Sheets

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: T:\Traffic\Dwg\CSAH 14\11-12-14\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: 12/12 LICENSE NO. 40416

DRAWN BY: MTH DATE: 3-01-11

DESIGN BY: #ZZB DATE: 8-13-08

CHECKED BY: JR DATE: 3-01-11



ANOKA COUNTY  
HIGHWAY DEPT.

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

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

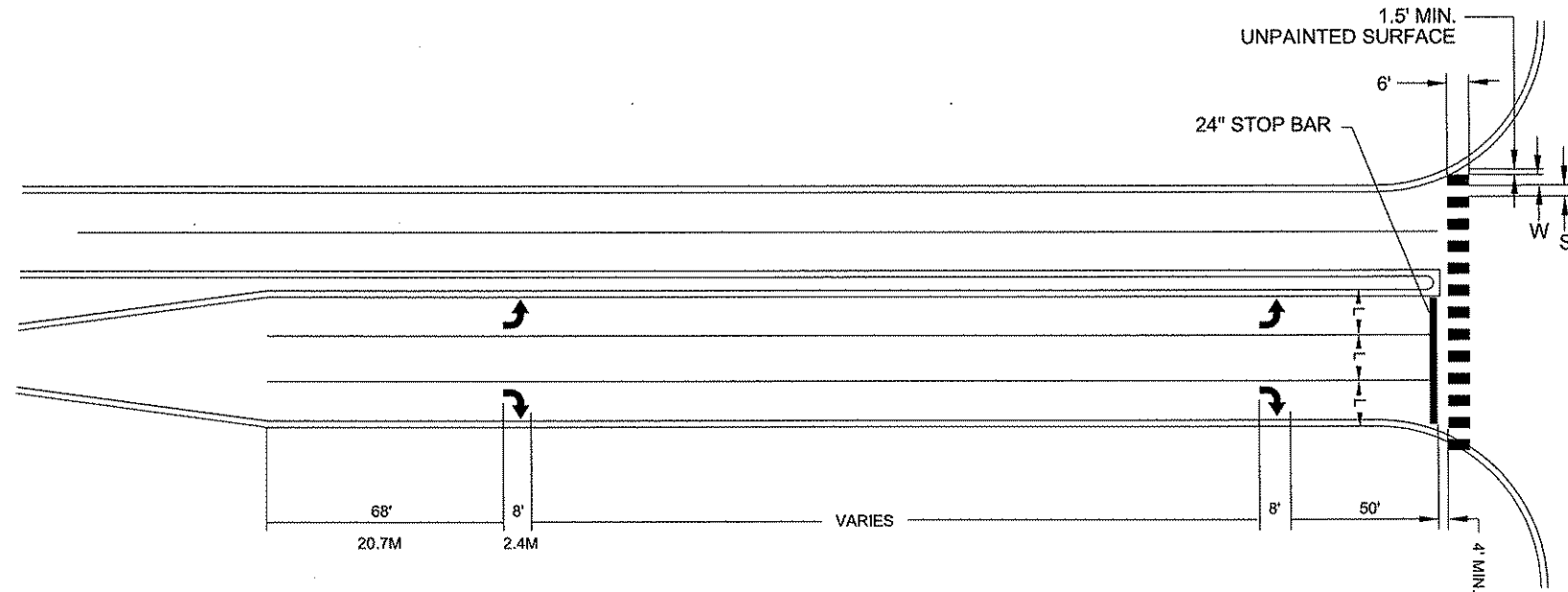
STATE PROJECT NO. \_\_\_\_\_

COUNTY PROJECT NO. 11-12-14

SIGNING & STRIPING DETAILS

Sheet 14 of 15 Sheets

# MARKINGS FOR PEDESTRIAN CROSSWALKS



(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

**NOTES: CROSSWALKS:**

- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) NSIDE LANE.

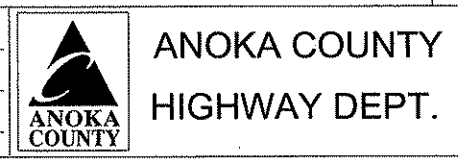
NO	DATE	BY	CHKD	APPR	REVISION

NAME: T:\Traffic\Dwg\CSAH 14\11-12-14\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: 3/2/12 LICENSE NO. 40416

DRAWN BY: MTH DATE: 3-01-11  
 DESIGN BY: #ZZB DATE: 8-13-08  
 CHECKED BY: JR DATE: 2-14-12



STATE PROJECT NO. \_\_\_\_\_  
 STATE PROJECT NO. \_\_\_\_\_  
 STATE PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 11-12-14

SIGNING & STRIPING DETAILS

Sheet 15 of 15 Sheets