

# MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

MINN. PROJ. NO. \_\_\_\_\_ HSIP 0214 (150)

## CONSTRUCTION PLAN FOR \_\_\_\_\_ GRADING, AGG.BASE, BITUMINOUS SURFACING, DRAINAGE, CURB & GUTTER AND SIGNAL SYSTEM

LOCATED ON  C.R. 3  BETWEEN  TRUNK HWY 47  AND  SPRINGBROOK DRIVE   
AND  SPRINGBROOK DRIVE  BETWEEN  HOLLY ST NW  AND  250' EAST OF C.R. 3

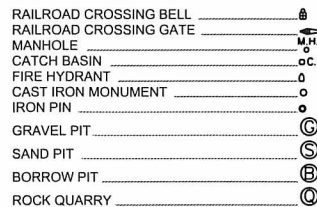
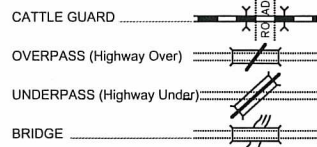
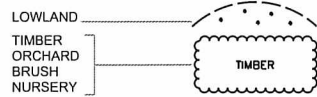
STATE PROJ. NO.  002-596-020

SPRINGBROOK DRIVE   C.R. 3 - COON RAPIDS BLVD NW

GROSS LENGTH <u> 617.63 </u> FEET	GROSS LENGTH <u> 1220.90 </u> FEET	GROSS LENGTH <u> 0.117 </u> MILES
BRIDGES-LENGTH <u> 0.00 </u> FEET	BRIDGES-LENGTH <u> 0.00 </u> FEET	BRIDGES-LENGTH <u> 0.000 </u> MILES
EXCEPTIONS-LENGTH <u> 0.00 </u> FEET	EXCEPTIONS-LENGTH <u> 0.00 </u> FEET	EXCEPTIONS-LENGTH <u> 0.000 </u> MILES
NET LENGTH <u> 617.63 </u> FEET	NET LENGTH <u> 1220.90 </u> FEET	NET LENGTH <u> 0.117 </u> MILES

### PLAN SYMBOLS

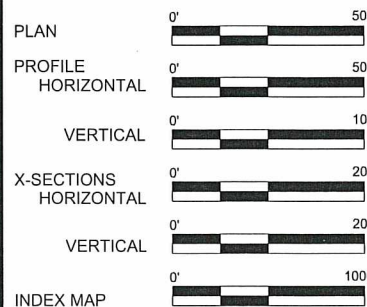
- COUNTY LINE \_\_\_\_\_
- TOWNSHIP OR RANGE LINE \_\_\_\_\_
- SECTION LINE \_\_\_\_\_
- QUARTER LINE \_\_\_\_\_
- SIXTEENTH LINE \_\_\_\_\_
- RIGHT OF WAY LINE \_\_\_\_\_
- SLOPE EASEMENT \_\_\_\_\_
- EXISTING RIGHT OF WAY \_\_\_\_\_
- PROPERTY LINE \_\_\_\_\_
- CORPORATE OR CITY LIMITS \_\_\_\_\_
- 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 \_\_\_\_\_



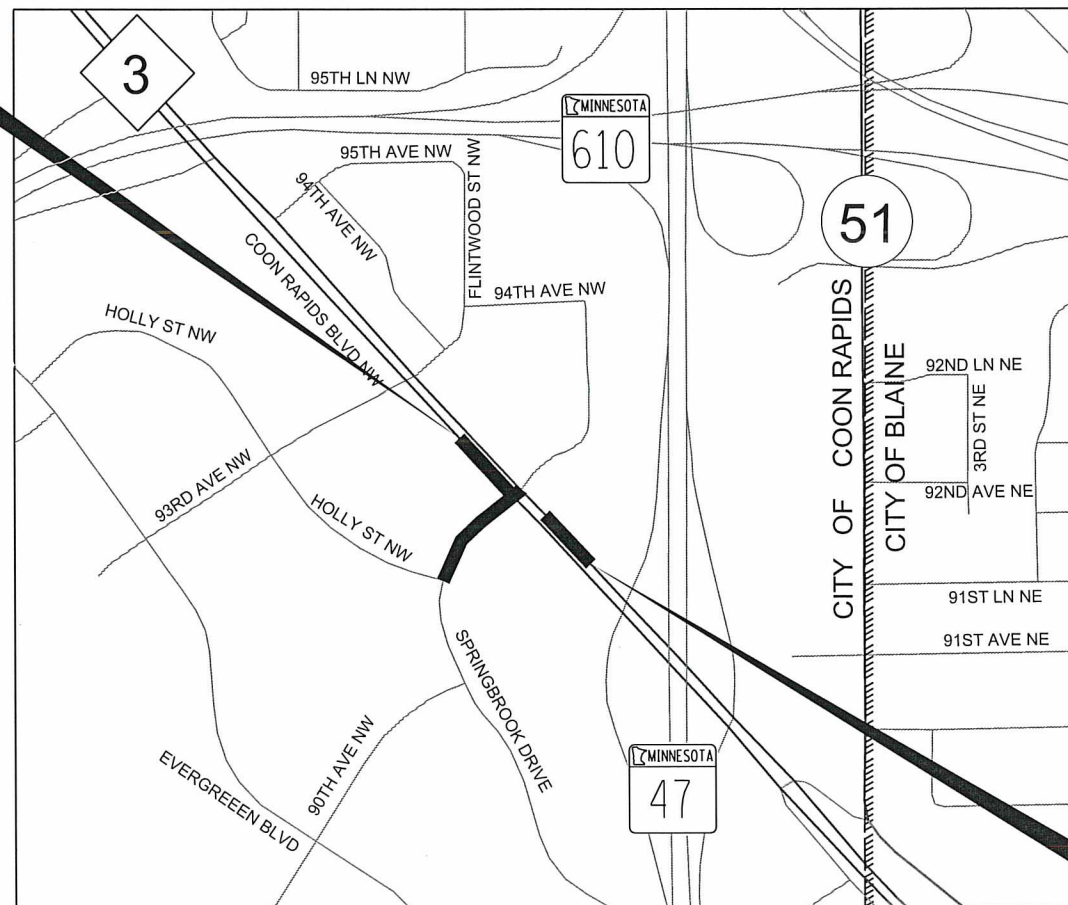
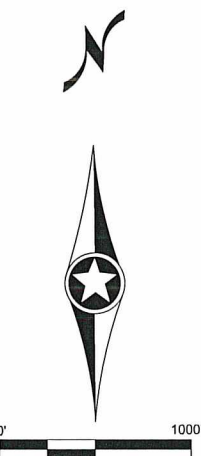
### UTILITY SYMBOLS

- 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 \_\_\_\_\_

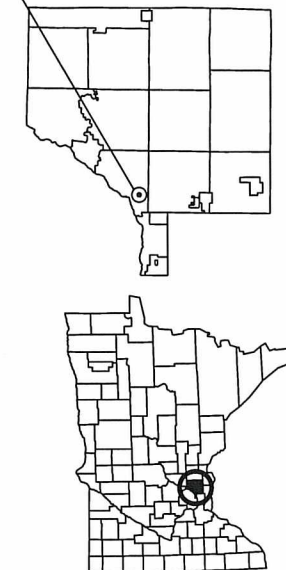
### SCALES



END S.P. 002-596-020  
N.B. C.R. 3 STA. 163+74.03



**PROJECT LOCATION**  
CITY OF COON RAPIDS  
ANOKA COUNTY  
MN/DOT DISTRICT - METRO  
SECTION 36  
TOWNSHIP 31 NORTH  
RANGE 24 WEST



BEGIN S.P. 002-596-020  
N.B. C.R. 3 STA. 151+53.13

### GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3	STATEMENT OF ESTIMATED QUANTITIES
4	EARTHWORK TABULATION AND SUMMARY
5	SOILS AND CONSTRUCTION NOTES
6	STANDARD PLATES & BASIS OF QUANTITIES
7 - 8	TAB SHEETS
9 - 11	TYPICAL SECTIONS
12	EXISTING SIGNING & STRIPING
13 - 17	PEDESTRIAN CURB RAMP DETAILS
18	ALIGNMENT TABULATION AND PLAN
19 - 20	EXISTING UTILITY PLAN
21 - 22	INPLACE TOPOGRAPHY, REMOVAL, AND UTILITY PLAN
23 - 27	STAGING PLAN
28 - 37	TRAFFIC CONTROL PLAN & STAGING SIGN QUANTITIES
38 - 40	CONSTRUCTION PLAN
41	INTERSECTION DETAILS
42 - 43	SWPPP NARRATIVE
44 - 45	TURF ESTABLISHMENT & EROSION CONTROL PLAN
46 - 49	EROSION CONTROL DETAILS
50 - 57	SIGNING & STRIPING PLAN, TAB, & DETAILS
58 - 78	TRAFFIC SIGNAL PLANS
79 - 91	CROSS SECTIONS

THIS PLAN CONTAINS  91  SHEETS

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

Approved: *[Signature]* 4/3/14  
ANOKA COUNTY ENGINEER

Approved: *[Signature]* 4/4/14  
CITY OF COON RAPIDS

*[Signature]* 4/28/14  
DISTRICT STATE AID ENGINEER

REVIEWED FOR COMPLIANCE WITH STATE AID AND FEDERAL AID RULES/POLICY

*[Signature]* 4/28/14  
Approved for State Aid AND FEDERAL AID FUNDING STATE AID ENGINEER

#### DESIGN DESIGNATION ( CR 3 )

ESAL 20 <u> 5,038,516 </u>	FUNCTIONAL CLASSIFICATION <u> A MINOR EXPANDER </u>
R VALUE <u> 55 </u>	NO. OF TRAFFIC LANES <u> 4 </u> NO. OF PARKING LANES <u> 0 </u>
ADT (2014) <u> 22,783 </u>	DESIGN SPEED <u> 50 </u> MPH <u> CR 3 </u>
PROJ. ADT (2034) <u> 36,453 </u>	STOPPING SIGHT DISTANCE BASED ON:
PROJ. HCA DT (2034) <u> 3441 </u>	HEIGHT OF EYE <u> 3.5' </u> HEIGHT OF OBJECT <u> 2.0' </u>
SOIL FACTOR <u> NA </u>	DESIGN SPEED NOT ACHIEVED AT:
<u> 10 </u> TON DESIGN	STA. _____ TO STA. _____ MPH _____

#### DESIGN DESIGNATION ( SPRINGBROOK DR )

ESAL 20 <u> - </u>	FUNCTIONAL CLASSIFICATION <u> LOCAL </u>
R VALUE <u> 55 </u>	NO. OF TRAFFIC LANES <u> 2 </u> NO. OF PARKING LANES <u> 0 </u>
ADT (2014) <u> - </u>	DESIGN SPEED <u> 30 </u> MPH <u> SPRINGBROOK DR </u>
PROJ. ADT (2034) <u> - </u>	STOPPING SIGHT DISTANCE BASED ON:
PROJ. HCA DT (2034) <u> - </u>	HEIGHT OF EYE <u> 3.5' </u> HEIGHT OF OBJECT <u> 2.0' </u>
SOIL FACTOR <u> NA </u>	DESIGN SPEED NOT ACHIEVED AT:
<u> 9 </u> TON DESIGN	STA. _____ TO STA. _____ MPH _____

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:  CURT KOBILARCSIK   
SIGNATURE: *[Signature]*  
DATE:  4-3-14  LICENSE NO.  24756

DRAWN BY  DFF  DATE  02-13-14

DESIGN BY  DFF  DATE  02-13-14

CHECKED BY  GMP  DATE  02-18-14



**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

TITLE SHEET

Sheet  1  of  91  Sheets

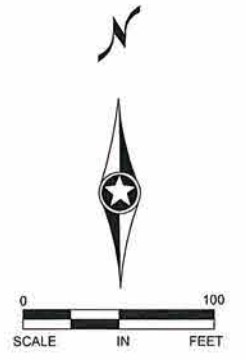
NO	DATE	BY	CKD	APPR	REVISION
1	03/31/14	DFF	GMP	CAK	PER MNDOT COMMENTS

22 40

END S.P. 002-596-020  
END CONSTRUCTION  
N.B. C.R. 3 STA. 163+74.03

**LEGEND**

- XXX INPLACE TOPOGRAPHY AND REMOVAL PLAN SHEET NUMBER
- XXX CONSTRUCTION PLAN SHEET NUMBER
- INPLACE/NEW SIGNAL SYSTEM



21 38

☉ E.B. SPRINGBROOK

☉ NB C.R. 3

22 39

END CONSTRUCTION  
E.B. SPRINGBROOK DR. STA. 12+97.81

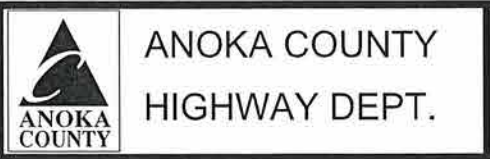
BEGIN S.P. 002-596-020  
BEGIN CONSTRUCTION  
N.B. C.R. 3 STA. 151+53.13

1	03/31/14	DFF	GMP	CAK	PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_GL.dgn 04/03/2014 11:45:59 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: CURT KOBILARCSIK  
SIGNATURE:   
DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
DESIGN BY: DFF DATE: 02-13-14  
CHECKED BY: GMP DATE: 02-18-14



S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

GENERAL LAYOUT

Sheet 2 of 91 Sheets

TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING		NON PARTICIPATING
					ANOKA COUNTY S.P. 002-596-020 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS S.P. 114-130-007 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS C.P. 12-26 ROADWAY QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1	0.62	0.37	0.01
A	2101.502	CLEARING	TREE	6	6		
A	2101.507	GRUBBING	TREE	6	6		
-	2102.502	PAVEMENT MARKING REMOVAL	LIN FT	1,520	1,520		
B	2104.501	REMOVE CURB AND GUTTER	LIN FT	2,076	2,076		
B	2104.503	REMOVE CONCRETE WALK	SQ FT	3,269	3,269		
B	2104.505	REMOVE CONCRETE MEDIAN	SQ YD	10	10		
B	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	3,533	763	2770	
	2104.509	REMOVE CASTING	EACH	2	2		
M	2104.509	REMOVE SIGN TYPE C	EACH	6	6		
B	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	106	106		
B	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	1,295	1,295		
M	2104.523	SALVAGE SIGN TYPE C	EACH	1	1		
EW	2105.501	COMMON EXCAVATION	CU YD	1,579	1,579		
EW	2105.507	SUBGRADE EXCAVATION	CU YD	1,444	1,444		
EW	2105.522	SELECT GRANULAR BORROW (CV)	CU YD	1,939	1,939		
D, E	2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	CU YD	815	815		
D	2231.501	BITUMINOUS PATCHING MIXTURE	TON	53	53		
D	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	456	456		
E	2360.501	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	3	3		
D	2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,B)	TON	579	579		
D	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON	470	470		
FF	2504.602	RELOCATE HYDRANT	EACH	1			1
FF	2504.602	ADJUST GATE VALVE & BOX	EACH	1	1		
GG	2506.516	CASTING ASSEMBLY	EACH	2	2		
GG	2506.602	ADJUST DRAINAGE STRUCTURE	EACH	1	1		
C	2521.501	4" CONCRETE WALK	SQ FT	7,008	5,835		1,173
C	2521.501	4" CONCRETE WALK SPECIAL	SQ FT	168	168		
C	2521.501	6" CONCRETE WALK	SQ FT	2,071	1,849		222
C	2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	822	411	411	
C	2531.501	CONCRETE CURB & GUTTER DESIGN B618 (MOD)	LIN FT	503	503		
C	2531.501	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	1,060	530	530	
E	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	223	223		
C	2531.618	TRUNCATED DOMES	SQ FT	112	112		
-	2563.601	TRAFFIC CONTROL	LUMP SUM	1	0.62	0.37	0.01
-	2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	210	130	78	2
N	2564.531	SIGN PANELS TYPE C	SQ FT	127.5	127.5		
M	2564.537	INSTALL SIGN TYPE C	EACH	1	1		
	2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	SIG SYS	1	0.25	0.75	
	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1		1	
	2565.601	TRAFFIC CONTROL INTERCONNECTION	LUMP SUM	1	1		
	2565.602	SIGNAL SERVICE CABINET	EACH	1	0.25	0.75	
	2565.616	TEMPORARY SIGNAL SYSTEM	SYSTEM	1	0.62	0.37	0.01
F	2573.502	SILT FENCE, TYPE MACHINE SLICED	LIN FT	125	125		
F	2573.530	STORM DRAIN INLET PROTECTION	EACH	6	6		
F	2575.505	SODDING TYPE SALT RESISTANT	SQ YD	926	926		
-	2581.501	REMOVABLE PREFORMED PLASTIC MARKING (4" BLACK)	LIN FT	90	56	33	1
-	2581.501	REMOVABLE PREFORMED PLASTIC MARKING (4" WHITE)	LIN FT	1,915	1,187	709	19
-	2581.501	REMOVABLE PREFORMED PLASTIC MARKING (4" YELLOW)	LIN FT	1,935	1,200	716	19
-	2581.501	REMOVABLE PREFORMED PLASTIC MARKING (4" DOUBLE YELL)	LIN FT	750	464	278	8
O	2582.501	PAVEMENT MESSAGE (LT ARROW) PREF. THERMOPLASTIC	EACH	3	3		
O	2582.501	PAVEMENT MESSAGE (RT ARROW) PREF. THERMOPLASTIC	EACH	3	3		
O	2582.501	PAVEMENT MESSAGE (LT/THRU ARROW) PREF. THERMOPLAST	EACH	3	3		
O	2582.502	24" SOLID LINE WHITE - PREF. THERMOPLASTIC	LIN FT	165	165		
-	2582.502	4" SOLID LINE WHITE-PAINT	LIN FT	2,110	1,308	781	21
-	2582.502	4" DOUBLE SOLID LINE YELLOW-PAINT	LIN FT	1,270	787	470	13
O	2582.502	4" SOLID LINE WHITE - EPOXY	LIN FT	2,880	2,880		
O	2582.502	4" SOLID LINE YELLOW - EPOXY	LIN FT	1,160	1,160		
O	2582.502	24" SOLID LINE YELLOW - EPOXY	LIN FT	55	55		
O	2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	580	580		
O	2582.503	CROSSWALK MARKING - PREFORMED THERMOPLASTIC	SQ FT	918	918		

1	03/31/14	DFF	GMP	CAK	PER MNDOT COMMENTS
2	04/16/14	DFF	GMP	CAK	PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_SEQ.dgn 04/17/2014 1:09:37 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: CURT KOBLARCSIK  
 SIGNATURE: *[Signature]*  
 DATE: 4-17-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14



ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

STATEMENT OF  
ESTIMATED QUANTITIES

STATION	EXCAVATION TOTALS		EMBANKMENT	
	COMMON (C.Y.)	SUBGRADE (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)
13+50.00	0	0	0	0
14+00.00	85	113	5	121
14+50.00	98	121	6	127
15+00.00	114	126	6	133
15+50.00	120	125	6	133
16+00.00	133	122	7	135
16+50.00	134	120	10	135
17+00.00	127	124	10	135
17+50.00	146	133	1	19
17+57.00	25	21	1	19
17+71.00	54	54	1	49
17+85.00	26	32	61	1174
<b>SUBTOTAL EB</b>	<b>1062</b>	<b>1091</b>	<b>114</b>	<b>2180</b>

152+00.00	0	0	0	0
152+25.00	14	10	0	15
152+50.00	14	11	0	15
152+75.00	14	13	0	16
153+00.00	16	14	0	16
153+25.00	16	16	0	18
153+50.00	18	16	0	71
154+50.00	67	65	0	36
155+00.00	29	32	0	17
155+25.00	8	8	0	17
<b>SUBTOTAL LTL</b>	<b>196</b>	<b>185</b>	<b>0</b>	<b>221</b>

159+25.00	0	0	0	0
159+50.00	25	13	2	31
159+75.00	23	14	1	29
160+00.00	23	14	2	29
160+25.00	24	14	2	29
160+50.00	24	14	2	29
160+75.00	23	14	2	30
161+00.00	26	14	1	30
161+25.00	29	14	1	30
161+50.00	30	14	1	30
161+75.00	29	14	1	30
162+00.00	28	13	1	30
162+25.00	25	11	1	29
162+50.00	12	5	19	385
<b>SUBTOTAL RTL</b>	<b>321</b>	<b>168</b>	<b>36</b>	<b>741</b>

<b>PROJECT TOTAL</b>	<b>1579</b>	<b>1444</b>	<b>150</b>	<b>3142</b>
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EARTHWORK BALANCE

EXCAVATION (CY)			
COMMON (EV) (1)	1,579	COMMON	1,084 (EV) / 1.2 = 903 (CV)
SUBGRADE EXCAVATION (EV) (2)	1,444	EXISTING TOPSOIL	495 (EV) / 1.2 = 413 (CV)
		SUBGRADE	1,444 (EV) / 1.2 = 1,203 (CV) (3)
EMBANKMENT (CY)			
TOPSOIL	150 (CV)		150 (CV)
SELECT GRANULAR	3,142 (CV)		3,142 (CV) (4)
EXCESS (CY)			
COMMON	903 (CV)		903 (CV) (5)
TOPSOIL	413 (CV)	- 150 (CV) =	263 (CV) (6)
BORROW (CY)			
SELECT GRANULAR	3,142 (CV)	- 1,203 (CV) =	1,939 (CV) (7)

- (1) TOTAL COMMON EXCAVATION FOR PROJECT (INCLUDING TOPSOIL AND VEGETATED MEDIAN)
- (2) TOTAL SUBGRADE EXCAVATION FOR PROJECT
- (3) ALL SUBGRADE EXCAVATION ASSUMED TO MEET REQUIREMENTS FOR SELECT GRANULAR BORROW AND SHALL BE USED ON THE PROJECT.
- (4) SELECT GRANULAR QUANTITY
- (5) TOTAL COMMON EXCESS FOR THIS PROJECT
- (6) TOTAL TOPSOIL EXCESS FOR PROJECT
- (7) TOTAL SELECT GRANULAR BORROW FOR PROJECT

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_EW.dgn 03/11/2014 8:50:10 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: CURT KOBIARCSIK

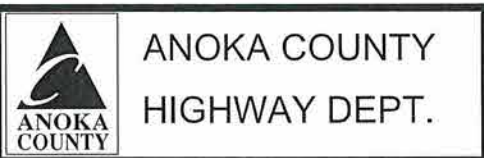
SIGNATURE: *Curt Kobiarsik*

DATE: 3-11-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14

DESIGN BY: DFF DATE: 02-13-14

CHECKED BY: GMP DATE: 02-18-14



S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

SOILS AND CONSTRUCTION NOTES:

1. TOP OF THE GRADING SUBGRADE (GRADING GRADE) IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE LAYER.
2. BOTTOM OF SUBBASE GRADE SHALL BE DEFINED AS THE BOTTOM OF THE 1' SUBGRADE EXCAVATION.
3. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL GRANULAR AND FINER GRAINED SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, PEAT, MUCK, ORGANIC MATERIAL, AND OTHER UNSTABLE MATERIAL.
4. NO OVER EXCAVATION WILL BE ALLOWED.
5. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3149.2B2.
6. ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE COMMON EXCAVATION.
7. COMMON BORROW - SELECT GRANULAR MATERIAL SHALL BE USED TO BACK FILL THE EMBANKMENT UNDER THE NEW ROADWAY CORE, UP TO THE TOP OF THE GRADING SUBGRADE.
8. WHENEVER THE WORD "INCIDENTAL" IS USED IN THIS PLAN, IT SHALL MEAN THIS WORK WILL BE INCIDENTAL FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.
9. TOPSOIL SHALL BE DEFINED AS EXISTING SOILS WHICH MEET MN/DOT SPECIFICATION 3877 THAT WOULD BE SUITABLE FOR REUSE.
10. UNSUITABLE SOILS ARE DEFINED AS SOILS WHICH DO NOT MEET OR ARE NOT MANUFACTURED TO MEET ANY OF THE ABOVE DEFINED CATEGORIES, AND ARE THEREFORE NOT REUSABLE AS STRUCTURAL BACKFILL OR EMBANKMENT WITHIN THE ROADWAY CORE.
11. SUITABLE GRADING MATERIAL OBTAINED FROM COMMON EXCAVATION NOT MEETING THE REQUIREMENTS OF MN/DOT SPEC 3149.2B1, SHALL BE USED AS EMBANKMENT MATERIAL ON THE PROJECT AS APPROVED BY THE ENGINEER.
12. UNSUITABLE MATERIALS ARE TOPSOILS, PAVEMENT OR CONCRETE DEBRIS, PEAT, MUCK AND ORGANIC OR OTHER UNSTABLE SOILS.
13. EXCESS TOPSOIL AND MUCK MATERIAL SHALL BE USED THROUGHOUT THE PROJECT AND AS DIRECTED BY THE ENGINEER.
14. REGULAR EMBANKMENT SHALL BE DEFINED AS ALL GRADING MATERIALS THAT ARE APPROPRIATE FOR REUSE ON THE PROJECT BUT THAT MAY NOT MEET THE REQUIREMENTS OF SUITABLE GRADING MATERIALS. REGULAR EMBANKMENT MAY CONSIST OF GRADING SOILS NOT MEETING GRANULAR SPECIFICATIONS AND THEREFORE NOT SUITABLE FOR REUSE UNDER ROAD CORE. REGULAR EMBANKMENT MAY CONSIST OF TOPSOIL AND ORGANIC SOILS; UNLESS THE ENGINEER DETERMINES THESE SOILS IS NOT REUSABLE, IN WHICH CASE THE CONTRACTOR SHALL REMOVE THEM FROM THE PROJECT LIMITS. REGULAR EMBANKMENT SHALL NOT CONSIST OF DEBRIS.
15. IN ALL AREAS OF NEW MAINLINE ROADWAY RECONSTRUCTION (PERMANENT AND TEMPORARY), PROVIDE FOR A MINIMUM 12 INCH COMPACTION SUBCUT UNLESS OTHERWISE NOTED. BACKFILL WITH SUITABLE GRADING MATERIAL. ANY UNCONTAMINATED SUITABLE GRANULAR MATERIAL REMOVED FROM THE EXISTING SUBGRADE AREA MAY BE USED IN OTHER AREAS DESIGNATED FOR THE SAME MATERIAL.
16. 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 ACCORDANCE WITH SPEC. 2104.3C3.
17. WHERE CONNECTING NEW SURFACING ADJACENT TO ANY INPLACE PAVEMENTS TO BE WIDENED, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT 1:2 SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
18. WHERE CONNECTING TO THE INPLACE ROADWAYS AT THE TERMINI OF PROPOSED NEW CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
19. WHERE MATCHING INTO INPLACE CROSSROADS, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:4 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
20. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON THE EXISTING PAVEMENT. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GALLONS/SQ. YD. BETWEEN BITUMINOUS LAYERS AND 0.07 TO 0.10 GALLONS/SQ. YD. ON CONCRETE OR MILLED BITUMINOUS SURFACES PRIOR TO BEING OVERLAID. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY) OR MC AND RC LIQUID ASPHALTS. THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPECIFICATION 2357.
21. PROVIDE A SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT.
22. STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 4 INCHES.
23. EMBANKMENT QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE PROPOSED GRADING GRADE OF ALL PERMANENT ROADWAYS. QUANTITIES REQUIRED ABOVE THE GRADING GRADE OR FOR TEMPORARY CONSTRUCTION ARE PROVIDED IN DETAIL ON THE BITUMINOUS SUMMARY TAB.
24. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.
25. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
26. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
27. UNSUITABLE SOILS NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MN/DOT SPECIFICATIONS.
28. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPECIFICATION 2105.3D.
29. INPLACE BITUMINOUS PAVEMENT RANGES FROM 4" TO 6" THICK. (AVERAGE 5"). FOR INFORMATION ONLY, CONTRACTOR TO VERIFY PAVEMENT DEPTH PRIOR TO PLACING BID
30. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3138, CLASS 5.

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14



ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-596-020  
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 C.P. 12-26

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

### STANDARD PLATES

PLATE NO.	DESCRIPTION
4108F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4125D	CATCH BASIN FRAM CASTING (FOR SQUARE GRATE) - CASTING NO. 806
4134A	CURB BOX CASATING FOR CATCH BASIN (FOR DESIGN B CURBS) - CASTING NO. 825
4154B	CATCH BASIN GRATE CASTING - CASTING NO. 816
7035N	CONCRETE WALK & CURB RETURNS AS ENTRANCES
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100H	CONCRETE CURB AND GUTTER (DESIGN B & V)
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES

### BASIS OF QUANTITIES

SPEC NO	DESCRIPTION	RATE
2360.501	TYPE SP12.5 WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2360.502	TYPE SP12.5 NON-WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD / LIFT
2575.511	MULCH MATERIAL TYPE 3	2 TONS / ACRE
2575.571	RAPID STABILIZATION METHOD 3	6 M GALLONS / ACRE

### INDEX OF TABULATION CHARTS

TAB.	DESCRIPTION	SHEET NO.
A	CLEARING & GRUBBING	7
B	REMOVALS, SAWING AND MILLING	7
C	CONCRETE	7
D	BITUMINOUS SUMMARY	7
E	DRIVEWAYS	7
F	TURF ESTABLISHMENT AND EROSION CONTROL	7
	EARTHWORK BALANCE	4
	EARTHWORK TABULATION	4
	TEMPORARY STAGING TRAFFIC CONTROL ITEMS	37
M	SIGN REMOVAL TAB	12
N	PERMANENT SIGNING TAB	52
O	PERMANENT STRIPING TAB	50
AA	UTILITY CONTACTS	8
BB	GAS - CENTERPOINT ENERGY	8
CC	POWER - XCEL	8
DD	TELEPHONE - CENTURYLINK	8
EE	CABLE - COMCAST	8
FF	WATERLINE	8
GG	SANITARY/STORM SEWER & CASTING ASSEMBLIES SUMMARY	8
HH	POWER - CONNEXUS	8
II	FIBER OPTIC - ZAYO	8

1	03/13/14	DFF	GMP	CAK	PER MNDOT COMMENTS
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 PRINT NAME: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14



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TABULATIONS

Sheet 6 of 91 Sheets

CLEARING & GRUBBING					A
ALIGNMENT	STATION	OFFSET	CLEARING (TREE)	GRUBBING (TREE)	NOTES
CL-SPR	16+15.60	54.2 LT	1	1	
CL-SPR	16+29.73	51.3 LT	1	1	
CL-SPR	16+44.32	56.1 LT	1	1	
CL-SPR	16+74.45	44.1 RT	1	1	
CL-SPR	16+78.14	49.5 RT	1	1	
CL-SPR	17+24.11	54.6 LT	1	1	
PROJECT TOTAL			6	6	

**CLEARING & GRUBBING GENERAL NOTES:**  
 1) TREES WITHIN THE CONSTRUCTION LIMITS WILL BE DESIGNATED FOR REMOVAL BY THE ENGINEER.  
 2) REMOVAL OF MISCELLANEOUS SHRUBS AND LANDSCAPING SHALL BE CONSIDERED INCIDENTAL

REMOVALS, SAWING AND MILLING										B
ALIGNMENT	STATION TO STATION		SPEC. 2104						NOTES	
			REMOVE			SAWCUT [1]				
			CONCRETE MEDIAN [SQ YD]	BITUMINOUS PAVEMENT [SQ YD]	CONCRETE SIDEWALK [SQ FT]	CURB AND GUTTER [LIN FT]	BITUMINOUS [LIN FT]	CONCRETE [LIN FT]		
E-N3	152+97 - 156+91	LT	10	238		373	390			
E-N3	158+94 - 162+52	LT		371		321	413			
CL-SPR	12+98 - 17+90	LT		2770	1353	689	179	106		
CL-SPR	13+25 - 17+86	RT			1527	521	24			
CL-SPR	18+91 - 19+12	LT		82	202	89	149			
CL-SPR	18+94 - 19+14	RT		72	187	83	140			
PROJECT TOTAL			10	3533	3269	2076	1295	106		

**REMOVALS NOTES:**  
 [1] INCLUDES SAWCUT FOR ENTRANCES

CONCRETE										C
ALIGNMENT	STATION TO STATION	LOCATION	TRUNCATED DOMES [SQ FT]	4" CONCRETE WALK [1] [SQ FT]	4" CONCRETE WALK SPECIAL [2] [SQ FT]	6" CONCRETE WALK [3] [SQ FT]	CONCRETE CURB AND GUTTER DESIGN B618 [LIN FT]	CONCRETE CURB AND GUTTER DESIGN B618 (MOD) [LIN FT]	CONCRETE CURB AND GUTTER DESIGN B624 [LIN FT]	NOTES
E-N3	152+97 - 156+91	LT		2989					373	
E-N3	158+94 - 162+52	LT							320	
CL-SPR	12+98 - 17+90	LT	48	2625	84	829	423	252	125	
CL-SPR	13+25 - 17+86	RT	32	1303		466	399	251	80	
CL-SPR	18+91 - 19+12	LT	16	48	42	414			85	
CL-SPR	18+94 - 19+14	RT	16	43	42	362			77	
PROJECT TOTAL			112	7008	168	2071	822	503	1060	

**CONCRETE SUMMARY NOTES:**  
 [1] QUANTITY FOR SIDEWALK AND CONCRETE MEDIAN  
 [2] QUANTITY FOR CONCRETE ENTRANCE NOSE  
 [3] QUANTITY FOR PEDESTRIAN RAMPS

BITUMINOUS SUMMARY										D
ALIGNMENT	STATION TO STATION	OFFSET	BITUMINOUS				AGGREGATE BASE CLASS 5 CU YD	NOTES		
			2360 TYPE SP 12.5 WEAR (4,B) TON	2360 TYPE SP 12.5 NON WEAR (3,B) TON	PATCHING MIXTURE TON	2357 BIT. TACK COAT GALLON				
E-N3	152+97 - 156+91	LT	113	57		74	81			
E-N3	158+94 - 162+52	LT	106	53		69	76			
CL-SPR	12+98 - 17+90	LT	214	214		186	361			
CL-SPR	13+25 - 17+86	RT	146	146		127	246			
CL-SPR	18+91 - 19+12	LT			28		13			
CL-SPR	18+94 - 19+14	RT			25		12			
PROJECT TOTAL			579	470	53	456	789			

DRIVEWAYS								E
ALIGNMENT	APRON CENTERLINE STATION	OFFSET	DRIVEWAY TYPE	APRON WIDTH FEET	6" DRIVEWAY CONCRETE SQ YD	TYPE SP 12.5 WEARING COURSE MIX (2.B) [1] TON	4" AGG BASE CL 5 CU YD	NOTES
CL-SPR	14+38.95	LT	CONCRETE	56	59		6.6	
CL-SPR	15+88.26	LT	CONCRETE	61	121		13.5	
CL-SPR	15+94.82	RT	CONCRETE/BIT	54	43	3	6.0	
PROJECT TOTAL					223	3	26.1	

**DRIVEWAY NOTES**  
 [1] 2.5" DEPTH

TURF ESTABLISHMENT AND EROSION CONTROL							F
ALIGNMENT	LOCATION STATION TO STATION	OFFSET	TEMPORARY	PERMANENT		NOTES	
			INLET PROTECTION EACH	SILT FENCE, TYPE MACHINE LIN FT	SODDING SALT RESISTANT SQ YD		
E-N3	152+97 - 156+91	LT					
E-N3	158+94 - 162+52	LT	1		256		
CL-SPR	12+98 - 17+90	LT	1	125	400		
CL-SPR	13+25 - 17+86	RT	3		270		
CL-SPR	18+91 - 19+12	LT			0		
CL-SPR	18+94 - 19+14	RT	1		0		
PROJECT TOTAL			6	125	926		

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 PRINT NAME: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-11-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14

**ANOKA COUNTY HIGHWAY DEPT.**

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 C.P. 12-26

TABULATIONS  
 Sheet 7 of 91 Sheets

UTILITY CONTACTS			AA
CITY OF COON RAPIDS 11155 ROBINSON DR NW COON RAPIDS, MN 55433 CONTACT TIM HIMMER PUBLIC WORKS DIRECTOR TEL. 763-767-6494	CENTERPOINT ENERGY 700 WEST LINDEN AVE P.O. BOX 1165 MINNEAPOLIS, MN 55440-1165 CONTACT STEVE GUHANICK TEL. 612-321-5421	ZAYO GROUP 5005 CHESHIRE PKWY MINNEAPOLIS, MN 55446 CONTACT MICHAEL DAHLE TEL. 952-857-9383	
CENTURYLINK 425 MONROE ST ANOKA, MN 55303 CONTACT BRUCE HOLLOWAY TEL. 763-712-5020	CONNEXUS ENERGY 14601 RAMSEY BLVD RAMSEY, MN 55303 MAT RAUSCHENDORFER TEL. 763-323-4259		
XCEL ENERGY 8701 MONTICELLO LANE MAPLE GROVE, MN 55369 CONTACT ROBERT M. TORRES DESIGNER TEL. 763-493-1671	COMCAST 2611 FAIRVIEW AVE ROSEVILLE, MN 55113 CONTACT DOUG ZAHN TEL. 651-493-5316		

GAS - CENTERPOINT ENERGY					BB
STATION		ALIGN	OFFSET	SIZE & ITEM	REMARK
BEGIN	END				
10+00	17+41	SPR	30' RIGHT	4" PLASTIC	RELOCATE
17+41		SPR	CROSSING	2" PLASTIC	LEAVE AS IS
17+41	17+85	SPR	37' LT - 98' LT	4" PLASTIC	RELOCATE
17+41	17+79	SPR	27' RT - 70' RT	4" PLASTIC	RELOCATE
18+92	19+12	SPR	64' RT - 39' RT	4" PLASTIC	LEAVE AS IS
157+85		CR3	CROSSING	4" PLASTIC	LEAVE AS IS
159+53	164+33	CR3	70' LT - 75' LT	4" PLASTIC	RELOCATE

CABLE - COMCAST					EE
STATION		ALIGN	OFFSET	SIZE & ITEM	REMARK
BEGIN	END				
12+53	15+32	SPR	35' RT - 48' RT	BURIED CABLE	LEAVE AS-IS

POWER - XCEL					CC
STATION		ALIGN	OFFSET	SIZE & ITEM	REMARK
BEGIN	END				
13+04		SPR	63' LT	MANHOLE	LEAVE AS IS
13+04	16+60	SPR	36' LT - 42' LT	UNDERGROUND	RELOCATE
13+23		SPR	33' RT	BOX	LEAVE AS IS
13+35		SPR	30' RT	LIGHT POLE	LEAVE AS IS
13+54		SPR	37' RT - 31' LT	UNDERGROUND	LEAVE AS IS
13+54	16+68	SPR	34' RT 53' RT	POLE	LEAVE AS IS
14+47		SPR	27' RT	LIGHT POLE	LEAVE AS IS
15+61		SPR	27' RT	LIGHT POLE	LEAVE AS IS
16+28		SPR	27' RT	LIGHT POLE	RELOCATE
16+65		SPR	27' RT	BOX	RELOCATE
16+65		SPR	CROSSING	UNDERGROUND	LEAVE AS IS
16+68		SPR	53' RT	BOX	LEAVE AS IS
17+18		SPR	27' RT	LIGHT POLE	RELOCATE

TELEPHONE - CENTURYLINK					DD	
STATION		ALIGN	OFFSET FROM LNB	SIZE & ITEM	DEPTH	REMARK
BEGIN	END					
10+00	17+41		30' RT - 27' RT	BURIED FIBER OPTIC		LEAVE AS IS
13+25			34' RT	SPLICE BOX		LEAVE AS IS
16+73	17+86		78' RT - 76' RT	BURIED FIBER OPTIC		LEAVE AS IS
17+23			27' RT	VAULT		LEAVE AS IS
17+41	15+94		CROSSING	BURIED FIBER OPTIC		LEAVE AS IS
152+87	157+79		89' LT - 76' LT	BURIED FIBER OPTIC		LEAVE AS IS
158+09	159+46		33' RT - 43' RT	BURIED CABLE		LEAVE AS IS
158+30	158+92		50' RT - 49' RT	BURIED FIBER OPTIC		LEAVE AS IS
159+40	162+50		87' LT - 79' LT	BURIED CABLE		LEAVE AS IS
159+65	164+88		78' LT - 73' LT	BURIED FIBER OPTIC		RELOCATE

WATERLINE					FF
ALIGN	STATION	OFFSET FROM ALIGN	REMARKS	EXIST ELEV	NOTES
SPR	12+76	42 LT	GATE VALVE	880.19	LEAVE AS-IS
SPR	13+35	34 LT	HYDRANT	884.10	RELOCATE
SPR	14+07	34 RT	CURB STOP	881.72	LEAVE AS-IS
SPR	16+06	34 LT	GATE VALVE	882.06	ADJUST
SPR	19+36	18 LT	GATE VALVE	884.24	LEAVE AS-IS
SPR	19+46	36 LT	HYDRANT	887.15	LEAVE AS-IS
SPR	19+90	38 LT	GATE VALVE	884.56	LEAVE AS-IS
CR3	158+70	20 RT	GATE VALVE	884.71	LEAVE AS-IS
CR3	160+11	30 RT	GATE VALVE	883.81	LEAVE AS-IS
CR3	160+11	33 RT	HYDRANT	886.20	LEAVE AS-IS
CR3	160+16	82 LT	GATE VALVE	883.47	LEAVE AS-IS
CR3	160+72	98 LT	HYDRANT	884.02	LEAVE AS-IS

POWER - CONNEXUS					HH
STATION		ALIGN	OFFSET	SIZE & ITEM	REMARK
BEGIN	END				
152+58		CR3	29' RT	MANHOLE	LEAVE AS IS
152+58	162+65	CR3	29' RT - 42' RT	UNDERGROUND	LEAVE AS IS
156+65		CR3	34' RT	LIGHT POLE	LEAVE AS IS
157+43		CR3	35' RT	LIGHT POLE	LEAVE AS IS
19+13		SPR	28' RT	LIGHT POLE	LEAVE AS IS
19+12		SPR	51' LT	LIGHT POLE	LEAVE AS IS
159+97		CR3	35' RT	LIGHT POLE	LEAVE AS IS
160+86		CR3	31' RT	LIGHT POLE	LEAVE AS IS
158+95		CR3	73' RT	CABINET	LEAVE AS IS
159+01		CR3	74' RT	CABINET	LEAVE AS IS
19+51		SPR	59' LT	SPLICE BOX	LEAVE AS IS
19+53		SPR	60' LT	SPLICE BOX	LEAVE AS IS
19+59		SPR	59' LT	CABINET	LEAVE AS IS

SANITARY/STORM SEWER					GG
ALIGN	STATION	OFFSET FROM ALIGN	REMARKS	EXIST ELEV	NOTES
SPR	11+84	1 LT	SANITARY MH	880.50	LEAVE AS-IS
SPR	11+86	15 RT	DRAINAGE MH	880.30	LEAVE AS-IS
SPR	12+87	24 RT	CATCH BASIN	880.48	LEAVE AS-IS
SPR	12+98	63 LT	CATCH BASIN	879.71	LEAVE AS-IS
SPR	13+83	2 LT	SANITARY MH	881.30	ADJUST
SPR	13+88	35 RT	SANITARY MH	881.47	LEAVE AS-IS
SPR	17+88	53 RT	CATCH BASIN	883.45	REMOVE & REPLACE CASTING
SPR	18+90	51 RT	CATCH BASIN	884.35	LEAVE AS-IS
SPR	19+13	3 RT	CATCH BASIN	884.44	LEAVE AS-IS
CR3	157+00	13 RT	SANITARY MH	885.47	LEAVE AS-IS
CR3	158+02	30 LT	CATCH BASIN	884.23	REMOVE & REPLACE CASTING
CR3	158+02	12 LT	SANITARY MH	884.75	LEAVE AS-IS
CR3	160+01	13 RT	SANITARY MH	883.61	LEAVE AS-IS

FIBER OPTIC - ZAYO					II
STATION		ALIGN	OFFSET	SIZE & ITEM	REMARK
BEGIN	END				
158+30	159+11	CR3	50' RT - 48' RT	BURIED FIBER	LEAVE AS-IS
159+11		CR3	85' RT	SPLICE BOX	LEAVE AS-IS

CASTING ASSEMBLIES SUMMARY						
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE	STANDARD PLATE NO.	CURB BOX	QUANTITY	REMARKS
B-17	806	816	4125, 4134, 4154	825	2	CATCH BASIN

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: CURT KOBIARCSIK

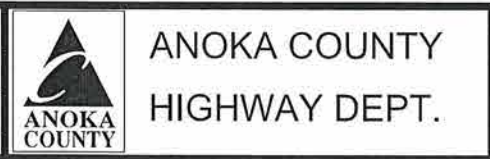
SIGNATURE: *Curt Kobiarcsik*

DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14

DESIGN BY: DFF DATE: 02-13-14

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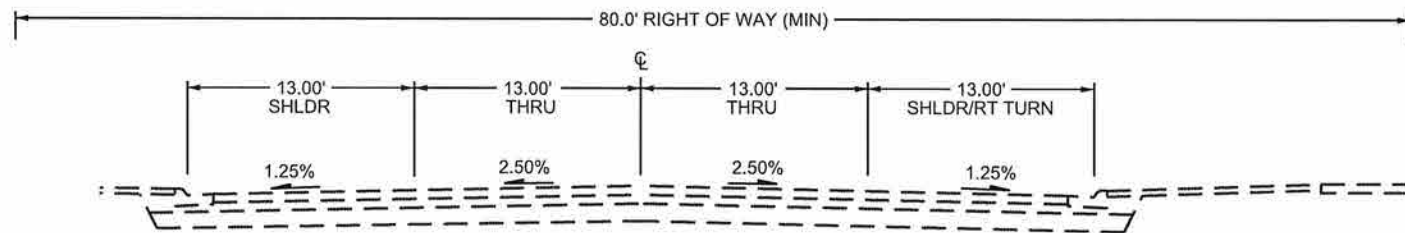


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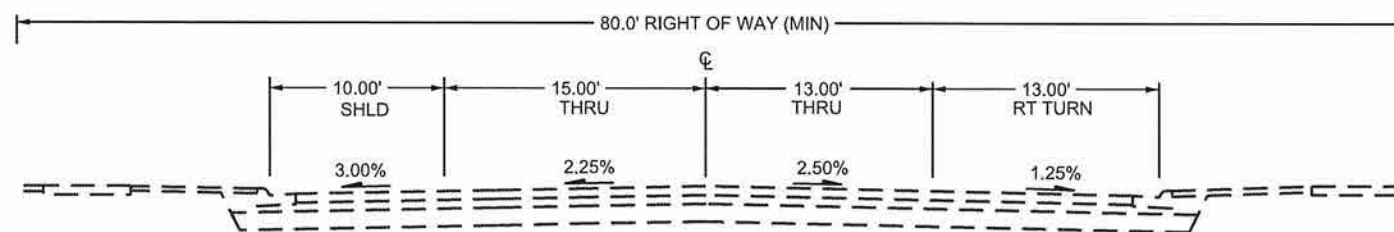
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STA. 13+25 - STA. 15+05



**EXISTING SPRINGBROOK DR NW**

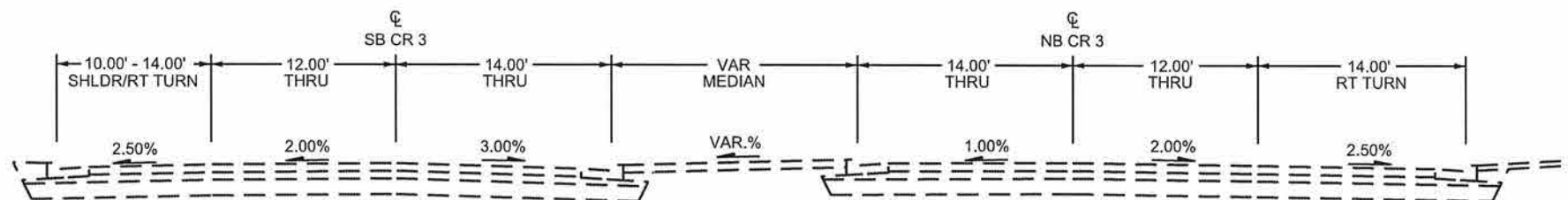
STA. 15+05 - STA. 17+55



**EXISTING CR 3**

STA. 151+75 - STA. 155+48

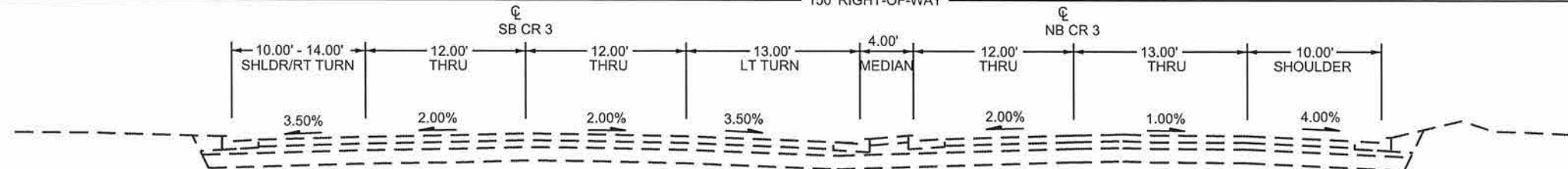
150' RIGHT-OF-WAY



**EXISTING CR 3**

STA. 158+97 - STA. 163+74

150' RIGHT-OF-WAY



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_TS.dgn      03/05/2014      1:43:47 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: CURT KOBIARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 3-10-14      LICENSE NO. 24756

DRAWN BY: DFF      DATE: \_\_\_\_\_  
 DESIGN BY: DFF      DATE: \_\_\_\_\_  
 CHECKED BY: GMP      DATE: \_\_\_\_\_



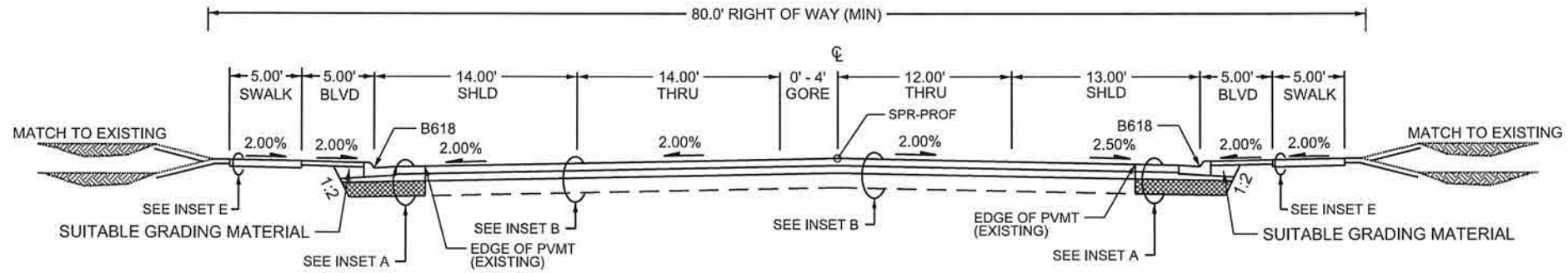
**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

TYPICAL SECTIONS  
 Sheet 9 of 91 Sheets

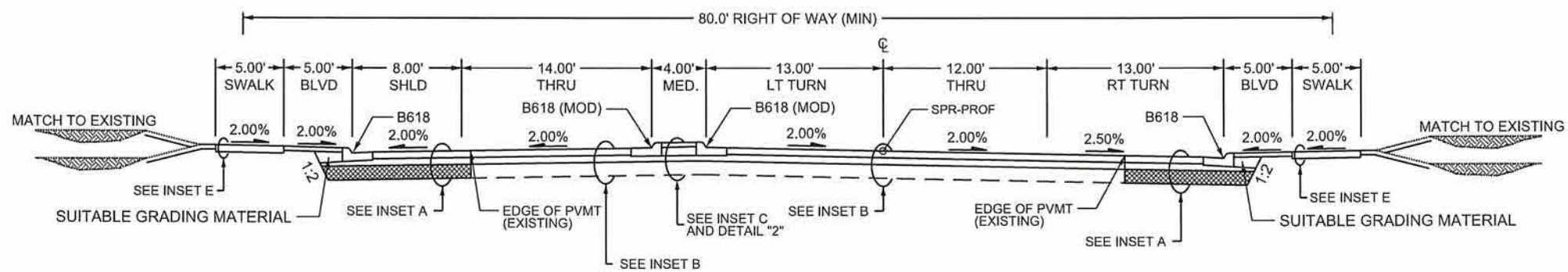
PROPOSED SPRINGBROOK DR NW

STA. 13+25 - STA. 15+05



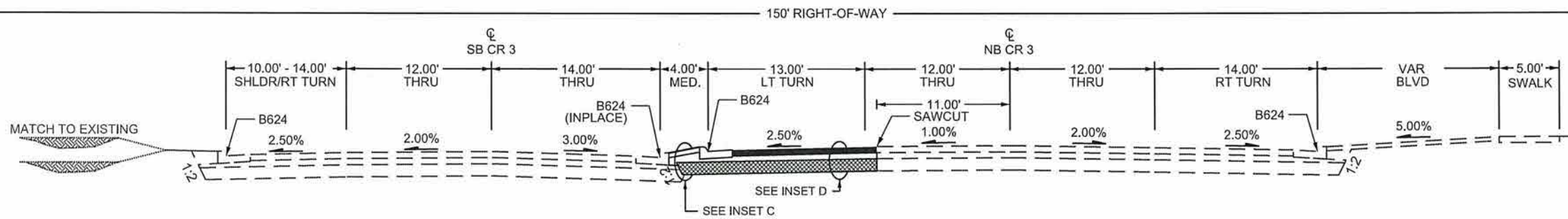
PROPOSED SPRINGBROOK DR NW

STA. 15+05 - STA. 17+55



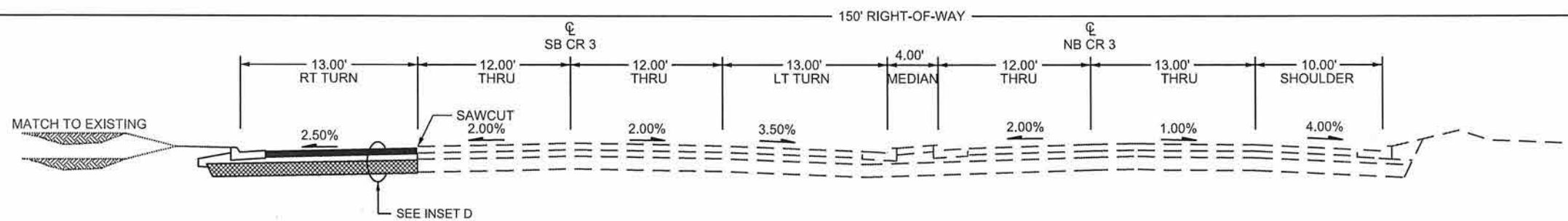
PROPOSED CR 3

STA. 151+75 - STA. 155+48



PROPOSED CR 3

STA. 158+97 - STA. 163+74



1	03/31/14	DFE	GMP	CAK	PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_TS.dgn					
04/03/2014 10:55:16 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: \_\_\_\_\_  
 DESIGN BY: DFF DATE: \_\_\_\_\_  
 CHECKED BY: GMP DATE: \_\_\_\_\_

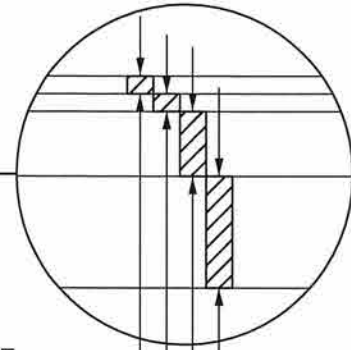


ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

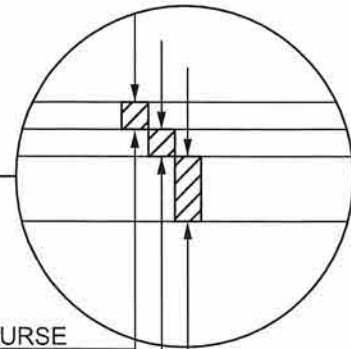
TYPICAL SECTIONS

INSET "A"  
NEW TURN LANE / WIDENING  
PAVEMENT DESIGN  
(SPRINGBROOK)



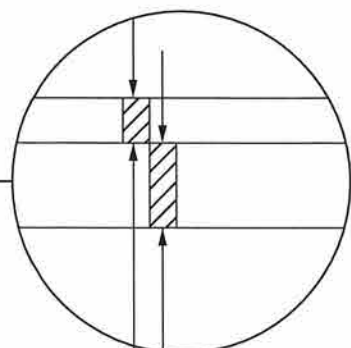
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MIXTURE (4,B) SPWEB440B  
2.0" TYPE SP 12.5 NON WEARING COURSE  
MIXTURE (3,B) SPNWB330B  
7.0" CL 5 AGGREGATE BASE  
(SPEC 2211) (CRUSHED)  
12" SELECT GRANULAR  
SUBGRADE -- SPEC. 2105

INSET "B"  
EXISTING / RECONSTRUCT  
PAVEMENT DESIGN  
(SPRINGBROOK)



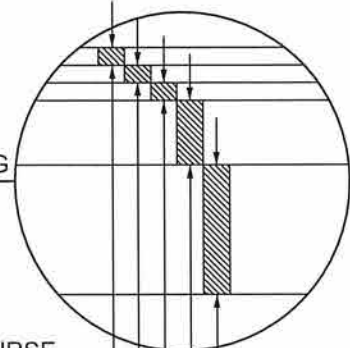
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MIXTURE (4,B) SPWEB440B  
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MIXTURE (3,B) SPNWB330B  
7.0" CL 5 AGGREGATE BASE  
(SPEC 2211) (CRUSHED)

INSET "C"  
MEDIAN DESIGN



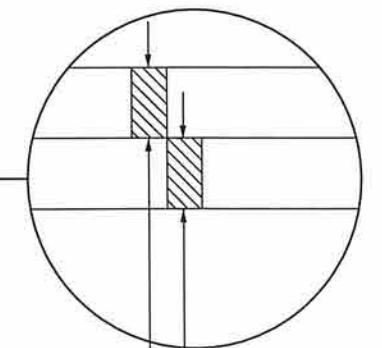
4" CONCRETE WALK  
(DEPTH VARIES) AGGREGATE BASE, CLASS 5

INSET "D"  
NEW TURN LANE / WIDENING  
PAVEMENT DESIGN (CR 3)



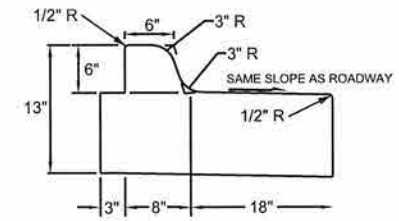
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MIXTURE (4,B) SPWEB440B  
2.0" TYPE SP 12.5 WEARING COURSE  
MIXTURE (4,B) SPWEB440B  
2.0" TYPE SP 12.5 NON WEARING COURSE  
MIXTURE (3,B) SPNWB330B  
6.0" CL 5 AGGREGATE BASE  
(SPEC 2211) (CRUSHED)  
12" SELECT GRANULAR  
SUBGRADE -- SPEC. 2105

INSET "E"  
CONCRETE SIDEWALK



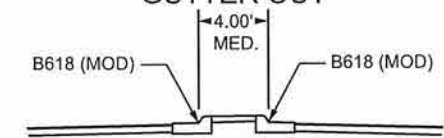
4" CONCRETE  
4" AGGREGATE BASE CL 5  
(INCIDENTAL TO 4" CONC. WALK)  
(SPEC 2211) (CRUSHED)

B618 MOD  
CURB & GUTTER  
REVERSE SLOPE GUTTER



DETAIL "1"  
B618 MOD C&G

SPRINGBROOK DR  
MEDIAN  
"GUTTER OUT"



DETAIL "2"

1	04/17/14	DFP	GMP	CAK	CORRECTED BITUMINOUS MIXTURE
NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_TS.dgn					04/17/2014 1:07:44 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: CURT KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 4-17-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: \_\_\_\_\_  
DESIGN BY: DFF DATE: \_\_\_\_\_  
CHECKED BY: GMP DATE: \_\_\_\_\_

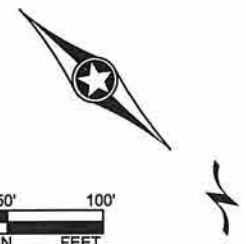
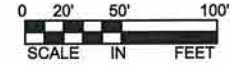


ANOKA COUNTY  
HIGHWAY DEPT.

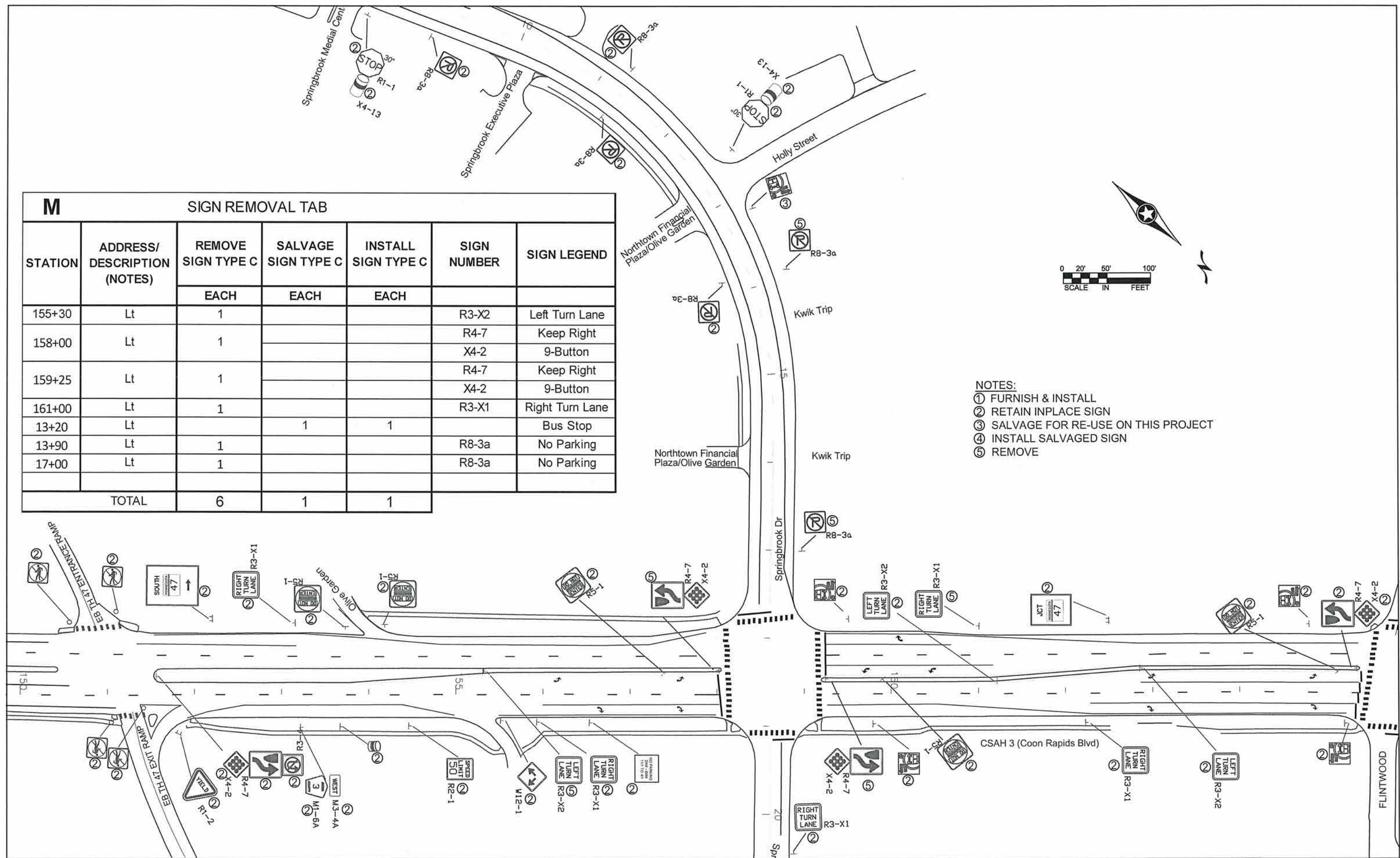
S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

TYPICAL SECTIONS

M SIGN REMOVAL TAB						
STATION	ADDRESS/ DESCRIPTION (NOTES)	REMOVE SIGN TYPE C	SALVAGE SIGN TYPE C	INSTALL SIGN TYPE C	SIGN NUMBER	SIGN LEGEND
		EACH	EACH	EACH		
155+30	Lt	1			R3-X2	Left Turn Lane
158+00	Lt	1			R4-7 X4-2	Keep Right 9-Button
159+25	Lt	1			R4-7 X4-2	Keep Right 9-Button
161+00	Lt	1			R3-X1	Right Turn Lane
13+20	Lt		1	1		Bus Stop
13+90	Lt	1			R8-3a	No Parking
17+00	Lt	1			R8-3a	No Parking
TOTAL		6	1	1		



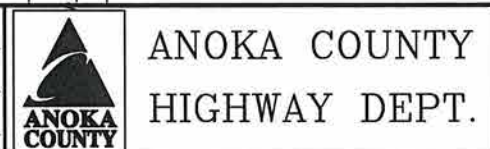
- NOTES:  
 ① FURNISH & INSTALL  
 ② RETAIN INPLACE SIGN  
 ③ SALVAGE FOR RE-USE ON THIS PROJECT  
 ④ INSTALL SALVAGED SIGN  
 ⑤ REMOVE



1	03/31/14	RLB	JR	CAK	PER MNDOT COMMENTS
NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-596-20\Bases\TRAFFIC\EXISTING SIGNING & STRIPING.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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 2/28/14  
 DESIGN BY: RLB DATE: 2/28/14  
 CHECKED BY: JR DATE: 2/28/14

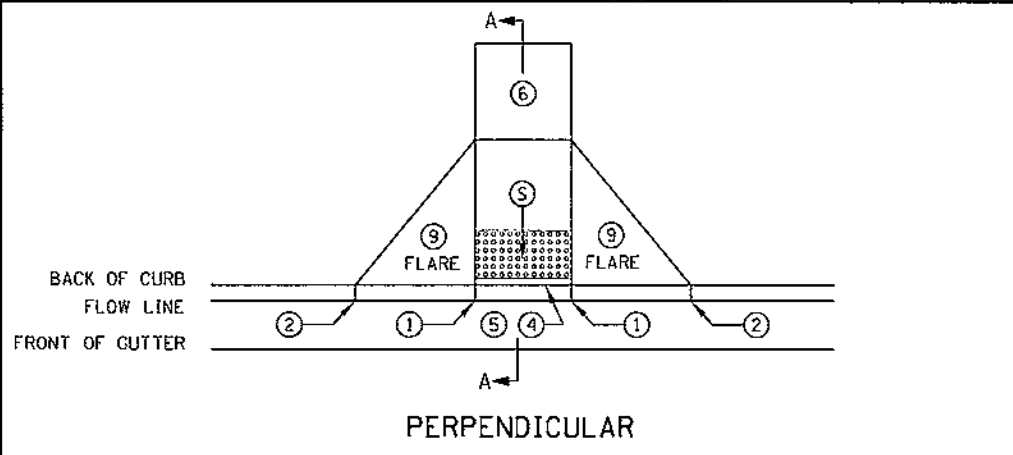


STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO.

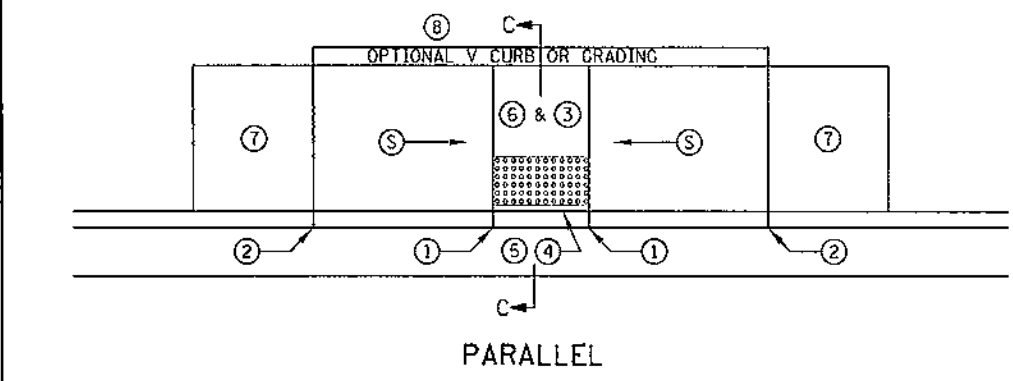
EXISTING SIGNING & STRIPING PLAN  
 Sheet 12 of 91 Sheets

PLOTTED/REVISED:  
03/05/2014

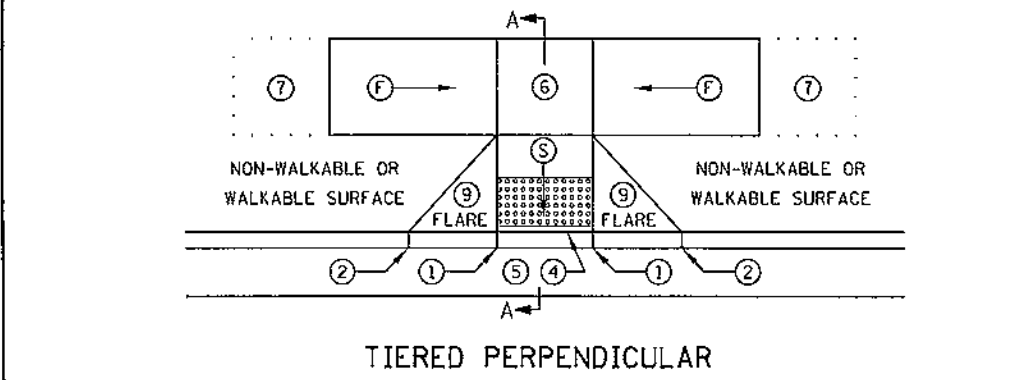
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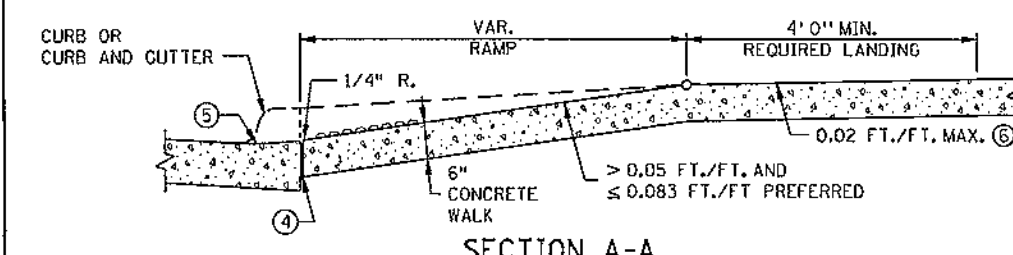
PERPENDICULAR



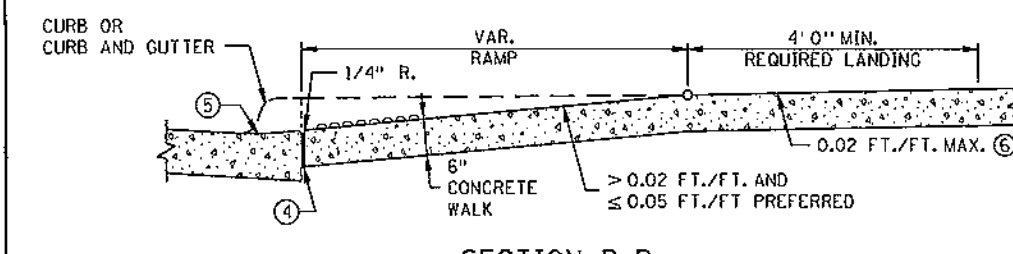
PARALLEL



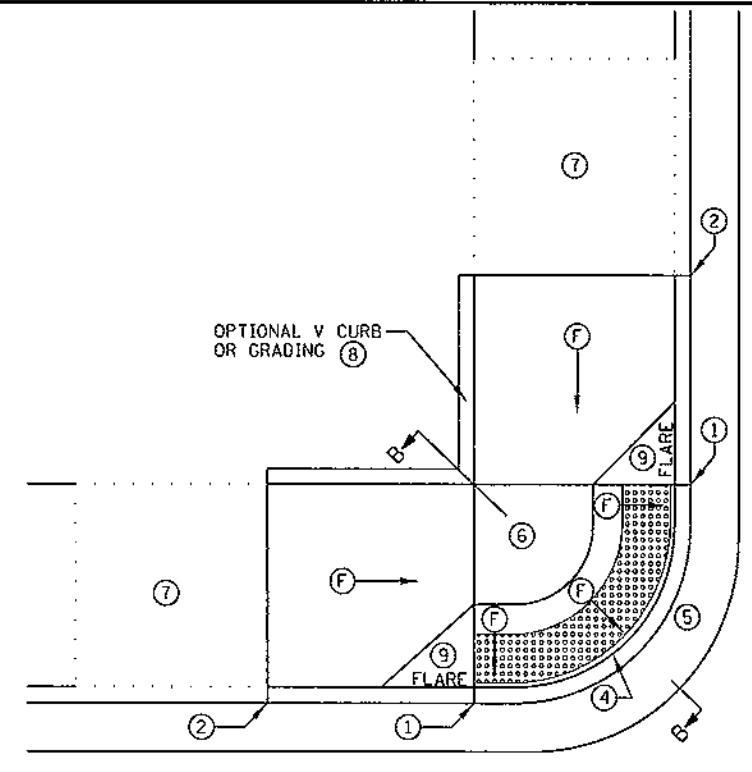
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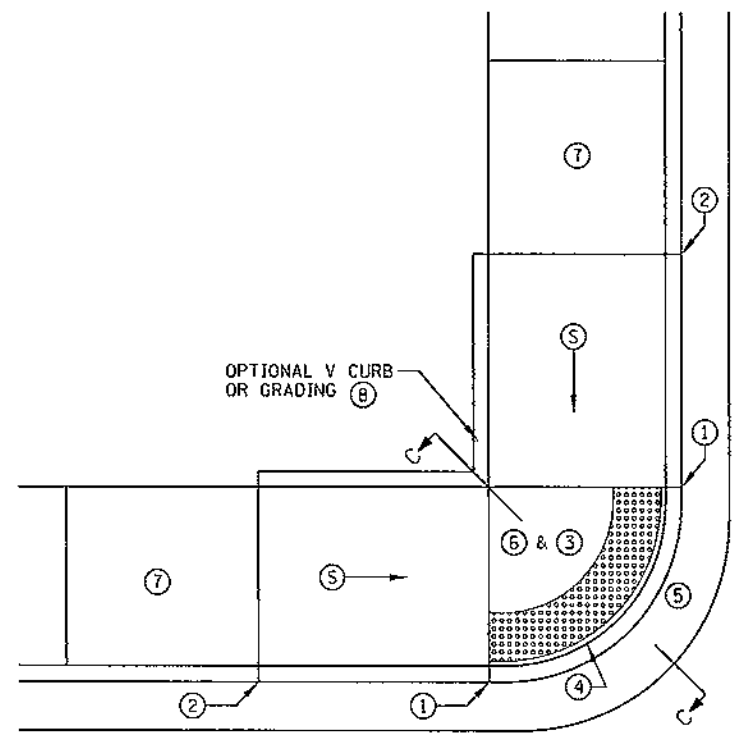
SECTION A-A  
PERPENDICULAR/TIERED/DIAGONAL



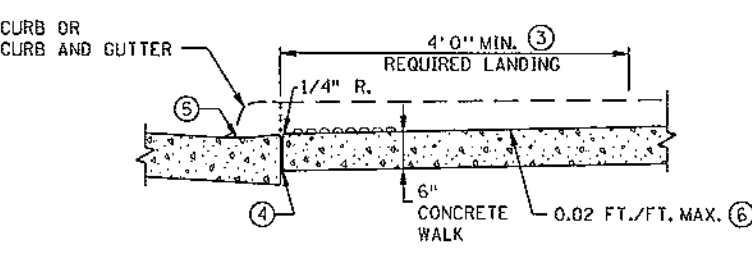
SECTION B-B  
FAN



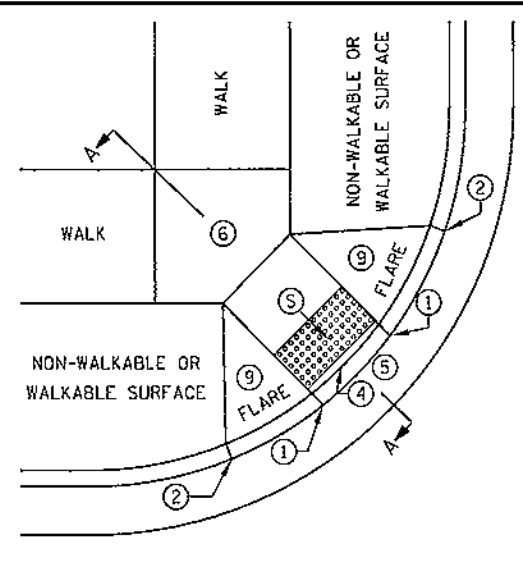
FAN



DEPRESSED CORNER



SECTION C-C  
PARALLEL/DEPRESSED CORNER



DIAGONAL 10

**NOTES:**  
 LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.  
 INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.  
 SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.  
 CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.  
 ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.  
 TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.  
 ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.  
 TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.  
 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.  
 SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

- 1 0" CURB HEIGHT.
- 2 FULL CURB HEIGHT.
- 3 DETECTABLE WARNINGS MAY BE PART OF 4' X 4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
- 4 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
- 5 SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
- 6 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
- 7 IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
- 8 V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.
- 9 SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- 10 DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

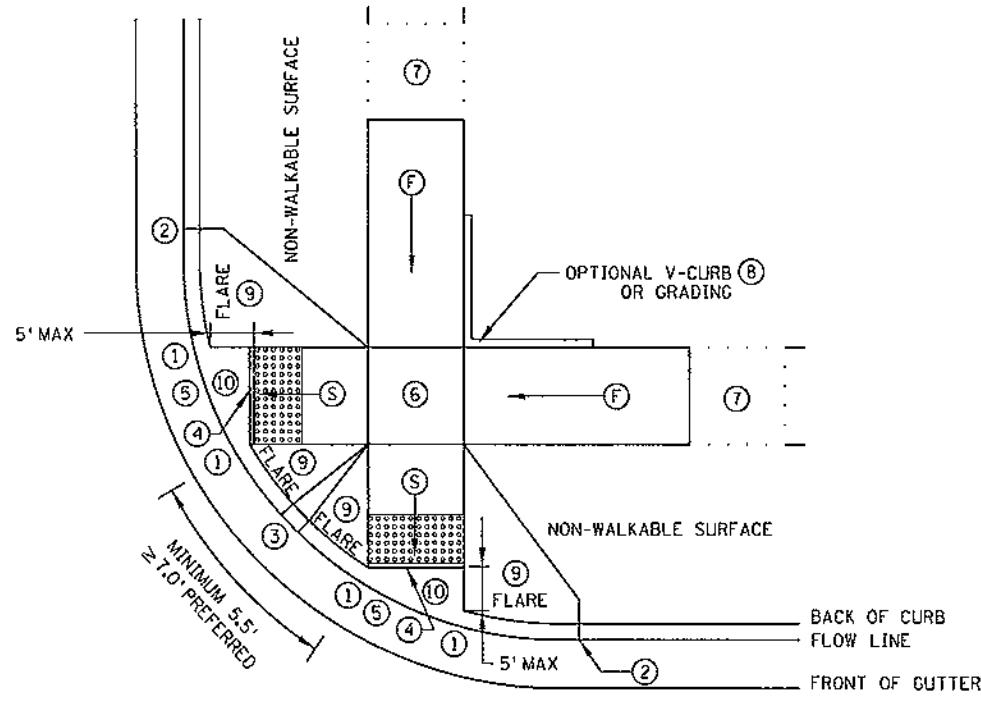
LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
S	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%
F	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

STANDARD PLAN SHEET NO.  
5-297.250 (1 OF 5)  
STANDARD APPROVED:  
APRIL 10, 2013  
S.P. 002-596-020 C.P. 12-26  
S.P. 114-130-007

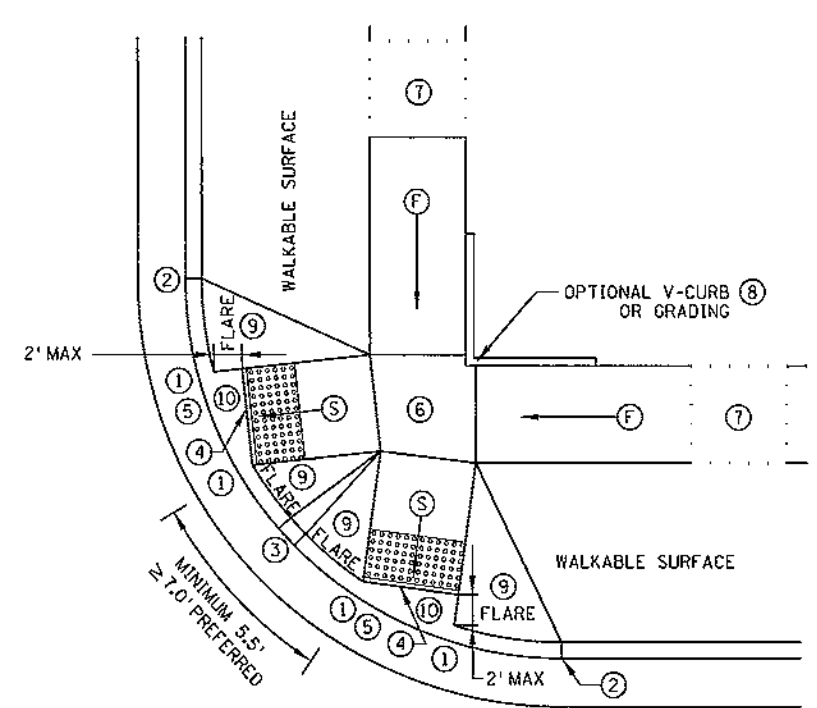
PEDESTRIAN CURB RAMP DETAILS

PLOTTED/REVISED:  
03/05/2014

DISTRICT #: USER NAME: dffrey  
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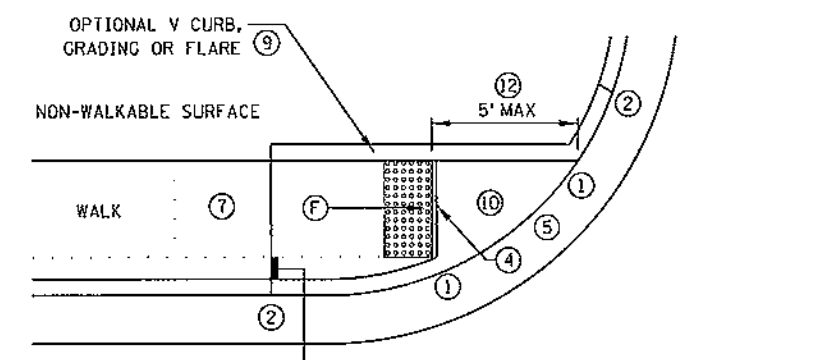


ADJACENT TO NON-WALKABLE SURFACE



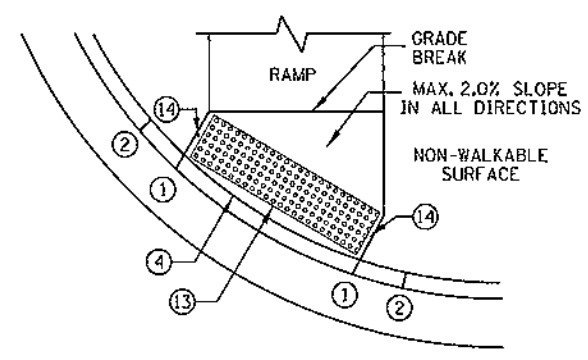
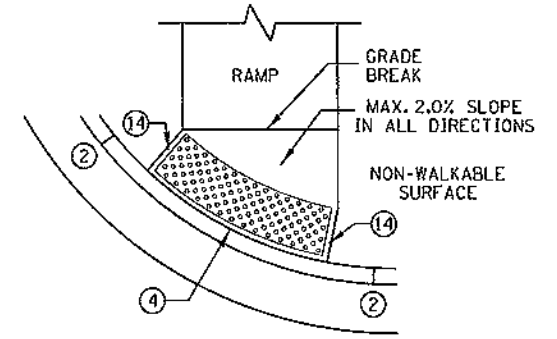
ADJACENT TO WALKABLE SURFACE

COMBINED DIRECTIONAL 15

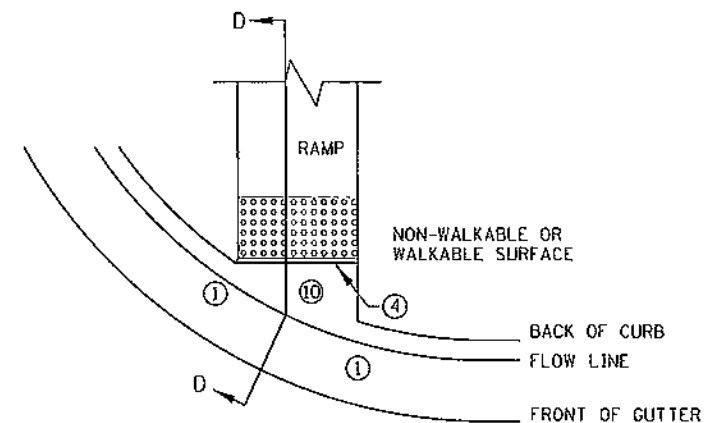


ONE-WAY DIRECTIONAL

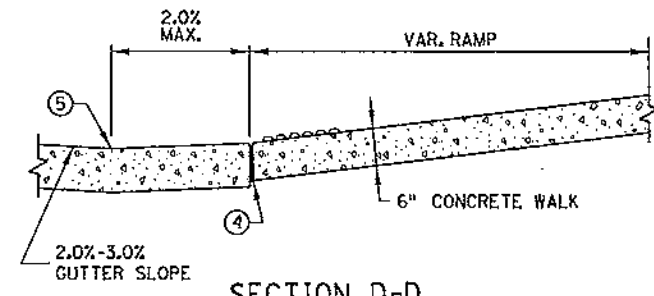
IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED



CURB FOR DIRECTIONAL RAMPS 11



SECTION D-D

NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.
- TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.
- ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.
- SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
- 1 0" CURB HEIGHT.
- 2 FULL CURB HEIGHT.
- 3 3" MINIMUM CURB HEIGHT, 4" PREFERRED.
- 4 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MIN. TO 6" MAX. FROM THE BACK OF CURB.
- 5 SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
- 6 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
- 7 IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
- 8 V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- 9 SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- 10 MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- 11 TO BE USED FOR ALL DIRECTIONAL RAMPS.
- 12 PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- 13 RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
- 14 WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- 15 FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

S INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%

F INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

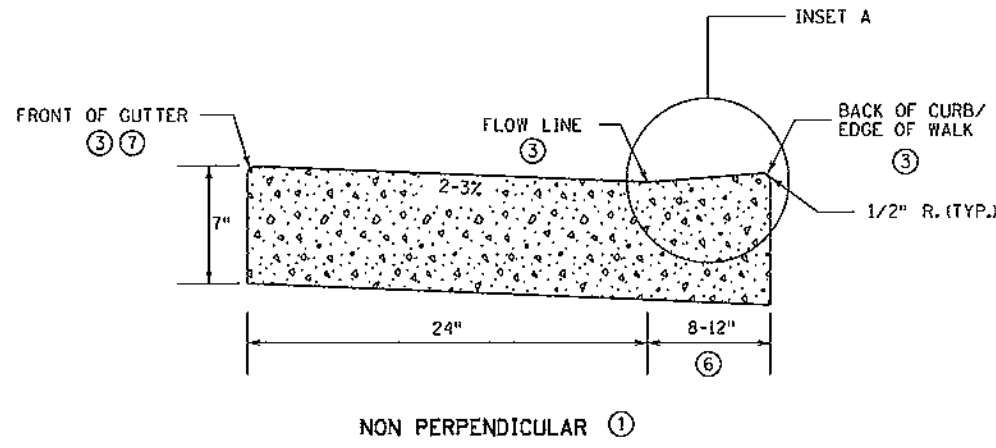
STANDARD PLAN SHEET NO.  
5-297.250 (2 OF 5)  
STANDARD APPROVED:  
APRIL 10, 2013  
S.P. 002-596-020 C.P. 12-26  
S.P. 114-130-007

PEDESTRIAN CURB RAMP DETAILS

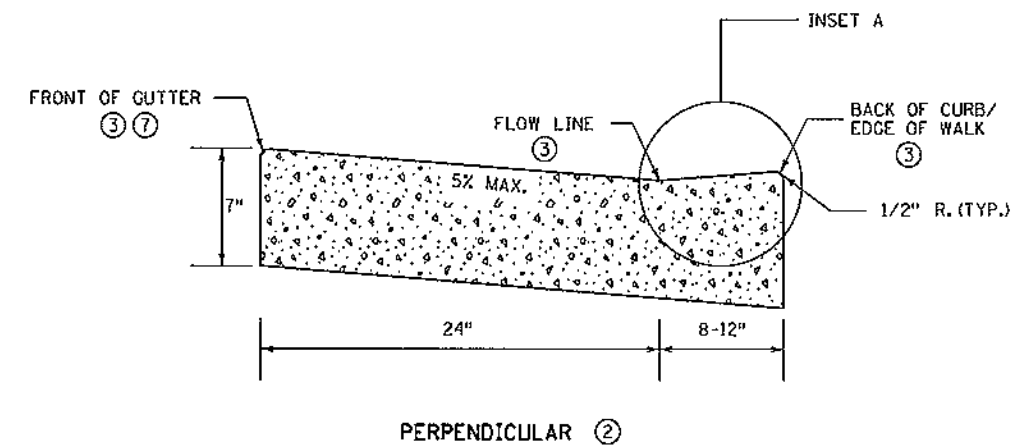
PLOTTED/REVISED:  
03/05/2014

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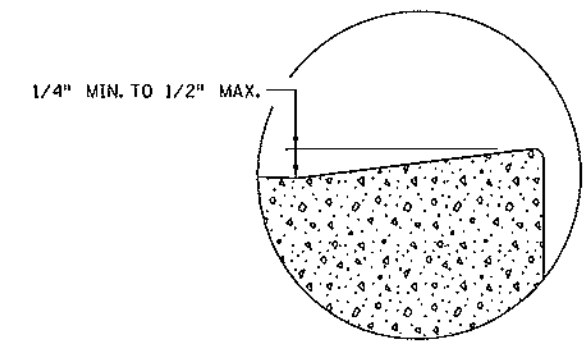
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s250\_3\_spn.dgn



NON PERPENDICULAR ①

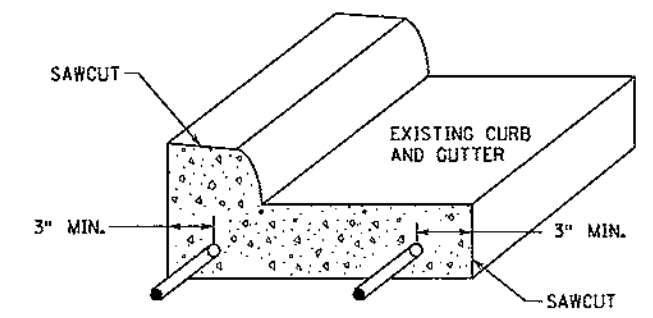
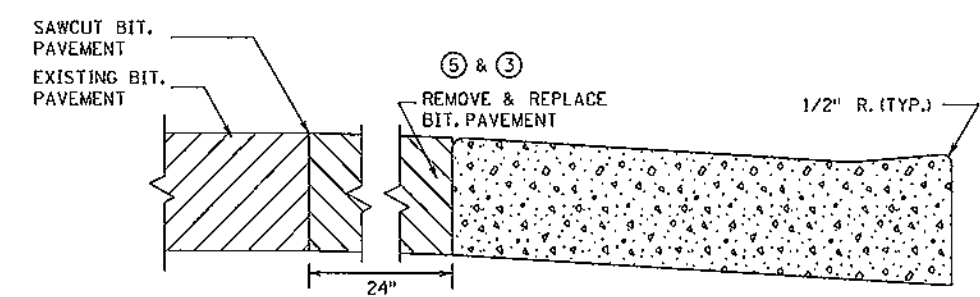
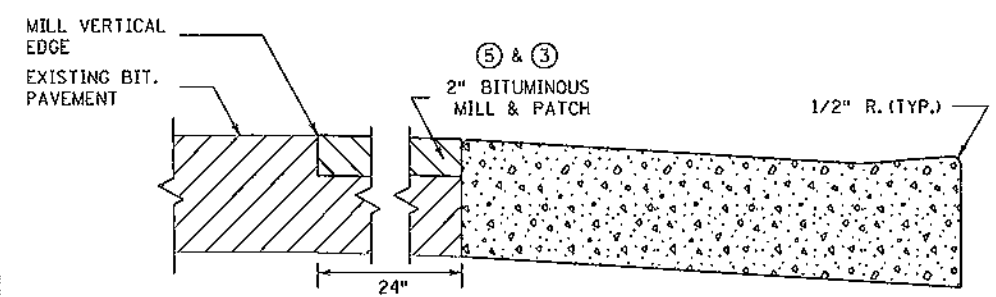


PERPENDICULAR ②

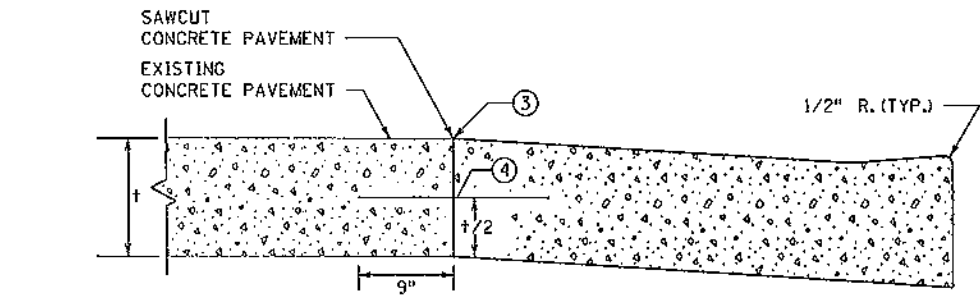
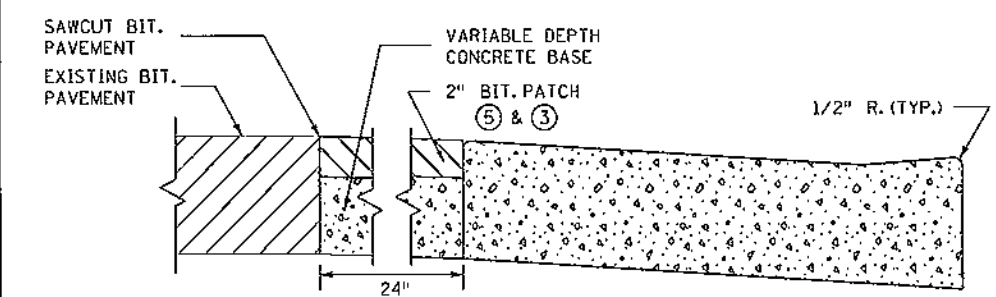


INSET A

PEDESTRIAN ACCESS ROUTE  
CURB & GUTTER DETAIL



CURB AND GUTTER ⑧  
REINFORCEMENT  
FOR USE ON CURB RAMP RETROFITS



PAVEMENT TREATMENT OPTIONS  
IN FRONT OF CURB & GUTTER  
FOR USE ON CURB RAMP RETROFITS

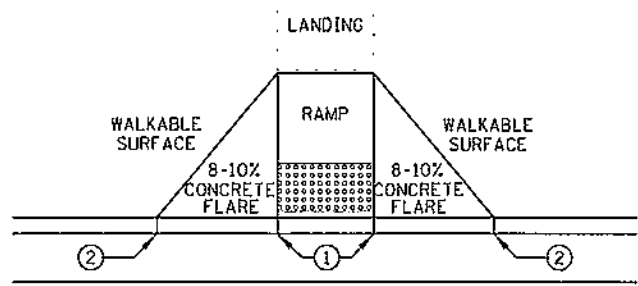
NOTES:

- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.
- NO PONDING SHALL BE PRESENT IN THE PAR.
- ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
- ① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND COMBINED DIRECTIONALS.
- ② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.
- ③ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".
- ④ DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.
- ⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
- ⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS.
- ⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. PAR GUTTER SHALL NOT BE OVERLAID.
- ⑧ WHERE PLAN SPECIFIES, DRILL AND GROUT 2 - NO. 4 X 12" LONG REINFORCEMENT BARS (EPOXY COATED).

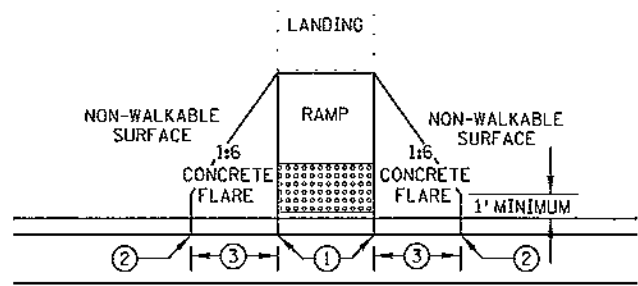
STANDARD PLAN SHEET NO. 5-297.250 (3 OF 5)
STANDARD APPROVED: APRIL 10, 2013
S.P. 002-596-020 C.P. 12-26 S.P. 114-130-007

PEDESTRIAN CURB RAMP DETAILS

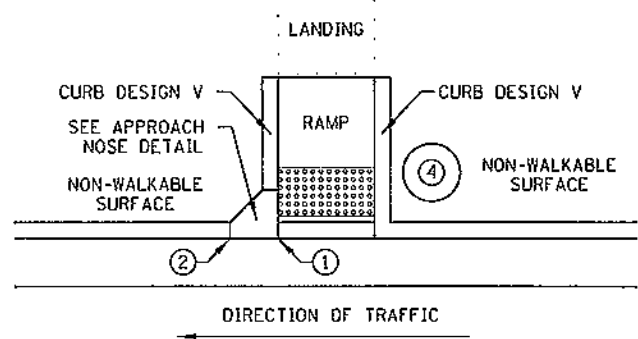
PLOTTED/REVISED:  
03/05/2014



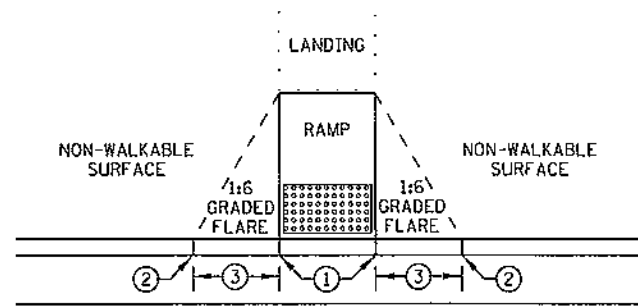
PAVED FLARES  
ADJACENT TO WALKABLE SURFACE



PAVED FLARES  
ADJACENT TO NON-WALKABLE SURFACE

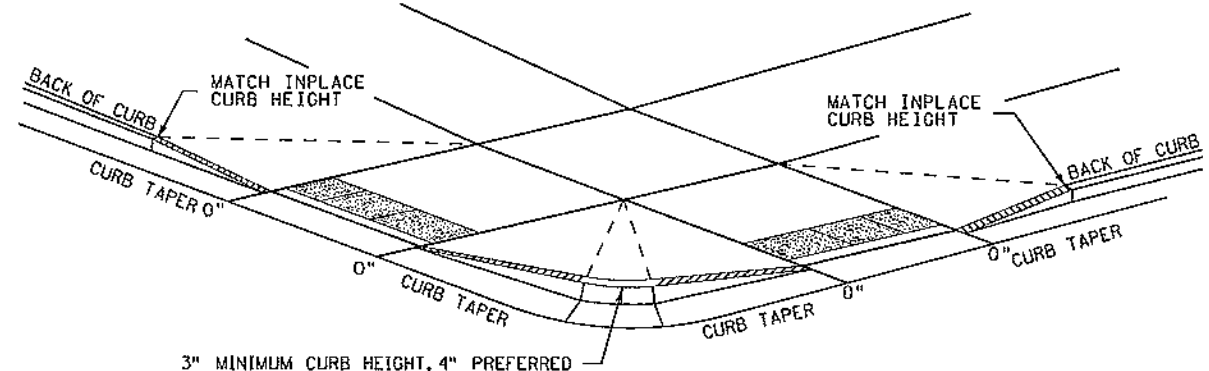


RETURNED CURB



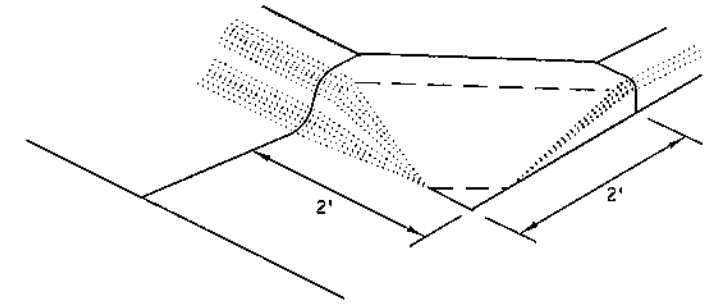
GRADED FLARES

TYPICAL SIDE TREATMENT OPTIONS ⑤



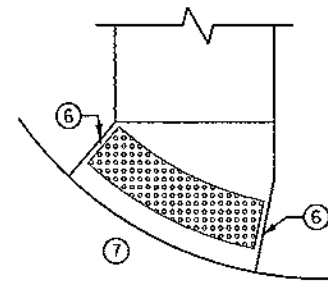
3" MINIMUM CURB HEIGHT, 4" PREFERRED  
(MEASURED AT FRONT FACE OF CURB)  
FOR A MIN. 6" LENGTH  
(MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH  
CURB AND GUTTER ⑧

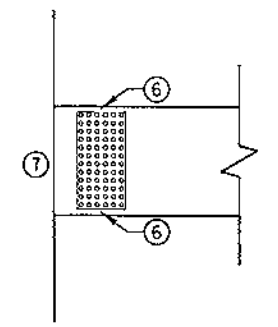


SECTION A-A

APPROACH NOSE DETAIL  
FOR DOWNSTREAM SIDE OF TRAFFIC



RADIAL DETECTABLE WARNING



RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

NOTES:

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER. CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 2' - 3' FLARE.
- ④ IMMOVABLE OBJECT OR OBSTRUCTION.
- ⑤ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED ON ALL RAMPS AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
- ⑥ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑦ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE VISUAL CONTRAST.
- ⑧ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

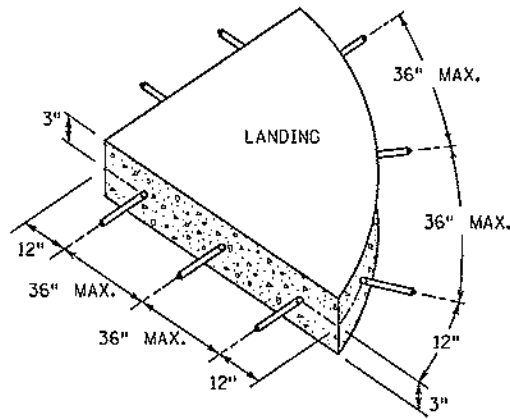
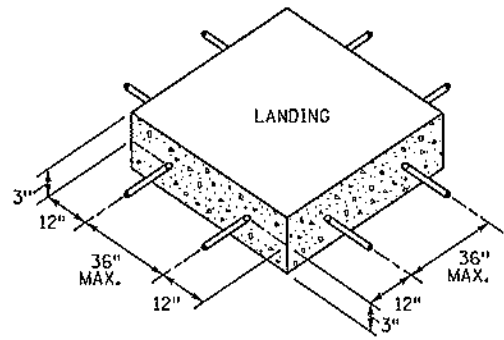
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STANDARD PLAN SHEET NO. 5-297.250 (4 OF 5)
STANDARD APPROVED: APRIL 10, 2013
S.P. 002-596-020 C.P. 12-26 S.P. 114-130-007

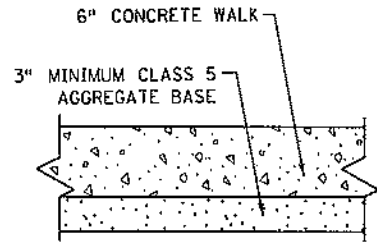
PEDESTRIAN CURB RAMP DETAILS



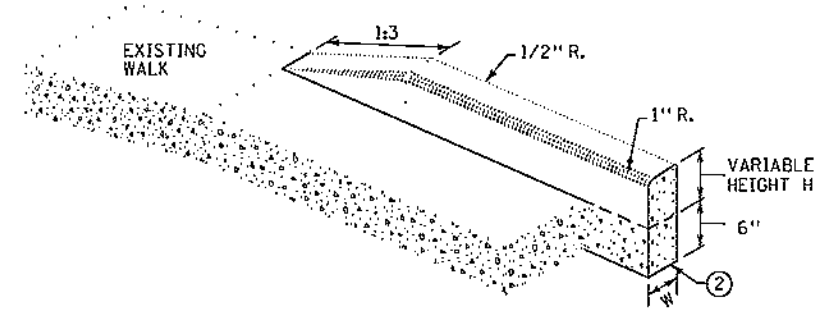
PLOTTED/REVISED:  
03/05/2014



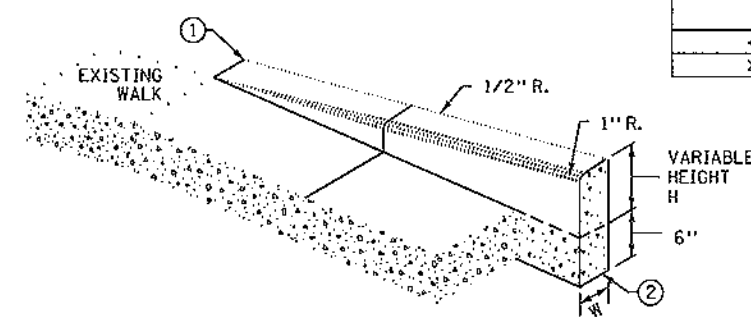
SIDEWALK REINFORCEMENT ⑤ ⑥



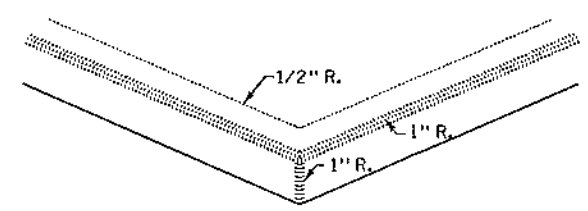
TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER



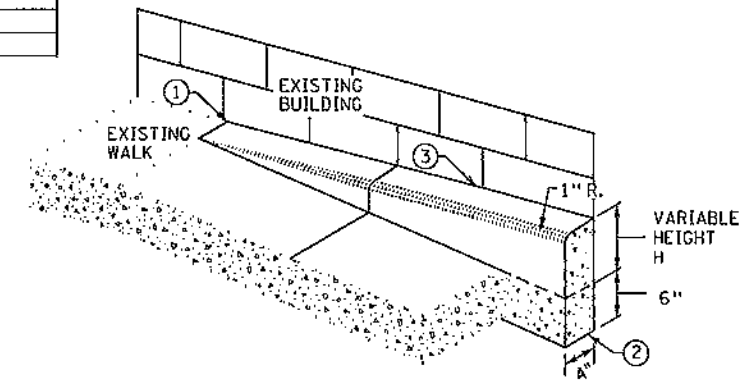
V CURB ADJACENT TO LANDSCAPE  
CURB WITHIN SIDEWALK LIMITS



V CURB ADJACENT TO LANDSCAPE  
CURB OUTSIDE SIDEWALK LIMITS

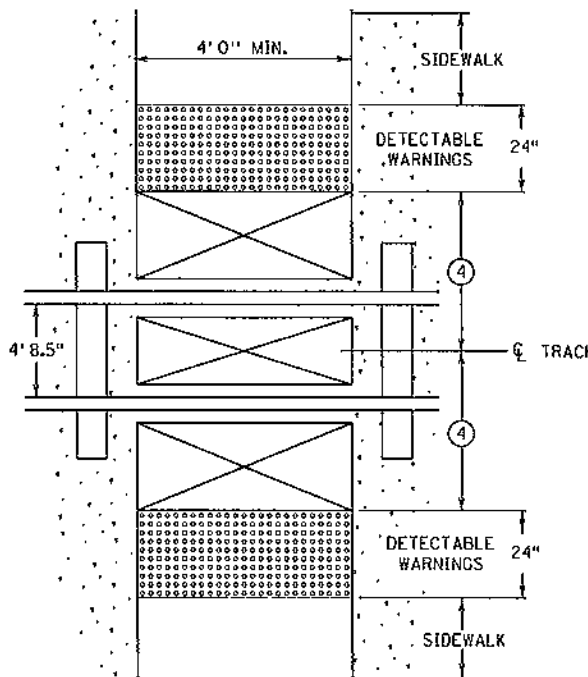


V CURB INTERSECTION

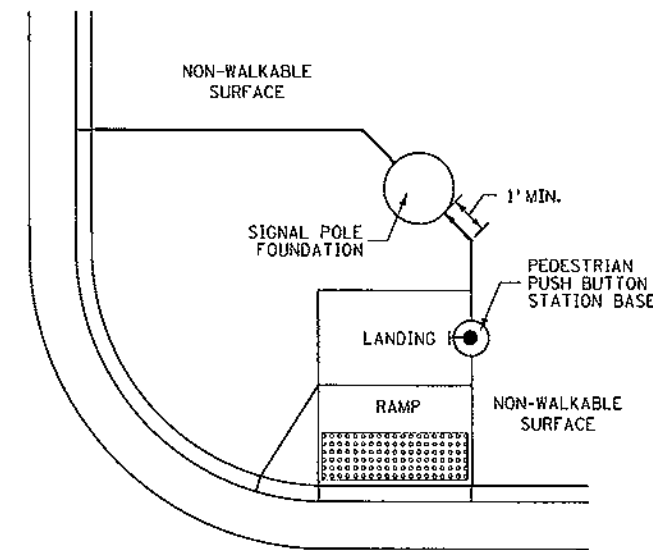


V CURB ADJACENT TO BUILDING  
OR BARRIER

CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



RAILROAD CROSSING  
PLAN VIEW



CONCRETE WALK EDGES ADJACENT  
TO CONCRETE STRUCTURES

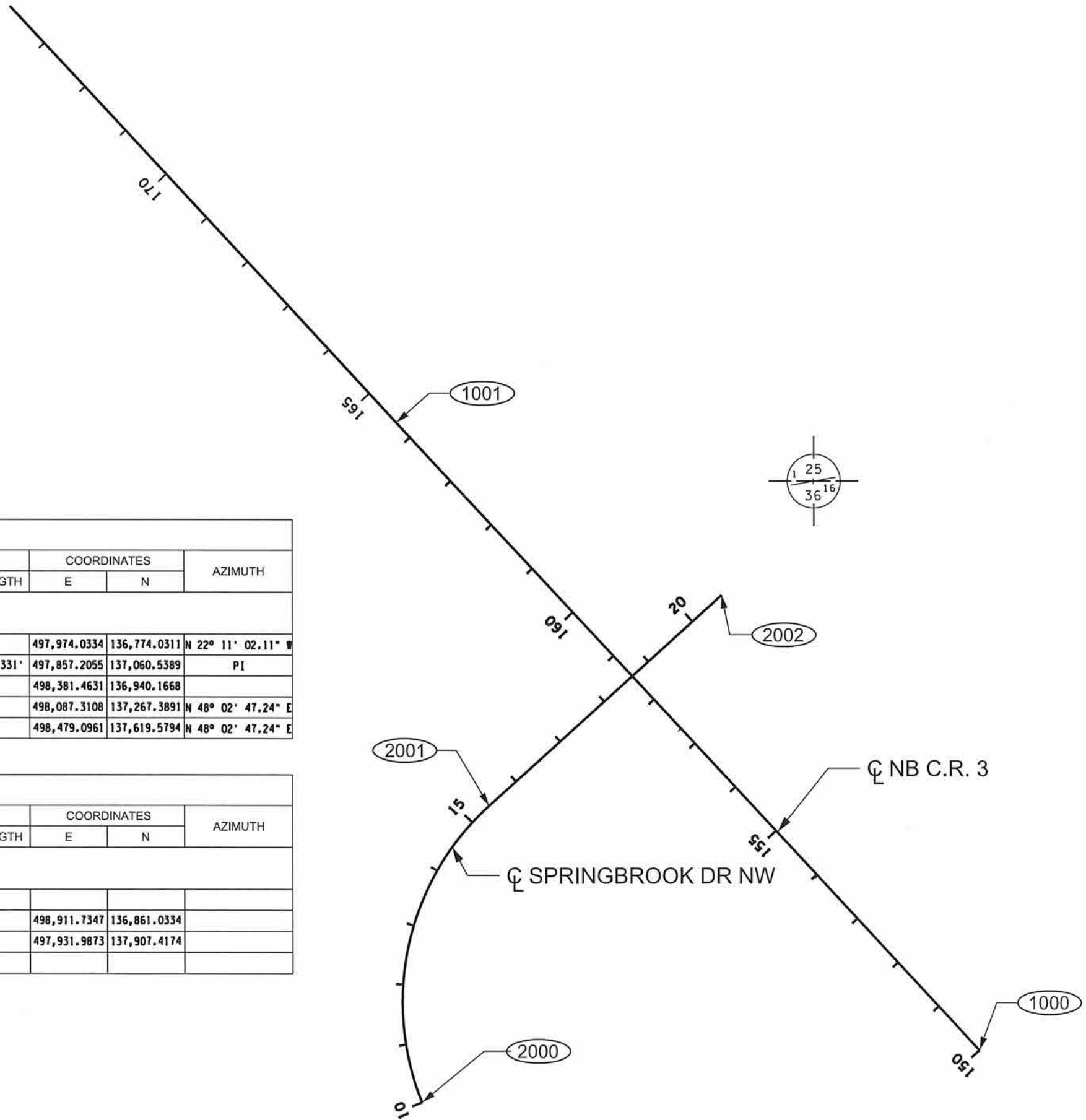
NOTES:

- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- ① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- ③ EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.
- ④ EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 15' MAXIMUM FROM THE CENTERLINE OF THE TRACK. WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 17" - 19" FROM THE APPROACHING SIDE OF THE GATE ARM.
- ⑤ WHEN PLAN SPECIFIES, DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS AT 36" MAX. CENTER TO CENTER (EPOXY COATED).
- ⑥ TO ENSURE RAMP AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET WHEN LANDINGS ARE CAST SEPARATELY.

DISTRICT #:   
USER NAME: dffrey  
PATH & FILENAME: P:\02-596-20\Plan\Standard\_Plans\250\_5\_spn.dgn  
FILE NAME: s250\_5\_spn.dgn

STANDARD PLAN SHEET NO.  
5-297.250 (5 OF 5)  
STANDARD APPROVED  
APRIL 10, 2013  
S.P. 002-596-020 C.P. 12-26  
S.P. 114-130-007

PEDESTRIAN CURB RAMP DETAILS



ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N		
☐ SPRINGBROOK <P_SP_6>											
2000	PC	☐ SPRINGBROOK	10+00.000					497,974.0334	136,774.0311	N 22° 11' 02.11" W	
EX_SP_6-1	PI		13+09.411	70° 13' 49.35" RT	13° 01' 18.37"	440.000'	309.411'	539.331'	497,857.2055	137,060.5389	PI
	CC							498,381.4631	136,940.1668		
2001	PT		15+39.331					498,087.3108	137,267.3891	N 48° 02' 47.24" E	
2002	PC		20+66.145					498,479.0961	137,619.5794	N 48° 02' 47.24" E	

ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
☐ C.R. 3 <P_03_6>										
		☐ C.S.A.H. 14								
1000	POT		150+00.000					498,911.7347	136,861.0334	
1001	POT		164+33.466					497,931.9873	137,907.4174	

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_AL.dgn 03/05/2014 1:44:00 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14

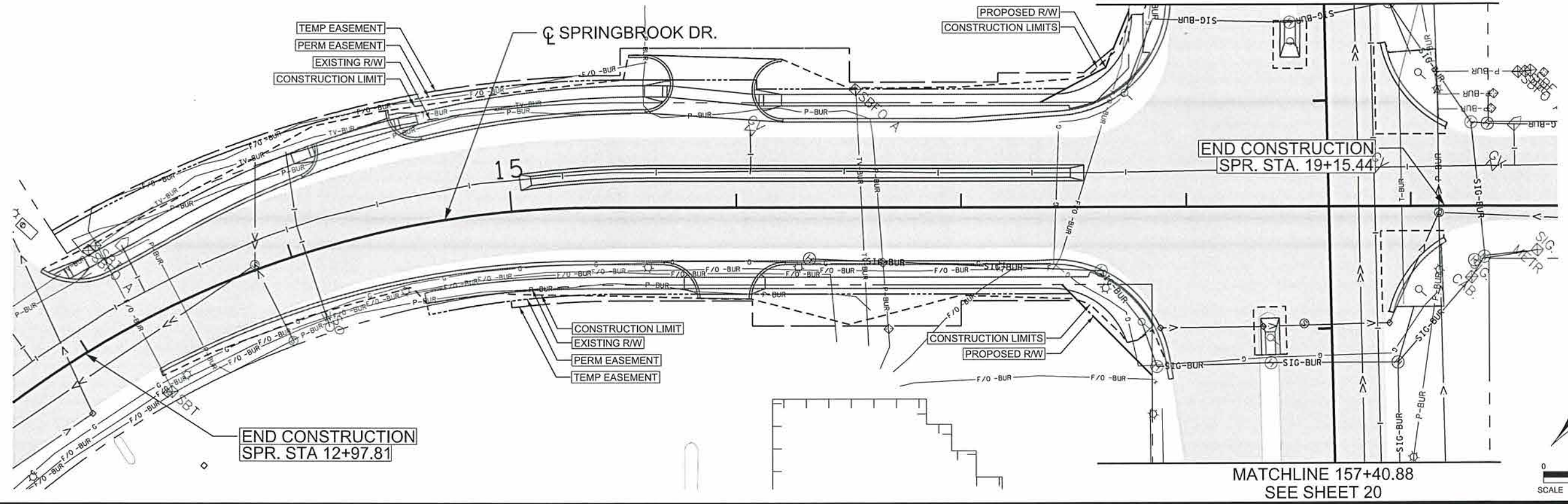
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

ALIGNMENT PLAN

Sheet 18 of 91 Sheets

SEE SHEET 19  
MATCHLINE 159+42.48

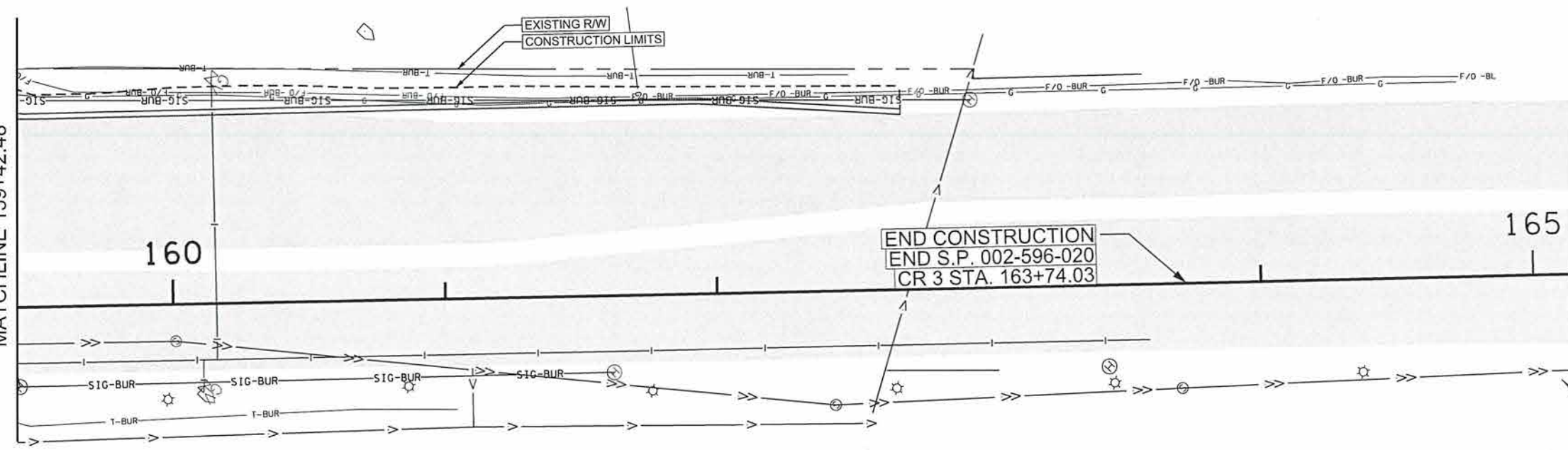


MATCHLINE 157+40.88  
SEE SHEET 20

LEGEND

- G — CENTERPOINT ENERGY
- TV-BUR — COMCAST CABLE COMMUNICATIONS
- P-BUR — XCEL ENERGY/ CONNEXUS ENERGY
- T-BUR — CENTURYLINK
- F/O-BUR — ZAYO GROUP
- SIG-BUR — TRAFFIC SIGNAL
- - - - - EX. STORM SEWER
- - - - - EX. SAN SEWER
- - - - - EX. WATER MAIN
- - - - - EXISTING R/W
- — — — — PROPOSED R/W
- — — — — PROPOSED GEOMETRICS
- █ EXISTING ROADWAY

SEE SHEET 19  
MATCHLINE 159+42.48

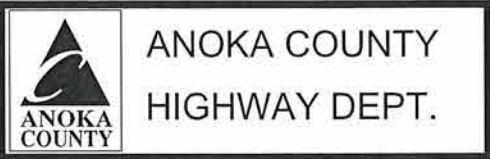


SCALE IN FEET

1	03/31/14	DFP	GMP	CAK	BEGIN/END PROJECT TO BEGIN/END CONST. PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_UTIL1.dgn					04/03/2014 11:08:41 AM

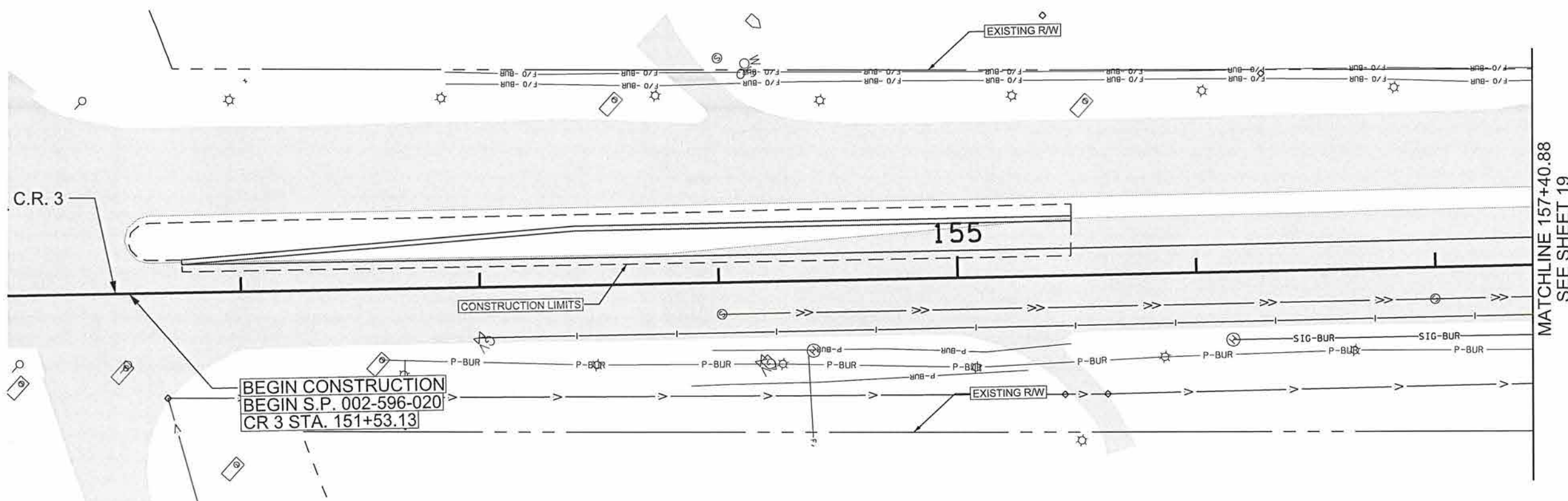
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY DFF DATE 02-13-14  
 DESIGN BY DFF DATE 02-13-14  
 CHECKED BY GMP DATE 02-18-14



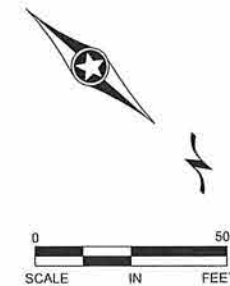
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 S.P. 114-130-007  
 C.P. 12-26

EXISTING UTILITY PLAN  
 SPRINGBROOK DRIVE/  
 COON RAPIDS BLVD  
 Sheet 19 of 91 Sheets



**LEGEND**

- G — CENTERPOINT ENERGY
- TV-BUR — COMCAST CABLE COMMUNICATIONS
- P-BUR — XCEL ENERGY/ CONNEXUS ENERGY
- T-BUR — CENTURYLINK
- F/O-BUR — ZAYO GROUP
- SIG-BUR — TRAFFIC SIGNAL
- - - - - EX. STORM SEWER
- - - - - EX. SAN SEWER
- | — EX. WATER MAIN
- - - - - EXISTING R/W
- · · · — PROPOSED R/W
- · · · — PROPOSED GEOMETRICS
- EXISTING ROADWAY



1	03/31/14	DFP	GMP	CAK	BEGIN/END PROJECT TO BEGIN/END CONST. PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_UTIL2.dgn 04/03/2014 11:08:42 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14
















**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

EXISTING UTILITY PLAN  
 COON RAPIDS BLVD  
 Sheet 20 of 91 Sheets

LEGEND

-  REMOVE BITUMINOUS PAVEMENT
-  REMOVE CONCRETE WALK
-  REMOVE VEGETATED MEDIAN
-  RECLAIM AND OVERLAY BITUMINOUS PAVEMENT
-  REMOVE CURB AND GUTTER
-  SAWING BITUMINOUS PAVEMENT
-  CONSTRUCTION LIMIT
-  EXISTING RIGHT OF WAY
-  TEMPORARY EASEMENT
-  PERMANENT EASEMENT
-  PROPOSED RIGHT OF WAY
-  PROPOSED GEOMETRY
-  TREE REMOVAL BY EACH

REMOVAL NOTES

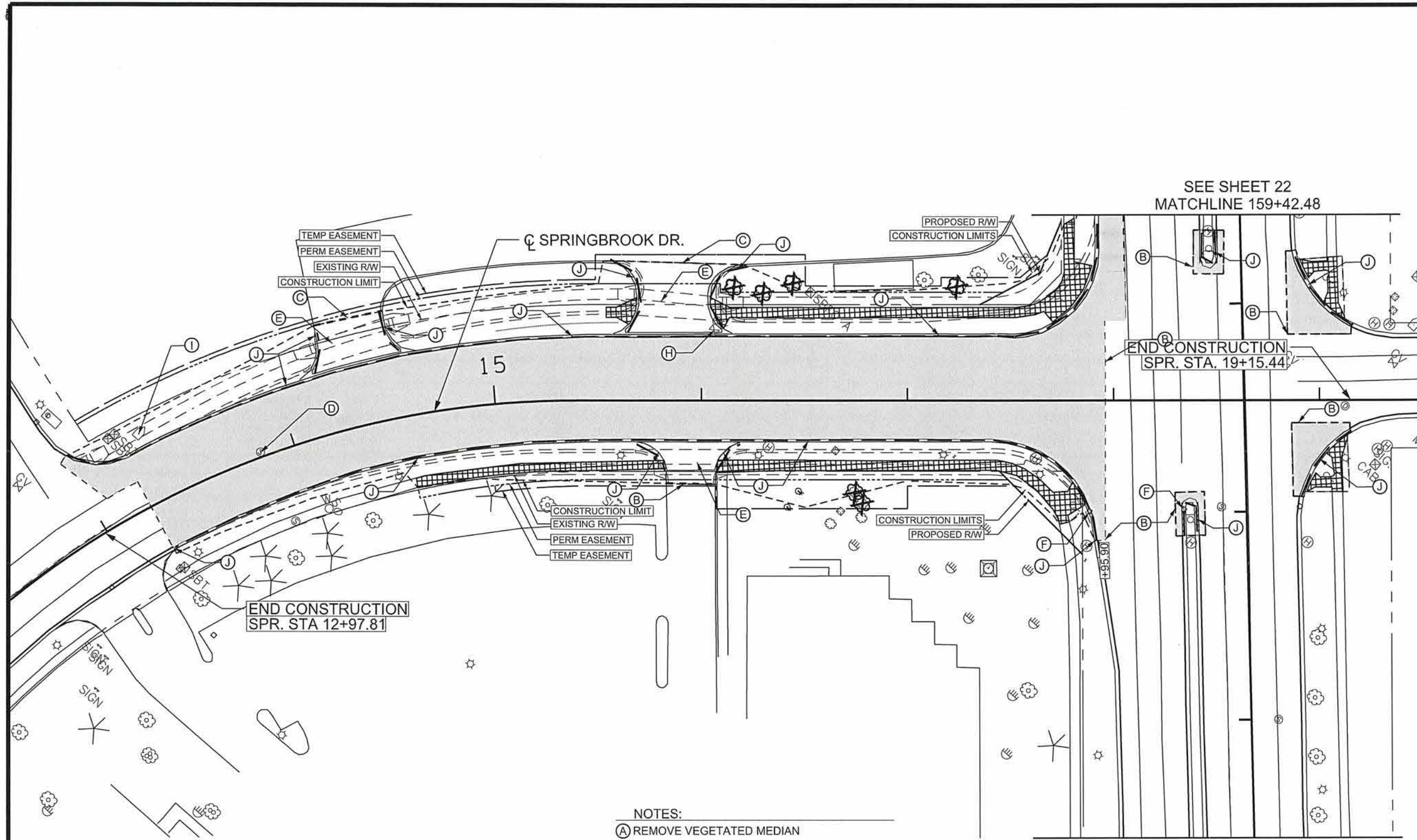
REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED AND MARKED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

ALL PRIVATE UTILITIES TO BE RELOCATED BY OTHERS AS REQUIRED. SEE IN PLACE UTILITY TABULATION FOR MORE INFORMATION.

ALL ROADWAY SIGNS WITHIN THE CONSTRUCTION LIMITS AND CONFLICTING SIGNS SHALL BE SALVAGED BY THE CONTRACTOR.

REMOVE VEGETATED MEDIAN WILL BE PAID FOR AS COMMON EXCAVATION.



- NOTES:
- (A) REMOVE VEGETATED MEDIAN
  - (B) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
  - (C) SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
  - (D) ADJUST DRAINAGE STRUCTURE
  - (E) REMOVE CONCRETE DRIVEWAY
  - (F) REMOVE & REPLACE CASTING
  - (H) ADJUST GATE VALVE
  - (I) RELOCATE HYDRANT
  - (J) REMOVE CURB & GUTTER

1	03/31/14	DFP	GMP	CAK	BEGIN/END PROJECT TO BEGIN/END CONST. PER MNDOT COMMENTS
NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_REM1.dgn 04/03/2014 10:55:19 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: CURT KOBILARCSIK

SIGNATURE: *Curt Kobilarcsik*


DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14

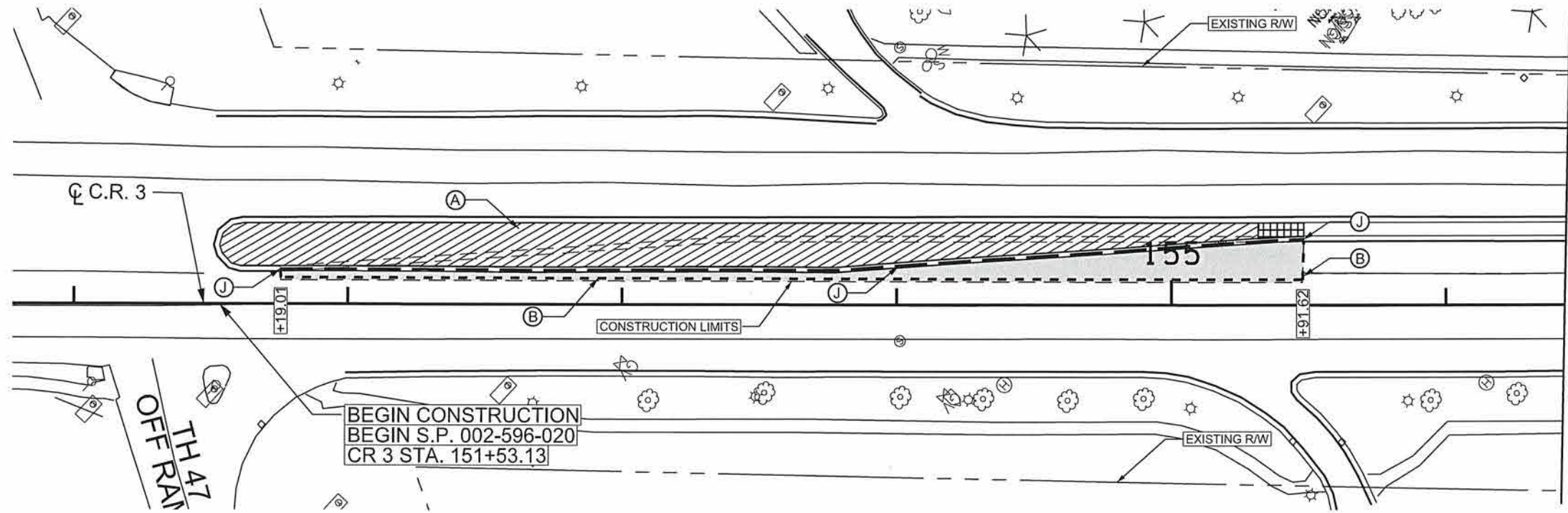
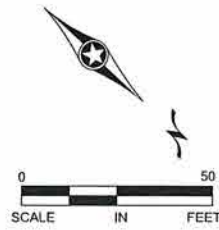
DESIGN BY: DFF DATE: 02-13-14

CHECKED BY: GMP DATE: 02-18-14

**ANOKA COUNTY**  
HIGHWAY DEPT.

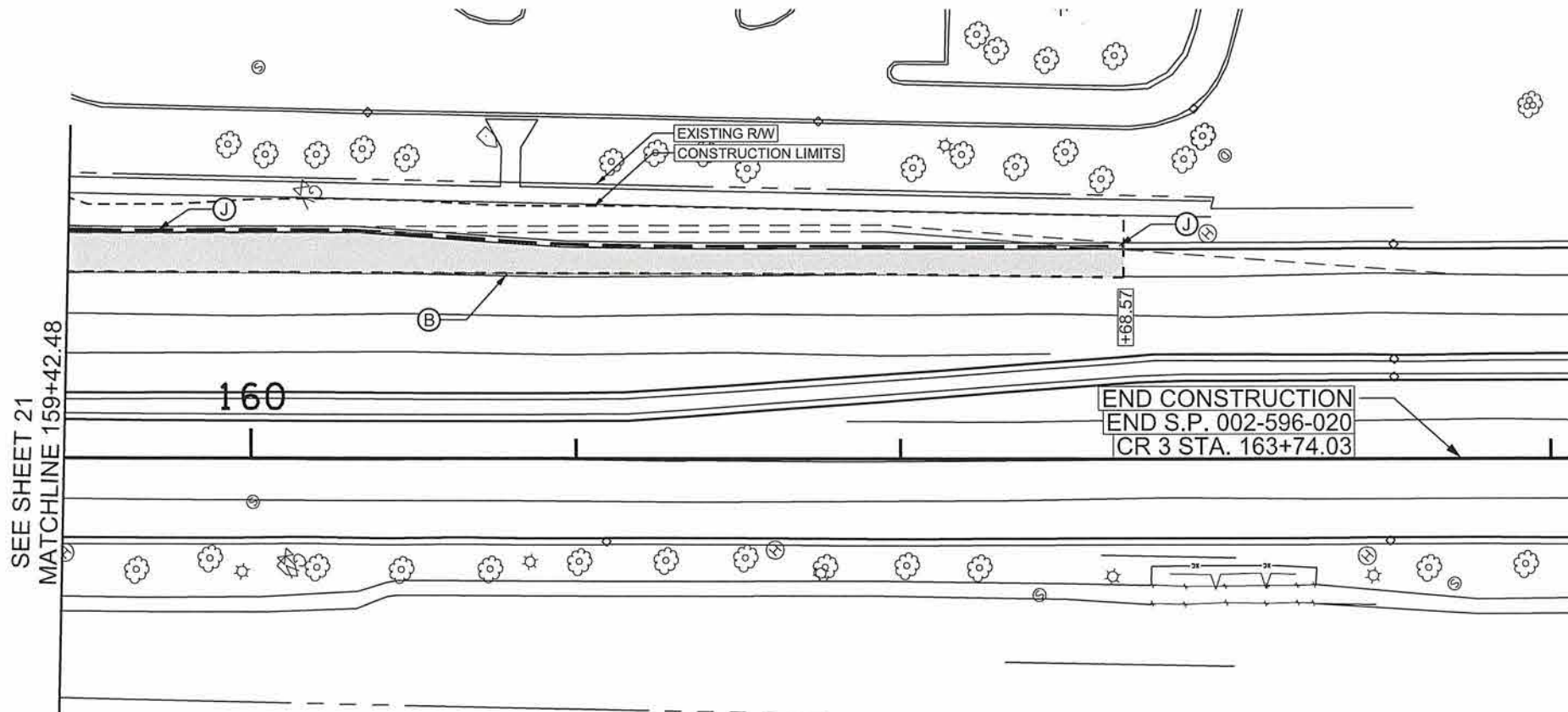
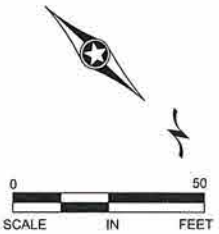


S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26



MATCHLINE 156+43.35  
SEE SHEET 21

LEGEND	
	REMOVE BITUMINOUS PAVEMENT
	REMOVE CONC. MEDIAN
	REMOVE VEGETATED MEDIAN
	RECLAIM AND OVERLAY BITUMINOUS PAVEMENT
	REMOVE CURB AND GUTTER
	SAWING BITUMINOUS PAVEMENT
	CONSTRUCTION LIMIT
	EXISTING RIGHT OF WAY
	TEMPORARY EASEMENT
	PERMANENT EASEMENT
	PROPOSED RIGHT OF WAY
	PROPOSED GEOMETRY
	TREE REMOVAL BY EACH



SEE SHEET 21  
MATCHLINE 159+42.48

**REMOVAL NOTES**

REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED AND MARKED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

ALL PRIVATE UTILITIES TO BE RELOCATED BY OTHERS AS REQUIRED. SEE IN PLACE UTILITY TABULATION FOR MORE INFORMATION.

ALL ROADWAY SIGNS WITHIN THE CONSTRUCTION LIMITS AND CONFLICTING SIGNS SHALL BE SALVAGED BY THE CONTRACTOR.

REMOVE VEGETATED MEDIAN WILL BE PAID FOR AS COMMON EXCAVATION.

- NOTES:**
- (A) REMOVE VEGETATED MEDIAN
  - (B) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
  - (J) REMOVE CURB & GUTTER

NO	DATE	BY	CHKD	APPR	REVISION
1	03/31/14	DFP	GMP	CAK	BEGIN/END PROJECT TO BEGIN/END CONST. PER MNDOT COMMENTS
NAME: P:\02-596-20\Plan\0259620_REM2.dgn 04/03/2014 10:55:20 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: CURT KOBIARCSIK

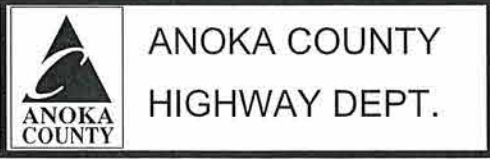
SIGNATURE: *Curt Kobilarcsik*

DATE: 4-3-14 LICENSE NO. 24756

DRAWN BY: DFP DATE: 02-13-14

DESIGN BY: DFP DATE: 02-13-14

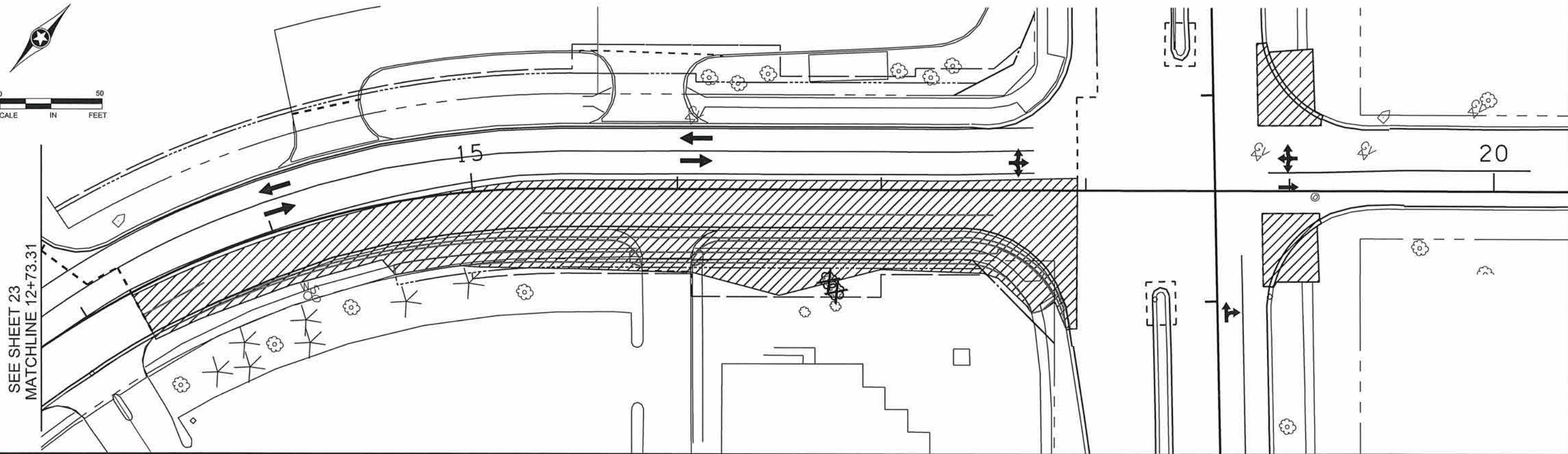
CHECKED BY: GMP DATE: 02-18-14



S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

REMOVAL PLAN  
CR 3 (COON RAPIDS BLVD)

Sheet 22 of 91 Sheets



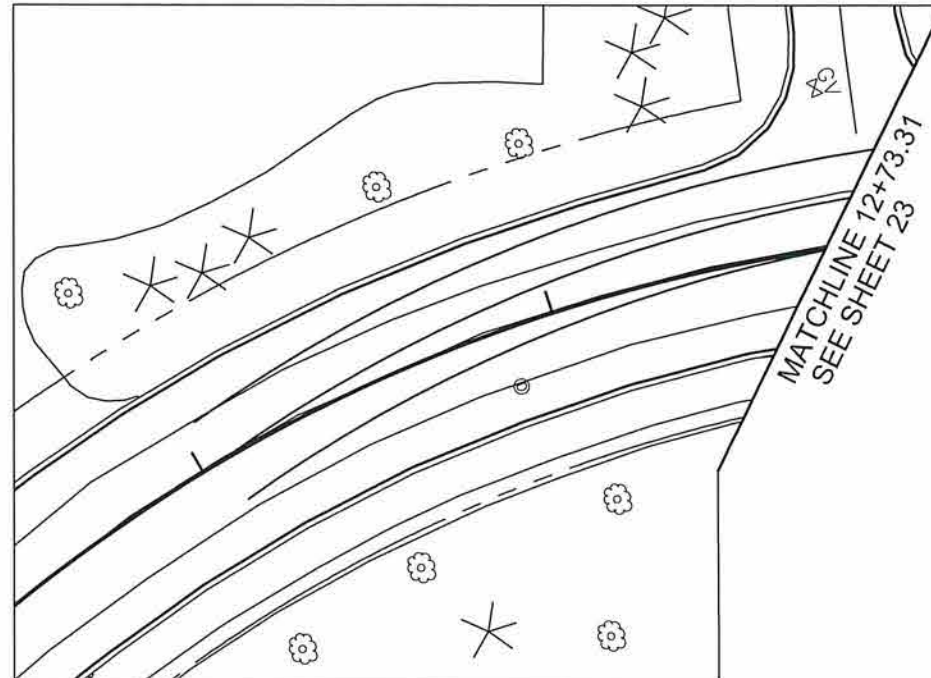
SEE SHEET 23  
MATCHLINE 12+73.31

**STAGE 1 CONSTRUCTION NOTES:**

SHIFT ALL TRAFFIC ON SPRINGBROOK DRIVE TO WEST SIDE AND CONSTRUCT EAST SIDE.

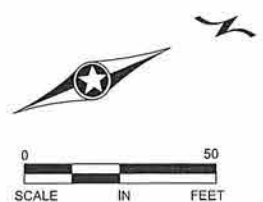
RECONSTRUCT PEDESTRIAN RAMPS ON THE NORTHEAST AND NORTHWEST QUADRANTS OF THE INTERSECTION.

MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.



MATCHLINE 12+73.31  
SEE SHEET 23

LEGEND	
	EXISTING TOPOGRAPHY
	TO BE CONSTRUCTED THIS STAGE
	TRAFFIC DIRECTION
	CONSTRUCTION AREA

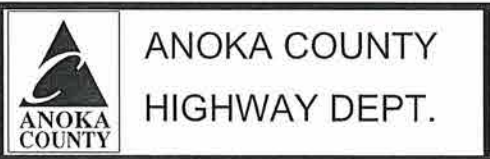


NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_STG1\_P1.dgn      03/05/2014      1:44:11 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-10-14      LICENSE NO. 24756

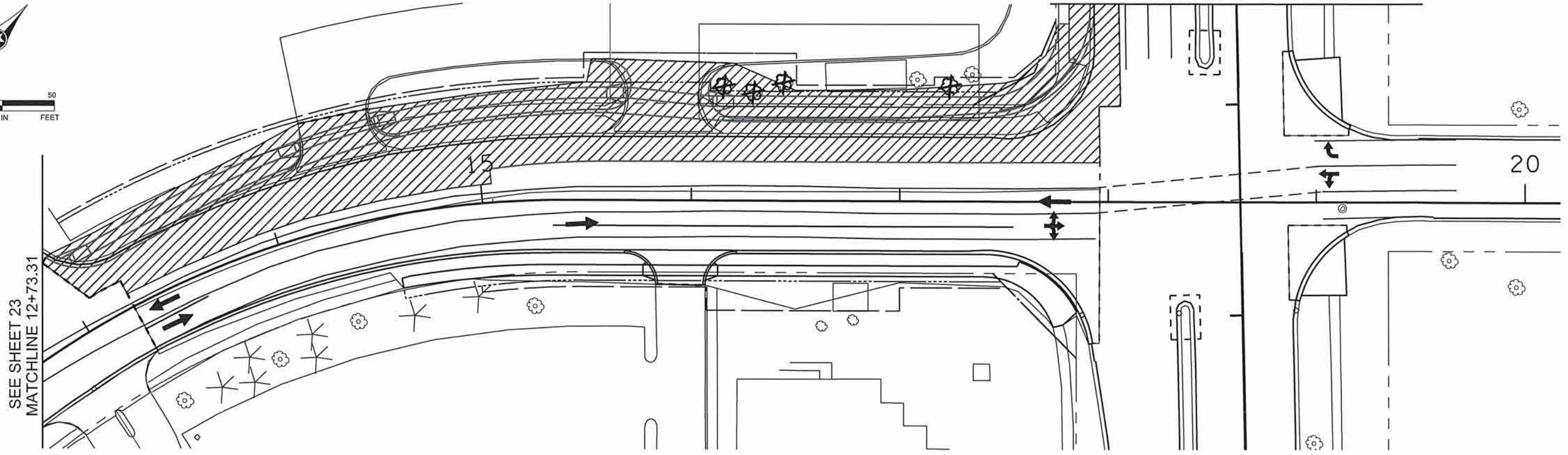
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 DESIGN BY: DFF      DATE: 02-13-14  
 CHECKED BY: GMP      DATE: 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26



SEE SHEET 25  
MATCHLINE 159+47.66



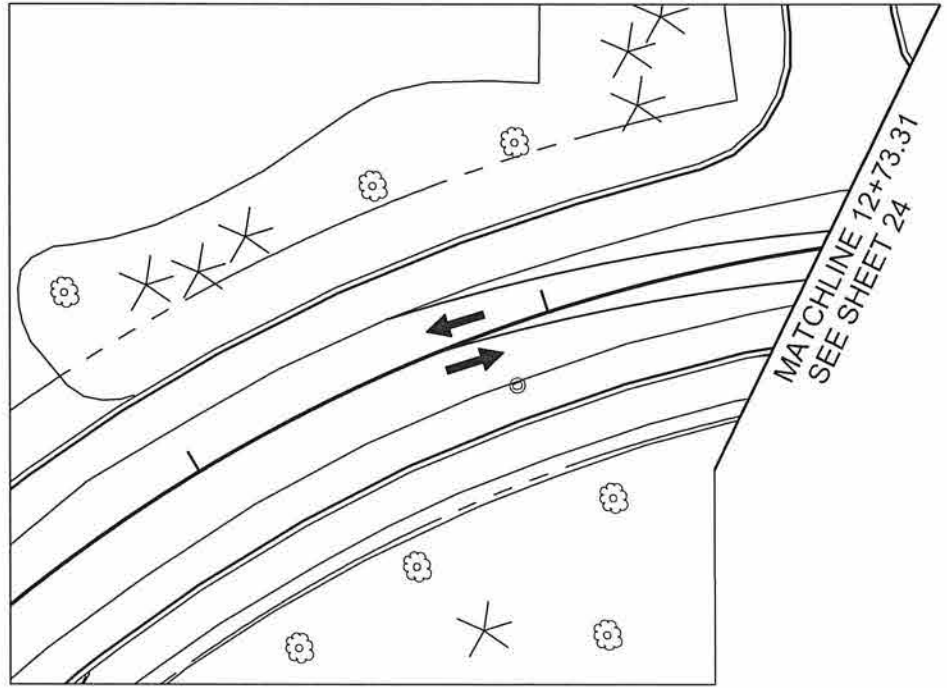
SEE SHEET 23  
MATCHLINE 12+73.31

**STAGE 2 CONSTRUCTION NOTES:**

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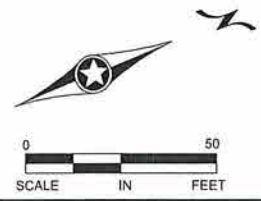
NARROW LANES ON SOUTHEAST-BOUND COON RAPIDS BLVD AND CONSTRUCT RIGHT TURN LANE EXTENSION.

MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.



MATCHLINE 12+73.31  
SEE SHEET 24

LEGEND	
	EXISTING TOPOGRAPHY
	TO BE CONSTRUCTED THIS STAGE
	TRAFFIC DIRECTION
	CONSTRUCTION AREA

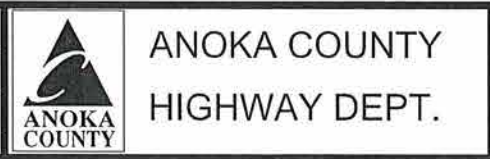


NO	DATE	BY	CKD	APPR	REVISION

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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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-10-14      LICENSE NO. 24756

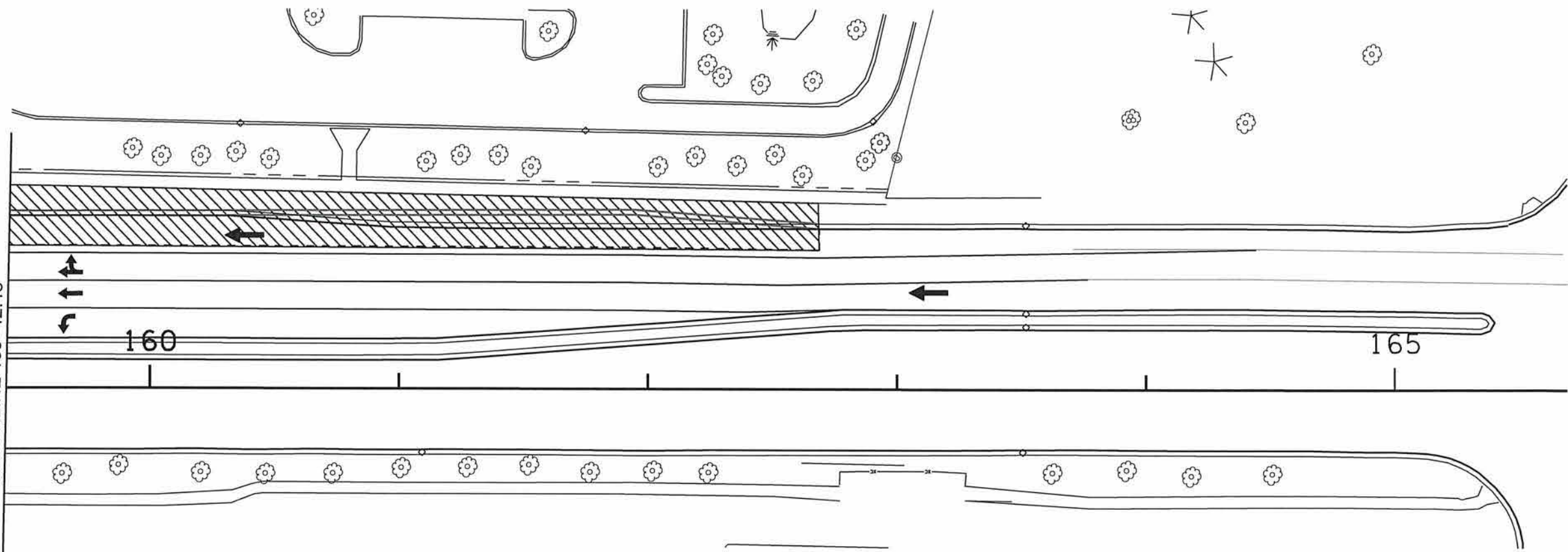
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 CHECKED BY: GMP      DATE: 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26



SEE SHEET 24  
MATCHLINE 159+42.48



**LEGEND**

- EXISTING TOPOGRAPHY
- TO BE CONSTRUCTED THIS STAGE
- TRAFFIC DIRECTION
- CONSTRUCTION AREA

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_STG2\_P2.dgn 03/05/2014 1:44:14 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: CURT KOBILARCSIK  
SIGNATURE:

DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
DESIGN BY: DFF DATE: 02-13-14  
CHECKED BY: GMP DATE: 02-18-14

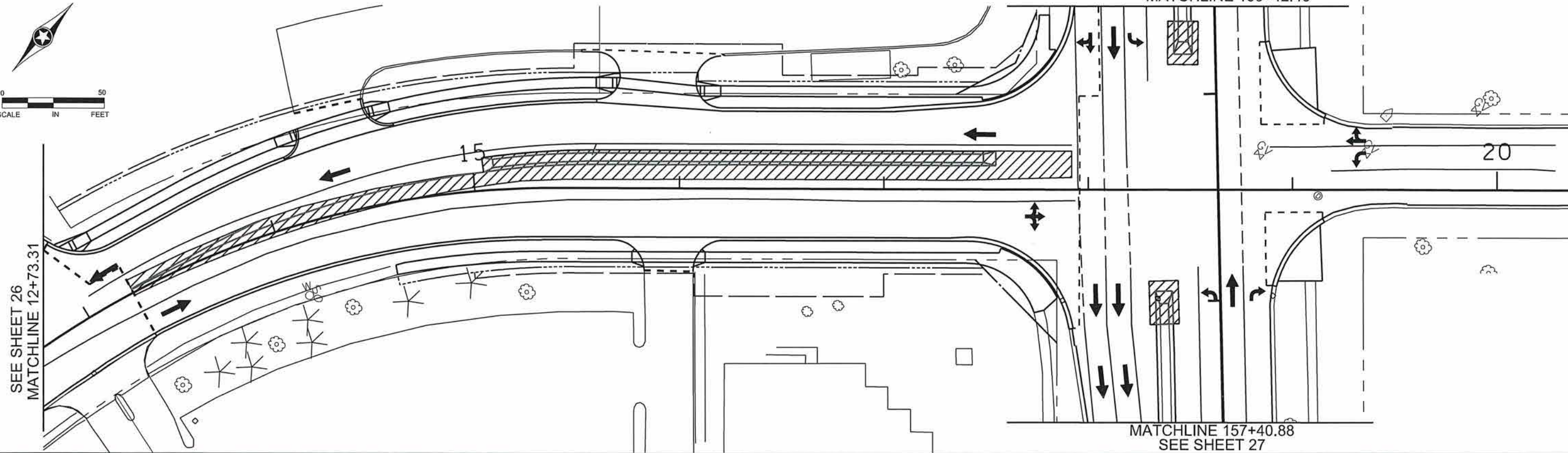


**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26



SEE SHEET 27  
MATCHLINE 159+42.48



SEE SHEET 26  
MATCHLINE 12+73.31

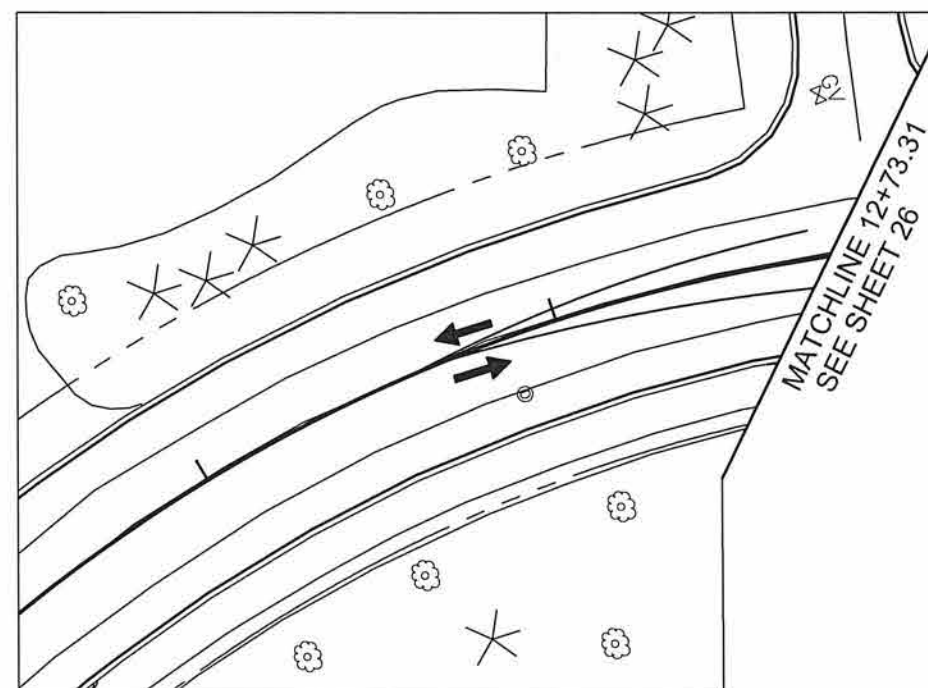
MATCHLINE 157+40.88  
SEE SHEET 27

**STAGE 3 CONSTRUCTION NOTES:**

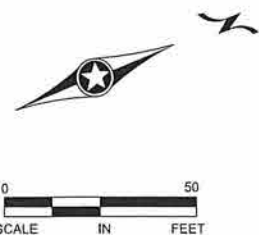
MAINTAIN NORTHBOUND SPRINGBROOK DRIVE STRIPING THE SAME AS STAGE 2. SHIFT SOUTHBOUND SPRINGBROOK DRIVE TRAFFIC TO THE WEST SIDE OF SPRINGBROOK. CONSTRUCT MEDIAN.

SHIFT EASTBOUND COON RAPIDS BOULEVARD AWAY FROM CENTER MEDIAN AND REDUCE WESTBOUND COON RAPIDS BOULEVARD TO ONE LANE THROUGH INTERSECTION. CONSTRUCT LEFT TURN LANE EXTENSION AND RECONSTRUCT MEDIAN NOSES.

MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.



LEGEND	
	EXISTING TOPOGRAPHY
	TO BE CONSTRUCTED THIS STAGE
	TRAFFIC DIRECTION
	CONSTRUCTION AREA



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_STG3\_P1.dgn 03/06/2014 1:40:09 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14

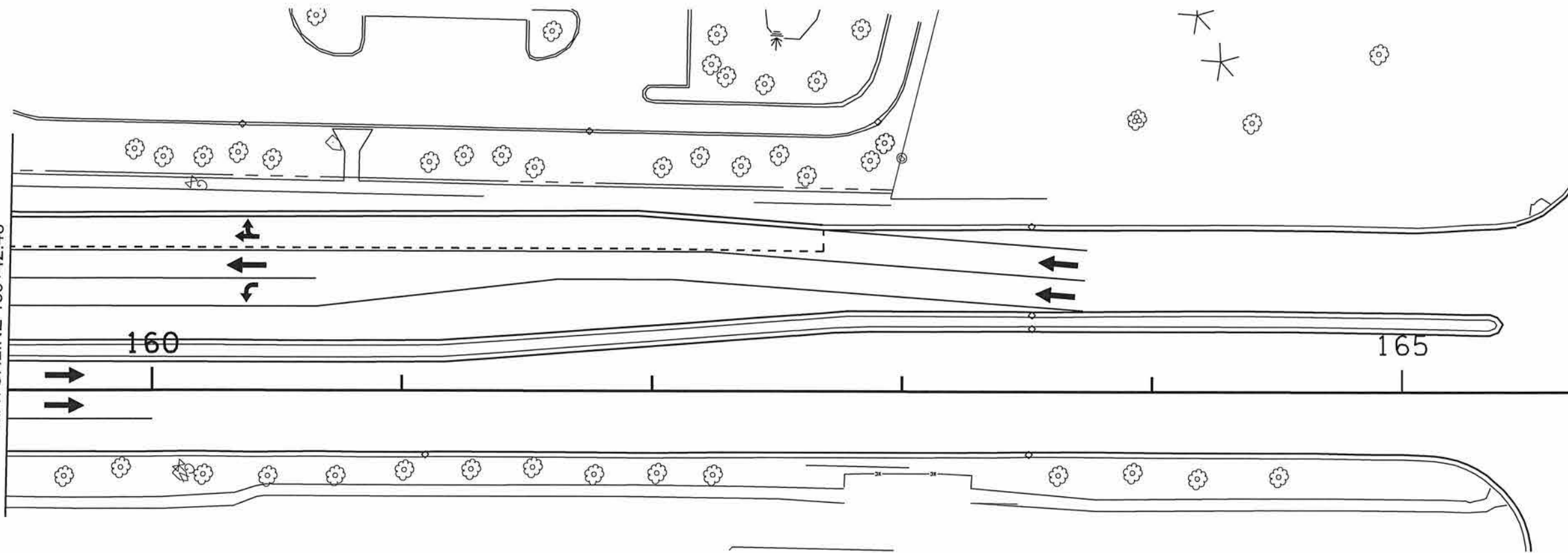


**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

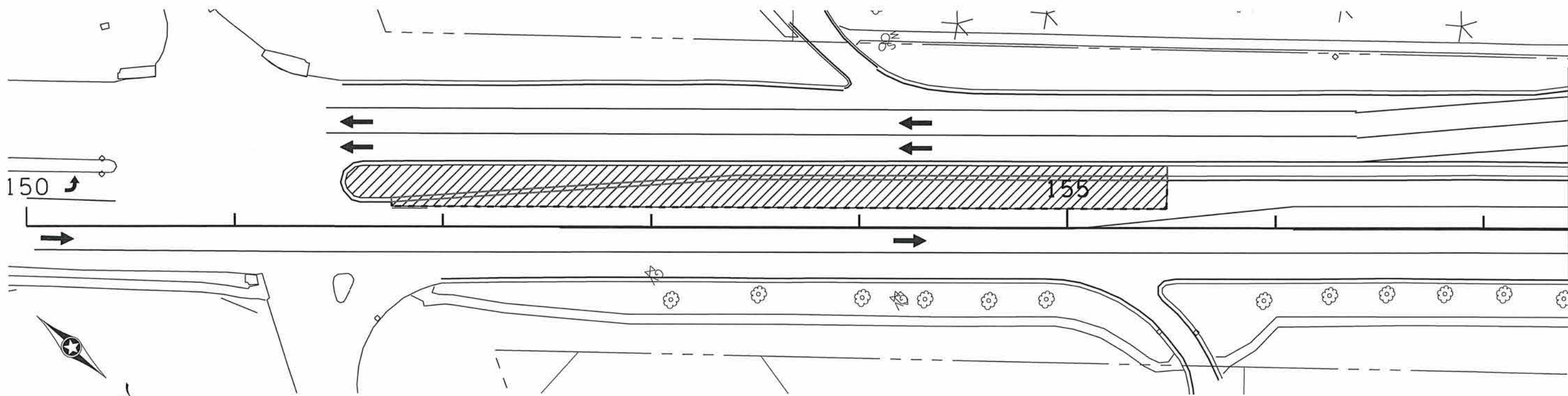


SEE SHEET 26  
MATCHLINE 159+42.48



**LEGEND**

- EXISTING TOPOGRAPHY
- TO BE CONSTRUCTED THIS STAGE
- ← TRAFFIC DIRECTION
- ▨ CONSTRUCTION AREA



MATCHLINE 157+40.88  
SEE SHEET 26



2 OF 2

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_STG3\_P2.dgn      03/05/2014      1:44:18 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: CURT KOBILARCSIK

SIGNATURE: *Curt Kobilarcsik*

DATE: 3-10-14      LICENSE NO. 24756

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DESIGN BY: DFF      DATE: 02-13-14

CHECKED BY: GMP      DATE: 02-18-14



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

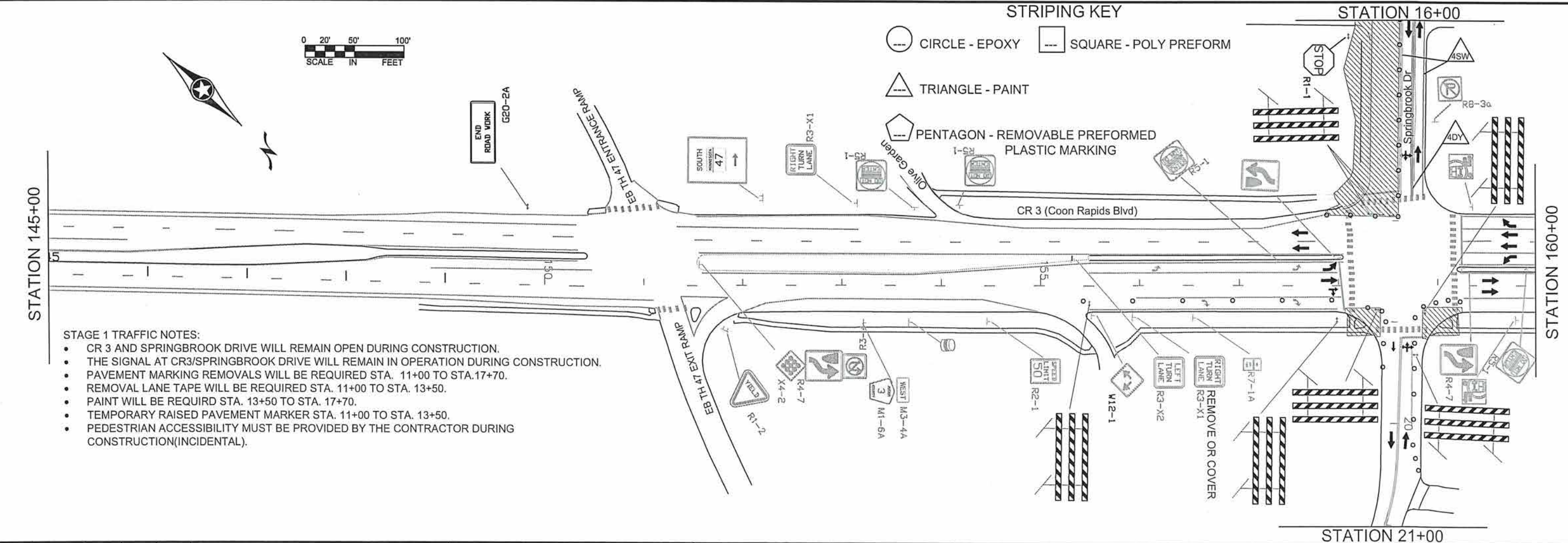
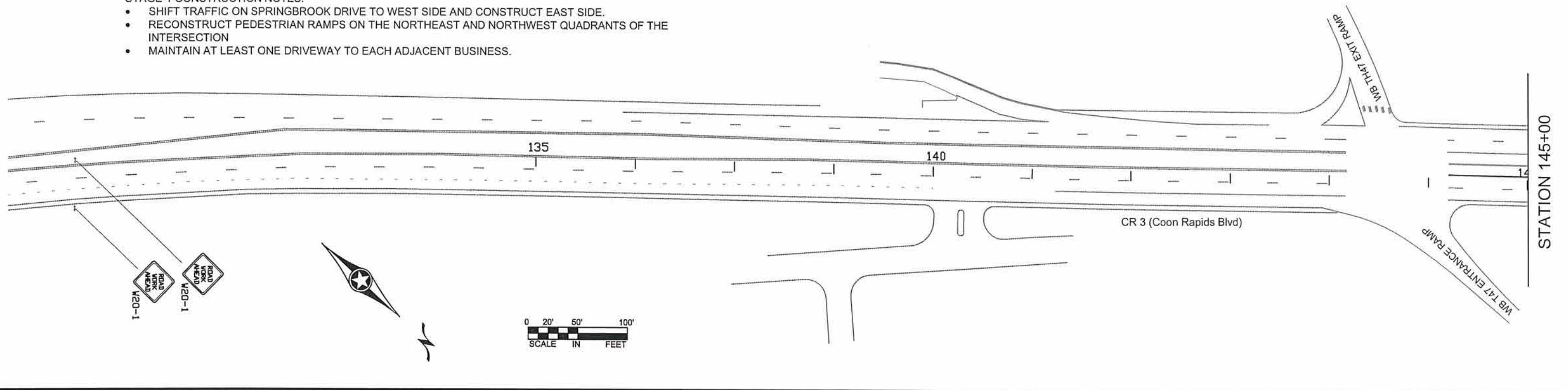
S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

STAGING PLAN  
STAGE 3

Sheet 27 of 91 Sheets

STAGE 1 CONSTRUCTION NOTES:

- SHIFT TRAFFIC ON SPRINGBROOK DRIVE TO WEST SIDE AND CONSTRUCT EAST SIDE.
- RECONSTRUCT PEDESTRIAN RAMPS ON THE NORTHEAST AND NORTHWEST QUADRANTS OF THE INTERSECTION
- MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.



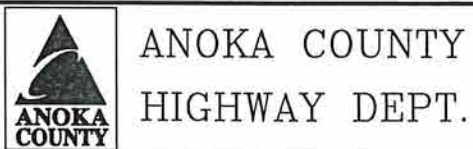
STAGE 1 TRAFFIC NOTES:

- CR 3 AND SPRINGBROOK DRIVE WILL REMAIN OPEN DURING CONSTRUCTION.
- THE SIGNAL AT CR3/SPRINGBROOK DRIVE WILL REMAIN IN OPERATION DURING CONSTRUCTION.
- PAVEMENT MARKING REMOVALS WILL BE REQUIRED STA. 11+00 TO STA. 17+70.
- REMOVAL LANE TAPE WILL BE REQUIRED STA. 11+00 TO STA. 13+50.
- PAINT WILL BE REQUIRED STA. 13+50 TO STA. 17+70.
- TEMPORARY RAISED PAVEMENT MARKER STA. 11+00 TO STA. 13+50.
- PEDESTRIAN ACCESSIBILITY MUST BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION(INCIDENTAL).

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: CURT A. KOBILARCZIK  
 SIGNATURE: *Curt A. Kobilarczik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE 2/20/14  
 DESIGN BY: RLB DATE 2/20/14  
 CHECKED BY: JR DATE 2/20/14

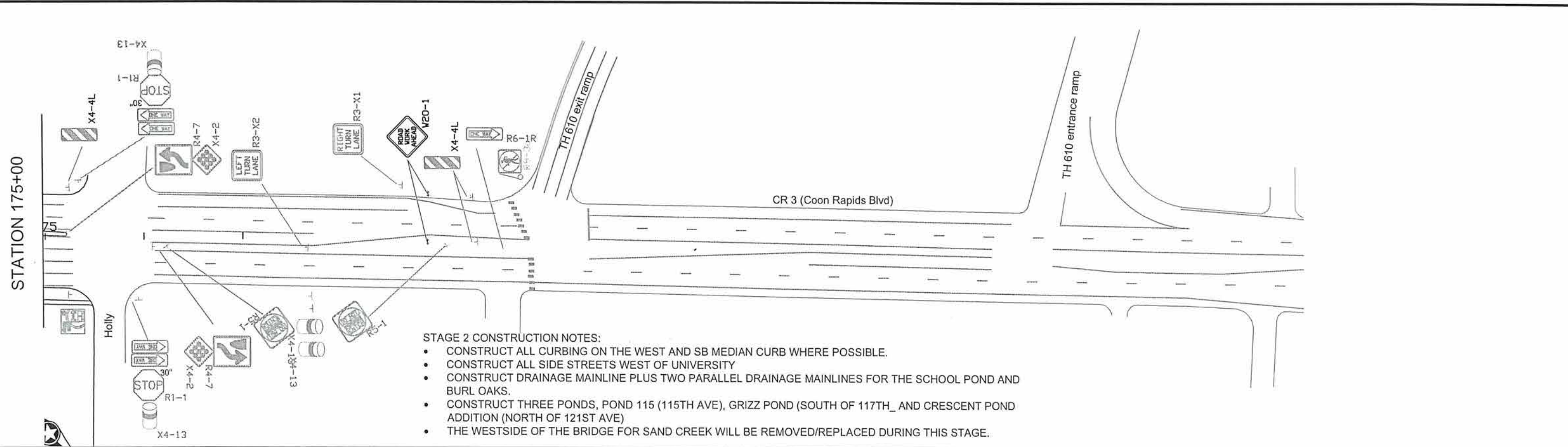
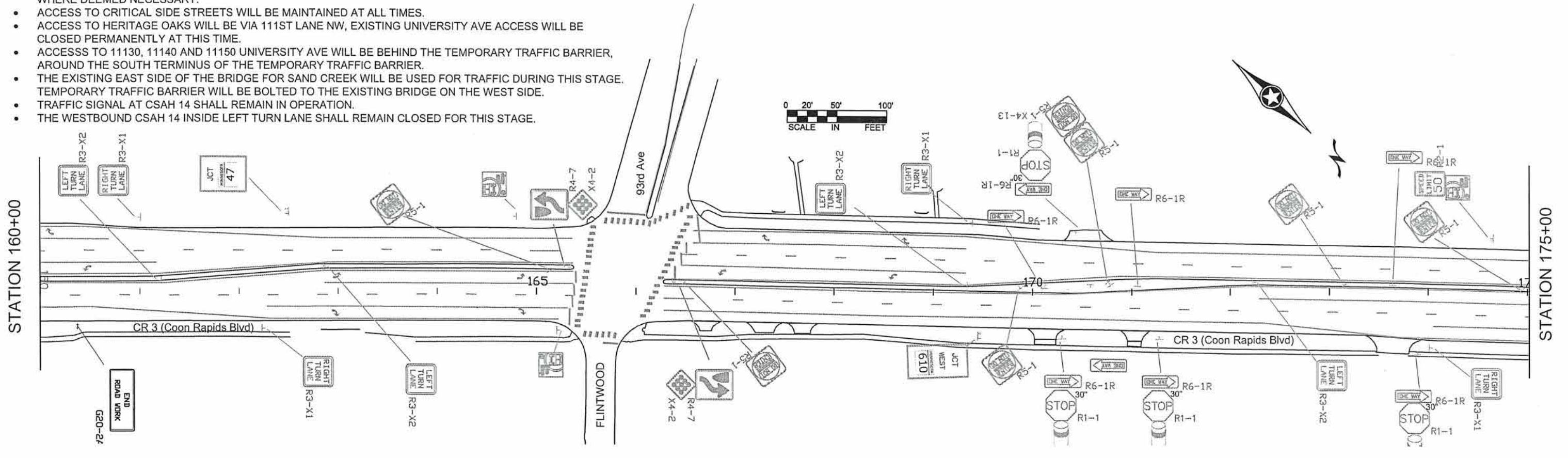


STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

TRAFFIC CONTROL PLAN  
 STAGE 1  
 Sheet 28 of 91 Sheets

**STAGE 2 TRAFFIC NOTES:**

- TWO LANE TWO WAY TRAFFIC ON EAST SIDE OF UNIVERSITY AVE
- TEMPORARY TRAFFIC BARRIER AND SUBSEQUENT UPSTREAM FLARES AND END TREATMENTS ARE SHOWN WHERE DEEMED NECESSARY.
- ACCESS TO CRITICAL SIDE STREETS WILL BE MAINTAINED AT ALL TIMES.
- ACCESS TO HERITAGE OAKS WILL BE VIA 111ST LANE NW, EXISTING UNIVERSITY AVE ACCESS WILL BE CLOSED PERMANENTLY AT THIS TIME.
- ACCESS TO 11130, 11140 AND 11150 UNIVERSITY AVE WILL BE BEHIND THE TEMPORARY TRAFFIC BARRIER, AROUND THE SOUTH TERMINUS OF THE TEMPORARY TRAFFIC BARRIER.
- THE EXISTING EAST SIDE OF THE BRIDGE FOR SAND CREEK WILL BE USED FOR TRAFFIC DURING THIS STAGE. TEMPORARY TRAFFIC BARRIER WILL BE BOLTED TO THE EXISTING BRIDGE ON THE WEST SIDE.
- TRAFFIC SIGNAL AT CSAH 14 SHALL REMAIN IN OPERATION.
- THE WESTBOUND CSAH 14 INSIDE LEFT TURN LANE SHALL REMAIN CLOSED FOR THIS STAGE.



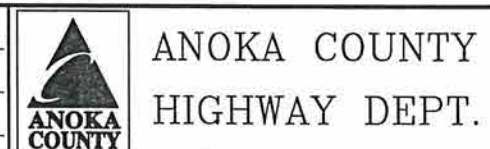
**STAGE 2 CONSTRUCTION NOTES:**

- CONSTRUCT ALL CURBING ON THE WEST AND SB MEDIAN CURB WHERE POSSIBLE.
- CONSTRUCT ALL SIDE STREETS WEST OF UNIVERSITY
- CONSTRUCT DRAINAGE MAINLINE PLUS TWO PARALLEL DRAINAGE MAINLINES FOR THE SCHOOL POND AND BURL OAKS.
- CONSTRUCT THREE PONDS, POND 115 (115TH AVE), GRIZZ POND (SOUTH OF 117TH\_ AND CRESCENT POND ADDITION (NORTH OF 121ST AVE)
- THE WESTSIDE OF THE BRIDGE FOR SAND CREEK WILL BE REMOVED/REPLACED DURING THIS STAGE.

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 2/20/14  
 DESIGN BY: RLB DATE: 2/20/14  
 CHECKED BY: JR DATE: 2/20/14



STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

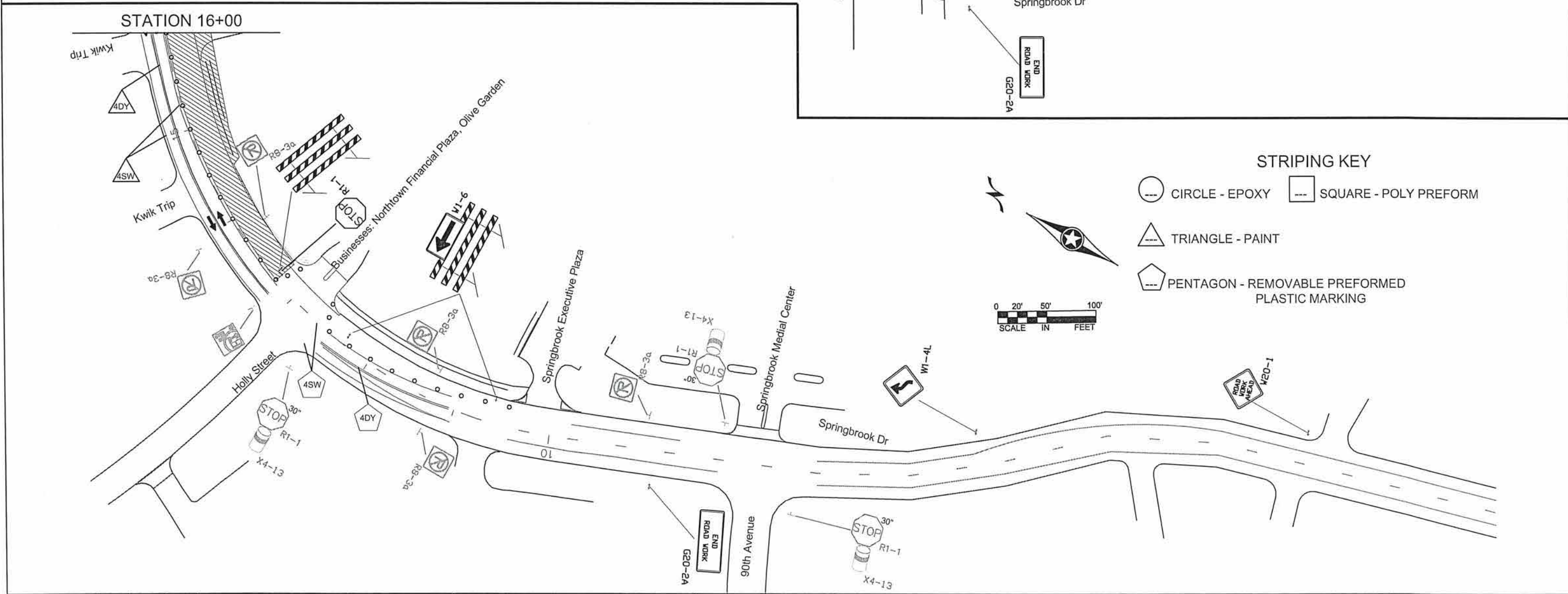
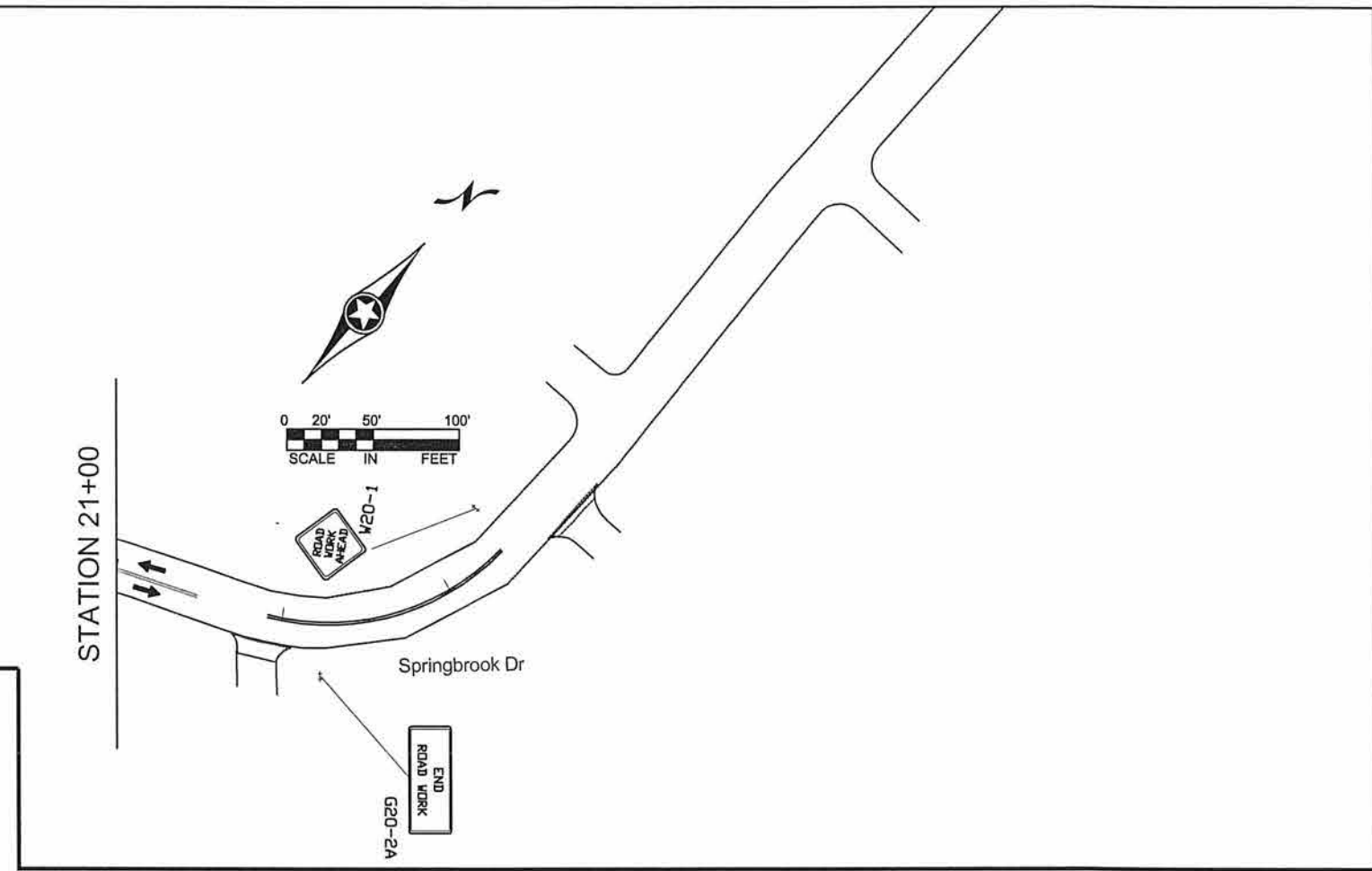
TRAFFIC CONTROL PLAN  
 STAGE 1  
 Sheet 29 of 91 Sheets

**STAGE 2 CONSTRUCTION NOTES:**

- CONSTRUCT ALL CURBING ON THE WEST AND SB MEDIAN CURB WHERE POSSIBLE.
- CONSTRUCT ALL SIDE STREETS WEST OF UNIVERSITY
- CONSTRUCT DRAINAGE MAINLINE PLUS TWO PARALLEL DRAINAGE MAINLINES FOR THE SCHOOL POND AND BURL OAKS.
- CONSTRUCT THREE PONDS, POND 115 (115TH AVE), GRIZZ POND (SOUTH OF 117TH\_ AND CRESCENT POND ADDITION (NORTH OF 121ST AVE)
- THE WESTSIDE OF THE BRIDGE FOR SAND CREEK WILL BE REMOVED/REPLACED DURING THIS STAGE.

**STAGE 2 TRAFFIC NOTES:**

- TWO LANE TWO WAY TRAFFIC ON EAST SIDE OF UNIVERSITY AVE
- TEMPORARY TRAFFIC BARRIER AND SUBSEQUENT UPSTREAM FLARES AND END TREATMENTS ARE SHOWN WHERE DEEMED NECESSARY.
- ACCESS TO CRITICAL SIDE STREETS WILL BE MAINTAINED AT ALL TIMES.
- ACCESS TO HERITAGE OAKS WILL BE VIA 111ST LANE NW, EXISTING UNIVERSITY AVE ACCESS WILL BE CLOSED PERMANENTLY AT THIS TIME.
- ACCESS TO 11130, 11140 AND 11150 UNIVERSITY AVE WILL BE BEHIND THE TEMPORARY TRAFFIC BARRIER, AROUND THE SOUTH TERMINUS OF THE TEMPORARY TRAFFIC BARRIER.
- THE EXISTING EAST SIDE OF THE BRIDGE FOR SAND CREEK WILL BE USED FOR TRAFFIC DURING THIS STAGE. TEMPORARY TRAFFIC BARRIER WILL BE BOLTED TO THE EXISTING BRIDGE ON THE WEST SIDE.
- TRAFFIC SIGNAL AT CSAH 14 SHALL REMAIN IN OPERATION.
- THE WESTBOUND CSAH 14 INSIDE LEFT TURN LANE SHALL REMAIN CLOSED FOR THIS STAGE.



**STRIPING KEY**

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

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE 2/20/14  
 DESIGN BY: RLB DATE 2/20/14  
 CHECKED BY: JR DATE 2/20/14



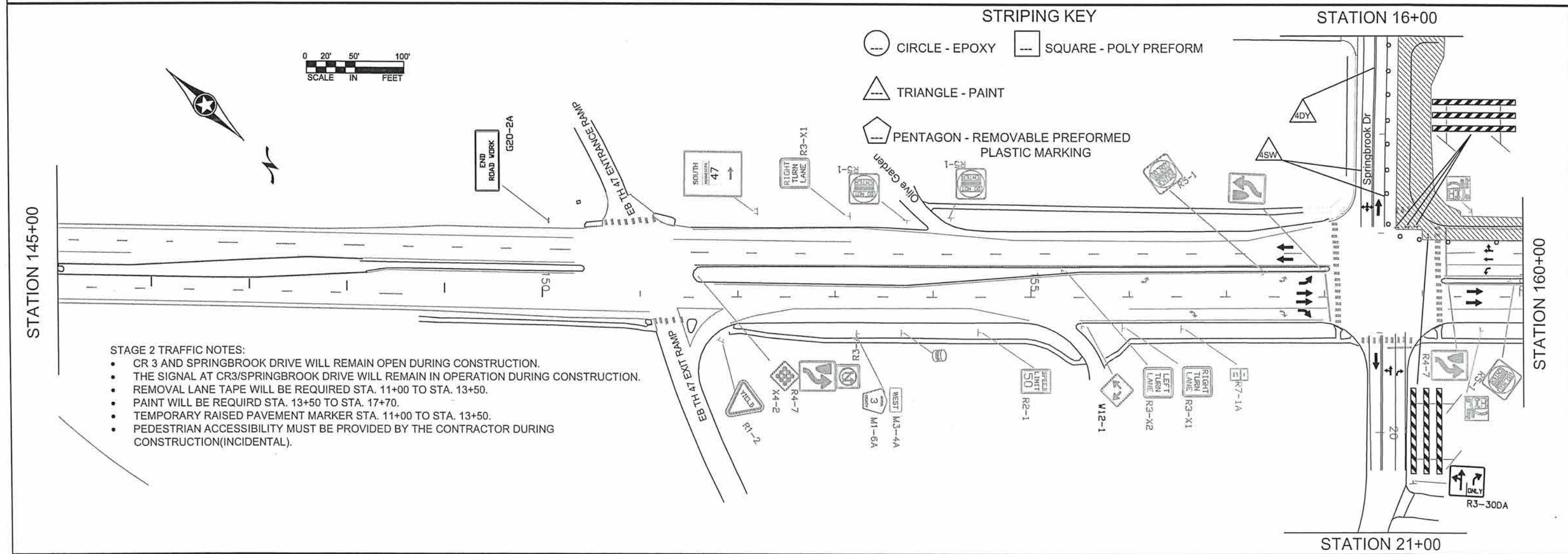
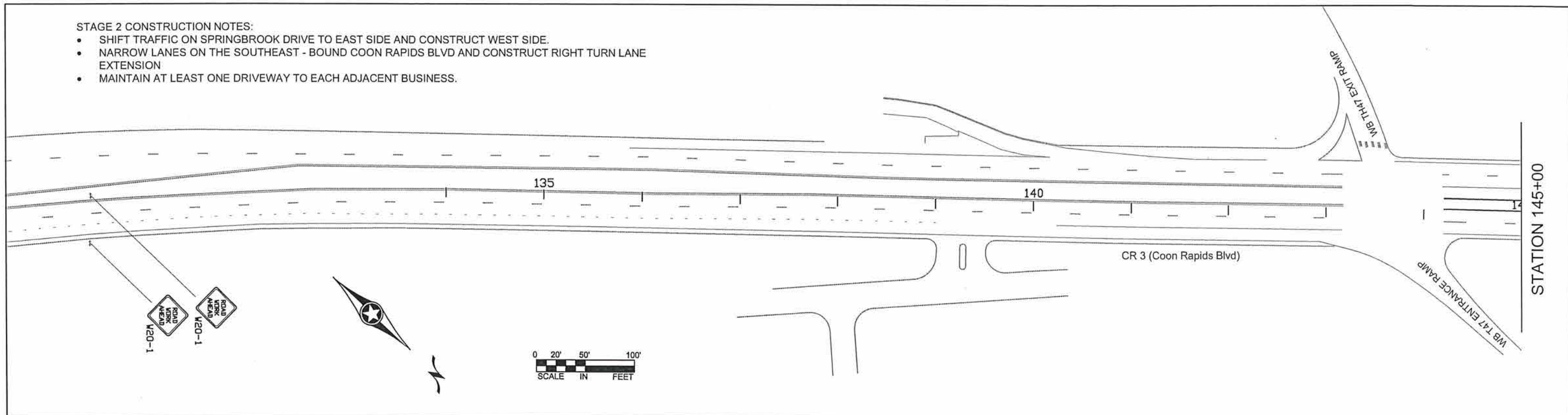
**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO.

TRAFFIC CONTROL PLAN  
 STAGE 1  
 Sheet 30 of 91 Sheets

STAGE 2 CONSTRUCTION NOTES:

- SHIFT TRAFFIC ON SPRINGBROOK DRIVE TO EAST SIDE AND CONSTRUCT WEST SIDE.
- NARROW LANES ON THE SOUTHEAST - BOUND COON RAPIDS BLVD AND CONSTRUCT RIGHT TURN LANE EXTENSION
- MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.



STAGE 2 TRAFFIC NOTES:

- CR 3 AND SPRINGBROOK DRIVE WILL REMAIN OPEN DURING CONSTRUCTION.
- THE SIGNAL AT CR3/SPRINGBROOK DRIVE WILL REMAIN IN OPERATION DURING CONSTRUCTION.
- REMOVAL LANE TAPE WILL BE REQUIRED STA. 11+00 TO STA. 13+50.
- PAINT WILL BE REQUIRED STA. 13+50 TO STA. 17+70.
- TEMPORARY RAISED PAVEMENT MARKER STA. 11+00 TO STA. 13+50.
- PEDESTRIAN ACCESSIBILITY MUST BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION(INCIDENTAL).

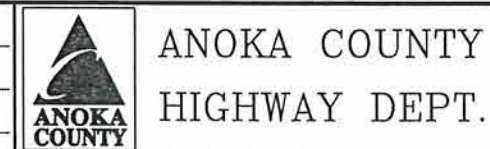
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Bases\TRAFFIC\02-596-20\_STG 2.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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 3/3/14  
 DESIGN BY: RLB DATE: 3/3/14  
 CHECKED BY: JR DATE: 3/3/14



STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

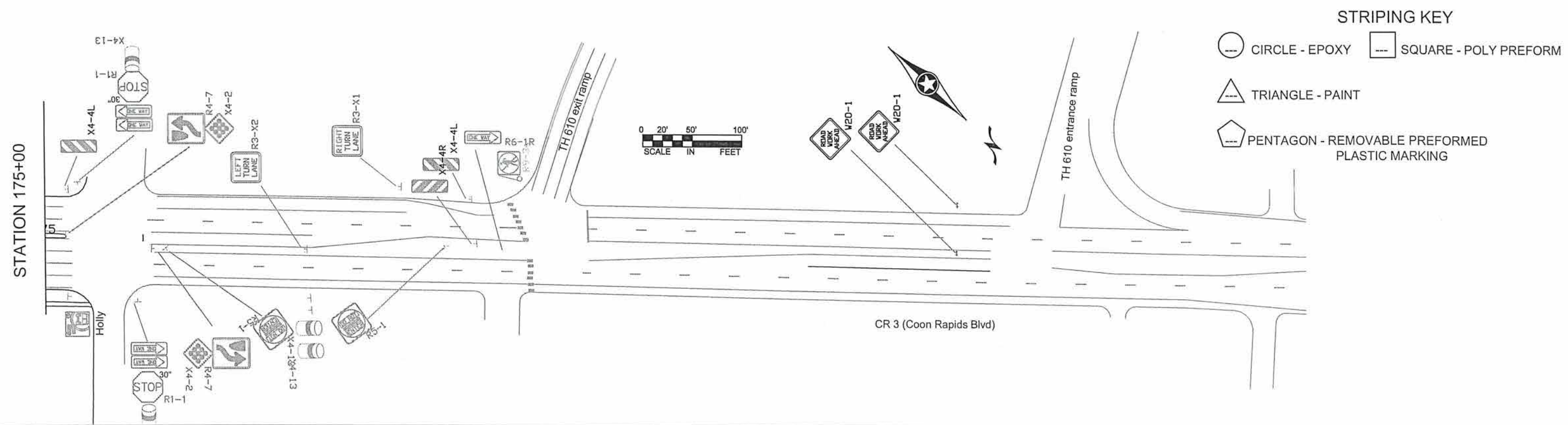
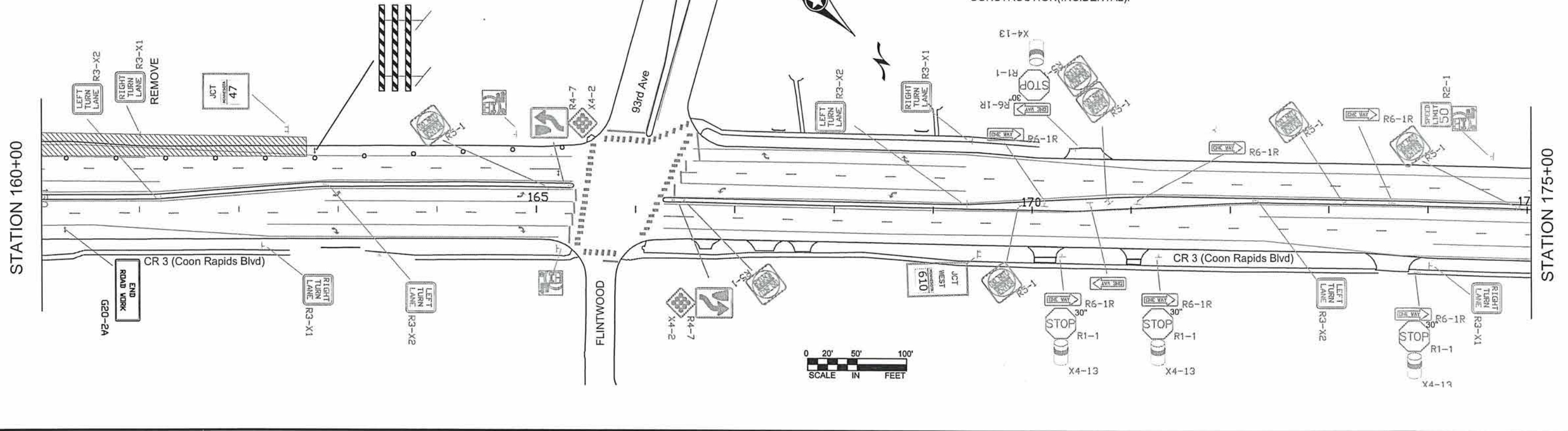
TRAFFIC CONTROL PLAN  
 STAGE 2  
 Sheet 31 of 91 Sheets

**STAGE 2 CONSTRUCTION NOTES:**

- SHIFT TRAFFIC ON SPRINGBROOK DRIVE TO EAST SIDE AND CONSTRUCT WEST SIDE.
- NARROW LANES ON THE SOUTHEAST - BOUND COON RAPIDS BLVD AND CONSTRUCT RIGHT TURN LANE EXTENSION
- MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.

**STAGE 2 TRAFFIC NOTES:**

- CR 3 AND SPRINGBROOK DRIVE WILL REMAIN OPEN DURING CONSTRUCTION.
- THE SIGNAL AT CR3/SPRINGBROOK DRIVE WILL REMAIN IN OPERATION DURING CONSTRUCTION.
- REMOVAL LANE TAPE WILL BE REQUIRED STA. 11+00 TO STA. 13+50.
- PAINT WILL BE REQUIRED STA. 13+50 TO STA. 17+70.
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**STRIPING KEY**

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- SQUARE - POLY PREFORM
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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Base\TRAFFIC\02-596-20\_STG 2.dwg

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PRINT NAME: CURT A. KOBILARCSIK

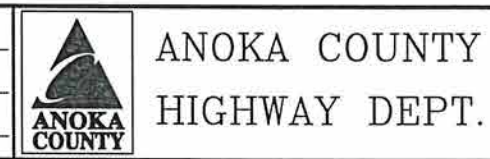
SIGNATURE: *Curt Kobilarsik*

DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 3/3/14

DESIGN BY: RLB DATE: 3/3/14

CHECKED BY: JR DATE: 3/3/14



STATE PROJECT NO. 002-596-020

STATE PROJECT NO. 114-130-007

CITY PROJECT NO. 12-26

COUNTY PROJECT NO. \_\_\_\_\_

TRAFFIC CONTROL PLAN  
STAGE 2

Sheet 32 of 91 Sheets

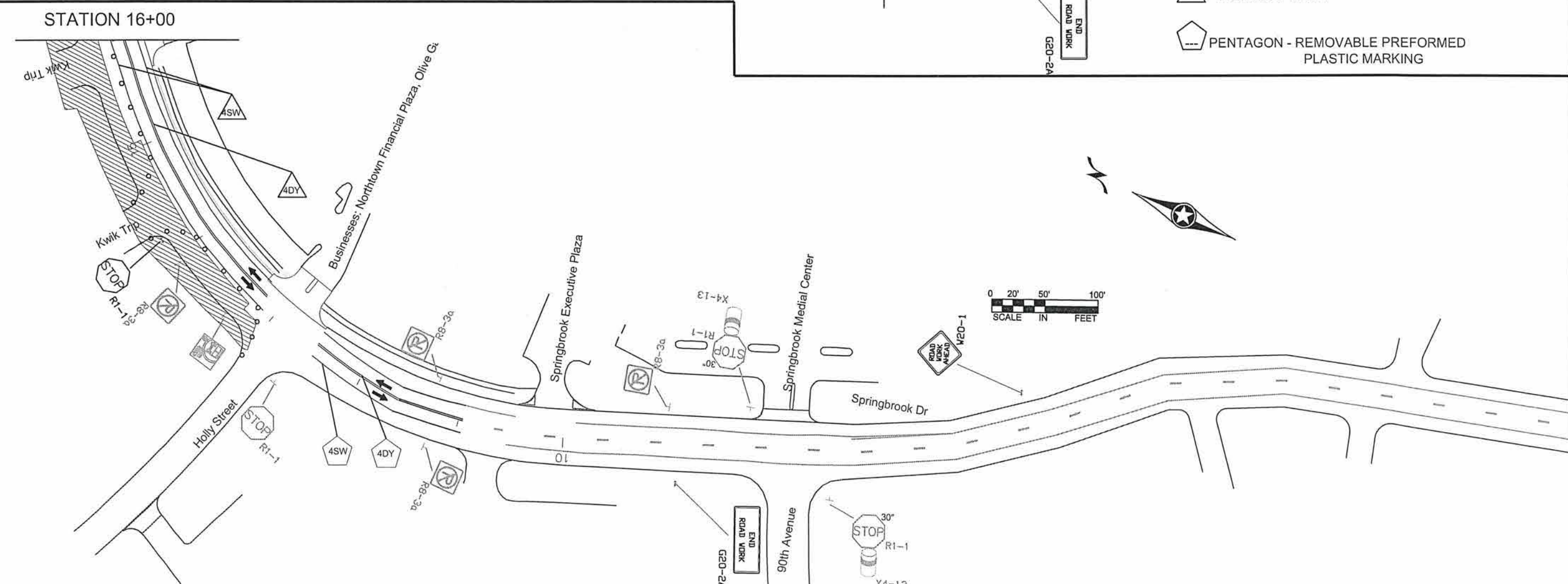
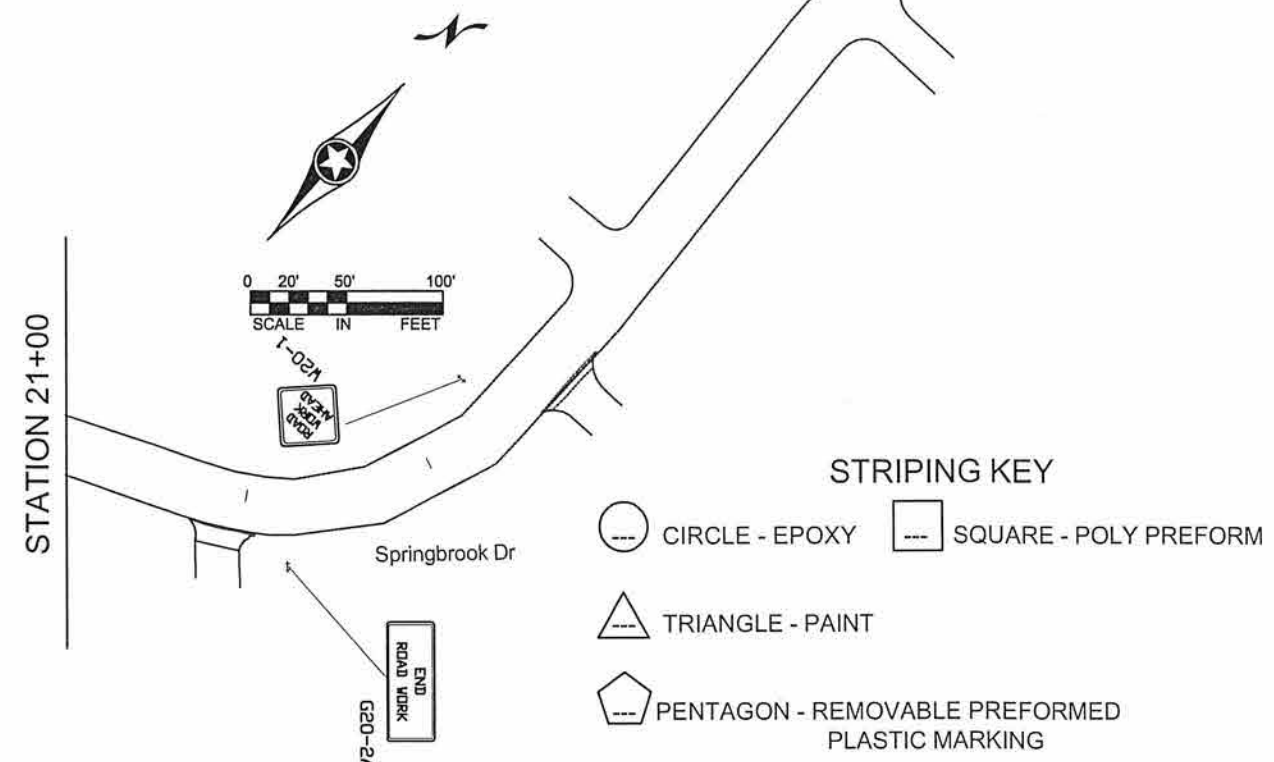


**STAGE 2 CONSTRUCTION NOTES:**

- SHIFT TRAFFIC ON SPRINGBROOK DRIVE TO EAST SIDE AND CONSTRUCT WEST SIDE.
- NARROW LANES ON THE SOUTHEAST - BOUND COON RAPIDS BLVD AND CONSTRUCT RIGHT TURN LANE EXTENSION
- MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.

**STAGE 2 TRAFFIC NOTES:**

- CR 3 AND SPRINGBROOK DRIVE WILL REMAIN OPEN DURING CONSTRUCTION.
- THE SIGNAL AT CR3/SPRINGBROOK DRIVE WILL REMAIN IN OPERATION DURING CONSTRUCTION.
- REMOVAL LANE TAPE WILL BE REQUIRED STA. 11+00 TO STA. 13+50.
- PAINT WILL BE REQUIRED STA. 13+50 TO STA. 17+70.
- TEMPORARY RAISED PAVEMENT MARKER STA. 11+00 TO STA. 13+50.
- PEDESTRIAN ACCESSIBILITY MUST BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION(INCIDENTAL).



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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 3/3/14  
 DESIGN BY: RLB DATE: 3/3/14  
 CHECKED BY: JR DATE: 3/3/14

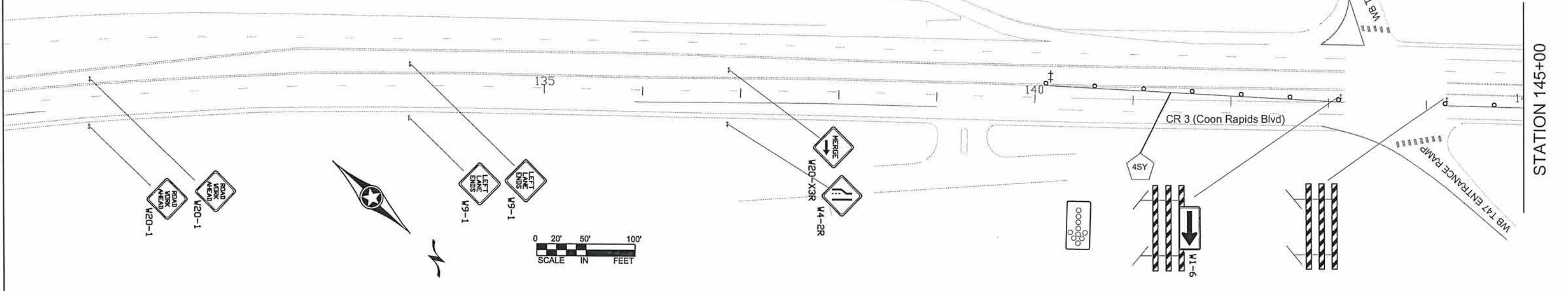
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

TRAFFIC CONTROL PLAN  
 STAGE 2  
 Sheet 33 of 91 Sheets

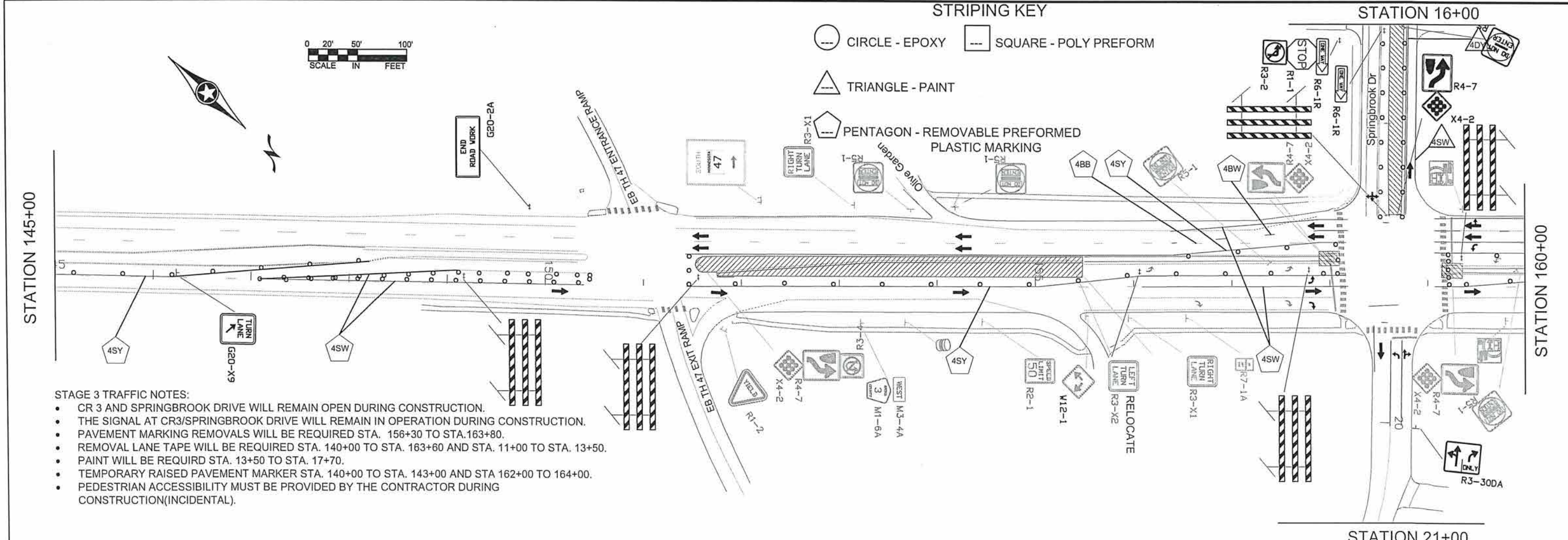
**STAGE 3 CONSTRUCTION NOTES:**

- MAINTAIN NORTHBOUND SPRINGBROOK DRIVE STRIPING THE SAME AS STAGE 2. SHIFT SOUTHBOUND SPRINGBROOK DRIVE TRAFFIC TO THE WEST SIDE OF SPRINGBROOK. CONSTRUCT MEDIAN.
- SHIFT EASTBOUND COON RAPIDS BLVD AWAY FROM CENTER MEDIAN AND REDUCE WEST BOUND COON RAPIDS BLVD TO ONE LANE THROUGH INTERSECTION. CONSTRUCT LEFT TURN LANE EXTENSION AND RECONSTRUCT MEDIAN NOSES.
- MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.



**STRIPING KEY**

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



**STAGE 3 TRAFFIC NOTES:**

- CR 3 AND SPRINGBROOK DRIVE WILL REMAIN OPEN DURING CONSTRUCTION.
- THE SIGNAL AT CR3/SPRINGBROOK DRIVE WILL REMAIN IN OPERATION DURING CONSTRUCTION.
- PAVEMENT MARKING REMOVALS WILL BE REQUIRED STA. 156+30 TO STA.163+80.
- REMOVAL LANE TAPE WILL BE REQUIRED STA. 140+00 TO STA. 163+60 AND STA. 11+00 TO STA. 13+50.
- PAINT WILL BE REQUIRED STA. 13+50 TO STA. 17+70.
- TEMPORARY RAISED PAVEMENT MARKER STA. 140+00 TO STA. 143+00 AND STA 162+00 TO 164+00.
- PEDESTRIAN ACCESSIBILITY MUST BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION(INCIDENTAL).

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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 2/24/14  
 DESIGN BY: RLB DATE: 2/24/14  
 CHECKED BY: JR DATE: 2/24/14



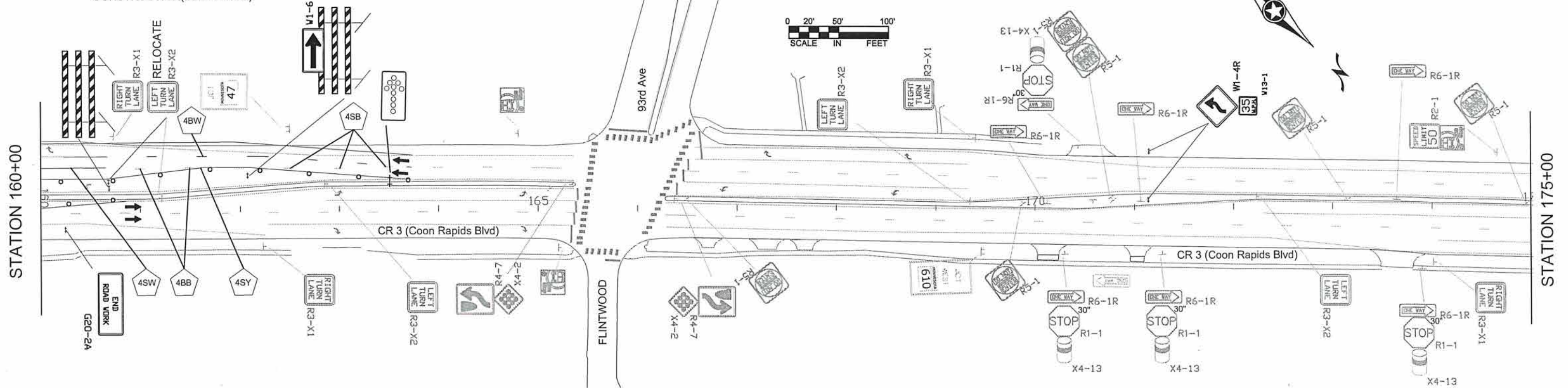
**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO.

TRAFFIC CONTROL PLAN  
 STAGE 3  
 Sheet 34 of 91 Sheets

**STAGE 3 TRAFFIC NOTES:**

- CR 3 AND SPRINGBROOK DRIVE WILL REMAIN OPEN DURING CONSTRUCTION.
- THE SIGNAL AT CR3/SPRINGBROOK DRIVE WILL REMAIN IN OPERATION DURING CONSTRUCTION.
- PAVEMENT MARKING REMOVALS WILL BE REQUIRED STA. 156+30 TO STA.163+80.
- REMOVAL LANE TAPE WILL BE REQUIRED STA. 140+00 TO STA. 163+60 AND STA. 11+00 TO STA. 13+50.
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- PEDESTRIAN ACCESSIBILITY MUST BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION(INCIDENTAL).

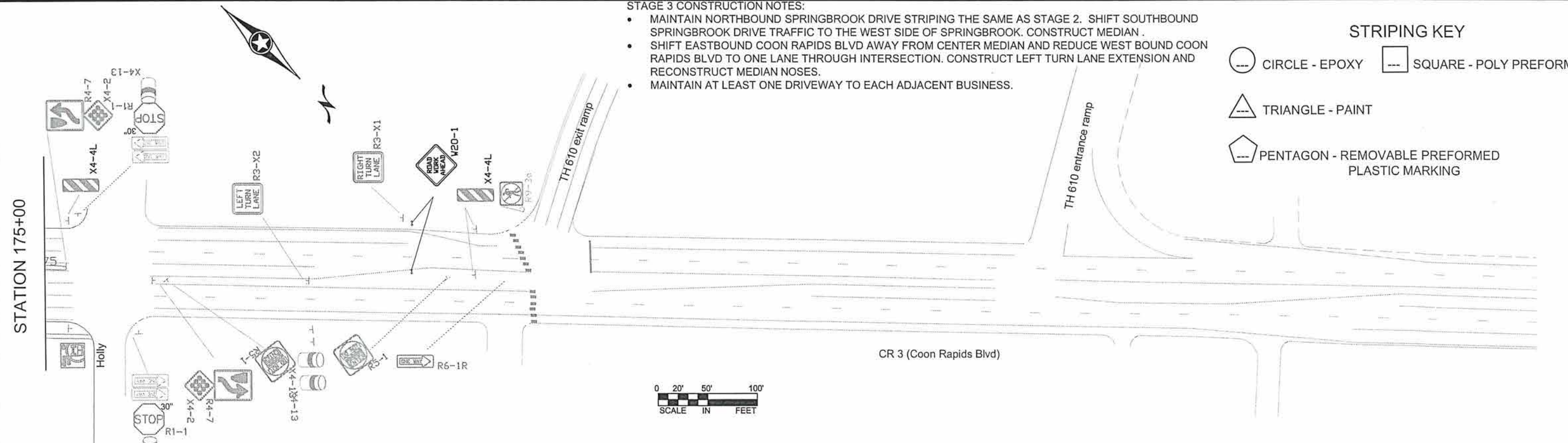


**STAGE 3 CONSTRUCTION NOTES:**

- MAINTAIN NORTHBOUND SPRINGBROOK DRIVE STRIPING THE SAME AS STAGE 2. SHIFT SOUTHBOUND SPRINGBROOK DRIVE TRAFFIC TO THE WEST SIDE OF SPRINGBROOK. CONSTRUCT MEDIAN.
- SHIFT EASTBOUND COON RAPIDS BLVD AWAY FROM CENTER MEDIAN AND REDUCE WEST BOUND COON RAPIDS BLVD TO ONE LANE THROUGH INTERSECTION. CONSTRUCT LEFT TURN LANE EXTENSION AND RECONSTRUCT MEDIAN NOSES.
- MAINTAIN AT LEAST ONE DRIVEWAY TO EACH ADJACENT BUSINESS.

**STRIPING KEY**

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
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- ⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



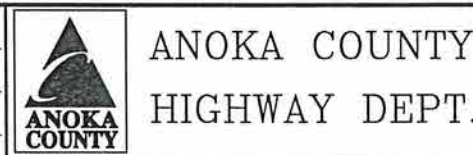
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Base\TRAFFIC\02-596-20\_STG 1.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: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE 2/24/14  
 DESIGN BY: RLB DATE 2/24/14  
 CHECKED BY: JIR DATE 2/24/14



STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

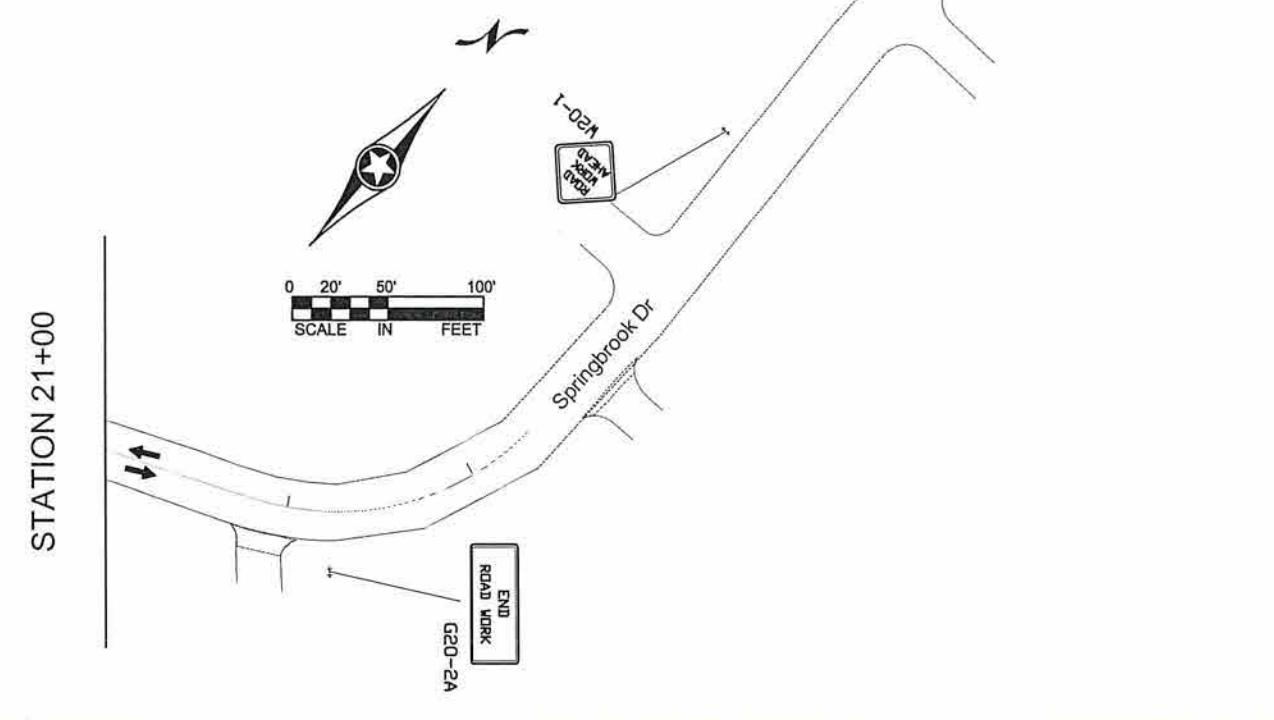
TRAFFIC CONTROL PLAN  
 STAGE 3  
 Sheet 35 of 91 Sheets

**STAGE 3 CONSTRUCTION NOTES:**

- MAINTAIN NORTHBOUND SPRINGBROOK DRIVE STRIPING THE SAME AS STAGE 2. SHIFT SOUTHBOUND SPRINGBROOK DRIVE TRAFFIC TO THE WEST SIDE OF SPRINGBROOK. CONSTRUCT MEDIAN.
- SHIFT EASTBOUND COON RAPIDS BLVD AWAY FROM CENTER MEDIAN AND REDUCE WEST BOUND COON RAPIDS BLVD TO ONE LANE THROUGH INTERSECTION. CONSTRUCT LEFT TURN LANE EXTENSION AND RECONSTRUCT MEDIAN NOSES.
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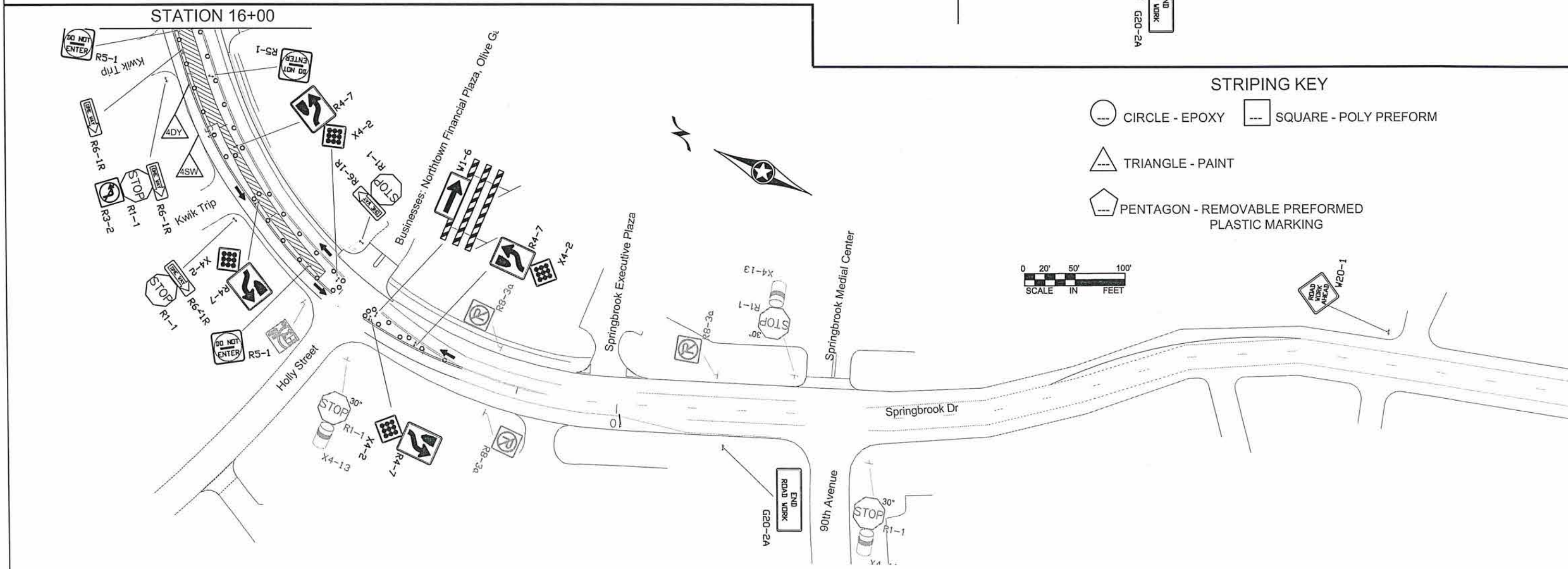
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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Base\TRAFFIC\02-596-20\_STG 1.dwg

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PRINT NAME: CURT A. KOBILARCSIK

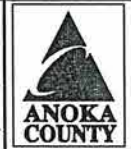
SIGNATURE: *Curt A. Kobilarscik*

DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE 2/24/14

DESIGN BY: RLB DATE 2/24/14

CHECKED BY: JR DATE 2/24/14



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 002-596-020

STATE PROJECT NO. 114-130-007

CITY PROJECT NO. 12-26

COUNTY PROJECT NO. \_\_\_\_\_

TRAFFIC CONTROL PLAN  
STAGE 3

Sheet 36 of 91 Sheets

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3
R1-1	48" x 48"		1	1	3
R5-1	30" x 30"		0	0	3
R6-1R	36" x 12"		0	0	4
	48" x 18"		0	0	2
W20-1	48" x 48"		6	6	6
TYPE III	8 FOOT		9	5	0
TYPE III	8 FOOT		0	0	7
REFLECTORIZED REBOUNDBLE DRUM			50	50	140
W1-6	48" x 24"		0	0	3
TYPE III	8 FOOT		0	0	3
W1-6	48" x 24"		1	0	0
TYPE III	8 FOOT		1	0	0
R3-2	24" x 24"		0	0	2

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3
G20-2a	48" x 24"		4	4	4
ARROW BOARD			0	0	2
W1-4R	36" x 36"		0	0	1
W13-1	24" x 24"		0	0	1
W1-4L	36" x 36"		1	0	0
W9-1	36" x 36"		0	0	2
W20-X3R	36" x 36"		0	0	1
W4-2R	36" x 36"		0	0	1
G20-X9	30" x 36"		0	0	1
R4-7	24" x 30"		0	0	5
X4-2	18" x 18"		0	0	5
CHANGABLE MESSAGE BOARD			0	0	2

TEMPORARY PAVEMENT MARKING		
ITEM	UNIT	TOTAL QUANTITY
PAVEMENT MARKING REMOVAL 4" SOLID PAINT	LIN FT	1310
PAVEMENT MARKING REMOVAL 4" DOUBLE SOLID PAINT	LIN FT	210
TEMPORARY RAISED PAVEMENT MARKER	EACH	210
REMOVABLE PREFORMED PLASTIC MARKING (4" BLACK)	LIN FT	90
REMOVABLE PREFORMED PLASTIC MARKING (4" WHITE)	LIN FT	1915
REMOVABLE PREFORMED PLASTIC MARKING (4" YELLOW)	LIN FT	1935
REMOVABLE PREFORMED PLASTIC MARKING (4" DOUBLE YELLOW)	LIN FT	750
4" SOLID LINE WHITE - LATEX PAINT	LIN FT	2110
4" DOUBLE YELLOW - LATEX PAINT	LIN FT	1270

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART IV, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-020\Bases\TRAFFIC\02-596-20\_STGQTY.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: CURT A. KOBILARCSIK  
 SIGNATURE:   
 DATE: 3-10-14 REG. NO. 24756

DRAWN BY: RLB DATE: 3/4/14  
 DESIGN BY: RLB DATE: 3/4/14  
 CHECKED BY: JR DATE: 3/4/14



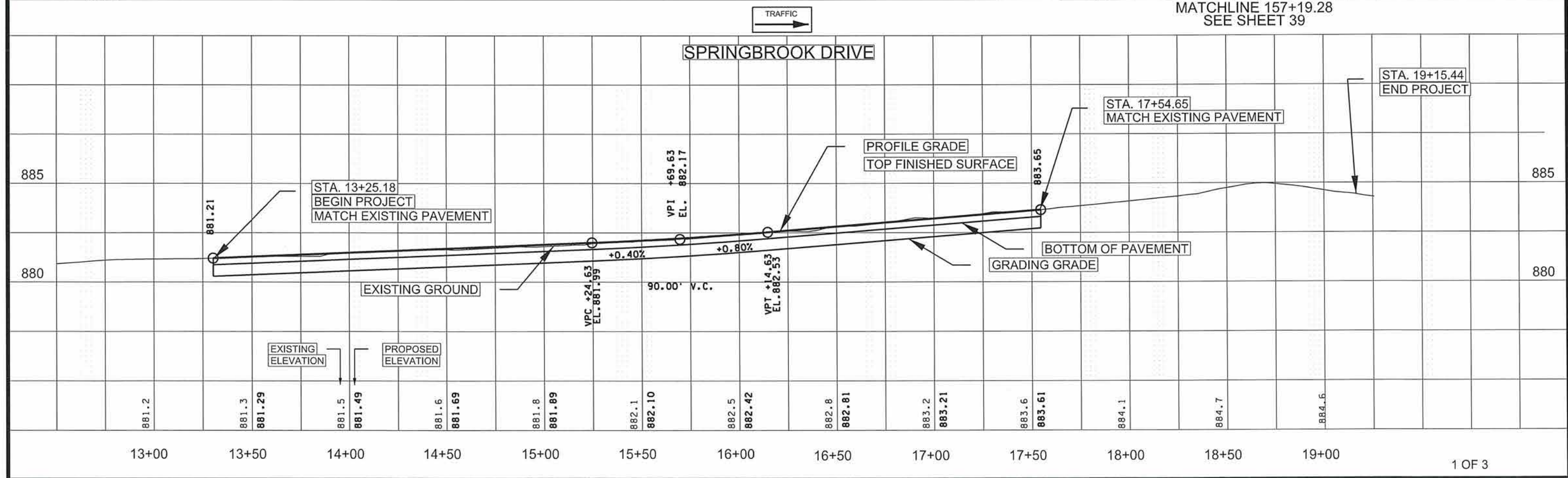
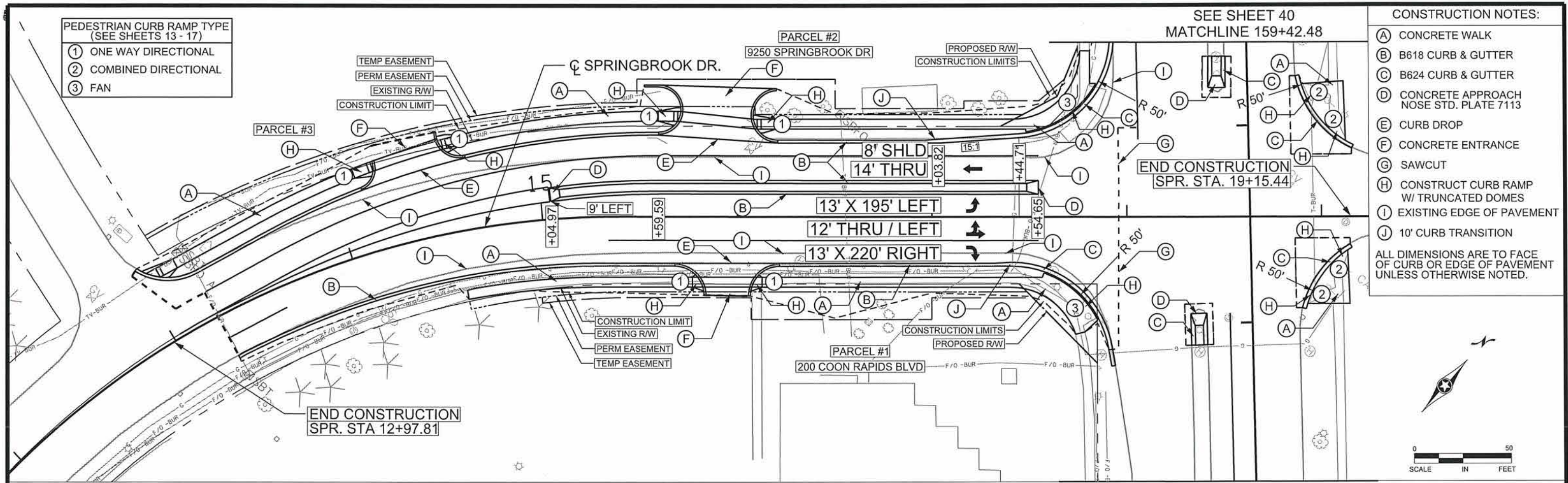
ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO.

STAGING  
 SIGN QUANTITIES

- PEDESTRIAN CURB RAMP TYPE  
(SEE SHEETS 13 - 17)
- ① ONE WAY DIRECTIONAL
  - ② COMBINED DIRECTIONAL
  - ③ FAN

- CONSTRUCTION NOTES:
- (A) CONCRETE WALK
  - (B) B618 CURB & GUTTER
  - (C) B624 CURB & GUTTER
  - (D) CONCRETE APPROACH NOSE STD. PLATE 7113
  - (E) CURB DROP
  - (F) CONCRETE ENTRANCE
  - (G) SAWCUT
  - (H) CONSTRUCT CURB RAMP W/ TRUNCATED DOMES
  - (I) EXISTING EDGE OF PAVEMENT
  - (J) 10' CURB TRANSITION
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

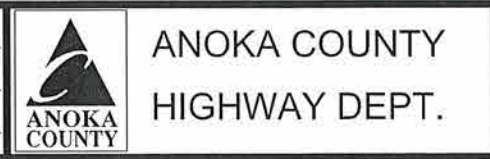


NO	DATE	BY	CKD	APPR	REVISION
1	03/31/14	DFP	GMP	CAK	PER MNDOT COMMENTS
2	04/16/14	DFP	GMP	CAK	RECLIPPED PROFILE
NAME: P:\02-596-20\Plan\0259620_PP1.dgn					

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.

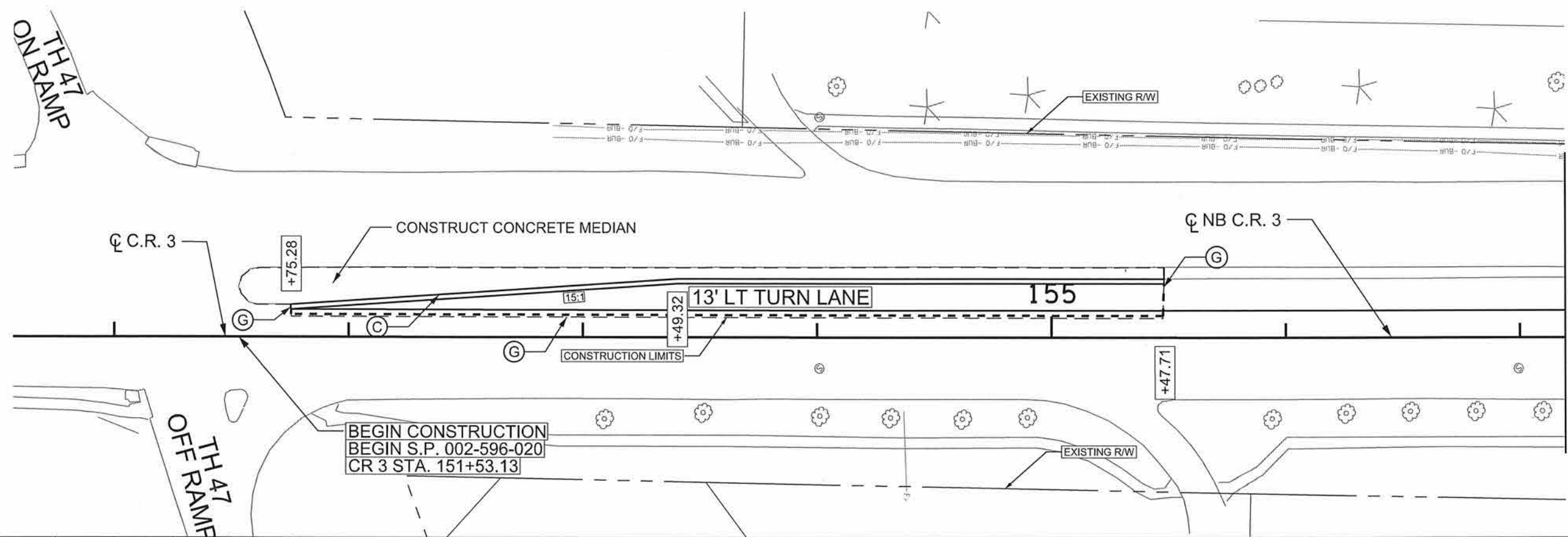
PRINT NAME: CURT KOBIARCSIK  
SIGNATURE: *Curt Kobiarcsik*  
DATE: 9-17-14 LICENSE NO. 24756

DRAWN BY: DFP DATE: 02-13-14  
DESIGN BY: DFP DATE: 02-13-14  
CHECKED BY: GMP DATE: 02-18-14

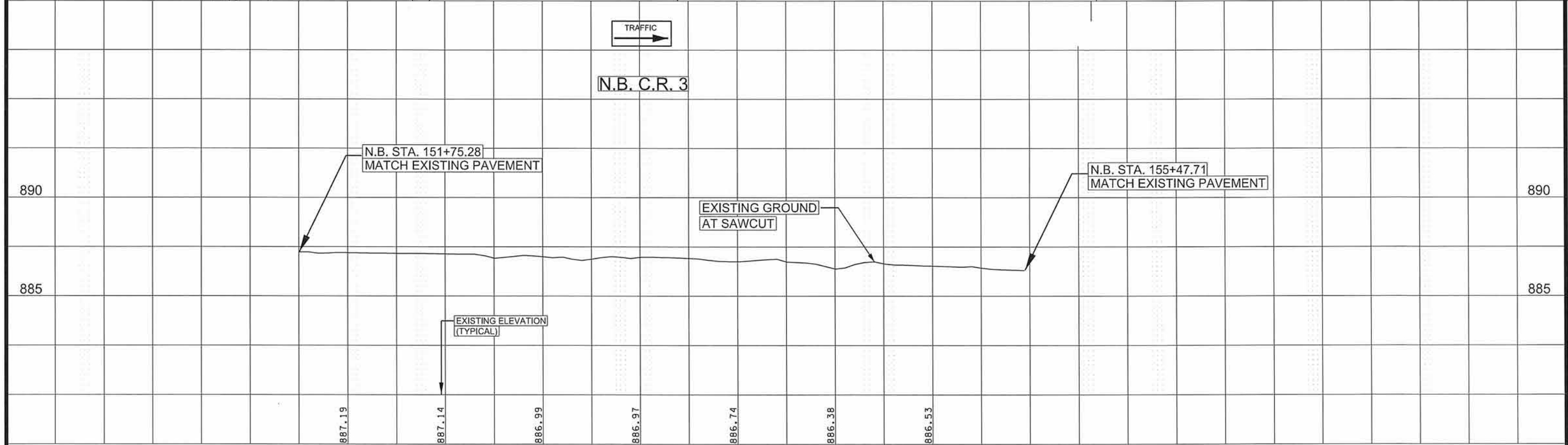
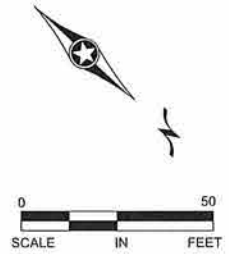


S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

**CONSTRUCTION NOTES:**  
 (A) CONCRETE WALK  
 (C) B624 CURB & GUTTER  
 (G) SAWCUT  
 ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



MATCHLINE 157+19.28  
SEE SHEET 38

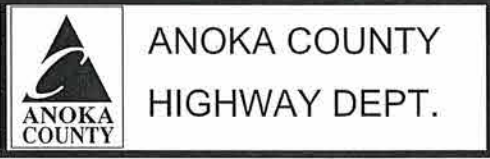


152+00                      153+00                      154+00                      155+00

1	03/31/14	DFP	GMP	CAK	ADDED BEGIN CONSTRUCTION PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_PP2.dgn                      04/03/2014                      10:55:21 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-3-14                      LICENSE NO. 24756

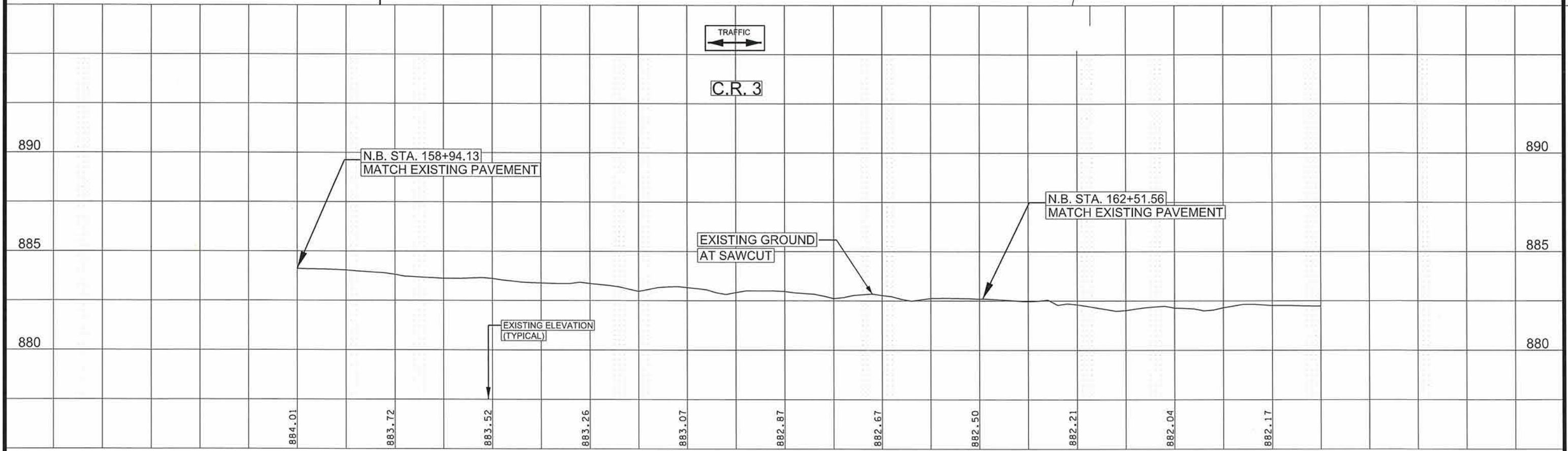
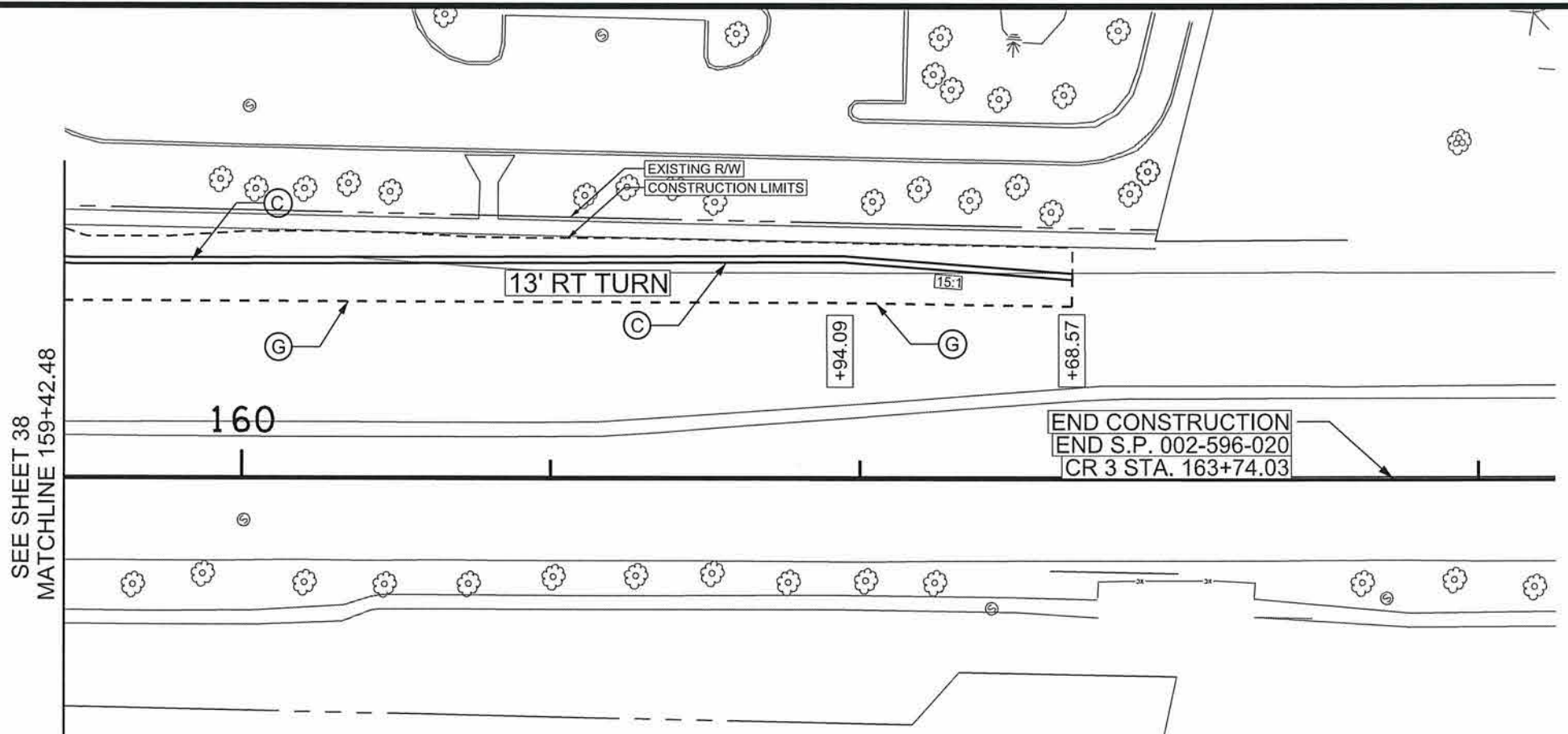
DRAWN BY: DFF                      DATE: 02-13-14  
 DESIGN BY: DFF                      DATE: 02-13-14  
 CHECKED BY: GMP                      DATE: 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CONSTRUCTION PLAN  
 CR 3 (COON RAPIDS BLVD)  
 LEFT TURN LANE  
 Sheet 39 of 91 Sheets

**CONSTRUCTION NOTES:**  
 (A) CONCRETE WALK  
 (C) B624 CURB & GUTTER  
 (G) SAWCUT  
 ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



159+00      160+00      161+00      162+00      162+00      3 OF 3

1	03/31/14	DFF	GMP	CAK	ADDED END CONSTRUCTION PER MNDOT COMMENTS
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_PP3.dgn      04/03/2014      10:55:22 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-3-14      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 02-13-14  
 DESIGN BY: DFF      DATE: 02-13-14  
 CHECKED BY: GMP      DATE: 02-18-14

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

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CONSTRUCTION PLAN  
 CR 3 (COON RAPIDS BLVD)  
 RIGHT TURN LANE  
 Sheet 40 of 91 Sheets



SPRINGBROOK RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEV.	DESCRIPTION
A1	SP	17+41.25	92.1' LT	-	RADIUS POINT
A2	SP	17+44.58	42.2' LT	883.17	BEGIN RADIUS
A3	SP	17+78.17	58.4' LT	883.23	MIDPOINT
A4	SP	17+91.24	93.3' LT	883.27	END RADIUS
A5	SP	17+41.27	75' RT	882.96	BEGIN RADIUS
A6	SP	17+41.27	25' RT	883.49	MIDPOINT
A7	SP	17+73.81	37' RT	883.64	END RADIUS
A8	SP	17+90.68	64.4' RT	-	RADIUS POINT

DRIVEWAY RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEV.	DESCRIPTION
D1	SP	14+13.36	43.4' LT	-	RADIUS POINT
D2	SP	14+14.25	33.4' LT	880.90	BEGIN RADIUS
D3	SP	14+19.82	36.6' LT	881.19	MIDPOINT
D4	SP	14+22.44	42.4' LT	881.48	END RADIUS
D5	SP	14+65.08	49.7' LT	-	RADIUS POINT
D6	SP	14+65.94	37.8' LT	881.13	BEGIN RADIUS
D7	SP	14+56.98	41.7' LT	881.53	MIDPOINT
D8	SP	14+54.49	51.8' LT	881.93	END RADIUS

DRIVEWAY RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEV.	DESCRIPTION
B1	SP	15+67.96	40' RT	-	RADIUS POINT
B2	SP	15+67.96	25' RT	881.59	BEGIN RADIUS
B3	SP	15+78.46	29.3' RT	882.02	MIDPOINT
B4	SP	15+82.95	39.7' RT	882.44	END RADIUS
B5	SP	16+21.68	40' RT	-	RADIUS POINT
B6	SP	16+21.68	25' RT	881.97	BEGIN RADIUS
B7	SP	16+11.04	29.4' RT	882.26	MIDPOINT
B8	SP	16+06.68	40.1' RT	882.55	END RADIUS

DRIVEWAY RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEV.	DESCRIPTION
K1	SP	15+59.59	54.5' LT	-	RADIUS POINT
K2	SP	15+59.59	43' LT	881.61	BEGIN RADIUS
K3	SP	15+71.09	54.5' LT	881.75	MIDPOINT
K4	SP	15+59.59	66' LT	881.88	END RADIUS
K5	SP	16+20.73	54.6' LT	-	RADIUS POINT
K6	SP	16+20.83	39' LT	882.14	BEGIN RADIUS
K7	SP	16+08.13	51.3' LT	882.05	MIDPOINT
K8	SP	16+20.25	64.2' LT	881.96	END RADIUS

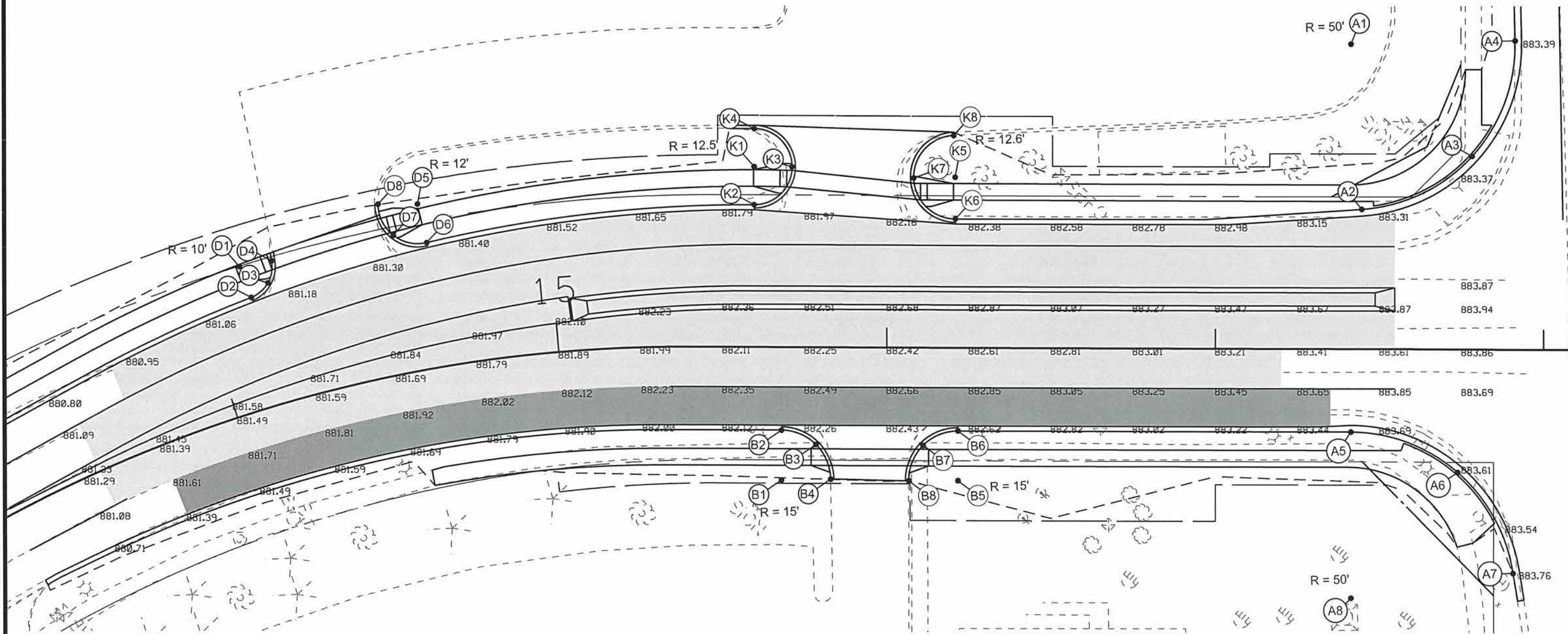


**LEGEND**

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- SAWCUT
- 2.00% CROSS SLOPE
- 2.50% CROSS SLOPE

ELEVATIONS ARE TOP OF FINISHED PAVEMENT

CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_IN1.dgn 03/11/2014 8:50:46 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: CURT KOBIARCSIK  
 SIGNATURE: *Curt Kobiarcsik*  
 DATE: 3-11-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14

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

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

INTERSECTION DETAILS  
 SPRINGBROOK DRIVE

Sheet 41 of 91 Sheets

**PROJECT LOCATION AND GENERAL INFORMATION**

THIS ROAD CONSTRUCTION PROJECT ADDS A LEFT TURN LANE ON SPRINGBROOK DRIVE, LENGTHENS THE LEFT AND RIGHT TURN LANES FROM COON RAPIDS BOULEVARD TO SOUTHBOUND SPRINGBROOK DRIVE. INCLUDES EXCAVATION AND GRADING FOR THE ADDITION AND LENGTHENING OF THE TURN LANES, REPLACING CURB & GUTTER. TRAFFIC SIGNAL INSTALLATION AT THE INTERSECTION OF COON RAPIDS BLVD AND SPRINGBROOK DRIVE.

THIS PROJECT WILL REQUIRE THE DISTURBANCE OF 3.7 ACRES OF SOILS AND DOES CREATE THE POTENTIAL FOR SEDIMENT DISCHARGE FROM THE SITE.

**TRAINING REQUIREMENTS**

THE CONTRACTOR WILL ENSURE COMPLIANCE WITH THE TRAINING REQUIRED IN PART 111.A.2 OF THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY.

THE INDIVIDUALS TRAINED AND THE TRAINING RECEIVED WILL BE RECORDED IN THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS PERSONEL FOR THE PROJECT HAVE BEEN DETERMINED.

**LONG TERM OPERATION AND MAINTENANCE**

THE CITY OF COON RAPIDS STREETS DIVISION WILL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT AND SNOW REMOVAL OPERATIONS ALONG THE PROPOSED WALK.

TIM HIMMER  
CITY OF COON RAPIDS PUBLIC WORKS DIRECTOR  
1831 111TH AVE  
COON RAPIDS, MN 55433  
PHONE: (763) 767-6494

**RECEIVING SURFACE WATERS, DISCHARGE TO IMPAIRED WATERS & SPECIAL WATERS**

THE FOLLOWING TABLE IDENTIFIES ALL SURFACE WATERS WITHIN 1 MILE OF THE PROJECT DISTURBED SOIL BOUNDARIES, WHICH WILL RECEIVE STORMWATER RUNOFF FROM THE CONSTRUCTION SITE, DURING OR AFTER CONSTRUCTION.

STORMWATER FROM A DISCHARGE POINT ON THE PROJECT THAT FLOWS TO A SURFACE WATER IDENTIFIED AS IMPAIRED AND/OR SPECIAL MUST INCLUDE THE FOLLOWING ADDITIONAL BMP REQUIREMENTS:

- 1) ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- 2) TEMPORARY SEDIMENT BASINS MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME. THIS PROJECT AS DESIGNED DOES NOT HAVE FIVE (5) DISTURBED ACRES DRAINING TO A COMMON LOCATION AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

RECEIVING SURFACE WATERS		
NAME OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
ANOKA COUNTY		
UNNAMED DITCH	NO	YES

**DISTURBED SOIL AREA**

TOTAL DISTURBED SOILS AREA FOR THIS PROJECT IS 1.59 ACRES

**IMPERVIOUS SOIL AREA**

EXISTING AREA OF IMPERVIOUS SURFACE IS 0.94 ACRES.  
POST CONSTRUCTION AREA OF IMPERVIOUS SURFACE IS 1.22 ACRES.

**SOIL TYPES**

THE PREDOMINANT SOIL TYPE FOUND ON THIS PROJECT IS LIKELY A FILLED GRANULAR MATERIAL, ALTHOUGH THE PREDOMINANT SOIL IN THE AREA IS SEELYVILLE MUCK.

**CONSTRUCTION PHASING**

SILT FENCE AND/OR OTHER SUITABLE PERIMETER BMP'S AS PROVIDED IN THE PLANS WILL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY. CONSTRUCTION WILL BE PHASED SO THAT ALL DOWN GRADIENT SEDIMENT CONTROL MEASURES ARE INSTALLED PRIOR TO OR IN CONJUNCTION WITH ANY SOIL DISTURBING ACTIVITIES.

WHEN TOPSOIL IS DISTURBED, THE TOPSOIL WILL BE STRIPPED AND STOCKPILED IN SOIL BERMS AT THE TOE OF THE STRIPPED SLOPES ALONG THE PROJECT LIMITS. TEMPORARY VEGETATION WILL BE ESTABLISHED ON THE STOCKPILED TOPSOIL BERMS WITH SEED MIXTURE 150, TYPE 1 FERTILIZER, AND DISK ANCHORED TYPE 1 MULCH AS PROVIDED IN THE PLAN. STOCKPILED TOPSOIL BERMS WILL NOT BE PLACED IN ANY STORMWATER CONVEYANCES.

AFTER STRIPPING THE TOPSOIL THE EXPOSED SOIL INSLOPES WILL BE STABILIZED WITH DISK ANCHORED TYPE 1 MULCH WITHIN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED.

**TEMPORARY SEDIMENT BASINS**

THIS ROAD CONSTRUCTION PROJECT AS DESIGNED DOES NOT MEET ANY OF THE TEMPORARY SEDIMENT BASIN DISTURBED AREA THRESHOLD REQUIREMENTS AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

**PERMANENT STORMWATER MANAGEMENT SYSTEM**

ALL STORMWATER MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING WATERS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING A SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

THIS ROAD CONSTRUCTION PROJECT HAS LESS THEN 1 ACRE INCREASE IN IMPERVIOUS AREA.

**EROSION PREVENTION PRACTICES**

ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. FOR ALL AREAS WHERE DISTURBED SOILS DRAIN TO AN IMPAIRED OR SPECIAL WATER THE EXPOSED SOIL MUST BE STABILIZED NO LATER THEN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA CEASED. SEE THE IMPAIRED & SPECIAL WATERS SECTION OF THIS SWPPP FOR ADDITIONAL BMP REQUIREMENTS FOR DISTURBED AREAS THAT DRAIN TO A SPECIAL OR IMPAIRED WATER

**PROJECT CONTACTS**

DNR	NOT REQUIRED		
COE	NOT REQUIRED		
ANOKA COUNTY DESIGN SWPPP PREPARATION	U OF MN DESIGN OF SWPPP EXPIRES 5/13	NICK DOBDA	763-862-4261
ANOKA COUNTY PROJECT REPRESENTATIVE	U OF MN SITE MANAGEMENT EXPIRES 5/15	CHRIS OSTERHUS	763-862-4252
EROSION CONTROL SUPERVISOR (CONTRACTOR)			

**SEDIMENT CONTROL PRACTICES**

TEMPORARY STOCKPILED TOPSOIL BERMS MUST INCLUDE PERIMETER BMP'S AS PROVIDED IN THE PLAN AT LOCATIONS WHERE CONSTRUCTION STORMWATER DRAINS FROM THE PROJECT

IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES, THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 1:3 OR STEEPER

ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE BMP'S DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL DISCHARGE TO THE INLET HAVE BEEN STABILIZED

VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE MUST BE MINIMIZED. STREET SWEEPING MUST BE USED IF SEDIMENT IS BEING TRACKED OFF THE CONSTRUCTION SITE

**POLLUTION PROVENTION MEASURES**

THE CONTRACTOR WILL IMPLEMENT THE POLLUTION PREVENTION MANAGEMENT MEASURES AS DIRECTED IN THE NPDES PERMIT PART IV.F AS PERTAINING TO SOLID WASTE, HAZARDOUS MATERIALS EXTERNAL TRUCK WASHING, AND CONCRETE WASHOUT ONSITE.

THESE MANAGEMENT MEASURES FOR POLLUTION PREVENTION WILL BE STRICTLY ENFORCED.

**LOCATION OF SWPPP REQUIREMENTS**

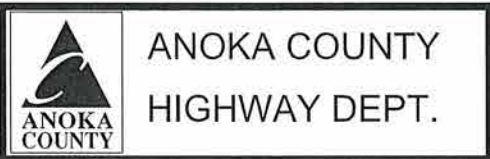
REQUIREMENT	PLAN		MNDOT SPECIFICATION	SPECIAL PROVISION
	TITLE	LOCATION		
NPDES PERMIT COMPLIANCE			1701, 1702, & 1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CERTIFIED PERSONNEL IN EROSION AND SEDIMENT CONTROL SITE MANAGEMENT			1506, 1717, & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CHAIN OF RESPONSIBILITY	AGENCY CONTACTS	SHEET 42	1506, 1717, & 2573	
PROJECT SCHEDULE / WEEKLY EROSION & SEDIMENT CONTROL SCHEDULE / COMPLETING INSPECTION / MAINTENANCE LOG	AGENCY CONTACTS	SHEET 42	1717 & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
SWPPP PREPARATION	AGENCY CONTACTS	SHEET 42		
SITE MAP / RECEIVING WATERS / DIRECTION OF FLOW			1717	
PROJECT SPECIFIC CONSTRUCTION STAGING			1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 1806 (DETERMINATION AND EXTENSION OF CONTRACT TIME)
TEMPORARY EROSION AND SEDIMENT CONTROL BMP LOCATIONS, INSTALLATION, TIMING OF INSTALLATION AND TYPE OF BMP	QUANTITY TABULATIONS	SHEET 7	2573 & 2525	2575 (RAPID STABILIZATION SPECIFICATION)
ADDITIONAL TEMPORARY AND OR PERMANENT EROSION AND SEDIMENT CONTROL BMP'S NOT PROVIDED OR SHOWN IN THE PLAN			1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 2575 (RAPID STABILIZATION SPECIFICATION)
MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES, REMOVAL OF TRACKED SEDIMENT, REMOVAL OF DEVICES			1717 & 2573	1514 (MAINTENANCE DURING CONSTRUCTION) 1717 (LAND AIR & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
DEWATERING			2105.3B, & 2451.3C	DEWATERING MAY ALSO REQUIRE DNR PERMIT. NO DEWATERING IS ANTICIPATED FOR THIS PROJECT
FINAL STABILIZATION	QUANTITY TABULATIONS EROSION CONTROL PLAN	SHEET 7 SHEET 44-45	1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS	QUANTITY TABULATIONS EROSION CONTROL PLAN	SHEET 7 SHEET 44-45	2575	2575 (RAPID STABILIZATION SPECIFICATION)
PERMANENT EROSION CONTROL DETAILS	EROSION CONTROL DETAILS	SHEET 44-45	2575	2575 (CONTROLLING EROSION AND ESTABLISHING VEGETATION)

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Plan\0259620\_SWPPP.dgn 03/05/2014 1:44:29 PM

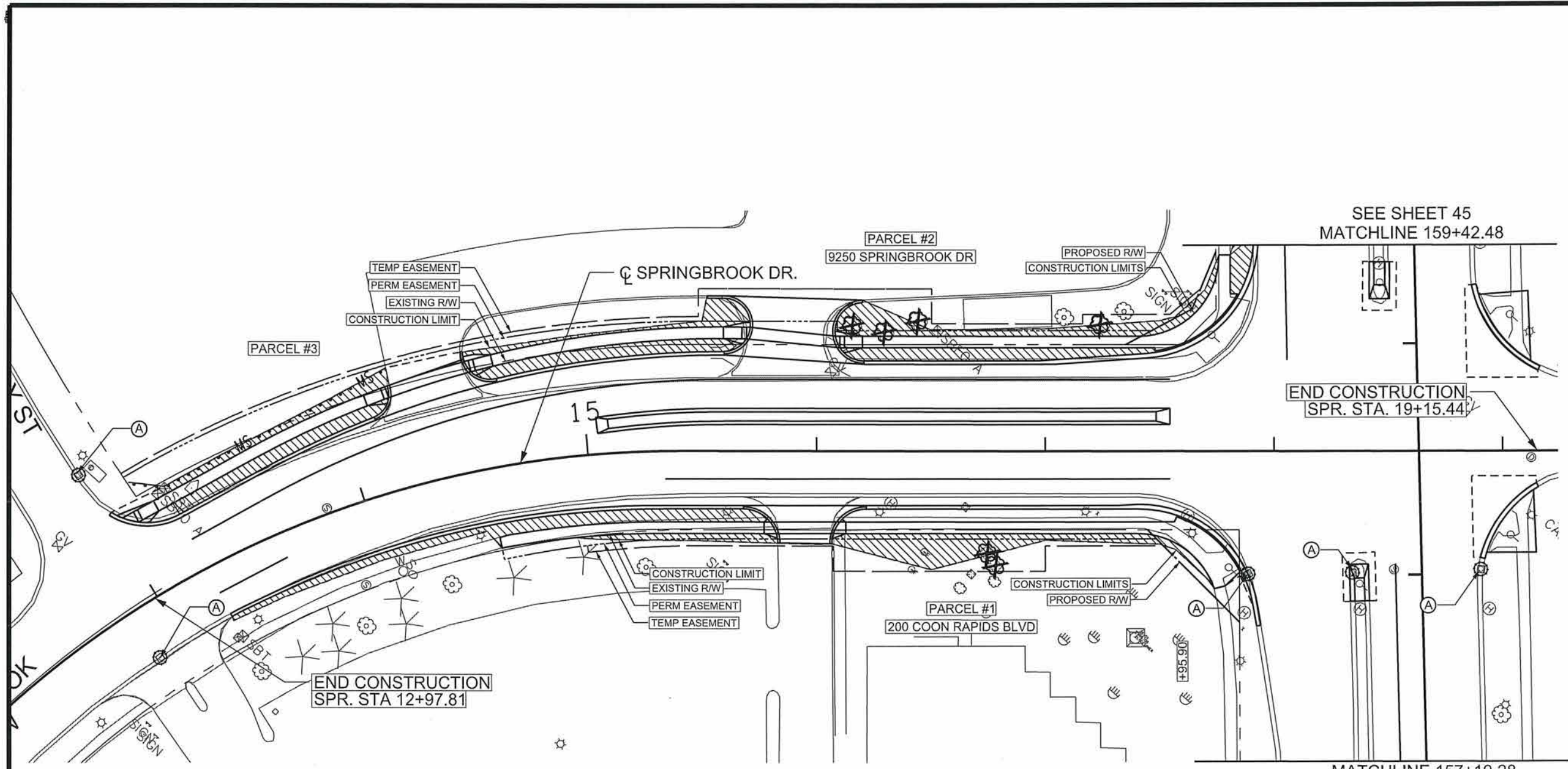
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: CURT KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
DESIGN BY: DFF DATE: 02-13-14  
CHECKED BY: GMP DATE: 02-18-14



S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

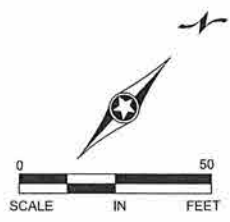




**LEGEND**

- SODDING TYPE SALT RESISTANT
- INLET PROTECTION
- CONSTRUCTION LIMIT
- PERMANENT EASEMENT
- PROPOSED GEOMETRY
- SILT FENCE TYPE MACHINE SLICED
- SURFACE FLOW ARROW
- PROPOSED CATCH BASIN
- INPLACE CATCH BASIN
- PROPOSED MANHOLE
- INPLACE MANHOLE
- PROPOSED APRON
- INPLACE APRON
- PROPOSED STORM SEWER
- INPLACE STORM SEWER

- NOTES**
- 1) THE CONTRACTOR SHALL CONSTRUCT WASHED GRAVEL ENTRANCES AT POINTS OF EXIT FROM THE WORK AREA ONTO EXISTING BITUMINOUS PAVEMENT AS DIRECTED BY THE ENGINEER.
  - 2) SILT FENCE SHALL FOLLOW AS CLOSE AS POSSIBLE A SINGLE CONTOUR.
  - 3) SILT FENCE SHALL BE CLEANED OUT OR REPLACED WHEN SEDIMENT REACHES 8" OR  $\frac{1}{3}$  OF SILT FENCE HEIGHT.
  - 4) WHEN SEDIMENT DEPOSITS IN A WATER OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
  - 5) IF SILT DEPOSITS IN THE ANOKA COUNTY RIGHT-OF-WAY, THE CONTRACTOR IS RESPONSIBLE FOR ITS REMOVAL.
  - 6) ALL DISTURBED AREAS ARE TO BE REVEGETATED WITHIN 14 DAYS OF THE COMPLETION OF ROUGH GRADING.

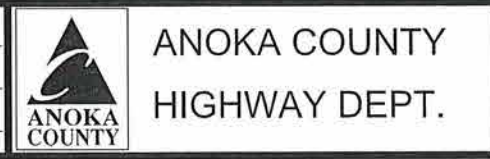


**NOTES:**  
 (A) INLET PROTECTION

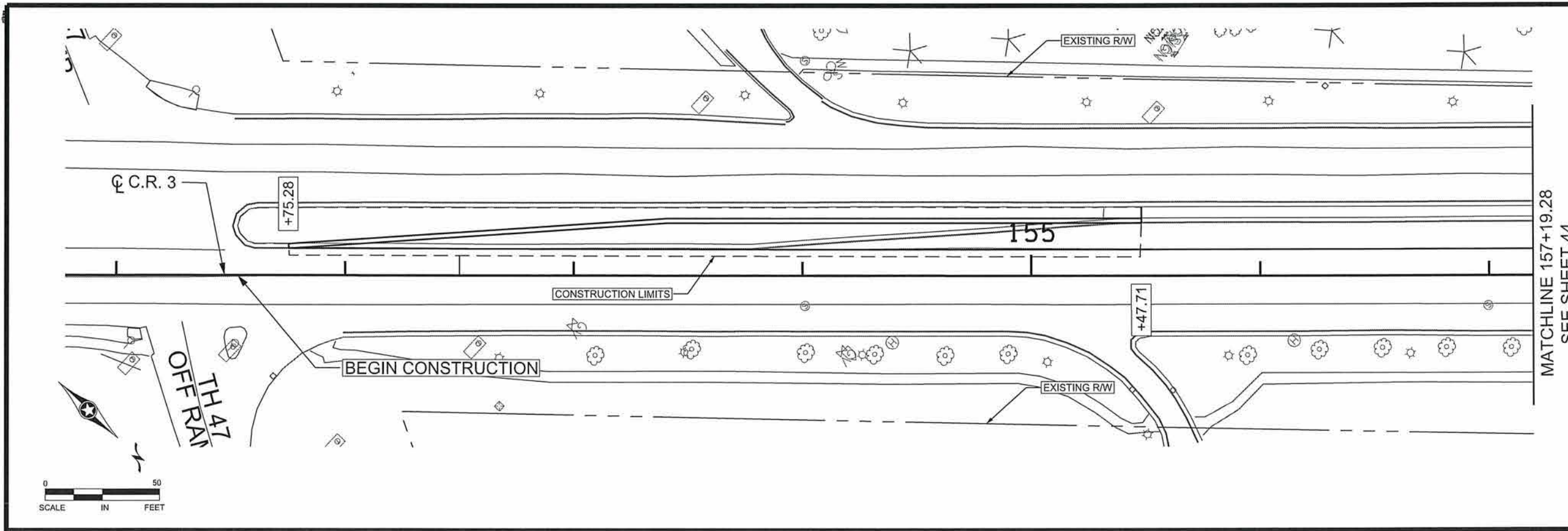
1	03/31/14	DFE	GMP	CAK	BEGIN/END PROJECT TO BEGIN/END CONST. PER MNDOT COMMENTS
2	04/16/14	DFE	GMP	CAK	REVISED NOTE 6 PER CCWD PERMIT REQUIREMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_TE1.dgn					04/17/2014 1:09:44 PM

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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-17-14 LICENSE NO. 24756

DRAWN BY: DFF DATE: 02-13-14  
 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26



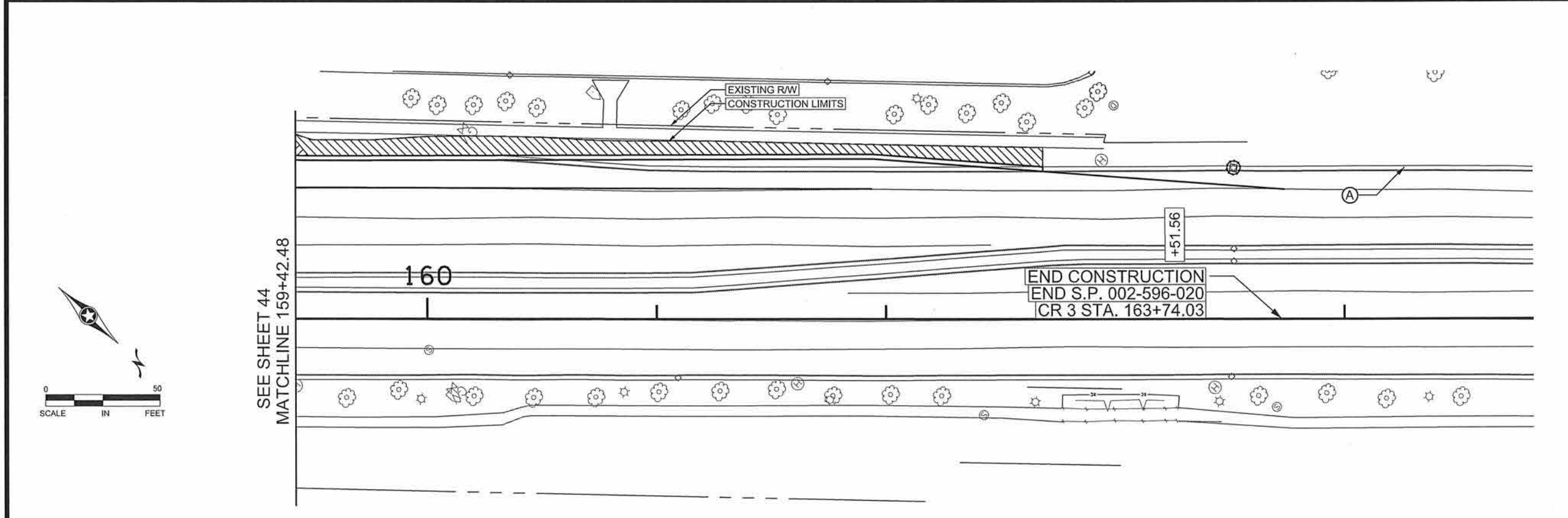
**LEGEND**

- SODDING TYPE SALT RESISTANT
- INLET PROTECTION
- CONSTRUCTION LIMIT
- PERMANENT EASEMENT
- PROPOSED GEOMETRY
- SILT FENCE TYPE MACHINE SLICED
- SURFACE FLOW ARROW
- PROPOSED CATCH BASIN
- INPLACE CATCH BASIN
- PROPOSED MANHOLE
- INPLACE MANHOLE
- PROPOSED APRON
- INPLACE APRON
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- INPLACE STORM SEWER

**NOTES**

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2 OF 2

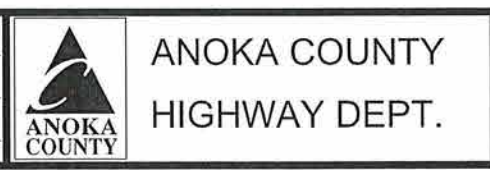


**NOTES:**  
 (A) INLET PROTECTION

1	03/31/14	DFF	GMP	CAK	ADDED BEGIN/END CONSTRUCTION PER MNDOT COMMENTS
2	04/16/14	DFF	GMP	CAK	REVISED NOTE 6 PER CCWD PERMIT REQUIREMENTS
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-596-20\Plan\0259620_TE2.dgn 04/17/2014 1:09:45 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: CURT KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 4-17-14 LICENSE NO. 24756

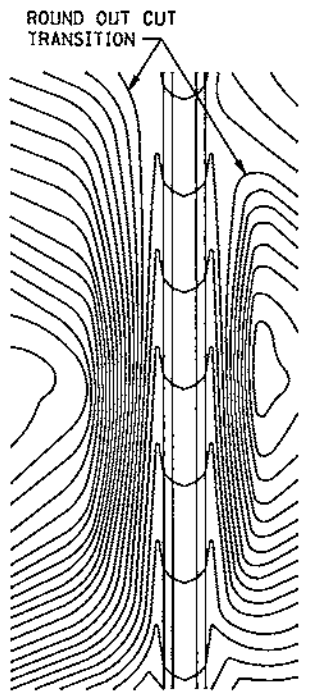
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 DESIGN BY: DFF DATE: 02-13-14  
 CHECKED BY: GMP DATE: 02-18-14



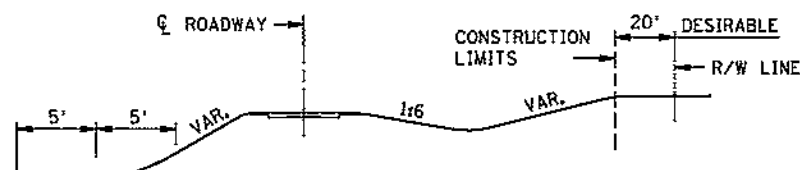
S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

TURF ESTABLISHMENT & EROSION CONTROL PLAN  
 CR 3 (COON RAPIDS BLVD)  
 Sheet 45 of 91 Sheets

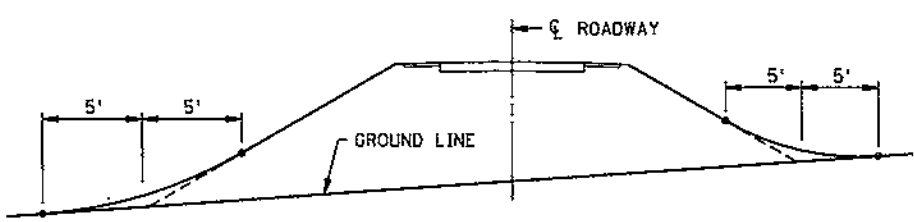
PLOTTED/REVISED:  
03/05/2014



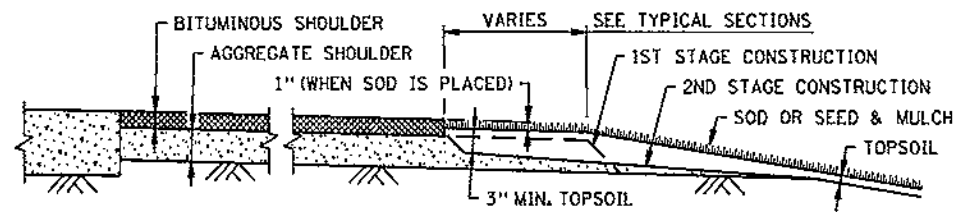
CONTOURING ROAD CUTS



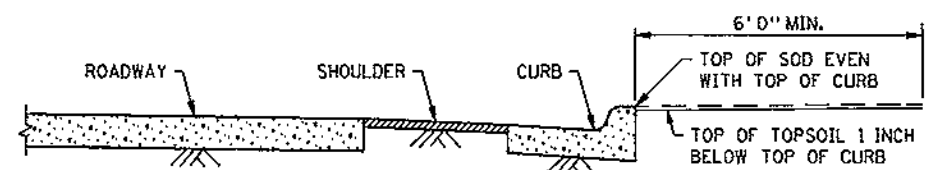
ROUNDING SHOULDERS AND BACKSLOPES



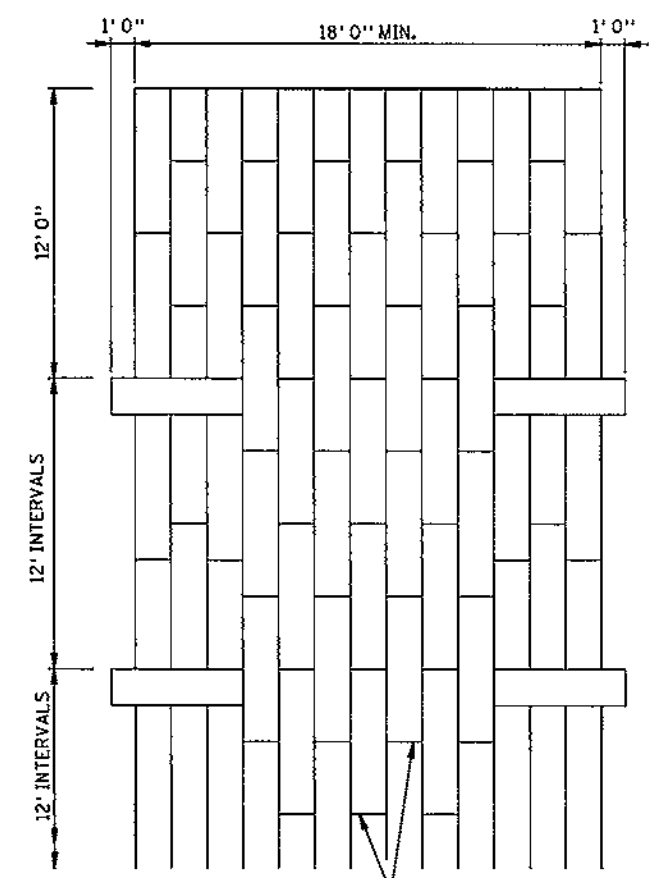
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



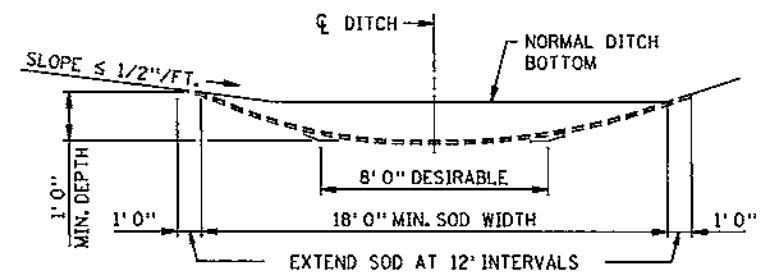
SHAPING AND TOPSOILING INSLOPES



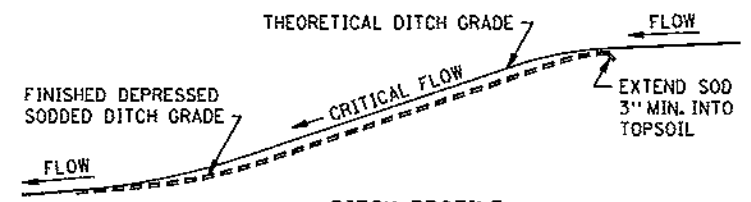
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



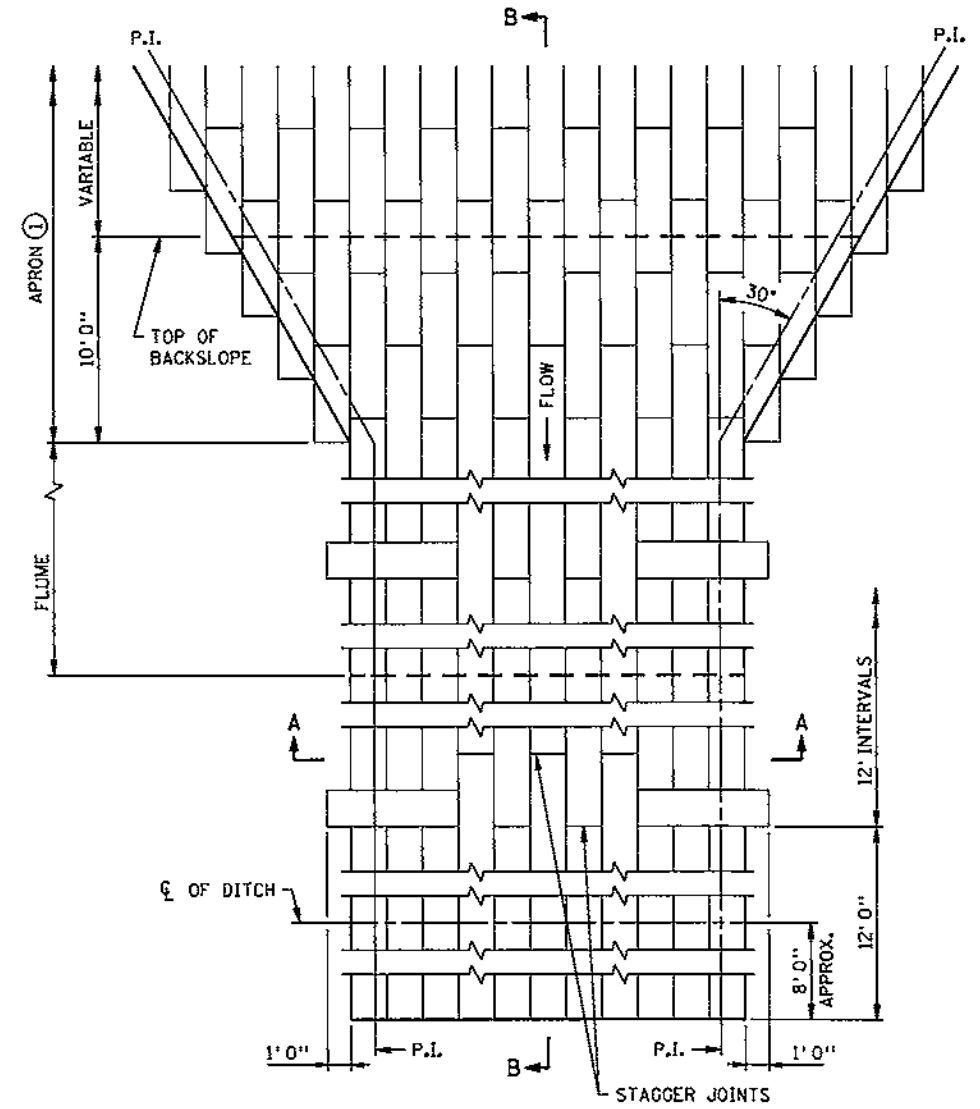
STAGGER JOINTS  
PLAN VIEW



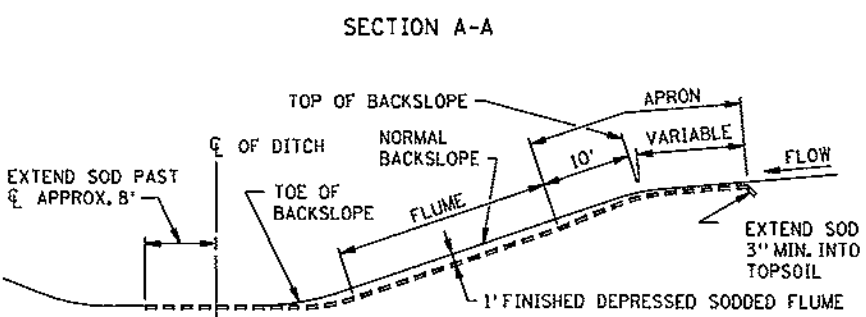
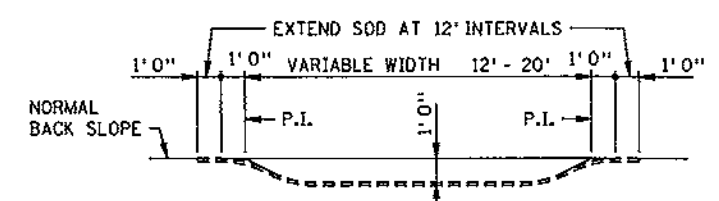
SODDED DITCH CROSS SECTION  
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.),  
FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



DITCH PROFILE  
SODDED DITCH DETAILS



PLAN VIEW



SECTION B-B  
SODDED FLUME DETAILS

NOTES:  
SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.  
① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO. 5-297.404	TITLE
STANDARD APPROVED: NOVEMBER 20, 2002	PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
S.P. 002-596-020 C.P. 12-26 S.P. 114-130-007	

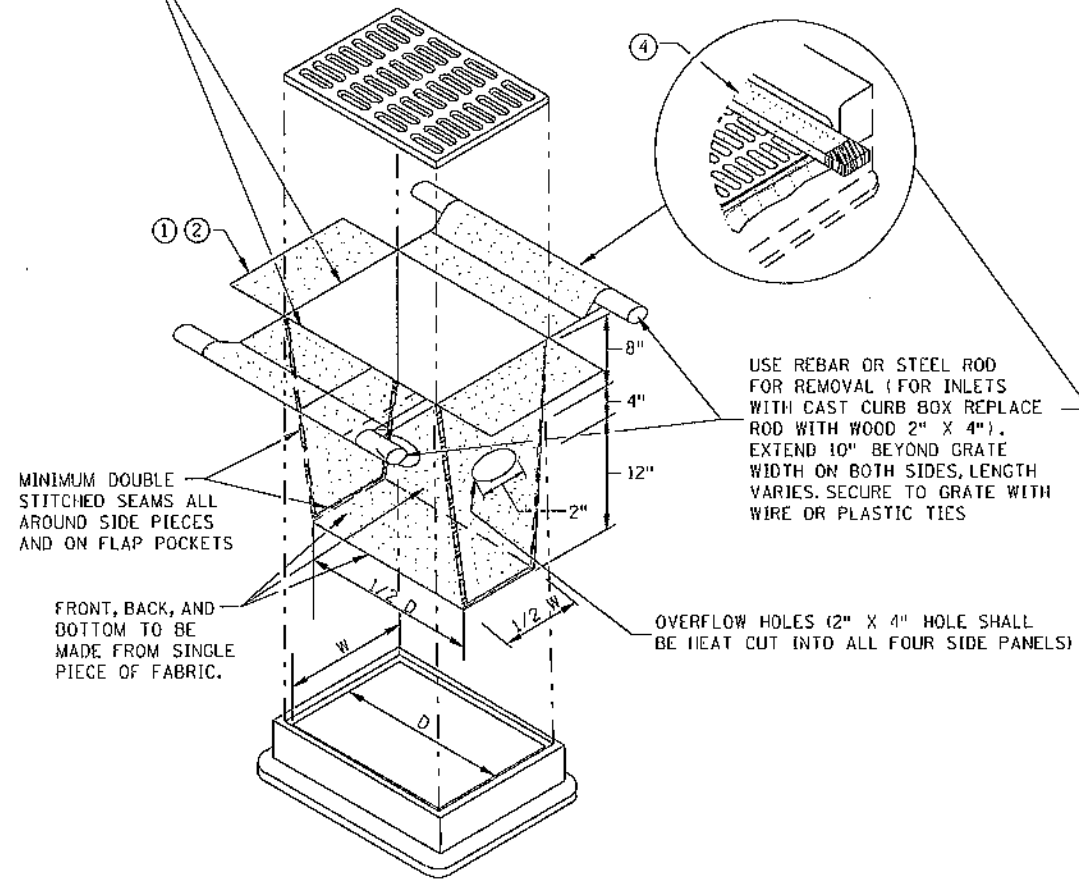
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PLOTTED/REVISED:  
03/27/2014

DISTRICT #: USER NAME: dffrey PATH & FILENAME: F:\02-596-20\PlanStandard\_Plans\405\_4\_spr.dgn

FILE NAME: s405\_4\_spr.dgn

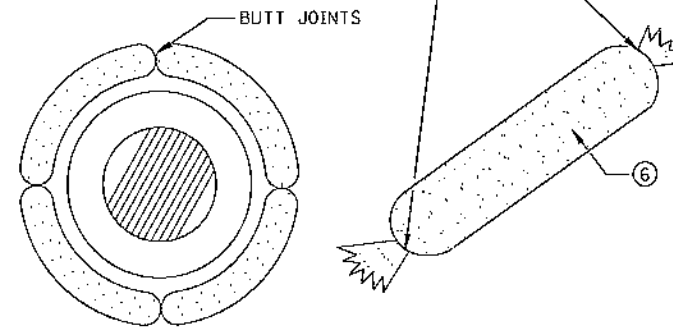
INLET SPECIFICATIONS AS PER THE PLAN  
DIMENSION LENGTH AND WIDTH TO MATCH  
FLAP POCKET



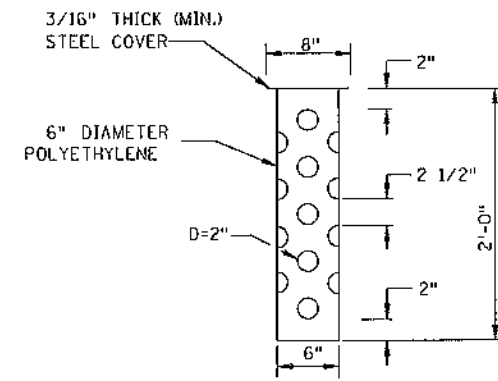
**FILTER BAG INSERT ③**

(CAN BE INSTALLED IN ANY INLET TYPE  
WITH OR WITHOUT A CURB BOX)

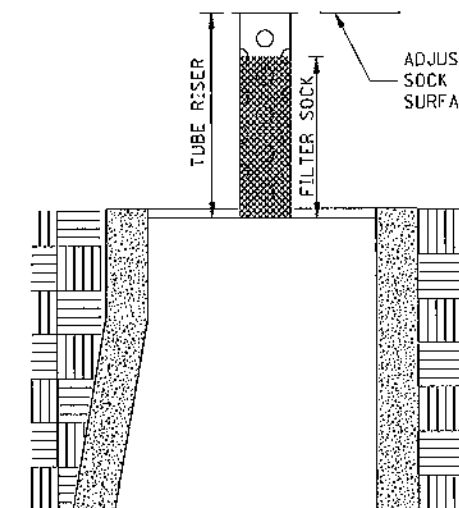
ENDS SECURELY CLOSED TO  
PREVENT LOSS OF OPEN GRADED  
AGGREGATE FILL. SECURED WITH  
50 PSI. ZIP TIE.



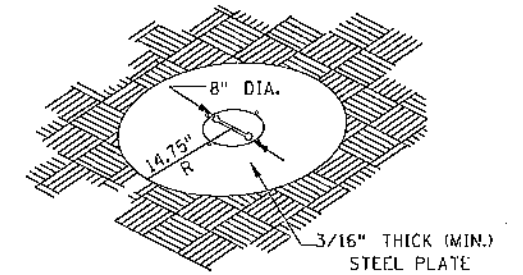
**ROCK LOG/COMPOST LOG**



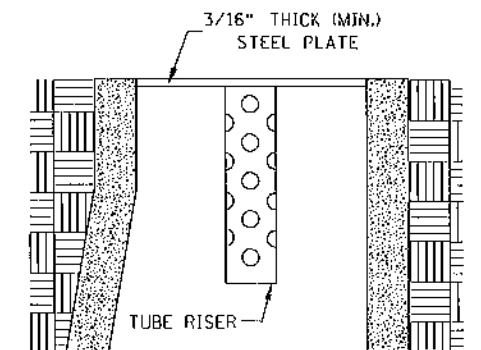
**TUBE RISER**



**SECTION  
(UP POSITION)**

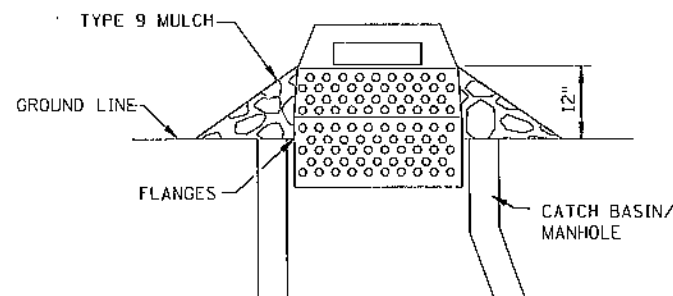


**PERSPECTIVE VIEW**



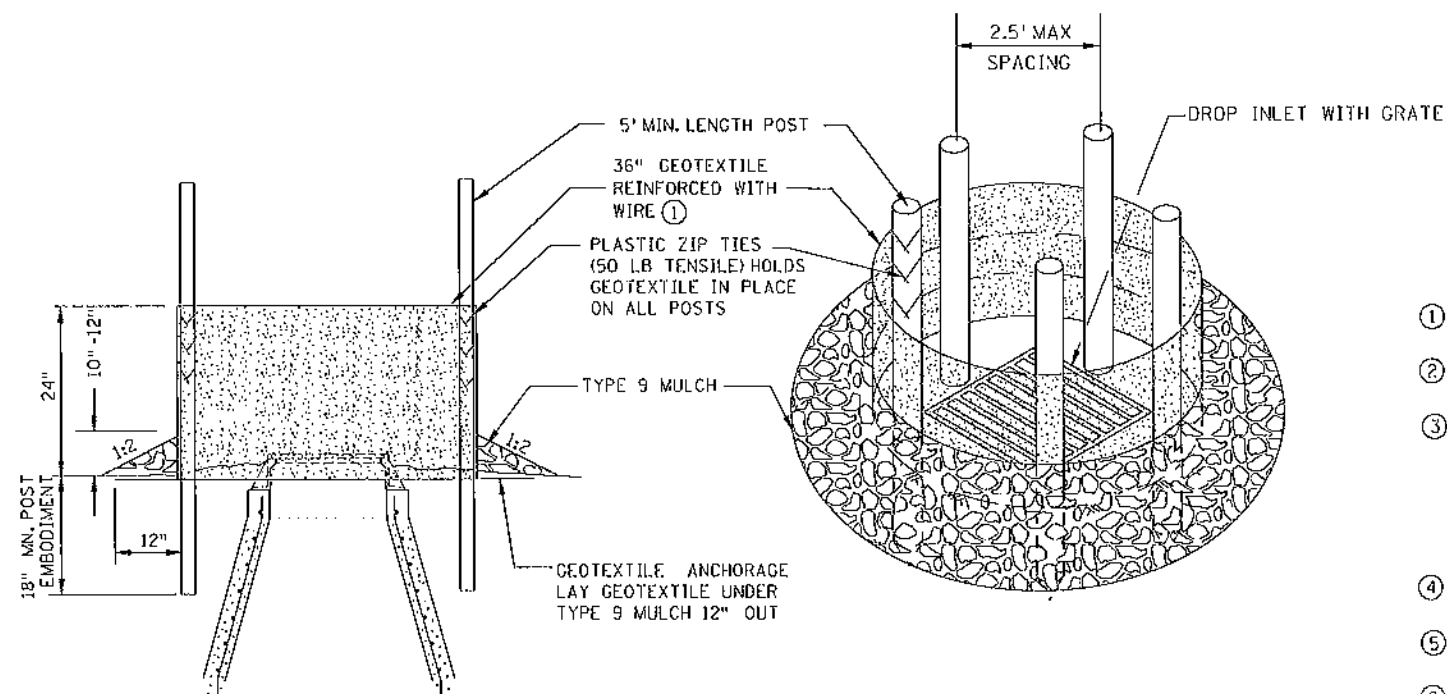
**SECTION  
(DOWN POSITION)**

**POP-UP HEAD**



**SEDIMENT CONTROL INLET HAT**

NOTE:  
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL  
OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE  
THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW  
FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING,  
FLANGES AND A LID/COVER.



**SILT FENCE RING AND ROCK FILTER BERM**

USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS

**NOTES:**

SEE SPECS. 2573, 3137, & 3886.

DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEDE TRAFFIC FLOW.

- ① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
- ② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ③ INSTALLATION NOTES:  
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH CLEARANCE.
- ④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
- ⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
- ⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

STANDARD SHEET NO.  
5-297.405 (4 OF 7)

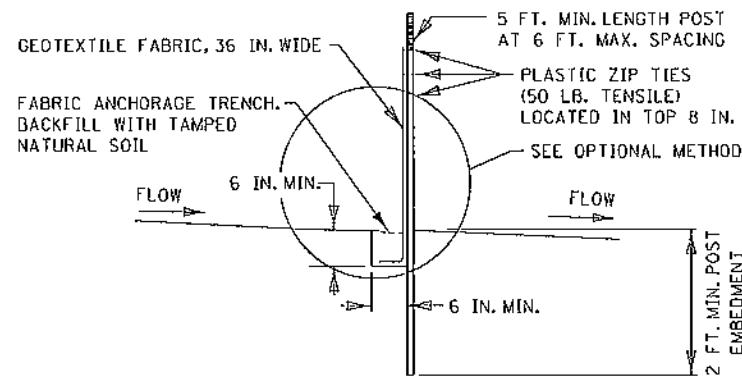
STANDARD APPROVED:  
DECEMBER 11, 2013

S.P. 002-596-020 C.P. 12-26  
S.P. 114-130-007

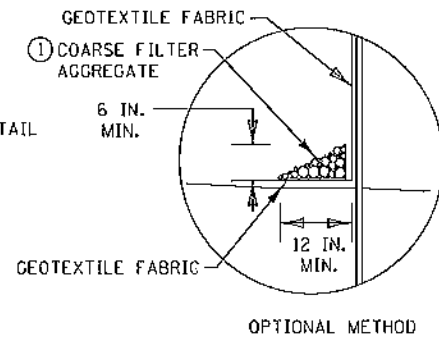
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TEMPORARY SEDIMENT CONTROL  
STORM DRAIN INLET PROTECTION

SHEET NO. 47 OF 91 SHEETS

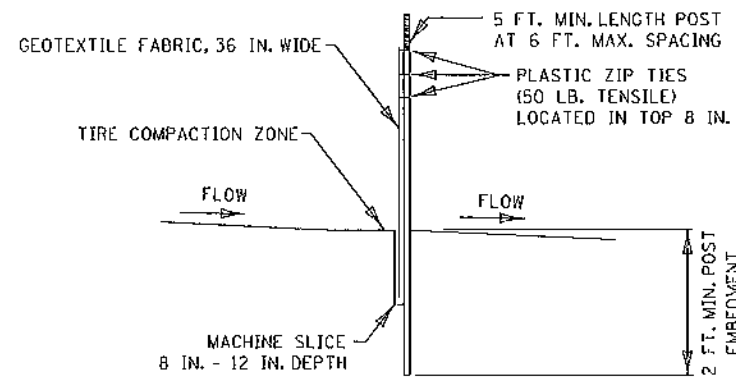
PLOTTED/REVISED:  
03/27/2014



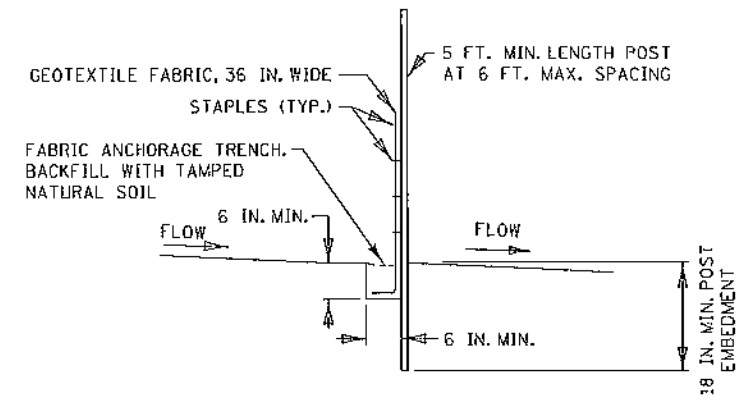
SILT FENCE TYPE HI ②  
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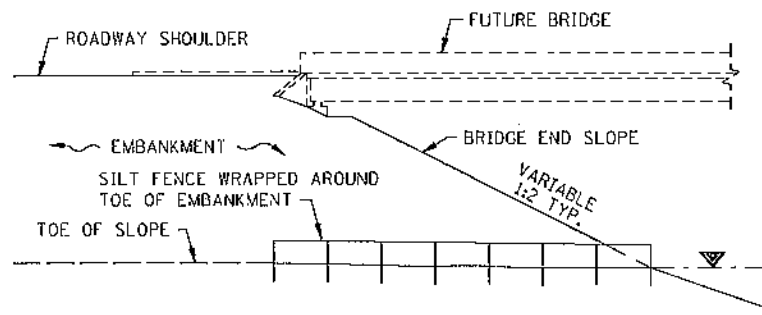
OPTIONAL METHOD



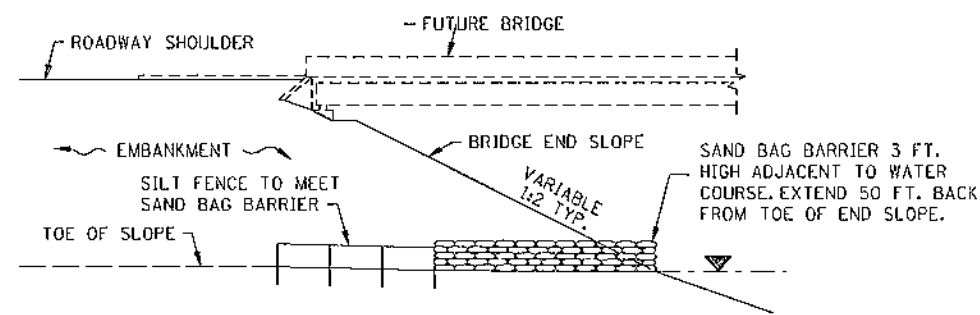
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(MACHINE SLICED)



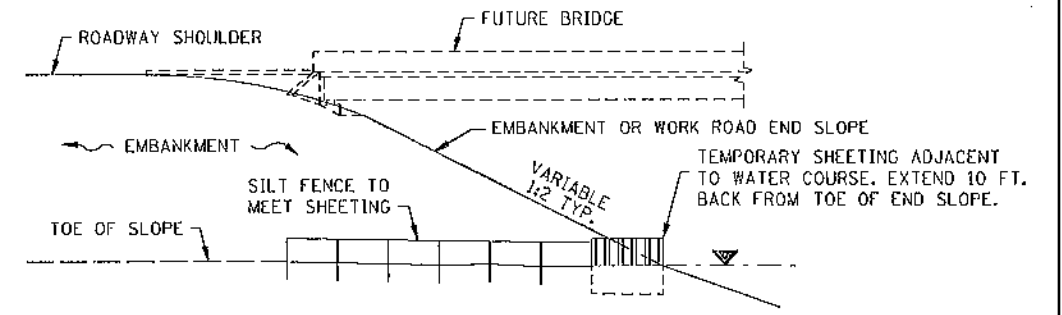
SILT FENCE TYPE PA ③  
(PREASSEMBLED)



SILT FENCE ONLY ④

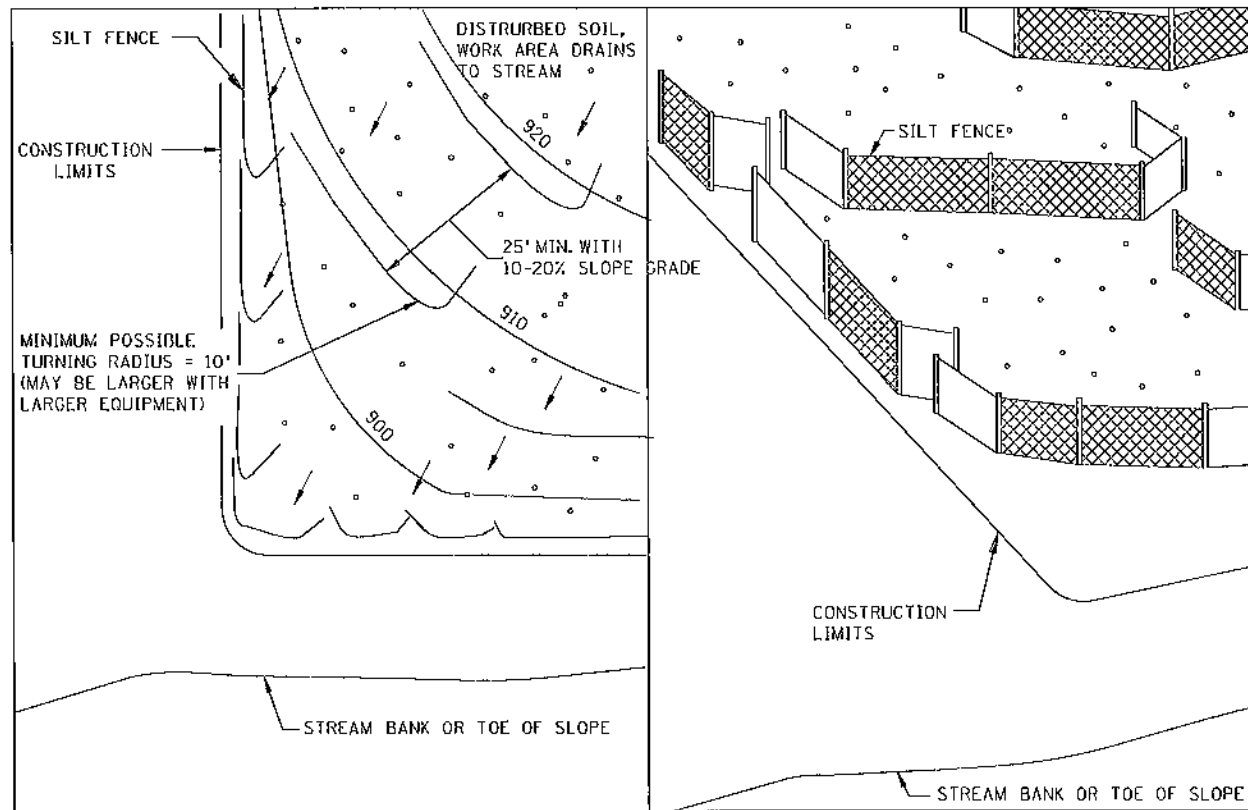


SILT FENCE WITH SAND BAGS ⑤



SILT FENCE WITH SHEETING ⑥

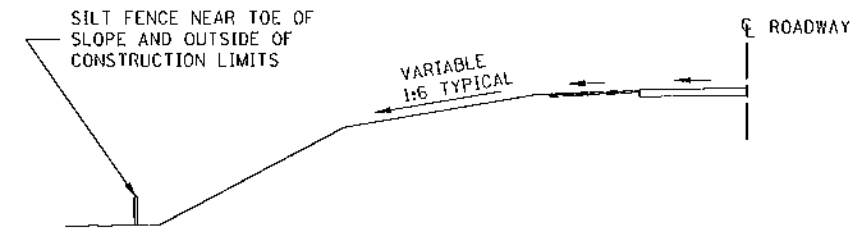
INSTALLATION AT BRIDGE EMBANKMENT ADJACENT TO WATER



PLAN VIEW

PERSPECTIVE VIEW

J-HOOK INSTALLATION



LOCATION AT TOE OF ROADWAY EMBANKMENT

NOTES:

- SEE SPECS. 2573, 3149 & 3886.
- ① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.
- ② TO PROTECT AREAS FROM SHEET FLOW, MAXIMUM CONTRIBUTING AREA: 1 ACRE.
- ③ TO PROTECT AREAS FROM SHEET FLOW, MAXIMUM CONTRIBUTING AREA: 0.25 ACRE.
- ④ WATER COURSE FLOW VELOCITY: STANDING. CONTRIBUTING SLOPE AREA: 1/2 ACRE.
- ⑤ WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC. CONTRIBUTING SLOPE AREA: 1 ACRE.
- ⑥ WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC. CONTRIBUTING SLOPE AREA: 3 ACRES.

STANDARD SHEET NO.  
5-297.405 (6 OF 7)  
STANDARD APPROVED:  
DECEMBER 11, 2013  
S.P. 002-596-020 C.P. 12-26  
S.P. 114-130-007

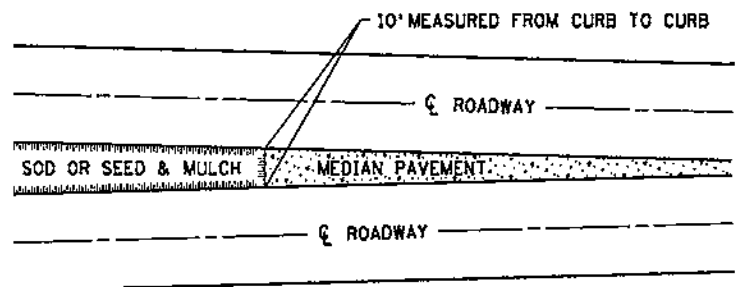
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TEMPORARY SEDIMENT CONTROL  
SILT FENCE

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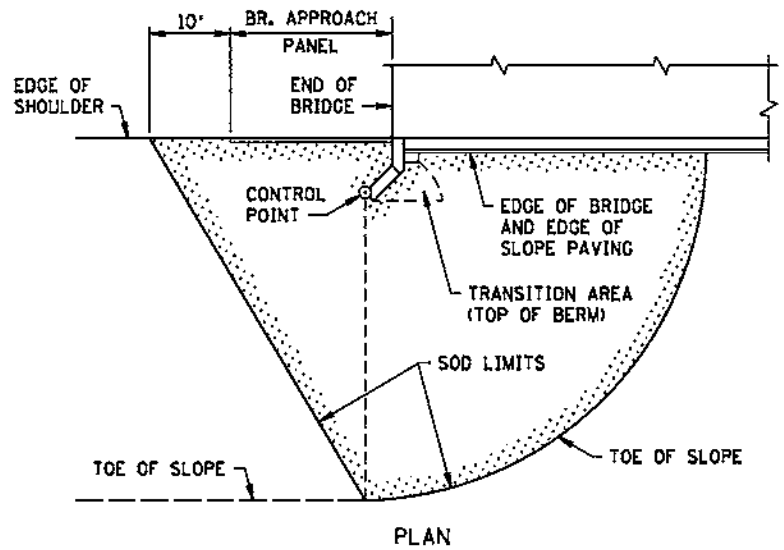


PLOTTED/REVISED: 03/27/2014

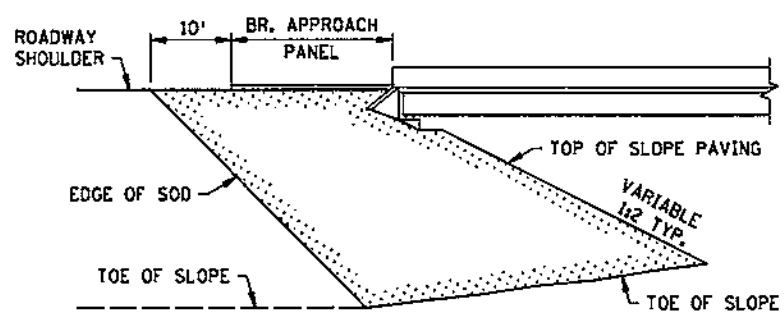
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SODDING LIMITS AT CORE AREA

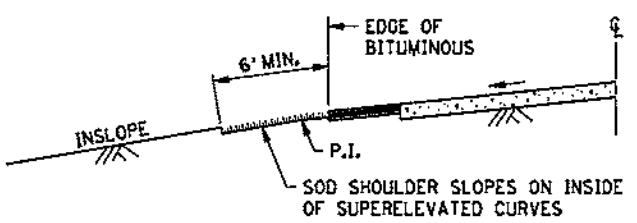


PLAN

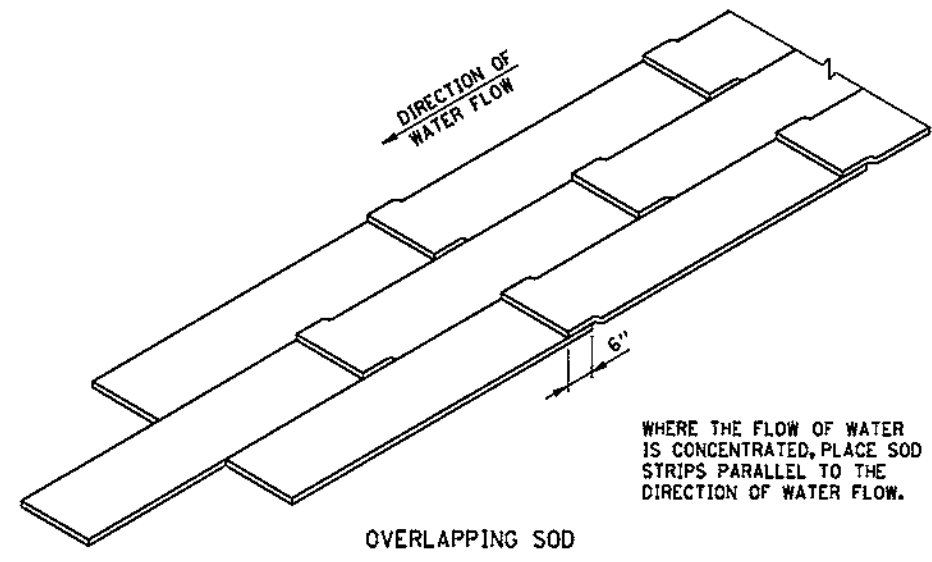


ELEVATION

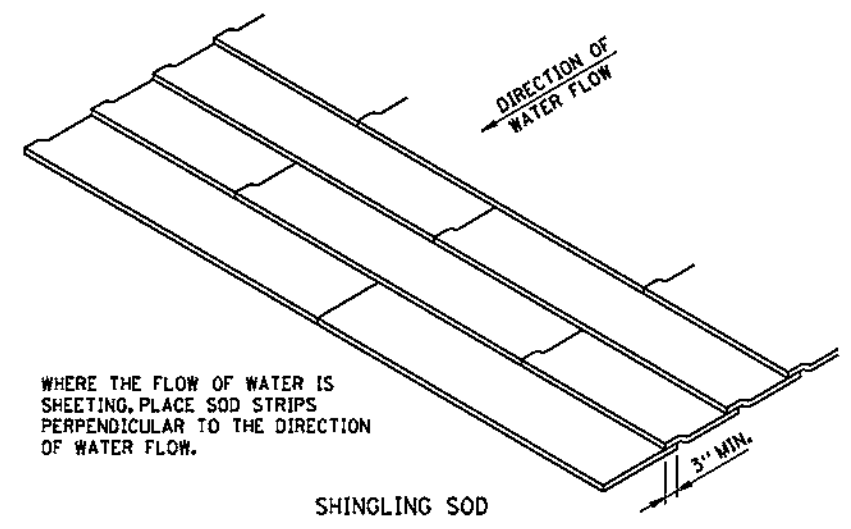
SODDING LIMITS AT BRIDGE APPROACH FILLS



SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

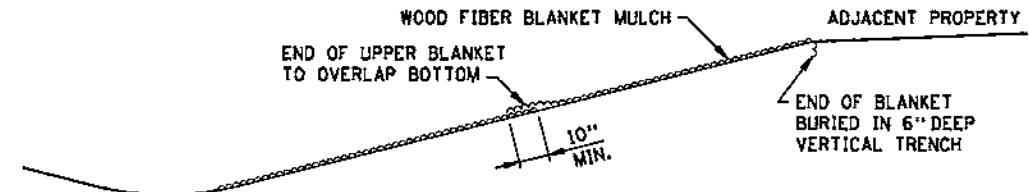


SHINGLING SOD

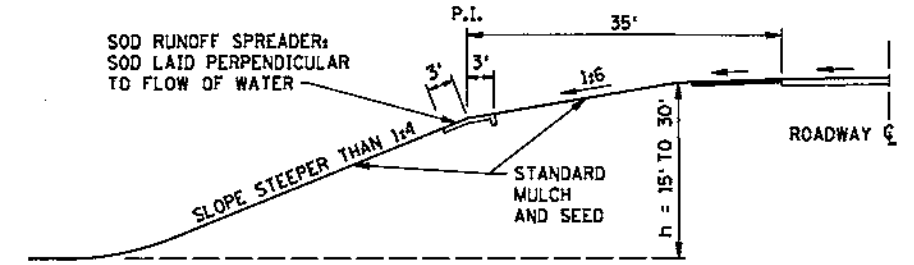
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.

WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

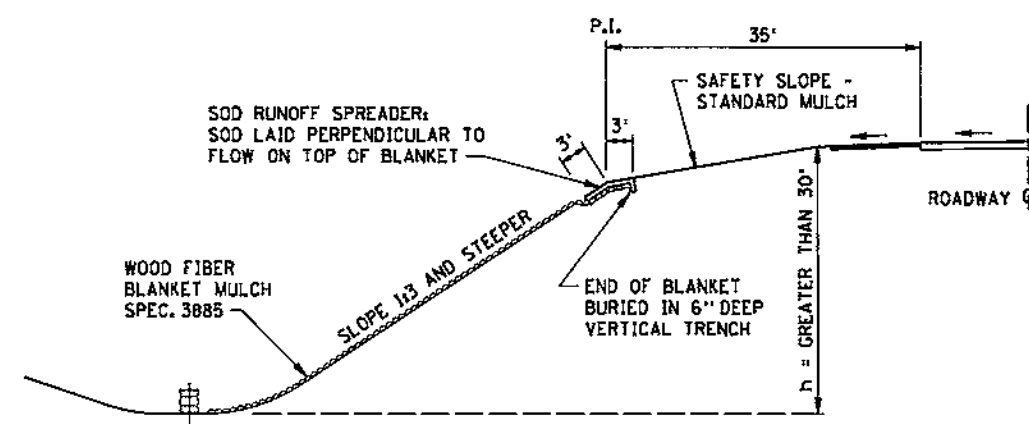
SPECIAL SOD PLACEMENT TECHNIQUES



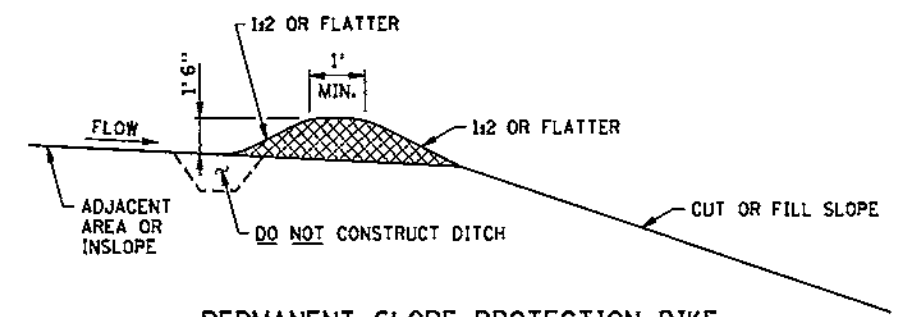
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)



PERMANENT SLOPE PROTECTION DIKE

STANDARD SHEET NO. 5-297.406	TITLE PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
STANDARD APPROVED: JANUARY 31, 1995	
REVISION DATE 10-26-2000	S.P. 002-596-020 C.P. 12-26 S.P. 114-130-007
SHEET NO. 49 OF 91 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.

**PREFORMED THERMOPLASTIC:**

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

**PAINT:**

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

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

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

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

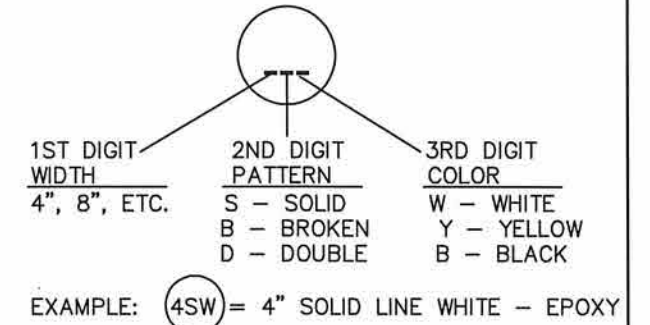
PERMANENT PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
24" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	55
24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	165
3'X6' THERMOPLASTIC ZEBRA CROSSWALK	SQ FT	918
PAVEMENT MESSAGE (RT ARROW) PREFORMED THERMOPLASTIC	EACH	3
PAVEMENT MESSAGE (LT ARROW) PREFORMED THERMOPLASTIC	EACH	3
PAVEMENT MESSAGE (LT/THRU ARROW) PREFORMED THERMOPLASTIC	EACH	3
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	2880
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	1160
4" DOUBLE YELLOW - EPOXY PAINT	LIN FT	580

**SYMBOLS & MATERIALS LEGEND**

- CROSSWALK BLOCK WHITE-POLY PREFORM
- ↩ PAVEMENT MESSAGE (LEFT ARROW) POLY PREFORM

**STRIPING KEY**

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



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: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE: 3/3/14  
DESIGN BY: RLB DATE: 3/3/14  
CHECKED BY: JR DATE: 3/3/14



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

STATE PROJECT NO. 002-596-020  
STATE PROJECT NO. 114-130-007  
CITY PROJECT NO. 12-26  
COUNTY PROJECT NO.

PERMANENT MARKING TABULATION  
Sheet 50 of 91 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Bases\TRAFFIC\Perm pvmt mrkg guide notes\_guidelines.dwg



F & I SIGN PANELS TYPE C							N
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R6-1L	12" x 36"		1	3.00	3.00		
R6-1R	12" x 36"		3	3.00	9.00		
R1-1	30" x 30"		3	6.25	18.75	1	7.0'
X4-13	4" diameter x 15"		0	1.31	0		
R3-X1	24" x 36"		1	6.00	6.00	1	7.0'
R3-X2	24" x 36"		1	6.00	6.00	1	7.0'
R3-30AELA	48" x 30"	 R3-30AELA	1	10.00	10.00	2	7.0'
R3-2	24" x 24"		2	4.00	8.00	1	7.0'
R4-7	24" x 30"		4	5.00	20.00	1	7.0'
X4-2	18" x 18"		4	2.25	0		
R5-1	30" x 30"		3	6.25	18.75	1	7.0'
R8-3a	24" x 24"		2	4.00	8.00	1	7.0'
W3-3	30" x 30"		2	6.25	12.50	2	7.0'
R3-30AELA	36" x 30"		1	7.50	7.50	2	7.0'

**NOTES:**

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED FEBRUARY, 2014
- LOCATIONS OF ALL PERMANENT STRIPING AND PAVEMENT MESSAGES ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL MAINLINE PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- SEE PERMANENT SIGN TABULATIONS FOR ADDITIONAL INFORMATION.
- ALL SEGMENT STRIPE LINES SHALL BE EPOXY. PERMANENT MESSAGES AND ARROWS SHALL BE PREFORMED THERMOPLASTIC.
- ALL SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.

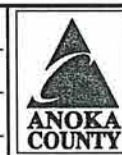
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NAME: P:\02-596-20\02-Base\TRAFFIC\EXISTING SIGNING & STRIPING.dwg

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: CURT A. KOBILARCSIK  
 SIGNATURE:   
 DATE: 3-10-14 LICENSE NO. 24756

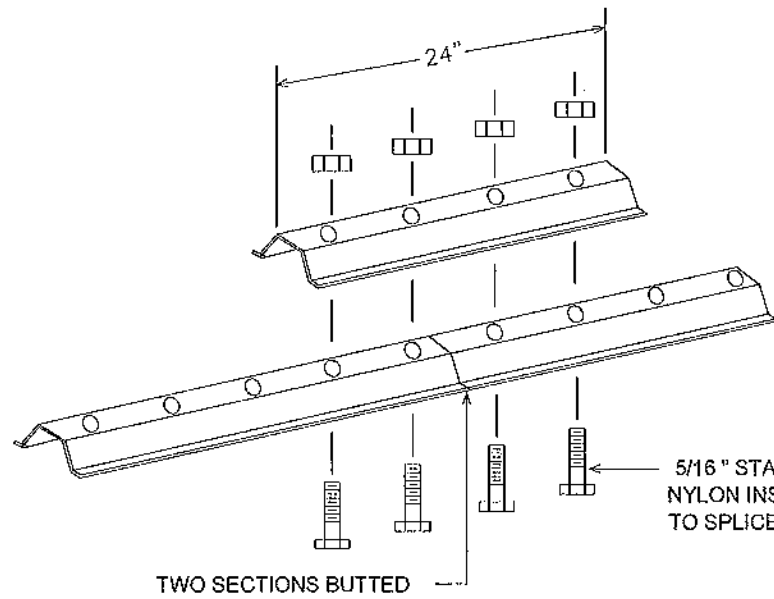
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 CHECKED BY: JR DATE: 2/28/14



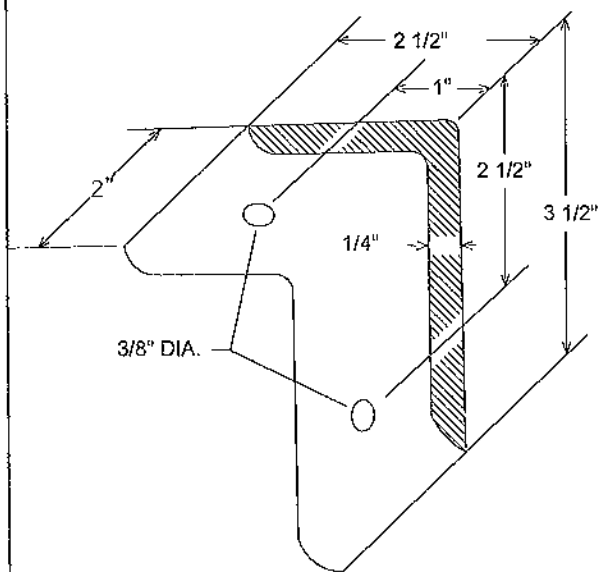
**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO.

PERMANENT SIGNING & STRIPING PLAN  
 Sheet 52 of 91 Sheets

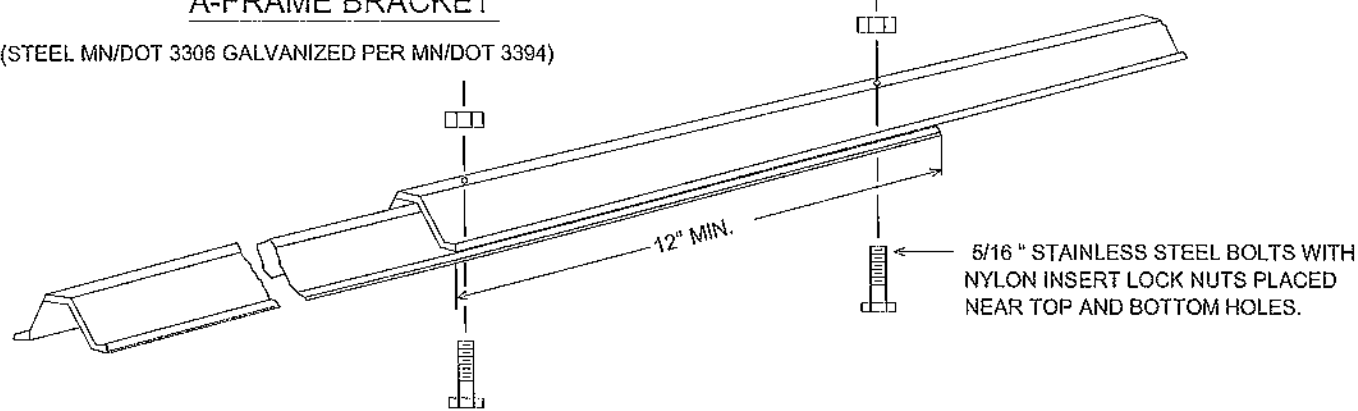


LATERAL BRACE OR STRINGER  
SPLICE DETAIL (EXPLODED VIEW)



A-FRAME BRACKET

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



KNEE BRACE SPLICE

3 1/2" x 3 1/2" SHIM PLATE

STAINLESS STEEL WASHER AND NYLON WASHER  
(T= 1/32" MIN., I.D.= 3/8" MAX., O.D.= 7/8" MAX.)

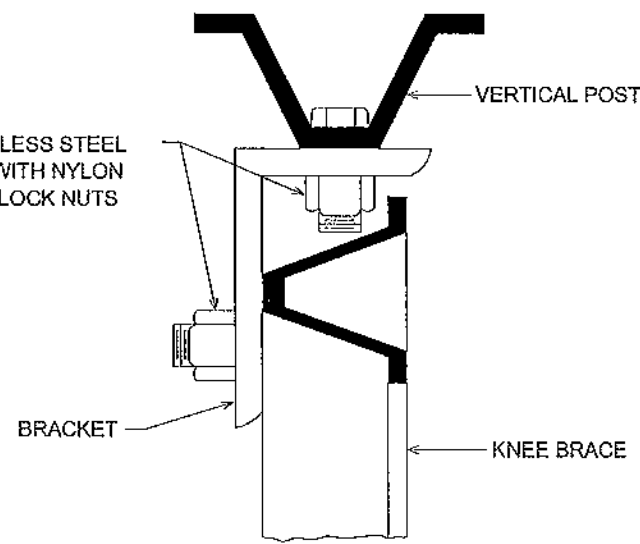
SIGN PANEL

STRINGER

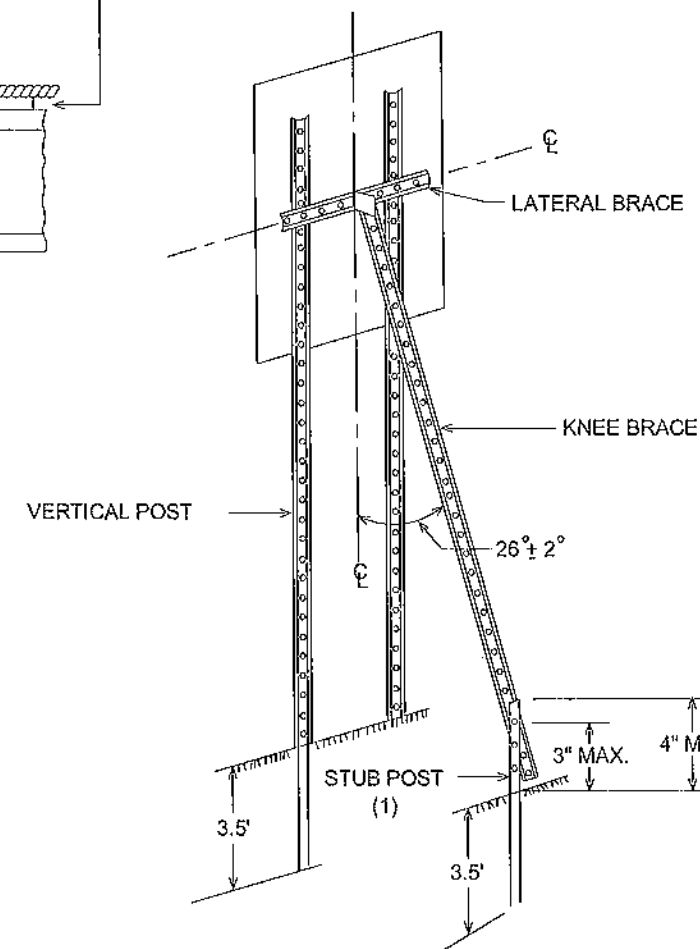
VERTICAL POST

5/16" STAINLESS STEEL BOLT  
WITH NYLON INSERT LOCK NUT

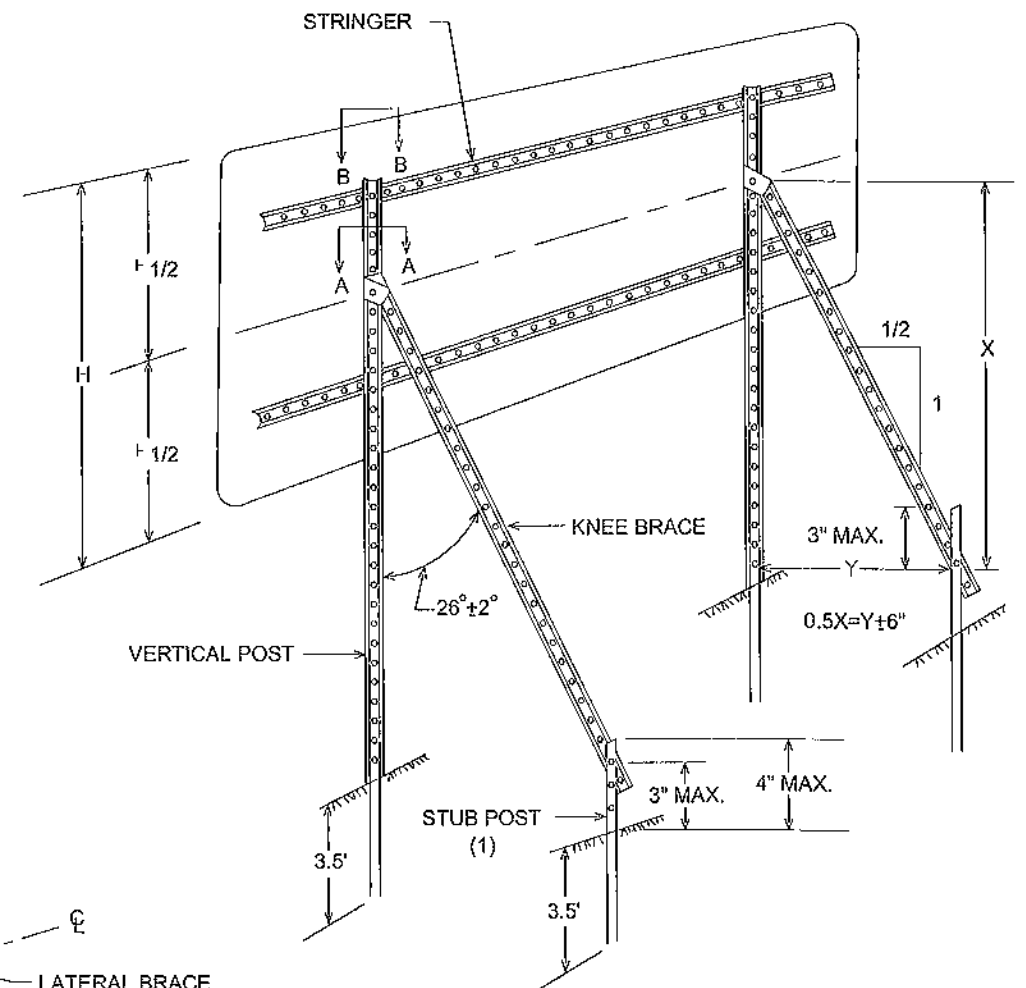
SECTION B-B



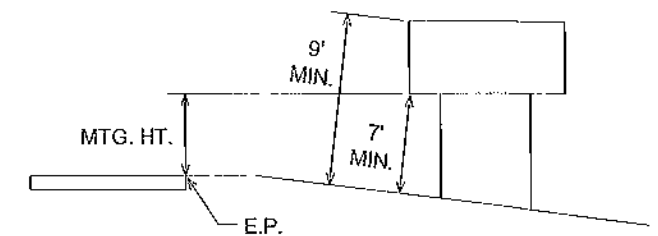
SECTION A-A



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



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



TYPICAL MOUNTING

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

TYPE C & D SIGN  
STRUCTURAL DETAILS

NO	DATE	BY	CRD	APPR	REVISION

NAME: P:\02-596-20\Bases\TRAFFIC\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: CURT A KOBIARCSIK  
 SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LICENSE NO. 24756

DRAWN BY: RLB DATE: 3/4/14  
 DESIGN BY: RLB DATE: 3/4/14  
 CHECKED BY: JR DATE: 3/4/14

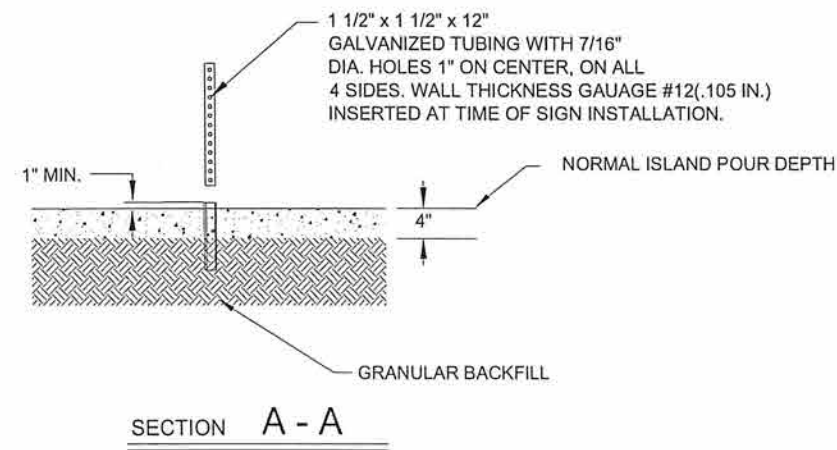
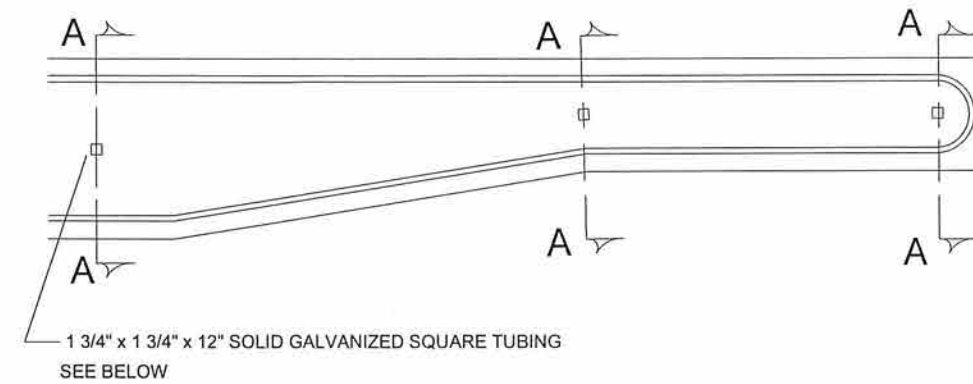


ANOKA COUNTY  
HIGHWAY DEPT.

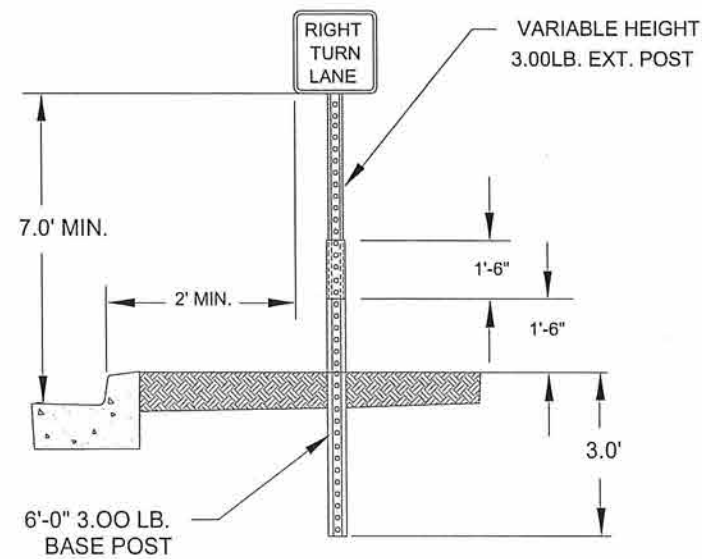
STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

SIGNING & STRIPING DETAILS

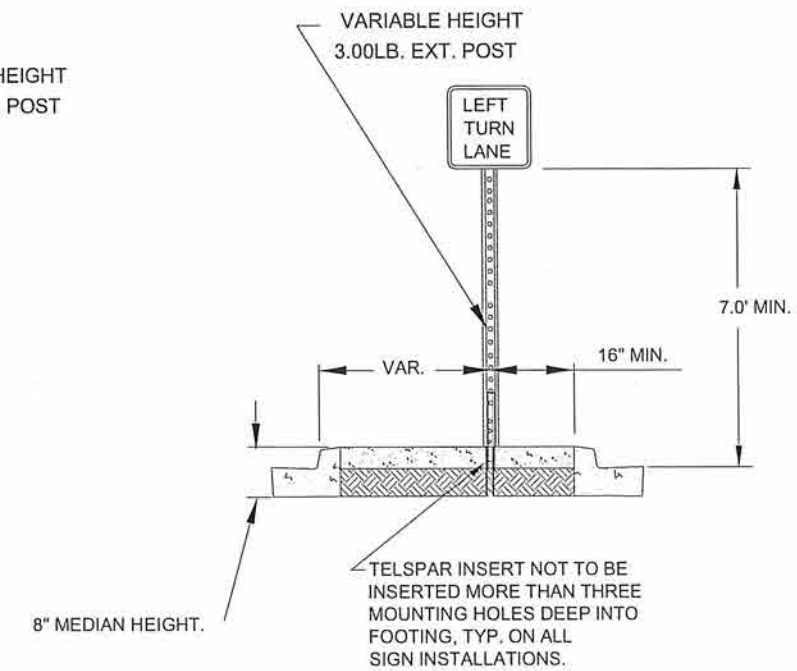
Sheet 53 of 91 Sheets



GROUND POST MOUNT SIGN  
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN  
INSTALLATION TYPICAL



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Bose\TRAFFIC\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.

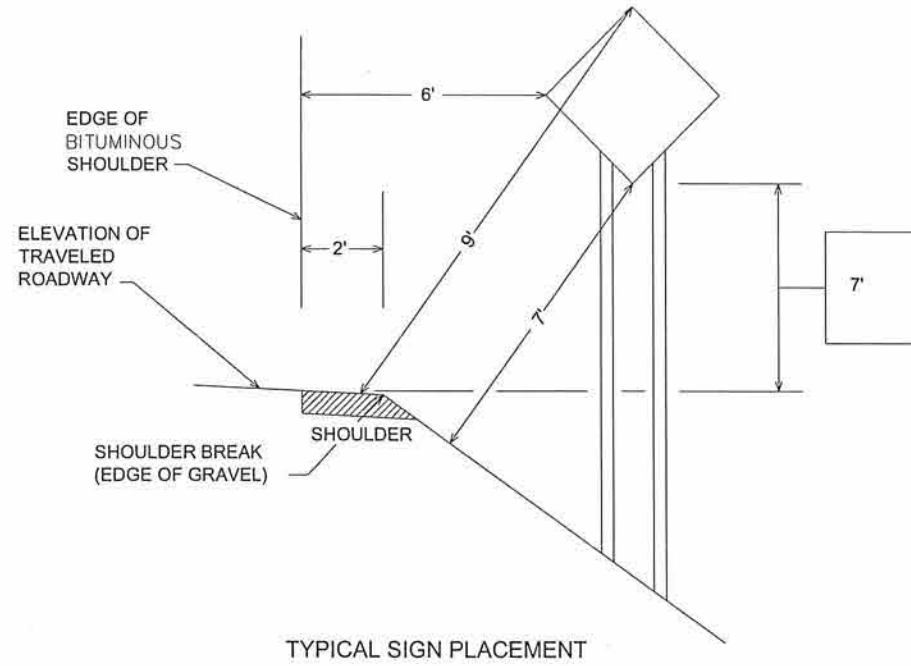
PRINT NAME: CURT A KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 3-10-14 LICENSE NO. 24756

DRAWN BY: RLB DATE 3/4/14  
 DESIGN BY: RLB DATE 3/4/14  
 CHECKED BY: JR DATE 3/4/14

ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. 002-596-020  
 STATE PROJECT NO. 114-130-007  
 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO. \_\_\_\_\_

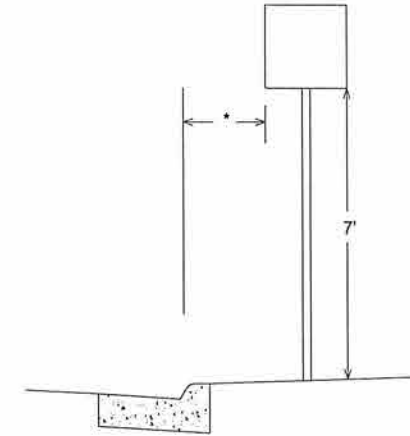
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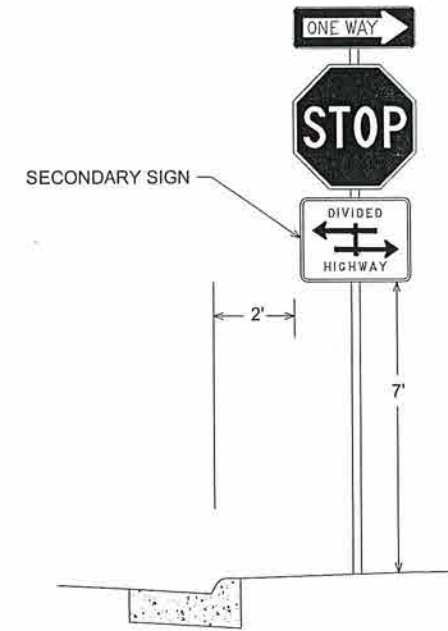
TYPICAL SIGN PLACEMENT

URBAN

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



TYPICAL SIGN PLACEMENT



NOTE:

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

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.  
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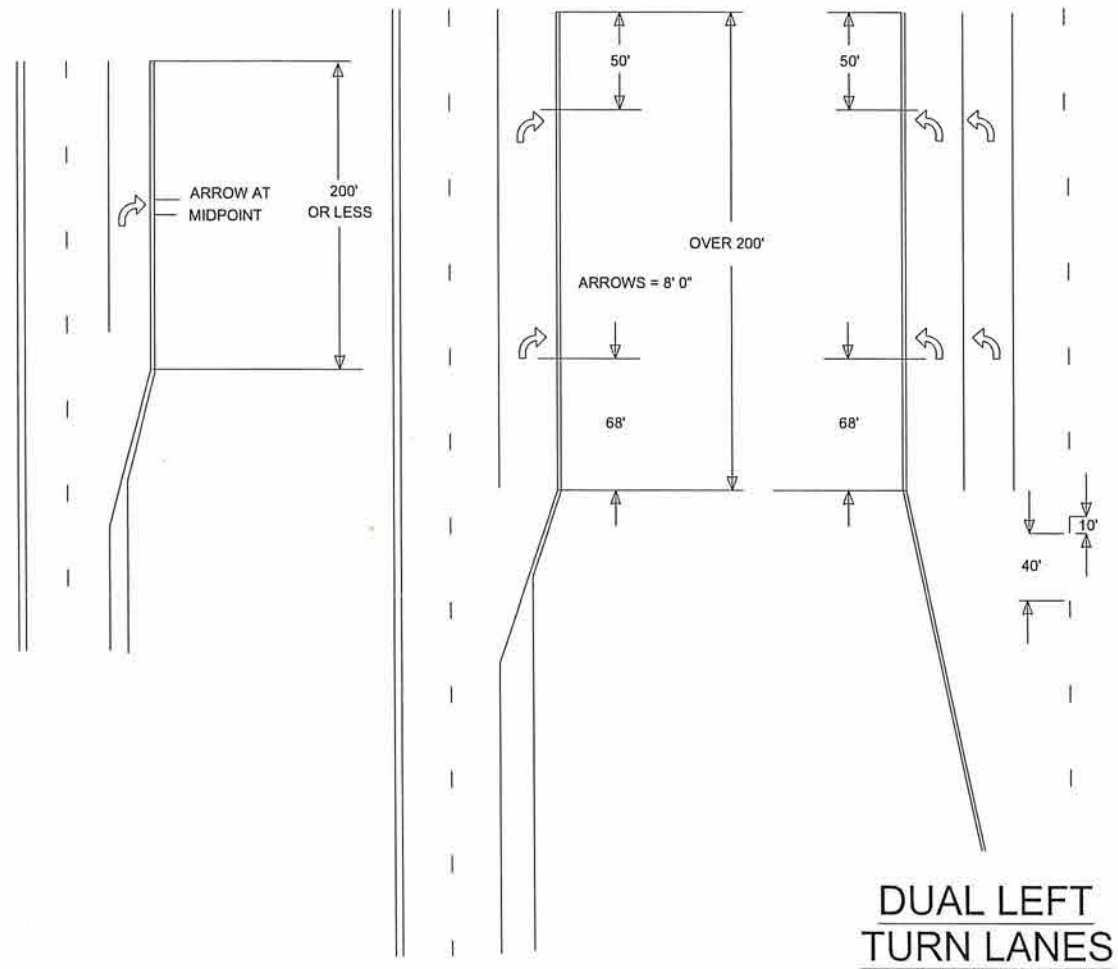


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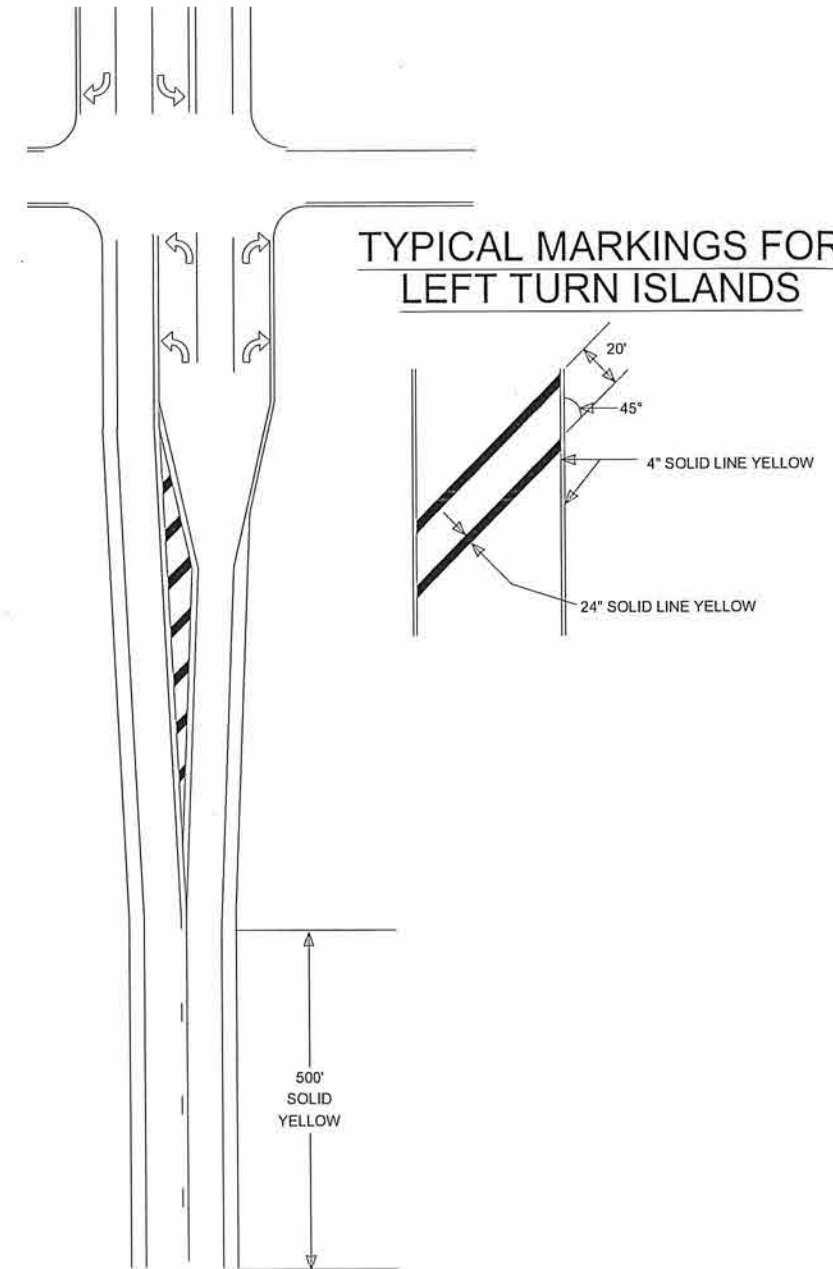
STATE PROJECT NO. 002-596-020  
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 CITY PROJECT NO. 12-26  
 COUNTY PROJECT NO.

SIGNING & STRIPING DETAILS  
 Sheet 55 of 91 Sheets

**TYPICAL MESSAGE PLACEMENT  
FOR TURN LANES**



**TYPICAL MARKINGS FOR  
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-596-20\Bose\TRAFFIC\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: CURT A KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 3-10-14 LICENSE NO. 24756

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DESIGN BY: RLB DATE: 3/4/14

CHECKED BY: JR DATE: 3/4/14



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. 002-596-020

STATE PROJECT NO. 114-130-007

CITY PROJECT NO. 12-26

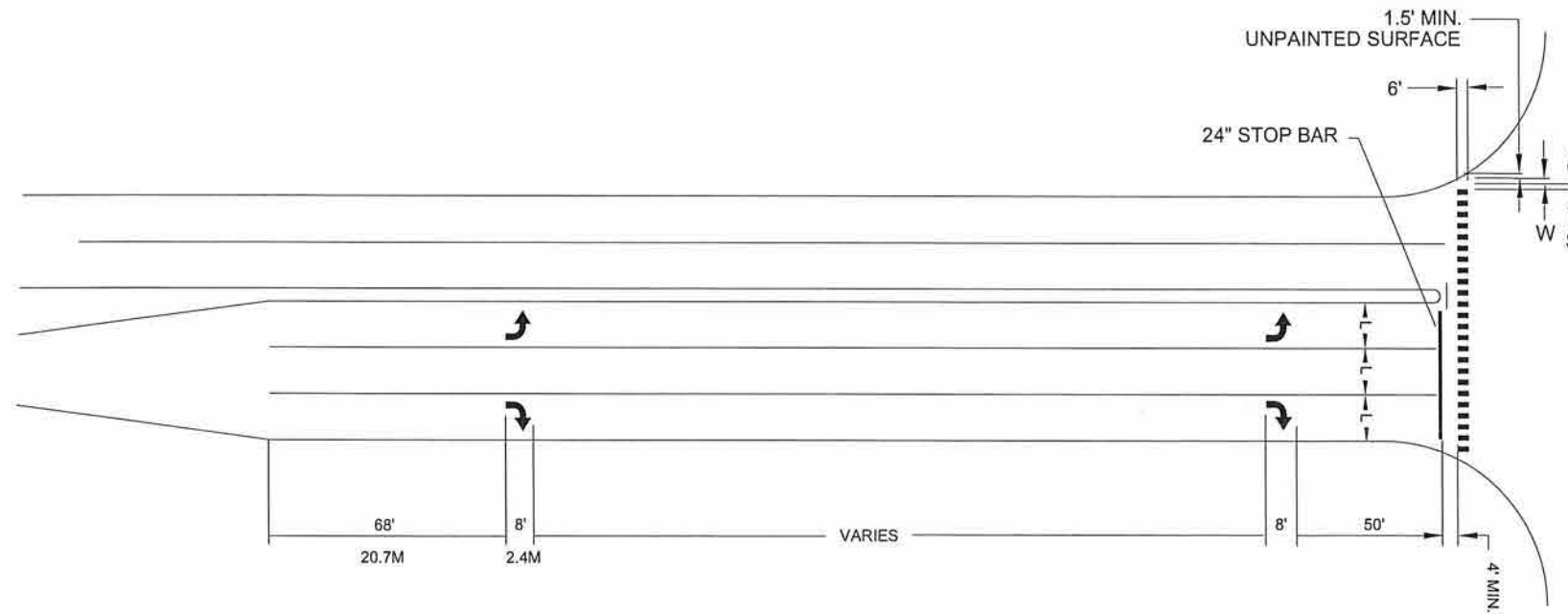
COUNTY PROJECT NO.

SIGNING & STRIPING DETAILS

Sheet 56 of 91 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.

# NOTES & GUIDELINES

## GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR 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 TREATMENTS AND/OR LAITANCE. ON LOW SPEED (SPEED LIMIT 35 OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS, SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

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

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

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

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

## 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°F OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OF 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.

NO	DATE	BY	CKD	APPR	REVISION

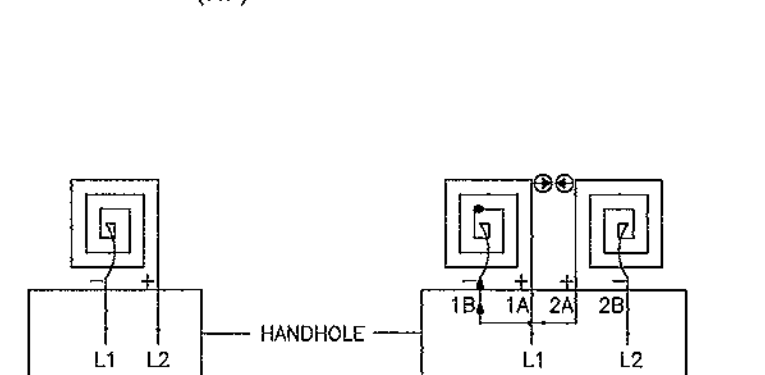
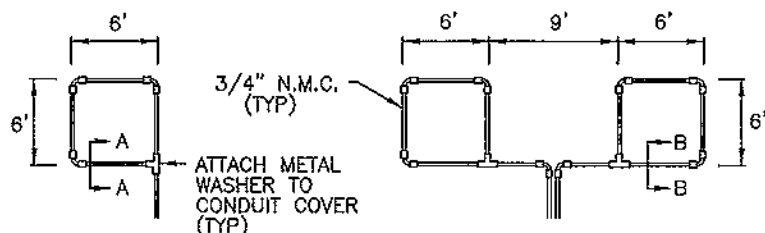
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**ANOKA COUNTY**  
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 COUNTY PROJECT NO. \_\_\_\_\_

SIGNING & STRIPING DETAILS  
 Sheet 57 of 91 Sheets

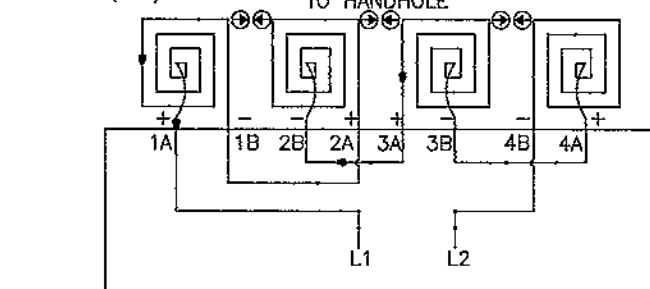
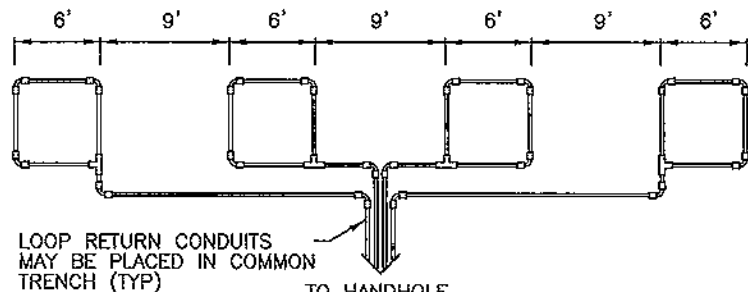


**LOOP DETECTOR  
DETAIL 'A'**  
(LOOP PHASING FOR  
SINGLE CONNECTION)

LOOP CONNECTIONS SHALL BE  
LABELED AND SPLICED IN THE  
HANDHOLE AS FOLLOWS:

L1 TO 1A  
1B TO 2A  
2B TO L2

**LOOP DETECTOR  
DETAIL 'B'**  
(LOOP PHASING FOR  
SERIES CONNECTION)

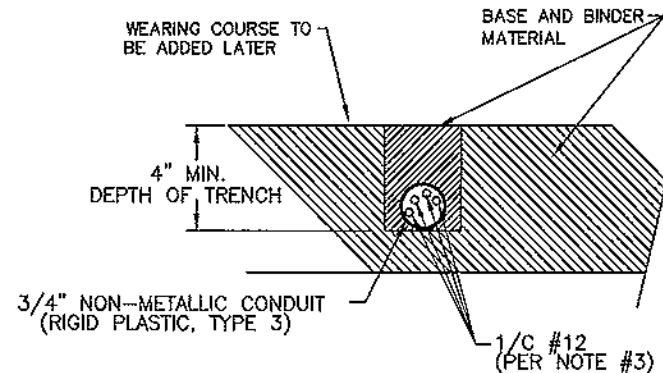


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED  
IN THE HANDHOLE AS FOLLOWS:

L1 TO 1A      3B TO 4A  
1B TO 2A      4B TO L2  
2B TO 3A

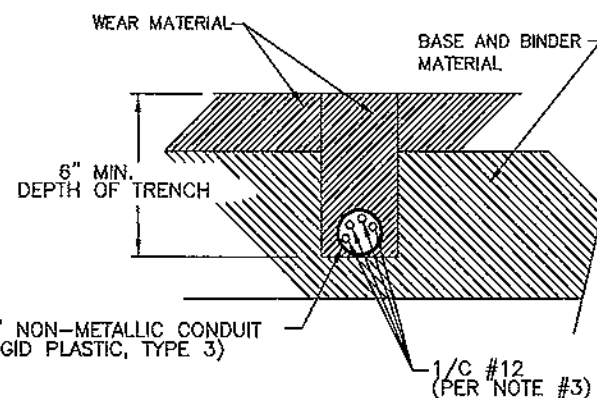
SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE.  
ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE  
(1A, 1B, ECT)

**LOOP DETECTOR  
DETAIL 'C'**  
(LOOP PHASING FOR  
SERIES CONNECTION)



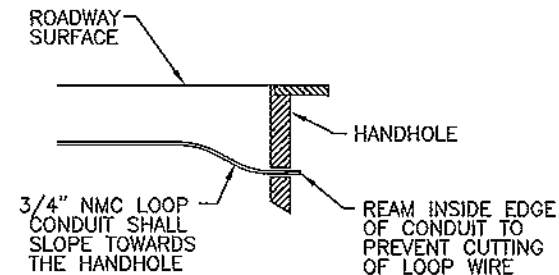
**SECTION A-A**

DETAIL FOR LOOP INSTALLATION  
IN NEW ROADWAY



**SECTION B-B**

DETAIL FOR LOOP INSTALLATION  
IN EXISTING ROADWAY



**DRAINAGE DETAIL**

**LOOP DETECTOR WIRING**

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6' x 15' AND LARGER SHALL HAVE (2) TURNS.

**LEGEND OF SYMBOLS**

CONTROLLER AND SERVICE EQUIP. NO's	(A)
SIGNAL BASE NO.	(1)
SIGNAL FACE NO.	(2)
LUMINAIRE NO.	(3)
CONTROLLER AND CABINET	(4)
CONTROLLER AND CABINET - IN PLACE	(5)
HANDHOLE	(6)
HANDHOLE - IN PLACE	(7)
RIGID STEEL CONDUIT (RSC)	(8)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(9)
SIGNAL FACE WITH BACKGROUND SHIELD	(10)
SIGNAL FACE W/O BACKGROUND SHIELD	(11)
SIGNAL FACE - IN PLACE	(12)
PEDESTRIAN INDICATORS	(13)
PEDESTRIAN INDICATORS - IN PLACE	(14)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(15)
PEDESTRIAN PUSH BUTTON STATION	(16)
TRAFFIC SIGNAL PEDESTAL	(17)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(18)
TRAFFIC SIGNAL POLE AND MAST ARM	(19)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(20)
STREET LIGHT POLE AND LUMINAIRE	(21)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(22)
MAST ARM AND LUMINAIRE	(23)
MAST ARM AND LUMINAIRE - INPLACE	(24)
WOOD POLE	(25)
WOOD POLE - IN PLACE	(26)
SOURCE OF POWER	(27)
RAILROAD SIGNAL - IN PLACE	(28)
RIGHT OF WAY LINE	(29)
CENTERLINE	(30)
EDGE OF ROADWAY	(31)
SHOULDERLINE	(32)
CURB LINE	(33)
STOP BAR	(34)
EMERGENCY VEHICLE PREEMPTION DETECTOR	(35)

**ABBREVIATIONS**

3-1(EG)	SIGNAL HEAD PHASE "3" - NO. "1"	P2-1(EG)	PED INDICATION PHASE "2" - NO. "1"
BR. GR.	BARE GROUND	PB	PUSH BUTTON
CH. SW.	CHECK SWITCH	PB2-1(EG)	PUSH BUTTON PHASE "2" - NO. "1"
CLR	CLEAR	PEC	PHOTOELECTRIC CELL
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	PED	PEDESTRIAN
DWK	DON'T WALK	R	RED
EQG	EQUIPMENT GROUND	R&S	REMOVE AND SALVAGE
EVP	EMERGENCY VEHICLE PRE-EMPTION	RLTA	RED LEFT TURN ARROW
F&I	FURNISH AND INSTALL	RRTA	RED RIGHT TURN ARROW
FL	FLASH/FLASHING	RSC	RIGID STEEL CONDUIT
G	GREEN	SOP	SOURCE OF POWER
GLTA	GREEN LEFT TURN ARROW	SPR	SPARE
GRN	GREEN	ST. LHT	STREET LIGHT
GR. R	GROUND ROD	STA	STATION
GRTA	GREEN RIGHT TURN ARROW	SW	SWITCH
GTHA	GREEN THRU ARROW	SWD	SWITCHED
HH	HANDHOLE	S&R	SALVAGE AND REINSTALL
HPS	HIGH PRESSURE SODIUM	TDW	TELEPHONE DROP WIRE
JB	JUNCTION BOX	WLK	WALK
LUM	LUMINAIRE	YEL	YELLOW
NEU	NEUTRAL	YLTA	YELLOW LEFT TURN ARROW
NMC	NONMETALLIC CONDUIT	YRTA	YELLOW RIGHT TURN ARROW
		YTHA	YELLOW THRU ARROW

**CONDUCTOR COLOR CODE**

R	RED
O	ORANGE
BL	BLUE
WH	WHITE
R/BLK	RED WITH BLACK TRACER
O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER
WH/BLK	WHITE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

**TRAFFIC SIGNAL TABULATION**

ITEM NO	ITEM	UNIT	TOTAL ESTIMATED QUANTITY
2565	TRAFFIC CONTROL SIGNAL SYSTEM	SIG. SYS.	1
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1
2565	TRAFFIC CONTROL INTERCONNECTION	LUMP SUM	1
2565	SIGNAL SERVICE CABINET	EACH	1
2565	TEMPORARY SIGNAL SYSTEM	SYSTEM	1

**TRAFFIC SIGNAL STANDARD PLATES**

THESE TRAFFIC SIGNAL STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

PLATE NO.	DESCRIPTION
* 8110 E	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
* 8111 E	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED) (3 SHEETS)
* 8112 G	PEDESTAL FOUNDATION (TRAFFIC CONTROL SIGNALS)
* 8114 A	PVC HANDHOLE/PULLBOX (NO VEHICLE LOAD) (2 SHEETS)
* 8118 D	SERVICE EQUIPMENT & POLE-TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
* 8121 H	TRANSFORMER BASE & POLE BASE PLATE (2 SHEETS)
* 8122 F	PEDESTAL & PEDESTAL BASE (FOR TRAFFIC CONTROL SIGNALS SUPPORT)
* 8123 G	POLE & MAST ARM-LUMINAIRES & TRAFFIC LIGHTS ASSEMBLY (2 SHEETS)
* 8126 K	POLE FOUNDATION (PA90 & PA100)
* 8129 A	SHIM AND WASHER (TRAFFIC CONTROL SIGNALS AND ROADWAY LIGHTING)

\* - APPLIES TO THIS PROJECT

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE

REVISIONS	NO.	BY	DATE

REVISIONS

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.  
Name: John M. Gray, PE  
Date: January 13, 2014  
Lic. No. 22457

SEH  
PHONE: (651) 480-2000  
3535 WADSWORTH CENTER DR.  
ST. PAUL, MN 55110

ANOKA COUNTY  
CITY OF COON RAPIDS

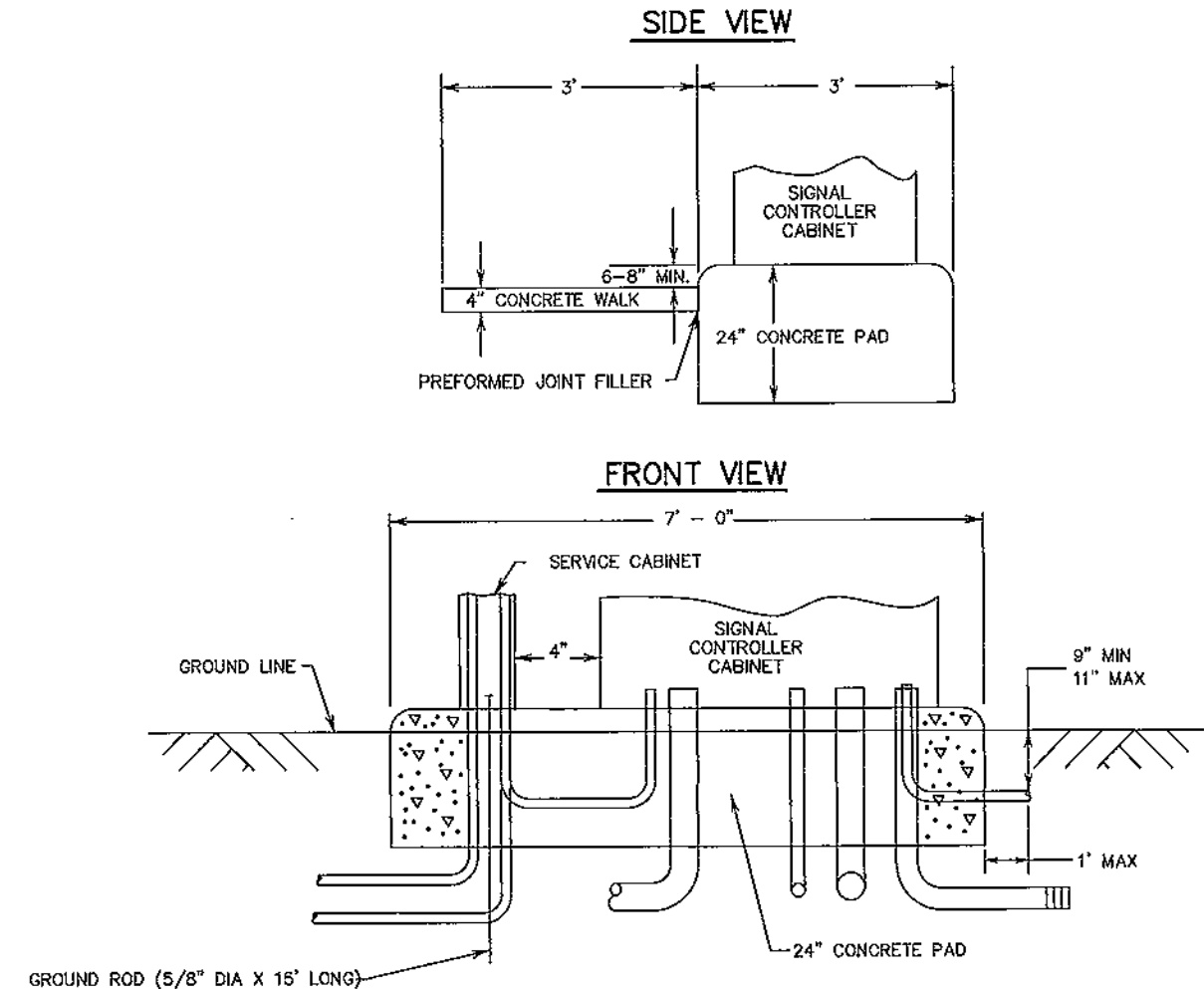
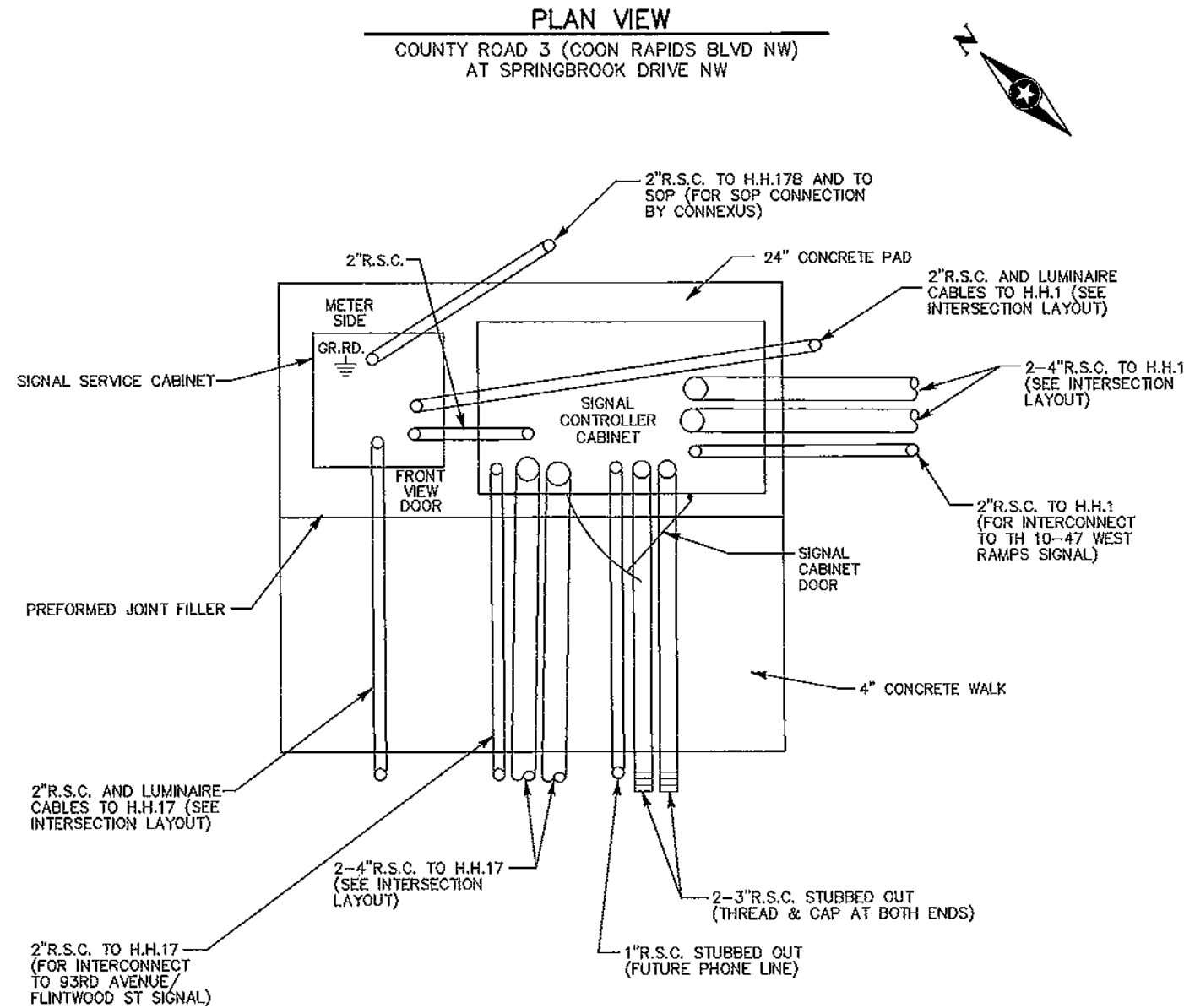
TRAFFIC SIGNAL SYSTEM  
DETAILS AND STANDARD PLATES  
CO. RD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO. 58  
ANOKC 125787  
SIGNAL SHEET 1 OF 21

91

# TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

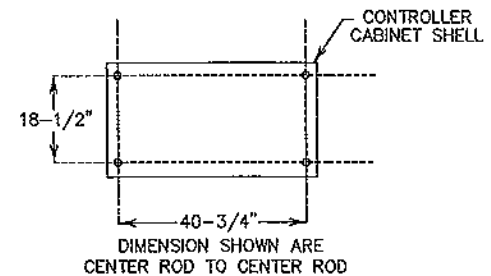
SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)



**NOTES:**

1. THE ANCHOR RODS, NUTS AND WASHERS FOR THE COUNTY FURNISHED CONTROLLER AND CABINET SHALL BE FURNISHED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR.
2. THE UPPER PART OF THE NEW EQUIPMENT PAD SHALL BE BEVELLED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER.
3. THE TOP OF THE CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED).
4. CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER, BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
5. CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR THE EQUIPMENT PAD AND SIDEWALK.
6. CONDUITS WITH BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
7. THE EXACT LOCATION OF CONDUITS WITHIN THE PAD SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
8. ANCHOR RODS SHALL PROJECT A MINIMUM OF 3" ABOVE THE CONCRETE BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
9. CONTRACTOR SHALL PROVIDE MINIMUM 4-INCH CLEARANCE BETWEEN CONTROLLER AND SERVICE CABINETS ON THE EQUIPMENT PAD FOUNDATION AS SHOWN.

**CONTROLLER CABINET  
TYPE "P" & "R"  
BOLT PATTERN**



S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

DRAWN BY: JMG									
DESIGNER: JMG									
CHECKED BY: JMG									
DESIGN TEAM	NO.	BY	DATE	REVISIONS					

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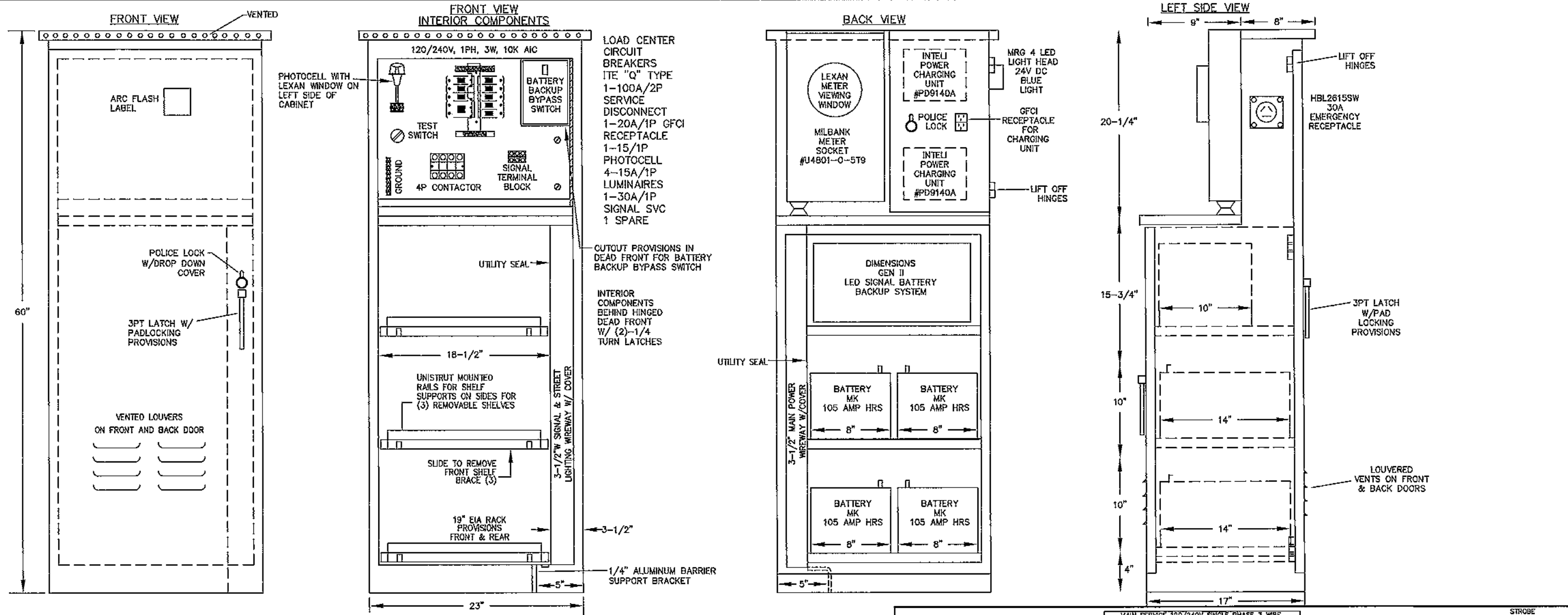
**SEH**

PHONE: (951) 490-2000  
3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

**ANOKA COUNTY  
CITY OF COON RAPIDS**

**TRAFFIC SIGNAL SYSTEM  
EQUIPMENT PAD FOUNDATION  
CORD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW**

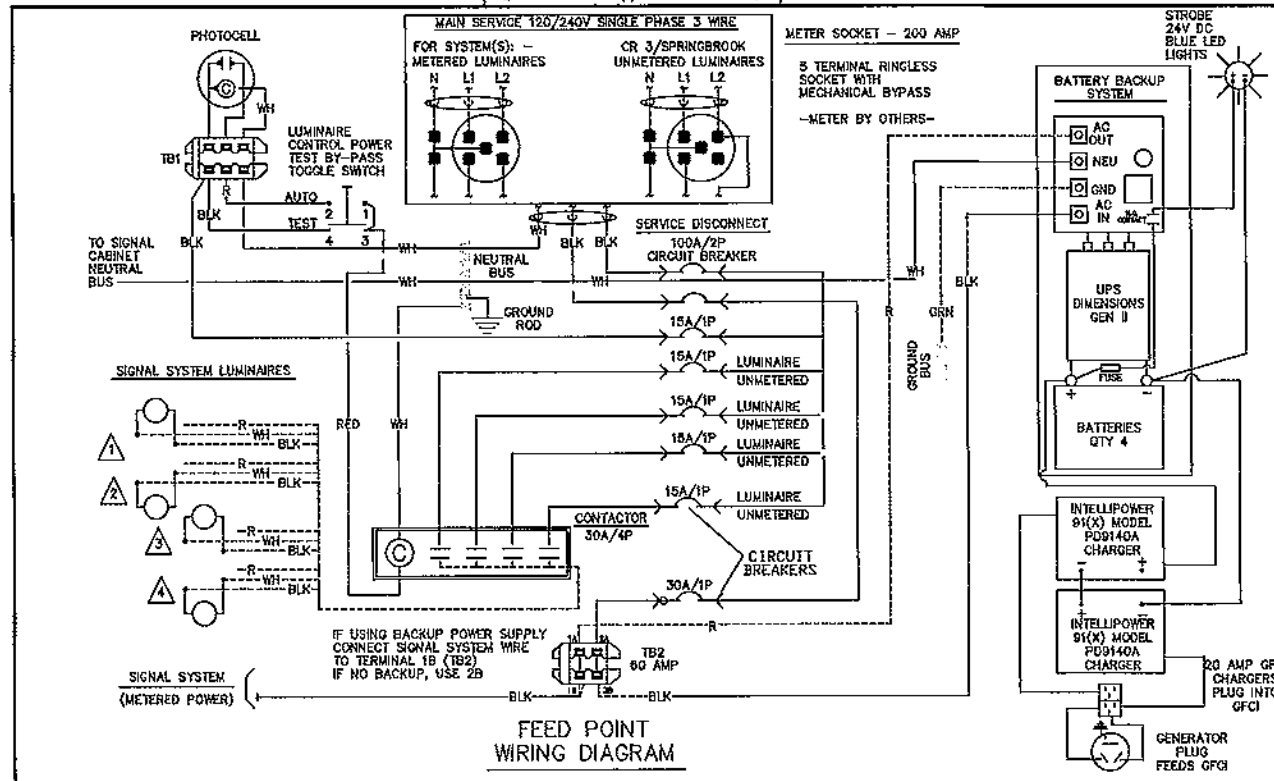
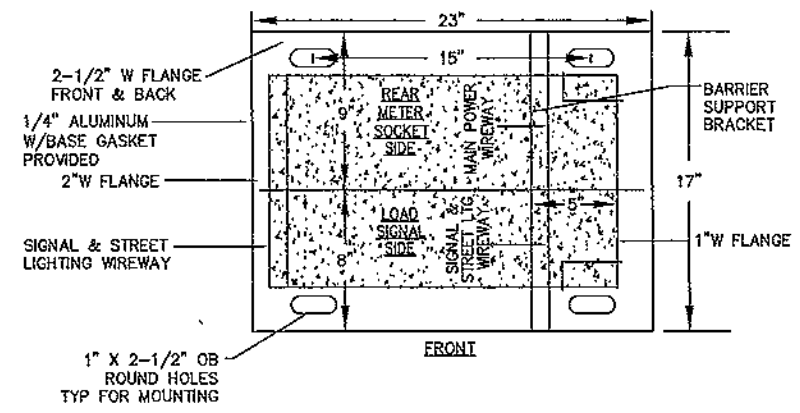
FILE NO. ANOKC 125787	59
SIGNAL SHEET 2 OF 21	91



**CABINET CONSTRUCTION**

- NEMA 3R
- 1/8" ALUMINUM 5052-H32
- ANODIZED 30 MINUTE CLEAR
- NEOPRENE GASKETED DOORS
- NON-CORRODING HARDWARE
- ETL LISTED IN ACCORDANCE W/UL508A

SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES REGARDING SEPARATE PAY ITEM FOR FURNISHING & INSTALLING NEW BATTERY BACK-UP SIGNAL SERVICE CABINET.



DRAWN BY: JMG  
 DESIGNER: JMG  
 CHECKED BY: JMG  
 DESIGN TEAM

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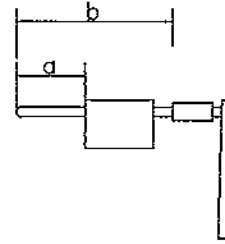
ANOKA COUNTY  
 CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM  
 SERVICE CABINET DETAILS  
 CO. RD. 3 (COON RAPIDS BLVD NW)  
 AT SPRINGBROOK DRIVE NW

FILE NO. ANOKC 125787  
 SIGNAL SHEET 3 OF 21  
 60  
 91

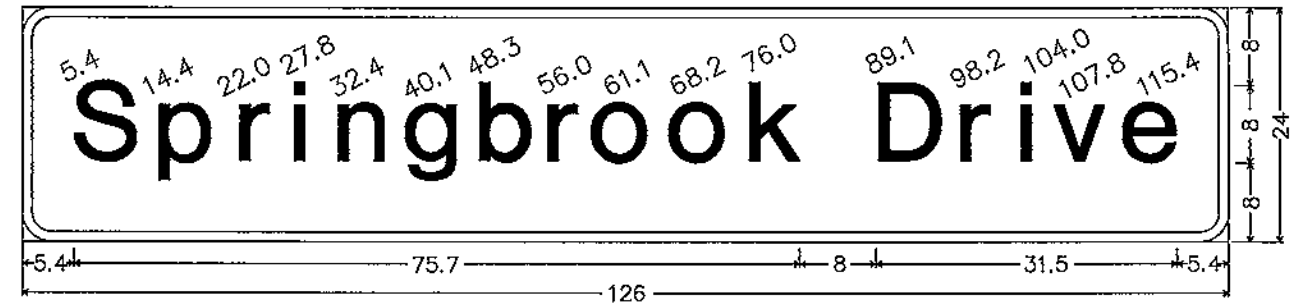


MAST ARM MOUNTED SIGNS							
SIGN PANELS - TYPE D (FURNISH AND INSTALL)							
SIGN PANEL	SIZE (Inches)	NO. REQ.	BRACKETS PER SIGN	BRACKET SPACING (**)	AREA (sq. ft.) PER SIGN	POLE NO.	a
D-1	126x24	1	5	-	21.00	1	28'
D-2	126x24	1	5	-	21.00	3	20'
D-3	126x24	1	5	-	21.00	5	28'
D-4	126x24	1	5	-	21.00	7	20'
TOTALS		4			84.00		



(\*\*)= SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE SPECIAL PROVISIONS AND STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/07) FOR BRACKET SPACING REQUIREMENTS.

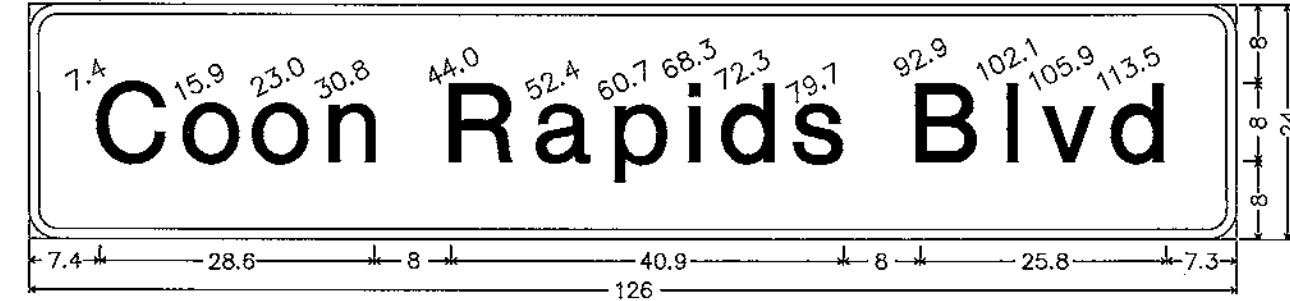
D-1, D-3



3.0" Radius, 1.0" Border, White on Green; [Springbrook Drive] E Mod;

SIGNAL SYSTEM MOUNTED SIGNS								
SIGN PANELS - TYPE C (FURNISH AND INSTALL)								
SIGN PANEL	SIZE (In.)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (In.)	SQ. FT. PER SIGN	POLE NO.	a	PANEL LEGEND
R6-1L	36x12	2	①	-	3.00	1, 5	-	ONE WAY (LEFT)
R6-1R	36x12	2	①	-	3.00	1, 5	-	ONE WAY (RIGHT)
R10-X12	36x42	2	2	-	10.50	1, 5	1'	LEFT TURN YIELD ON FLASHING YELLOW ARROW
TOTALS		6			33.00			

D-2, D-4



3.0" Radius, 1.0" Border, White on Green; [Coon Rapids Blvd] E Mod;

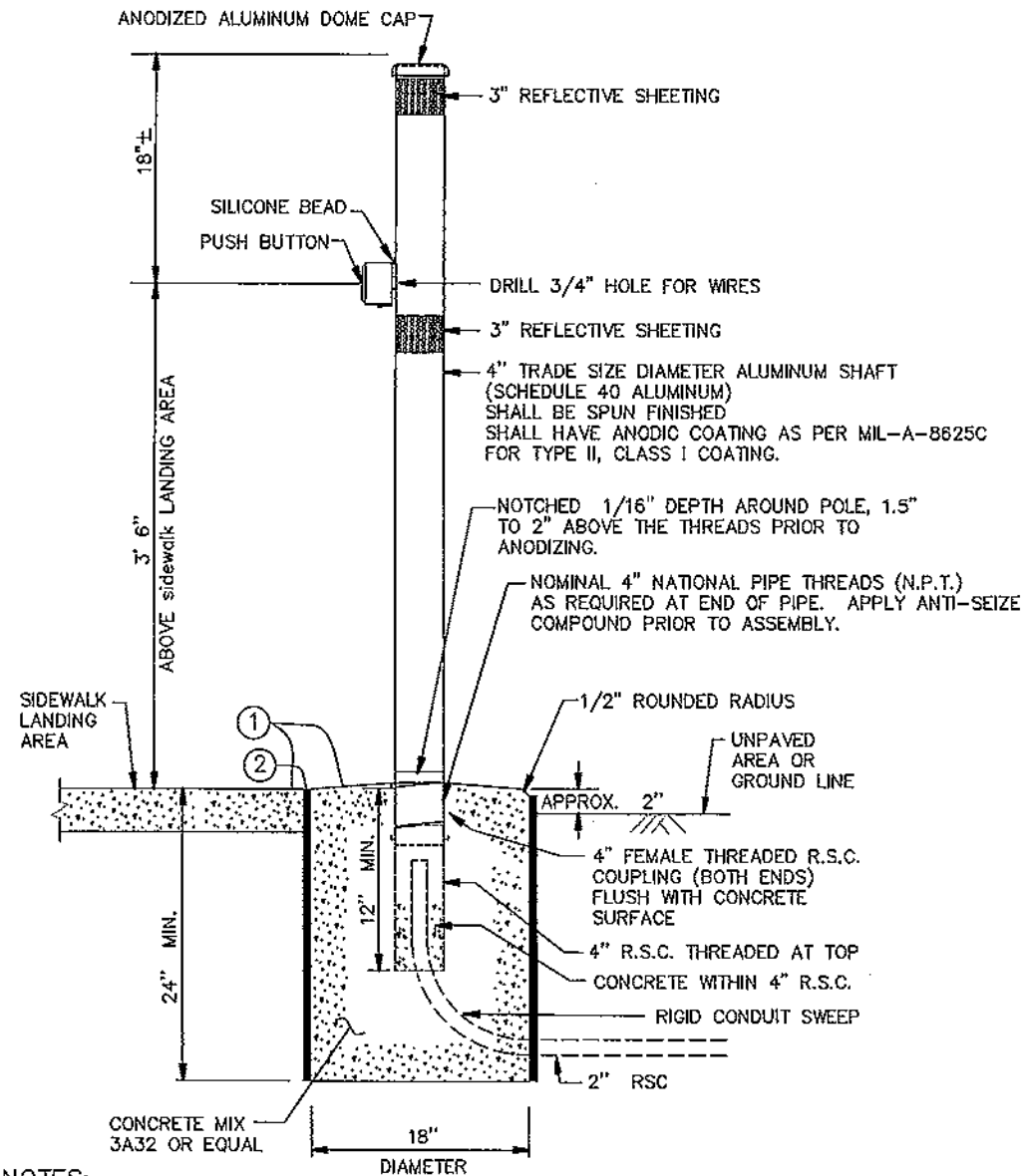
GENERAL SIGNING NOTES:

- COLOR FOR ALL TYPE D SIGNS SHOWN SHALL BE WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS, SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/07), AND SPECIAL PROVISIONS.
- SEE STANDARD SIGNS MANUAL FOR DETAILED DRAWINGS OF TYPE C SIGN PANELS.
- FURNISHING AND INSTALLING TYPE C AND D SIGNS AS SHOWN SHALL BE INCLUDED UNDER ITEM NO. 2585 (TRAFFIC CONTROL SIGNAL SYSTEM). SEE SPECIAL PROVISIONS.
- ALL NEW TYPE C AND D SIGN PANELS SHOWN SHALL BE FABRICATED USING DG3 SHEETING. SEE SPECIAL PROVISIONS.
- ①= MOUNT SIGN PANEL ON TRAFFIC SIGNAL MAST ARM POLE.

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

DRAWN BY: JMG DESIGNER: JMG CHECKED BY: JMG DESIGN TEAM	NO. BY DATE REVISIONS	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.  Name: John M. Gray, PE Lic. No. 22457 Date: January 13, 2014	 PHONE: (651) 490-2000 3535 VADHAIS CENTER DR. ST. PAUL, MN 55110	ANOKA COUNTY CITY OF COON RAPIDS	TRAFFIC SIGNAL SYSTEM SIGNAL SIGNING DETAILS CO. RD. 3 (COON RAPIDS BLVD NW) AT SPRINGBROOK DRIVE NW	FILE NO. ANOKC 125787 SIGNAL SHEET 5 OF 21	62 91
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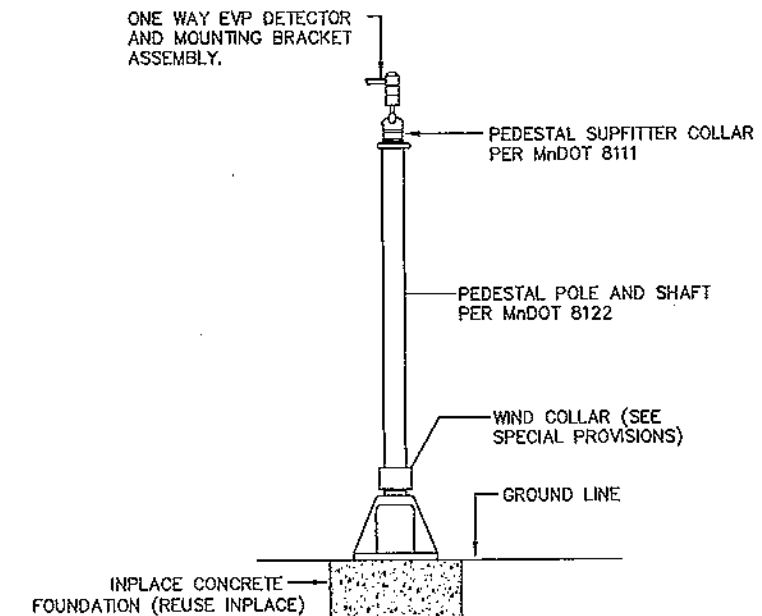
PEDESTRIAN PUSH BUTTON STATION DETAILS



NOTES:

- PLACEMENT AND ORIENTATION OF THE PUSH BUTTON STATION IS CRITICAL. MOUNT THE BUTTON SO THAT THE FACE IS PARALLEL WITH THE ASSOCIATED CROSSWALK. SCREW IN POST TO A TIGHTENED POSITION BEFORE MOUNTING ACCESSIBLE PEDESTRIAN PUSH BUTTON UNIT TO THE POST.
- BLIND THREADED INSERTS (RIVET NUT) MUST BE INSERTED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
- BLIND THREADED INSERTS SHALL BE ZINC PLATED STEEL WITH 1/4 - 20 UNC THREADS. INSERT SHALL BE SUITABLE FOR USE ON A MOUNTING SURFACE WALL THICKNESS OF .337". APPROVED BLIND THREADED INSERTS CAN BE FOUND ON THE MN/DOT QUALIFIED PRODUCTS LIST.
- MOUNTING BOLTS SHALL BE 1/4 - 20 STAINLESS STEEL. APPLY BRUSH ON ANTI SEIZE COMPOUND TO BOLTS PRIOR TO ASSEMBLY.
- APPLY A BEAD OF 100% SILICONE SEALANT ALONG THE TOP OF THE PUSH BUTTON UNIT WHERE IT COMES IN CONTACT WITH THE 4" POST.
- THE REFLECTIVE SHEETING SHALL BE WHITE AT INTERSECTION CORNERS AND SHALL BE YELLOW WHEN USED IN CENTER MEDIANS. SEE MN/DOT SIGNING QUALIFIED PRODUCTS LIST (QPL) FOR APPROVED TUBE DELINEATOR SHEETING.
- ANTI-SEIZE COMPOUND MUST BE USED ON THE MOUNTING BOLTS WHEN THE PEDESTRIAN SIGN IS MOUNTED.
- ① THE CONCRETE FOUNDATION SHALL BE CAST IN PLACE AND CONSTRUCTED FLUSH WITH THE SURROUNDING SIDEWALK. THE FOUNDATION SHALL BE CONSTRUCTED CONCURRENTLY WITH, OR AFTER, THE ADJACENT SIDEWALK CONSTRUCTION.
- ② 1/4 MAXIMUM THICK FIBER FORMING TUBE MATCHING PLAN FOUNDATION DIMENSIONS SHALL BE USED AS A FORM AND BOND BREAKER.

PEDESTAL POLE MOUNTED EVP DETECTOR DETAIL



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CHECKED BY: JMG  
DESIGN TEAM

NO.	BY	DATE	REVISIONS

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.  
*John M. Gray*  
Name: John M. Gray, PE  
Lic. No. 22457  
Date: March 12, 2014

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3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

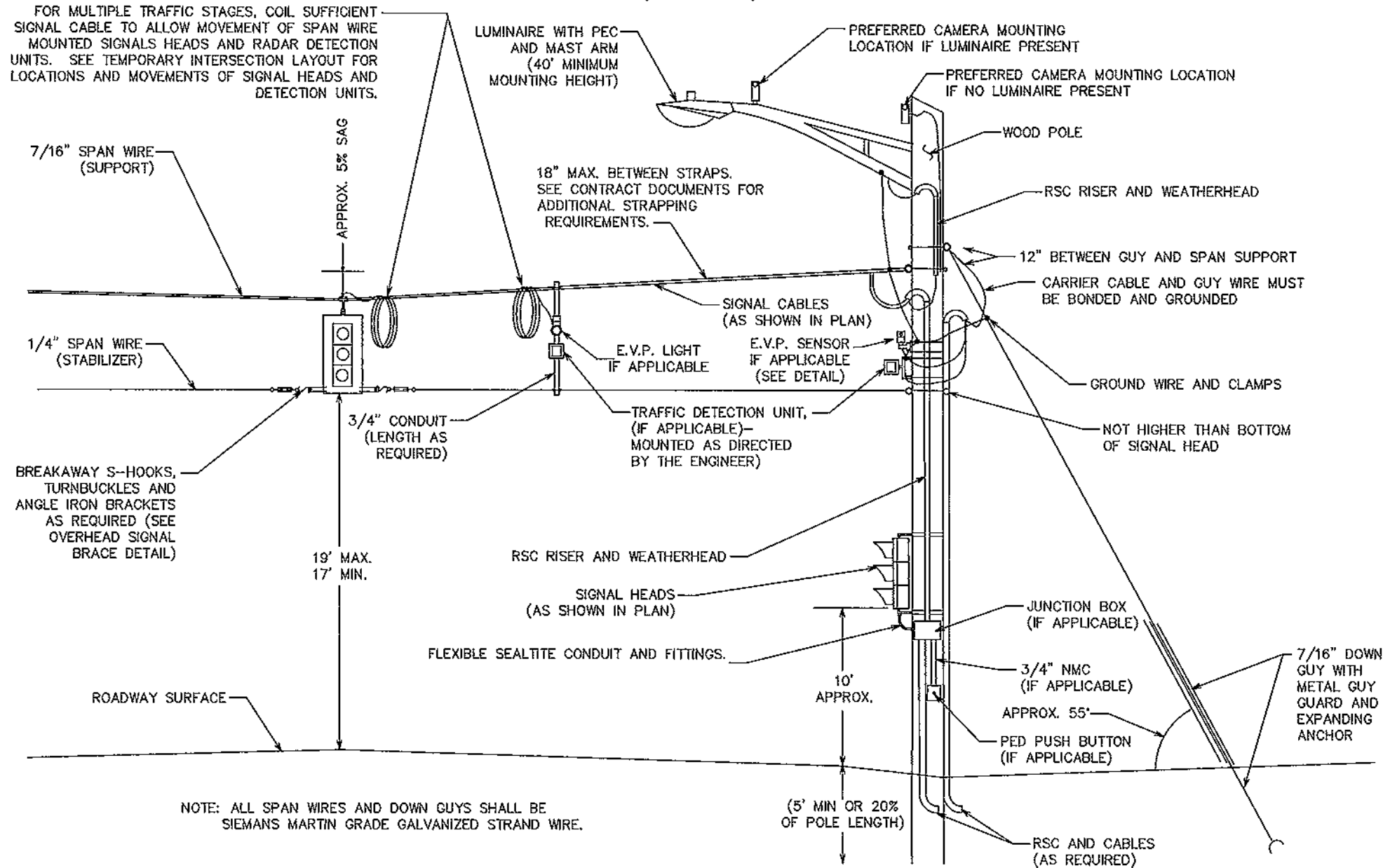
ANOKA COUNTY  
CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM  
MISCELLANEOUS DETAILS  
CORD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO. ANOKC 125787  
SIGNAL SHEET 6 OF 21  
63  
91

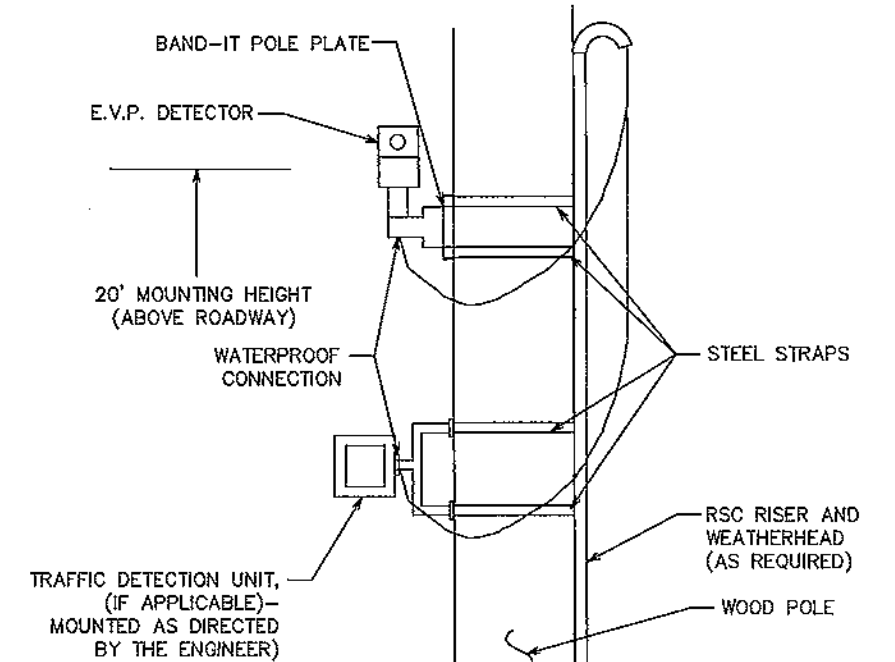
TYPICAL WOOD POLE AND SPAN WIRE MOUNTED TRAFFIC SIGNALS

(NOT TO SCALE)



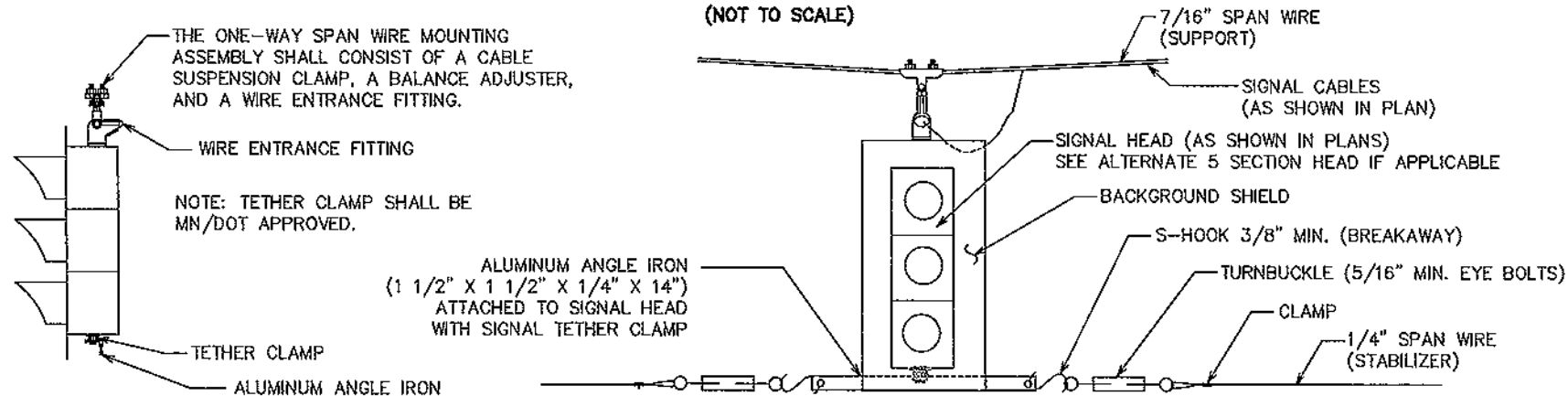
E.V.P. OR TRAFFIC DETECTOR WOOD POLE MOUNT

(NOT TO SCALE)



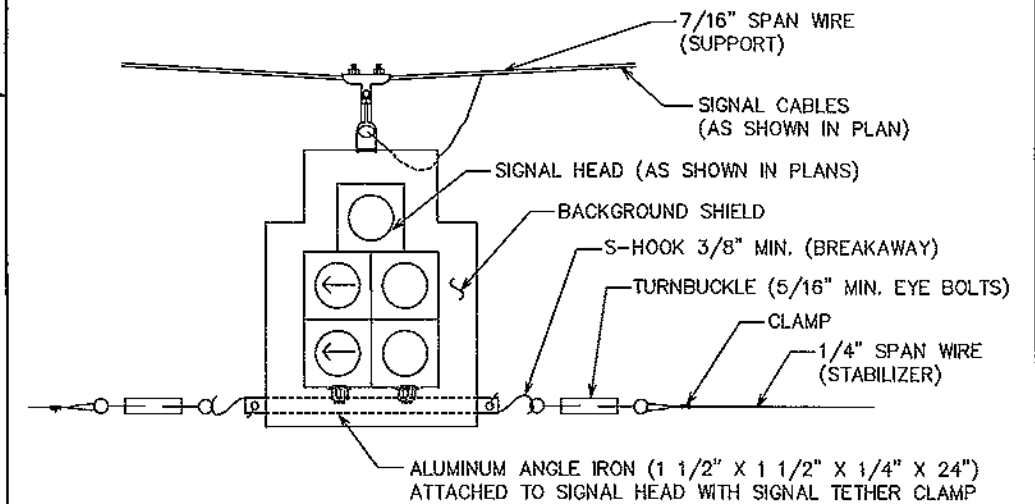
OVERHEAD SIGNAL BRACE DETAIL

(NOT TO SCALE)



5 SECTION HEAD OVERHEAD SIGNAL BRACE DETAIL

(NOT TO SCALE)



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DESIGN TEAM	NO.	BY	DATE	REVISIONS

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*John M. Gray*  
Name: John M. Gray, PE  
Ltc. No. 22457

Date: January 13, 2019

SEH  
PHONE: (651) 490-2000  
3535 VADHANS CENTER DR.  
ST. PAUL, MN 55110

ANOKA COUNTY CITY OF COON RAPIDS	TRAFFIC SIGNAL SYSTEM WOOD POLE AND SPAN WIRE DETAILS COR. 3 (COON RAPIDS BLVD NW) AT SPRINGBROOK DRIVE NW	FILE NO. ANOKC 125787	64
		SIGNAL SHEET 7 OF 21	91



**NOTES:**

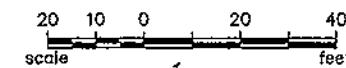
- 1) LOCATION OF WOOD POLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) CONTRACTOR SHALL REUSE AND MAINTAIN EXISTING HANDHOLES 1, 16, AND 17 AS PART OF TEMPORARY SIGNAL SYSTEM AS SHOWN.
- 3) EACH NEW SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
- 4) SEE DETAILS FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS.
- 5) ALL VEHICLE AND PEDESTRIAN SIGNAL FACES ARE INPLACE AND SHALL BE REUSED AND MADE OPERATIONAL AS SHOWN, EXCEPT AS OTHERWISE DENOTED ON THE PLANS.
- 6) ALL TRAFFIC SIGNAL MATERIALS AND ELECTRICAL EQUIPMENT TO BE FURNISHED AND INSTALLED BY CONTRACTOR FOR THE TEMPORARY SIGNAL SYSTEM SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION AT THE INTERSECTION. SEE SPECIAL PROVISIONS.
- 7) PROPOSED TEMPORARY SIGNAL SYSTEM PLAN IS PROPOSED LAYOUT TO MAINTAIN SIGNAL OPERATION DURING CONSTRUCTION. CONTRACTOR MAY SUGGEST ALTERNATIVE PLAN FOR MAINTAINING SIGNAL OPERATION DURING CONSTRUCTION, AND THE ENGINEER SHALL APPROVE ANY CHANGES TO THE PLAN PRIOR TO INSTALLATION OF TEMPORARY SYSTEM.
- 8) (F & I) = ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.  
(S & I) = ITEMS TO BE SALVAGED AND INSTALLED BY CONTRACTOR.
- 9) CONTRACTOR SHALL MAINTAIN A SIGNAL SYSTEM IN OPERATION AT THIS INTERSECTION AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE ENGINEER FOR THE SIGNAL SYSTEM TO BE TURNED OFF DURING NON-PEAK TRAFFIC PERIODS (FOR SWITCHOVERS FROM EXISTING SIGNAL SYSTEM TO TEMPORARY SIGNAL SYSTEM, FOR MODIFICATIONS BETWEEN TRAFFIC CONTROL STAGES, AND FROM TEMPORARY SIGNAL SYSTEM TO NEW PERMANENT SIGNAL SYSTEM).
- 10) ○ = INPLACE TRAFFIC SIGNAL MAST ARM POLE.  
⊗ = PROPOSED TRAFFIC SIGNAL MAST ARM POLE OR PUSH BUTTON STATION.  
● = PROPOSED WOOD POLE LOCATION FOR TEMPORARY SIGNAL SYSTEM.

○ INPLACE GROUND MOUNTED TRANSFORMER (SOP-CONNEXUS) EXTENDED INTO H.H.17: 2"R.S.C.-INPLACE INPLACE POWER CABLES

**INSTALL VIDEO DETECTORS (FURNISHED BY COUNTY)**

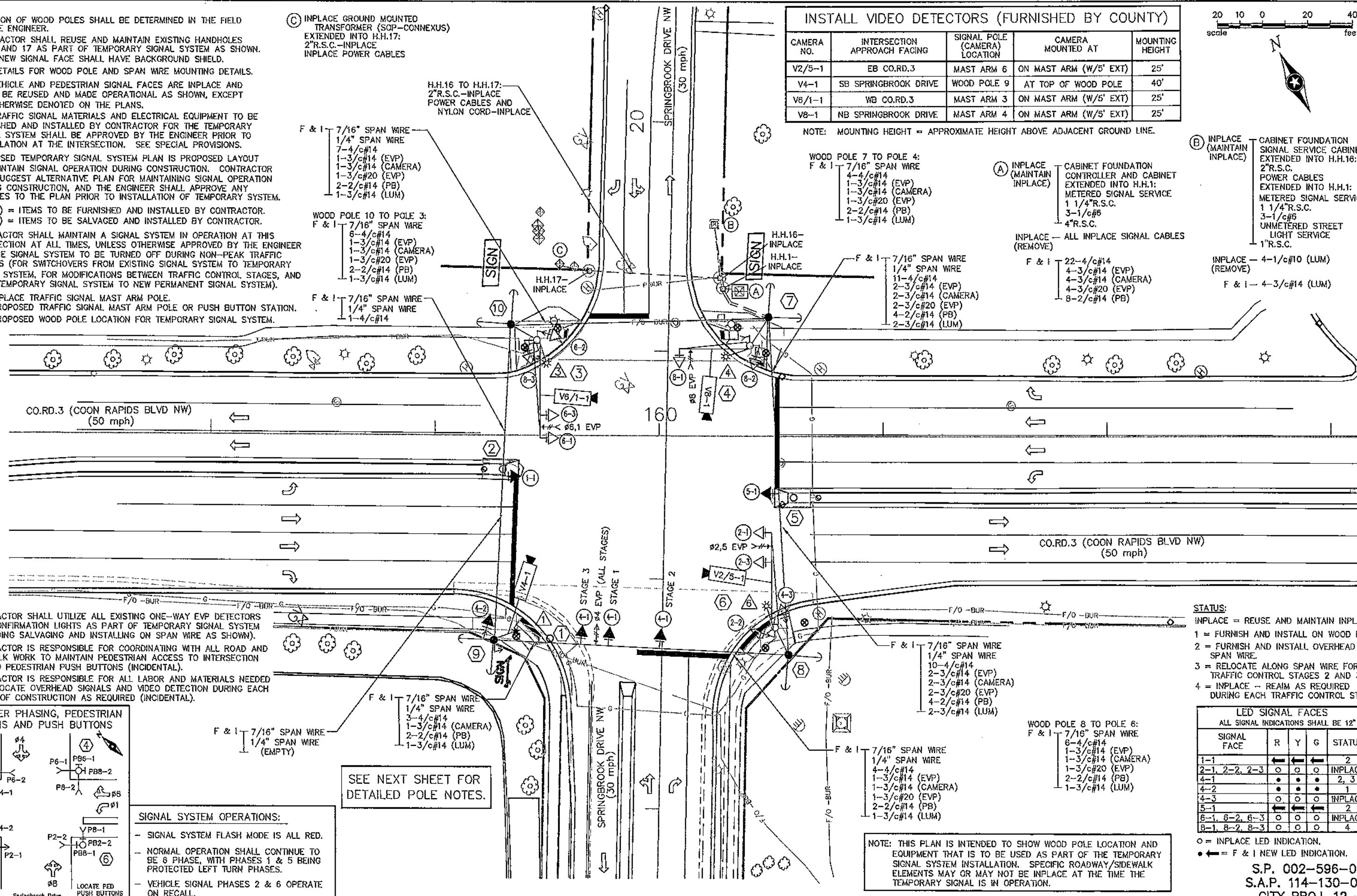
CAMERA NO.	INTERSECTION APPROACH FACING	SIGNAL POLE (CAMERA) LOCATION	CAMERA MOUNTED AT	MOUNTING HEIGHT
V2/5-1	EB CO.RD.3	MAST ARM 6	ON MAST ARM (W/5' EXT)	25'
V4-1	SB SPRINGBROOK DRIVE	WOOD POLE 9	AT TOP OF WOOD POLE	40'
V6/1-1	WB CO.RD.3	MAST ARM 3	ON MAST ARM (W/5' EXT)	25'
V8-1	NB SPRINGBROOK DRIVE	MAST ARM 4	ON MAST ARM (W/5' EXT)	25'

NOTE: MOUNTING HEIGHT = APPROXIMATE HEIGHT ABOVE ADJACENT GROUND LINE.



ⓑ INPLACE (MAINTAIN INPLACE) CABINET FOUNDATION SIGNAL SERVICE CABINET EXTENDED INTO H.H.16: 2"R.S.C. POWER CABLES EXTENDED INTO H.H.1: METERED SIGNAL SERVICE 1 1/4"R.S.C. 3-1/c#6 4"R.S.C.

INPLACE - ALL INPLACE SIGNAL CABLES (REMOVE)  
F & I - 4-1/c#10 (LUM) (REMOVE)  
F & I - 4-3/c#14 (LUM)



Ⓐ INPLACE (MAINTAIN INPLACE) CABINET FOUNDATION CONTROLLER AND CABINET EXTENDED INTO H.H.1: METERED SIGNAL SERVICE 1 1/4"R.S.C. 3-1/c#6 4"R.S.C.

F & I 7/16" SPAN WIRE  
1/4" SPAN WIRE  
11-4/c#14  
2-3/c#14 (EVP)  
2-3/c#14 (CAMERA)  
2-3/c#20 (EVP)  
4-2/c#14 (PB)  
2-3/c#14 (LUM)

F & I 7/16" SPAN WIRE  
1/4" SPAN WIRE  
7-4/c#14  
1-3/c#14 (EVP)  
1-3/c#14 (CAMERA)  
1-3/c#20 (EVP)  
2-2/c#14 (PB)  
1-3/c#14 (LUM)

WOOD POLE 10 TO POLE 3:  
F & I 7/16" SPAN WIRE  
6-4/c#14  
1-3/c#14 (EVP)  
1-3/c#14 (CAMERA)  
1-3/c#20 (EVP)  
2-2/c#14 (PB)  
1-3/c#14 (LUM)

F & I 7/16" SPAN WIRE  
1/4" SPAN WIRE  
1-4/c#14

WOOD POLE 7 TO POLE 4:  
F & I 7/16" SPAN WIRE  
4-4/c#14  
1-3/c#14 (EVP)  
1-3/c#14 (CAMERA)  
1-3/c#20 (EVP)  
2-2/c#14 (PB)  
1-3/c#14 (LUM)

F & I 7/16" SPAN WIRE  
1/4" SPAN WIRE  
11-4/c#14  
2-3/c#14 (EVP)  
2-3/c#14 (CAMERA)  
2-3/c#20 (EVP)  
4-2/c#14 (PB)  
2-3/c#14 (LUM)

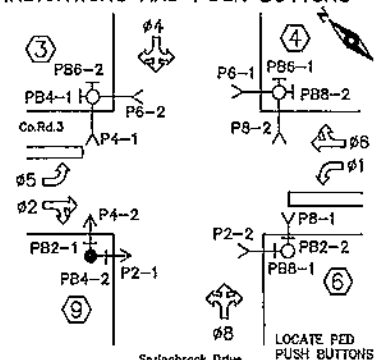
F & I 7/16" SPAN WIRE  
1/4" SPAN WIRE  
10-4/c#14  
2-3/c#14 (EVP)  
2-3/c#14 (CAMERA)  
2-3/c#20 (EVP)  
4-2/c#14 (PB)  
2-3/c#14 (LUM)

WOOD POLE 8 TO POLE 6:  
F & I 7/16" SPAN WIRE  
6-4/c#14  
1-3/c#14 (EVP)  
1-3/c#14 (CAMERA)  
1-3/c#20 (EVP)  
2-2/c#14 (PB)  
1-3/c#14 (LUM)

SEE NEXT SHEET FOR DETAILED POLE NOTES.

- 11) CONTRACTOR SHALL UTILIZE ALL EXISTING ONE-WAY EVP DETECTORS AND CONFIRMATION LIGHTS AS PART OF TEMPORARY SIGNAL SYSTEM (INCLUDING SALVAGING AND INSTALLING ON SPAN WIRE AS SHOWN).
- 12) CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL ROAD AND SIDEWALK WORK TO MAINTAIN PEDESTRIAN ACCESS TO INTERSECTION AND TO PEDESTRIAN PUSH BUTTONS (INCIDENTAL).
- 13) CONTRACTOR IS RESPONSIBLE FOR ALL LABOR AND MATERIALS NEEDED TO RELOCATE OVERHEAD SIGNALS AND VIDEO DETECTION DURING EACH STAGE OF CONSTRUCTION AS REQUIRED (INCIDENTAL).

**CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS**



**SIGNAL SYSTEM OPERATIONS:**

- SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION SHALL CONTINUE TO BE 8 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 & 6 OPERATE ON RECALL.

- STATUS:**
- INPLACE = REUSE AND MAINTAIN INPLACE.
  - 1 = FURNISH AND INSTALL ON WOOD POLE.
  - 2 = FURNISH AND INSTALL OVERHEAD ON SPAN WIRE.
  - 3 = RELOCATE ALONG SPAN WIRE FOR TRAFFIC CONTROL STAGES 2 AND 3.
  - 4 = INPLACE - REMAIN AS REQUIRED DURING EACH TRAFFIC CONTROL STAGE.

**LED SIGNAL FACES**  
ALL SIGNAL INDICATIONS SHALL BE 12"

SIGNAL FACE	R	Y	G	STATUS
1-1	←	←	←	2
2-1, 2-2, 2-3	○	○	○	INPLACE
4-1	•	•	•	2, 3
4-2	•	•	•	1
4-3	○	○	○	INPLACE
5-1	←	←	←	2
6-1, 6-2, 6-3	○	○	○	INPLACE
8-1, 8-2, 8-3	○	○	○	4

○ = INPLACE LED INDICATION.  
◀ = F & I NEW LED INDICATION.

NOTE: THIS PLAN IS INTENDED TO SHOW WOOD POLE LOCATION AND EQUIPMENT THAT IS TO BE USED AS PART OF THE TEMPORARY SIGNAL SYSTEM INSTALLATION. SPECIFIC ROADWAY/SIDEWALK ELEMENTS MAY OR MAY NOT BE INPLACE AT THE TIME THE TEMPORARY SIGNAL IS IN OPERATION.

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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*John M. Gray*  
Name: John M. Gray, PE  
Date: March 12, 2014  
Lic. No. 22457

**SEH**  
PHONE: (651) 490-2000  
3535 VADNAN CENTER DR.  
ST. PAUL, MN 55110

**ANOKA COUNTY**  
CITY OF COON RAPIDS

**TEMPORARY SIGNAL SYSTEM**  
INTERSECTION LAYOUT  
CO.RD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO.	ANOKC 125787	<b>65</b>
SIGNAL SHEET	8 OF 21	<b>91</b>

① INPLACE (REMOVE) P90 POLE FOUNDATION  
 TYPE P90-A-30-D40-9  
 LUMINAIRE-200 W HPS  
 ONE WAY SIGNAL-OVERHEAD  
 TYPE 30A-POLE MOUNTED 90°  
 TYPE 10B-POLE MOUNTED 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD

INPLACE (S & I) ONE WAY EVP DETECTOR AND LIGHT (#4)-  
 RELOCATE TO SPAN WIRE

F & I SPAN WIRE MOUNTING HARDWARE AND  
 BRACKETING FOR EVP DETECTOR/LIGHT

② INPLACE (REMOVE) PEDESTAL FOUNDATION  
 PEDESTAL POLE AND BASE  
 TYPE 1A  
 R4-7 SIGN PANEL

③ INPLACE (MAINTAIN INPLACE) P100 POLE FOUNDATION  
 TYPE P100-A-40-D40-9 (DAVIT AT 350°)  
 LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
 2-ONE WAY SIGNALS-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#6,1)

INSTALL (FURNISHED BY COUNTY) 1-VIDEO DETECTOR CAMERA-MAST ARM  
 MOUNTED (FACING WB TRAFFIC) (V6/1-1)

F & I MOUNTING HARDWARE/5' EXTENSION FOR MAST  
 ARM MOUNTING OF VIDEO DETECTOR CAMERA  
 7/16" SPAN WIRE TO WOOD POLE 10:  
 6-4/c#14  
 1-3/c#14 (EVP)  
 1-3/c#14 (CAMERA)  
 1-3/c#20 (EVP)  
 2-2/c#14 (PB)  
 1-3/c#14 (LUM)

④ INPLACE (MAINTAIN INPLACE) P90 POLE FOUNDATION  
 TYPE P90-A-30-D40-9 (DAVIT AT 350°)  
 LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
 ONE WAY SIGNAL-OVERHEAD  
 TYPE 30A-POLE MOUNTED 90°  
 TYPE 10B-POLE MOUNTED 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#8)

INSTALL (FURNISHED BY COUNTY) 1-VIDEO DETECTOR CAMERA-MAST ARM  
 MOUNTED (FACING NB TRAFFIC) (V8-1)

F & I MOUNTING HARDWARE/5' EXTENSION FOR MAST  
 ARM MOUNTING OF VIDEO DETECTOR CAMERA  
 7/16" SPAN WIRE TO WOOD POLE 7:  
 4-4/c#14  
 1-3/c#14 (EVP)  
 1-3/c#14 (CAMERA)  
 1-3/c#20 (EVP)  
 2-2/c#14 (PB)  
 1-3/c#14 (LUM)

⑤ INPLACE (REMOVE) PEDESTAL FOUNDATION  
 PEDESTAL POLE AND BASE  
 TYPE 1A  
 R4-7 SIGN PANEL

⑥ INPLACE (MAINTAIN INPLACE) P100 POLE FOUNDATION  
 TYPE P100-A-40-D40-9 (DAVIT AT 350°)  
 LUMINAIRE-200 W HPS  
 2-ONE WAY SIGNALS-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#2,5)

INSTALL (FURNISHED BY COUNTY) 1-VIDEO DETECTOR CAMERA-MAST ARM  
 MOUNTED (FACING EB TRAFFIC) (V2/5-1)

F & I MOUNTING HARDWARE/5' EXTENSION FOR MAST  
 ARM MOUNTING OF VIDEO DETECTOR CAMERA  
 7/16" SPAN WIRE TO WOOD POLE 8:  
 6-4/c#14  
 1-3/c#14 (EVP)  
 1-3/c#14 (CAMERA)  
 1-3/c#20 (EVP)  
 2-2/c#14 (PB)  
 1-3/c#14 (LUM)

⑦ F & I 50' WOOD POLE-CLASS 2  
 2-DOWN GUYS, GUY GUARDS, AND EXPANDING ANCHORS  
 EXTEND INTO H.H.1:  
 2-4"R.S.C. RISERS AND WEATHERHEADS  
 22-4/c#14  
 4-3/c#14 (EVP)  
 4-3/c#14 (CAMERA)  
 4-3/c#20 (EVP)  
 8-2/c#14 (PB)  
 4-3/c#14 (LUM)

⑧ F & I 50' WOOD POLE-CLASS 2  
 2-DOWN GUYS, GUY GUARDS,  
 AND EXPANDING ANCHORS

⑨ INSTALL (FURNISHED BY COUNTY) 1-VIDEO DETECTOR CAMERA-WOOD POLE  
 MOUNTED (FACING SB TRAFFIC) (V4-1)

F & I 50' WOOD POLE-CLASS 2  
 2-DOWN GUYS, GUY GUARDS, AND EXPANDING ANCHORS  
 LUMINAIRE-200 W HPS W/15' MAST ARM  
 TYPE 30A-WOOD POLE MOUNTED (P2-1)  
 TYPE 10B-WOOD POLE MOUNTED (4-2, P4-2)  
 2-PEDESTRIAN PUSH BUTTONS, R10-4b SIGNS, & RISERS  
 MOUNTING HARDWARE FOR WOOD POLE MOUNTING OF  
 VIDEO DETECTOR CAMERA  
 METAL JUNCTION BOX  
 2"R.S.C. RISER ABOVE JUNCTION BOX  
 4-4/c#14  
 2-2/c#14 (PB)  
 2"R.S.C. RISER ABOVE SPAN WIRE  
 1-3/c#14 (CAMERA)  
 1-3/c#14 (LUM)

⑩ F & I 50' WOOD POLE-CLASS 2  
 2-DOWN GUYS, GUY GUARDS,  
 AND EXPANDING ANCHORS

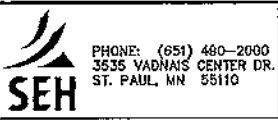
S.P. 002-596-020  
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*John M. Gray*  
 Name: John M. Gray, PE  
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Date: January 13, 2014

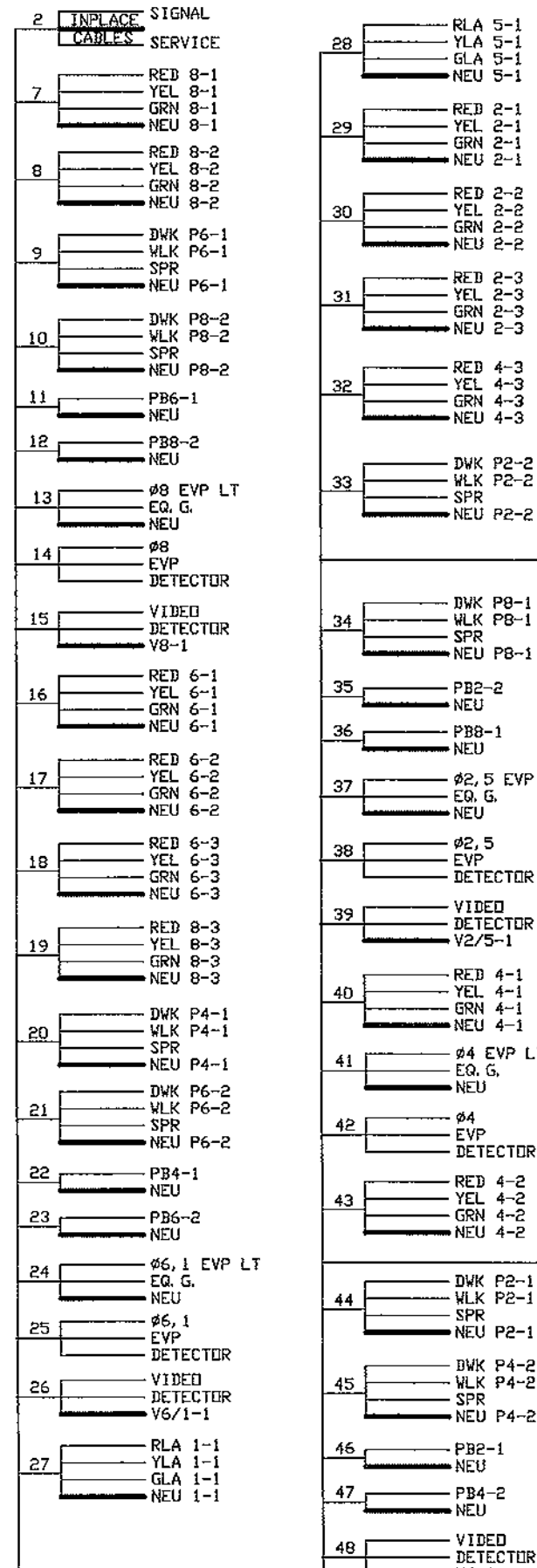


**ANOKA COUNTY**  
 CITY OF COON RAPIDS

TEMPORARY SIGNAL SYSTEM  
 INTERSECTION LAYOUT  
 CO.RD. 3 (COON RAPIDS BLVD NW)  
 AT SPRINGBROOK DRIVE NW

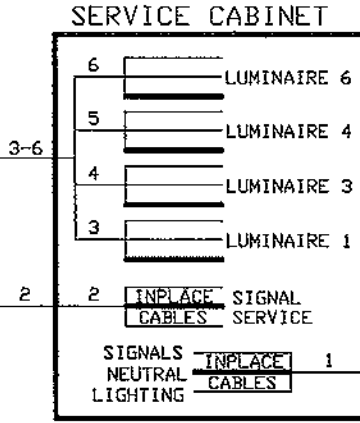
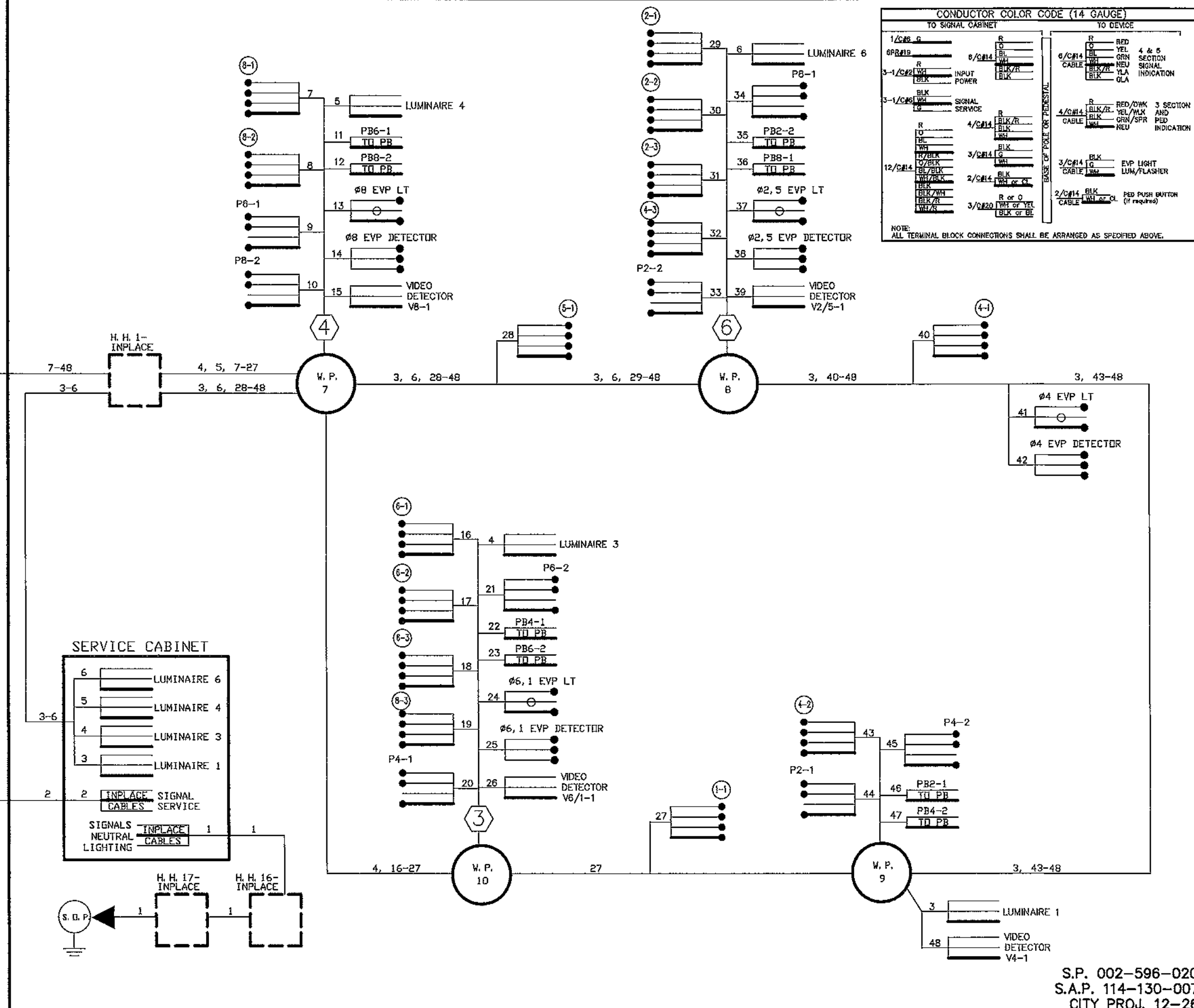
FILE NO. ANOKC 125787	66
SIGNAL SHEET 9 OF 21	91

CONTROLLER CABINET



CONDUCTOR COLOR CODE (14 GAUGE)

TO SIGNAL CABINET			TO DEVICE		
1/C#8 G	R	G	R	RED	4 & 5
6/R#19	BL	BL	BL	YEL	SECTION
	WH	WH	WH	GRN	SIGNAL
3-1/C#2 WH	BLK/R	BLK	BLK/R	NEU	INDICATION
	BLK	BLK	BLK	YLA	
3-1/C#6 WH	BLK	BLK	BLK	GLA	
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
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	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		
	BLK	BLK	BLK		



DRAWN BY: JMG	NO.	BY	DATE	REVISIONS
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM				

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.

Date: January 13, 2014 Name: John M. Gray, PE Lic. No. 22457

SEH  
PHONE: (651) 490-2000  
3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

ANOKA COUNTY  
CITY OF COON RAPIDS

TEMPORARY SIGNAL SYSTEM  
FIELD WIRING DIAGRAM  
COORD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

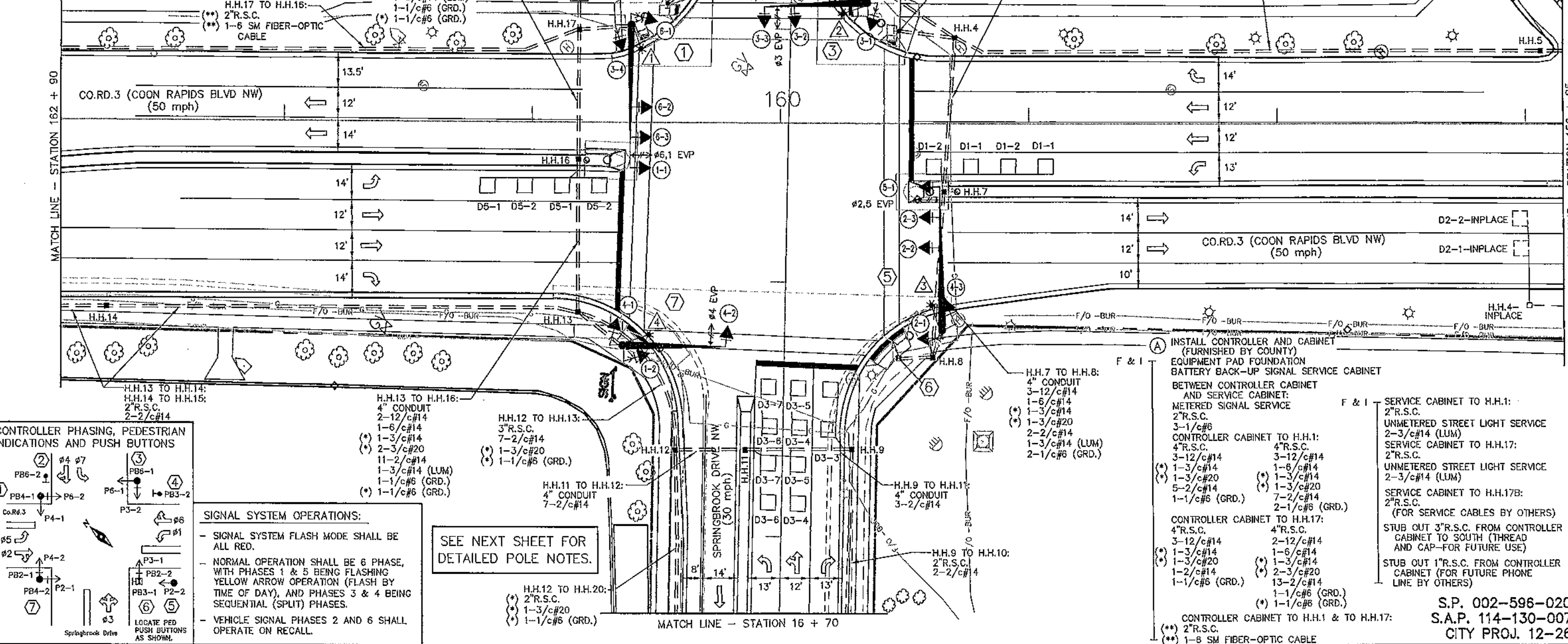
FILE NO. ANOKC 125787	67
SIGNAL SHEET 10 OF 21	91

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

NOTES:

- 1) THE EXACT LOCATION OF HANDHOLES, FOUNDATIONS, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- 3) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
- 4) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE, AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE END OF EACH MAST ARM (FOR EVP).
- 5) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION (CONNEXUS). SEE SPECIAL PROVISIONS.
- 6) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED AND INSTALLED BY CONTRACTOR (INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
- 7) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION FILLED COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
- 8) ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
- 9) SEE DETAILS, SPECIAL PROVISIONS, AND STATEMENT OF ESTIMATED QUANTITIES REGARDING BATTERY BACK-UP SIGNAL SERVICE CABINET TO BE FURNISHED AND INSTALLED BY CONTRACTOR (SEPARATE FROM ITEM NO. 2565 FOR THIS SIGNAL SYSTEM).
- 10) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
- 11) (\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR (OR COUNTY FURNISHED ITEMS TO BE INSTALLED BY CONTRACTOR) UNDER ITEM NO. 2565 ("EMERGENCY VEHICLE PREEMPTION SYSTEM"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 12) (F & I) = ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.

- 13) (\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED (OR REMOVED) BY THE CONTRACTOR UNDER ITEM NO. 2565 ("TRAFFIC CONTROL INTERCONNECTION"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 14) SEE SPECIAL PROVISIONS REGARDING REMOVAL OF INPLACE PERMANENT SIGNAL SYSTEM (INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
- 15) CONTRACTOR SHALL MAINTAIN OPERATION OF A SIGNAL SYSTEM AT THIS INTERSECTION AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE ENGINEER. SEE SPECIAL PROVISIONS AND TEMPORARY SIGNAL SYSTEM PLANS.
- 16) SALVAGING OF EXISTING DECORATIVE STREET LIGHT POLES NEAR NEW HANDHOLES 1 AND 3 WILL BE MEASURED AND PAID FOR SEPARATELY AS NOTED ELSEWHERE IN THE PLANS AND SPECIAL PROVISIONS.
- 17) ALL NEW CABLES & CONDUCTORS, HANDHOLES, CONDUIT, AND LOOP DETECTORS SHALL BE FURNISHED & INSTALLED BY CONTRACTOR AS SHOWN.



LOOP DETECTORS FUNCTIONS:

- 1) CALL AND EXTEND
- 3) EXTEND ONLY
- 7) DELAYED CALL, IMMEDIATE EXTEND
- 8) CARRY OVER (STRETCH)

NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

NMC LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	
D1-1	2-6x6	20' & 50'	1	
D1-2	2-6x6	5' & 35'	1	
D2-1	6x6	400'	1	
D2-2	6x6	400'	1	
D3-1	6x6	120'	3,8	
D3-2	6x6	120'	3,8	
D3-3	2-6x6	5' & 20'	7	
D3-4	2-6x6	20' & 50'	1	
D3-5	2-6x6	5' & 35'	1	
D3-6	2-6x6	20' & 50'	1	
D3-7	2-6x6	5' & 35'	1	
D4-1	6x6	120'	3,8	
D4-2	2-6x6	5' & 20'	7	
D4-3	2-6x6	5' & 25'	7	
D5-1	2-6x6	20' & 50'	1	
D5-2	2-6x6	5' & 35'	1	
D6-1	6x6	400'	1	
D6-2	6x6	400'	1	

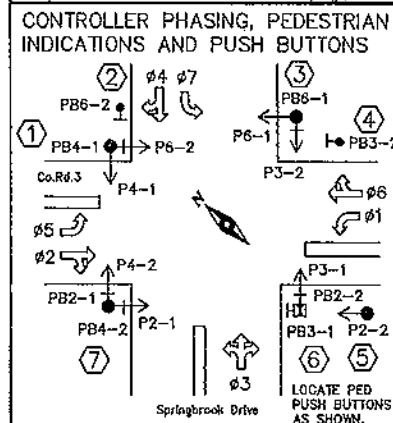
LED SIGNAL FACES

ALL SIGNAL INDICATIONS SHALL BE 12"

SIGNAL FACE	R	Y	FYA	G	G
1-1, 1-2			←	←	←
2-1, 2-2, 2-3	•	•			
3-1, 4-1	•	•		•	•
3-2, 4-2					←
3-3, 3-4, 4-3			←	←	←
5-1, 5-2	•	•			
6-1, 6-2, 6-3	•	•			

FYA = FLASHING YELLOW ARROW

(B) INPLACE GROUND MOUNTED TRANSFORMER (SOP-CONNEXUS) EXTENDED INTO H.H.17B: 2"R.S.C.-INPLACE (POWER CABLES TO 'E F & I' BY CONNEXUS)



SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 & 5 BEING FLASHING YELLOW ARROW OPERATION (FLASH BY TIME OF DAY), AND PHASES 3 & 4 BEING SEQUENTIAL (SPLIT) PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

SEE NEXT SHEET FOR DETAILED POLE NOTES.

DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG  
DESIGN TEAM

NO.	BY	DATE	REVISIONS

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.

John M. Gray, PE  
Lic. No. 22457  
Date: March 12, 2014

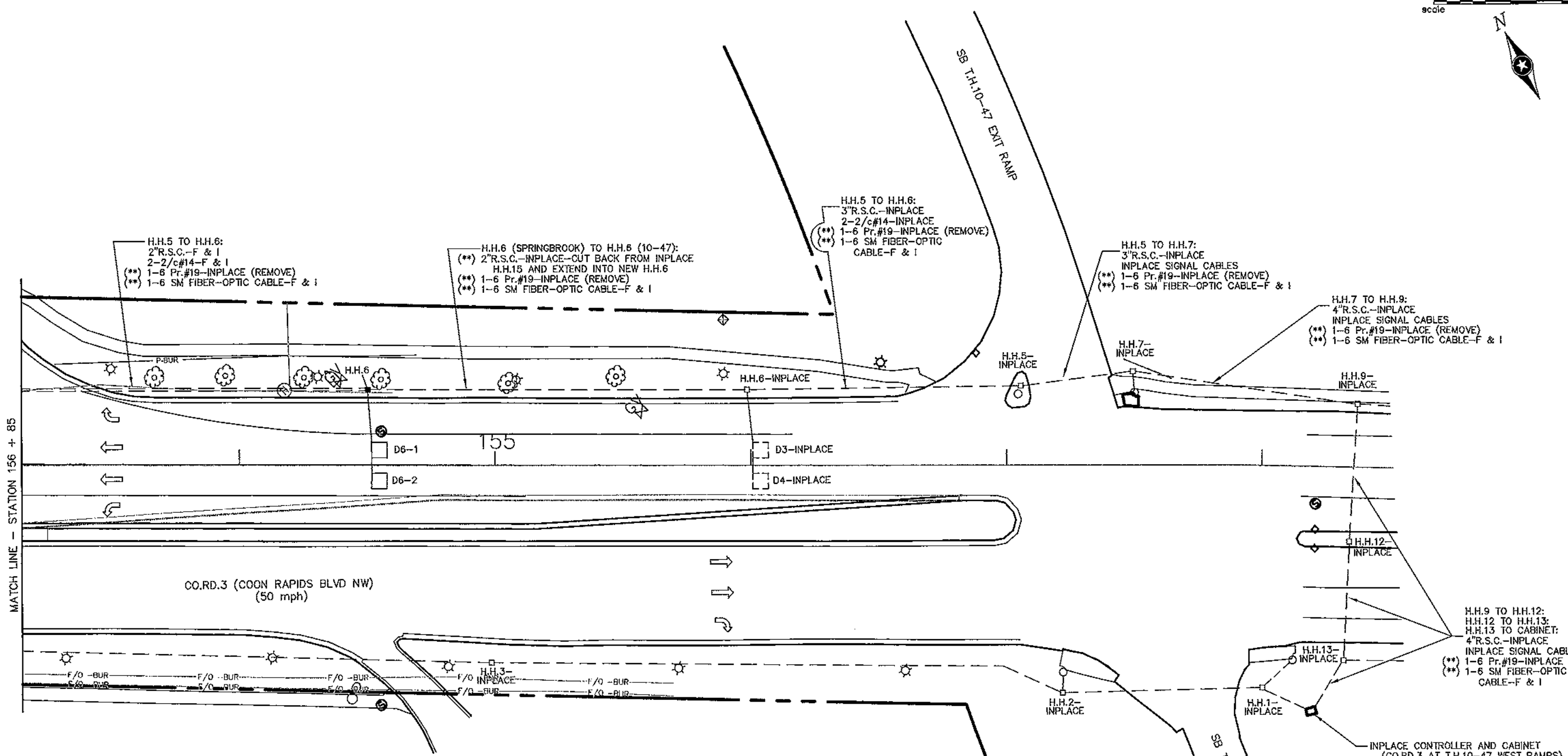
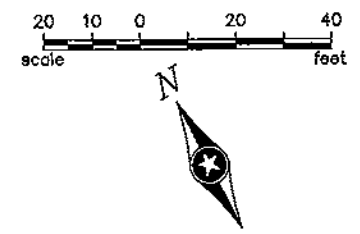
SEH  
PHONE: (651) 490-2000  
3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

ANOKA COUNTY  
CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM  
INTERSECTION LAYOUT  
CO. RD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO.  
ANOKC 125787  
SIGNAL SHEET  
11 OF 21  
68  
91

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26



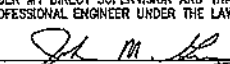
- INTERCONNECT NOTES:**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
  - 2) (\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
  - 3) SEE SIGNAL SHEET 16 FOR FURTHER INFORMATION REGARDING EXISTING TRAFFIC SIGNAL SYSTEM COMPONENTS FOR T.H.10-47 WEST RAMPS SIGNAL SYSTEM.


S.P. 002-596-020  
 S.A.P. 114-130-007  
 CITY PROJ. 12-26

DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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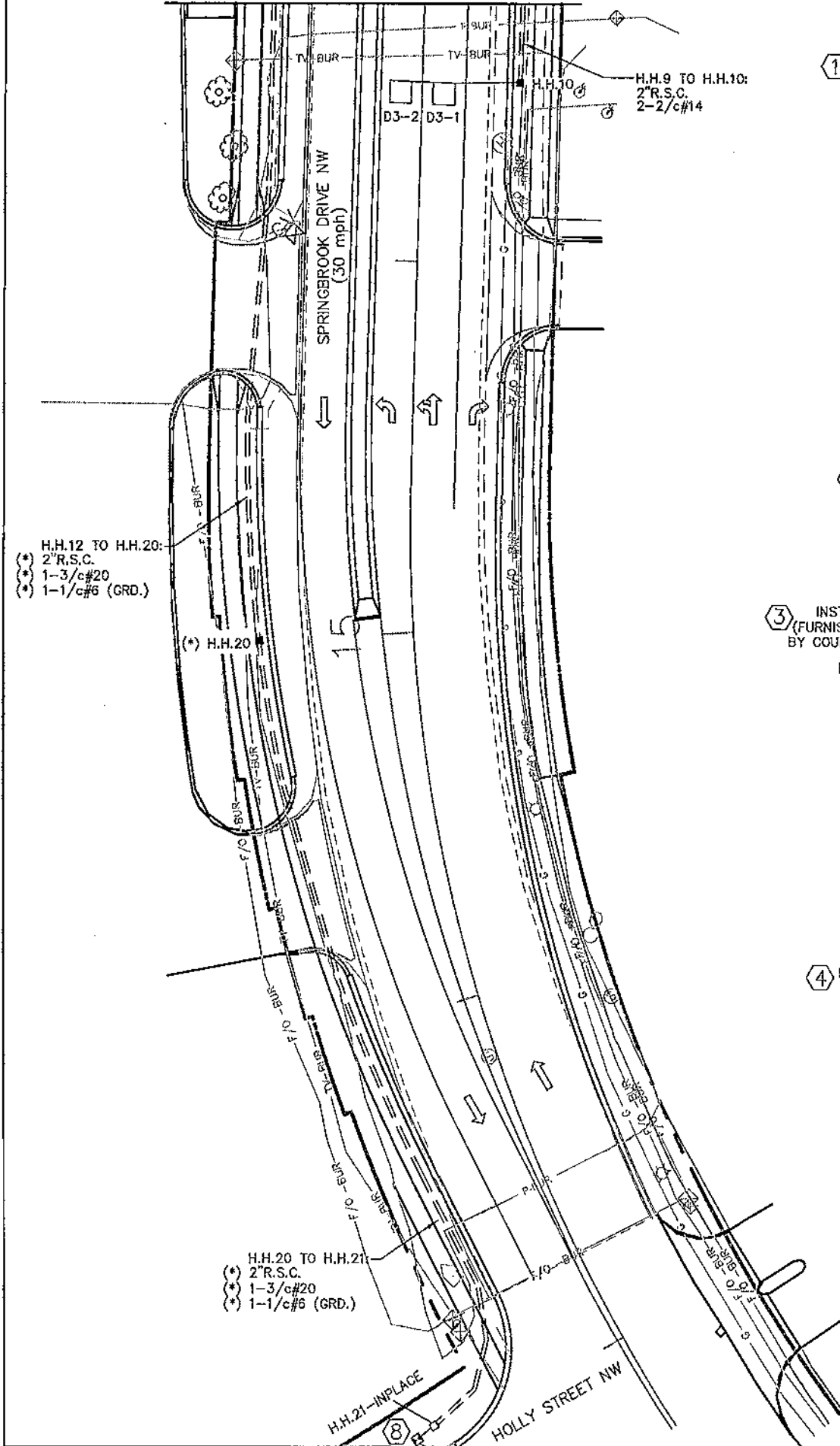
  
 Name: John M. Croft, PE  
 Lic. No. 22457  
 Date: January 13, 2014


 PHONE: (651) 480-2000  
 3535 VADNANS CENTER DR.  
 ST. PAUL, MN 55110

**ANOKA COUNTY**  
**CITY OF COON RAPIDS**

**TRAFFIC CONTROL INTERCONNECTION**  
**INTERSECTION LAYOUT**  
 CO.RD. 3 (COON RAPIDS BLVD NW)  
 (SPRINGBROOK TO TH 10-47 WEST RAMPS)

FILE NO.	69
ANOKC 125787	
SIGNAL SHEET	91
12 OF 21	



① INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-55-D30-9 (\*) ONE WAY EVP DETECTOR (#6,1)

F & I PA100 POLE FOUNDATION  
LUMINAIRE-COBRAHEAD LED (DAVIT AT 350')  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'  
2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11' AND 23'  
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°  
2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180°  
1-PEDESTRIAN PUSH BUTTON  
2-R6-1 SIGN PANELS-POLE MOUNTED 0° & 180°  
R10-X12 SIGN PANEL-ADJACENT TO 1-1  
TYPE D SIGN PANEL-OVERHEAD (D-1)  
(\*) ONE WAY EVP CONFIRMATION LIGHT AND EVP MOUNTING BRACKET (FOR DETECTOR AND LIGHT) (#6,1)  
EXTEND INTO H.H.17:  
3"R.S.C.  
3-12/c#14  
(\*) 1-3/c#14  
(\*) 1-3/c#20  
1-2/c#14  
1-3/c#14 (LUM)  
1-1/c#6 (GRD.)

⑤ INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-55-D30-9 (\*) ONE WAY EVP DETECTOR (#2,5)

F & I PA100 POLE FOUNDATION  
LUMINAIRE-COBRAHEAD LED (DAVIT AT 350')  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'  
2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11' AND 23'  
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°  
1-ANGLE MOUNT C.D. PED INDICATION-POLE MOUNTED 180°  
2-R6-1 SIGN PANELS-POLE MOUNTED 0° & 180°  
R10-X12 SIGN PANEL-ADJACENT TO 5-1  
TYPE D SIGN PANEL-OVERHEAD (D-3)  
(\*) ONE WAY EVP CONFIRMATION LIGHT AND EVP MOUNTING BRACKET (FOR DETECTOR AND LIGHT) (#2,5)  
EXTEND INTO H.H.8:  
3"R.S.C.  
3-12/c#14  
(\*) 1-3/c#14  
(\*) 1-3/c#20  
1-3/c#14 (LUM)  
1-1/c#6 (GRD.)

② F & I PEDESTRIAN PUSH BUTTON STATION (SEE DETAILS)  
1-PEDESTRIAN PUSH BUTTON  
EXTEND INTO H.H.1:  
2"R.S.C.  
1-2/c#14

⑥ F & I PEDESTAL FOUNDATION  
10' PEDESTAL POLE, BASE, AND WIND COLLAR  
1-STRAIGHT MOUNT C.D. PED INDICATION-POLE MOUNTED  
2-PEDESTRIAN PUSH BUTTONS  
EXTEND INTO H.H.8:  
3"R.S.C.  
1-6/c#14  
2-2/c#14  
1-1/c#6 (GRD.)

③ INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-40-D30-9 (\*) ONE WAY EVP DETECTOR (#3)

F & I PA100 POLE FOUNDATION  
LUMINAIRE-COBRAHEAD LED (DAVIT AT 350')  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'  
1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 11'  
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°  
2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180°  
1-PEDESTRIAN PUSH BUTTON  
TYPE D SIGN PANEL-OVERHEAD (D-2)  
(\*) ONE WAY EVP CONFIRMATION LIGHT AND EVP MOUNTING BRACKET (FOR DETECTOR AND LIGHT) (#3)  
EXTEND INTO H.H.3:  
3"R.S.C.  
3-12/c#14  
(\*) 1-3/c#14  
(\*) 1-3/c#20  
1-2/c#14  
1-3/c#14 (LUM)  
1-1/c#6 (GRD.)

⑦ INSTALL (FURNISHED BY COUNTY) TYPE PA100-A-40-D30-9 (\*) ONE WAY EVP DETECTOR (#4)

F & I PA100 POLE FOUNDATION  
LUMINAIRE-COBRAHEAD LED (DAVIT AT 350')  
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'  
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°  
2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180°  
2-PEDESTRIAN PUSH BUTTONS  
TYPE D SIGN PANEL-OVERHEAD (D-4)  
(\*) ONE WAY EVP CONFIRMATION LIGHT AND EVP MOUNTING BRACKET (FOR DETECTOR AND LIGHT) (#4)  
EXTEND INTO H.H.13:  
3"R.S.C.  
2-12/c#14  
1-6/c#14  
(\*) 1-3/c#14  
(\*) 1-3/c#20  
2-2/c#14  
1-3/c#14 (LUM)  
1-1/c#6 (GRD.)

④ F & I PEDESTRIAN PUSH BUTTON STATION (SEE DETAILS)  
1-PEDESTRIAN PUSH BUTTON  
EXTEND INTO H.H.4:  
2"R.S.C.  
1-2/c#14

⑧ INPLACE (REUSE INPLACE) PEDESTAL FOUNDATION EXTENDED INTO H.H.21:  
2"R.S.C.-INPLACE

INPLACE (SALVAGE) (\*) PEDESTAL POLE, BASE, AND EVP DETECTOR

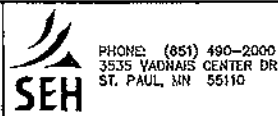
INSTALL (FURNISHED BY COUNTY) (\*) ONE-WAY EVP DETECTOR (#3)

F & I (\*) 12' PEDESTAL POLE (INCLUDES BASE AND WIND COLLAR)  
(\*) EVP MOUNTING HARDWARE & BRACKETING ATOP SLIPFITTER COLLAR (#3)  
(\*) 1-3/c#20  
(\*) 1-1/c#6 (GRD.)

DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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.  
Date: March 12, 2014 Name: John M. Gray, PE Lic. No. 22457



ANOKA COUNTY  
CITY OF COON RAPIDS

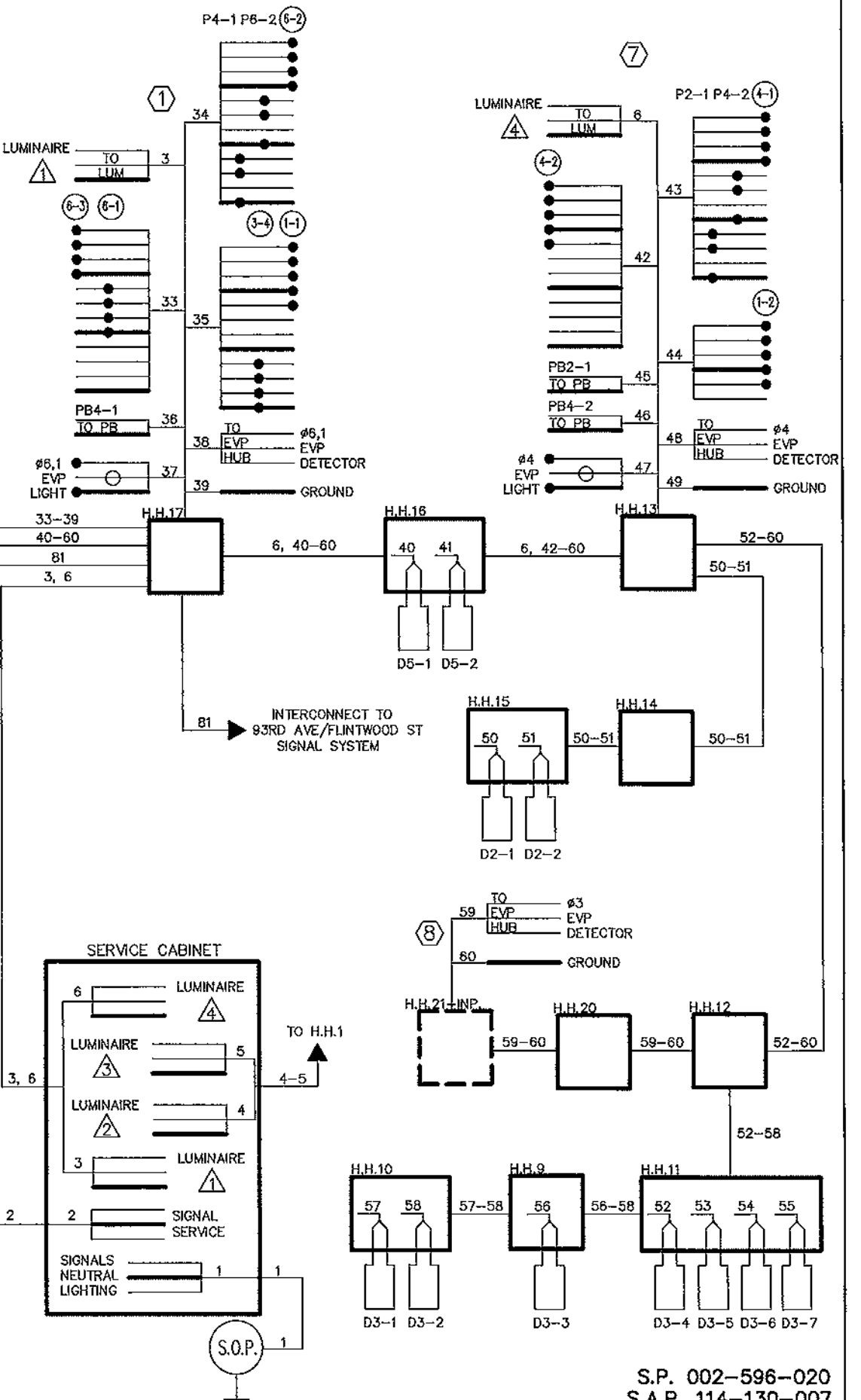
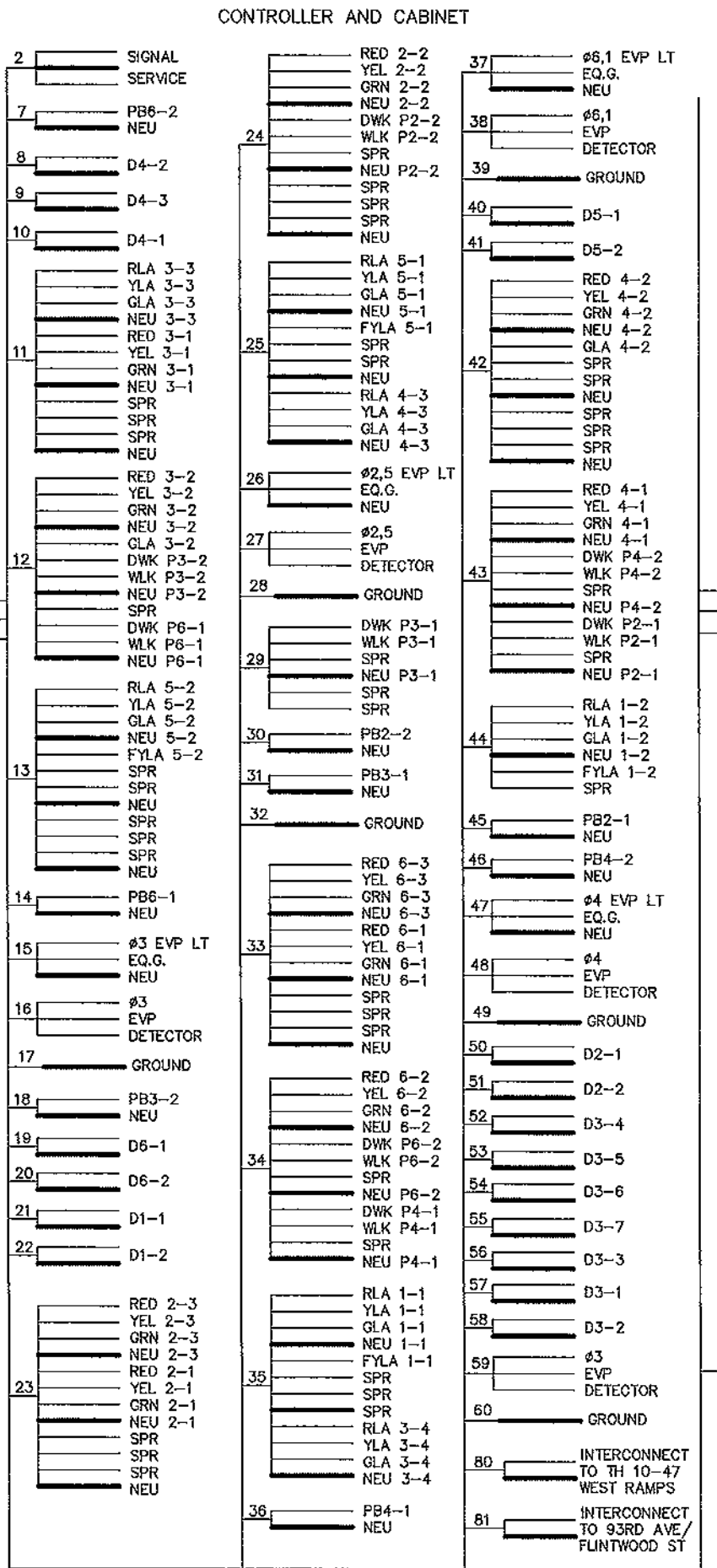
TRAFFIC SIGNAL SYSTEM  
INTERSECTION LAYOUT  
COORD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO. ANOKC 125787  
SIGNAL SHEET 13 OF 21  
70  
91

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

**CONDUCTOR COLOR CODE (14 GAUGE)**

TO SIGNAL CABINET		TO DEVICE	
1/C#14	R	R	RED 4 & 5
6/C#14	BLK	BLK	YEL SECTION
3-1/C#20	WH	BLK/GRN	GRN SIGNAL
3-1/C#14	WH	BLK/BLK	YLA NEU
			GLA INDICATION
			RED/DWK 3 SECTION
			YEL/WLK AND
			GRN/SPR PED
			YLA INDICATION
			RED/DWK 3 SECTION
			YEL/WLK AND
			GRN/SPR PED
			YLA INDICATION
			RED/DWK 3 SECTION
			YEL/WLK AND
			GRN/SPR PED
			YLA INDICATION



DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG  
DESIGN TEAM

NO.	BY	DATE	REVISIONS

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*John M. Gray, P.E.*  
Name: John M. Gray, P.E.  
Lic. No. 22457  
Date: January 13, 2014

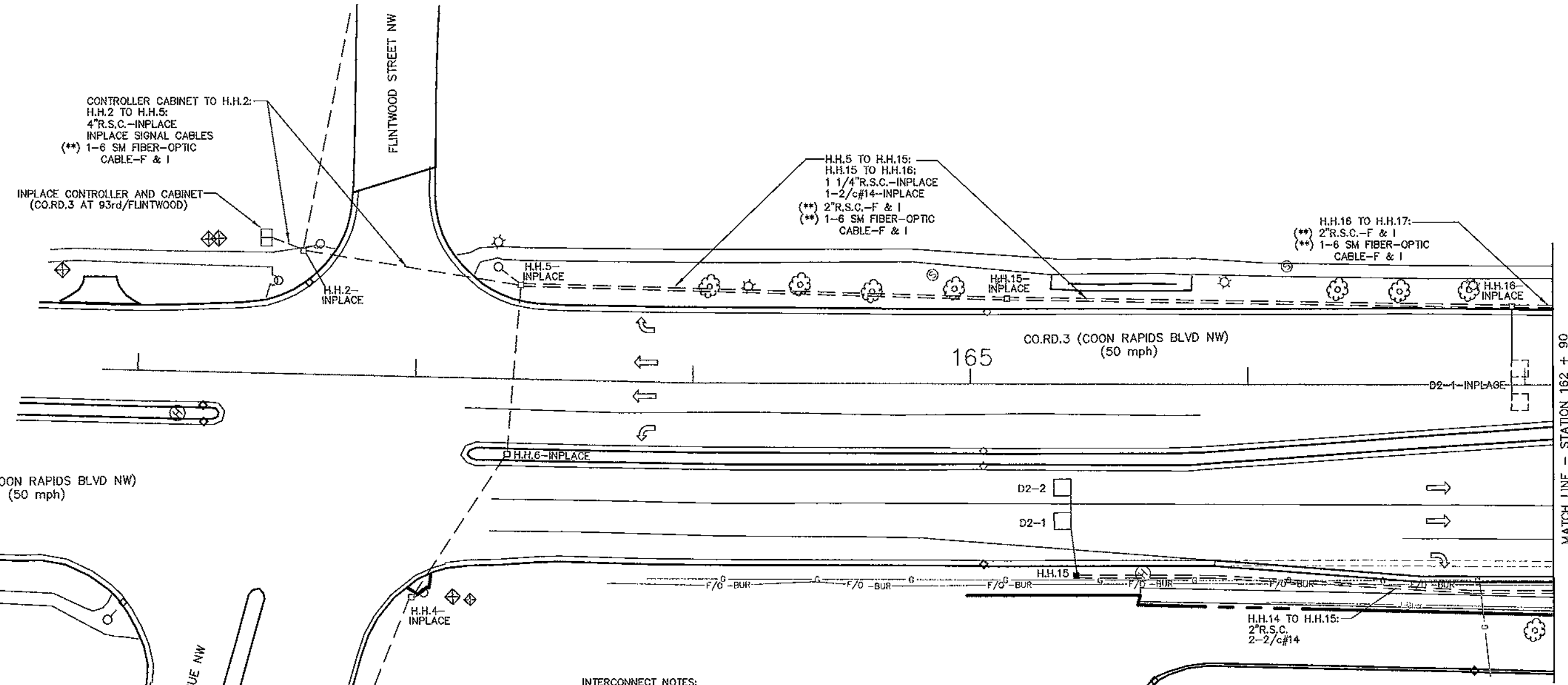
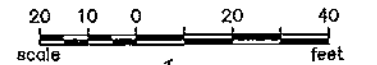
ANOKA COUNTY CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM  
FIELD WIRING DIAGRAM  
COORD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO. ANOKC 125787  
SIGNAL SHEET 14 OF 21

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

71  
91



- INTERCONNECT NOTES:**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
  - 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
  - 3) (\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
  - 4) SEE SIGNAL SHEET 18 FOR FURTHER INFORMATION REGARDING EXISTING TRAFFIC SIGNAL SYSTEM COMPONENTS FOR 93RD AVENUE/FLINTWOOD STREET SIGNAL SYSTEM.

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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.

*John M. Gray*  
Name: John M. Gray, PE  
Date: January 13, 2014  
Lic. No. 22457

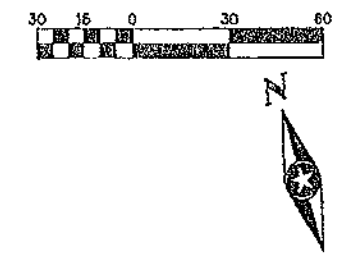
**SEH**  
PHONE: (651) 490-2000  
3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

**ANOKA COUNTY**  
CITY OF COON RAPIDS

**TRAFFIC CONTROL INTERCONNECTION**  
INTERSECTION LAYOUT  
CO. RD. 3 (COON RAPIDS BLVD NW)  
(93RD-FLINTWOOD TO SPRINGBROOK)

FILE NO.	72
ANOKA 125787	
SIGNAL SHEET	91
15 OF 21	





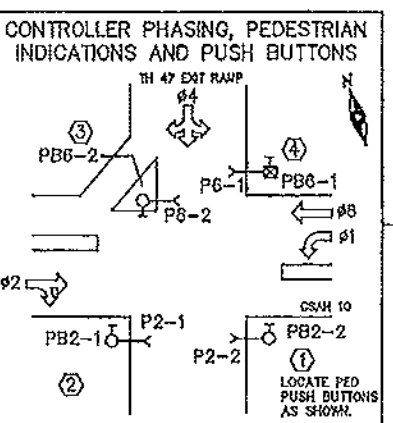
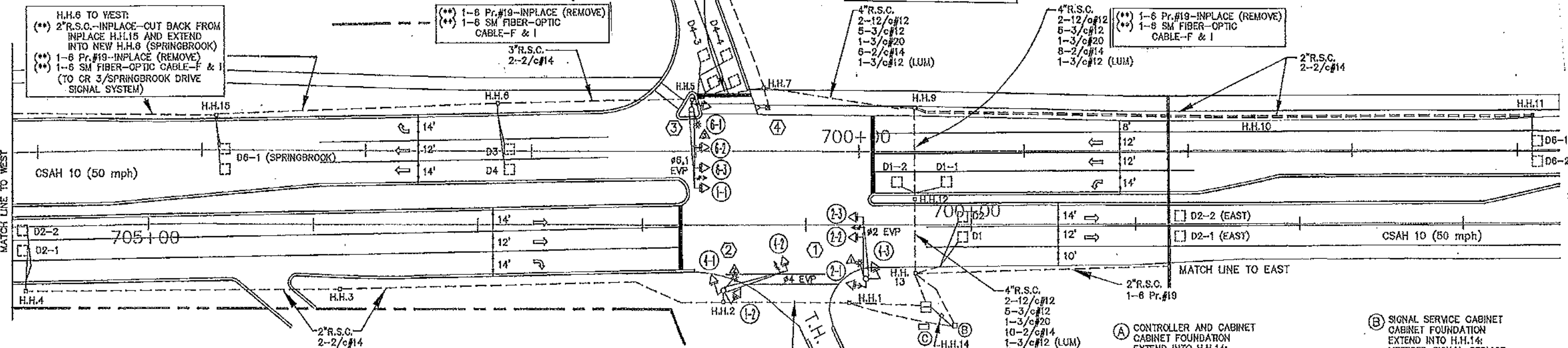
LED SIGNAL FACES			
SIGNAL FACE	ALL 12"		
	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
8-1, 8-2, 8-3	○	○	○

○ ← = INPLACE LED INDICATION, REUSE INPLACE.

INPLACE NMC LOOP DETECTORS			
NUMBER	SIZE (FY.)	LOCATION	FUNCTION
D1-1	8x8	40'	1
D1-2	8x8	10'	1
D2-1	8x8	400'	1
D2-2	8x8	400'	1
D4-1	8x8	250'	3,8
D4-2	8x8	250'	3,8
D4-3	2-8x8	8' & 20'	1
D4-4	2-8x8	8' & 20'	1
D6-1	8x8	400'	1
D6-2	8x8	400'	1
D1	8x8	50'	11
D2	8x8	50'	11
D3	8x8	100'	11
D4	8x8	100'	11

- LOOP DETECTORS FUNCTIONS:**
- 1) CALL AND EXTEND
  - 3) EXTEND ONLY
  - 7) DELAYED CALL - IMMEDIATE EXTEND
  - 8) CARRY OVER (STRETCH)
  - 11) SPECIAL DETECTOR (COUNTING)

- INTERCONNECT NOTES:**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
  - 2) (\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2505 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
  - 3) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY BOTH (\*\*) AND BY EITHER F & I (INTERCONNECT ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR) OR BY REMOVE (INPLACE INTERCONNECT CABLE TO BE REMOVED AND DISPOSED OF BY CONTRACTOR).
  - 4) SEE SIGNAL SHEET 12 FOR FURTHER INFORMATION REGARDING INTERCONNECT WORK TO BE COMPLETED BY CONTRACTOR.



SYSTEM ID = 20221  
METER ADDRESS = HIGHWAY 10 AND COON RAPIDS BLVD

**SIGNAL SYSTEM OPERATIONS:**

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 4 PHASE, WITH PHASE 1 BEING A PROTECTED LEFT TURN PHASE.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

- ② PA100 POLE FOUNDATION  
TYPE PA100-A-40-D40-9 (DAVT AT 350')  
LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
ONE WAY SIGNAL-OVERHEAD  
TYPE 10A-POLE MOUNTED 90'  
TYPE 10B-POLE MOUNTED 180'  
1-PEDESTRIAN PUSH BUTTON & SIGN  
R9-3a SIGN PANEL-FACING POLE 3  
TYPE D SIGN PANEL-OVERHEAD  
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#4)  
EXTEND INTO H.H.2:  
3'R.S.C.  
2-12/c#12  
2-3/c#12  
1-3/c#20  
1-3/c#14  
1-3/c#12 (LUM)

Ⓢ INPLACE GROUND MOUNTED TRANSFORMER (S.O.P.) (CONNEXUS)

- ① PA90 POLE FOUNDATION  
TYPE PA90-A-35-D40-9 (DAVT AT 350')  
LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
2-ONE WAY SIGNALS-OVERHEAD (0' & 11' FROM END OF MAST ARM)  
TYPE 10A-POLE MOUNTED 90'  
TYPE 10B-POLE MOUNTED 180'  
1-PEDESTRIAN PUSH BUTTON & SIGN  
R9-3a SIGN PANEL-FACING POLE 5  
2-TYPE D SIGN PANELS-OVERHEAD  
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#2)  
EXTEND INTO H.H.1:  
3'R.S.C.  
2-12/c#12  
2-3/c#12  
1-3/c#20  
1-3/c#12 (LUM)

- ③ A100 POLE FOUNDATION  
TYPE PA100-A-45-D40-9 (DAVT AT 350')  
LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
3-ONE WAY SIGNALS-OVERHEAD (0', 11' AND 23' FROM END OF MAST ARM)  
TYPE 10B-POLE MOUNTED 180'  
1-PEDESTRIAN PUSH BUTTON & SIGN  
R9-3a SIGN PANEL-FACING POLE 2  
TYPE D SIGN PANEL-OVERHEAD  
ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#6,1)  
EXTEND INTO H.H.5:  
3'R.S.C.  
2-12/c#12  
3-3/c#12  
1-3/c#20  
1-3/c#12 (LUM)

- Ⓐ CONTROLLER AND CABINET CABINET FOUNDATION  
EXTEND INTO H.H.14:  
METERED SIGNAL SERVICE  
2'R.S.C.  
3-1/c#6  
EXTEND INTO H.H.1:  
UNMETERED STREET LIGHT SERVICE  
4'R.S.C.  
4-12/c#12  
4-3/c#12  
2-3/c#20  
2-2/c#14  
EXTEND INTO H.H.13:  
4'R.S.C.  
2-12/c#12  
5-3/c#12  
1-3/c#20  
1-3/c#14  
1-3/c#12 (LUM)  
1-6 Pr.#19  
2-3'R.S.C. STUBBED OUT FROM CABINET TO NORTH (THREADED AND CAPPED BOTH ENDS- FOR FUTURE USE)

- Ⓑ SIGNAL SERVICE CABINET CABINET FOUNDATION  
EXTEND INTO H.H.14:  
METERED SIGNAL SERVICE  
2'R.S.C.  
3-1/c#6  
EXTEND INTO H.H.1:  
UNMETERED STREET LIGHT SERVICE  
2'R.S.C.  
4-12/c#12  
2-3/c#20  
EXTEND INTO H.H.13:  
UNMETERED STREET LIGHT SERVICE  
2'R.S.C.  
1-3/c#12 (LUM)  
STUB OUT 2'R.S.C. TO WEST (FOR SERVICE CONNECTION BY CONNEXUS)

DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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

*John U. Gray, PE*  
Home: John U. Gray, PE  
Lic. No. 22457  
Date: January 13, 2014

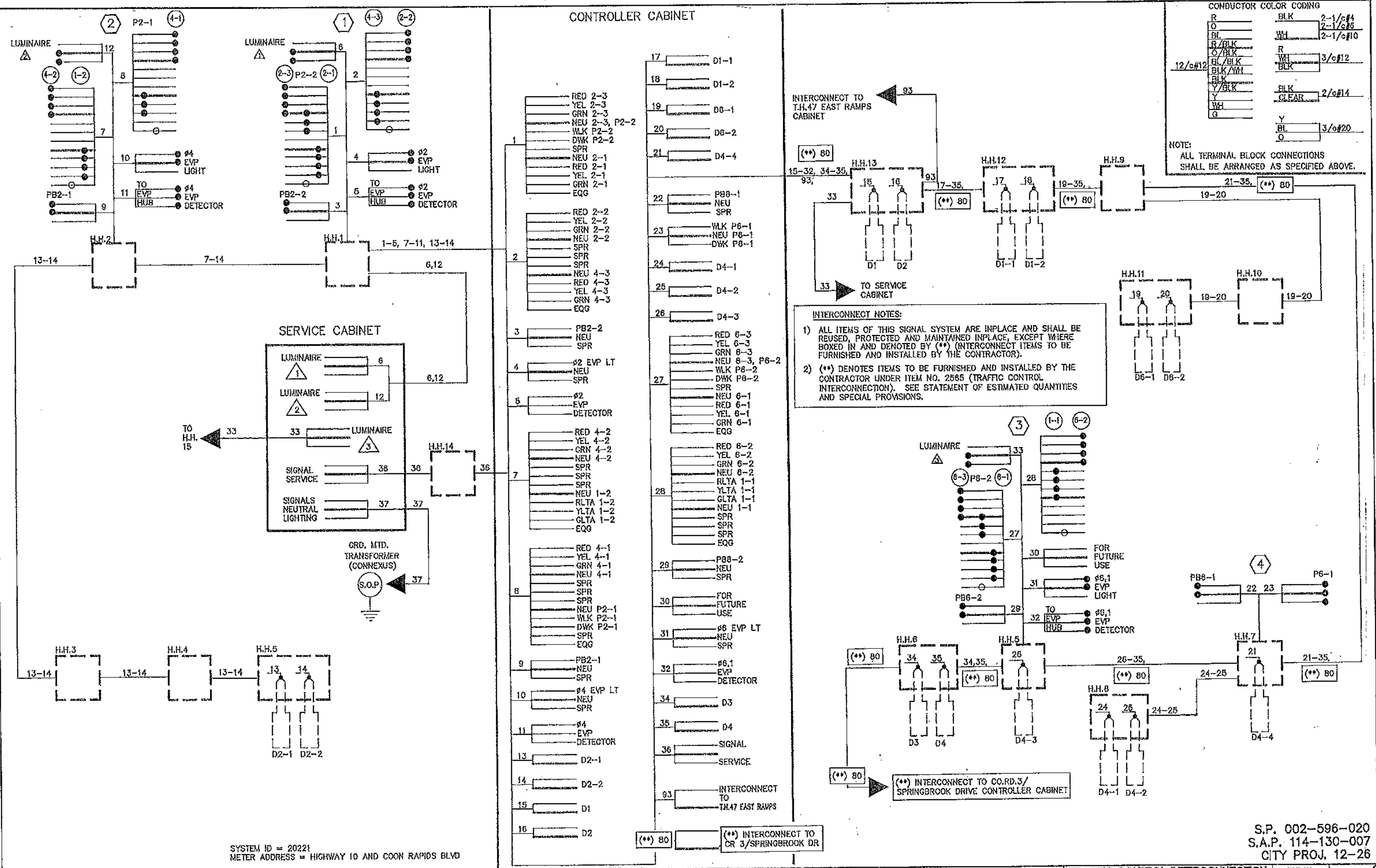
SEH  
PHONE: (651) 490-2000  
3535 WADSWORTH CENTER DR.  
ST. PAUL, MN 55110

ANOKA COUNTY  
CITY OF COON RAPIDS

TRAFFIC CONTROL INTERCONNECTION  
INTERSECTION LAYOUT  
COR. 3 (COON RAPIDS BLVD NW)  
AT T.H.10-47 WEST RAMPS

FILE NO. 73  
ANOKA 125787  
SIGNAL SHEET 91  
16 OF 21

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26



DRAWN BY: JMG				
DESIGNER: JMG				
CHECKED BY: JMG				
NO.	BY	DATE	REVISIONS	

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.

Name: John M. Gray, PE  
 Lic. No.: 22457  
 Date: January 13, 2017

PHONE: (651) 490-2000  
 3535 VANDAN'S CENTER DR.  
 ST. PAUL, MN 55110

**ANOKA COUNTY**  
CITY OF COON RAPIDS

**TRAFFIC CONTROL INTERCONNECTION**  
FIELD WIRING DIAGRAM  
CO. RD. 3 (COON RAPIDS BLVD NW)  
AT T.H.10-47 WEST RAMPS

S.P. 002-596-020  
 S.A.P. 114-130-007  
 CITY PROJ. 12-26

FILE NO. ANOKC 128787	74
SIGNAL SHEET 17 OF 21	91

**INTERCONNECT NOTES:**

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2180.
- (\*\*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- ALL ITEMS OF THIS SIGNAL SYSTEM ARE IN PLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED IN PLACE, EXCEPT WHERE BOXED IN AND DENOTED BY BOTH (\*\*) AND BY F & I (INTERCONNECT ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR).
- SEE SIGNAL SHEET 15 FOR FURTHER INFORMATION REGARDING INTERCONNECT WORK TO BE COMPLETED BY CONTRACTOR.

NUMBER	SIZE	LOCATION	FUNCTION
D1-1	4'-6" x 6'	---	1
D2-1	2'-6" x 6'	360'	1
D4-1	2'-6" x 6'	220'	3,8
D4-2	2'-6" x 6'	---	7
D4-3	2'-6" x 6'	---	1
D4-4	2'-6" x 6'	---	1
D5-1	4'-6" x 6'	---	1
D6-1	2'-6" x 6'	360'	1
D8-1	6' x 6'	105'	3,8
D8-2	2'-6" x 6'	---	7
D8-3	6' x 6'	---	7

\* DISTANCE TO STOP BAR

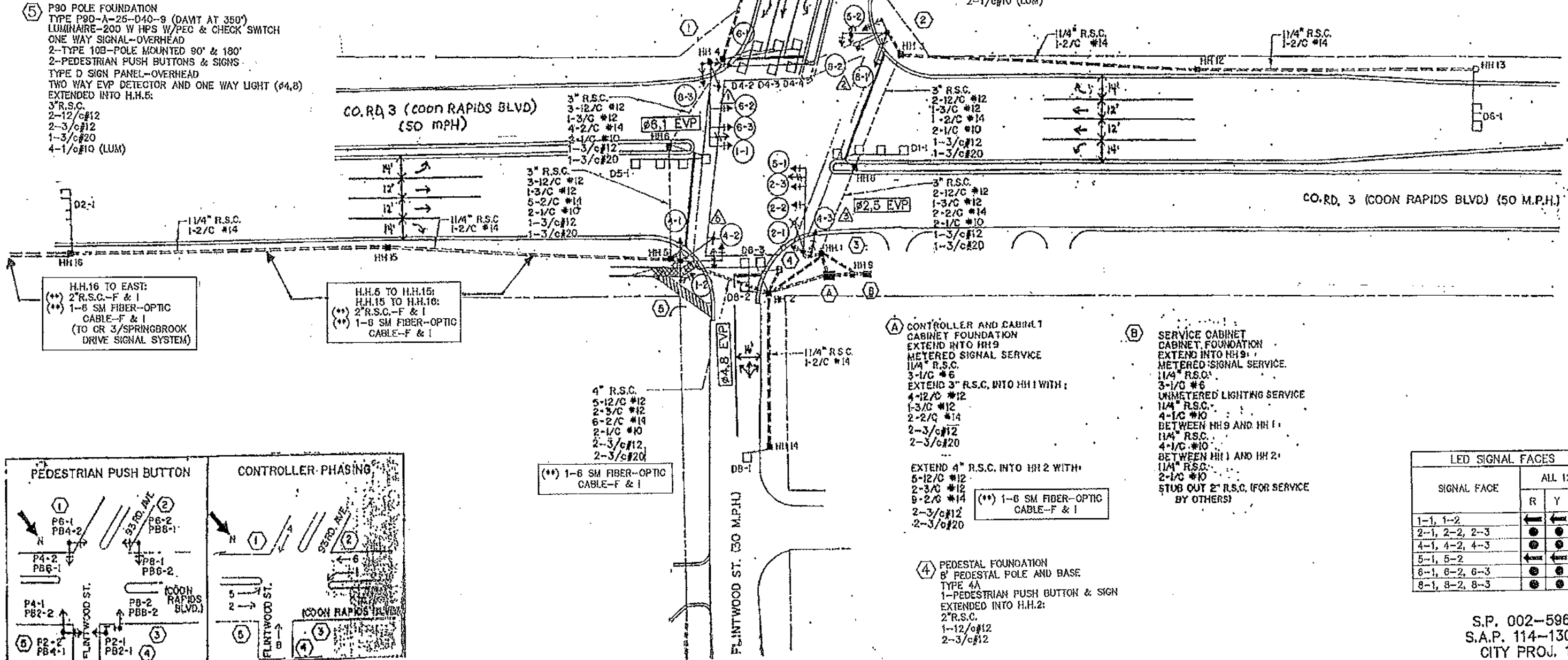
- LOOP DETECTOR FUNCTIONS**
- CALL AND EXTEND
  - CALL ONLY
  - EXTEND ONLY
  - CALL ONLY DETECT
  - DELETED CALL ONLY
  - DELETED CALL ONLY DETECT
  - DELETED CALL - BOUNDARY EXTEND
  - EXTEND OVER INTERSECTION
  - BOUNDARY DETECTION
  - TRAILING DETECTION
  - PRELIM DETECTION



- ⑤ P90 POLE FOUNDATION  
 TYPE P90-A-25-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
 ONE WAY SIGNAL-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 TWO WAY EVP DETECTOR AND ONE WAY LIGHT (#4,8)  
 EXTENDED INTO H.H.5:  
 3" R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20  
 4-1/c#10 (LUM)

- ① A100 POLE FOUNDATION  
 TYPE A100-A-50-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS  
 3-ONE WAY SIGNALS-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#8,1)  
 EXTENDED INTO H.H.4:  
 3" R.S.C.  
 3-12/c#12  
 2-3/c#12  
 1-3/c#20  
 2-1/c#10 (LUM)

- ③ A100 POLE FOUNDATION  
 TYPE A100-A-50-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
 3-ONE WAY SIGNALS-OVERHEAD  
 TYPE 10B-POLE MOUNTED 90°  
 TYPE 10A-POLE MOUNTED 180°  
 1-PEDESTRIAN PUSH BUTTON & SIGN  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#2,5)  
 EXTENDED INTO H.H.1:  
 3" R.S.C.  
 2-12/c#12  
 3-3/c#12  
 1-3/c#20  
 4-1/c#10 (LUM)



H.H.16 TO EAST:  
 (\*\*\*) 2" R.S.C.-F & I  
 (\*\*\*) 1-6 SM FIBER-OPTIC CABLE-F & I  
 (TO CR 3/SPRINGBROOK DRIVE SIGNAL SYSTEM)

H.H.6 TO H.H.15:  
 H.H.15 TO H.H.16:  
 (\*\*\*) 2" R.S.C.-F & I  
 (\*\*\*) 1-6 SM FIBER-OPTIC CABLE-F & I

(\*\*\*) 1-6 SM FIBER-OPTIC CABLE-F & I

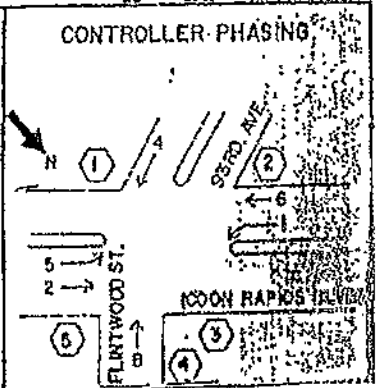
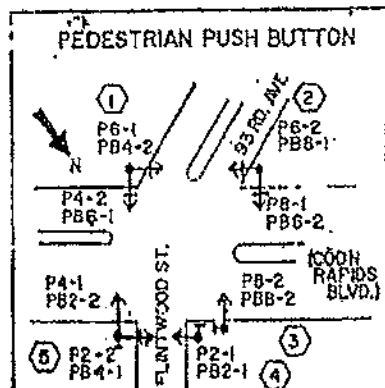
A CONTROLLER AND CABINET 1  
 CABINET FOUNDATION  
 EXTEND INTO H.H.9  
 METERED SIGNAL SERVICE  
 1 1/4" R.S.C.  
 3-1/C #6  
 EXTEND 3" R.S.C. INTO H.H.1 WITH:  
 4-12/C #12  
 1-3/C #12  
 2-2/C #14  
 2-3/c#12  
 2-3/c#20

B SERVICE CABINET  
 CABINET FOUNDATION  
 EXTEND INTO H.H.9  
 METERED SIGNAL SERVICE  
 1 1/4" R.S.C.  
 3-1/C #6  
 UNMETERED LIGHTING SERVICE  
 1 1/4" R.S.C.  
 4-1/C #10  
 BETWEEN H.H.9 AND H.H.1:  
 1 1/4" R.S.C.  
 4-1/C #10  
 BETWEEN H.H.1 AND H.H.2:  
 1 1/4" R.S.C.  
 2-1/C #10  
 STUB OUT 2" R.S.C. (FOR SERVICE BY OTHERS)

EXTEND 4" R.S.C. INTO H.H.2 WITH:  
 5-12/C #12  
 2-3/C #12  
 9-2/C #14  
 2-3/c#12  
 2-3/c#20  
 (\*\*\*) 1-6 SM FIBER-OPTIC CABLE-F & I

- ④ PEDESTAL FOUNDATION  
 B' PEDESTAL POLE AND BASE  
 TYPE 4A  
 1-PEDESTRIAN PUSH BUTTON & SIGN  
 EXTENDED INTO H.H.2:  
 2" R.S.C.  
 1-12/c#12  
 2-3/c#12

LED SIGNAL FACES				
SIGNAL FACE	ALL 12"			
	R	Y	G	
1-1, 1-2	←	←	←	
2-1, 2-2, 2-3	●	●	●	
4-1, 4-2, 4-3	●	●	●	
5-1, 5-2	←	←	←	
6-1, 6-2, 6-3	●	●	●	
8-1, 8-2, 8-3	●	●	●	



DRAWN BY: JMG  
 DESIGNER: JMG  
 CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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.  
 Date: January 13, 2014  
 Name: John M. Gray, PE  
 Lic. No.: 22457

SEH  
 PHONE: (651) 490-2000  
 3535 VADNASS CENTER DR.  
 ST. PAUL, MN 55110

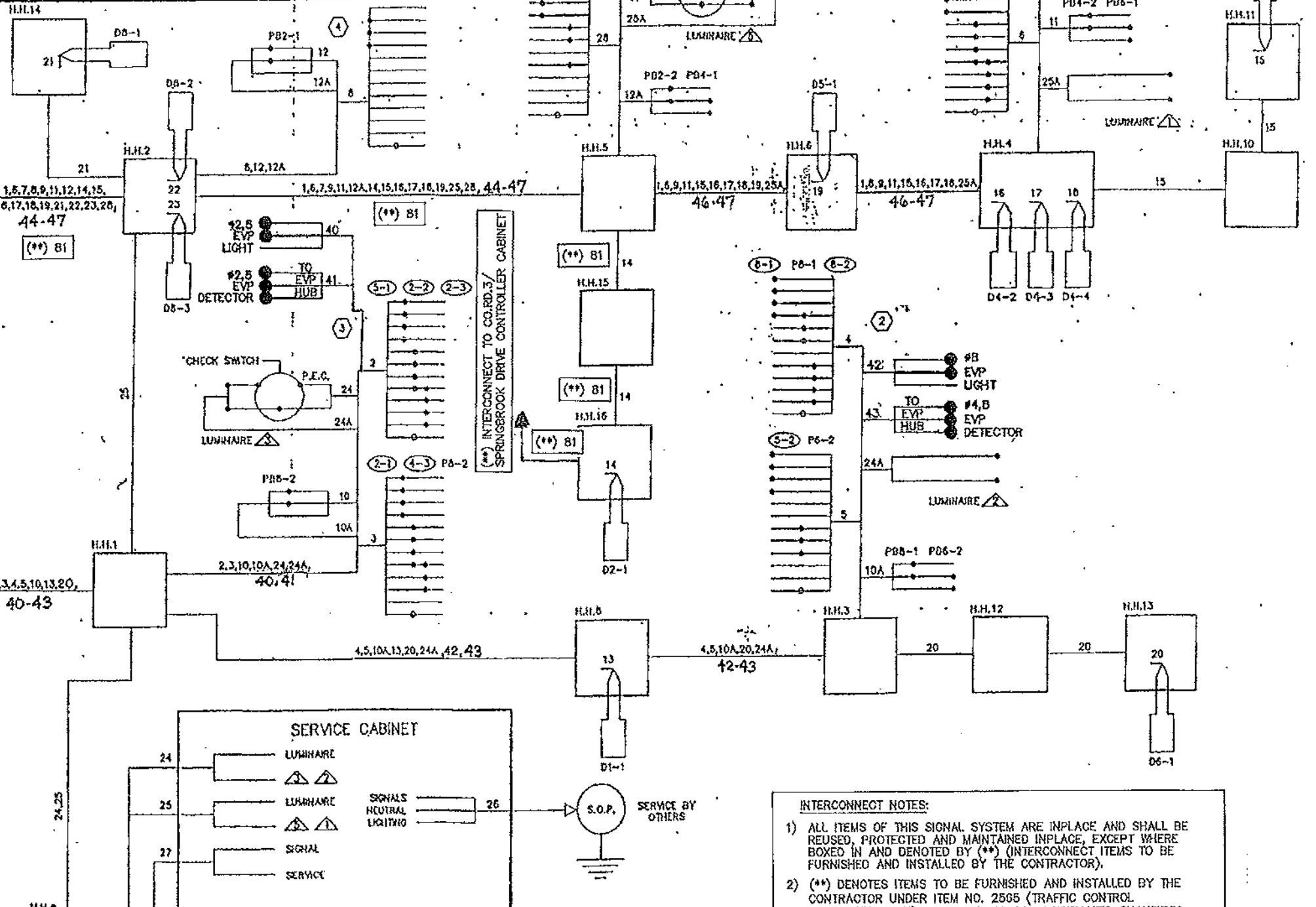
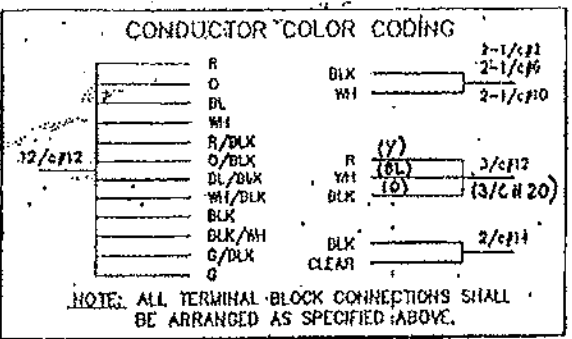
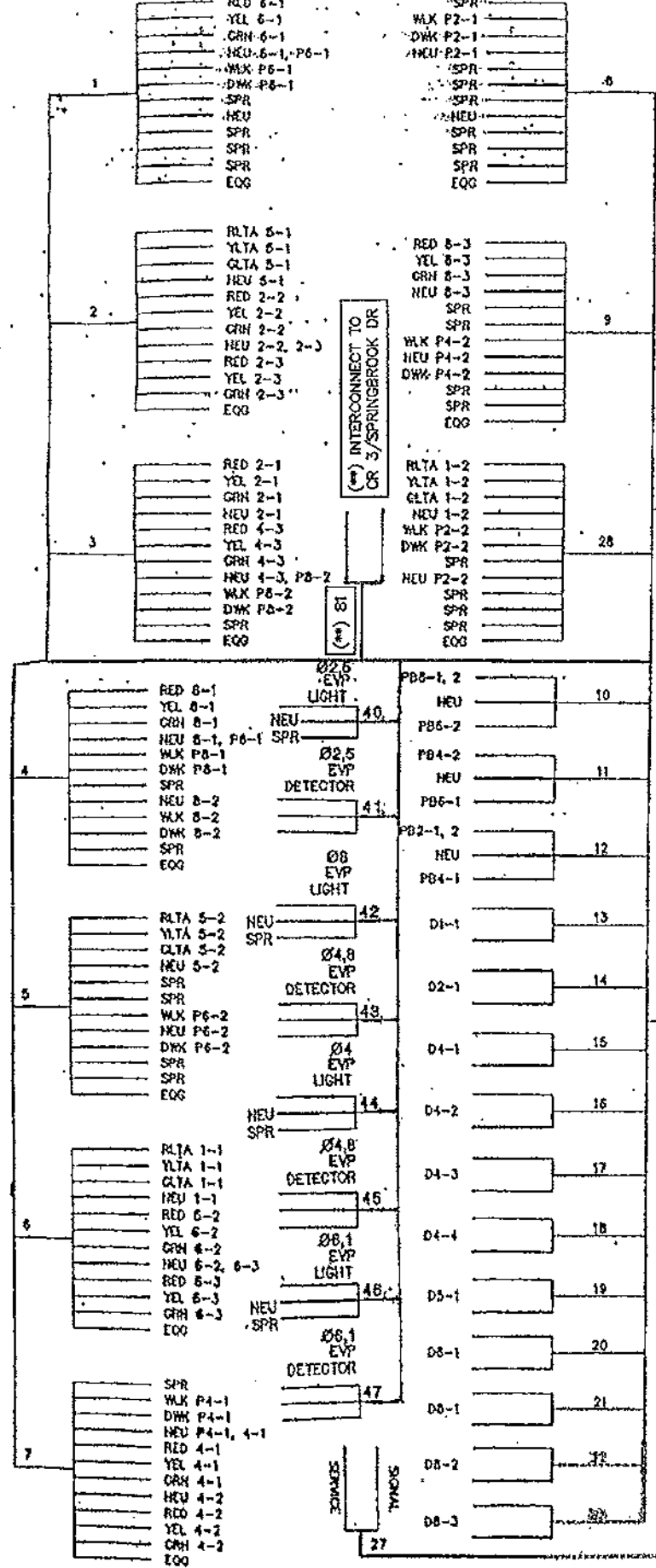
ANOKA COUNTY  
 CITY OF COON RAPIDS

TRAFFIC CONTROL INTERCONNECTION  
 INTERSECTION LAYOUT  
 CO. RD. 3 (COON RAPIDS BLVD NW)  
 AT 93RD AVENUE/FLINTWOOD STREET

FILE NO. ANOKA 126787  
 SIGNAL SHEET 18 OF 21  
 75  
 91

S.P. 002-596-020  
 S.A.P. 114-130-007  
 CITY PROJ. 12-26

**CONTROLLER CABINET**



**INTERCONNECT NOTES:**

- 1) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY (\*\*). (INTERCONNECT ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR).
- 2) (\*\*). DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2505 (TRAFFIC CONTROL INTERCONNECTION). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.

DRAWN BY: JMG  
 DESIGNER: JMG  
 CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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.

John M. Gray, P.E.  
 Date: January 13, 2015  
 License No. 22457

SEH  
 PHONE: (855) 490-2000  
 3535 VADRIAS CENTER DR.  
 ST. PAUL, MN 55110

**ANOKA COUNTY**  
 CITY OF COON RAPIDS

**TRAFFIC CONTROL INTERCONNECTION**  
 FIELD WIRING DIAGRAM  
 COORD. 3 (COON RAPIDS BLVD NW)  
 AT 93RD AVENUE/FLINTWOOD STREET

S.P. 002-596-020  
 S.A.P. 114-130-007  
 CITY PROJ. 12-26

FILE NO. ANOKC 125707  
 SIGNAL SHEET 19 OF 21  
 76  
 91

LOOP DETECTORS			
NUMBER	SIZE	LOCATION	FUNCTION
D1-1	MULTIPLE	---	1
D2-1	2-8'x6'	370'	1
D4-1	2-8'x6'	140'	3,8
D4-2	2-8'x6'	---	1
D4-3	2-8'x6'	---	7
D5-1	MULTIPLE	---	1
D6-1	2-8'x6'	370'	1
D6-1	2-8'x6'	140'	3,8
D6-2	2-8'x6'	---	1
D6-3	2-8'x6'	---	7

- FUNCTIONS:**
- 1) CALL AND EXTEND
  - 2) CALL ONLY
  - 3) EXTEND ONLY
  - 4) CALL ONLY DENSITY
  - 5) DELAYED CALL ONLY
  - 6) DELAYED CALL ONLY DENSITY
  - 7) DELAYED CALL - IMMEDIATE EXTEND
  - 8) CARRY OVER (STRETCH)
  - 9) ADVISORY DETECTOR
  - 10) SAMPLING DETECTOR
  - 11) SPECIAL DETECTOR

NOTE: LOCATION = DISTANCE FROM STOP BAR TO DETECTOR

③ P100 POLE FOUNDATION  
 TYPE P100-A-40-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
 2-ONE WAY SIGNALS-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#6,1)  
 EXTENDED INTO H.H.4:  
 3"R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20  
 4-1/c#10 (LUM)

① SERVICE CABINET  
 CABINET FOUNDATION  
 EXTEND INTO H.H. 16:  
 2" R.S.C.  
 EXTEND INTO H.H. 11  
 METERED SIGNAL SERVICE  
 1 1/4" R.S.C.  
 3- 1/0 #6  
 UNMETERED STREET LIGHTING SERVICE  
 1" R.S.C.  
 4- 1/0 #10

② CONTROLLER & CABINET  
 CABINET FOUNDATION  
 EXTEND INTO H.H. 11  
 4" R.S.C.  
 5- 12/0 #12  
 3- 3/0 #12  
 5- 2/0 #14  
 2- 3/0 #12  
 2- 3/c#20  
 3- 3/c#20  
 METERED SIGNAL SERVICE  
 1 1/4" R.S.C.  
 3- 1/0 #6  
 EXTEND INTO H.H.9:  
 4" R.S.C.  
 5- 12/0 #12  
 3- 3/0 #12  
 5- 2/0 #14  
 2- 3/c#12  
 2- 3/c#20  
 1- 6 Pr.#19  
 BETWEEN H.H.1 AND H.H.9:  
 2" R.S.C.  
 2- 1/0 #10

④ P90 POLE FOUNDATION  
 TYPE P90-A-30-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS W/PEC & CHECK SWITCH  
 ONE WAY SIGNAL-OVERHEAD  
 TYPE 30A-POLE MOUNTED 90°  
 TYPE 10B-POLE MOUNTED 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#6)  
 EXTENDED INTO H.H.9:  
 3"R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20  
 4-1/c#10 (LUM)

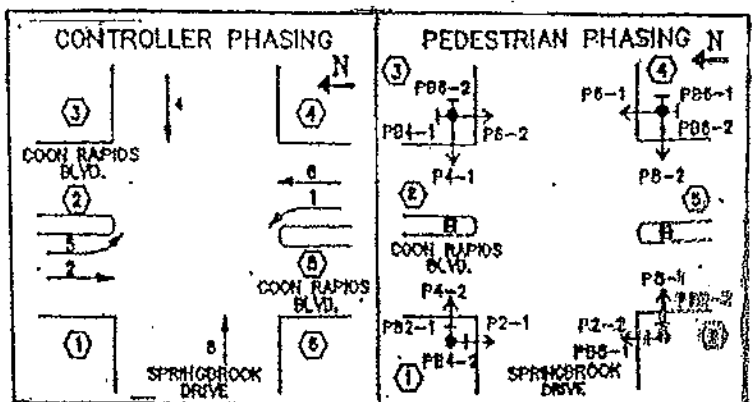
① P80 POLE FOUNDATION  
 TYPE P80-A-30-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS  
 ONE WAY SIGNAL-OVERHEAD  
 TYPE 30A-POLE MOUNTED 90°  
 TYPE 10B-POLE MOUNTED 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#4)  
 EXTENDED INTO H.H.6:  
 3"R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20  
 2-1/c#10 (LUM)

② PEDESTAL FOUNDATION  
 PEDESTAL POLE AND BASE  
 TYPE 1A  
 R4-7 SIGN PANEL  
 EXTENDED INTO H.H.5:  
 3"R.S.C.  
 1-12/c#12  
 1-3/c#12

⑤ PEDESTAL FOUNDATION  
 PEDESTAL POLE AND BASE  
 TYPE 1A  
 R4-7 SIGN PANEL  
 EXTENDED INTO H.H.10:  
 3"R.S.C.  
 1-12/c#12  
 1-3/c#12

⑥ P100 POLE FOUNDATION  
 TYPE P100-A-40-D40-9 (DAVT AT 350')  
 LUMINAIRE-200 W HPS  
 2-ONE WAY SIGNALS-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS & SIGNS  
 TYPE D SIGN PANEL-OVERHEAD  
 ONE WAY EVP DETECTOR AND LIGHT (#2,5)  
 EXTENDED INTO H.H.4:  
 3"R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20  
 2-1/c#10 (LUM)

⑦ PEDESTAL FOUNDATION  
 PEDESTAL POLE AND BASE  
 ONE WAY EVP DETECTOR-MOUNTED  
 ATOP PEDESTAL POLE (#6)  
 EXTENDED INTO H.H.3:  
 2"R.S.C.  
 1-3/c#20



NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

LED SIGNAL FACES			
SIGNAL FACE	ALL 12"		
	R	Y	G
1-1	←	←	←
2-1, 2-2, 2-3	●	●	●
4-1, 4-2, 4-3	●	●	●
5-1	←	←	←
6-1, 6-2, 6-3	●	●	●
8-1, 8-2, 8-3	●	●	●

DRAWN BY: JMG	DESIGNER: JMG	CHECKED BY: JMG	DESIGN TEAM	NO.	BY	DATE	REVISIONS

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.

*John M. Gray, PE*  
 Name: John M. Gray, PE  
 License No.: 22457  
 Date: January 13, 2014

SEH  
 PHONE: (651) 490-2000  
 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

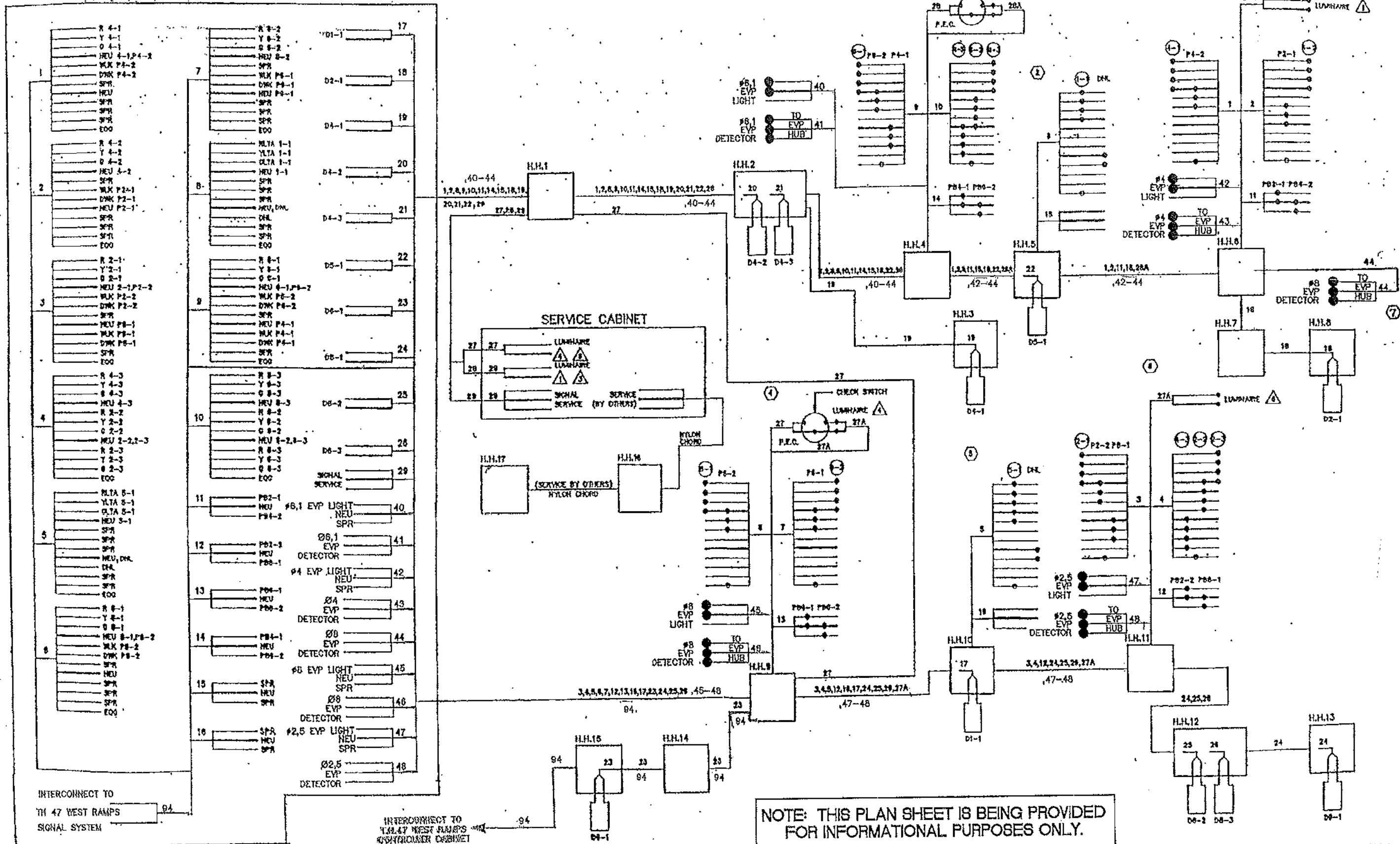
ANOKA COUNTY  
 CITY OF COON RAPIDS

INPLACE SIGNAL SYSTEM  
 'FOR INFORMATION ONLY'  
 COORD. 3 (COON RAPIDS BLVD NW)  
 AT SPRINGBROOK DRIVE NW

S.P. 002-598-020  
 S.A.P. 114-130-007  
 CITY PROJ. 12-26

FILE NO. ANOKC 125787  
 SIGNAL SHEET 20 OF 21

# CONTROLLER AND CABINET



NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

S.P. 002-596-020  
S.A.P. 114-130-007  
CITY PROJ. 12-26

DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG  
DESIGN TEAM

NO.	BY	DATE	REVISIONS

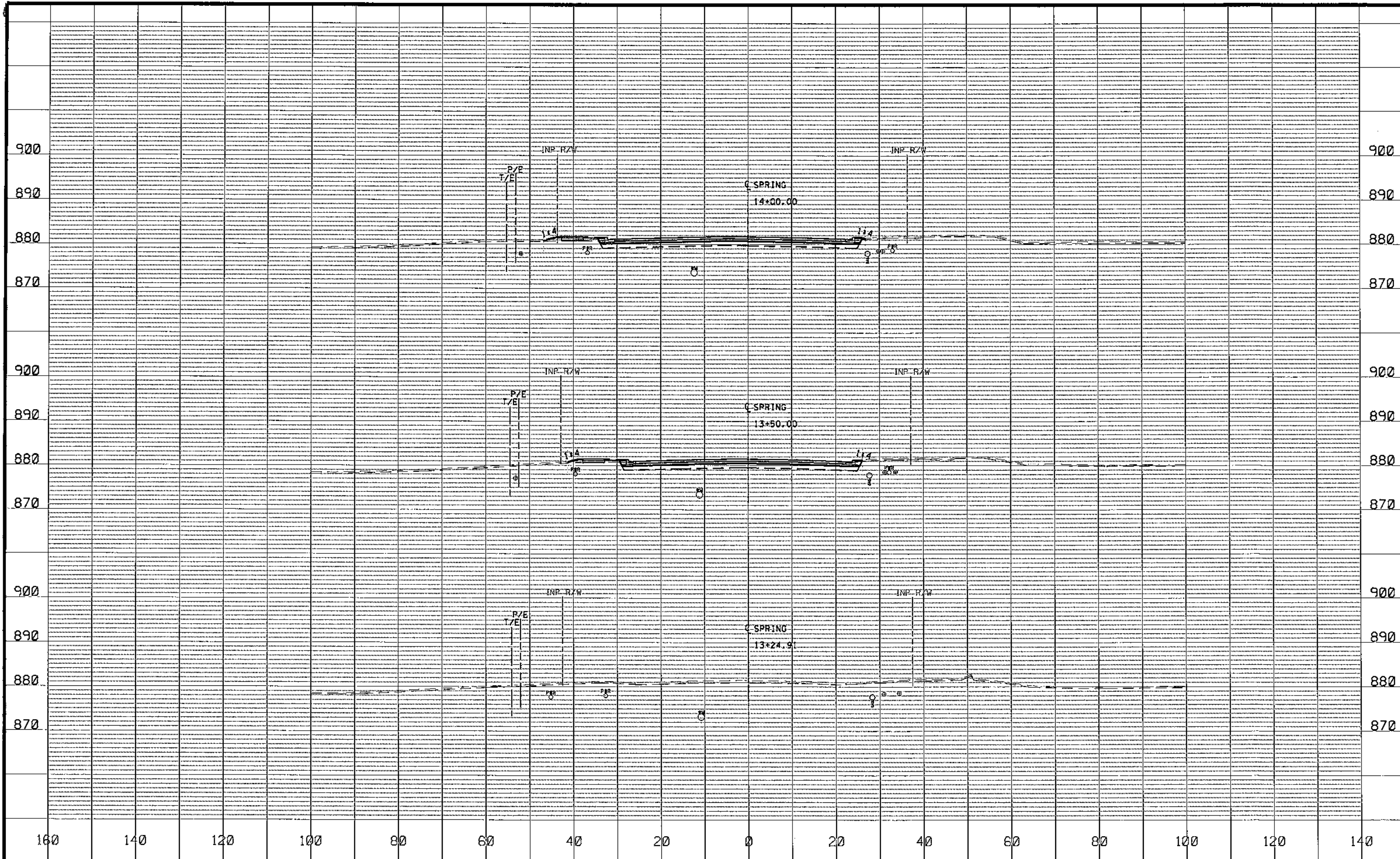
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
Date: January 13, 2015  
Name: John M. Gray, PE  
Lic. No.: 22457

SEH  
PHONE: (651) 490-2000  
3535 VADVAIS CENTER DR.  
ST. PAUL, MN 55110

ANOKA COUNTY  
CITY OF COON RAPIDS

INPLACE SIGNAL SYSTEM  
'FOR INFORMATION ONLY'  
CORD. 3 (COON RAPIDS BLVD NW)  
AT SPRINGBROOK DRIVE NW

FILE NO. ANOKG 125797  
SIGNAL SHEET 21 OF 21  
78  
91



1	03/31/14	DFP	GMP	CAK	PER MNDOT COMMENTS
NO	DATE	BY	CHKD	APPR	REVISION
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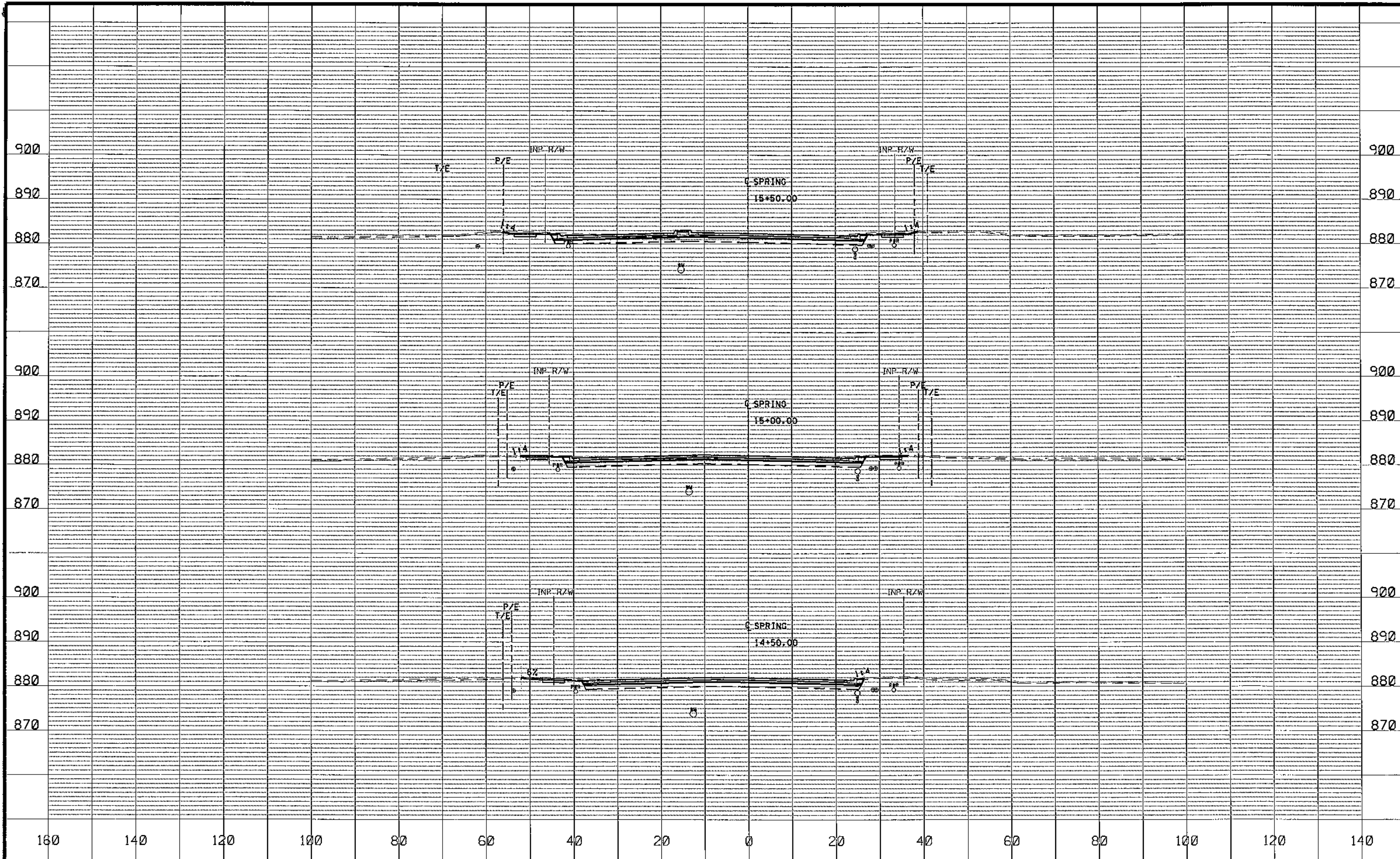
DRAWN BY DFP DATE 02-13-14  
 DESIGN BY DFP DATE 02-13-14  
 CHECKED BY GMP DATE 02-18-14



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

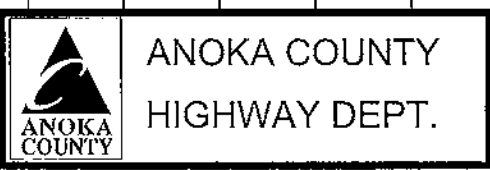
S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

**CROSS SECTIONS**  
 STA 13+24.91 TO 14+00.00  
 Sheet 79 of 91 Sheets



1	03/31/14	DFE	GMP	CAK	PER MNDOT COMMENTS
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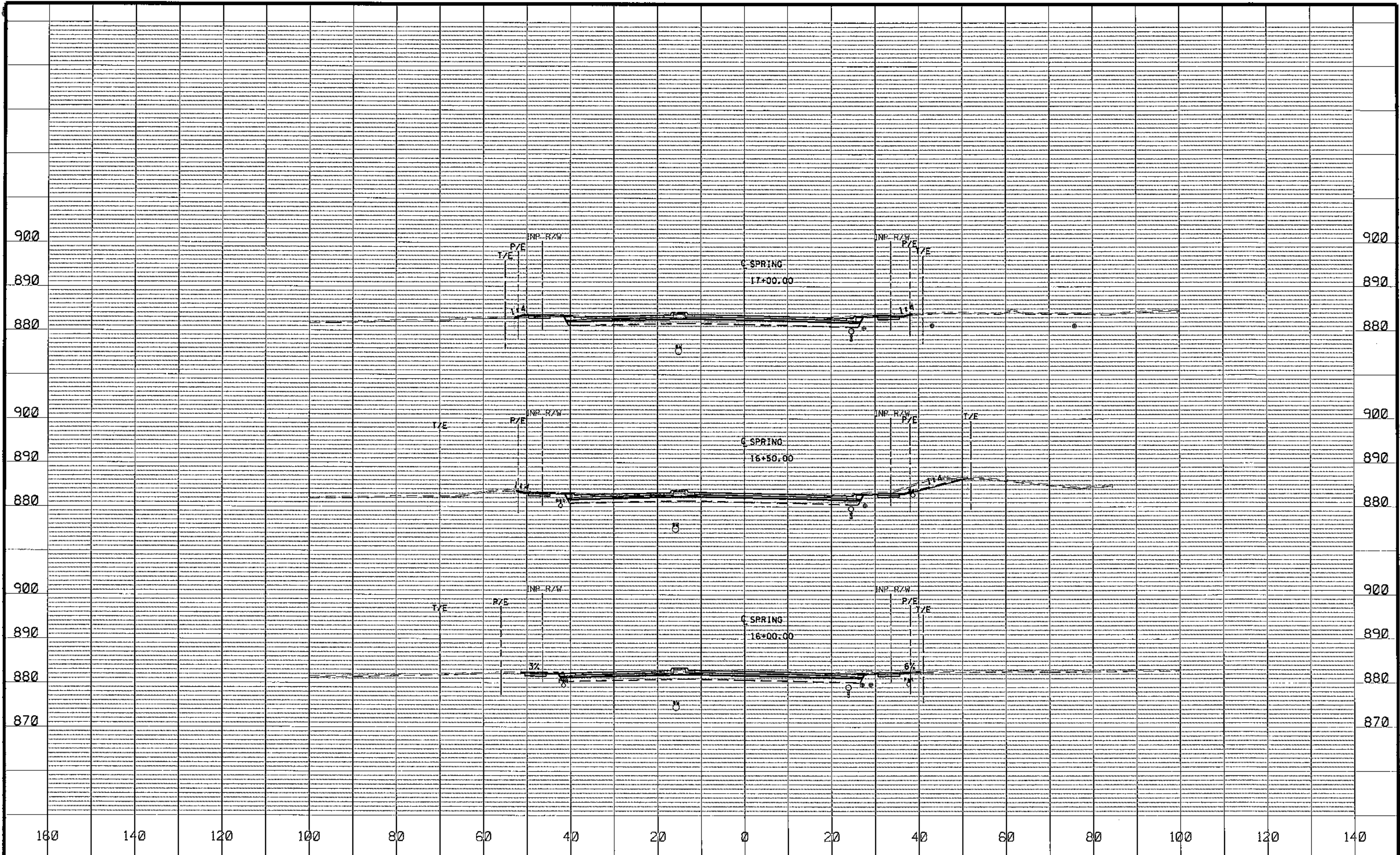
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 CHECKED BY GMP DATE 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

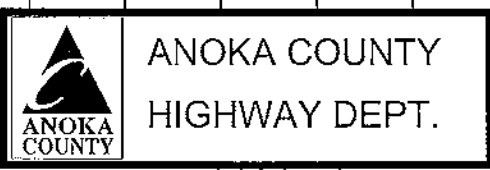
CROSS SECTIONS  
 STA 14+50.00 TO 15+50.00  
 Sheet 80 of 91 Sheets





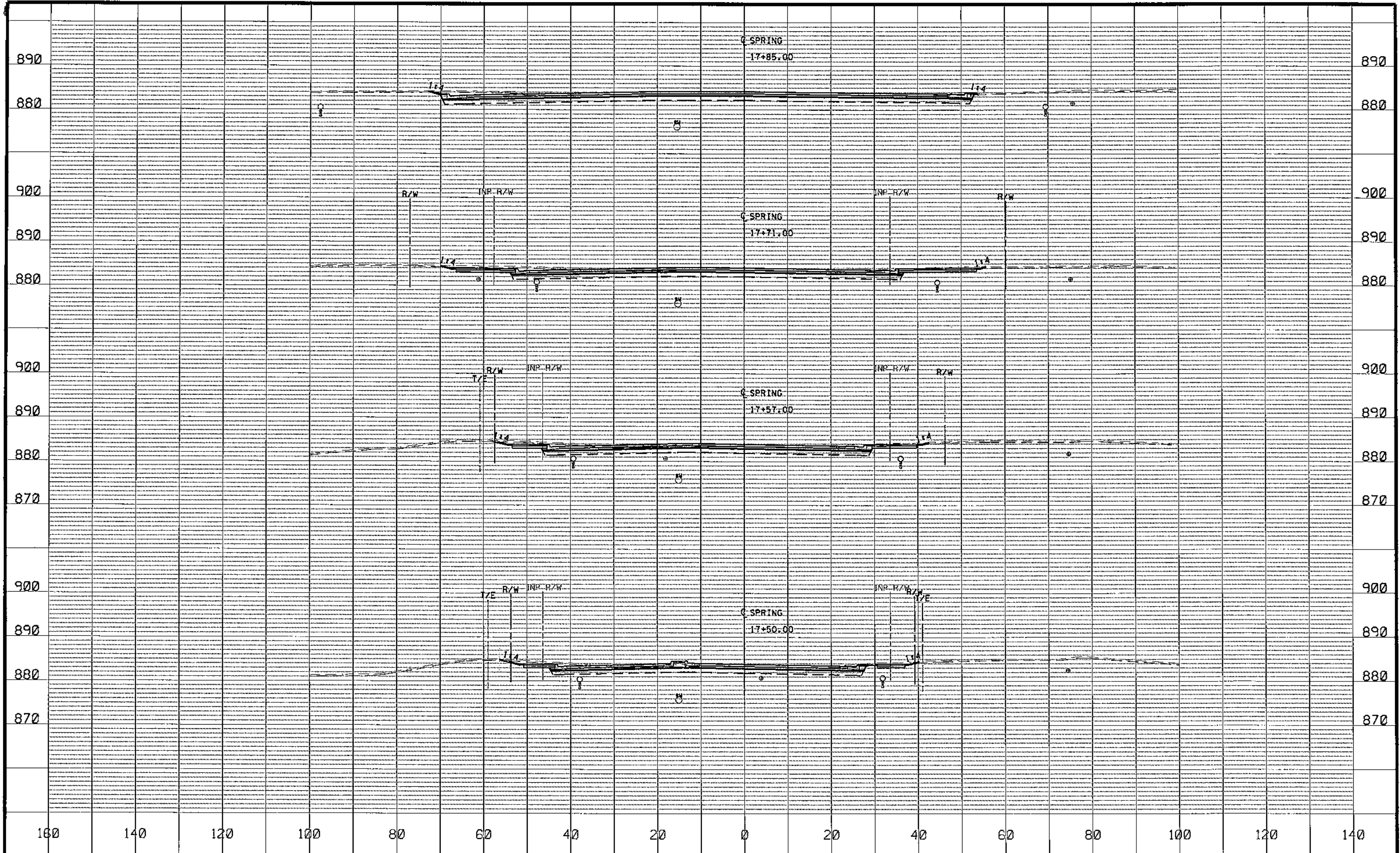
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 CHECKED BY GMP DATE 02-18-14



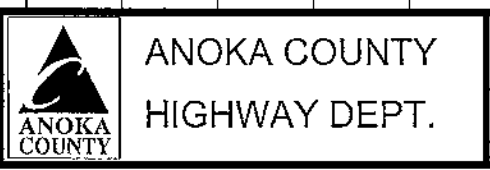
S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 STA 16+00.00 TO 17+00.00  
 Sheet 81 of 91 Sheets



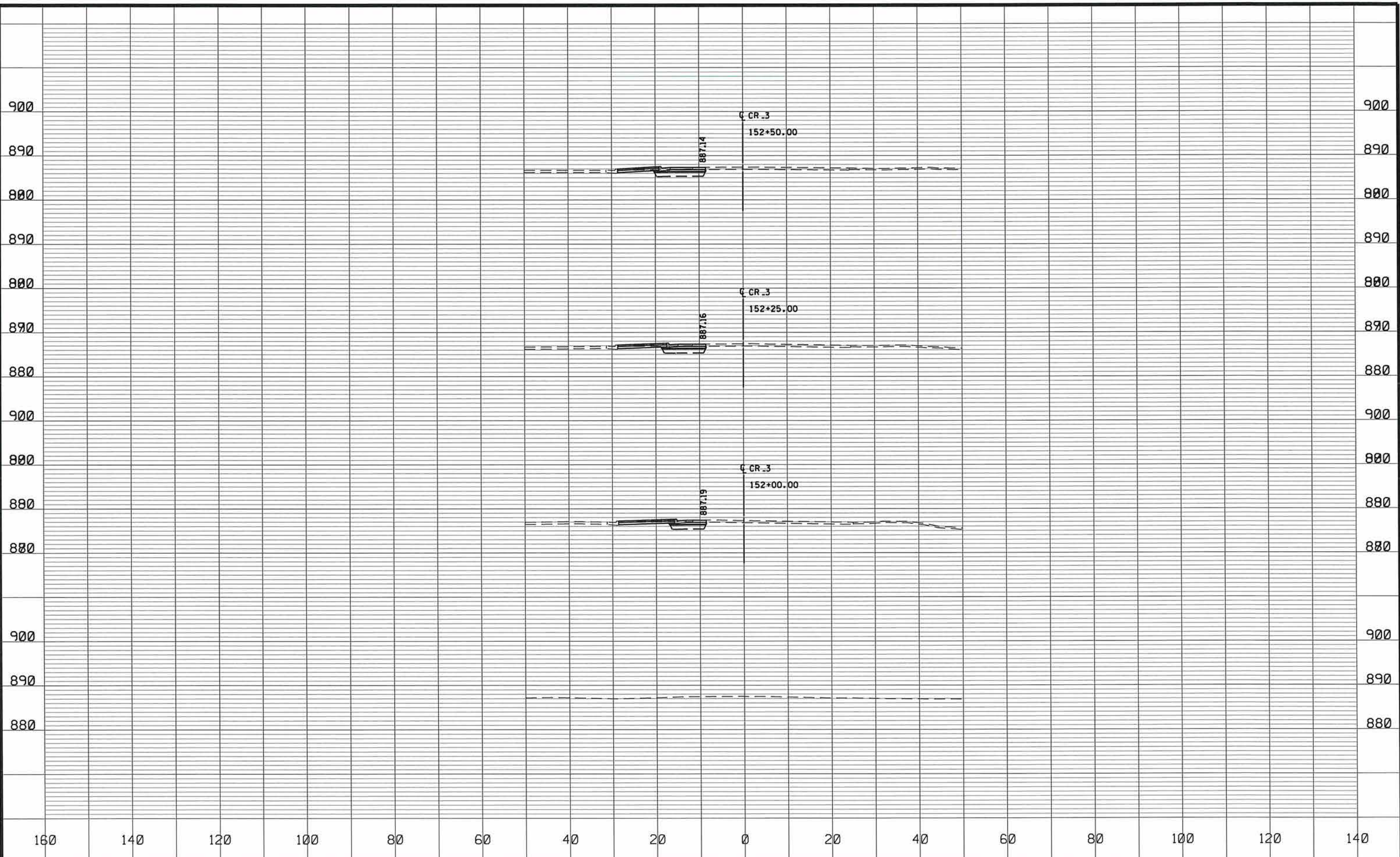
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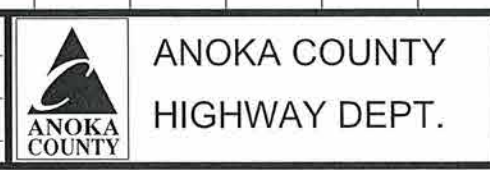
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 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 STA 17+50.00 TO 17+85.00  
 Sheet 82 of 91 Sheets



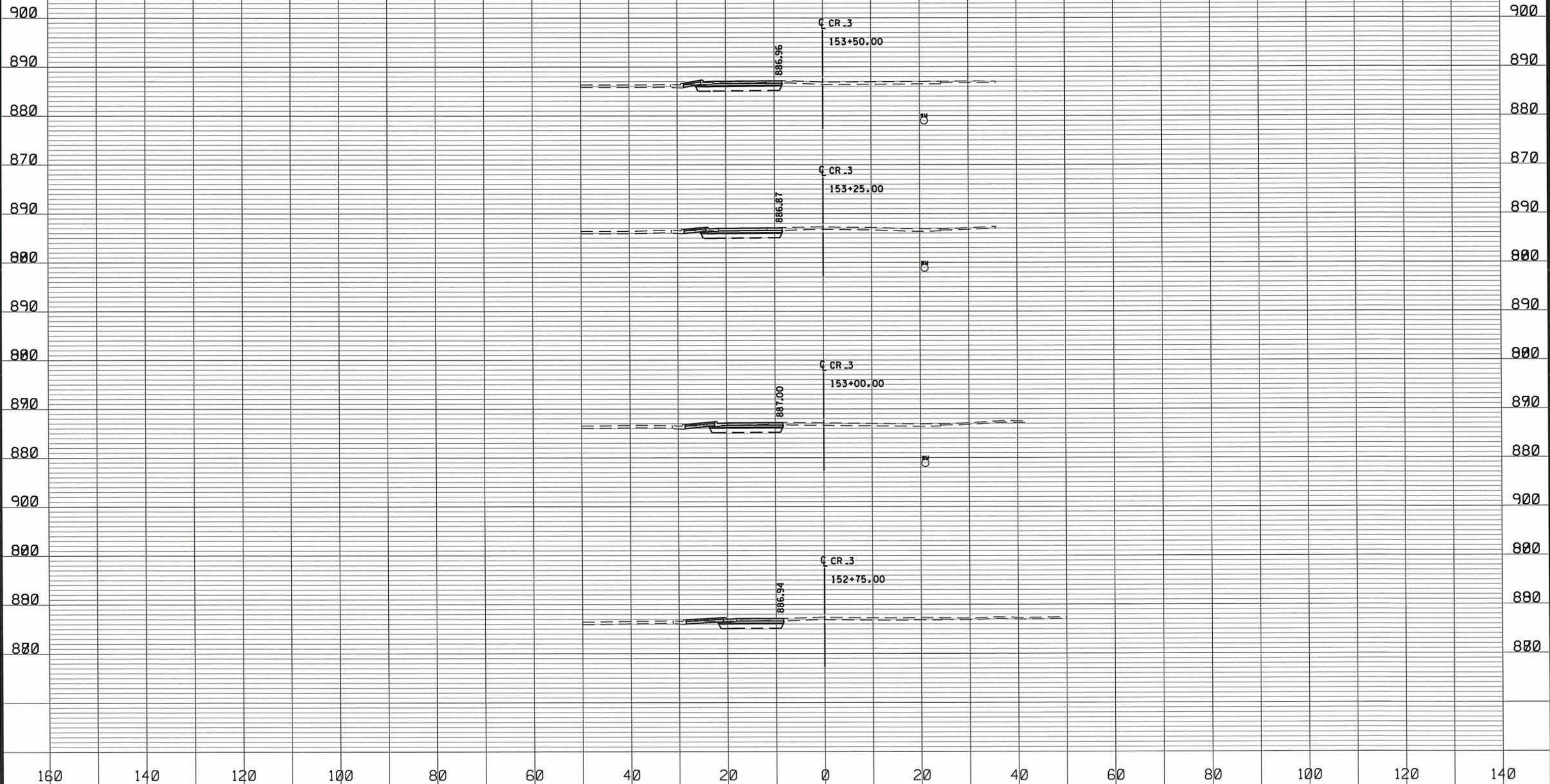
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DRAWN BY DFE DATE 02-13-14  
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 CHECKED BY GMP DATE 02-18-14



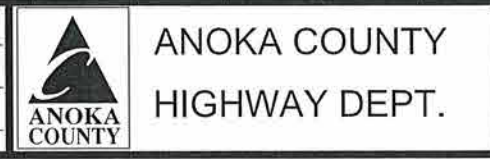
S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 LEFT TURN LANE  
 STA 151+75.00 TO 152+50.00  
 Sheet 83 of 91 Sheets



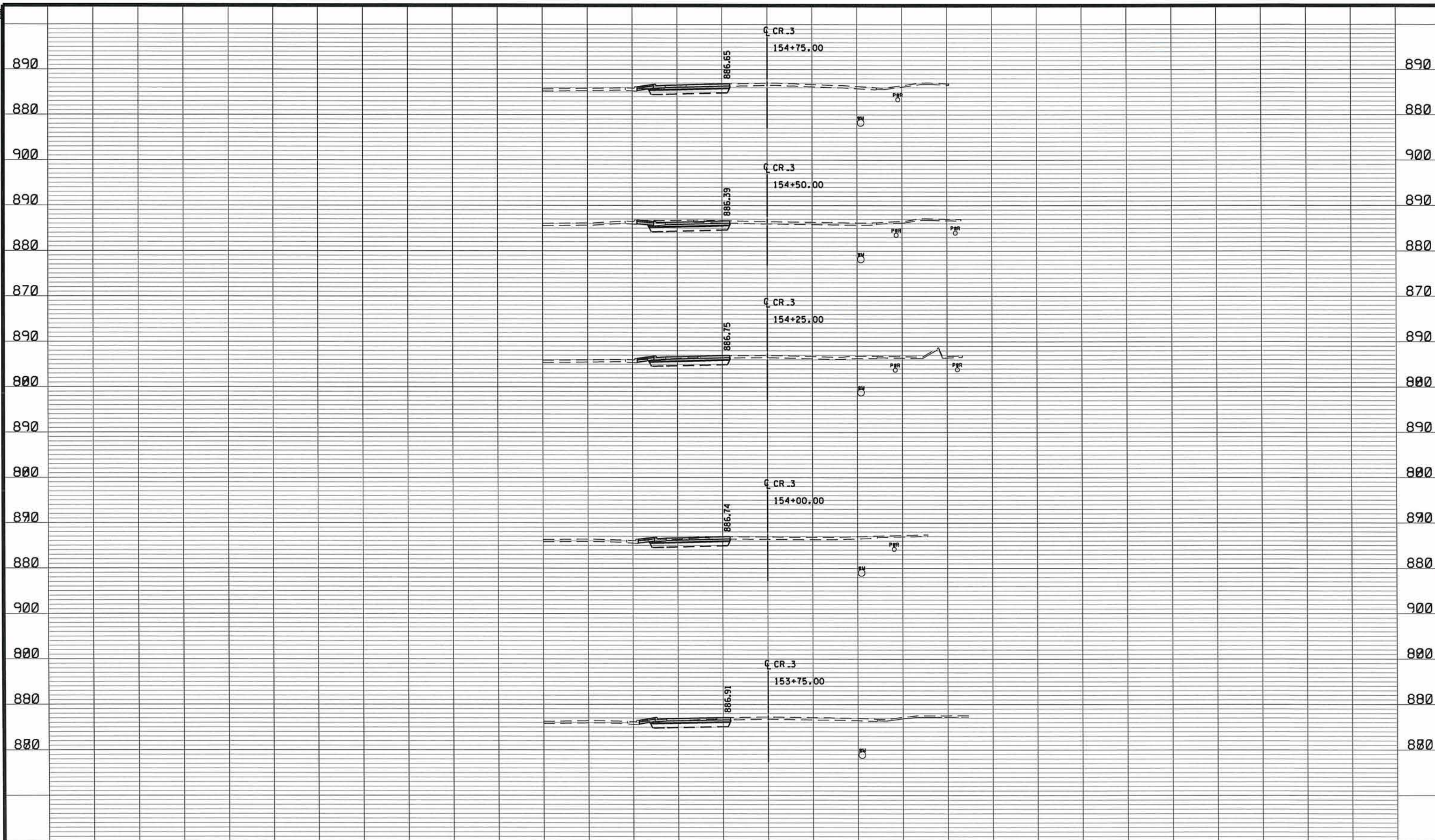
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 DESIGN BY  DFF  DATE  02-13-14   
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S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

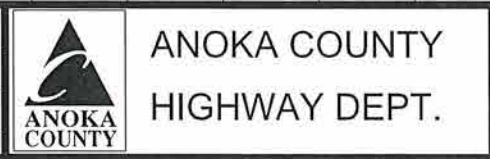
CROSS SECTIONS  
 CR 3 LEFT TURN LANE  
 STA  152+75.00  TO  153+50.00   
 Sheet  84  of  91  Sheets



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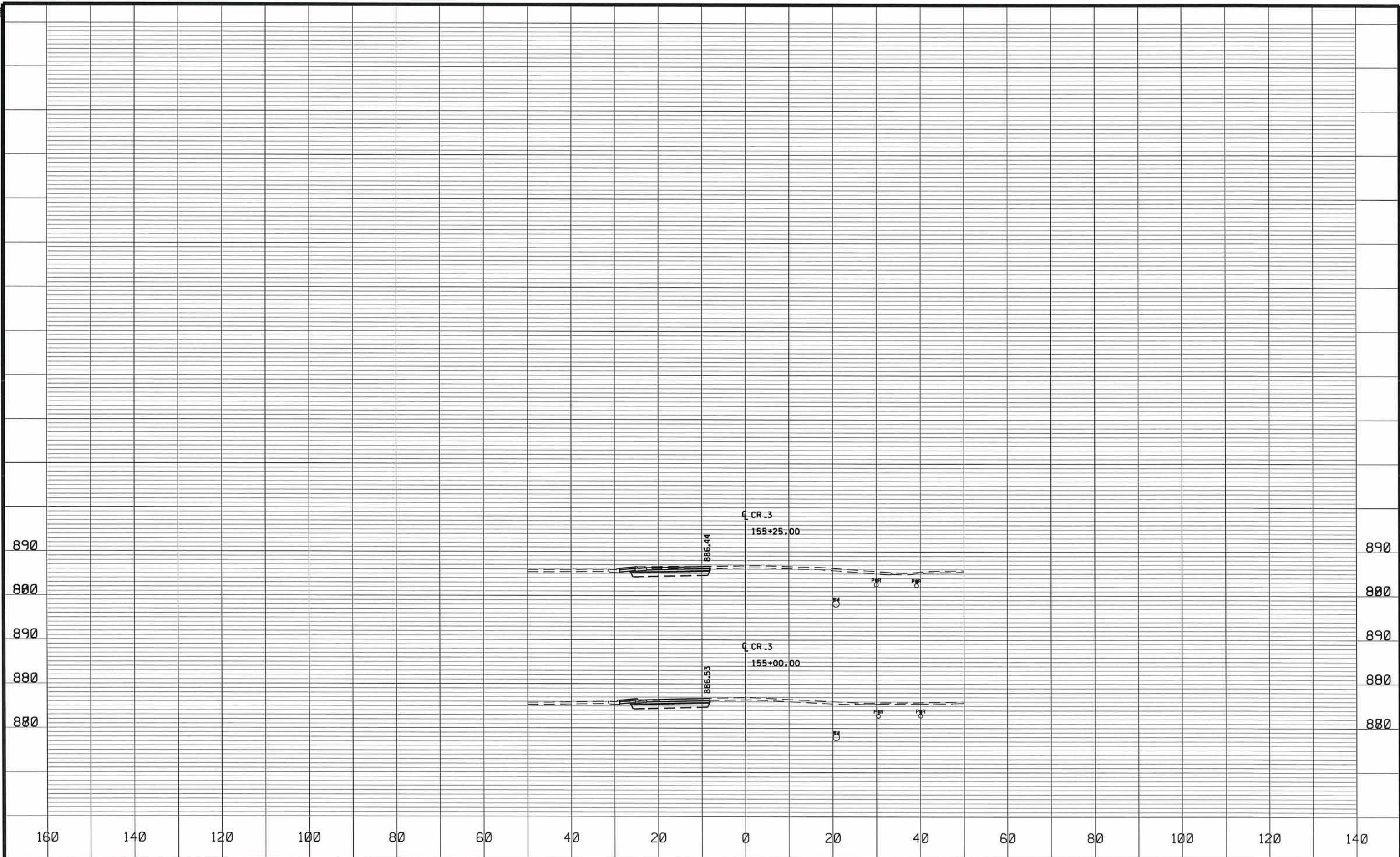
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 CHECKED BY GMP DATE 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 LEFT TURN LANE  
 STA 153+75.00 TO 154+75.00  
 Sheet 85 of 91 Sheets



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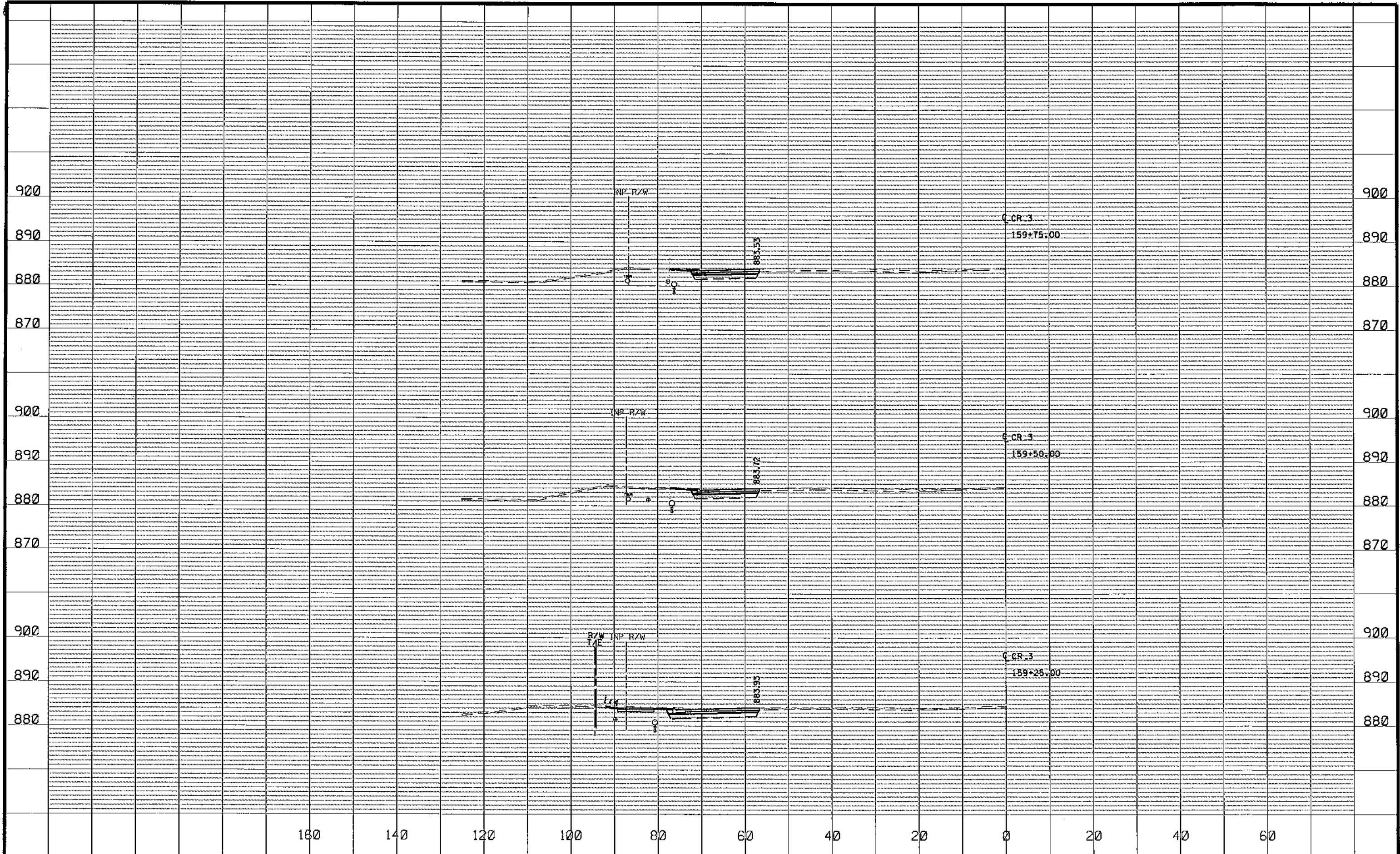
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 DESIGN BY DFP DATE 02-13-14  
 CHECKED BY GMP DATE 02-18-14



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

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 LEFT TURN LANE  
 STA 155+00.00 TO 155+25.00  
 Sheet 86 of 91 Sheets



1	03/31/14	DFF	GMP	CAK	PER MNDOT COMMENTS
NO	DATE	BY	CHKD	APPR	REVISION
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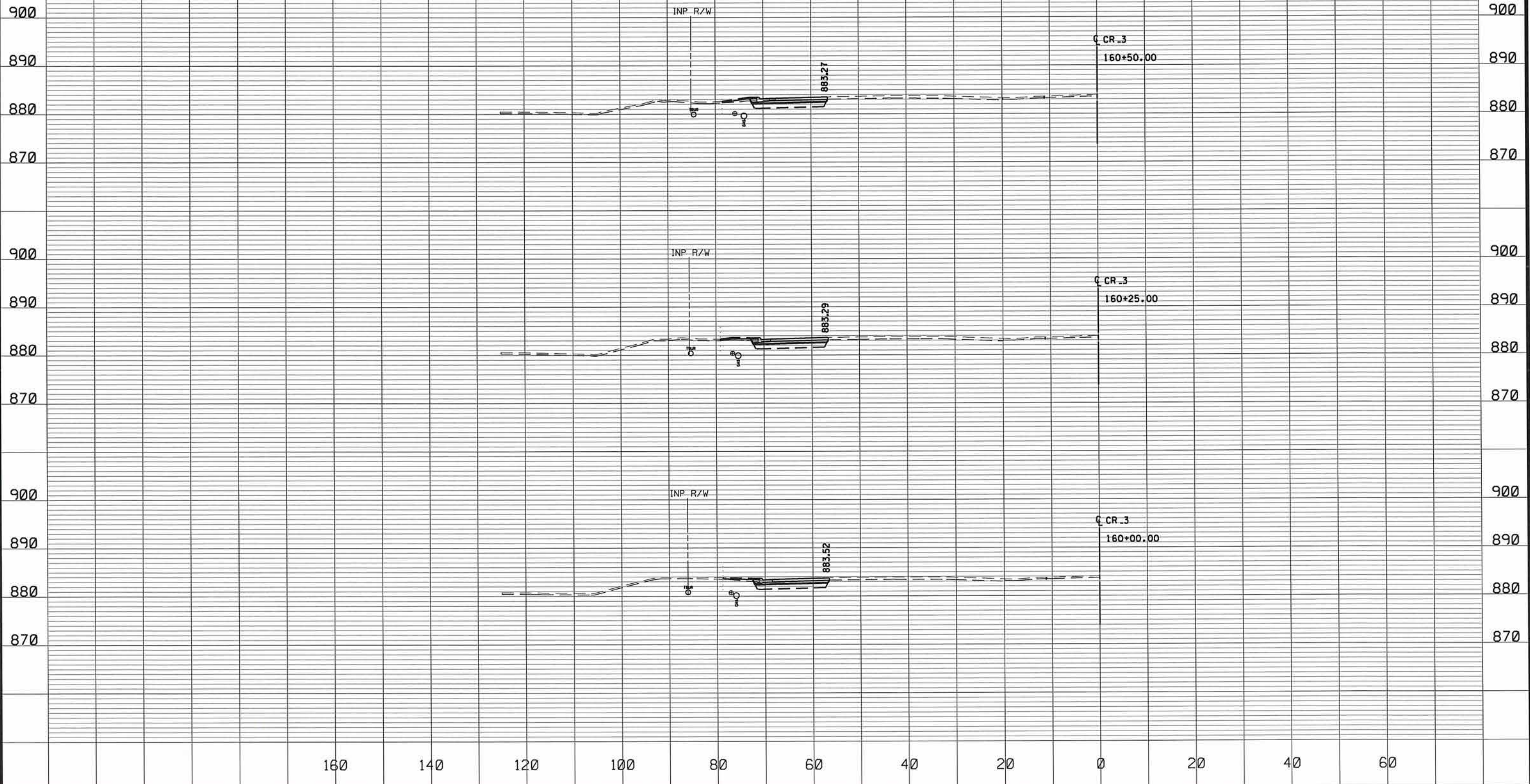
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 CHECKED BY GMP DATE 02-18-14



ANOKA COUNTY  
HIGHWAY DEPT.

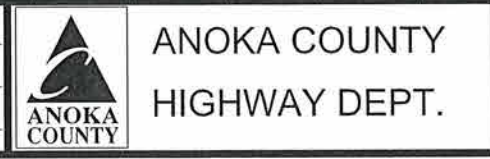
S.P. 002-596-020  
S.P. 114-130-007  
C.P. 12-26

CROSS SECTIONS  
CR 3 RIGHT TURN LANE  
STA 159+25.00 TO 159+75.00  
Sheet 87 of 91 Sheets



NO	DATE	BY	CKD	APPR	REVISION
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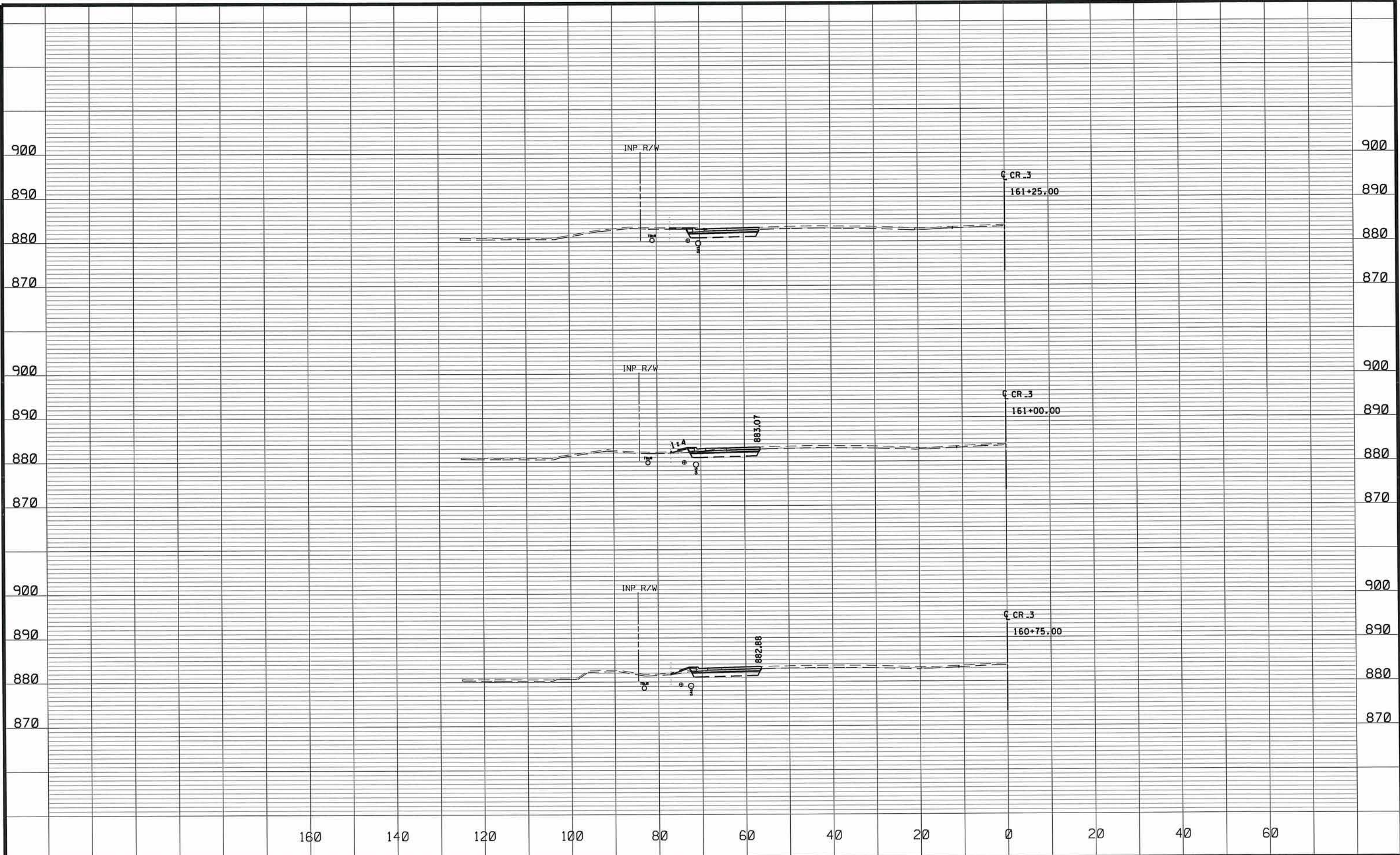
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 CHECKED BY: GMP DATE: 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 RIGHT TURN LANE  
 STA 160+00.00 TO 160+50.00  
 Sheet 88 of 91 Sheets

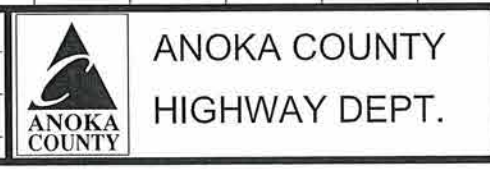




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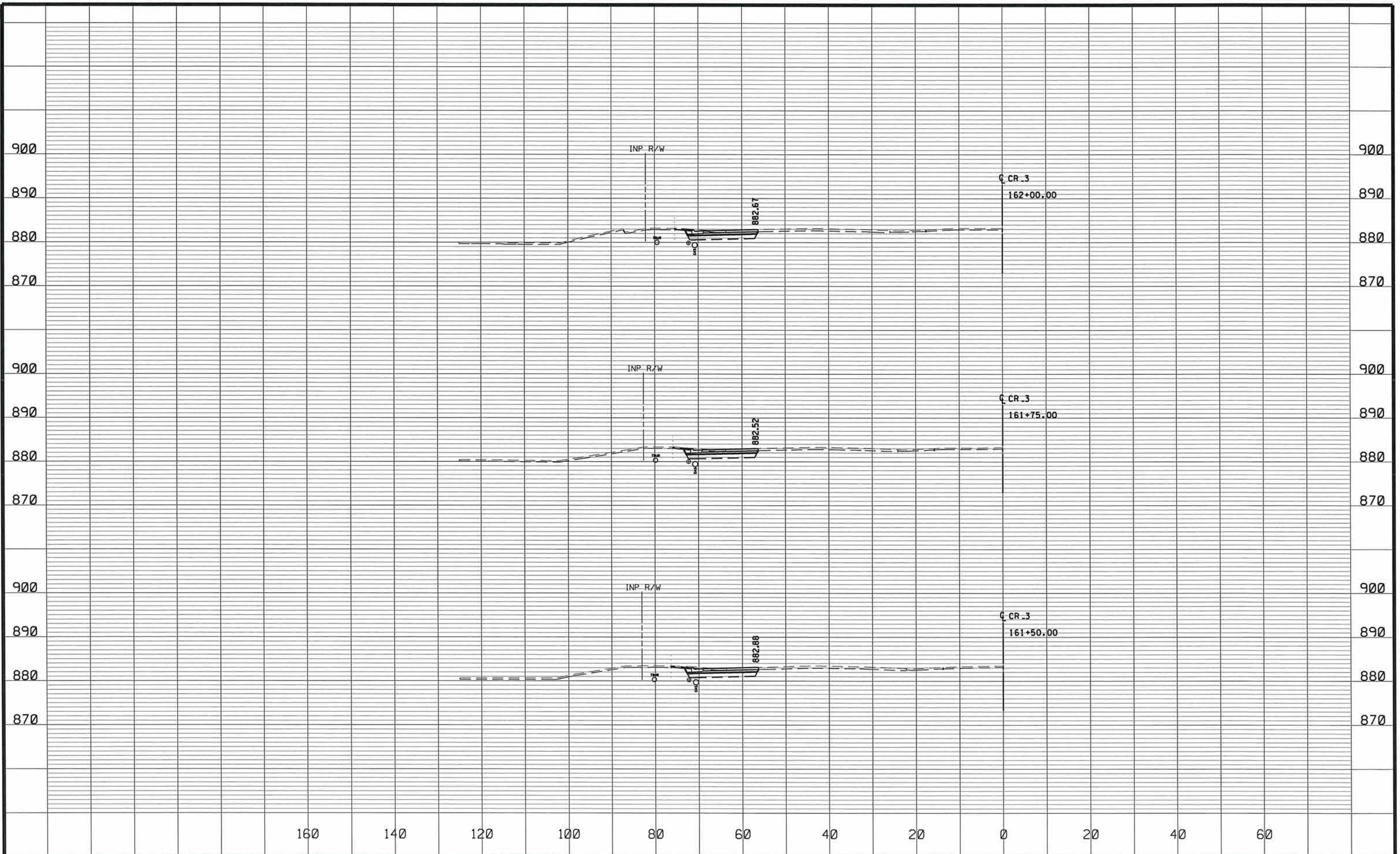
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DRAWN BY DFF DATE 02-13-14  
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 CHECKED BY GMP DATE 02-18-14



S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 RIGHT TURN LANE  
 STA 160+75.00 TO 161+25.00  
 Sheet 89 of 91 Sheets



NO	DATE	BY	CKD	APPR	REVISION
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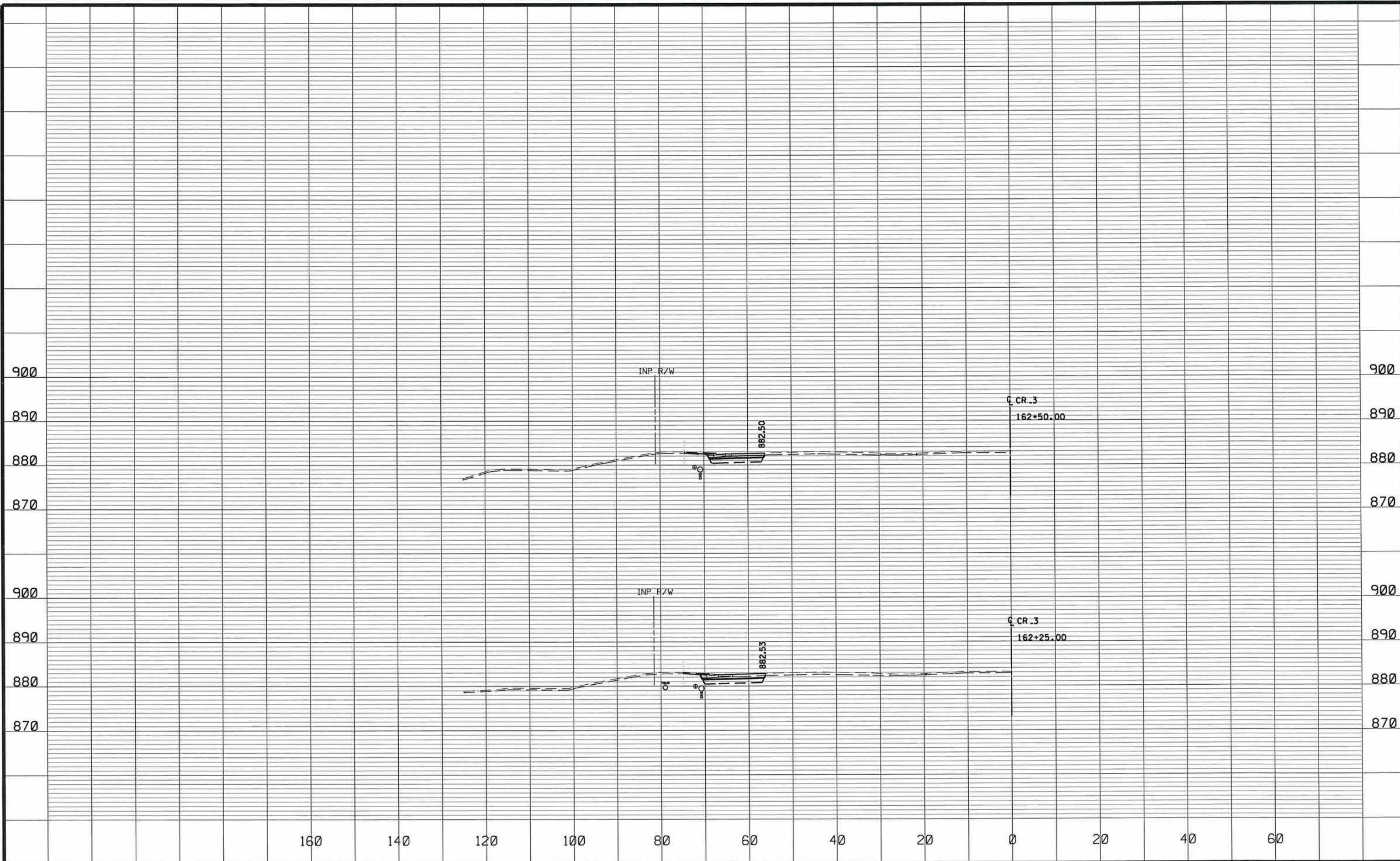
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**ANOKA COUNTY**  
**HIGHWAY DEPT.**

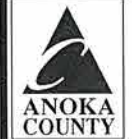
S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 RIGHT TURN LANE  
 STA 161+50.00 TO 162+00.00  
 Sheet 90 of 91 Sheets



NO	DATE	BY	CHKD	APPR	REVISION
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DRAWN BY DFP DATE 02-13-14  
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 CHECKED BY GMP DATE 02-18-14



**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-596-020  
 S.P. 114-130-007  
 C.P. 12-26

CROSS SECTIONS  
 CR 3 RIGHT TURN LANE  
 STA 162+25.00 TO 162+50.00  
 Sheet 91 of 91 Sheets