

# MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

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

LOCATED ON C.S.A.H. 7 BETWEEN CROSS ST. AND SCHOOL ST.

LOCATED ON C.S.A.H. 14 BETWEEN 6TH AVE. AND 8TH AVE.

STATE PROJ. NO. 002-607-019

CSAH 07			CSAH 14		
GROSS LENGTH	1382.40 FEET	0.262 MILES	GROSS LENGTH	1283.13 FEET	0.243 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES	BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES	EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	1382.40 FEET	0.262 MILES	NET LENGTH	1283.13 FEET	0.243 MILES

**GOVERNING SPECIFICATIONS**  
THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

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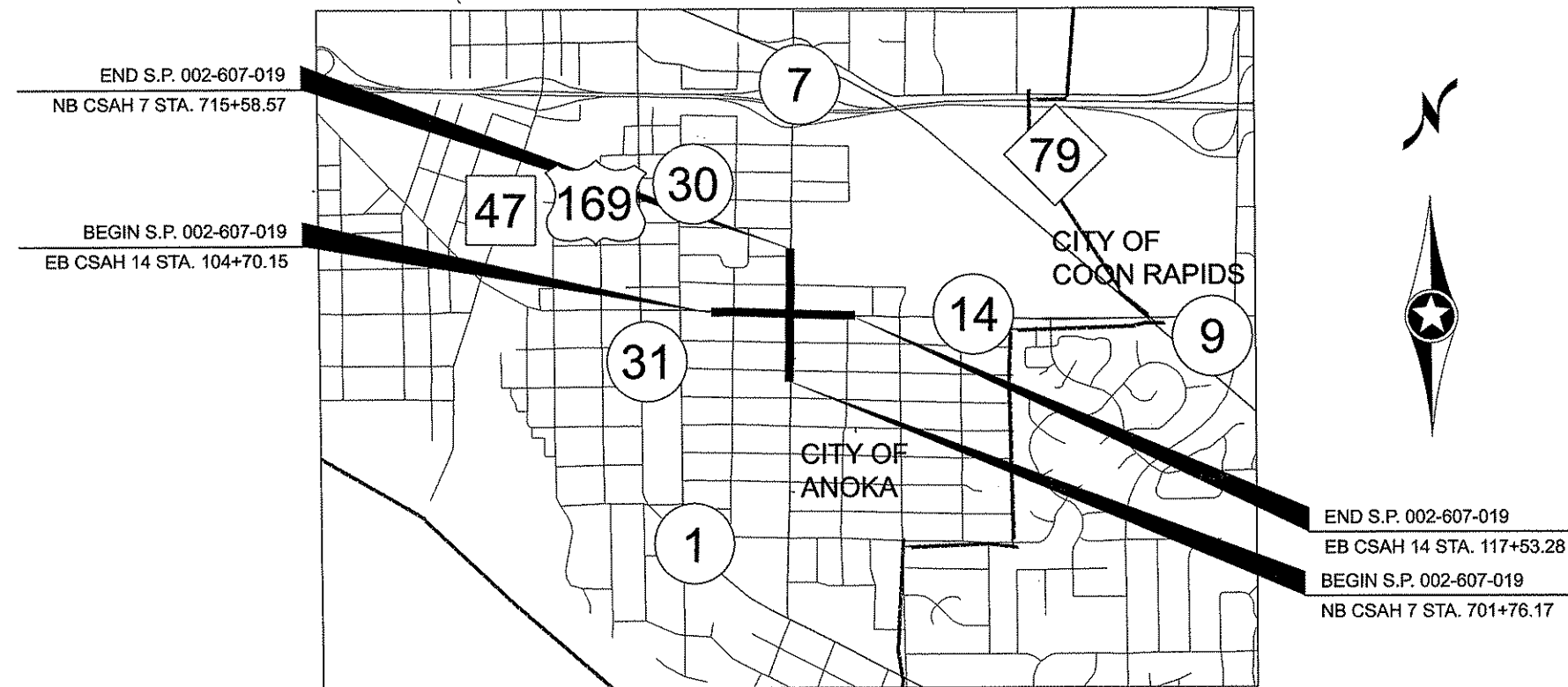
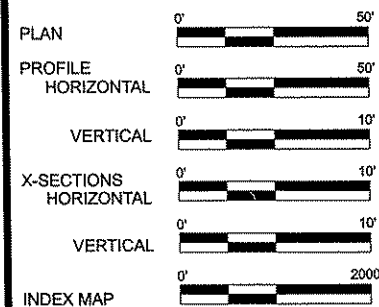
## PLAN SYMBOLS

- COUNTY LINE \_\_\_\_\_
- TOWNSHIP OR RANGE LINE \_\_\_\_\_
- SECTION LINE \_\_\_\_\_
- QUARTER LINE \_\_\_\_\_
- SIXTEENTH LINE \_\_\_\_\_
- RIGHT OF WAY LINE \_\_\_\_\_
- SLOPE EASEMENT \_\_\_\_\_
- EXISTING RIGHT OF WAY \_\_\_\_\_
- PROPERTY LINE \_\_\_\_\_
- CORPORATE OR CITY LIMITS \_\_\_\_\_
- RETAINING WALL \_\_\_\_\_
- RAILROAD \_\_\_\_\_
- RAILROAD RIGHT OF WAY \_\_\_\_\_
- RIVER OR CREEK \_\_\_\_\_
- DRAINAGE DITCH \_\_\_\_\_
- CULVERT \_\_\_\_\_
- DROP INLET \_\_\_\_\_
- GUARD RAIL \_\_\_\_\_
- BARBED WIRE FENCE \_\_\_\_\_
- WOVEN WIRE FENCE \_\_\_\_\_
- CHAIN LINK FENCE \_\_\_\_\_
- WOOD FENCE \_\_\_\_\_
- STONE WALL OR FENCE \_\_\_\_\_
- HEDGE \_\_\_\_\_
- LOWLAND \_\_\_\_\_
- TIMBER \_\_\_\_\_
- ORCHARD \_\_\_\_\_
- BRUSH \_\_\_\_\_
- NURSERY \_\_\_\_\_
- CATTLE GUARD \_\_\_\_\_
- OVERPASS (Highway Over) \_\_\_\_\_
- UNDERPASS (Highway Under) \_\_\_\_\_
- BRIDGE \_\_\_\_\_
- BUILDING (One Story Frame) \_\_\_\_\_
- F-FRAME C-CONCRETE \_\_\_\_\_
- S-STONE T-TILE \_\_\_\_\_
- B-BRICK ST-STUCCO \_\_\_\_\_
- RAILROAD CROSSING BELL \_\_\_\_\_
- RAILROAD CROSSING GATE \_\_\_\_\_
- MANHOLE \_\_\_\_\_
- CATCH BASIN \_\_\_\_\_
- FIRE HYDRANT \_\_\_\_\_
- CAST IRON MONUMENT \_\_\_\_\_
- IRON PIN \_\_\_\_\_
- GRAVEL PIT \_\_\_\_\_
- SAND PIT \_\_\_\_\_
- BORROW PIT \_\_\_\_\_
- ROCK QUARRY \_\_\_\_\_

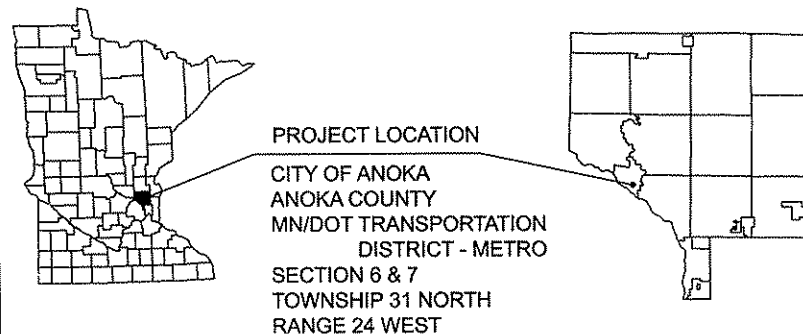
## UTILITY SYMBOLS

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

## SCALES



THIS PLAN CONTAINS 85 SHEETS



S.P. 002-607-019 DESIGN DESIGNATION CSAH 7		FUNCTIONAL CLASSIFICATION <u>MAJOR COLLECTOR</u>	
ESAL <sub>20</sub>	1,683,000	NO. OF TRAFFIC LANES	<u>4</u> NO. OF PARKING LANES <u>0</u>
R VALUE	60	DESIGN SPEED	<u>35</u> MPH
ADT (2012)	15,910	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. ADT (2032)	23,310	HEIGHT OF EYE	<u>3.5'</u> HEIGHT OF OBJECT <u>2.0'</u>
PROJ. HCADT (2032)	909	DESIGN SPEED NOT ACHIEVED AT:	
SOIL FACTOR	NA	STA. _____ TO STA. _____ MPH _____	
_____ 10 _____ TON DESIGN			
S.P. 002-607-019 DESIGN DESIGNATION CSAH 14		FUNCTIONAL CLASSIFICATION <u>A MINOR EXPANDER</u>	
ESAL <sub>20</sub>	1,865,000	NO. OF TRAFFIC LANES	<u>4</u> NO. OF PARKING LANES <u>0</u>
R VALUE	60	DESIGN SPEED	<u>35</u> MPH EAST OF SEVENTH AVE
ADT (2012)	17,630	DESIGN SPEED	<u>30</u> MPH WEST OF SEVENTH AVE
PROJ. ADT (2032)	25,830	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCADT (2032)	1007	HEIGHT OF EYE	<u>3.5'</u> HEIGHT OF OBJECT <u>2.0'</u>
SOIL FACTOR	NA	DESIGN SPEED NOT ACHIEVED AT:	
_____ 10 _____ TON DESIGN		STA. _____ TO STA. _____ MPH _____	

Approved: *[Signature]* 5/29/12  
 ANOKA COUNTY ENGINEER

Approved: *[Signature]* 5/29/12  
 CITY OF ANOKA ENGINEER

REVIEWED FOR COMPLIANCE WITH STATE AND FEDERAL AID RULES/POLICY: *[Signature]* 5/30/12  
 DISTRICT STATE AID ENGINEER

Approved for State and FEDERAL AID FUNDING: *[Signature]* 7/0/12  
 STATE AID ENGINEER

NO	DATE	BY	CHKD	APPR	REVISION
1	5/29/12	BAV	JEO	CAK	MODIFIED TEXT

NAME: P:02-607-19\Plan\0260719\_TSH.dgn  
 05/28/2012 10:17:16 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 A. KOBILARCSIK  
 SIGNATURE: *[Signature]*  
 DATE: 5-29-12 LICENSE NO. 24756


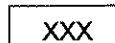


DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

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

S.P. 002-607-019

TITLE SHEET  
 Sheet 1 of 85 Sheets

**LEGEND**

-  INPLACE TOPOGRAPHY AND REMOVAL PLAN SHEET NUMBER
-  CONSTRUCTION PLAN SHEET NUMBER
-  STORM DRAINAGE PLAN SHEET NUMBER
-  INPLACE SIGNAL SYSTEM

38 42 46

END S.P. 002-607-019  
NB CSAH 7 STA. 715+58.57

35 39 43

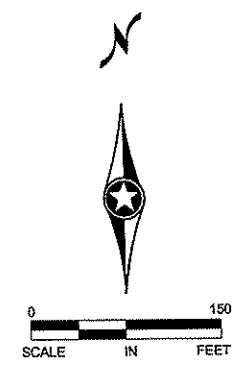
BEGIN S.P. 002-607-019  
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36 40 44

END S.P. 002-607-019  
EB CSAH 14 STA. 117+53.28

BEGIN S.P. 002-607-019  
NB CSAH 7 STA. 701+76.17

37 41 45



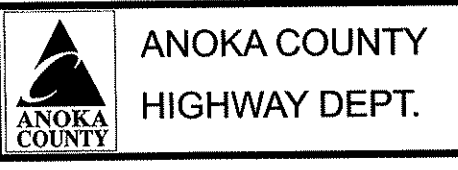
NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_GL\_P1.dgn      05/16/2012      3:53:05 PM

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

PRINT NAME: CURT A. KOBIARCSIA  
SIGNATURE: *Curt A. Kobiarcsia*  
DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 04-05-12  
DESIGN BY: BAV      DATE: 04-05-12  
CHECKED BY: JED      DATE: 04-17-12



S.P. 002-607-019

GENERAL LAYOUT

Sheet 2 of 85 Sheets

NOTE/ TAB	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING		NON-PARTICIPATING
					ANOKA COUNTY 002-607-019 ROADWAY QUANTITIES ESTIMATED	DRAINAGE QUANTITIES ESTIMATED	ANOKA COUNTY 002-607-019 ROADWAY QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1	1.000		
	2031.501	FIELD OFFICE TYPE D	EACH	1	1.000		
(1)/B	2101.502	CLEARING	TREE	14	14		
(1)/B	2101.507	GRUBBING	TREE	14	14		
R	2102.502	PAVEMENT MARKING REMOVAL-PERMANENT	LIN FT	9705	9705		
(1)/B	2104.501	REMOVE CURB AND GUTTER	LIN FT	3679	3679		
(1)/B	2104.503	REMOVE BRICK SIDEWALK	SQ FT	297	297		
(1)/B	2104.503	REMOVE CONCRETE SIDEWALK	SQ FT	12579	12579		
(1)/B	2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ FT	3835	3835		
(1)/B	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	2610	2610		
	2104.509	REMOVE SIGNAL SYSTEM	EACH	1	1		
(1)/B	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	3329	3329		
	2104.523	SALVAGE SIGN TYPE C	EACH	43	43		
	2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	3	3		
	2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	1			1
	2105.501	COMMON EXCAVATION	CU YD	1845	1845		
	2105.507	SUBGRADE EXCAVATION (P)	CU YD	1135	1135		
	2105.522	SELECT GRANULAR BORROW (LV)	CU YD	806	806		
	2130.501	WATER	M GALLONS	122	122		
D	2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	CU YD	593	593		
B	2232.501	MILL BITUMINOUS SURFACE (2.0")	SQ YD	10854	10854		
F	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	380	380		
F	2360.501	TYPE SP 12.5 WEARING COURSE MIX (3,F)	TON	2071	2071		
F	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON	412	412		
H	2503.541	15" RC PIPE SEWER DES 3006	LIN FT	416		416	
H	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	1		1	
K	2504.602	RELOCATE HYDRANT	EACH	3	3		
K	2504.602	ADJUST GATE VALVE & BOX	EACH	19	19		
K	2504.602	RELOCATE CURB STOP & BOX	EACH	1	1		
K	2504.602	ADJUST CURB STOP	EACH	9	9		
H	2506.501	CONST. DRAINAGE STRUCTURE DESIGN H	LIN FT	23.9		23.9	
H	2506.501	CONST. DRAINAGE STRUCTURE DES 48-4020	LIN FT	8.7		8.7	
H	2506.516	CASTING ASSEMBLY	EACH	9		9	
H	2506.602	RECONSTRUCT DRAINAGE STRUCTURE	EACH	1		1	
C	2506.602	ADJUST FRAME & RING CASTING	EACH	5		5	
H	2506.602	CONNECT INTO EXISTING DRAINAGE STRUCTURE	EACH	3		3	
(2)/E	2521.501	4" CONCRETE WALK	SQ FT	10574	10574		
(2)/E	2521.501	6" CONCRETE WALK	SQ FT	1623	1623		
(2)/E	2521.618	4" CONCRETE WALK SPECIAL	SQ FT	580	580		
(2)/E	2521.618	6" CONCRETE WALK SPECIAL	SQ FT	256	256		
(1)/B	2521.515	SAWING CONCRETE WALK	LIN FT	279	279		
(2)/E	2531.501	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	2896	2896		
(2)/E	2531.501	CONCRETE CURB & GUTTER DESIGN B612	LIN FT	14	14		
(2)/E	2531.507	6" CONCRETE DRIVEWAY	SQ YD	211	211		
(2)/E	2531.507	8" CONCRETE DRIVEWAY	SQ YD	171	171		

**GENERAL NOTES:**

- (1) SEE REMOVAL PLAN SHEETS 35 - 38
- (2) SEE CONSTRUCTION PLAN SHEETS 39 - 42
- (3) SEE TRAFFIC SIGNAL PLAN SHEETS 62 - 66
- (4) SEE SIGNING AND STRIPING PLAN SHEETS 53 - 56 (STREET SIGNS PAID FOR AS ITEM 2564.537)
- (5) SEE TRAFFIC CONTROL PLAN SHEETS 28 - 31

1	5/29/12	BAV	JEO	CAK	UPDATED ITEMS
NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-607-19\Plant\0260719_SEQ.dgn					

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PRINT NAME: CURT A KOBIARCSIK

SIGNATURE: *Curt Kobiarcsik*

DATE: 5-29-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12

DESIGN BY: BAV DATE: 04-05-12

CHECKED BY: JEO DATE: 04-17-12



**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-607-019

STATEMENT OF  
ESTIMATED QUANTITIES

Sheet 3 of 85 Sheets

NOTE/ TAB	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING		NON-PARTICIPATING
					ANOKA COUNTY 002-607-019 ROADWAY QUANTITIES ESTIMATED	DRAINAGE QUANTITIES ESTIMATED	ANOKA COUNTY 002-607-019 ROADWAY QUANTITIES ESTIMATED
(2)/E	2531.618	TRUNCATED DOMES	SF	208	208		
(2)/E	2531.618	PEDESTRIAN CURB RAMP	SF	1172	1172		
(5)	2533.507	PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337-PINNED	LIN FT	270	270		
(5)	2533.508	RELOCATE PORTABLE PRECAST CONCRETE BARRIER DESIGN 8337-PINNE	LIN FT	270	270		
(5)	2554.615	IMPACT ATTENUATOR	EACH	3	3		
(5)	2554.615	RELOCATE IMPACT ATTENUATOR	EACH	3	3		
(5)	2563.601	TRAFFIC CONTROL (STAGE 1)	LUMP SUM	1	1.000		
(5)	2563.601	TRAFFIC CONTROL (STAGE 2)	LUMP SUM	1	1.000		
(5)	2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	487	487.0		
(5)	2563.602	PORTABLE CONCRETE BARRIER DELINEATOR	EACH	15	15.0		
	2563.610	POLICE OFFICER	HOUR	60	60.0		
(4)	2564.531	SIGN PANELS TYPE C	SQ FT	281.25	281.25		
(4)	2564.537	INSTALL SIGN TYPE C	EACH	4	4		
(4)	2564.537	INSTALL SIGN TYPE SPECIAL	EACH	3	3		
(3)	2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	SYSTEM	1	1.0		
(3)	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1	1.0		
(3)	2565.601	TRAFFIC CONTROL INTERCONNECTION	LUMP SUM	1	1.0		
(3)	2565.602	SIGNAL SERVICE CABINET	EACH	1	1.0		
(3)	2565.602	PVC HANDHOLE	EACH	1	1.0		
(3)	2565.603	2" RIGID STEEL CONDUIT	LIN FT	550	550		
1	2573.530	STORM DRAIN INLET PROTECTION	EACH	8	8		
1	2575.505	SODDING TYPE SALT RESISTANT	SQ YD	163	163		
(4)	2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	487	487		
(4)	2582.501	PAVEMENT MESSAGE (LT ARROW) PREFORMED THERMOPLASTIC	EACH	5	5		
(4)	2582.501	PAVEMENT MESSAGE (RT ARROW) PREFORMED THERMOPLASTIC	EACH	1	1		
(4)	2582.501	PAVEMENT MESSAGE (THRU ARROW) PREFORMED THERMOPLASTIC	EACH	4	4		
(4)	2582.501	PAVEMENT MESSAGE (RT-THRU ARROW) PREFORMED THERMOPLASTIC	EACH	4	4		
(4)	2582.502	4" SOLID LINE WHITE-PAINT	LIN FT	8800	8800		
(4)	2582.502	4" SOLID LINE YELLOW-PAINT	LIN FT	600	600		
(4)	2582.502	4" DOUBLE SOLID LINE YELLOW-PAINT	LIN FT	4400	4400		
(4)	2582.502	4" SOLID LINE WHITE-EPOXY	LIN FT	8652	8652		
(4)	2582.502	4" BROKEN LINE WHITE-EPOXY	LIN FT	1270	1270		
(4)	2582.502	4" SOLID LINE YELLOW-EPOXY	LIN FT	370	370		
(4)	2583.502	4" BROKEN LINE YELLOW-EPOXY	LIN FT	80	80		
(4)	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY	LIN FT	5048	5048		
(4)	2582.502	8" BROKEN LINE WHITE - EPOXY	LIN FT	153	153		
(4)	2582.502	24" STOP LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	132	132		
(4)	2582.502	24" SOLID LINE YELLOW PREFORMED THERMOPLASTIC	LIN FT	392	392		
(4)	2582.503	3'X6' CROSSWALK MARKING - PREFORMED THERMOPLASTIC	SQ FT	648	648		

**GENERAL NOTES:**

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- (4) SEE SIGNING AND STRIPING PLAN SHEETS 53 - 56 (STREET SIGNS PAID FOR AS ITEM 2564.537)
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NO	DATE	BY	CKD	APPR	REVISION
1	5/29/12	BAV	JEO	CAK	UPDATED ITEMS


NAME: P:\02-607-19\Plan\0260719\_SEQ.dgn 05/29/2012 11:19:58 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 A KOBIARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-29-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-08-12  
 CHECKED BY: JEO DATE: 04-17-12

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




S.P. 002-607-019

STATEMENT OF ESTIMATED QUANTITIES

Sheet 4 of 85 Sheets



1. TOP OF THE SUBGRADE IS CONSIDERED THE CONTACT GRADE BETWEEN THE AGGREGATE BASE LAYER AND THE UNDERLYING SUBGRADE.
2. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3149.2B2.
3. GRANULAR MATERIAL ON THIS PROJECT SHALL MEET THE GRADATION REQUIREMENTS OF MN/DOT SPEC. 3149.2B1
4. ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE COMMON EXCAVATION.
5. TOPSOIL SHALL BE DEFINED AS EXISTING SOILS WHICH MEET MN/DOT SPECIFICATION 3877 THAT WOULD BE SUITABLE FOR REUSE.
7. SUITABLE GRADING MATERIAL CONSISTS OF MINERAL SOILS WHICH ARE FREE OF ORGANIC CONTENT AND DEBRIS, ARE NON-EXPANSIVE, AND AER IN A CONDITION WHICH CAN MEET SPECIFIED COMPACTION LEVELS.
8. SLOPE DRESSING ON THE PROJECT IS DEFINED AS THE TOPSOIL OR OTHER SOIL PLACED DURING PRIOR CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF. THESE SOILS MAY NOT MEET THE MINIMUM ORGANIC CONTENT AND OTHER REQUIREMENTS FOR TOPSOIL BORROW
9. IN ALL AREAS OF NEW MAINLINE ROADWAY RECONSTRUCTION (PERMANENT AND TEMPORARY), PROVIDE FOR A MINIMUM 12 INCH COMPACTION SUBCUT UNLESS OTHERWISE NOTED. BACKFILL WITH SELECT GRANULAR MATERIAL. ANY UNCONTAMINATED SUITABLE GRANULAR MATERIAL REMOVED FROM THE EXISTING SUBGRADE AREA MAY BE USED IN OTHER AREAS DESIGNATED FOR THE SAME MATERIAL.
10. 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.
11. 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.
12. 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.
13. 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 1:2 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
14. 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.
15. PROVIDE A SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT.
16. 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.
17. EMBANKMENT QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE TOP OF SUBGRADE. QUANTITIES REQUIRED ABOVE THE TOP OF SUBGRADE OR FOR TEMPORARY CONSTRUCTION ARE PROVIDED IN DETAIL ON THE BITUMINOUS AND AGGREGATE SUMMARY TABS.
18. 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.
19. 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.
20. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BECOME PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
21. 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.
22. INPLACE BITUMINOUS PAVEMENT RANGES FROM 4" TO 9" THICK. (AVERAGE 5"). FOR INFORMATION ONLY, CONTRACTOR TO VERIFY PAVEMENT DEPTH PRIOR TO PLACING BID.
23. AGGREGATE BASE MATERIAL SHALL BE 100% CRUSHED AND MEET THE REQUIREMENTS OF MN/DOT SPEC. 3138, CLASS 5.
24. COMPACTION OF ALL AGGREGATE BASE, GRANULAR, AND SELECT GRANULAR MATERIAL SHOULD BE IN ACCORDANCE WITH MN/DOT "MODIFIED PENETRATION INDEX METHOD"
25. EMBANKMENT CONSTRUCTION SHALL BE PERFORMED AS REQUIRED BY MN/DOT SPECIFICATION 2105
30. COMPACTION OF ALL PERMANENT BITUMINOUS MIXTURES SHALL BE THE "MAXIMUM DENSITY METHOD"

					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: <i>Curt Kobilarsik</i> DATE: 5-18-12 LICENSE NO. 24756		DRAWN BY: DFF DATE: 04-05-12 DESIGN BY: BAV DATE: 04-05-12 CHECKED BY: JEO DATE: 04-17-12		 <b>ANOKA COUNTY HIGHWAY DEPT.</b>		S.P. 002-607-019		<b>SOILS AND CONSTRUCTION NOTES</b>											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					NO	DATE	BY	CKD	APPR	REVISION													Sheet <u>5</u> of <u>85</u> Sheets	
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THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3145F	CONCRETE PIPE TIES
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGNS G AND H
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS)
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4108F	ADJUSTING RINGS FOR CATCH BASINS AND MANHOLES
4110F	COVER CASTING FOR MANHOLE (FOR USE IN ALL TRAFFIC AREAS) - CASTING NO. 715 AND 716
7035N	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100H	CONCRETE CURB AND GUTTER (DESIGN B and DESIGN V)
8000I	STANDARD BARRICADES
8114A	P.V.C. HANDHOLE/PULLBOX (NO VEHICLE LOAD)
8118D	SERVICE EQUIPMENT & POLE TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8120P	POLE FOUNDATION ( PA85 )
8121G	TRANSFORMER BASE AND POLE BASE PLATE (PA85M, PA90 AND PA100)
8123G	POLE AND MAST ARM - LUMINAIRES AND TRAFFIC LIGHTS ASSEMBLY
8126J	POLE FOUNDATION ( PA90 AND PA100 )

BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2213.610	STREET SWEEPER (WITH PICKUP BROOM)	PROJECT LENGTH / 3 MPH FOR 90 DAYS
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD / LIFT
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

1	5/29/12	BAV	JEO	CAK	MODIFIED TEXT
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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 A KOBLARCSIK  
 SIGNATURE: *Curt Koblarsik*  
 DATE: 5-29-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12



ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

CLEARING AND GRUBBING					A
ALIGNMENT	STATION TO STATION	REMOVE (SPEC. 2104)		NOTES	
		CLEARING (TREE)	GRUBBING (TREE)		
CSAH 14	108+96.28 - 109+95.13	3	3		
CSAH 7	709+21.48 - 712+33.78	11	11		
PROJECT TOTAL		14	14		

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


REMOVALS, SAWING AND MILLING										B
ALIGNMENT	STATION TO STATION	REMOVE (SPEC. 2104)					SAWING (SPEC. 2104)	MILLING (SPEC. 2232)	SAWING (SPEC. 2521)	NOTES
		BIT. PAVEMENT	CONC. SIDEWALK	CONC. DRIVEWAY	CONC. CURB & GUTTER	BRICK SIDEWALK	BIT. PAVEMENT (FULL DEPTH)	BIT. SURFACE (2")	CONC. WALK	
		(SQ YD)	(SQ FT)	(SQ FT)	(LIN FT)	(SQ FT)	(LIN FT)	(SQ YD)	(LIN FT)	
CSAH 14	105+79.20 - 110+97.69	590	4539	501	538	297	695	3059	47	
CSAH 14	110+97.69 - 117+68.30	847	4830	953	926		1019	2852	170	
CSAH 7	705+06.47 - 706+88.16	114	226		100		185	2585	18	
CSAH 7	708+66.05 - 715+63.76	1059	2984	2381	2115		1430	2358	44	
PROJECT TOTAL		2610	12579	3835	3679	297	3329	10854	279	

AGGREGATE			D
ALIGNMENT	STATION TO STATION	AGGREGATE BASE CLASS 5 CU YD	NOTES
CSAH 14	105+79.20 - 110+97.69	123	
CSAH 14	110+97.69 - 117+68.30	170	
CSAH 7	705+06.47 - 706+88.16	19	
CSAH 7	708+66.05 - 715+63.76	281	
TOTAL		593	

CONCRETE												E
STATION		ALIGNMENT	CONCRETE CURB & GUTTER DESIGN B624	CONCRETE CURB & GUTTER DESIGN B612	4" CONCRETE WALK	4" CONCRETE WALK SPECIAL	6" CONCRETE WALK	6" CONCRETE WALK SPECIAL	6" CONCRETE DRIVEWAY	8" CONCRETE DRIVEWAY	TRUNCATED DOMES	PEDESTRIAN CURB RAMP
BEGIN	END		LIN FT	LIN FT	SQ FT	SQ FT	SQ FT	SQ FT	SQ YD	SQ YD	SQ FT	SQ FT
105+79.20	110+97.69	EB	532		1687		582			69	48	288
110+97.69	117+68.30	EB	917	14	4108	580	554		95	44	32	266
705+06.47	706+88.16	NB	100					256			32	13
708+66.05	715+63.76	NB	1347		4779		487		116	58	96	605
PROJECT TOTAL			2896	14	10574	580	1623	256	211	171	208	1172

SANITARY/STORM SEWER ADJUSTMENTS										C
STATION	OFFSET	DESCRIPTION	EXISTING TOC	PROPOSED TOC	INVERT	CHANGE FT	ADJUST EACH	NOTES		
<b>C.S.A.H. 14</b>										
108+27	42.82' LT	STORM	876.93	878.18		1.25	1	ADJUST		
108+29	2.93' RT	STORM	879.22	(A)				LEAVE AS-IS		
108+29	49.25' LT	STORM	878.04	878.04				ADJUST		
108+54	49.84' LT	STORM	878.33	878.33				ADJUST		
108+73	10.40' LT	SANITARY	879.21	(A)				LEAVE AS-IS		
109+06	2.91' RT	STORM	879.43	(A)				LEAVE AS-IS		
110+75	1.88' RT	STORM	879.01	(A)				LEAVE AS-IS		
112+33	10.87' LT	SANITARY	878.96	(A)				LEAVE AS-IS		
113+80	43.63' LT	STORM	878.99	878.45	871.07	-0.54	1	ADJUST		
114+22	5.90' RT	STORM	878.28	(A)	872.58			LEAVE AS-IS		
115+90	4.49' LT	SANITARY	877.05	(A)				LEAVE AS-IS		
116+34	10.98' LT	SANITARY	876.48	(A)				LEAVE AS-IS		
<b>C.S.A.H. 7</b>										
707+47	21.58' LT	STORM	878.25	(A)				LEAVE AS-IS		
707+46	21.33' RT	STORM	878.29	878.78	874.27	0.49	1	ADJUST		
707+92	3.17' RT	STORM	878.85	(A)				LEAVE AS-IS		
708+43	25.68' LT	STORM	878.31	878.42		0.11	1	(B)		
708+48	1.95' RT	STORM	878.58	(A)				LEAVE AS-IS		
708+62	26.75' LT	STORM	877.93	878.31	872.52			ADJUST		
709+19	2.51' LT	SANITARY	877.89	(A)				LEAVE AS-IS		
711+18	15.99' RT	STORM	875.12	875.58	868.15	0.46	1	(B)		
711+36	46.62' LT	STORM	875.10	875.10		0.00		ADJUST		
711+41	0.66' LT	SANITARY	875.64	(A)				LEAVE AS-IS		
711+56	5.42' LT	N/A	875.68	(A)				LEAVE AS-IS		
711+78	45.60' LT	STORM	874.80	874.80		0.00		ADJUST		
713+73	2.63' RT	N/A	873.48	(A)				LEAVE AS-IS		
714+55	22.10' LT	STORM	872.59	872.80	867.86	0.21		(C)		
714+59	20.31' RT	STORM	872.75	(A)				LEAVE AS-IS		
714+68	8.62' LT	STORM	873.01	(A)				LEAVE AS-IS		
714+86	0.22' LT	SANITARY	873.15	(A)				LEAVE AS-IS		
TOTAL								5		

**NOTES:**  
 A) MILL AREA. ELEVATION TO REMAIN THE SAME.  
 B) CONVERT TO MANHOLE. REPLACE CB CASTING WITH MANHOLE CASTING.  
 C) SHIFT CASTING 1.7' WEST

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NO	DATE	BY	CKD	APPR	REVISION				
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BITUMINOUS SUMMARY					F
ALIGNMENT	STATION TO STATION	BITUMINOUS			NOTES
		2360 TYPE SP 12.5 WEAR (3,F)	2360 TYPE SP 12.5 NON- WEAR (3,B)	2357 BIT. TACK COAT	
		TON	TON	GALLON	
CSAH 14	105+79.20 - 110+97.69	522	85	80	
CSAH 14	110+97.69 - 117+68.30	563	118	110	
CSAH 7	705+06.47 - 706+88.16	325	14	20	
CSAH 7	708+66.05 - 715+63.76	661	195	170	
PROJECT TOTAL		2071	412	380	

TURF ESTABLISHMENT AND EROSION CONTROL				I
LOCATION		ALIGNMENT	STORM DRAIN INLET PROTECTION	SODDING TYPE SALT RESISTANT
BEGIN STATION	END STATION		EACH	SQ YD
112+17		RT EB CSAH 14	1	
112+17		LT EB CSAH 14	1	
112+75		RT EB CSAH 14	1	
112+75		LT EB CSAH 14	1	
112+90	116+14	RT EB CSAH 14	1	124
113+30	114+49	LT EB CSAH 14	1	39
CSAH 14 SUB-TOTAL			6	163
708+39	711+43	RT NB CSAH 7	1	129
708+73		LT NB CSAH 7	1	
711+72	715+22	RT NB CSAH 7		162
711+87	714+63	LT NB CSAH 7		93
715+08	715+37	LT NB CSAH 7		18
CSAH 7 SUB-TOTAL			2	
PROJECT TOTAL			8	163

DRAINAGE TABULATION														H			
STRUCTURE NO.		CENTER OF CASTING LOCATION			DRAINAGE STRUCTURES				TOP OF CASTING ELEV.	OUTLET ELEV.	DOWN- STREAM INLET ELEV.	SLOPE %	15" RCP CL 5 LIN FT	CONNECT TO EXISTING DRAINAGE EACH	CONNECT TO EXISTING STORM SEWER EACH	RECONSTRUCT STRUCTURE EACH	
FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	TYPE	DESIGN	PAY HEIGHT										CASTING ASSEMBLY TYPE
							H LIN FT	48-4020 LIN FT									
101	102	CSAH 14	112+16.77	32.00' LT	CB	H	3.1		R-3250-EV	878.22	874.97	874.68	0.50	59			
102	103	CSAH 14	112+75.00	32.00' LT	CB	H	3.4		R-3250-EV	878.22	874.68	874.10	0.50	116			
103	EX110	CSAH 14	113+90.66	32.00' LT	CB	H	4.7		R-3250-EV	878.99	874.13	874.13	0.50		1		
104	105	CSAH 14	112+16.77	21.00' RT	CB	H	3.1		R-3250-EV	878.38	875.13	874.84	0.50	59			
105	106	CSAH 14	112+75.00	21.00' RT	CB	H	3.4		R-3250-EV	878.39	874.84	874.10	0.50	148			
106	EX 110	CSAH 14	114+22.14	21.00' RT	CB	48-4020		3.4	R-3250-EV	877.64	874.1	874.02	0.50	16	1		
702	EX 115	CSAH 7	708+72.65	32.00' LT	CB	H	3.1		R-3250-EV	878.17	874.92	874.87	0.50	11	1		
703	EX 118	CSAH 7	711+12.89	20.00' RT	CB	H	3.1		R-3250-EV	875.41	872.16	872.13	0.50	7	1		
EX 115		CSAH 7	708+62.20	26.83' LT	MH	48-4020		5.3	M-8	877.93	872.52					1	
PROJECT TOTAL							23.9	8.7	9				416	3	1	1	

CASTING ASSEMBLIES SUMMARY					
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	STANDARD PLATE PLATE NO.	QUANTITY	REMARKS
M-8	700-7	715	4101 4110	1	Manhole
R-3250-EVSP	805	816	4132 4154	8	Catch Basin

NO	DATE	BY	CHKD	APPR	REVISION

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PRINT NAME: CURT A KOBILARCSIK  
SIGNATURE: *Curt Kobilarsik*  
DATE: 5-29-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
DESIGN BY: BAV DATE: 04-05-12  
CHECKED BY: JEO DATE: 04-17-12



ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-607-019

UTILITY OWNERS		J
CITY OF ANOKA 2015 FIRST AVE N ANOKA, MN 55303 CONTACT GREG LEE PUBLIC SERVICES DIRECTOR TEL: 763-576-2781	ANOKA COUNTY HIGHWAY DEPARTMENT TRAFFIC SIGNAL 1440 BUNKER LAKE BLVD NW ANDOVER, MN 55304 CONTACT AL BRADFORD TEL 763-862-4231	
QWEST/CENTURYLINK 425 MONROE ANOKA, MN 55303 CONTACT BRUCE HOLLOWAY TEL. 763-712-5020	CENTERPOINT ENERGY 700 WEST LINDEN AVE P.O. BOX 1165 MINNAPOLIS, MN 55440-1165 CONTACT ANDREW BALGOBIN TEL 612-321-5426	
COMCAST 2611 FAIRVIEW AVE ROSEVILLE, MN 55113 CONTACT DOUG ZAHN TEL. 651-493-5316	ANOKA MUNICIPAL UTILITY 2015 FIRST AVE N ANOKA, MN 55303 CONTACT DAN VOSS TEL 763-576-2750	
ACCESS COMMUNICATION TECH 5005 CHESHIRE LANE N, SUITE 1 PLYMOUTH, MN 55446-3719 CONTACT MIKE DAHLE TEL. 763-545-9998		

STREET LIGHTS				M
STATION	OFFSET	ALIGN	REMARKS	
106+15.85	29.79 LT	EB	LEAVE AS IS	
106+92.62	27.00 RT	EB	LEAVE AS IS	
108+19.14	32.55 LT	EB	RELOCATE	
109+20.35	25.24 RT	EB	LEAVE AS IS	
112+49.59	23.87 RT	EB	RELOCATE	
113+32.84	53.76 LT	EB	LEAVE AS IS	
115+01.76	40.79 LT	EB	RELOCATE	
117+96.18	35.81 LT	EB	LEAVE AS IS	
706+37.04	31.79 RT	NB	LEAVE AS IS	
711+33.10	48.76 LT	NB	RELOCATE	
715+40.08	44.01 RT	NB	LEAVE AS IS	
717+43.33	46.96 RT	NB	LEAVE AS IS	

OVERHEAD POWER				N
STATION	OFFSET	ALIGN	INPLACE ITEM	REMARKS
104+51.62	83.22 LT	EB	POWER POLE	LEAVE AS IS
104+53.95	49.09 RT	EB	POWER POLE	LEAVE AS IS
702+99.04	24.20 RT	NB	POWER POLE	LEAVE AS IS
704+41.68	23.59 RT	NB	POWER POLE	LEAVE AS IS
705+67.56	25.14 RT	NB	POWER POLE	LEAVE AS IS
706+35.48	25.87 RT	NB	POWER POLE	LEAVE AS IS
706+40.40	25.49 RT	NB	MANHOLE	RELOCATE
708+72.22	21.57 RT	NB	POWER POLE	RELOCATE
709+82.95	20.64 RT	NB	POWER POLE	RELOCATE
710+67.01	20.22 RT	NB	POWER POLE	RELOCATE
711+91.61	20.17 RT	NB	POWER POLE	RELOCATE
713+12.77	21.43 RT	NB	POWER POLE	RELOCATE
713+24.97	26.47 LT	NB	POWER POLE	RELOCATE
714+52.07	24.67 LT	NB	POWER POLE	RELOCATE
714+58.40	23.65 RT	NB	POWER POLE	RELOCATE
716+52.99	22.27 RT	NB	POWER POLE	LEAVE AS IS
716+56.11	24.29 LT	NB	POWER POLE	LEAVE AS IS
718+29.99	23.44 RT	NB	POWER POLE	LEAVE AS IS
718+49.90	25.00 LT	NB	POWER POLE	LEAVE AS IS

WATERMAIN					K
STATION	OFFSET	ALIGNMENT	REMARKS	EXISTING ELEV	NOTES
101+52.18	27.65 LT	14 EB	HYDRANT	879.23	LEAVE AS-IS
101+53.97	30.06 RT	14 EB	CURB STOP	876.73	LEAVE AS-IS
103+02.98	30.16 RT	14 EB	CURB STOP	876.81	LEAVE AS-IS
103+58.62	30.04 RT	14 EB	CURB STOP	877.06	LEAVE AS-IS
104+04.73	17.36 LT	14 EB	GATE VALVE	877.42	LEAVE AS-IS
104+43.57	33.62 LT	14 EB	GATE VALVE	876.74	LEAVE AS-IS
104+51.71	58.40 RT	14 EB	GATE VALVE	876.44	LEAVE AS-IS
104+53.89	58.92 RT	14 EB	HYDRANT	879.58	LEAVE AS-IS
104+62.62	18.11 LT	14 EB	GATE VALVE	877.26	LEAVE AS-IS
104+66.59	34.20 RT	14 EB	CURB STOP	877.52	LEAVE AS-IS
105+63.47	31.54 RT	14 EB	CURB STOP	877.82	LEAVE AS-IS
105+89.11	28.81 RT	14 EB	CURB STOP	877.88	LEAVE AS-IS
106+50.82	31.45 LT	14 EB	CURB STOP	878.39	LEAVE AS-IS
106+62.55	29.04 RT	14 EB	CURB STOP	878.21	LEAVE AS-IS
107+04.96	30.81 LT	14 EB	CURB STOP	878.41	LEAVE AS-IS
107+37.12	26.76 RT	14 EB	CURB STOP	878.60	LEAVE AS-IS
107+70.10	30.51 LT	14 EB	HYDRANT	881.16	RELOCATE
107+70.53	22.04 LT	14 EB	GATE VALVE	878.39	ADJUST
107+86.07	32.09 LT	14 EB	CURB STOP	878.77	RELOCATE
107+91.74	28.15 RT	14 EB	CURB STOP	878.87	LEAVE AS-IS
108+65.27	26.29 RT	14 EB	CURB STOP	879.22	LEAVE AS-IS
110+07.17	34.56 LT	14 EB	CURB STOP	878.97	ADJUST
110+49.23	23.27 LT	14 EB	GATE VALVE	878.32	ADJUST
110+49.23	31.70 LT	14 EB	HYDRANT	881.59	RELOCATE
110+55.26	19.80 LT	14 EB	GATE VALVE	878.58	ADJUST
110+75.34	20.06 LT	14 EB	GATE VALVE	878.67	ADJUST
112+57.14	36.08 LT	14 EB	CURB STOP	878.63	ADJUST
112+64.32	20.55 LT	14 EB	GATE VALVE	878.55	ADJUST
113+91.52	22.93 RT	14 EB	CURB STOP	878.40	ADJUST
114+11.74	38.55 LT	14 EB	CURB STOP	878.35	ADJUST
114+60.06	25.27 RT	14 EB	CURB STOP	878.05	ADJUST
115+02.58	27.10 LT	14 EB	GATE VALVE	877.10	ADJUST
115+02.63	33.61 LT	14 EB	HYDRANT	880.53	RELOCATE
115+15.08	36.82 LT	14 EB	CURB STOP	877.26	ADJUST
115+76.89	23.18 RT	14 EB	CURB STOP	876.52	ADJUST
116+43.76	34.11 LT	14 EB	CURB STOP	876.48	LEAVE AS-IS
116+85.73	25.07 RT	14 EB	CURB STOP	875.97	LEAVE AS-IS
117+00.64	32.53 LT	14 EB	CURB STOP	875.49	LEAVE AS-IS
117+50.38	29.95 LT	14 EB	CURB STOP	875.03	LEAVE AS-IS
117+94.80	32.45 RT	14 EB	GATE VALVE	874.90	LEAVE AS-IS
117+97.56	49.41 RT	14 EB	GATE VALVE	875.21	LEAVE AS-IS
118+04.60	50.34 RT	14 EB	HYDRANT	875.72	LEAVE AS-IS
118+36.25	14.16 LT	14 EB	GATE VALVE	874.18	LEAVE AS-IS
118+63.74	30.96 LT	14 EB	CURB STOP	873.98	LEAVE AS-IS
119+20.99	30.67 LT	14 EB	CURB STOP	873.66	LEAVE AS-IS
119+32.75	28.26 RT	14 EB	CURB STOP	873.83	LEAVE AS-IS

TELEPHONE				O
STATION	OFFSET	INPLACE ITEM	REMARKS	
108+08.11	27.32 RT	TELEPHONE MANHOLE	LEAVE AS IS	
109+82.53	26.75 RT	TELEPHONE MANHOLE	LEAVE AS IS	
704+88.97	34.54 LT	TELEPHONE MANHOLE	LEAVE AS IS	
704+89.28	14.53 LT	TELEPHONE MANHOLE	LEAVE AS IS	
706+92.16	24.97 RT	TELEPHONE MANHOLE	ADJUST	
707+52.16	25.56 RT	TELEPHONE MANHOLE	ADJUST	
707+56.87	26.59 RT	TELEPHONE MANHOLE	ADJUST	
711+26.92	18.36 LT	TELEPHONE MANHOLE	LEAVE AS IS	

WATERMAIN					K
STATION	OFFSET	ALIGNMENT	REMARKS	EXISTING ELEV	NOTES
701+31.76	23.27 LT	7 NB	GATE VALVE	878.81	LEAVE AS-IS
701+34.61	29.46 LT	7 NB	GATE VALVE	879.11	LEAVE AS-IS
701+38.50	25.66 LT	7 NB	GATE VALVE	878.99	LEAVE AS-IS
701+95.26	27.49 RT	7 NB	GATE VALVE	880.64	LEAVE AS-IS
701+95.74	28.63 LT	7 NB	HYDRANT	880.93	LEAVE AS-IS
704+53.69	26.88 LT	7 NB	GATE VALVE	880.01	LEAVE AS-IS
704+55.84	24.71 LT	7 NB	GATE VALVE	879.83	LEAVE AS-IS
704+67.60	29.64 LT	7 NB	GATE VALVE	880.03	LEAVE AS-IS
704+69.45	27.14 LT	7 NB	GATE VALVE	879.98	LEAVE AS-IS
705+03.54	34.73 LT	7 NB	HYDRANT	880.64	LEAVE AS-IS
705+14.93	33.19 LT	7 NB	CURB STOP	880.73	LEAVE AS-IS
708+28.61	30.23 LT	7 NB	GATE VALVE	878.44	ADJUST
708+42.73	12.77 RT	7 NB	GATE VALVE	878.18	ADJUST
710+59.86	32.84 LT	7 NB	GATE VALVE	876.26	ADJUST
711+65.40	30.99 LT	7 NB	GATE VALVE	875.24	ADJUST
711+68.53	37.60 LT	7 NB	GATE VALVE	875.22	ADJUST
711+70.87	19.28 RT	7 NB	GATE VALVE	875.25	ADJUST
711+72.04	30.72 LT	7 NB	GATE VALVE	875.07	ADJUST
711+76.21	29.51 LT	7 NB	GATE VALVE	875.09	ADJUST
711+84.91	25.40 RT	7 NB	CURB STOP	875.26	ADJUST
712+19.87	29.88 LT	7 NB	CURB STOP	875.21	ADJUST
712+94.75	14.31 RT	7 NB	GATE VALVE	873.83	ADJUST
714+37.67	25.11 RT	7 NB	CURB STOP	872.92	LEAVE AS-IS
714+74.32	22.40 LT	7 NB	GATE VALVE	872.91	ADJUST
714+76.86	11.00 RT	7 NB	GATE VALVE	873.12	ADJUST
714+77.28	27.50 LT	7 NB	GATE VALVE	872.98	ADJUST
714+81.98	22.87 LT	7 NB	GATE VALVE	873.01	ADJUST
715+09.68	38.30 LT	7 NB	HYDRANT	876.69	LEAVE AS-IS
718+04.63	27.92 LT	7 NB	GATE VALVE	873.96	LEAVE AS-IS
718+07.42	12.91 RT	7 NB	GATE VALVE	873.99	LEAVE AS-IS
718+08.11	24.99 LT	7 NB	GATE VALVE	874.06	LEAVE AS-IS
718+08.14	31.05 LT	7 NB	GATE VALVE	874.02	LEAVE AS-IS
718+12.59	27.82 LT	7 NB	GATE VALVE	874.10	LEAVE AS-IS

GAS - CENTERPOINT ENERGY				P
STATION		OFFSET LEB/LNB	REMARKS	SIZE & ITEM
BEGIN	END			
CSAH 14				
104+00	111+41	18 RT TO 19 RT	LEAVE AS IS	4" ST CL-5
104+70	111+50	30 LT TO 35 LT	LEAVE AS IS	4" PE CL-6
111+41	117+10	19 RT TO 22 RT	LEAVE AS IS	2" ST CL-5
111+50	118+10	30 LT TO 30 LT	LEAVE AS IS	4" PE CL-6
CSAH 7				
701+18	701+74	18 LT TO 20 LT	LEAVE AS IS	4" ST CL-5
701+74	704+51	20 LT TO 16 LT	LEAVE AS IS	2" ST CL-5
704+51	705+15	16 LT TO 33 LT	LEAVE AS IS	4" ST CL-5
705+15	706+15	33 LT TO 30 LT	LEAVE AS IS	2" TR CL-5
706+15	707+80	30 LT TO 30 LT	LEAVE AS IS	4" ST CL-5
710+11	711+31	21 RT TO 20 RT	LEAVE AS IS	2" TR CL-5
710+31		21 RT	LEAVE AS IS	SERVICE
711+31			CROSSING	2" ST CL-5
711+31	715+70	15 RT TO 19 RT	LEAVE AS IS	2" TR CL-5

NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_TAB.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 A KOBILARCSIK

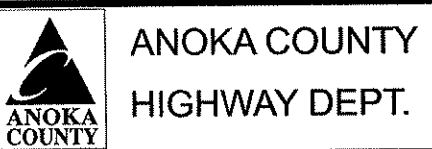
SIGNATURE: *Curt Kobilarsik*

DATE: 5.18.12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12

DESIGN BY: BAV DATE: 04-05-12

CHECKED BY: JEO DATE: 04-17-12



S.P. 002-607-019

TAB SHEETS

Sheet 9 of 85 Sheets



EARTHWORK BALANCE

EXCAVATION (CY)			
		COMMON	1,429 (EV) / 1.2 = 1,191 (CV)
COMMON (EV) (P) (1) 1,637		EXISTING TOPSOIL	208 (EV) / 1.2 = 173 (CV)
SUBGRADE EXCAVATION (EV) (P) (2) 1,135		SUBGRADE	1,135 (EV) / 1.2 = 946 (CV) (3)
EMBANKMENT (CY)			
		TOPSOIL	23 (CV) = 23 (CV)
		SELECT GRANULAR	1,522 (CV) = 1,522 (CV) (4)
EXCESS (CY)			
		COMMON	1,191 (CV) = 1,191 (CV) (5)
		TOPSOIL	173 (CV) - 23 (CV) = 150 (CV) (6)
BORROW (CY)			
		SELECT GRANULAR	1,522 (CV) - 946 (CV) = 576 (CV) *1.4 = 806.4 (LV) (7)

- (1) TOTAL COMMON EXCAVATION FOR PROJECT (INCLUDING TOPSOIL)
- (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

STATION NB CSAH 7	EXCAVATION TOTALS			EMBANKMENT VOLUMES		
	COMMON (C.Y.)	SUBGRADE (C.Y.)	MUCK (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)	COMMON (C.Y.)
708+75.00	0	0	0	0	0	0
709+00.00	0	0	0	1	28	0
709+25.00	38	23	0	1	27	0
709+50.00	40	23	0	1	27	0
710+00.00	36	23	0	2	52	0
710+25.00	41	23	0	1	27	0
710+43.36	31	17	0	1	20	0
710+50.00	10	6	0	0	7	0
710+64.52	23	13	0	0	15	0
711+00.00	50	32	0	0	36	0
711+15.31	21	13	0	0	17	0
711+50.00	51	26	0	1	37	0
711+56.06	8	5	0	0	6	0
712+00.00	55	40	0	0	32	0
712+50.00	63	45	0	0	46	0
712+77.45	37	25	0	0	30	0
713+00.00	33	20	0	0	24	0
713+24.81	35	22	0	0	26	0
713+50.00	33	23	0	0	27	0
713+60.12	13	9	0	0	11	0
714+00.00	47	36	0	1	41	0
714+05.59	6	5	0	0	6	0
714+50.00	41	38	0	1	46	0
714+86.25	47	29	0	1	37	0
715+00.00	17	12	0	0	14	0
715+50.00	19	22	0	0	44	0
<b>SUBTOTAL NB</b>	<b>795</b>	<b>530</b>	<b>0</b>	<b>11</b>	<b>683</b>	<b>0</b>

STATION EB CSAH 14	EXCAVATION TOTALS			EMBANKMENT VOLUMES		
	COMMON (C.Y.)	SUBGRADE (C.Y.)	MUCK (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)	COMMON (C.Y.)
106+50.00	0	0	0	0	0	0
107+00.00	13	11	0	1	28	0
107+38.00	10	9	0	1	21	0
107+50.00	6	5	0	0	10	0
108+00.00	24	23	0	1	74	0
108+40.60	24	18	0	1	45	0
108+50.00	6	4	0	0	5	0
109+00.00	28	22	0	0	27	0
109+50.00	22	23	0	0	28	0
110+00.00	24	23	0	0	28	0
110+50.00	28	20	0	0	25	0
111+00.00	20	9	0	0	11	0
111+50.00	34	23	0	0	28	0
112+00.00	64	45	0	1	56	0
112+50.00	68	45	0	1	56	0
112+64.23	20	13	0	0	16	0
112+84.89	28	19	0	0	23	0
113+00.00	19	14	0	0	17	0
113+50.00	65	45	0	1	55	0
113+62.75	17	11	0	0	14	0
114+34.70	107	65	0	1	79	0
114+54.35	31	18	0	0	22	0
115+00.00	62	42	0	1	52	0
115+50.00	60	48	0	2	59	0
115+81.24	39	31	0	1	37	0
116+00.00	23	19	0	0	23	0
<b>SUBTOTAL EB</b>	<b>842</b>	<b>605</b>	<b>0</b>	<b>12</b>	<b>839</b>	<b>0</b>
<b>TOTAL</b>	<b>1637</b>	<b>1135</b>	<b>0</b>	<b>23</b>	<b>1522</b>	<b>0</b>

NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-607-19\plan\0260719_TAB_EW.dgn					
05/16/2012 3:53:21 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 A KOBIARCSIK

SIGNATURE: *Curt Kobilarcsik*

DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: OFF DATE: 04-05-12

DESIGN BY: BAV DATE: 04-05-12

CHECKED BY: JEO DATE: 04-17-12



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

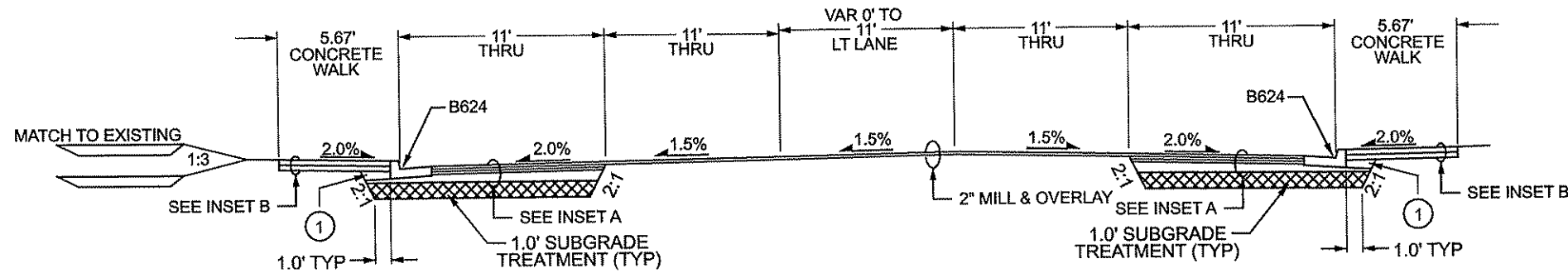
S.P. 002-607-019

**EARTHWORK SUMMARY**

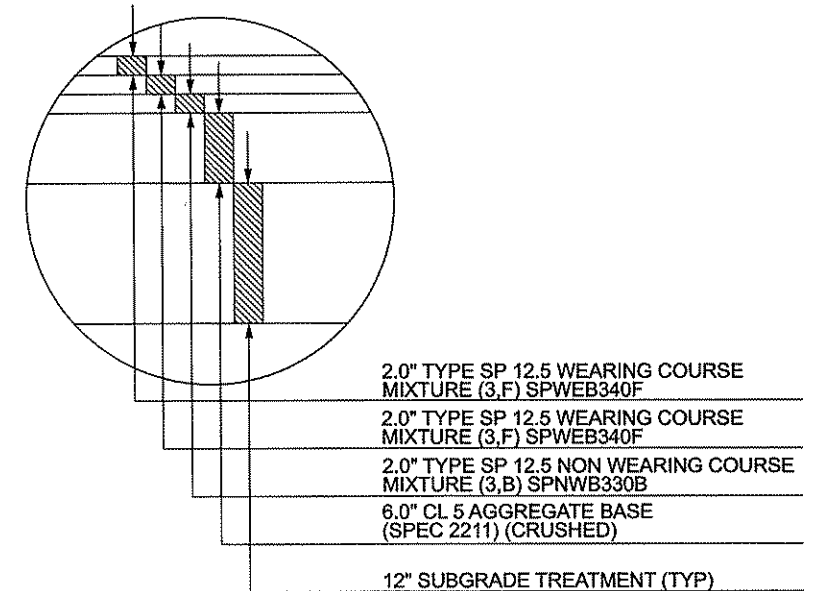
Sheet 11 of 85 Sheets

### C.S.A.H. 14 (MAIN STREET)

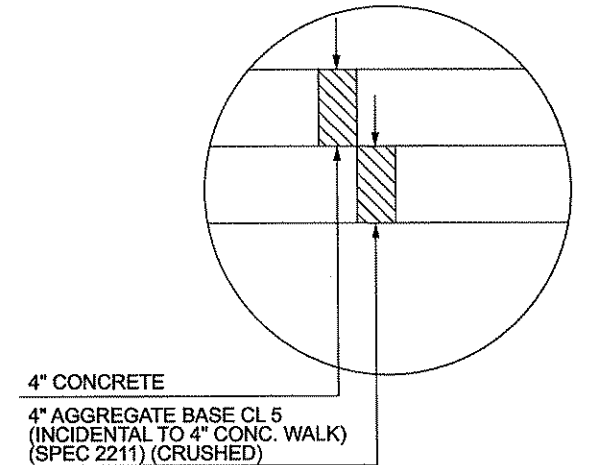
STA. 106+34.21 - STA. 115+18.90  
 SIDEWALK BEGINS STA. 107+07.59 (LT) & STA. 110+47.05 (RT)  
 SIDEWALK END STA. 115+14.46 (LT) & STA. 116+08.75 (RT)  
 MILL AND OVERLAY ONLY STA. 116+08.75 - 117+53.28



### INSET "A" PAVEMENT DESIGN

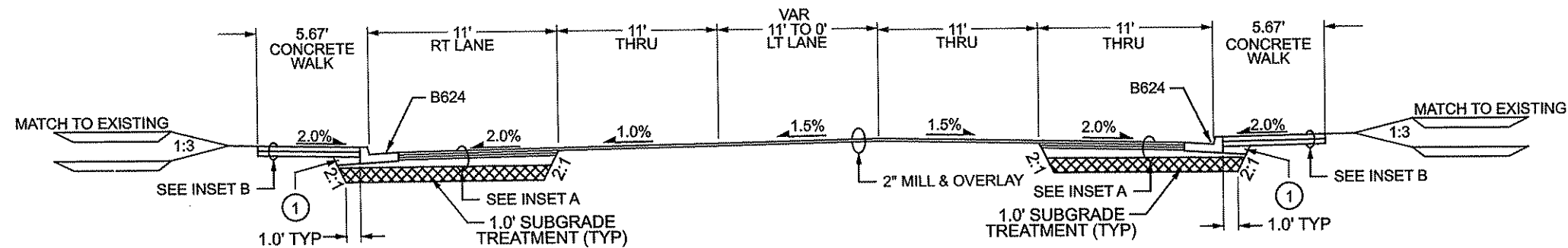


### INSET "B" CONCRETE SIDEWALK



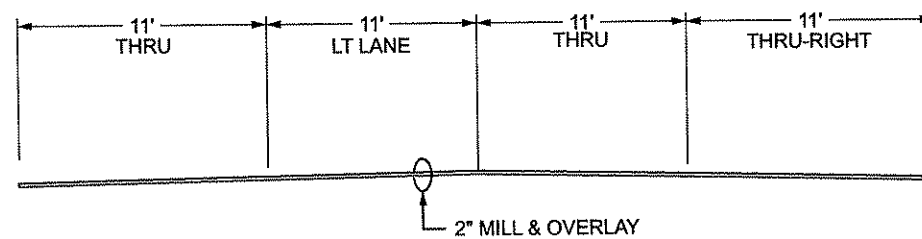
### C.S.A.H. 7

STA. 708+64.30 - STA. 715+37.43  
 SIDEWALK ENDS STA. 713+37.10 (LT) & STA. 713+78.52 (RT)



### C.S.A.H. 7

STA. 701+76.17 - STA. 707+46.11



#### SPECIFIC NOTES:

- ① SUITABLE EXCAVATED MATERIAL

#### GENERAL NOTES:

- SEE CONSTRUCTION PLANS FOR TAPER AND TURN LANE LOCATIONS.
- UNLESS OTHERWISE SPECIFIED, THE GRADING GRADE CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.
- UNLESS OTHERWISE SPECIFIED, CLASS 5 AGGREGATE WILL EXTEND 1' BEYOND BACK OF CURB.
- MILL & OVERLAY ON CSAH 7 FROM STA. 701+76.17 TO STA. 707+46.11 AND ON CSAH 14 FROM STA. 104+70.15 TO STA. 106+12.82 AND FROM STA. 116+08.75 TO STA. 117+53.28.
- SUBGRADE TREATMENT IS PAID FOR AS SUBGRADE EXCAVATION

1	5/29/12	BAV	JEO	CAK	MODIFIED TEXT
NO	DATE	BY	CKD	APPR	REVISION
					05/29/2012

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: *Curt Kobilarcsik*  
 DATE: 5-29-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: DFF DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12



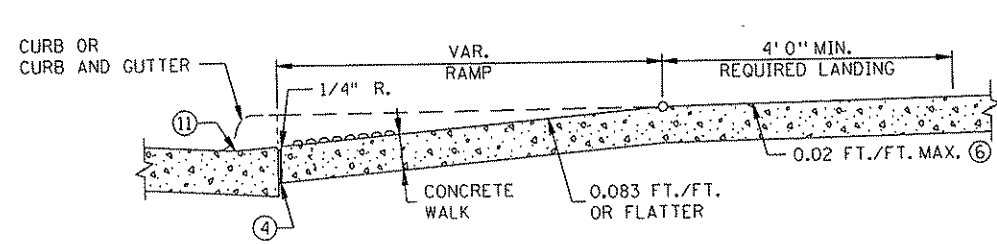
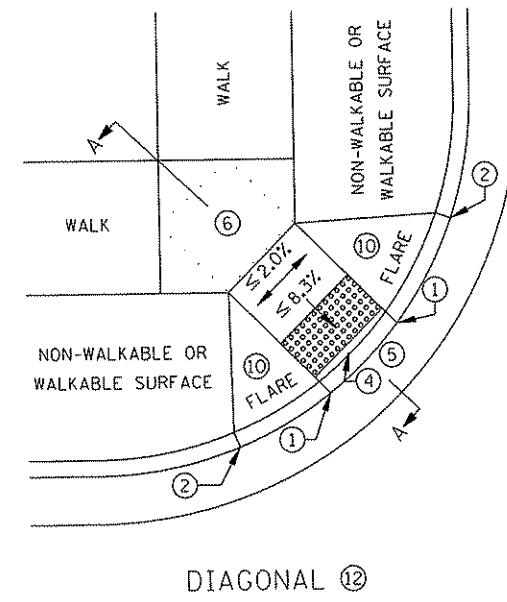
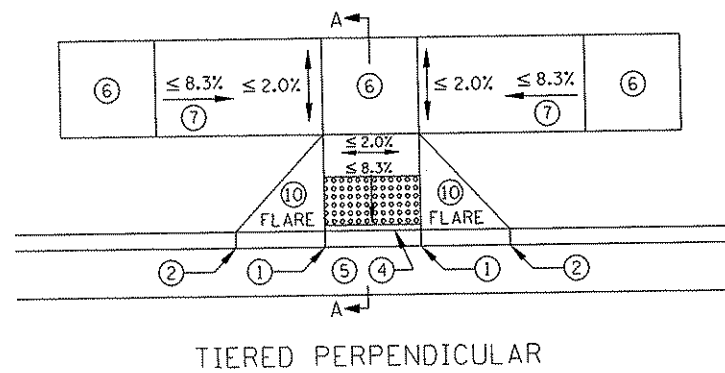
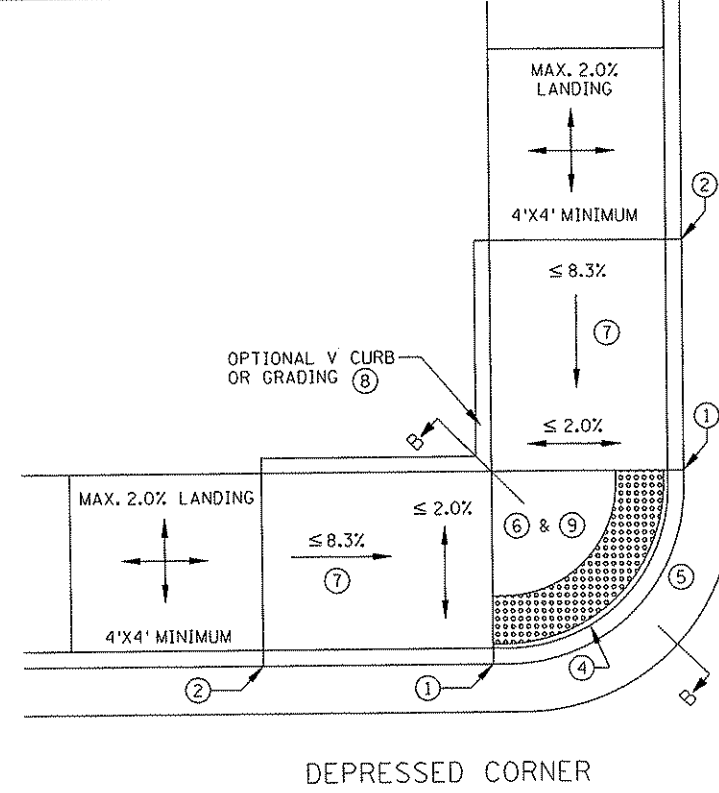
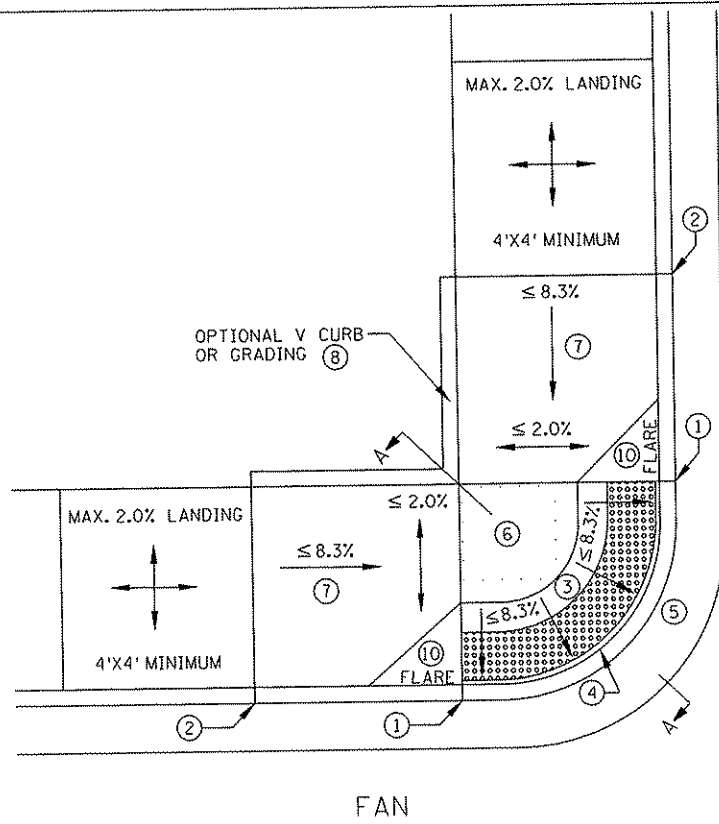
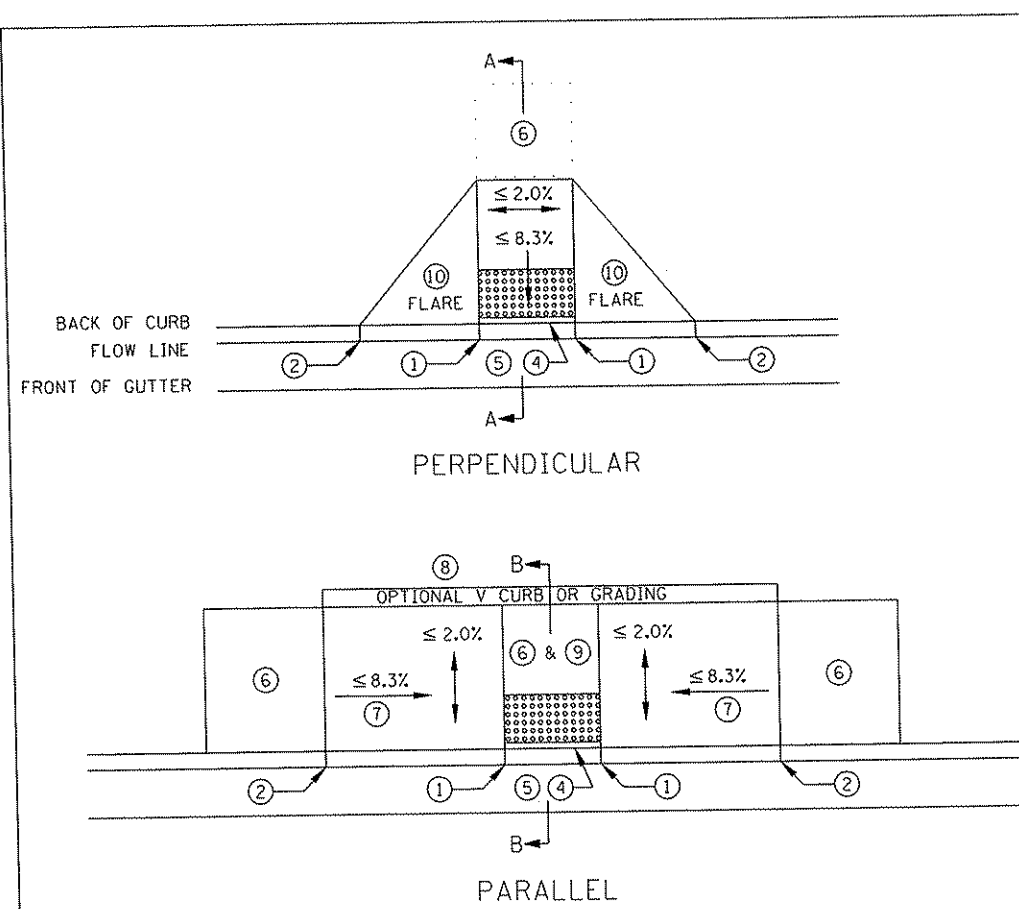
ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

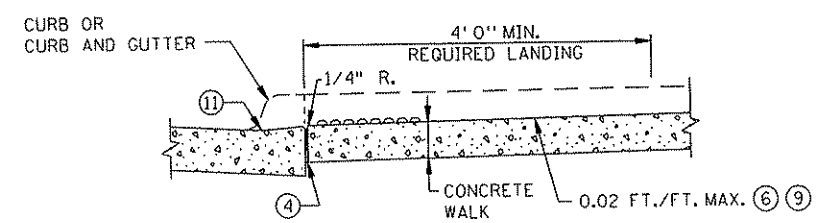
TYPICAL SECTIONS

PLOTTED/REVISED:  
05/16/2012

USER NAME: dffrey  
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SECTION A-A  
PERPENDICULAR/TIERED/DIAGONAL/FAN



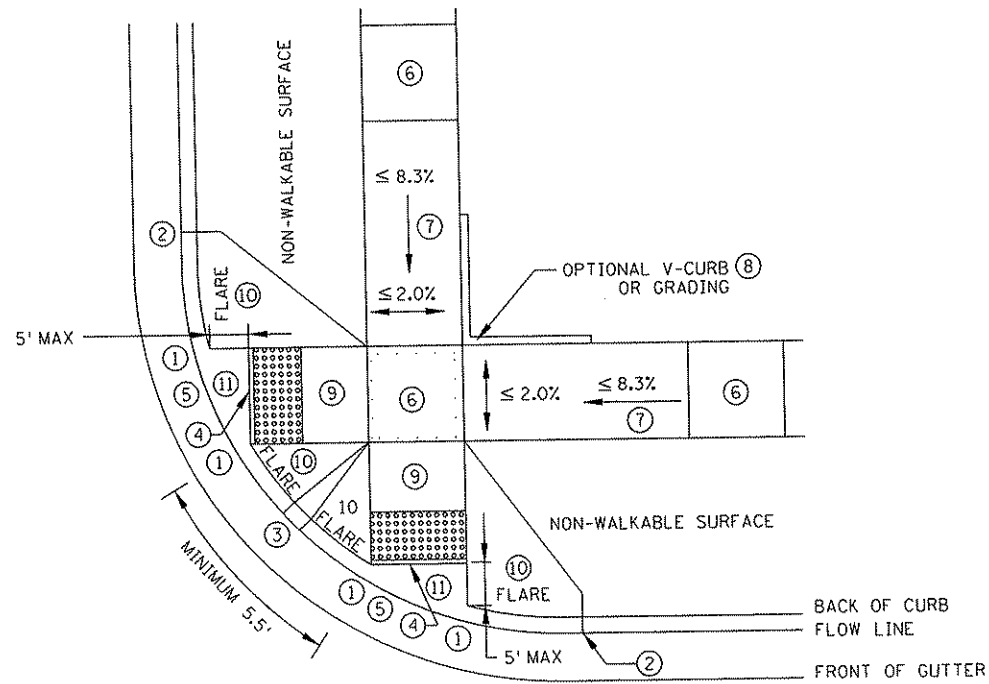
SECTION B-B  
PARALLEL/DEPRESSED CORNER

NOTES:

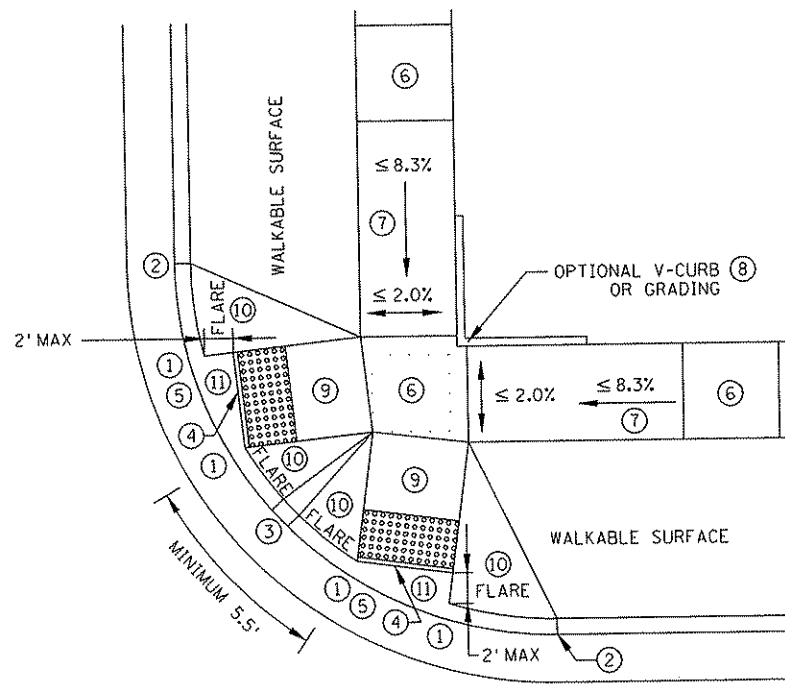
- SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR DETAILS ON DETECTABLE WARNING.
- SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN. (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)
- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.
- 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 5% OR GREATER.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- USE 6" CONCRETE FOR ALL INITIAL RAMP AND LANDING AREAS.
- CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.
- ALL GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL/PEDESTRIAN ACCESS ROUTE.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.
- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ LESS THAN 5% PREFERRED, 5-8.3% SHOULD ONLY BE USED AFTER ALL OTHER SLOPES HAVE BEEN CONSIDERED AND DEEMED IMPRACTICAL.
- 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 SET BACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SET BACK 3"-6" 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% SLOPE IN ALL DIRECTIONS.
- ⑦ IF RUNNING SLOPE IS LESS THAN 5.0% NO SECONDARY LANDING IS REQUIRED.
- ⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.
- ⑨ 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.
- ⑩ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- ⑪ SEE SHEET 3 OF 5 FOR FURTHER DETAIL.
- ⑫ DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN CONSIDERED AND DEEMED IMPRACTICAL.

PLOTTED/REVISED:  
05/16/2012

USER NAME: dffrey  
PATH & FILENAME: \_\02-607-01plan.s250\_2\_spr.dgn

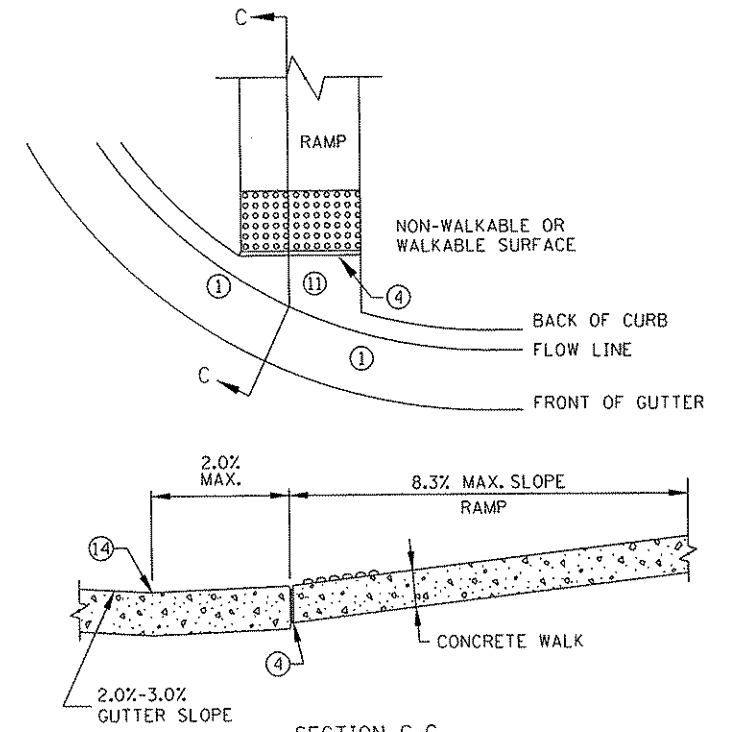


ADJACENT TO NON-WALKABLE SURFACE



ADJACENT TO WALKABLE SURFACE

COMBINED DIRECTIONAL

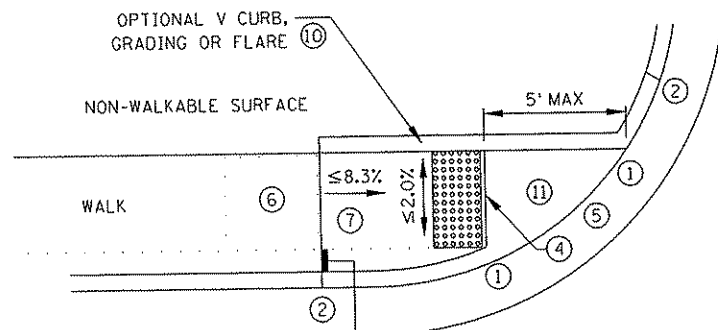


SECTION C-C  
CURB FOR DIRECTIONAL RAMPS 12

NOTES:

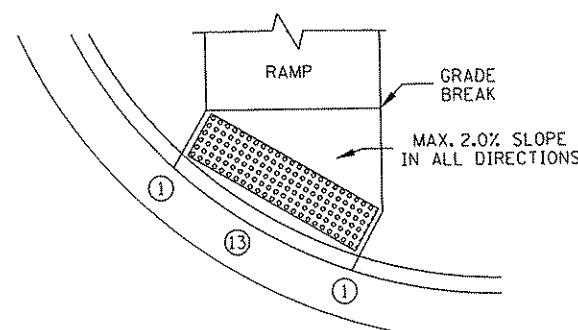
- SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR DETAILS ON DETECTABLE WARNING.
- SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN, (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)
- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.
- 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 5% OR GREATER.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- USE 6" CONCRETE WALK FOR ALL INITIAL RAMP AND LANDING AREAS.
- CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.
- ALL GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL/PEDESTRIAN ACCESS ROUTE.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

- 1 0" CURB HEIGHT.
- 2 FULL CURB HEIGHT.
- 3 3" MINIMUM CURB HEIGHT.
- 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 SET BACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SET BACK 3"-6" 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% SLOPE IN ALL DIRECTIONS.
- 7 IF RAMP SLOPE IS LESS THAN 5% NO SECONDARY LANDING IS REQUIRED.
- 8 V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- 9 RUNNING SLOPE LESS THAN OR EQUAL TO 8.3% & CROSS SLOPE LESS THAN OR EQUAL TO 2%.
- 10 SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- 11 MAX. 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- 12 TO BE USED FOR ALL DIRECTIONAL RAMPS.
- 13 DOMES PLACED AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- 14 ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.



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.

ONE-WAY DIRECTIONAL



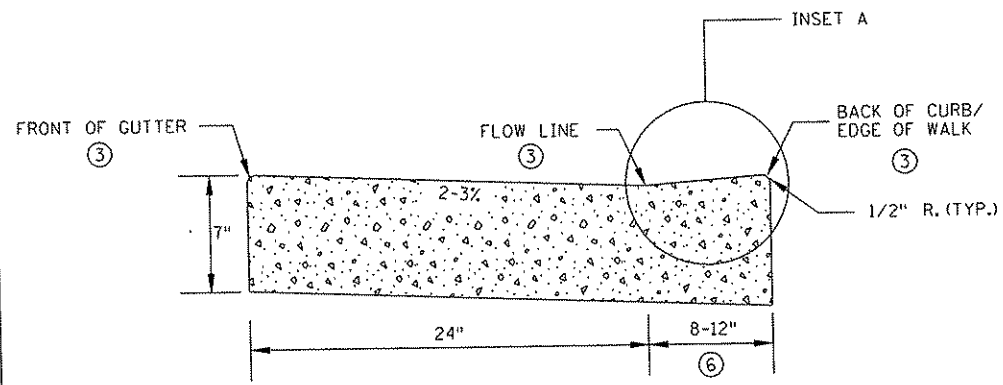
STANDARD PLAN SHEET NO.  
5-297.250 (2 OF 5)  
STANDARD APPROVED:  
MAY 10, 2012

PEDESTRIAN CURB RAMP DETAILS

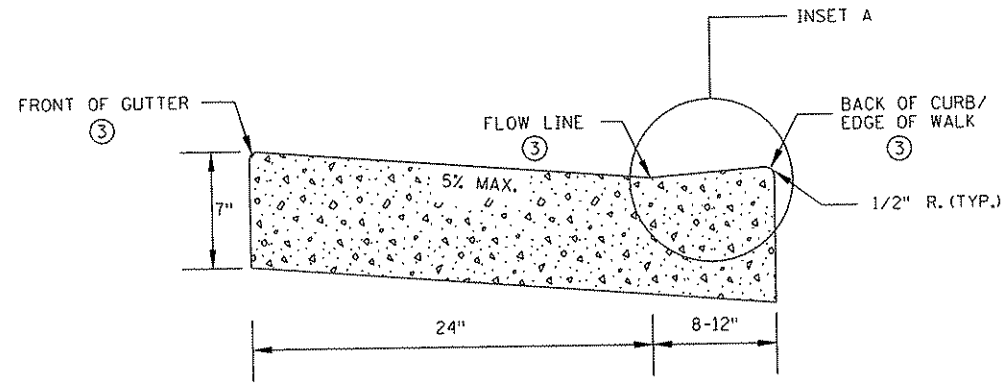


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05/16/2012

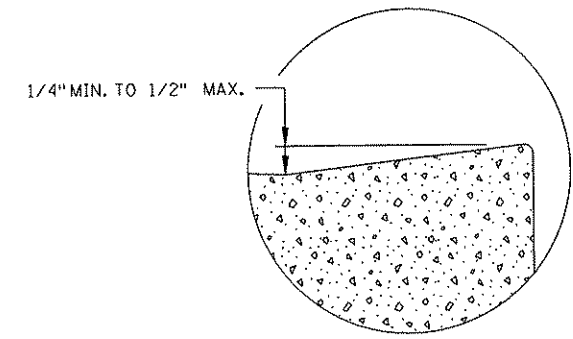
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NON PERPENDICULAR ①

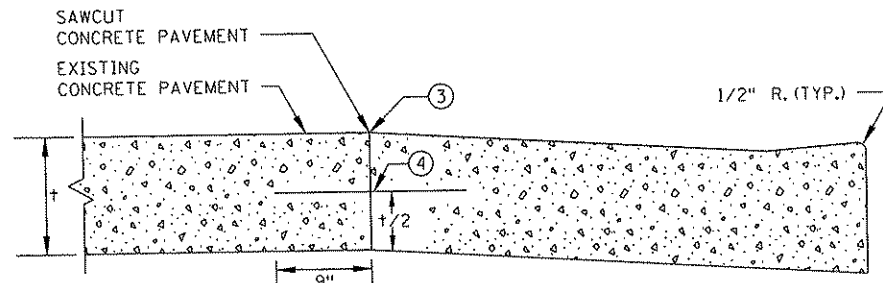
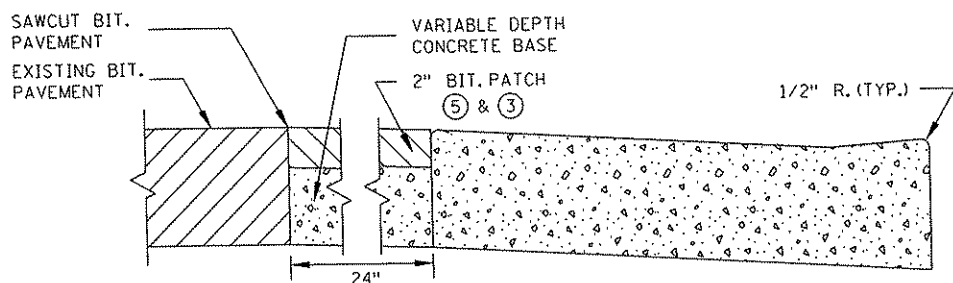
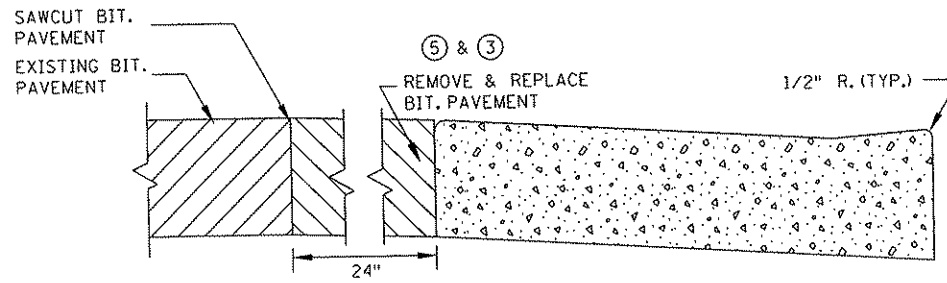
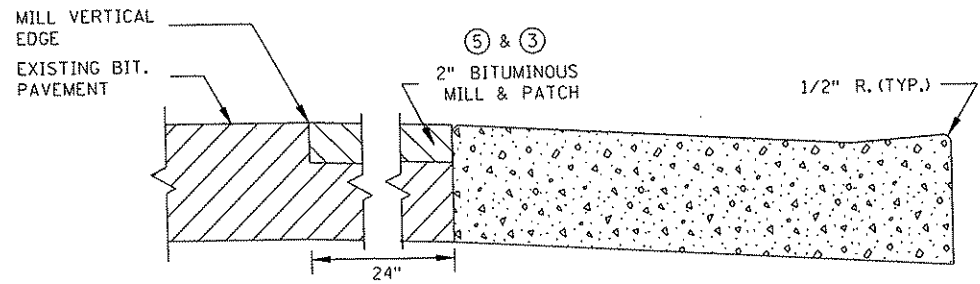


PERPENDICULAR ②



INSET A

PEDESTRIAN ACCESS ROUTE  
CURB & GUTTER DETAIL



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

- NOTES:  
ADEQUATE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% ABSOLUTE MAXIMUM.  
NO PONDING SHALL BE PRESENT IN THE PAR.  
ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY 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. 13 EPOXY-COATED 18" LONG BARS AT 2' 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.

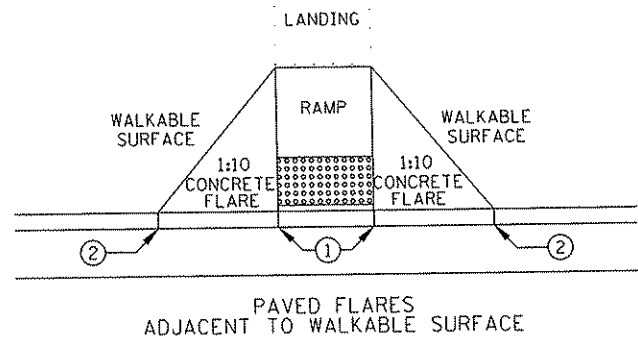
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5-297.250 (3 OF 5)  
STANDARD APPROVED:  
MAY 10, 2012

PEDESTRIAN CURB RAMP DETAILS

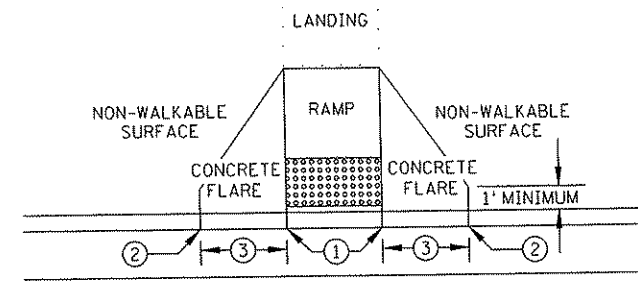
STATE PROJ. NO. S.P. 002-607-019 SHEET NO. 15 OF 85 SHEETS

PLOTTED/REVISED:  
05/16/2012

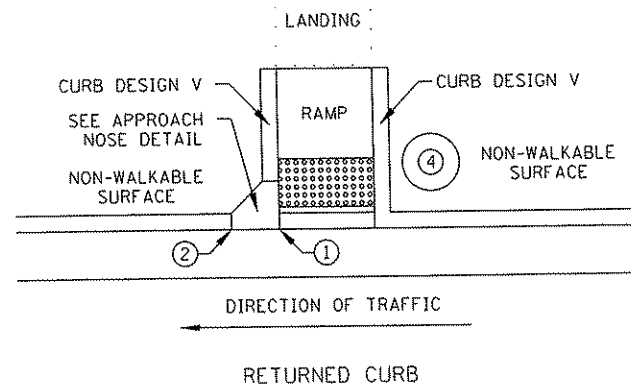
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PAVED FLARES  
ADJACENT TO WALKABLE SURFACE

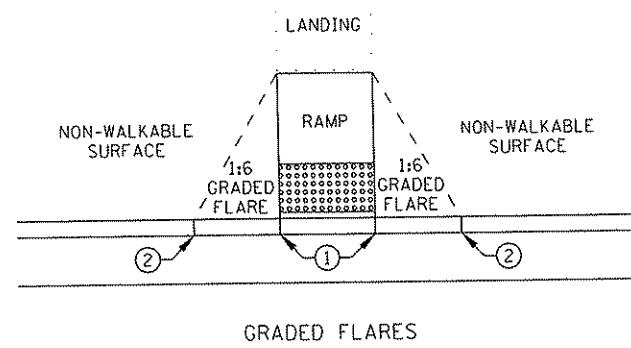


PAVED FLARES  
ADJACENT TO NON-WALKABLE SURFACE



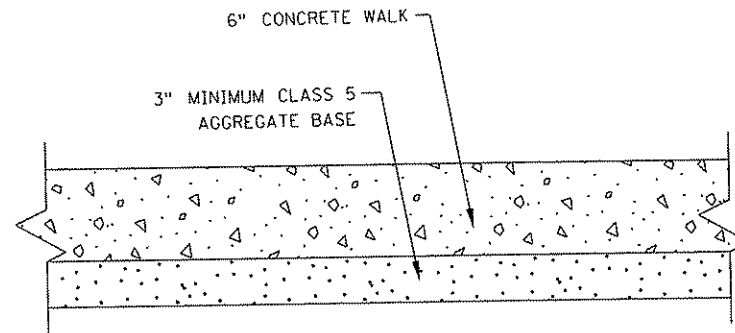
DIRECTION OF TRAFFIC

RETURNED CURB

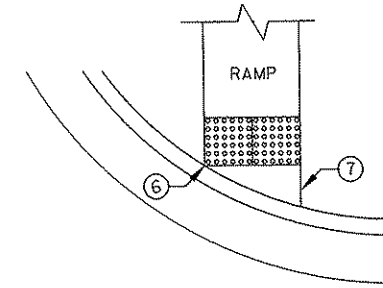


GRADED FLARES

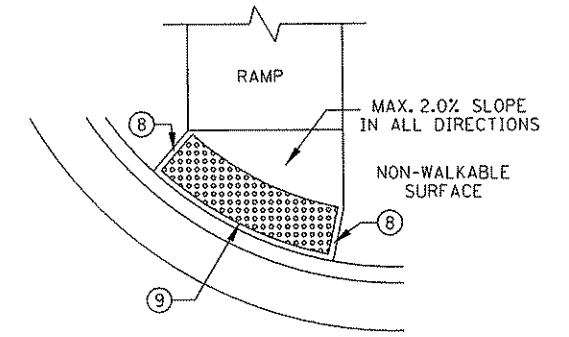
TYPICAL SIDE TREATMENT OPTIONS ⑤



TYPICAL SIDEWALK SECTION  
WITHIN INTERSECTION CORNER

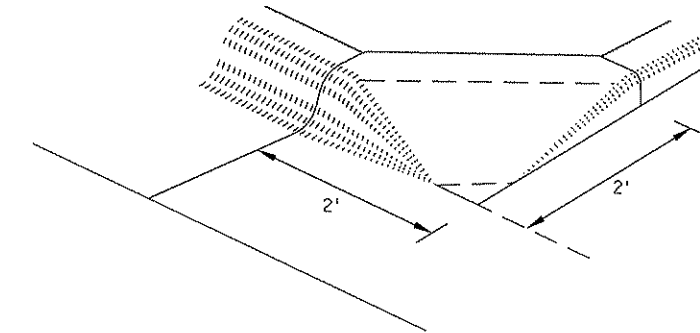


DETECTABLE WARNING  
SETBACK CRITERIA



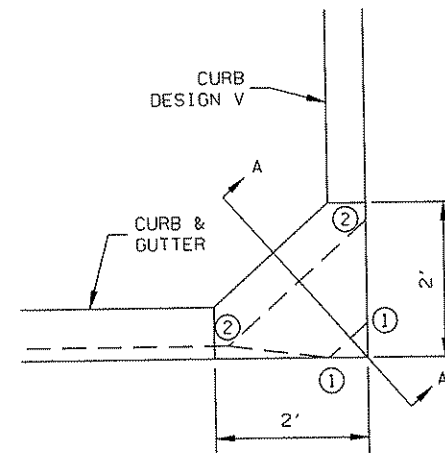
RADIAL DETECTABLE  
WARNING AT RADIUS

DETECTABLE WARNING PLACEMENT



SECTION A-A

APPROACH NOSE DETAIL  
FOR DOWNSTREAM SIDE OF TRAFFIC



NOTES:

SEE STANDARD PLATE 7038 AND THIS SHEET FOR DETAILS ON DETECTABLE WARNING.  
USE 6" CONCRETE WALK UP TO EXISTING SIDEWALK GRADES FOR ALL RAMP AND LANDING AREAS.  
WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER.  
FLARE LENGTHS SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 2' - 3' CONCRETE 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 DETECTABLE WARNING SHALL HAVE ONE CORNER 3" FROM THE BACK OF CURB.
- ⑦ SHALL BE 2' MAXIMUM OFFSET WHEN ADJACENT TO WALKABLE SURFACE AND 5' MAXIMUM OFFSET WHEN ADJACENT TO NON-WALKABLE SURFACE.
- ⑧ WHEN NO 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.
- ⑨ DETECTABLE WARNING TO BE PLACED AT A UNIFORM OFFSET DISTANCE FROM 3" TO 6" FROM THE BACK OF CURB. IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNING SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE CONCRETE BORDER.

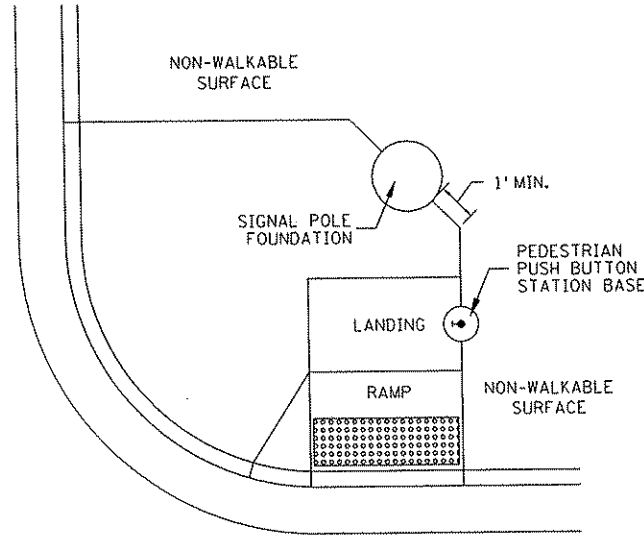
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5-297.250 (4 OF 5)  
STANDARD APPROVED:  
MAY 10, 2012

PEDESTRIAN CURB RAMP DETAILS

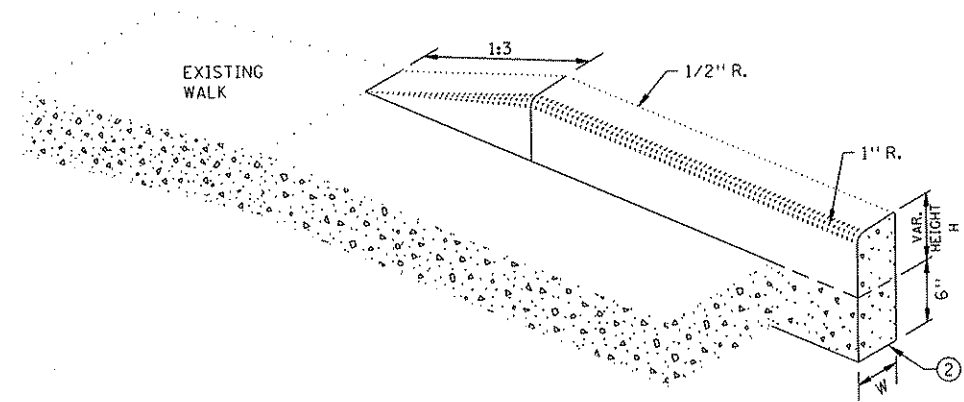
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05/16/2012

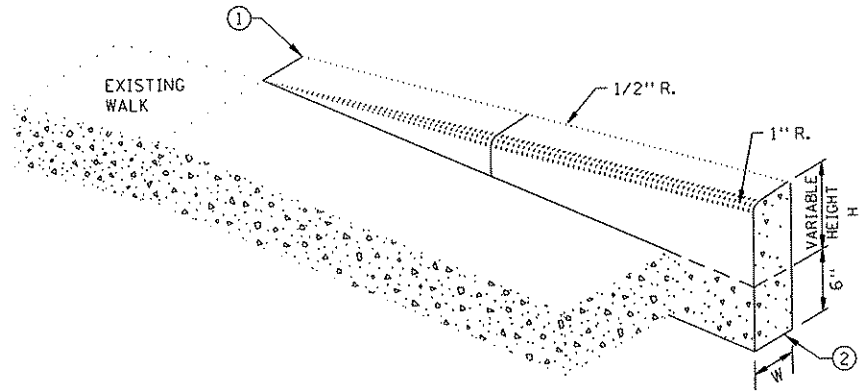
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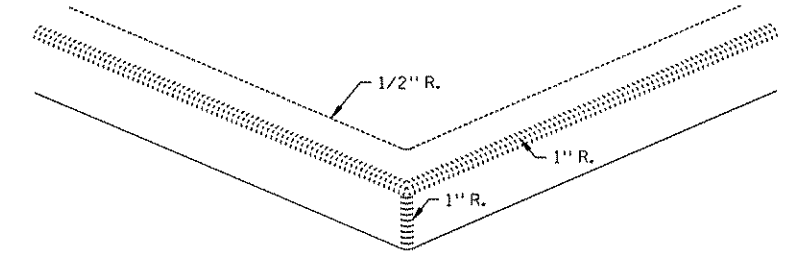
CONCRETE WALK EDGES ADJACENT TO CONCRETE STRUCTURES



V CURB ADJACENT TO LANDSCAPE  
CURB WITHIN SIDEWALK LIMITS

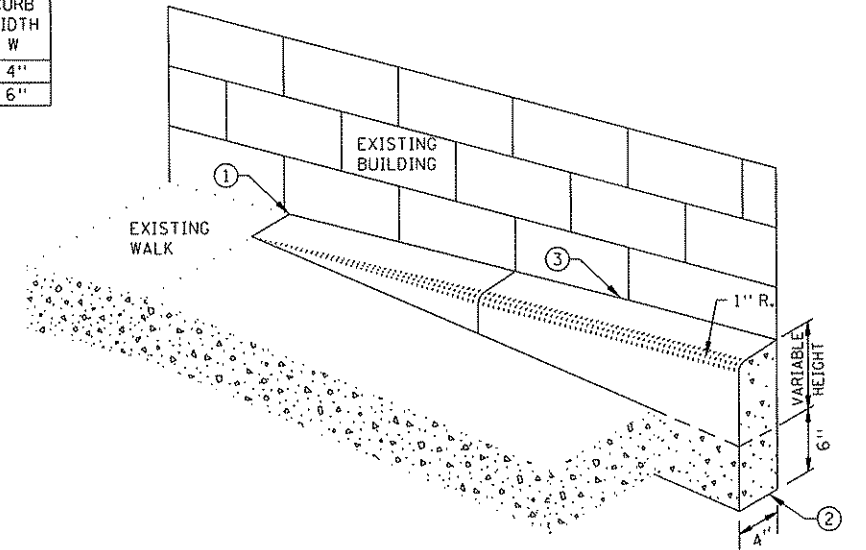


V CURB ADJACENT TO LANDSCAPE  
CURB OUTSIDE SIDEWALK LIMITS

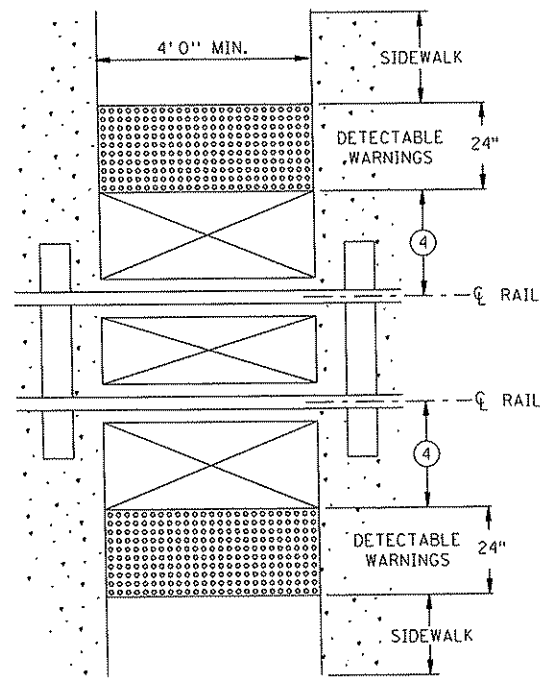


V CURB INTERSECTION

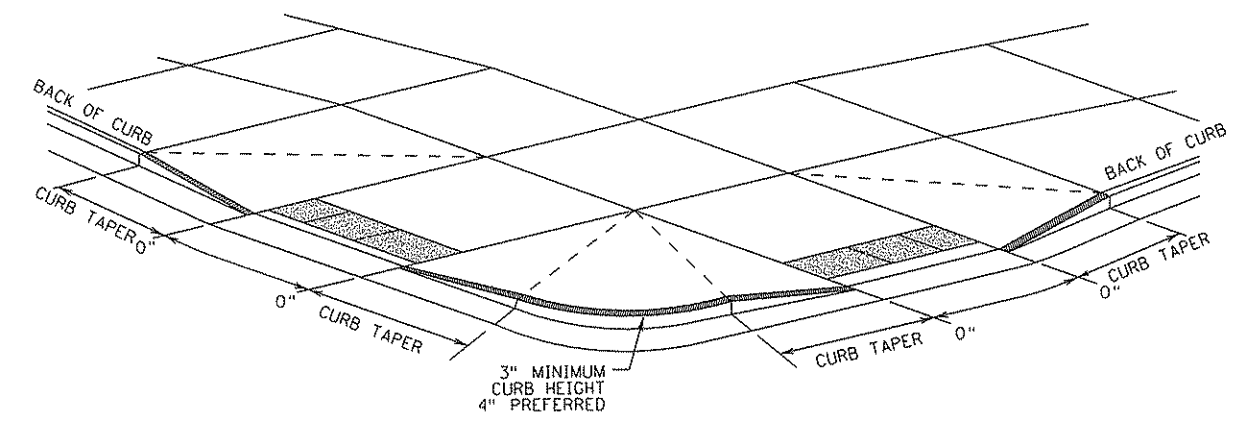
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



V CURB ADJACENT TO BUILDING



RAILROAD CROSSING  
PLAN VIEW



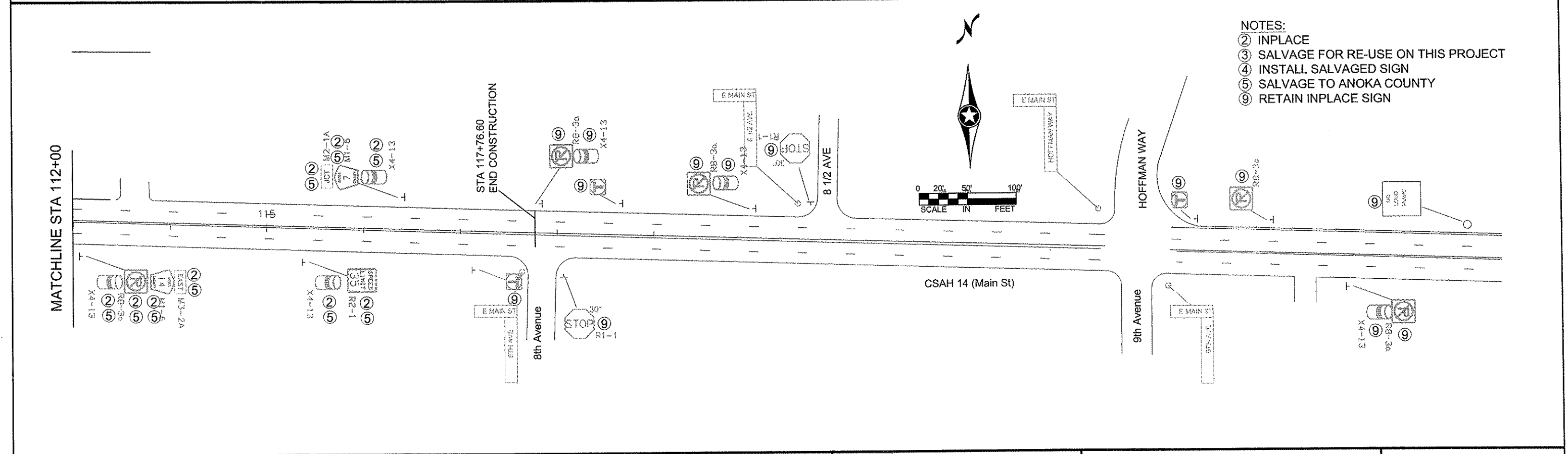
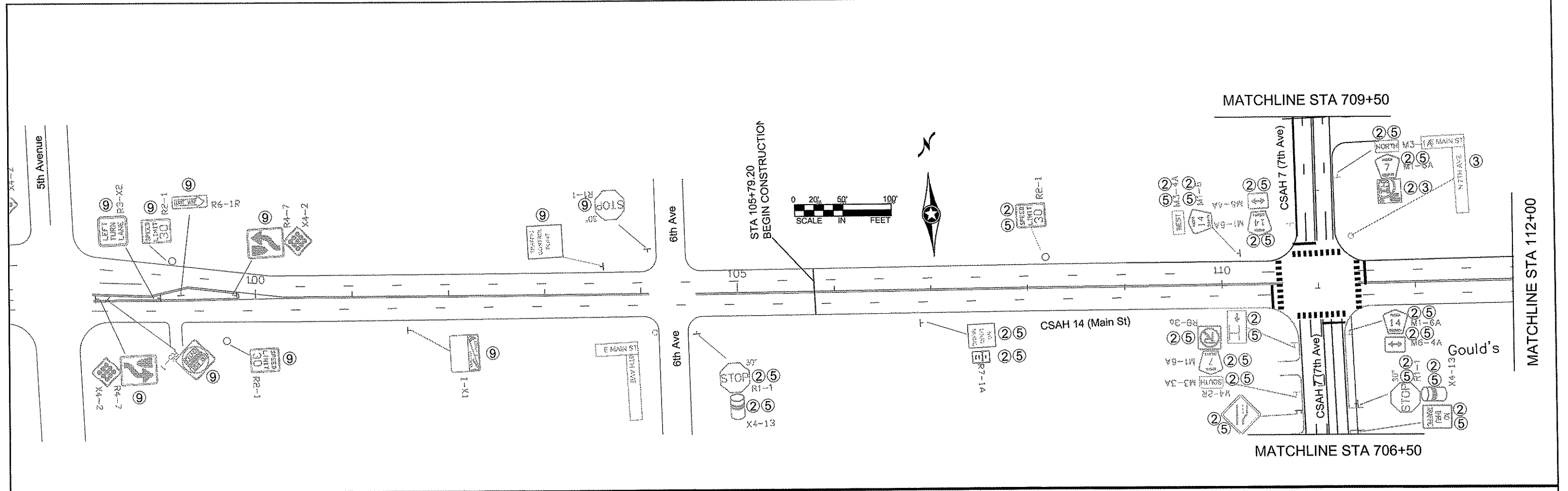
DETECTABLE EDGE AT QUADRANT ⑤

NOTES:

- ALL V-CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- 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 6' MINIMUM TO 15' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL.
- ⑤ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES TRUNCATED DOMES WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TRANSITIONS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS IMMEDIATELY AT THE EDGE OF THE TRUNCATED DOMES AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TRANSITION AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY GUIDELINES.

STANDARD PLAN SHEET NO.  
5-297.250 (5 OF 5)  
STANDARD APPROVED:  
MAY 10, 2012

PEDESTRIAN CURB RAMP DETAILS



- NOTES:
- ② INPLACE
  - ③ SALVAGE FOR RE-USE ON THIS PROJECT
  - ④ INSTALL SALVAGED SIGN
  - ⑤ SALVAGE TO ANOKA COUNTY
  - ⑨ RETAIN INPLACE SIGN

1	1/09/2012	MTH	RB	LANE WIDTHS BEING REDUCED TO 11 FEET	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-607-019\Bose\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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A. KOBILARCSIK

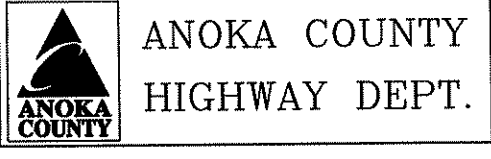
SIGNATURE: *Curt A. Kobilarsik*

DATE: 5-18-12 REG. NO. 24756

DRAWN BY: MTH DATE 09/30/11

DESIGN BY: MTH DATE 08/17/11

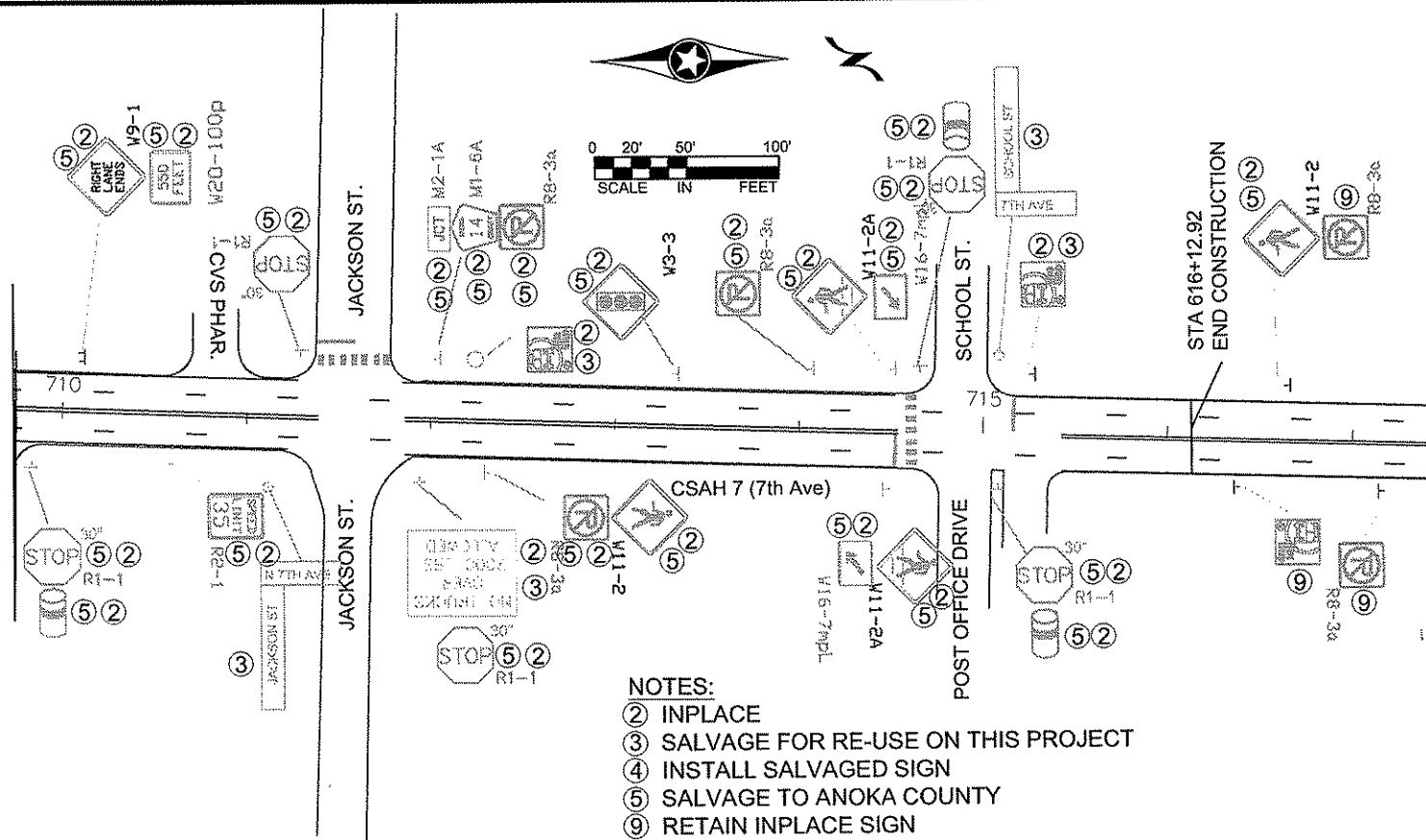
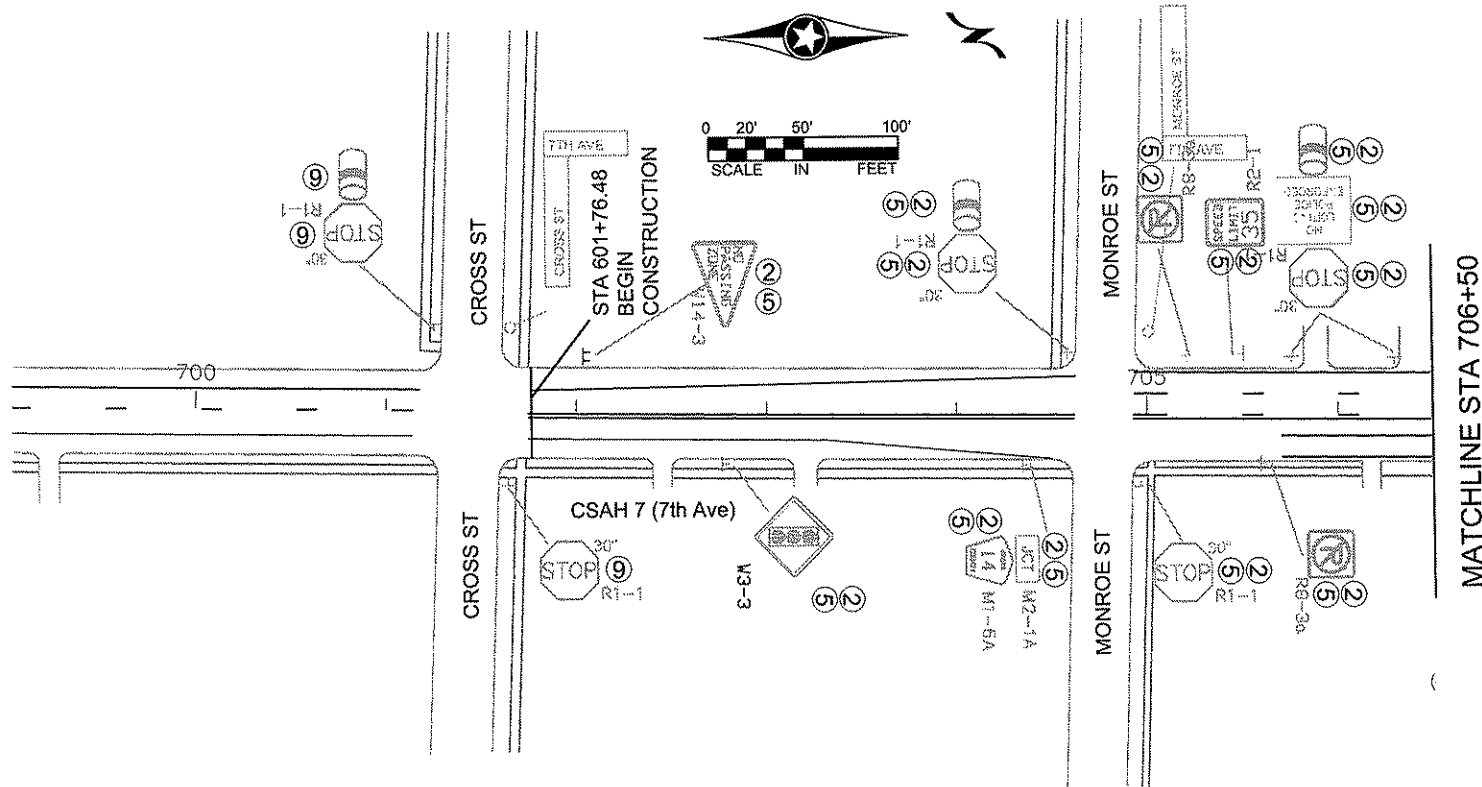
CHECKED BY: RB DATE 08/16/11



S.P. 002-607-019

EXISTING SIGNING AND STRIPING PLAN

Sheet 18 of 85 Sheets



SALVAGE SIGNS TABULATION							
STATION	ADDRESS/ DESCRIPTION (NOTES)	SALVAGE SIGN TYPE C	SALVAGE SIGN TYPE SPECIAL	INSTALL SIGN TYPE C	INSTALL SIGN TYPE SPECIAL	SIGN NUMBER	NOTES
		EACH	EACH	EACH	EACH		
CSAH 14 (Main Street) from 6th Street to 8th Avenue							
104+70		1					
104+70		1					
105+79		1				R3-8	No Cruising
106+90		1				R3-8	No Loud Music
108+22		1				R2-1	30 mph
110+23		1				M3-4A / M1-6A	WEST / 14
113+06		1				M1-6A / M6-1AL	EAST / 14
115+39		1				R1-1 / x4-13	No Parking / delineator
116+38		1				R2-1 / x4-13	35 mph / delineator
116+38		1				M2-1A / M1-6A / x4-13	JCT / 7 / delineator
CSAH 7 (7th Avenue) from Cross Street to 100 feet north of School Street							
702+00		1				W14-3	No Passing Zone
702+79		1				W3-3	Signal Ahead
704+47		1				M2-1 / M1-6A	JCT / 14
704+59		1				R1-1 / x4-13	Stop / delineator
704+90		1				R1-1	Stop
705+18		1				R8-3a	No Parking
705+28		1				R2-1	35 MPH
705+56		1				R8-3a	No Parking
705+73		1				R1-1 / x4-13	Stop / delineator
705+73		1				R3-x	No Loitering
706+28		1				R1-1 / x4-13	Stop / delineator
706+28		1		0		R3-x	No Loitering
706+50		1					No Thru Traffic
706+73		1				W4-2R	Merge Right
706+79		1				R1-1 / x4-13	Stop / delineator
706+94		1				M3-3A / M1-6	SOUTH / 7
707+42		1				R8-3a	No Parking
707+42		1					Hospital
707+49		1				M1-6 / M6-4A	14 / Two-Way
708+50	1		1		1	D3-2	N 7th Ave/E Main St
708+67		1				M1-6 / M6-4A	14 / Two-Way
708+67		1				M3-1A / M1-6	NORTH / 7
709+10		1			1		MTC Bus Stop
709+76		1				R1-1 / x4-13	Stop / delineator
710+12		1				W9-1 / W20-100p	Right Lane Ends / 550 FEET
710+54		1				R2-1	35 MPH
711+10	1		1		1	D3-2	N 7th Ave/Jackson St
711+31		1				R1-1	Stop
711+31		1				R1-1	Stop
711+92		1			1		No Trucks over 7000 lbs
712+00		1				M2-1A / M1-6A	JCT / 14
712+05		1			1	R8-3a	No Parking
712+28		1					MTC Bus Stop
712+28		1				W11-2	Ped Crossing
713+35		1				R8-3a	No Parking
714+08		1				W3-3	Signal Ahead
714+46		1				R8-3a	No Parking
714+53		1				W11-2A / W16-7mpl	Ped Crossing / Dir arrow
714+53		1				W11-2A / W16-7mpl	Ped Crossing / Dir arrow
714+66		1				R1-1 / x4-13	Stop / delineator
715+05		1				R1-1 / x4-13	Stop / delineator
715+10	1		1		1	D3-2	N 7th Ave/School St
715+26		1			1		MTC Bus Stop
716+90		1				W11-2	Ped Crossing
TOTAL		43		3	4	3	

CONSTRUCTION NOTES:  
 1. FOR RELOCATING TRAFFIC SIGNS DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER, RELOCATION INCIDENTAL TO TRAFFIC CONTROL.

1	1/09/2012	MTH	RB		LANE WIDTHS BEING REDUCED TO 11 FEET
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-607-019\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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12 REG. NO. 24756

DRAWN BY: MTH DATE 09/30/11  
 DESIGN BY: MTH DATE 08/17/11  
 CHECKED BY: RB DATE 08/16/11

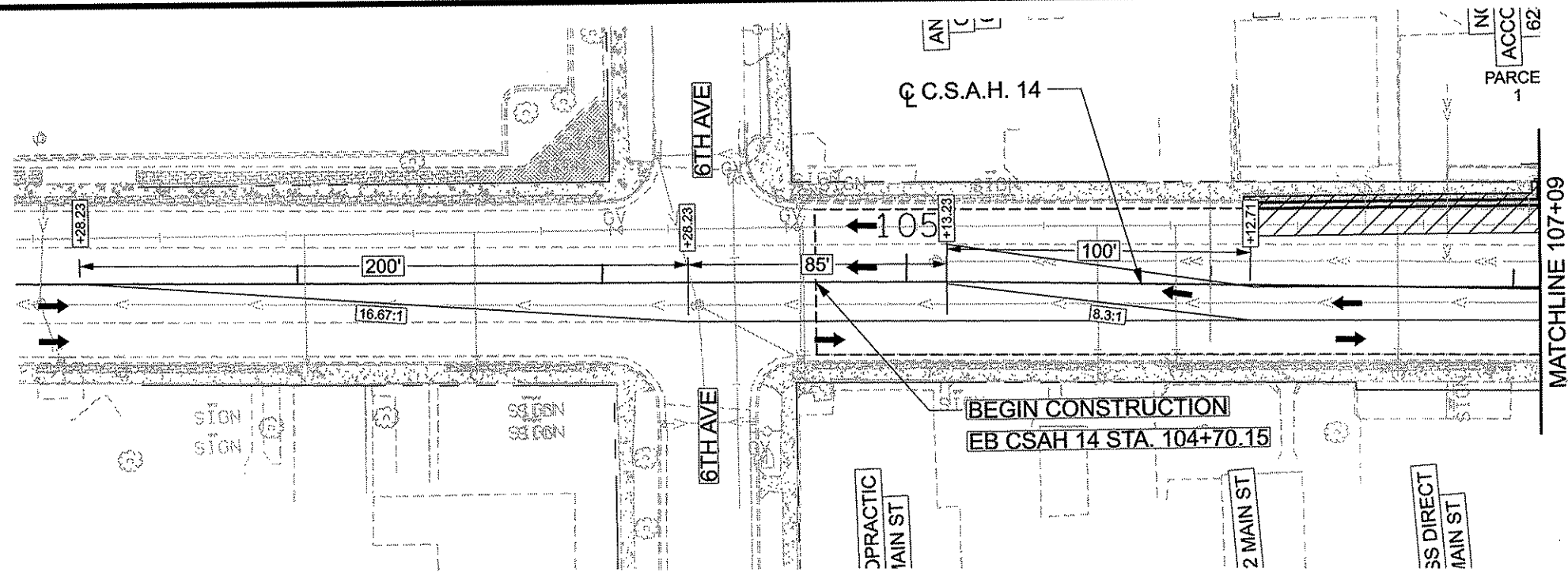


ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

EXISTING SIGNING AND STRIPING PLAN  
 Sheet 19 of 85 Sheets





**LEGEND**

- WORK AREA
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES

**STAGE 1 TRAFFIC NOTES:**

SHIFT TRAFFIC DOWN TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. SHIFT TRAFFIC TO SOUTH SIDE OF CSAH 14 AND TO WEST SIDE OF CSAH 7.

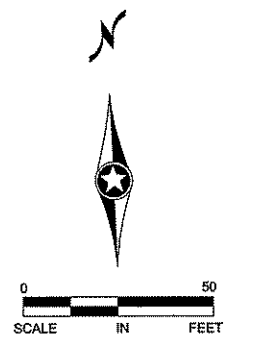
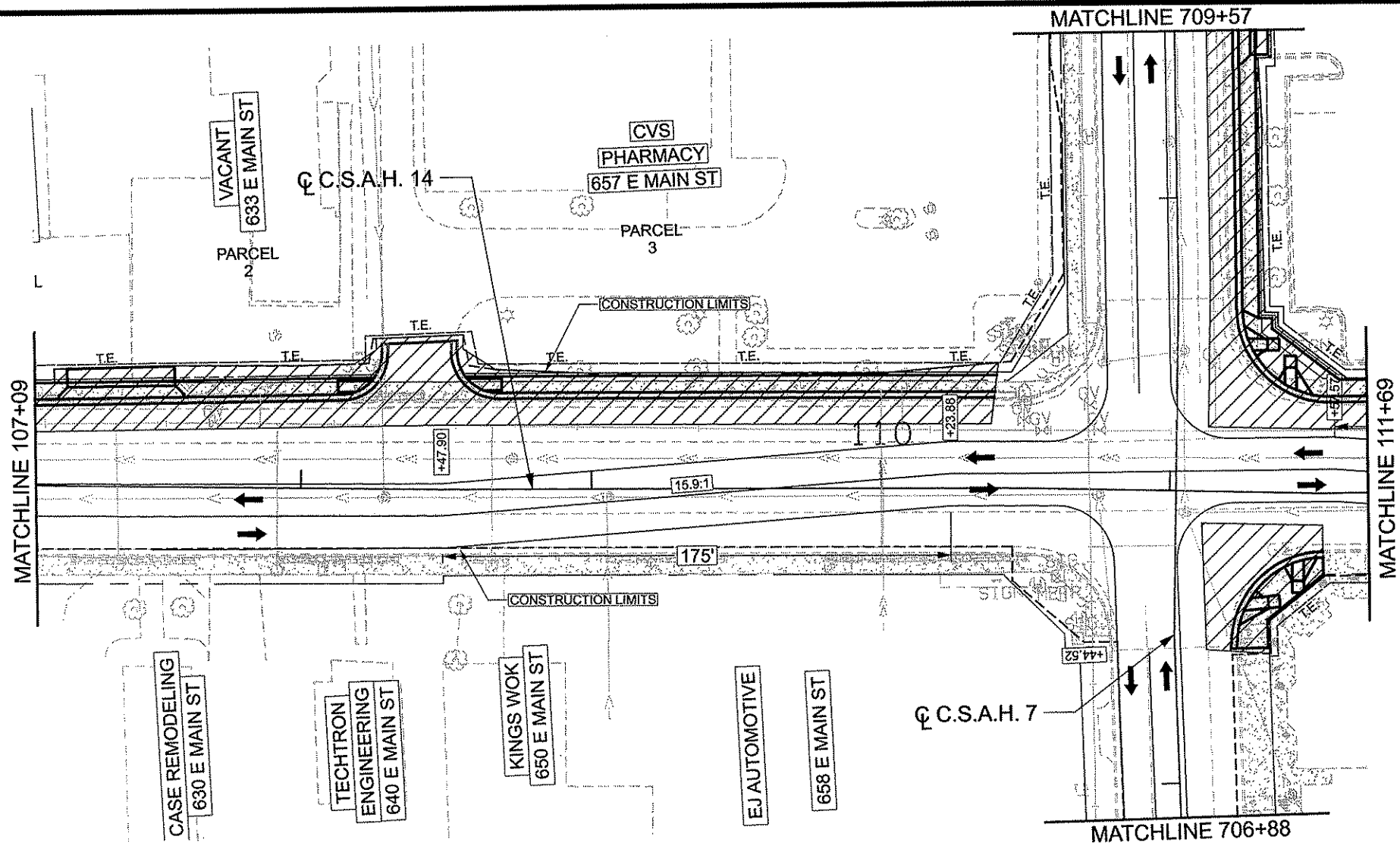
CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

FOUR WAY STOP CONDITION AT INTERSECTION

**STAGE 1 CONSTRUCTION NOTES:**

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHEAST AND SOUTHEAST CORNERS OF INTERSECTION OF CSAH 7 & 14

REMOVE SIGNAL AT CSAH 7/CSAH 14



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_STG1\_P1.dgn      05/16/2012      3:53:42 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 A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12      LICENSE NO. 24756

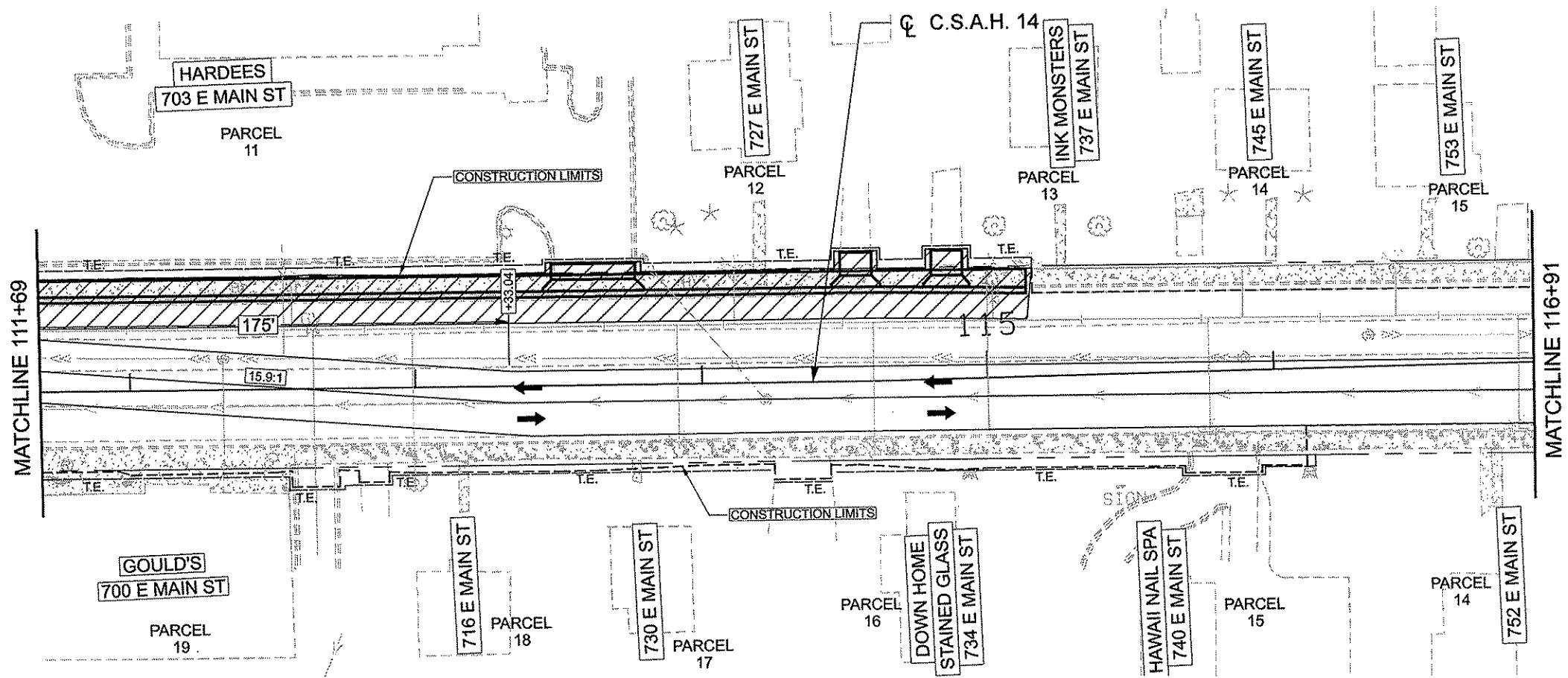
DRAWN BY: DFF      DATE: 04-05-12  
 DESIGN BY: BAV      DATE: 04-05-12  
 CHECKED BY: JEO      DATE: 04-17-12

**ANOKA COUNTY HIGHWAY DEPT.**

S.P. 002-607-019

**STAGING PLAN STAGE 1**

Sheet 20 OF 85 Sheets



STAGE 1 TRAFFIC NOTES:  
 SHIFT TRAFFIC DOWN TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. SHIFT TRAFFIC TO SOUTH SIDE OF CSAH 14 AND TO WEST SIDE OF CSAH 7.

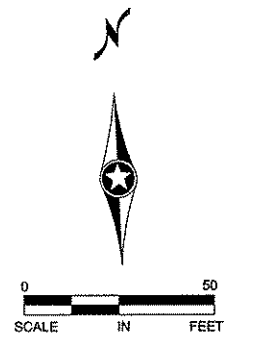
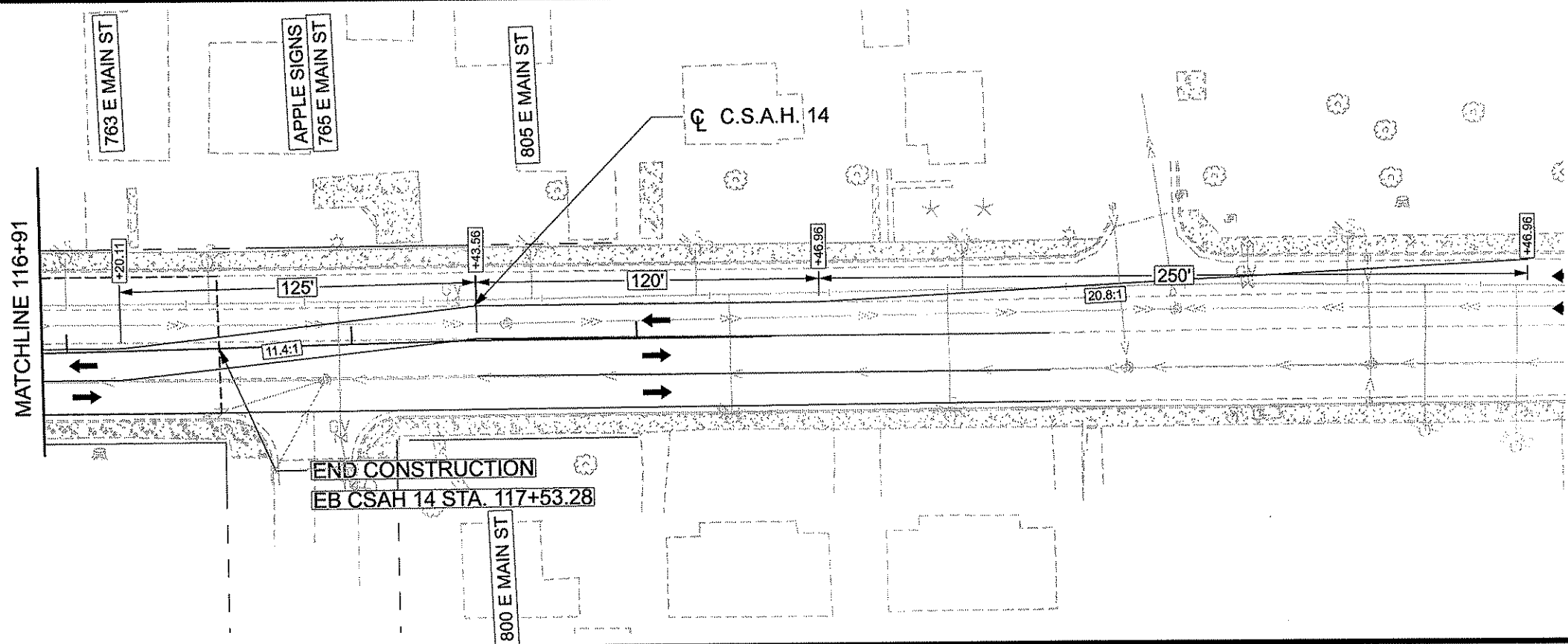
CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

FOUR WAY STOP CONDITION AT INTERSECTION

STAGE 1 CONSTRUCTION NOTES:  
 CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHEAST AND SOUTHEAST CORNERS OF INTERSECTION OF CSAH 7 & 14  
 REMOVE SIGNAL AT CSAH 7/CSAH 14

**LEGEND**

- WORK AREA
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES



NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-607-19\plan\0260719_STG1_P2.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 A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12 LICENSE NO. 24756









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 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

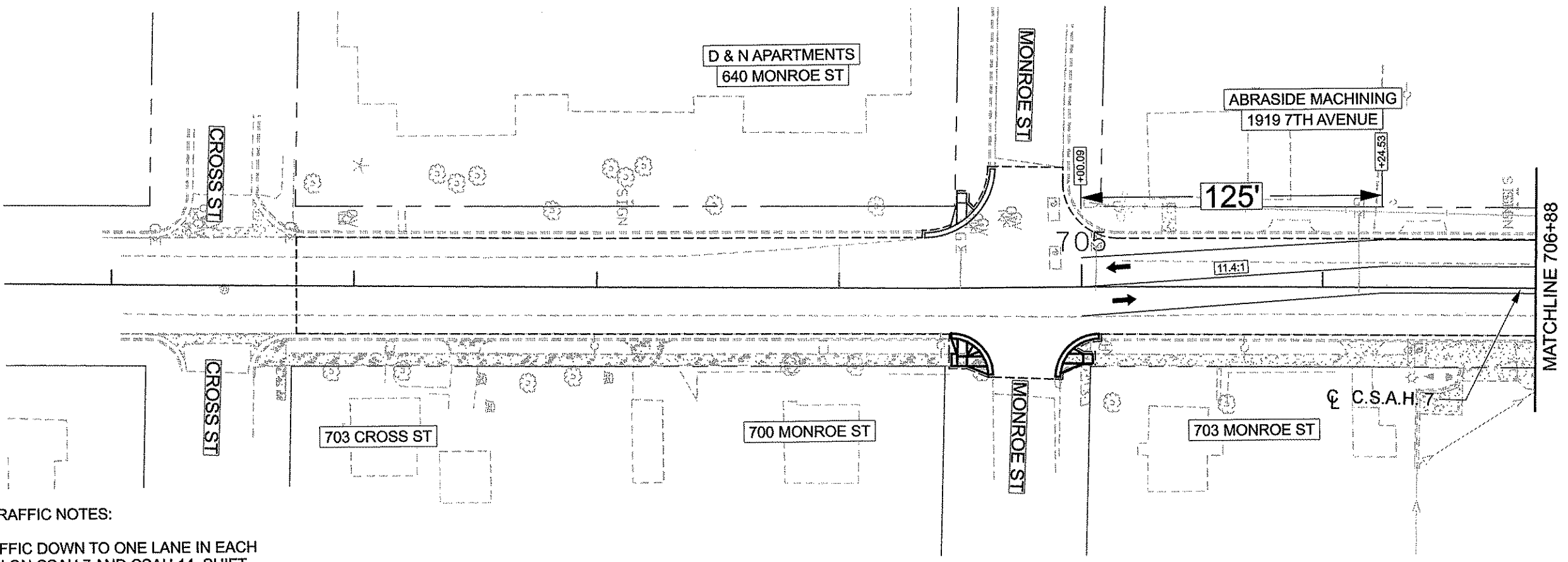
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

S.P. 002-607-019

STAGING PLAN  
 STAGE 1  
 Sheet 21 OF 85 Sheets

**LEGEND**

-  WORK AREA
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES



**STAGE 1 TRAFFIC NOTES:**

SHIFT TRAFFIC DOWN TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. SHIFT TRAFFIC TO SOUTH SIDE OF CSAH 14 AND TO WEST SIDE OF CSAH 7.

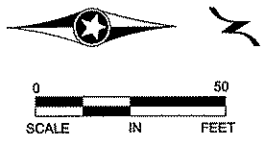
CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

FOUR WAY STOP CONDITION AT INTERSECTION

**STAGE 1 CONSTRUCTION NOTES:**

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHEAST AND SOUTHEAST CORNERS OF INTERSECTION OF CSAH 7 & 14

REMOVE SIGNAL AT CSAH 7/CSAH 14




NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plant\0260719\_STG1\_P3.dgn 05/16/2012 3:53:54 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 A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12



**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-607-019

STAGE 1 TRAFFIC NOTES:

SHIFT TRAFFIC DOWN TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. SHIFT TRAFFIC TO SOUTH SIDE OF CSAH 14 AND TO WEST SIDE OF CSAH 7.

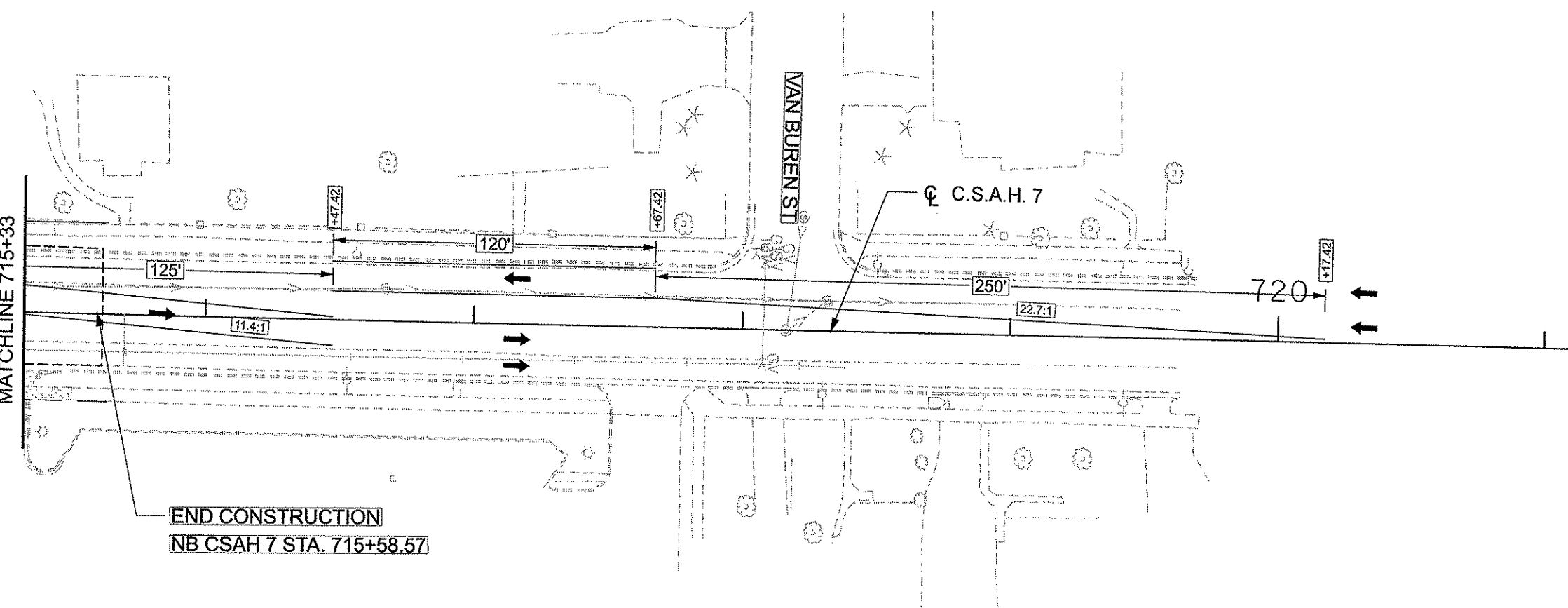
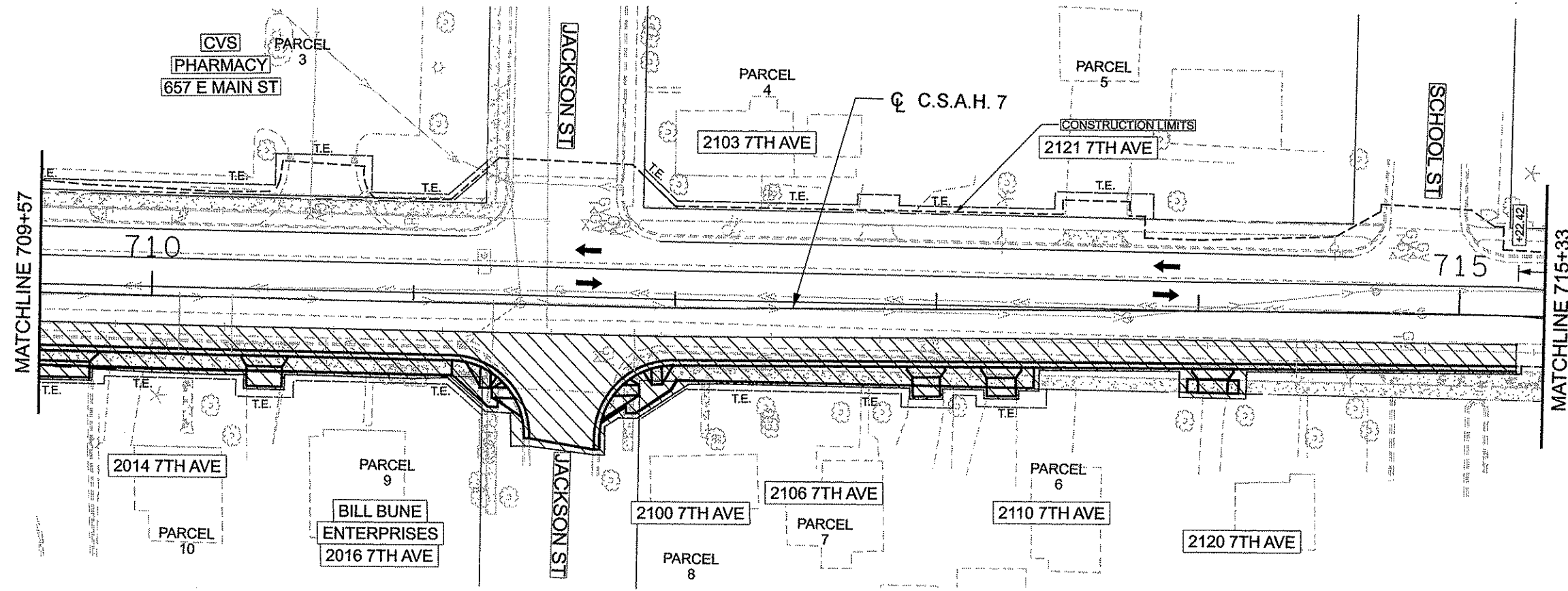
CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

FOUR WAY STOP CONDITION AT INTERSECTION

STAGE 1 CONSTRUCTION NOTES:

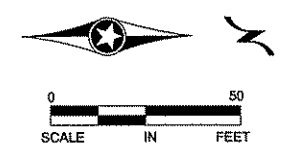
CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHEAST AND SOUTHEAST CORNERS OF INTERSECTION OF CSAH 7 & 14

REMOVE SIGNAL AT CSAH 7/CSAH 14



**LEGEND**

- WORK AREA
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES



NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-607-19\plam\0260719\_STG1\_P4.dgn 05/16/2012 3:53:59 PM

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

PRINT NAME: CURT A KOBIARCSIK  
 SIGNATURE: *Curt A Kobiarcsik*  
 DATE: 5-18-12 LICENSE NO. 24756

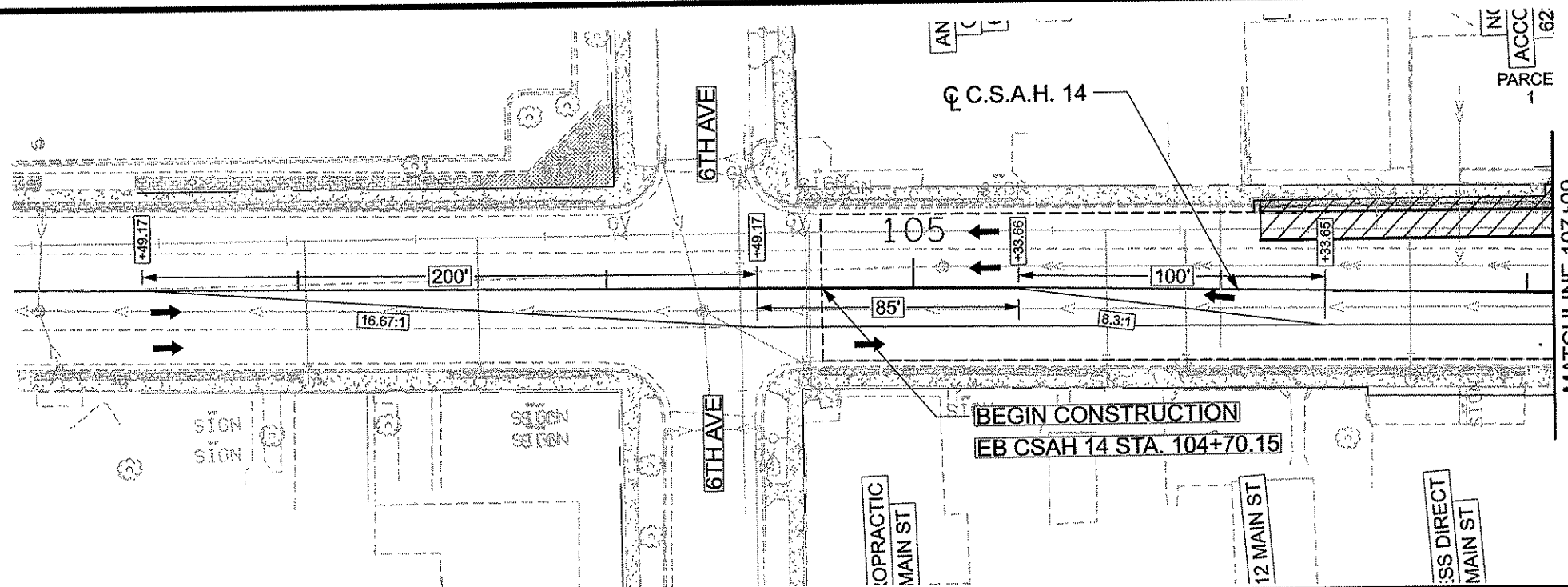
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 CHECKED BY: JEO DATE: 04-17-12

**ANOKA COUNTY  
 HIGHWAY DEPT.**

S.P. 002-607-019

STAGING PLAN  
 STAGE 1

Sheet 23 OF 85 Sheets



LEGEND	
	WORK AREA
	EXISTING TOPOGRAPHY
	CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
	COMPLETED CONSTRUCTION
	TRAFFIC SHIFT LANES
	TRAFFIC FLOW DIRECTION
	DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
	INPLACE DRAINAGE PIPES

**STAGE 2 TRAFFIC NOTES:**

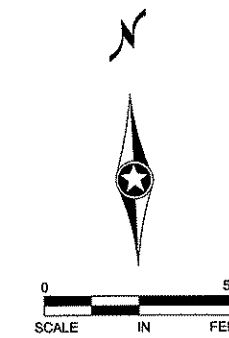
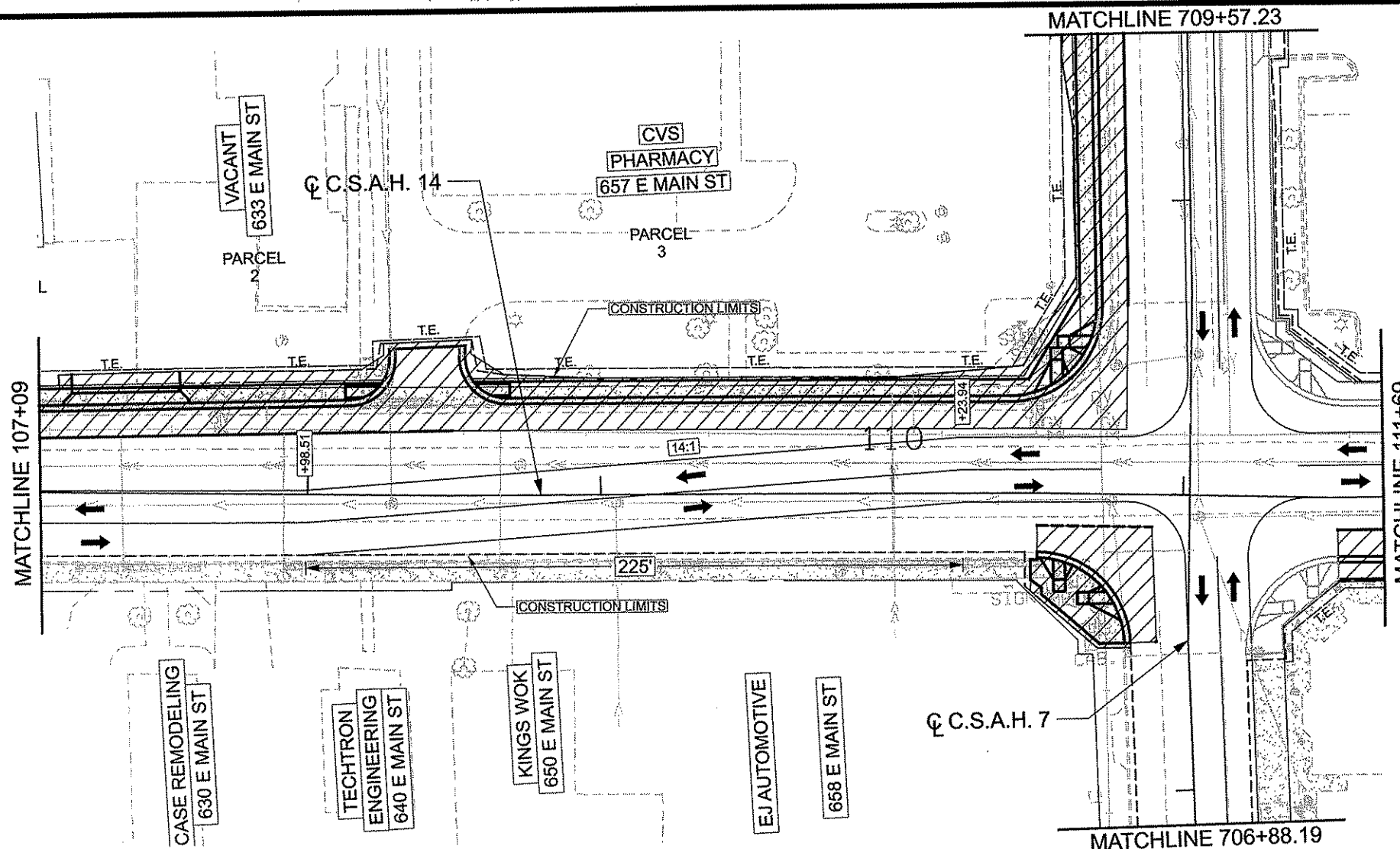
KEEP TRAFFIC TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. KEEP TRAFFIC TO SOUTH SIDE OF CSAH 14 WEST OF CSAH 7 AND SHIFT TRAFFIC TO EAST SIDE OF CSAH 7.

CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

FOUR WAY STOP CONDITION AT INTERSECTION.

**STAGE 2 CONSTRUCTION NOTES:**

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH, WEST OF CSAH 7. CONSTRUCT CSAH 14 FROM THE SAWCUT LINE SOUTH, EAST OF CSAH 7  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHWEST AND SOUTHWEST CORNER OF INTERSECTION OF CSAH 7 & 14.



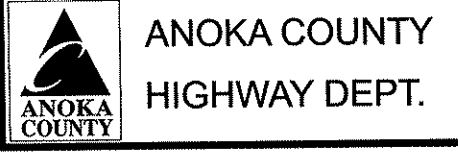
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NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_STG2\_P1.dgn      05/18/2012      3:54:05 PM

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 PRINT NAME: CURT A. KOBIARCSIK  
 SIGNATURE: *Curt Kobiarcsik*  
 DATE: 5-18-12      LICENSE NO. 24756

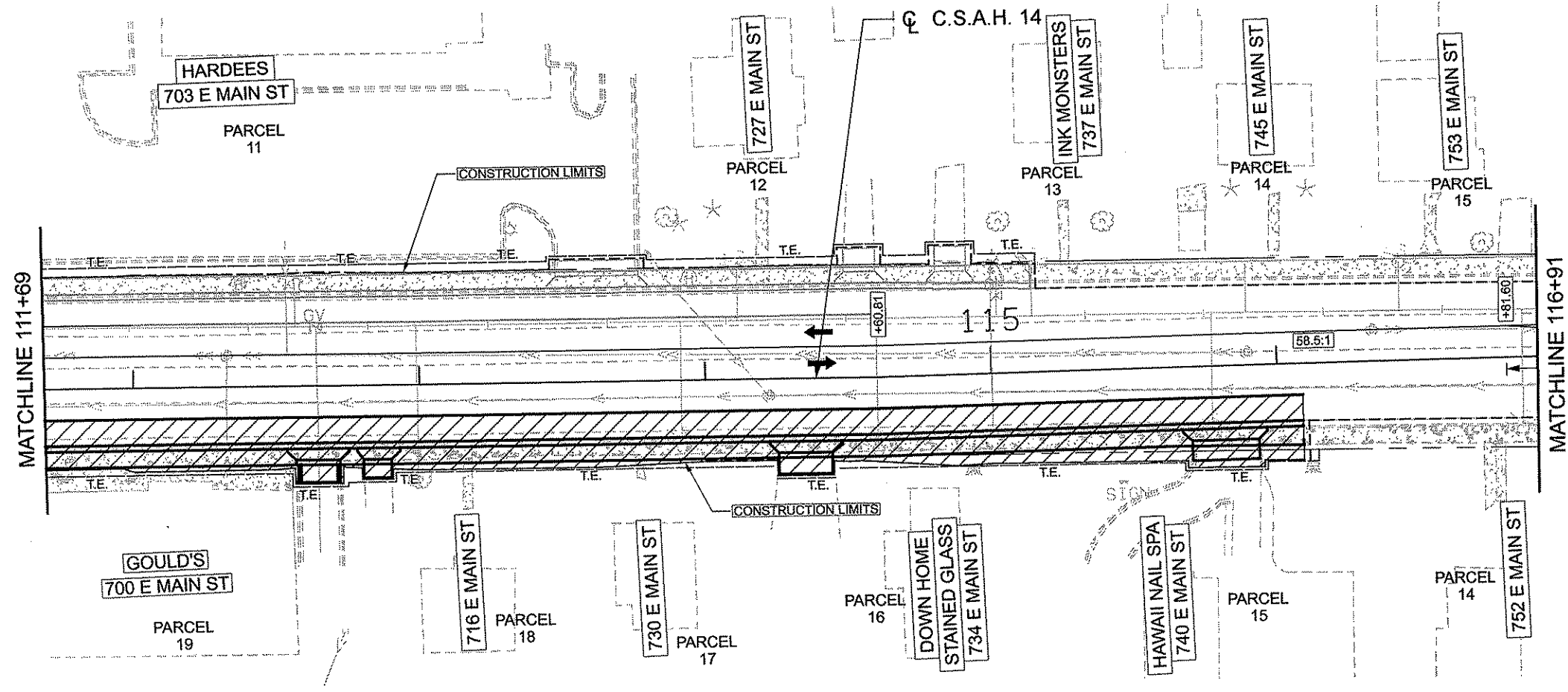
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 DESIGN BY: BAV      DATE: 04-05-12  
 CHECKED BY: JEO      DATE: 04-17-12



S.P. 002-607-019

STAGING PLAN  
 STAGE 2  
 Sheet 24 OF 85 Sheets





STAGE 2 TRAFFIC NOTES:

KEEP TRAFFIC TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. KEEP TRAFFIC TO SOUTH SIDE OF CSAH 14 WEST OF CSAH 7 AND SHIFT TRAFFIC TO EAST SIDE OF CSAH 7.

CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

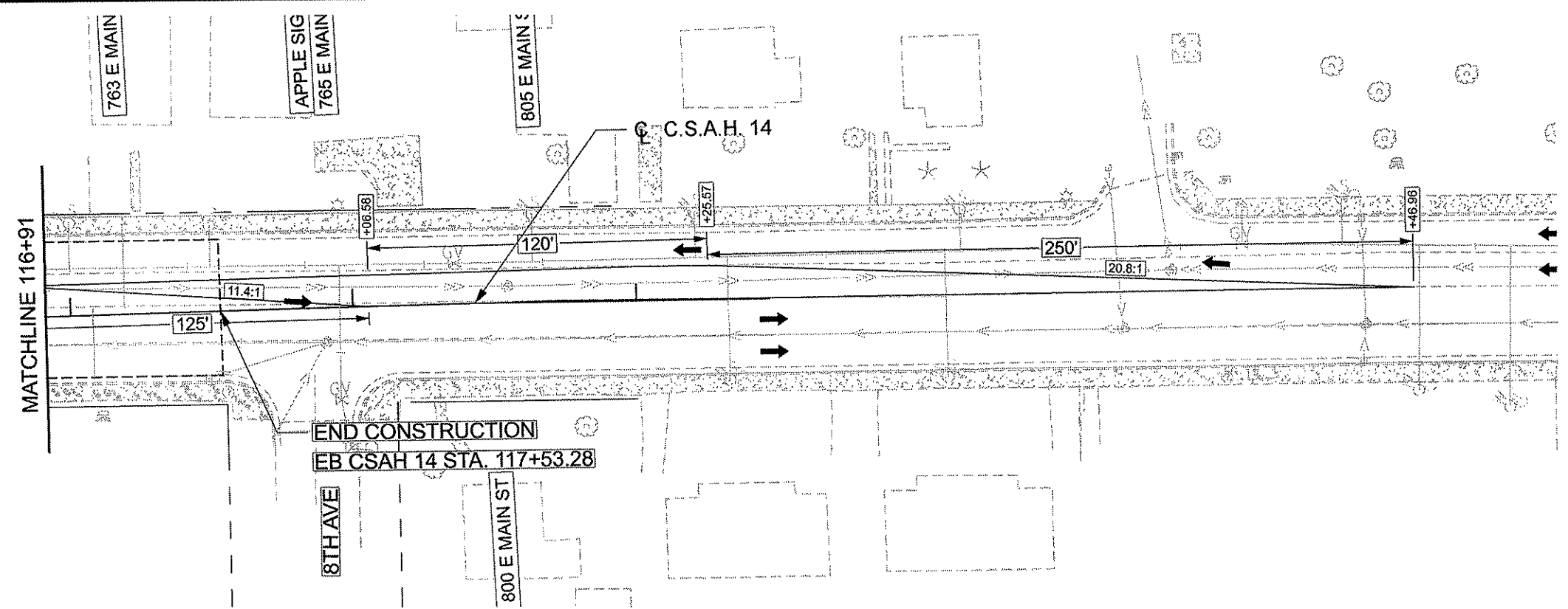
FOUR WAY STOP CONDITION AT INTERSECTION.

STAGE 2 CONSTRUCTION NOTES:

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH, WEST OF CSAH 7. CONSTRUCT CSAH 14 FROM THE SAWCUT LINE SOUTH, EAST OF CSAH 7  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHWEST AND SOUTHWEST CORNER OF INTERSECTION OF CSAH 7 & 14.

**LEGEND**

- WORK AREA
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_STG2\_P2.dgn 05/16/2012 3:54:11 PM

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PRINT NAME: CURT A. KOBILARCSIK  
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DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12









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

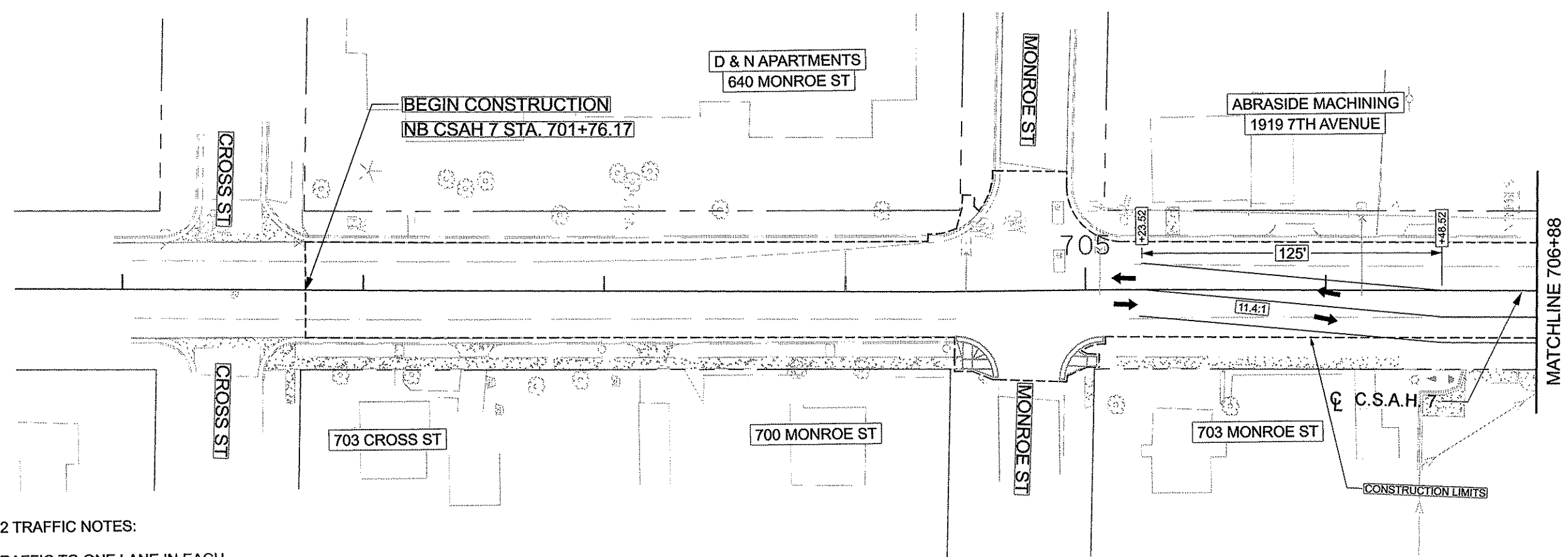
S.P. 002-607-019

STAGING PLAN  
 STAGE 2

Sheet 25 OF 85 Sheets

**LEGEND**

-  WORK AREA
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED CURRENT STAGE
-  INPLACE DRAINAGE PIPES



**STAGE 2 TRAFFIC NOTES:**

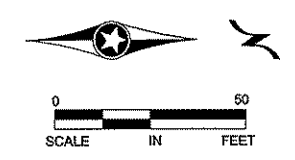
KEEP TRAFFIC TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. KEEP TRAFFIC TO SOUTH SIDE OF CSAH 14 WEST OF CSAH 7 AND SHIFT TRAFFIC TO EAST SIDE OF CSAH 7.

CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

FOUR WAY STOP CONDITION AT INTERSECTION.

**STAGE 2 CONSTRUCTION NOTES:**

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH, WEST OF CSAH 7. CONSTRUCT CSAH 14 FROM THE SAWCUT LINE SOUTH, EAST OF CSAH 7  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHWEST AND SOUTHWEST CORNER OF INTERSECTION OF CSAH 7 & 14.



NO	DATE	BY	CKD	APPR	REVISION

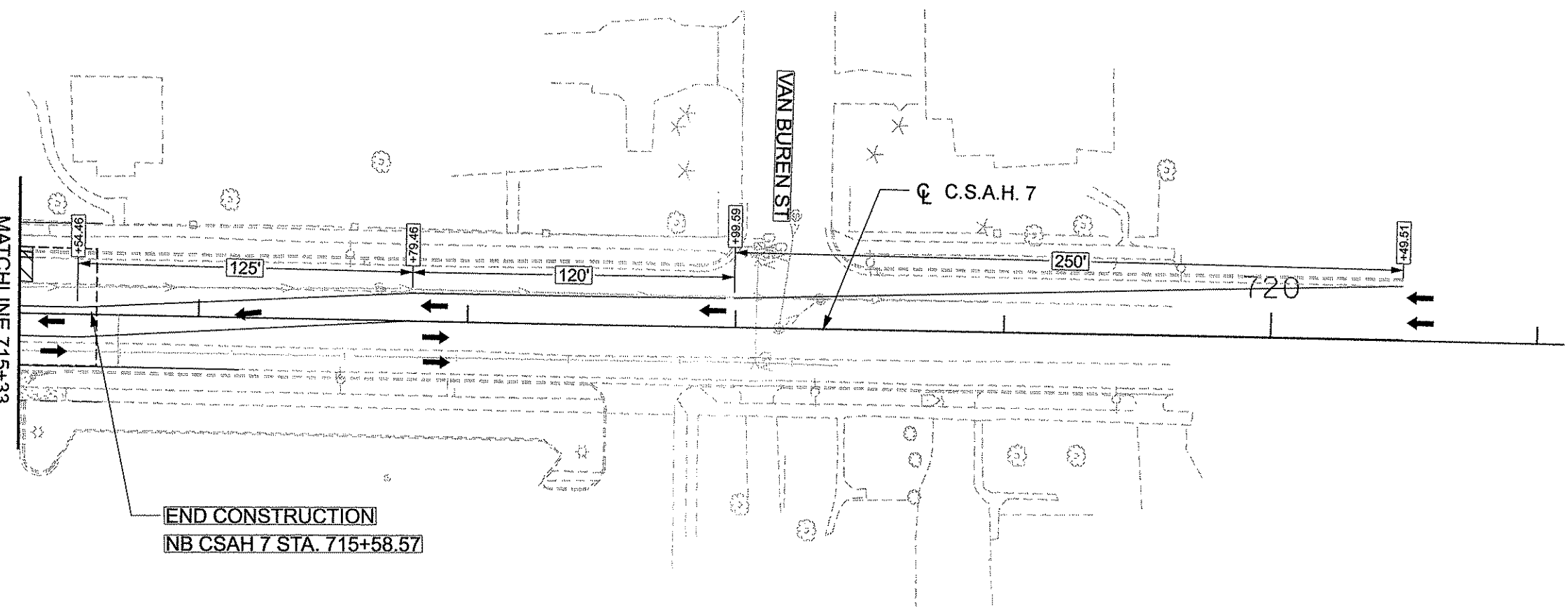
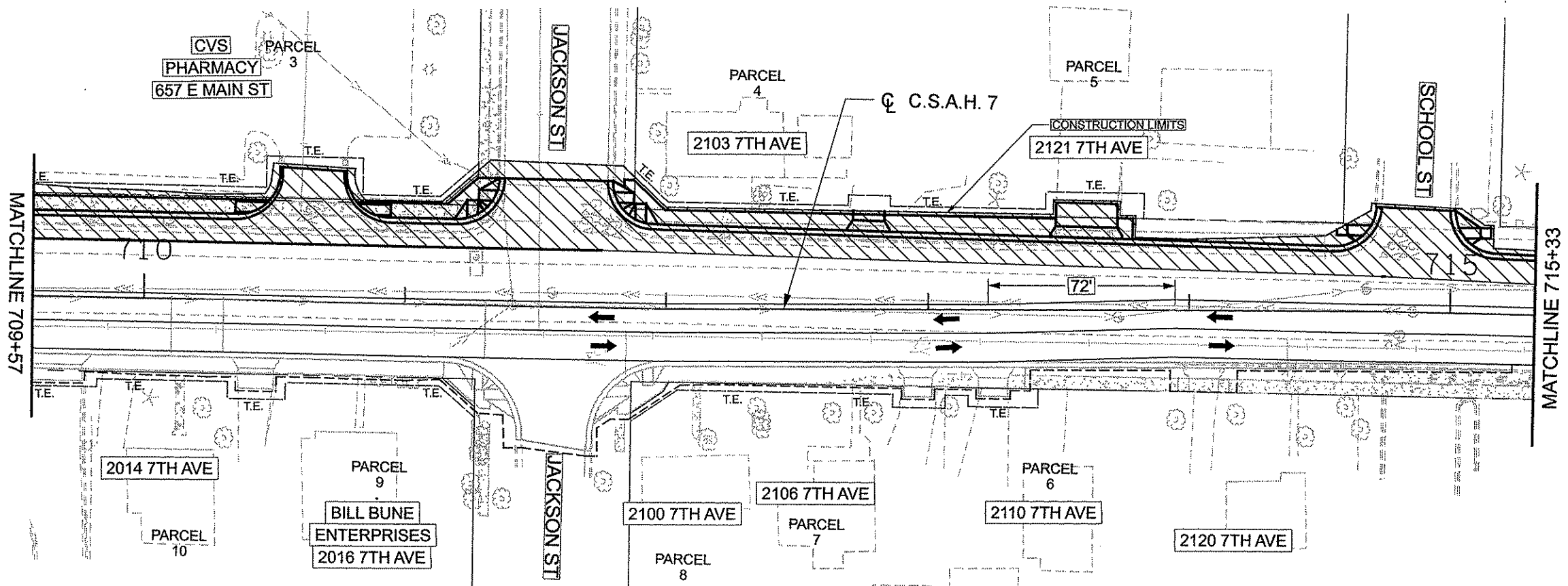
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 04-05-12  
 DESIGN BY: BAV      DATE: 04-05-12  
 CHECKED BY: JEO      DATE: 04-17-12

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

S.P. 002-607-019



STAGE 2 TRAFFIC NOTES:  
 KEEP TRAFFIC TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. KEEP TRAFFIC TO SOUTH SIDE OF CSAH 14 WEST OF CSAH 7 AND SHIFT TRAFFIC TO EAST SIDE OF CSAH 7.

CONTRACTOR TO MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES ON CSAH 7 AND CSAH 14 AT ALL TIMES.

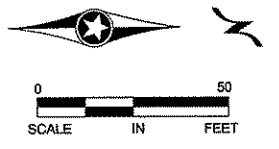
FOUR WAY STOP CONDITION AT INTERSECTION.

STAGE 2 CONSTRUCTION NOTES:

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH, WEST OF CSAH 7. CONSTRUCT CSAH 14 FROM THE SAWCUT LINE SOUTH, EAST OF CSAH 7  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHWEST AND SOUTHWEST CORNER OF INTERSECTION OF CSAH 7 & 14.

**LEGEND**

- WORK AREA
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_STG2\_P4.dgn

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 PRINT NAME: CURT A. KOBIARCSIK  
 SIGNATURE: *Curt A. Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 24758

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

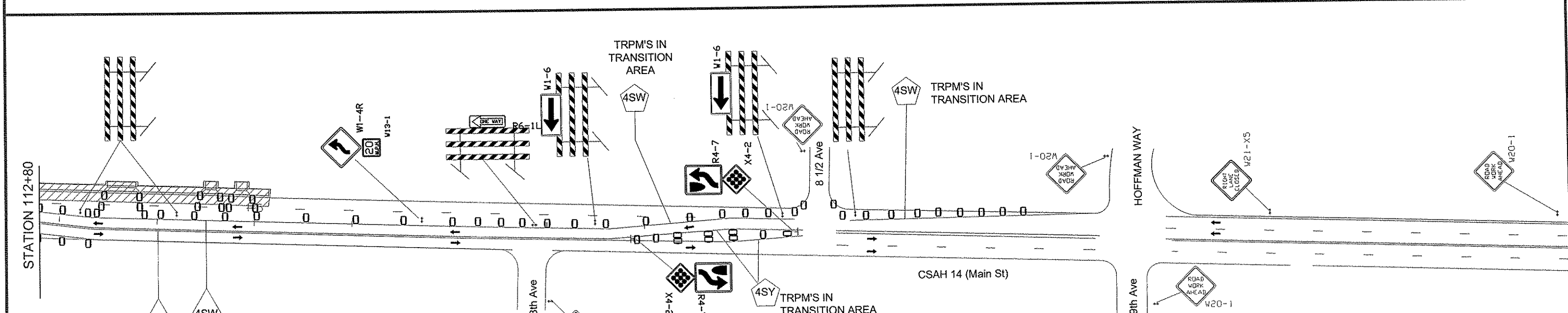
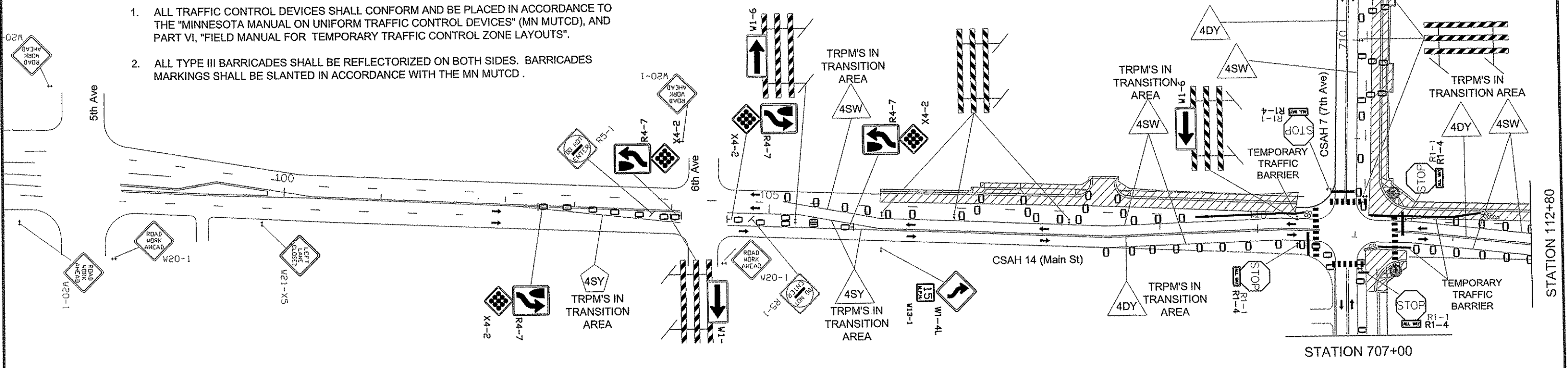
**ANOKA COUNTY  
 HIGHWAY DEPT.**

S.P. 002-607-019

STAGING PLAN  
 STAGE 2  
 Sheet 27 OF 85 Sheets

**NOTES:**

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
2. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.



**STAGE 2 CONSTRUCTION NOTES:**

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHEAST AND SOUTHEAST CORNERS OF INTERSECTION OF CSAH 7 & CSAH 14

**STAGE 2 TRAFFIC NOTES:**

MERGE TRAFFIC INTO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14.  
 SHIFT TRAFFIC TO SOUTH SIDE OF CSAH 14 AND TO WEST SIDE OF CSAH 7.

**CSAH 14 PAINT REMOVAL:**

- REMOVE 4" DOUBLE YELLOW PAINT STA 105+25 TO 110+50 AND 111+50 TO 118+40
- REMOVE 4" DOUBLE YELLOW PAINT STA 708+40 TO 716+60
- REMOVE EASTBOUND 4" BROKEN WHITE PAINT STA 102+30 TO 110+50 AND EB 111+50 TO 119+50
- REMOVE WESTBOUND 4" BROKEN WHITE PAINT STA 119+80 TO 122+30
- REMOVE NORTHBOUND 4" BROKEN YELLOW AND SOLID YELLOW STA 705+00 TO 708+00
- REMOVE SOUTHBOUND 4" BROKEN WHITE STA 705+00 TO 720+00

NO	DATE	BY	CHKD	APPR	REVISION

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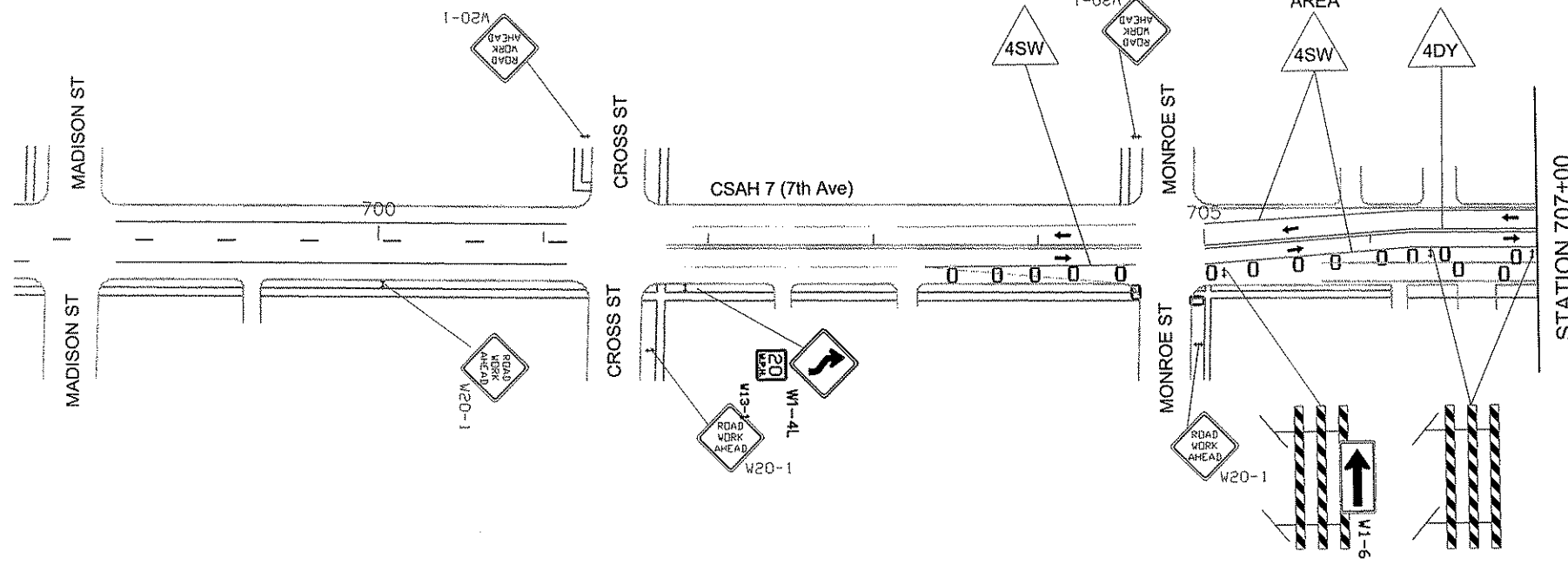
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 DESIGN BY: MTH DATE 4/18/12  
 CHECKED BY: JIR DATE 4/13/12



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

S.P. 002-607-019

STAGE 1  
 TRAFFIC CONTROL  
 LAYOUT  
 Sheet 28 of 85 Sheets



**STAGE 2 CONSTRUCTION NOTES:**

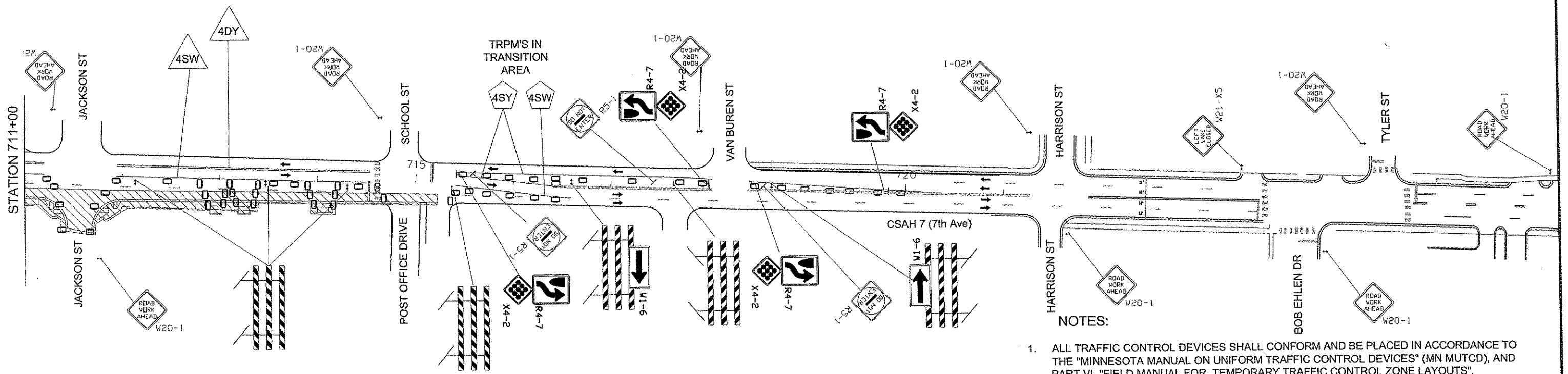
CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHEAST AND SOUTHEAST CORNERS OF  
 INTERSECTION OF CSAH 7 & CSAH 14

**STAGE 2 TRAFFIC NOTES:**

MERGE TRAFFIC INTO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14.  
 SHIFT TRAFFIC TO SOUTH SIDE OF CSAH 14 AND TO WEST SIDE OF CSAH 7.

**CSAH 14 PAINT REMOVAL:**

- REMOVE 4" DOUBLE YELLOW PAINT STA 105+25 TO 110+50 AND 111+50 TO 118+40
- REMOVE 4" DOUBLE YELLOW PAINT STA 708+40 TO 716+60
- REMOVE EASTBOUND 4" BROKEN WHITE PAINT STA 102+30 TO 110+50 AND EB 111+50 TO 119+50
- REMOVE WESTBOUND 4" BROKEN WHITE PAINT STA 119+80 TO 122+30
- REMOVE NORTHBOUND 4" BROKEN YELLOW AND SOLID YELLOW STA 705+00 TO 708+00
- REMOVE SOUTHBOUND 4" BROKEN WHITE STA 705+00 TO 720+00



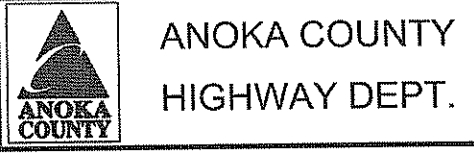
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S.P. 002-607-019

STAGE 1  
 TRAFFIC CONTROL  
 LAYOUT  
 Sheet 29 of 85 Sheets



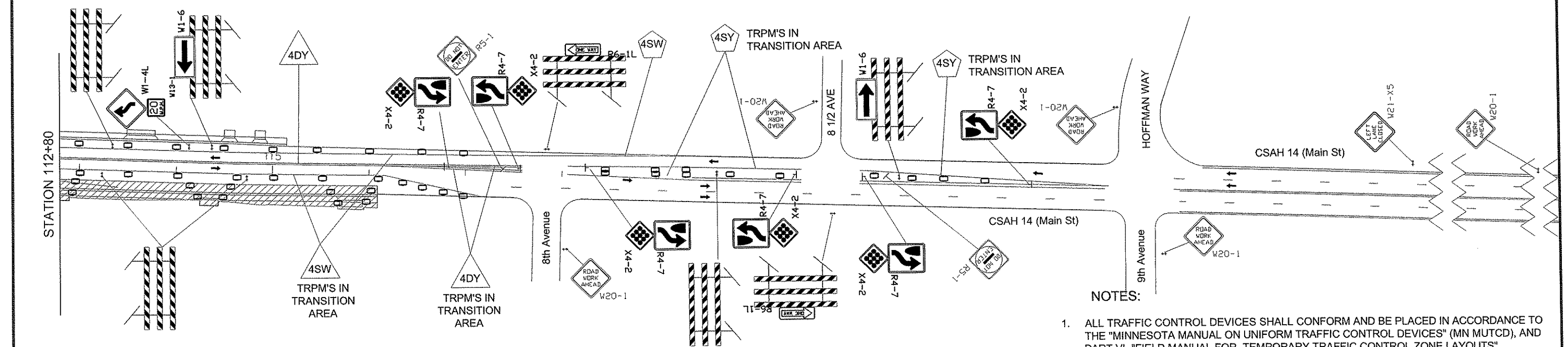
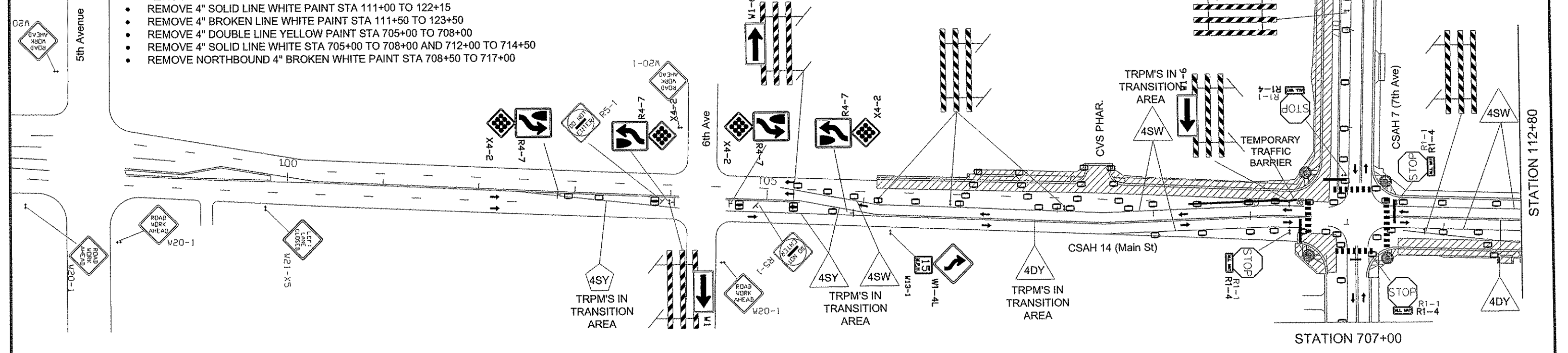
**STAGE 2 TRAFFIC NOTES:**

KEEP TRAFFIC TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. KEEP TRAFFIC TO SOUTH SIDE OF CSAH 14 AND SHIFT TRAFFIC TO EAST SIDE OF CSAH 7.

- REMOVE 4" DOUBLE LINE YELLOW PAINT STA 111+40 TO 119+50
- REMOVE 4" SOLID LINE WHITE PAINT STA 111+00 TO 122+15
- REMOVE 4" BROKEN LINE WHITE PAINT STA 111+50 TO 123+50
- REMOVE 4" DOUBLE LINE YELLOW PAINT STA 705+00 TO 708+00
- REMOVE 4" SOLID LINE WHITE STA 705+00 TO 708+00 AND 712+00 TO 714+50
- REMOVE NORTHBOUND 4" BROKEN WHITE PAINT STA 708+50 TO 717+00

**STAGE 2 CONSTRUCTION NOTES:**

CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHWEST AND SOUTHWEST CORNER OF INTERSECTION OF CSAH 7 & CSAH 14.



- NOTES:**
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
  2. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.

NO	DATE	BY	CHKD	APPR	REVISION

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

PRINT NAME: CURT A. KOBIARCSIK  
 SIGNATURE: *Curt Kobiarcsik*  
 DATE: 5-18-12 REG. NO. 24756

DRAWN BY: MTH DATE 4/18/12  
 DESIGN BY: MTH DATE 4/18/12  
 CHECKED BY: JR DATE 4/13/12

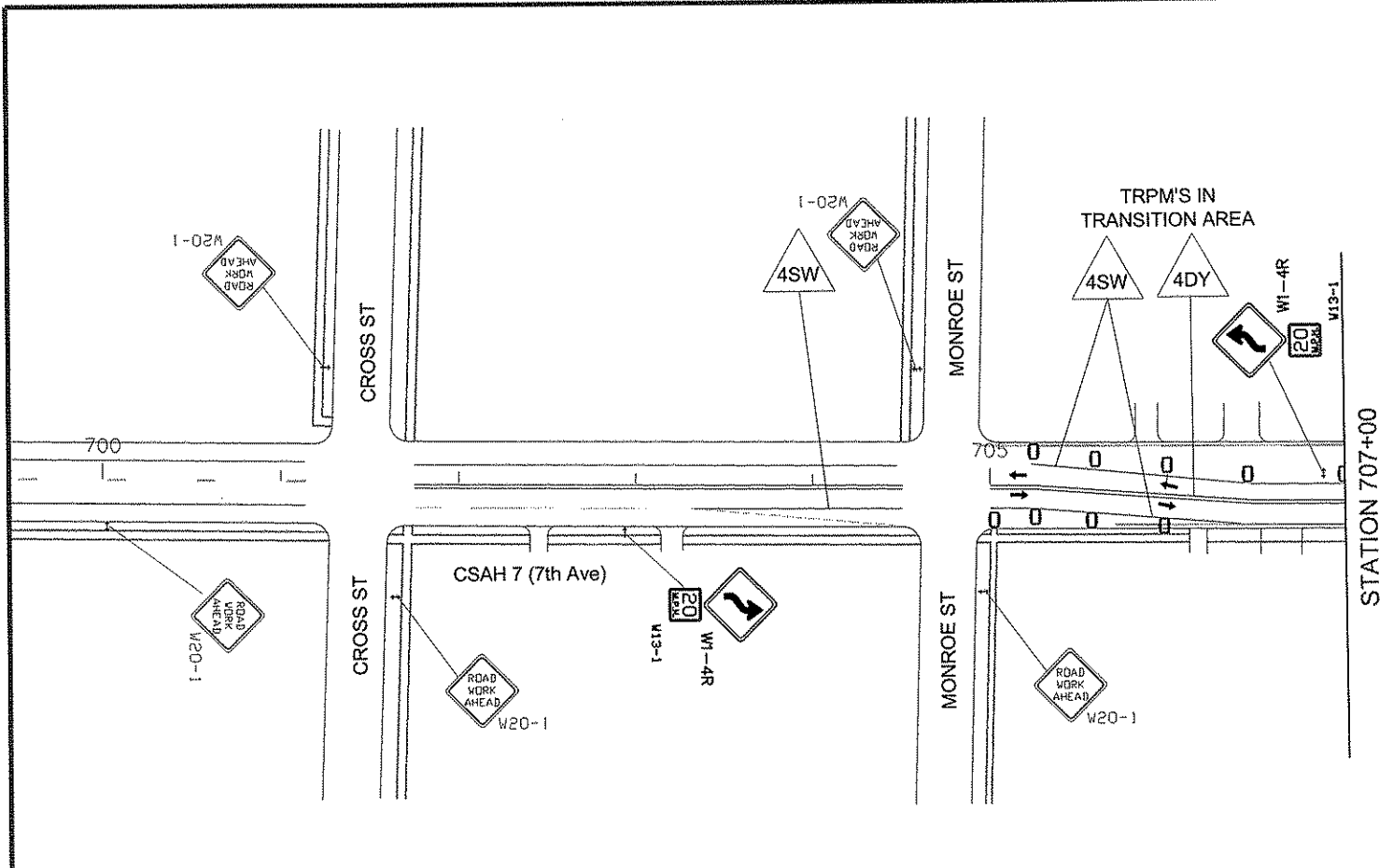


**ANOKA COUNTY  
 HIGHWAY DEPT.**

S.P. 002-607-019

STAGE 2  
 TRAFFIC CONTROL  
 LAYOUT  
 Sheet 30 of 85 Sheets

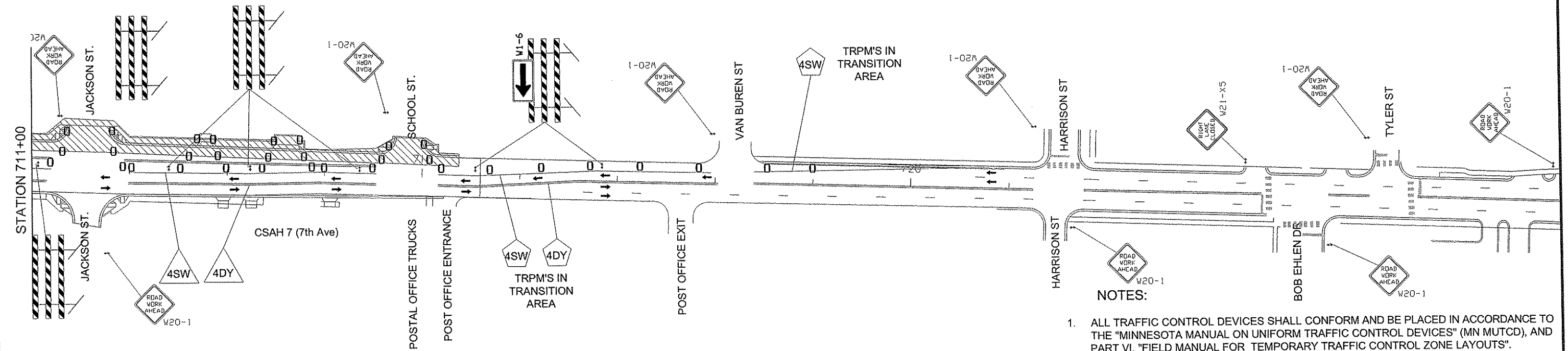




**STAGE 2 CONSTRUCTION NOTES:**  
 CONSTRUCT CSAH 14 FROM THE SAWCUT LINE NORTH.  
 CONSTRUCT CSAH 7 FROM THE EAST SAWCUT LINE EAST.  
 CONSTRUCT NORTHWEST AND SOUTHWEST CORNER OF INTERSECTION OF CSAH 7 & CSAH 14.

**STAGE 2 TRAFFIC NOTES:**  
 KEEP TRAFFIC TO ONE LANE IN EACH DIRECTION ON CSAH 7 AND CSAH 14. KEEP TRAFFIC TO SOUTH SIDE OF CSAH 14 AND SHIFT TRAFFIC TO EAST SIDE OF CSAH 7.

- REMOVE 4" DOUBLE LINE YELLOW PAINT STA 111+40 TO 119+50
- REMOVE 4" SOLID LINE WHITE PAINT STA 111+00 TO 122+15
- REMOVE 4" BROKEN LINE WHITE PAINT STA 111+50 TO 122+15
- REMOVE 4" DOUBLE LINE YELLOW PAINT STA 705+00 TO 708+00
- REMOVE 4" SOLID LINE WHITE PAINT STA 705+00 TO 708+00 AND 712+00 TO 714+50
- REMOVE NORTHBOUND 4" BROKEN WHITE PAINT STA 708+50 TO 717+00



- NOTES:**
1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
  2. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.

NO	DATE	BY	CKD	APPR	REVISION

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 DESIGN BY: MTH DATE 4/18/12  
 CHECKED BY: JR DATE 4/13/12



**ANOKA COUNTY  
 HIGHWAY DEPT.**

S.P. 002-607-019

STAGE 2  
 TRAFFIC CONTROL  
 LAYOUT  
 Sheet 31 of 85 Sheets

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2
R1-1	48" x 48"		4	4
R1-4	18" x 6"		4	4
R4-7	24" x 30"		10	10
X4-2	18" x 18"		10	10
R5-1	30" x 30"		5	4
W20-1	48" x 48"		24	24
W21-X5	48" x 48"		1	1
W21-X5	48" x 48"		2	2
W1-4R	48" x 48"		1	2
W13-1	30" x 30"		0	0
W13-1	30" x 30"		1	2
W1-RL	48" x 48"		2	2
W13-1	30" x 30"		1	1
W13-1	30" x 30"		1	1

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2
W1-6	48" x 24"		4	3
TYPE III	8 FOOT			
W1-6	48" x 24"		4	4
TYPE III	8 FOOT			
TYPE III	8 FOOT		15	11
TYPE III	8 FOOT		1	1
R6-1R	48" x 18"		0	0
TYPE III	8 FOOT			
R6-1L	48" x 18"		1	2
TYPE III	8 FOOT			
REFLECTORIZED REBOUNDABLE DRUM			220	150

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 VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADES MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12 REG. NO. 24756

DRAWN BY: MTH DATE 4/02/12  
 DESIGN BY: MTH DATE 4/02/12  
 CHECKED BY: JR DATE x/xx/12

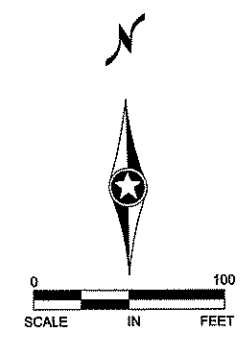
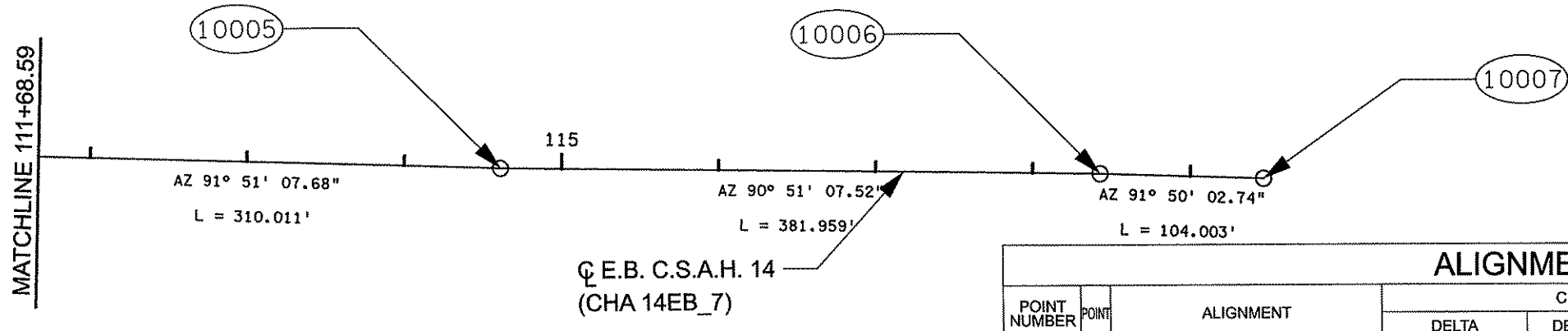
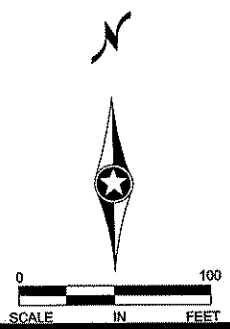
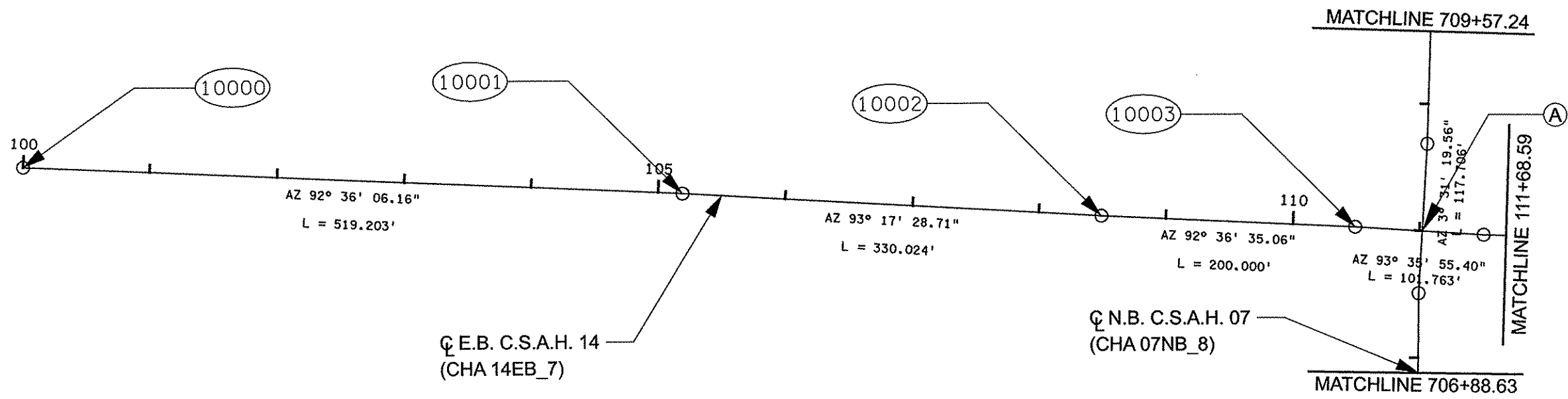


ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

STAGING  
 SIGN QUANTITIES

Sheet 32 of 85 Sheets



ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
Q C.S.A.H. 14 <14EB_7>										
10000	POT	Q C.S.A.H. 07	100+00.000					470,064.1444	159,299.6812	N 92° 36' 06.16" W
10001	POT		105+19.203					470,582.8122	159,276.1131	N 93° 17' 28.71" W
10002	POT		108+49.227					470,912.2918	159,257.1656	N 92° 36' 35.06" W
10003	POT		110+49.227					471,112.0844	159,248.0591	N 93° 35' 55.40" W
10004	POT		111+50.990					471,213.6472	159,241.6715	N 91° 51' 07.68" W
10005	POT		114+61.001					471,523.4958	159,231.6519	N 90° 51' 07.52" W
10006	POT		118+42.960					471,905.4124	159,225.9717	N 91° 50' 02.74" W
10007	POT		119+46.963					472,009.3625	159,222.6431	

(A) NB C.S.A.H. 07 STA. 707+99.86 = EB C.S.A.H. 14 STA 111+02.20

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-607-19\Plan\0260719\_ALI\_P1.dgn 03/18/2012 2:59:26 PM

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

PRINT NAME: CURT A. KOBILARCSIK

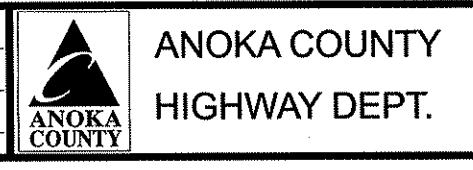
SIGNATURE: *Curt Kobilarsik*

DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12

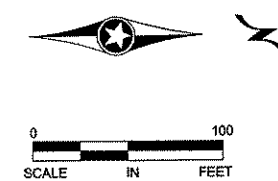
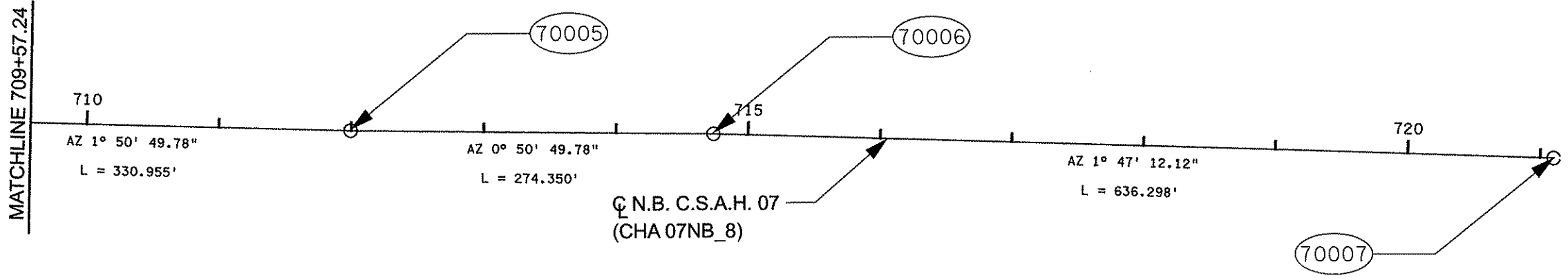
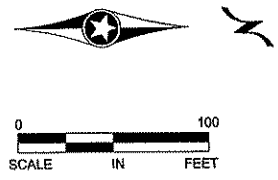
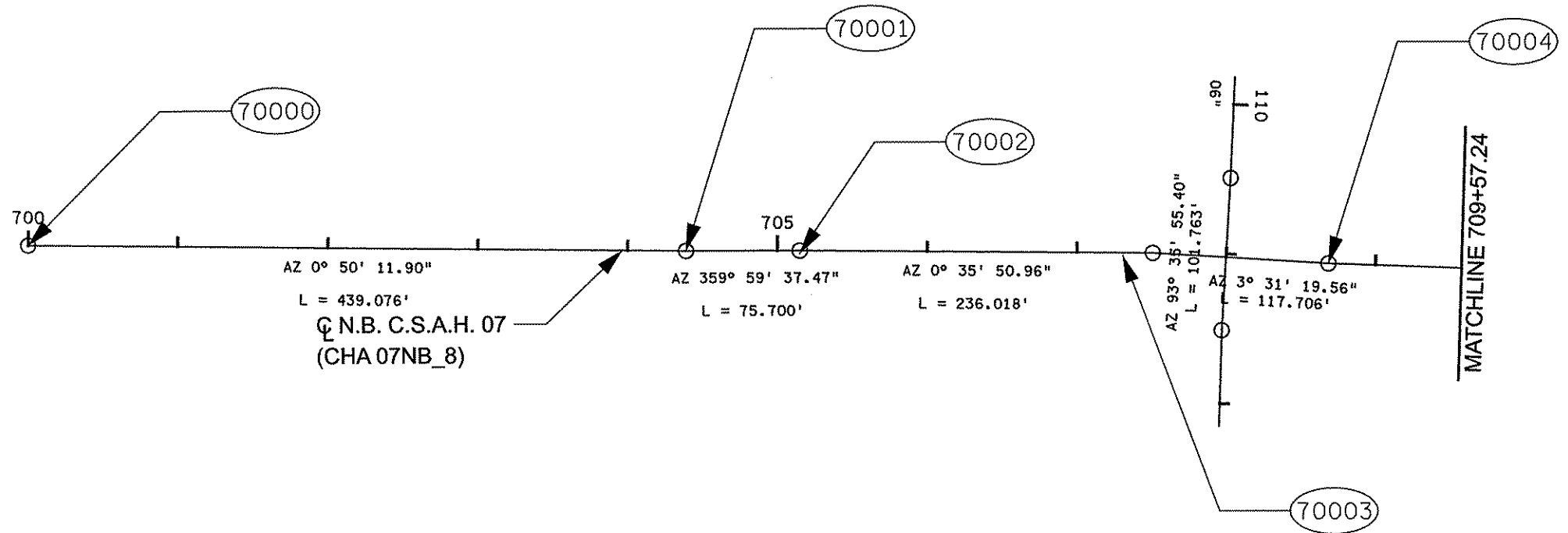
DESIGN BY: BAV DATE: 04-05-12

CHECKED BY: JEO DATE: 04-17-12



S.P. 002-607-019

ALIGNMENT PLAN  
CSAH 14  
Sheet 33 of 85 Sheets



ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
☉ C.S.A.H. 7 <07NB_8>										
70000	POT	☉ C.S.A.H. 07	700+00.000					471,153.0715	158,445.0235	N 0° 50' 11.90" W
70001	POT		704+39.076					471,159.4827	158,884.0527	N 359° 59' 37.47" W
70002	POT		705+14.776					471,159.4744	158,959.7527	N 0° 35' 50.96" W
70003	POT		707+50.794					471,161.9356	159,195.7578	N 3° 31' 19.56" W
70004	POT		708+68.499					471,169.1666	159,313.2411	N 1° 50' 49.78" W
70005	POT		711+99.454					471,179.8345	159,644.0240	N 0° 50' 49.78" W
70006	POT		714+73.805					471,183.8908	159,918.3443	N 1° 47' 12.12" W
70007	POT		721+10.103					471,203.7298	160,554.3329	

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-607-19\Plan\0260719\_ALL\_P1.dgn      05/18/2012      2:58:27 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 A. KOBIJARCSIK  
 SIGNATURE: *Curt A. Kobilarsik*  
 DATE: 5-18-12      LICENSE NO. 24756

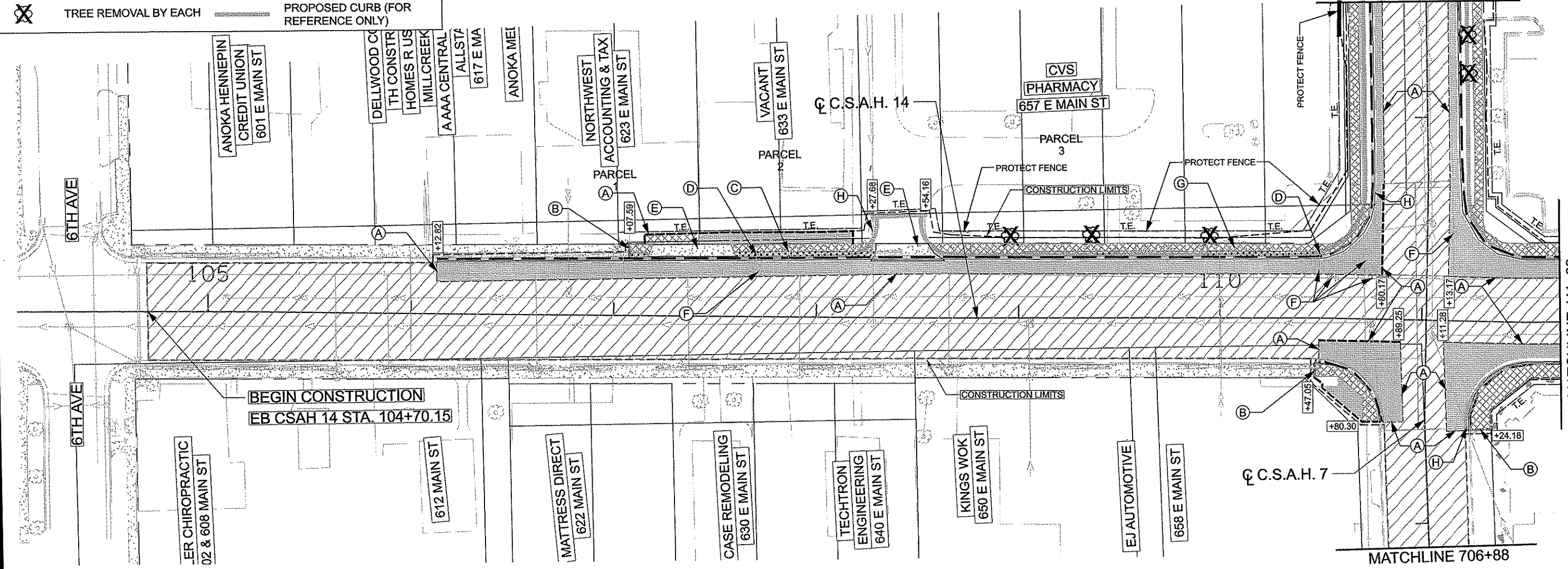
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 DESIGN BY: BAV      DATE: 04-05-12  
 CHECKED BY: JEO      DATE: 04-17-12

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

S.P. 002-607-019

LEGEND

-  REMOVE BITUMINOUS PAVEMENT
-  REMOVE BRICK
-  REMOVE CONCRETE SIDEWALK
-  MILL BITUMINOUS PAVEMENT
-  TREE REMOVAL BY EACH
-  REMOVE CURB AND GUTTER
-  SAWING BITUMINOUS PAVEMENT
-  CONSTRUCTION LIMIT
-  TEMPORARY EASEMENT
-  PERMANENT EASEMENT
-  PROPOSED CURB (FOR REFERENCE ONLY)



NOTES:

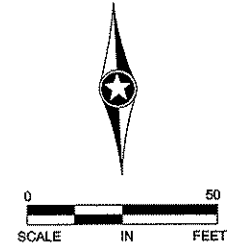
- (A) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
- (B) SAWCUT CONCRETE WALK
- (C) RELOCATE CURB STOP AND BOX
- (D) RELOCATE HYDRANT
- (E) REMOVE CONCRETE ENTRANCE
- (F) ADJUST GATE VALVE
- (G) ADJUST CURB STOP
- (H) ADJUST FRAME AND RING CASTING

GENERAL 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.



NO	DATE	BY	CKD	APPR	REVISION
NAME: p:\02-607-19\plan\0260719_RM_P1.dgn					05/16/2012 3:54:30 PM












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 PRINT NAME: CURT A KOBIARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12 LICENSE NO. 24756

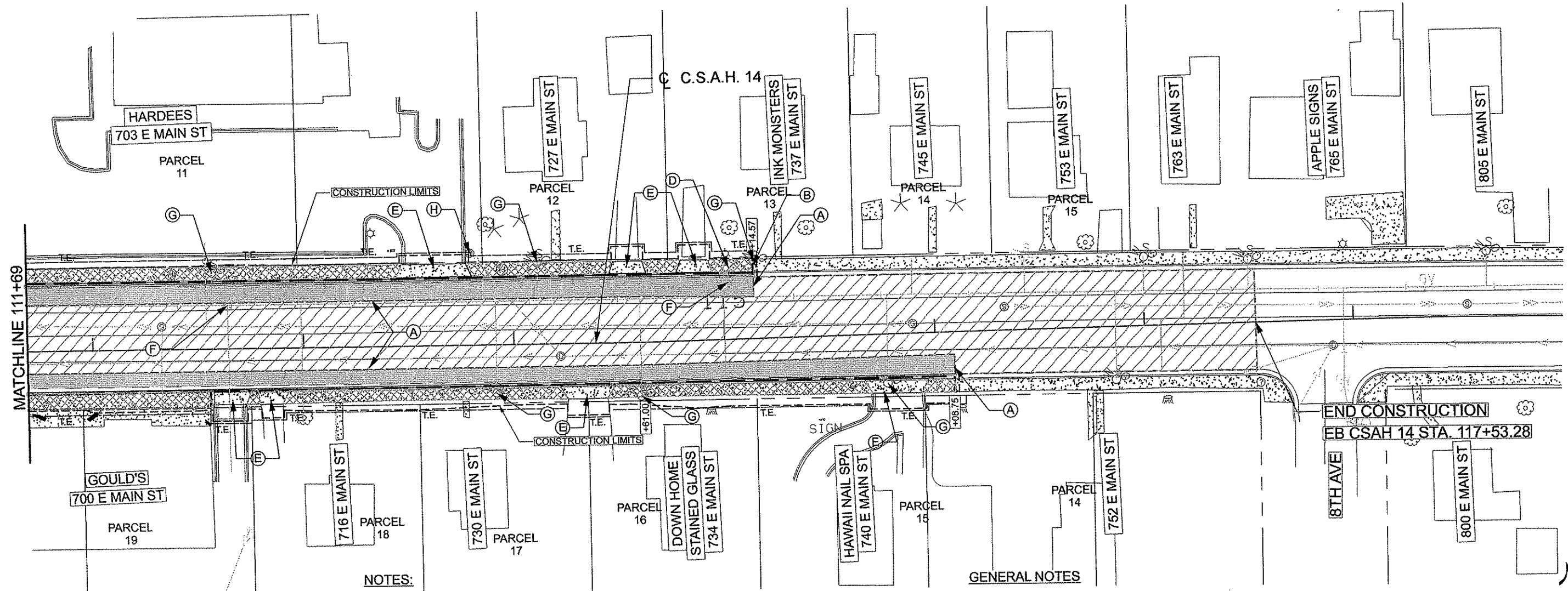
DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

 ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

LEGEND

-  REMOVE BITUMINOUS PAVEMENT
-  REMOVE BRICK
-  REMOVE CONCRETE SIDEWALK
-  MILL BITUMINOUS PAVEMENT
-  TREE REMOVAL BY EACH
-  REMOVE CURB AND GUTTER
-  SAWING BITUMINOUS PAVEMENT
-  CONSTRUCTION LIMIT
-  TEMPORARY EASEMENT
-  PERMANENT EASEMENT
-  PROPOSED CURB (FOR REFERENCE ONLY)



- NOTES:**
- (A) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
  - (B) SAWCUT CONCRETE WALK
  - (C) RELOCATE CURB STOP AND BOX
  - (D) RELOCATE HYDRANT
  - (E) REMOVE CONCRETE ENTRANCE
  - (F) ADJUST GATE VALVE
  - (G) ADJUST CURB STOP
  - (H) ADJUST FRAME AND RING CASTING

REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

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NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-607-19\plant\0260719\_RM\_P2.dgn      05/16/2012      3:54:36 PM

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

PRINT NAME: CURT A. KOBILARCSIK

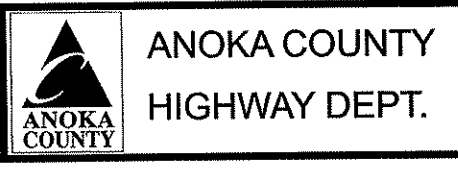
SIGNATURE: *Curt Kobilarsik*

DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 04-05-12

DESIGN BY: BAV      DATE: 04-05-12

CHECKED BY: JEO      DATE: 04-17-12



S.P. 002-607-019

2 OF 4

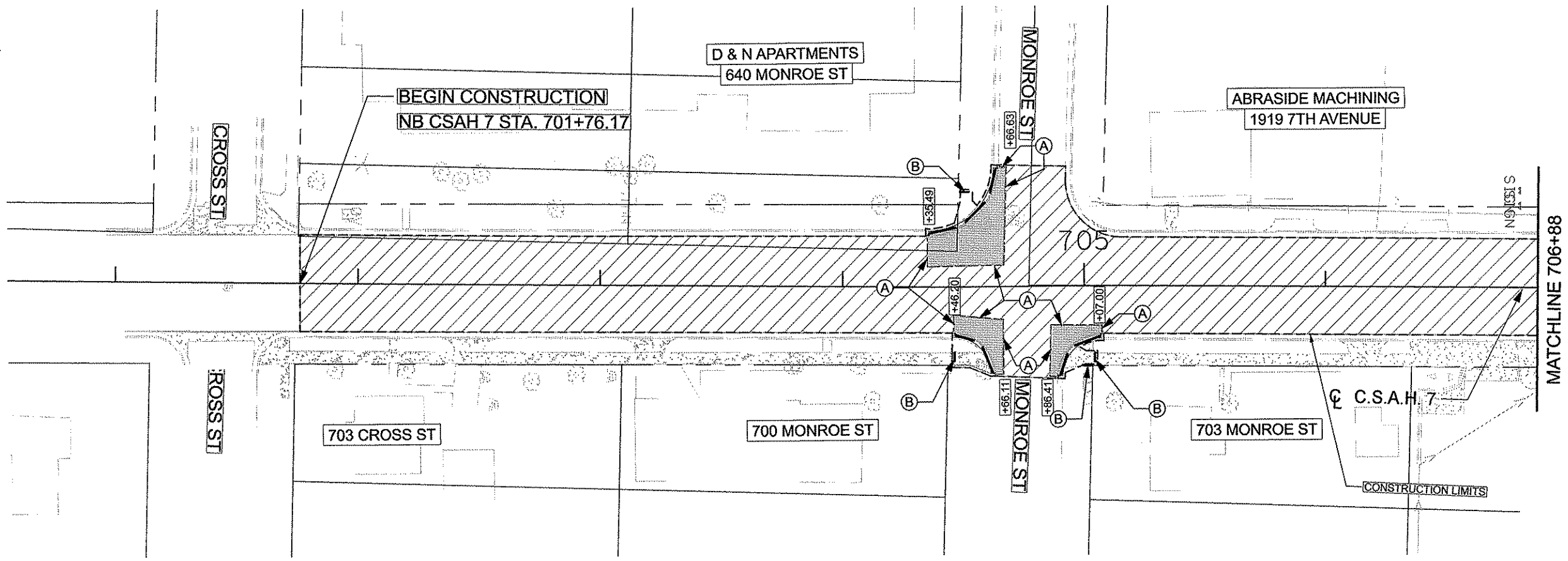
REMOVAL PLAN

Sheet 36 OF 85 Sheets



LEGEND

	REMOVE BITUMINOUS PAVEMENT		REMOVE CURB AND GUTTER
	REMOVE BRICK		SAWING BITUMINOUS PAVEMENT
	REMOVE CONCRETE SIDEWALK		CONSTRUCTION LIMIT
	MILL BITUMINOUS PAVEMENT		TEMPORARY EASEMENT
	TREE REMOVAL BY EACH		PERMANENT EASEMENT
			PROPOSED CURB (FOR REFERENCE ONLY)



NOTES:

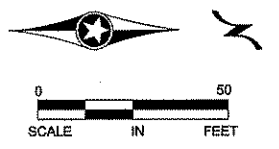
- (A) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
- (B) SAWCUT CONCRETE WALK
- (C) RELOCATE CURB STOP AND BOX
- (D) RELOCATE HYDRANT
- (E) REMOVE CONCRETE ENTRANCE
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GENERAL NOTES

REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

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NO	DATE	BY	CKD	APPR	REVISION

NAME: p:102-607-19\plant\0260719\_RM\_P3.dgn 05/16/2012 3:54:41 PM

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

PRINT NAME: CURT A KOBILARCSIK

SIGNATURE: *Curt Kobilarcsik*

DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12

DESIGN BY: BAV DATE: 04-05-12

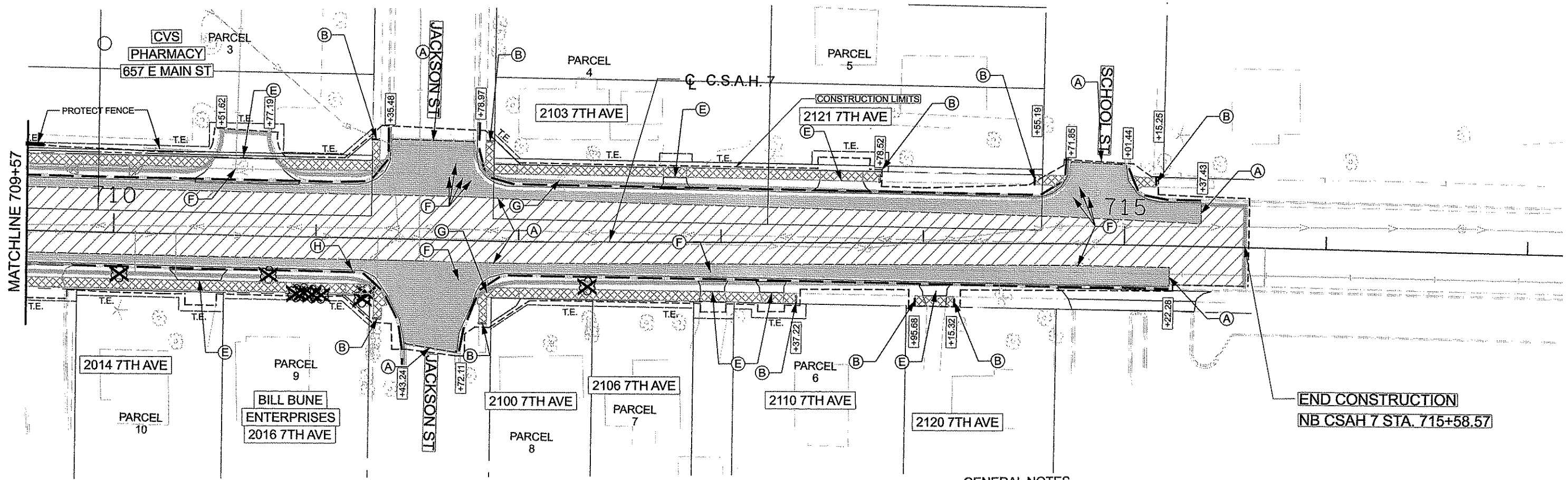
CHECKED BY: JEO DATE: 04-17-12

**ANOKA COUNTY**  
HIGHWAY DEPT.

S.P. 002-607-019

LEGEND

	REMOVE BITUMINOUS PAVEMENT		REMOVE CURB AND GUTTER
	REMOVE BRICK		SAWING BITUMINOUS PAVEMENT
	REMOVE CONCRETE SIDEWALK		CONSTRUCTION LIMIT
	MILL BITUMINOUS PAVEMENT		TEMPORARY EASEMENT
	TREE REMOVAL BY EACH		PERMANENT EASEMENT
			PROPOSED CURB (FOR REFERENCE ONLY)



NOTES:

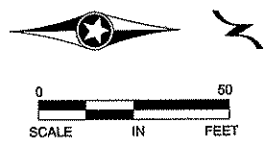
- (A) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
- (B) SAWCUT CONCRETE WALK
- (C) RELOCATE CURB STOP AND BOX
- (D) RELOCATE HYDRANT
- (E) REMOVE CONCRETE ENTRANCE
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GENERAL NOTES



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_RM\_P4.dgn 05/16/2012 3:54:46 PM

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SIGNATURE: *Curt Kobilarsik*

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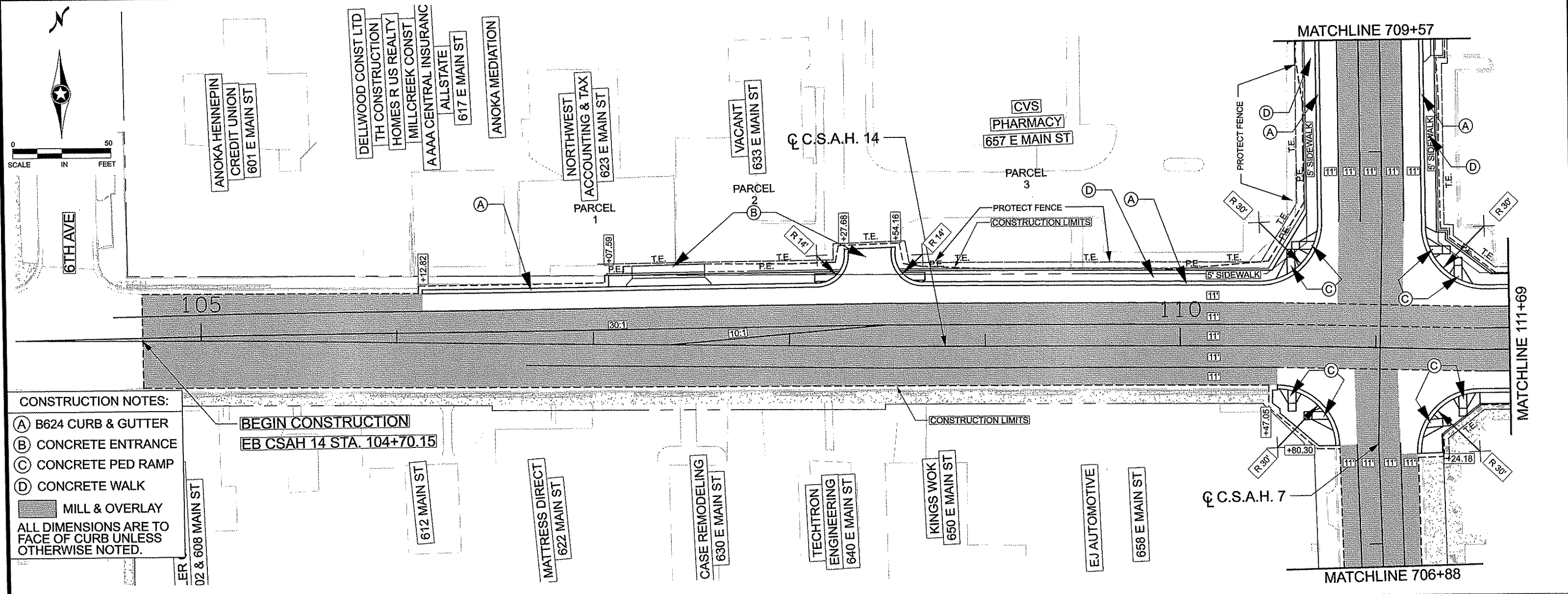
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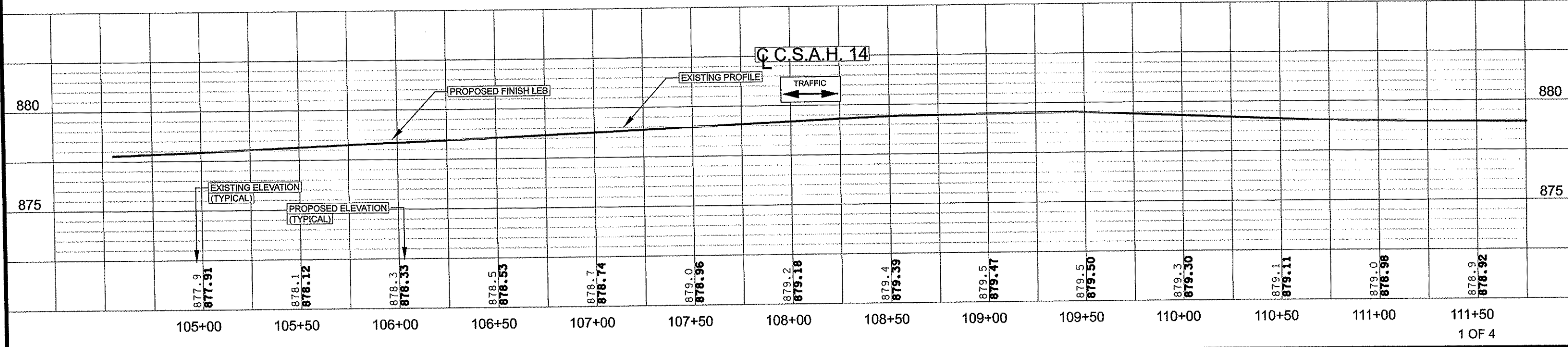
CHECKED BY: JED DATE: 04-17-12

ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-607-019



- CONSTRUCTION NOTES:**
- (A) B624 CURB & GUTTER
  - (B) CONCRETE ENTRANCE
  - (C) CONCRETE PED RAMP
  - (D) CONCRETE WALK
  - MILL & OVERLAY
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

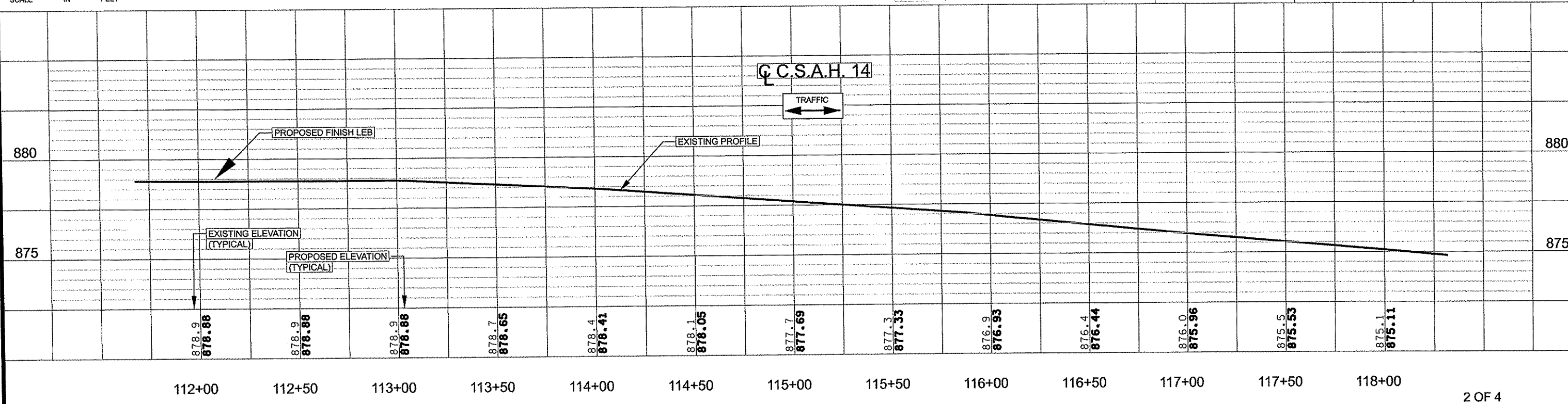
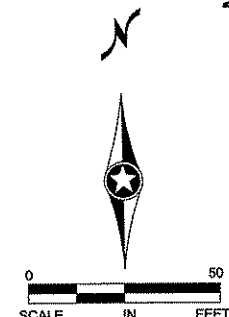
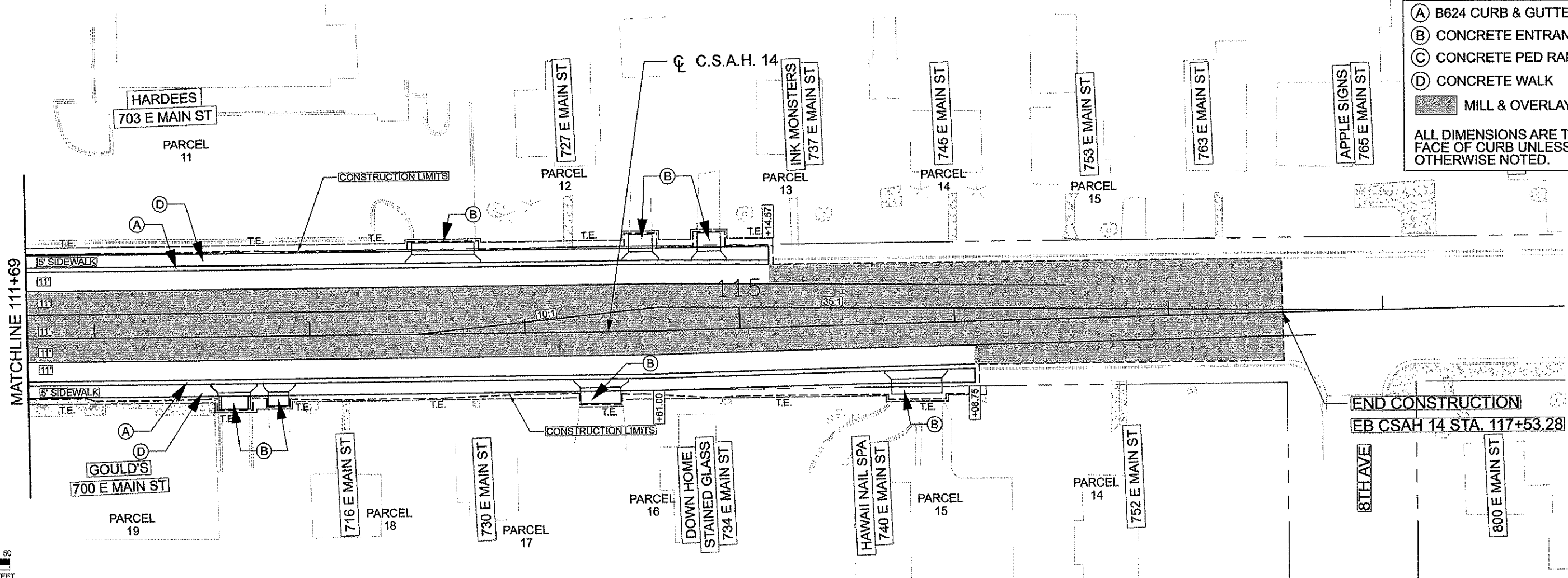


<p>NO. DATE BY CKD APPR</p> <p>REVISION 05/16/2012 3:54:51 PM</p> <p>NAME: p:\02-607-19\plan\0260719_PP_P1.dgn</p>	<p>I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.</p> <p>PRINT NAME: CURT A. KOBIARCSIK</p> <p>SIGNATURE: <i>Curt Kobiarcsik</i></p> <p>DATE: 5-18-12 LICENSE NO. 24758</p>	<p>DRAWN BY: DFF DATE: 04-05-12</p> <p>DESIGN BY: BAV DATE: 04-05-12</p> <p>CHECKED BY: JEO DATE: 04-17-12</p>	<p><b>ANOKA COUNTY</b> <b>HIGHWAY DEPT.</b></p>	<p>S.P. 002-607-019</p>	<p><b>CONSTRUCTION</b> <b>PLAN AND PROFILE</b> <b>C.S.A.H. 14</b></p> <p>Sheet 39 of 85 Sheets</p>
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CONSTRUCTION NOTES:

- (A) B624 CURB & GUTTER
- (B) CONCRETE ENTRANCE
- (C) CONCRETE PED RAMP
- (D) CONCRETE WALK
- [Hatched Box] MILL & OVERLAY

ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.



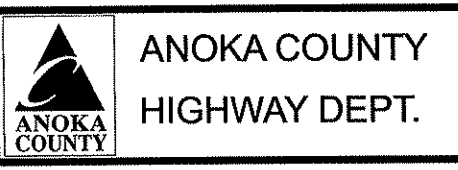
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A KOBIARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 24756


DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

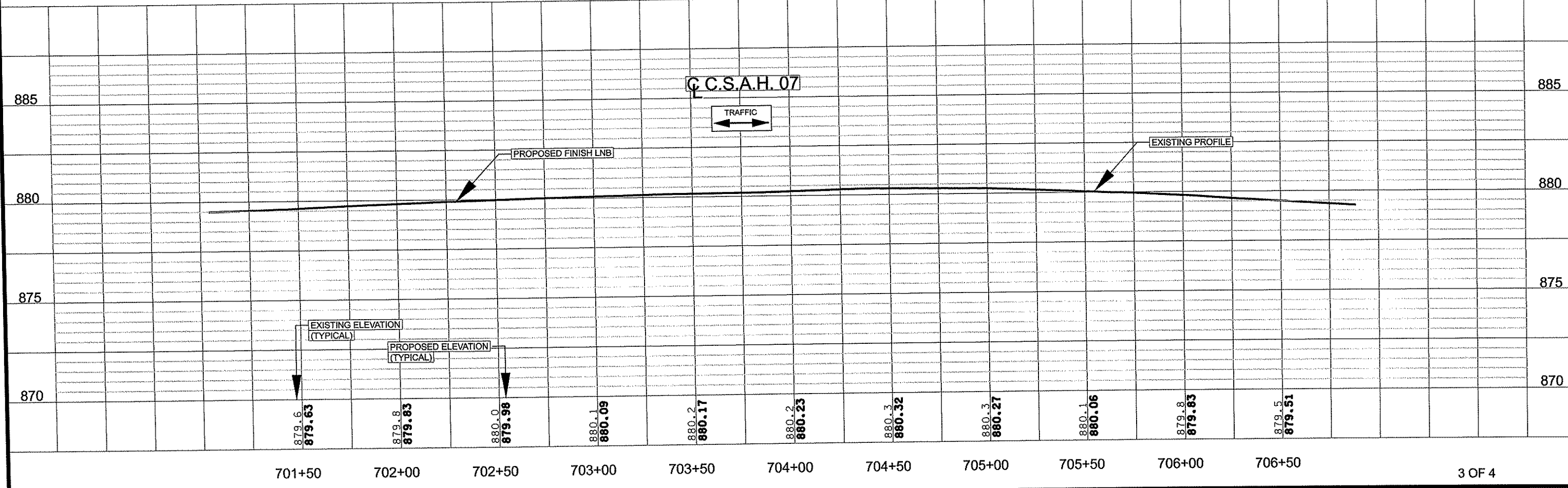
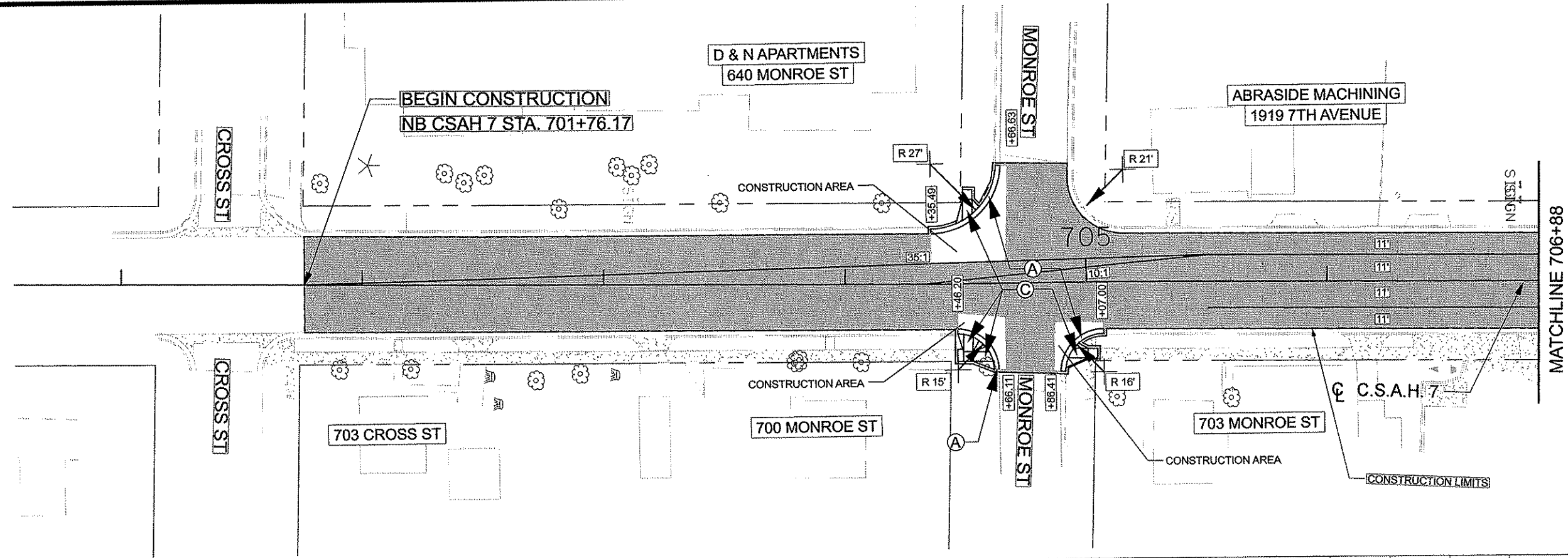


S.P. 002-607-019

CONSTRUCTION PLAN AND PROFILE C.S.A.H. 14  
 Sheet 40 of 85 Sheets



- CONSTRUCTION NOTES:**
- (A) B624 CURB & GUTTER
  - (B) CONCRETE ENTRANCE
  - (C) CONCRETE PED RAMP
  - (D) CONCRETE WALK
  -  MILL & OVERLAY
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.



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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 A. KOBIARCSIK

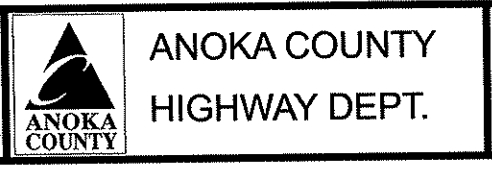
SIGNATURE: *Curt Kobilarcsik*

DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 04-05-12

DESIGN BY: BAV      DATE: 04-05-12

CHECKED BY: JEO      DATE: 04-17-12



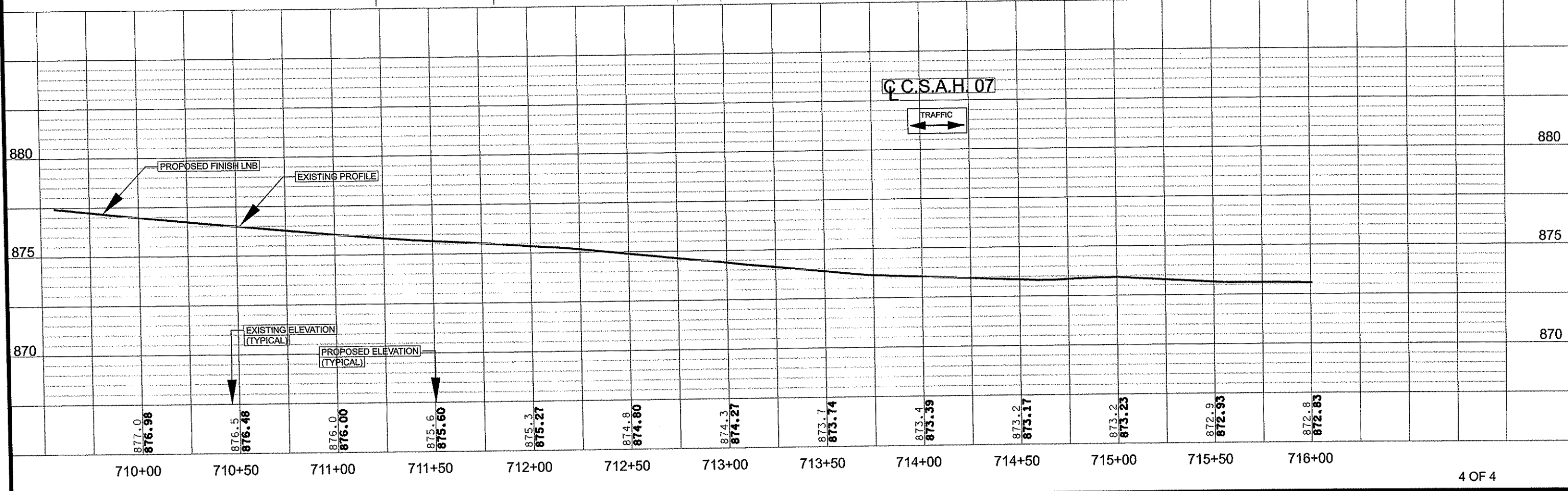
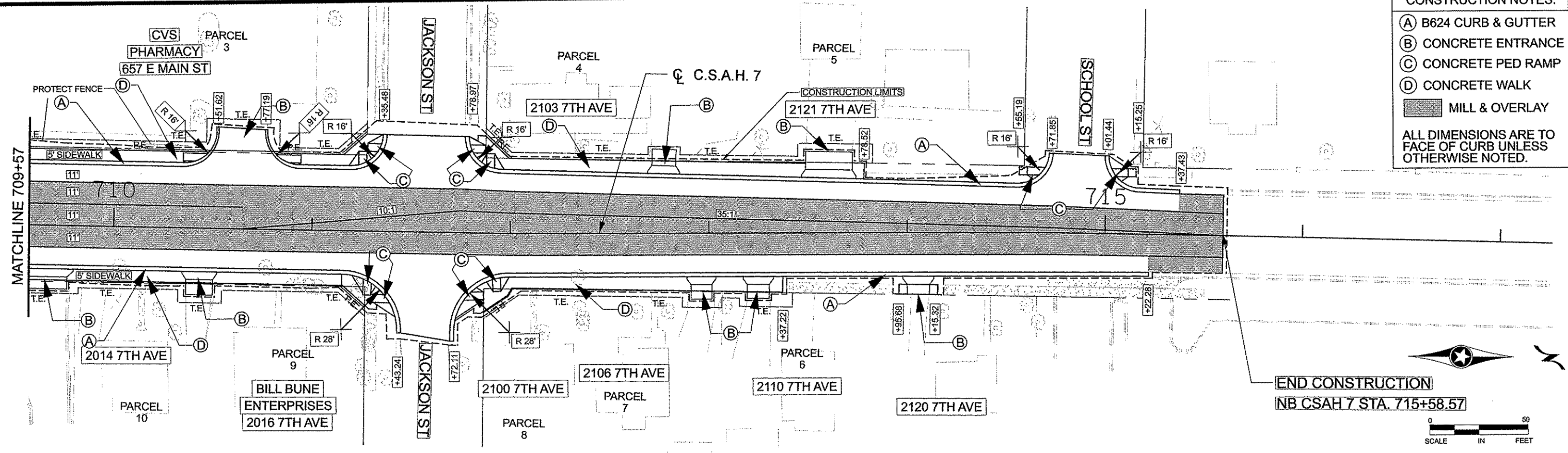
S.P. 002-607-019

3 OF 4

CONSTRUCTION PLAN AND PROFILE C.S.A.H. 7

Sheet 41 of 85 Sheets

- CONSTRUCTION NOTES:
- (A) B624 CURB & GUTTER
  - (B) CONCRETE ENTRANCE
  - (C) CONCRETE PED RAMP
  - (D) CONCRETE WALK
  - MILL & OVERLAY
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.



4 OF 4

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 A. KOBILARCSIK

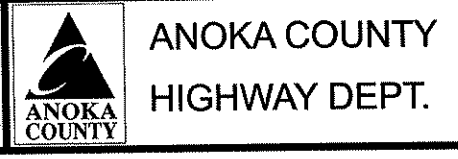
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DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 04-05-12

DESIGN BY: BAV      DATE: 04-05-12

CHECKED BY: JEO      DATE: 04-17-12

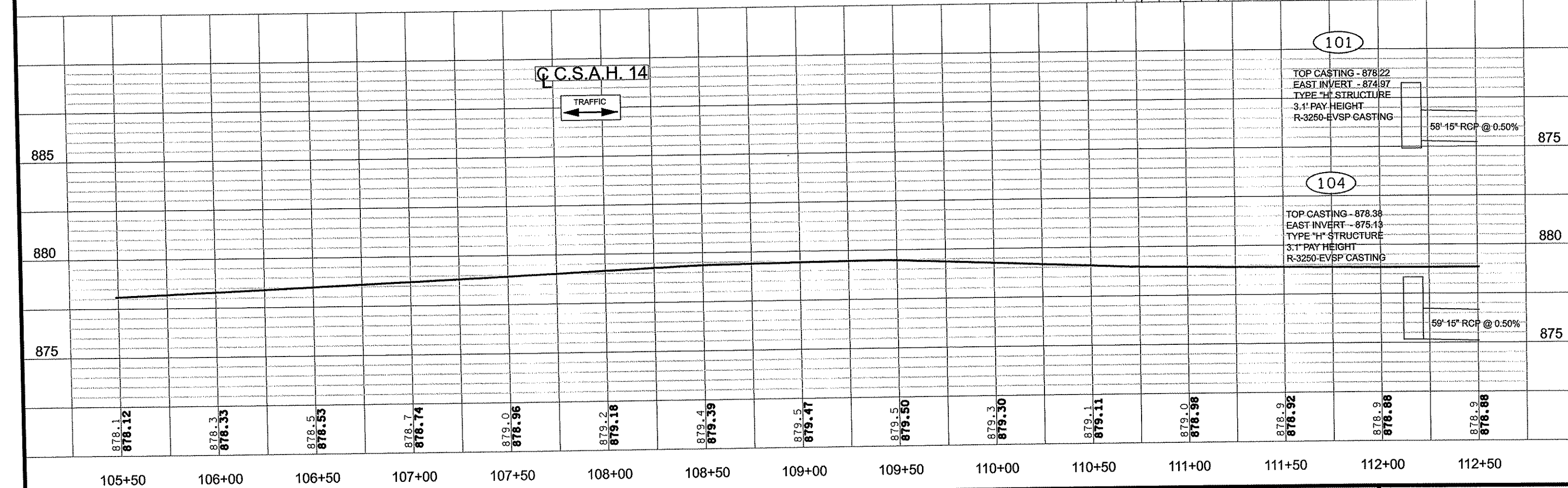
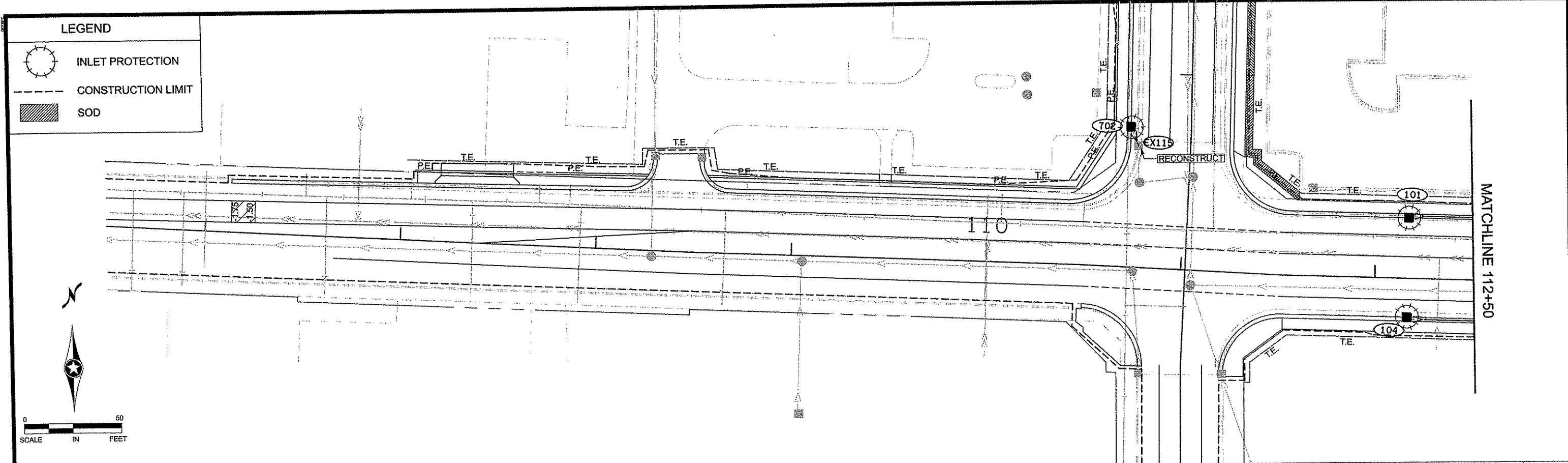


S.P. 002-607-019

CONSTRUCTION PLAN AND PROFILE C.S.A.H. 7

Sheet 42 of 85 Sheets





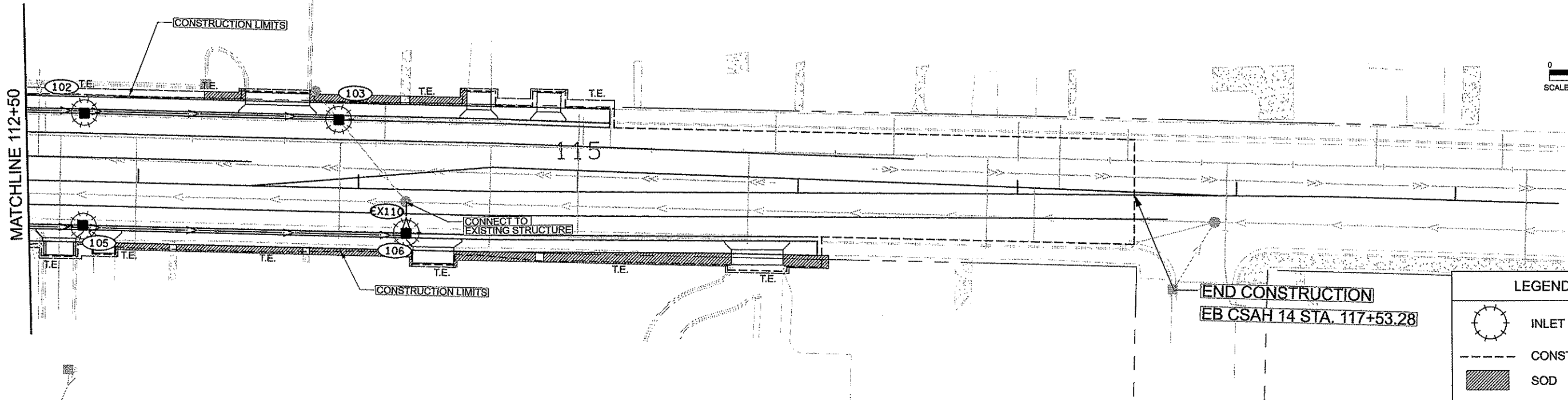
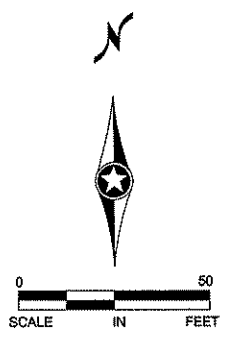
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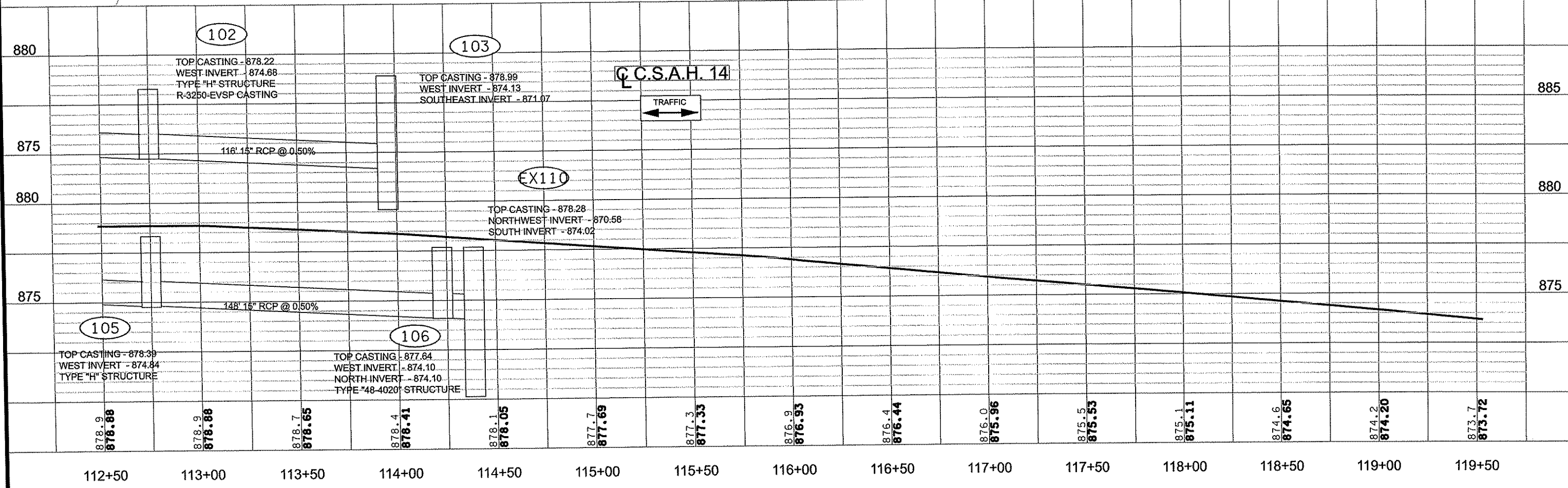
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DRAWN BY	BAV	DATE	04-05-12
PRINT NAME: CURT A. KOBIARCSIK		DESIGN BY	BAV	DATE	04-05-12
SIGNATURE: <i>Curt Kobilarcsik</i>		CHECKED BY	JEO	DATE	04-17-12
DATE: 5-18-12		LICENSE NO. 24758			

ANOKA COUNTY HIGHWAY DEPT.		S.P. 002-607-019
DRAINAGE, SUPERELEVATION AND EROSION CONTROL PLAN		
1 OF 4		
Sheet 43 of 85 Sheets		



LEGEND	
	INLET PROTECTION
	CONSTRUCTION LIMIT
	SOD



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plant\0260719\_DR\_P2.dgn      05/16/2012      3:55:19 PM

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

PRINT NAME: CURT A KOBIARCSKI

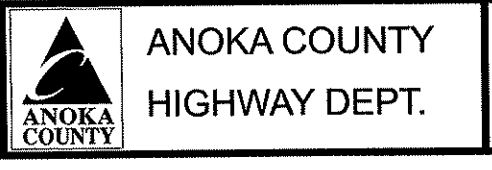
SIGNATURE: *Curt Kobilarcski*

DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: BAV      DATE: 04-05-12

DESIGN BY: BAV      DATE: 04-05-12

CHECKED BY: JEO      DATE: 04-17-12



S.P. 002-607-019

DRAINAGE, SUPERELEVATION AND EROSION CONTROL PLAN  
2 OF 4

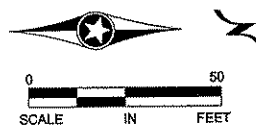
Sheet 44 of 85 Sheets

BEGIN CONSTRUCTION  
NB CSAH 7 STA. 701+76.17

705

MATCHLINE 709+00

CONSTRUCTION LIMITS



**LEGEND**

- INLET PROTECTION
- CONSTRUCTION LIMIT
- SOD

Q C.S.A.H. 07



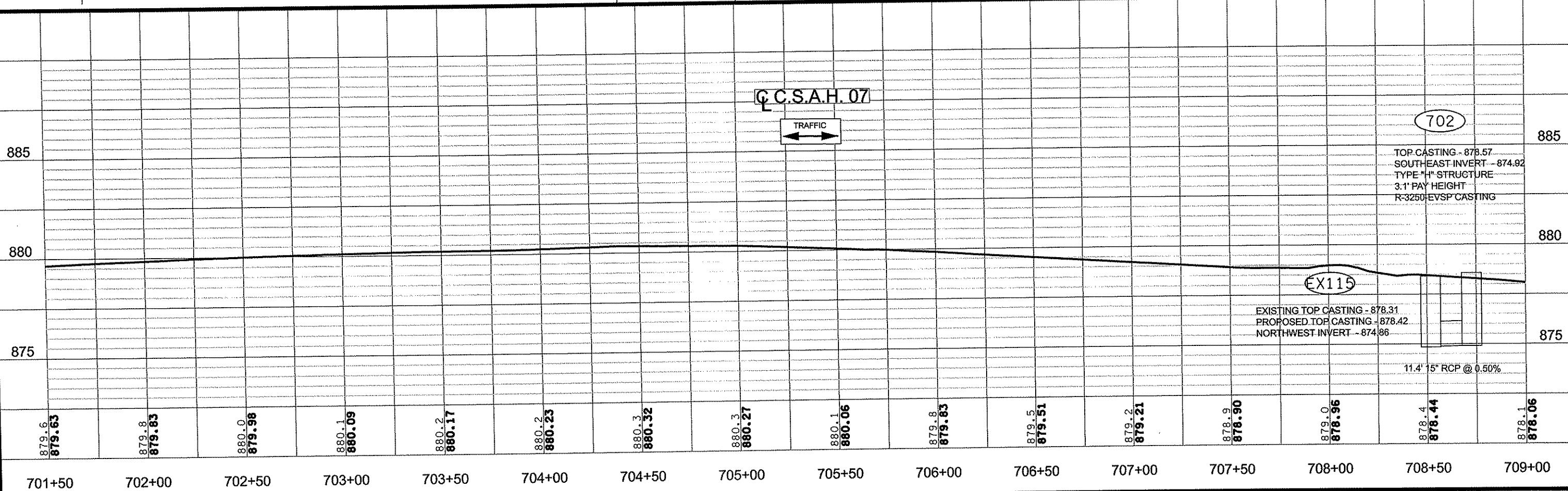
702

TOP CASTING - 878.57  
SOUTHEAST INVERT - 874.92  
TYPE "H" STRUCTURE  
3.1' PAY HEIGHT  
R-3250EVSP CASTING

EX115

EXISTING TOP CASTING - 878.31  
PROPOSED TOP CASTING - 878.42  
NORTHWEST INVERT - 874.86

11.4' 15" RCP @ 0.50%



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\102-607-19\plan\0260719\_DR\_P3.dgn      05/16/2012      3:55:23 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 A KOBILARCSIK  
SIGNATURE: *Curt Kobilarcsik*  
DATE: 5-18-12      LICENSE NO. 24758

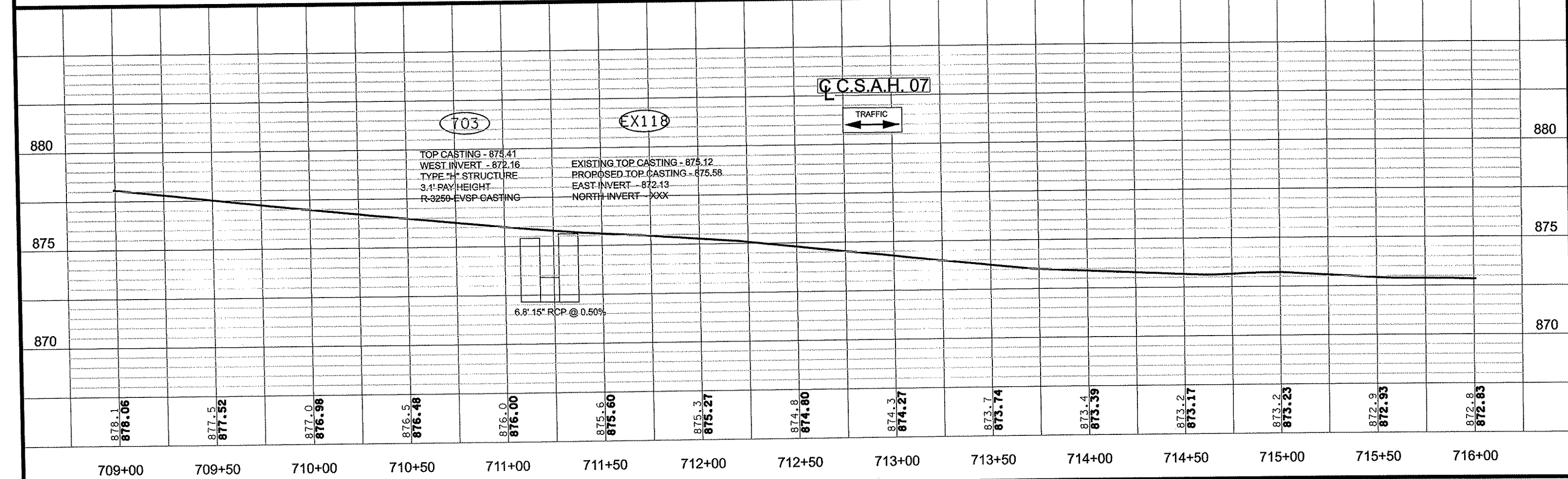
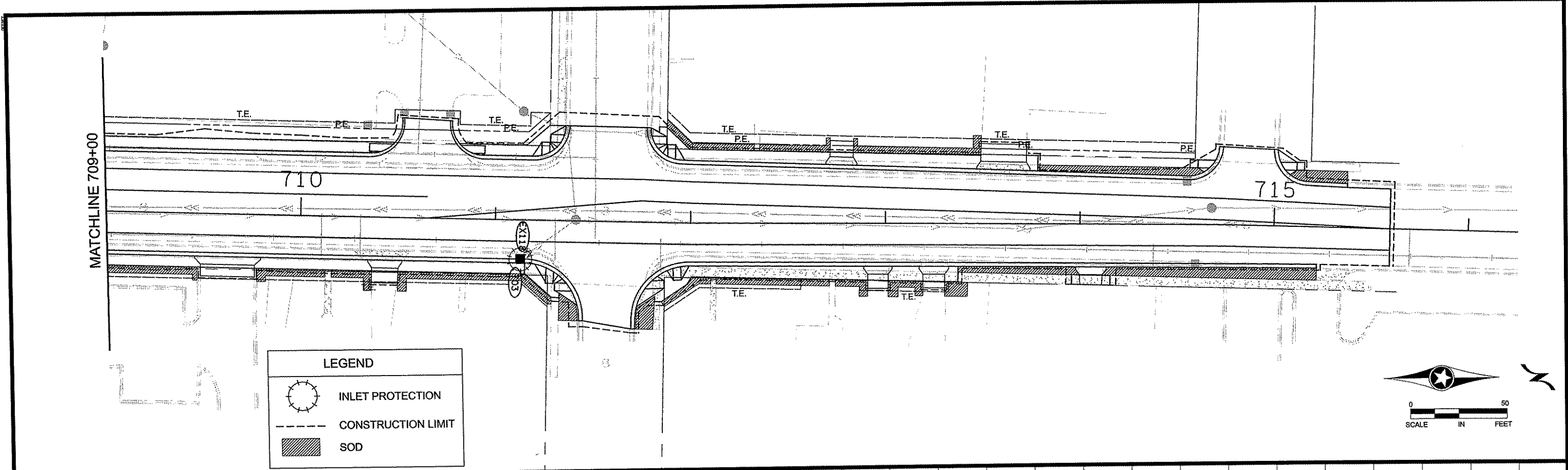
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DESIGN BY: BAV      DATE: 04-05-12  
CHECKED BY: JEO      DATE: 04-17-12



**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-607-019

**DRAINAGE, SUPERELEVATION  
AND EROSION CONTROL PLAN**  
3 OF 4  
Sheet 45 of 85 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_DR\_P4.dgn      05/16/2012      3:55:29 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 A. KOBIARCSIK

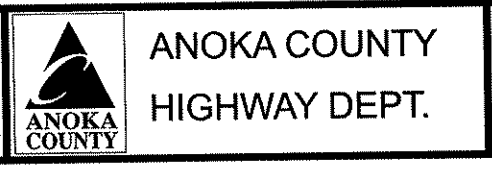
SIGNATURE: *Curt Kobilarcsik*

DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: BAV      DATE: 04-05-12

DESIGN BY: BAV      DATE: 04-05-12

CHECKED BY: JEO      DATE: 04-17-12



S.P. 002-607-019

DRAINAGE, SUPERELEVATION AND EROSION CONTROL PLAN  
4 OF 4

Sheet 46 of 85 Sheets

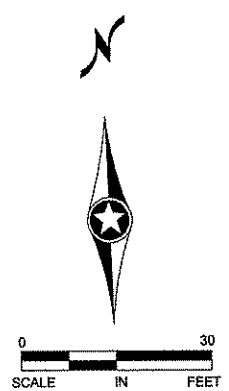
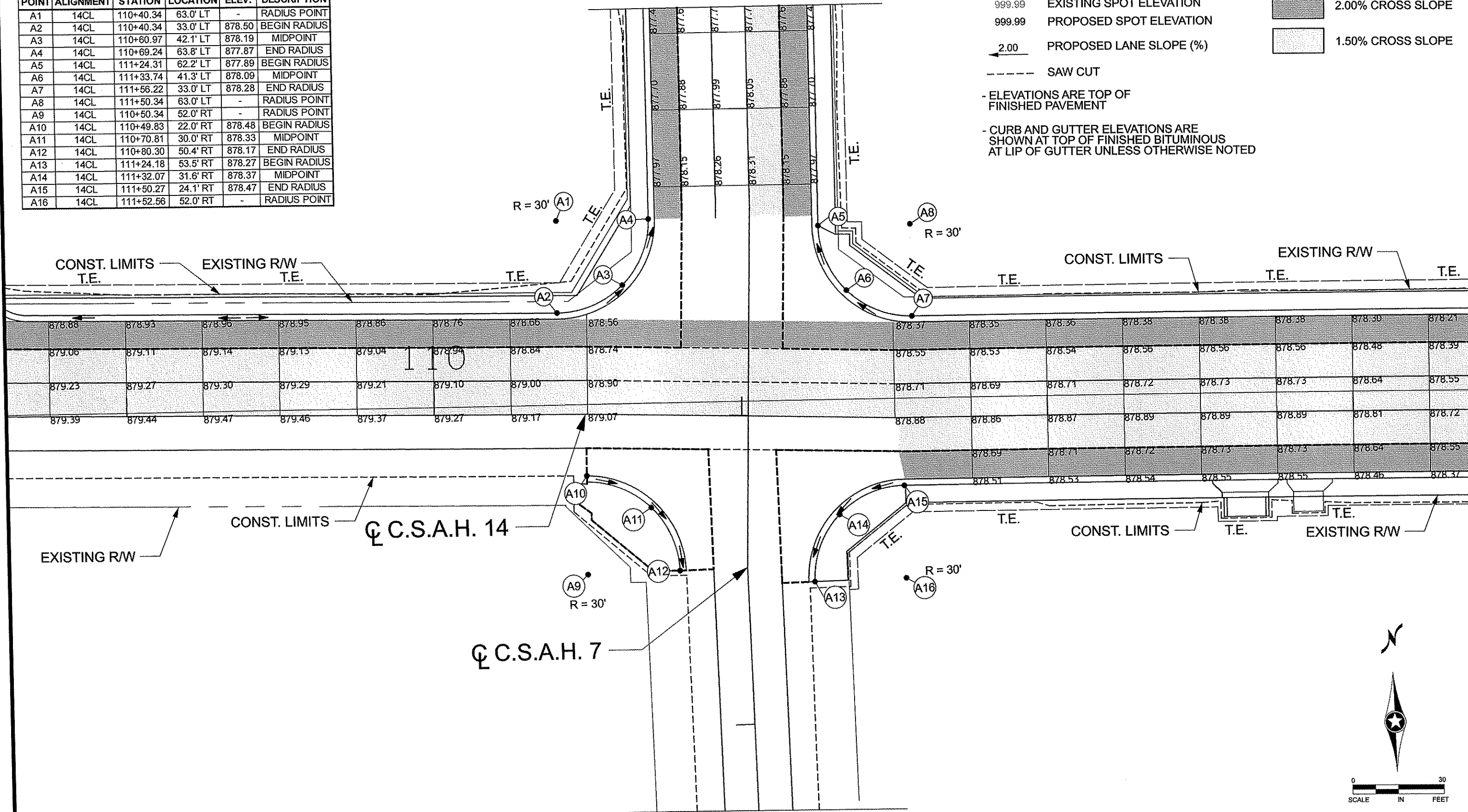


**CSAH 14 RADIUS POINTS**

POINT	ALIGNMENT	STATION	LOCATION	ELEV.	DESCRIPTION
A1	14CL	110+40.34	63.0' LT	-	RADIUS POINT
A2	14CL	110+40.34	33.0' LT	878.50	BEGIN RADIUS
A3	14CL	110+60.97	42.1' LT	878.19	MIDPOINT
A4	14CL	110+69.24	63.8' LT	877.87	END RADIUS
A5	14CL	111+24.31	62.2' LT	877.89	BEGIN RADIUS
A6	14CL	111+33.74	41.3' LT	878.09	MIDPOINT
A7	14CL	111+56.22	33.0' LT	878.28	END RADIUS
A8	14CL	111+50.34	63.0' LT	-	RADIUS POINT
A9	14CL	110+50.34	52.0' RT	-	RADIUS POINT
A10	14CL	110+49.83	22.0' RT	878.48	BEGIN RADIUS
A11	14CL	110+70.81	30.0' RT	878.33	MIDPOINT
A12	14CL	110+80.30	50.4' RT	878.17	END RADIUS
A13	14CL	111+24.18	53.5' RT	878.27	BEGIN RADIUS
A14	14CL	111+32.07	31.6' RT	878.37	MIDPOINT
A15	14CL	111+50.27	24.1' RT	878.47	END RADIUS
A16	14CL	111+52.56	52.0' RT	-	RADIUS POINT

**LEGEND**

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- SAW CUT
- ELEVATIONS ARE TOP OF FINISHED PAVEMENT
- CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED
- 2.00% CROSS SLOPE
- 1.50% CROSS SLOPE



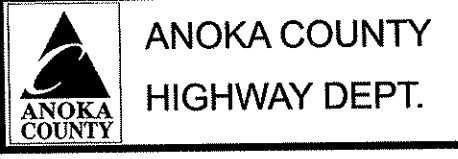
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A KOBIARCZAK  
 SIGNATURE: *Curt Kobilarczak*  
 DATE: 5-18-12      LICENSE NO. 24756

DRAWN BY: DFF      DATE: 04-05-12  
 DESIGN BY: BAV      DATE: 04-05-12  
 CHECKED BY: JEO      DATE: 04-17-12



S.P. 002-607-019

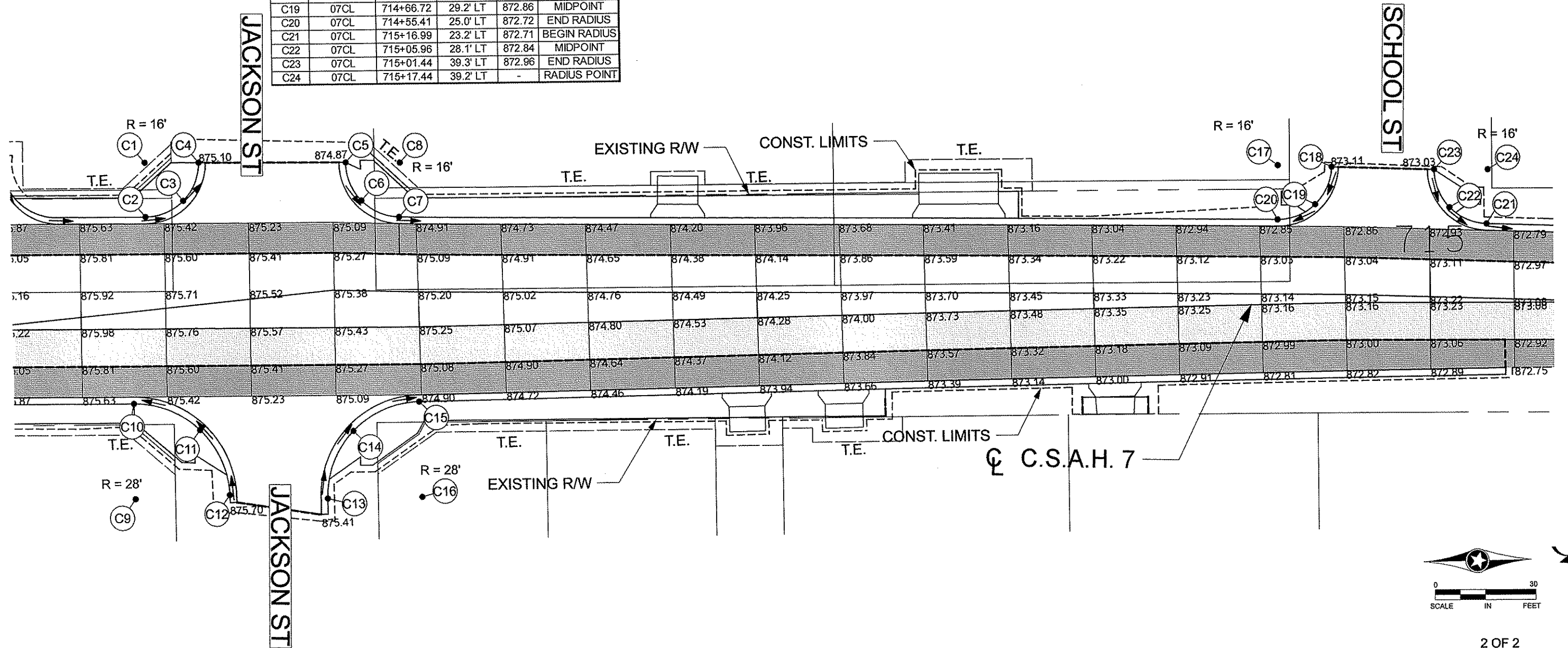
INTERSECTION DETAILS

Sheet 47 of 85 Sheets

**LEGEND**

- 999.99 EXISTING SPOT ELEVATION
- 999.99 PROPOSED SPOT ELEVATION
- 2.00 PROPOSED LANE SLOPE (%)
- 2.00% CROSS SLOPE
- 1.50% CROSS SLOPE
- ELEVATIONS ARE TOP OF FINISHED PAVEMENT
- SAW CUT
- CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED

CSAH 7 RADIUS POINTS					
POINT	ALIGNMENT	STATION	LOCATION	ELEV.	DESCRIPTION
C1	07CL	711+19.48	49.0' LT	-	RADIUS POINT
C2	07CL	711+19.48	33.0' LT	875.35	BEGIN RADIUS
C3	07CL	711+30.76	37.7' LT	875.21	MIDPOINT
C4	07CL	711+35.48	48.9' LT	875.06	END RADIUS
C5	07CL	711+78.97	48.6' LT	874.77	BEGIN RADIUS
C6	07CL	711+83.43	37.4 LT	874.81	MIDPOINT
C7	07CL	711+94.52	32.4' LT	874.85	END RADIUS
C8	07CL	711+94.97	48.4' LT	-	RADIUS POINT
C9	07CL	711+15.17	50.0' RT	-	RADIUS POINT
C10	07CL	711+15.17	22.0' RT	875.38	BEGIN RADIUS
C11	07CL	711+34.62	29.5' RT	875.52	MIDPOINT
C12	07CL	711+43.16	49.0' RT	875.65	END RADIUS
C13	07CL	711+72.07	50.3' RT	875.30	BEGIN RADIUS
C14	07CL	711+80.00	30.5' RT	875.05	MIDPOINT
C15	07CL	711+99.45	22.0' RT	874.79	END RADIUS
C16	07CL	711+99.45	50.0' RT	-	RADIUS POINT
C17	07CL	714+55.87	41.0' LT	-	RADIUS POINT
C18	07CL	714+71.85	40.2' LT	873.00	BEGIN RADIUS
C19	07CL	714+66.72	29.2' LT	872.86	MIDPOINT
C20	07CL	714+55.41	25.0' LT	872.72	END RADIUS
C21	07CL	715+16.99	23.2' LT	872.71	BEGIN RADIUS
C22	07CL	715+05.96	28.1' LT	872.84	MIDPOINT
C23	07CL	715+01.44	39.3' LT	872.96	END RADIUS
C24	07CL	715+17.44	39.2' LT	-	RADIUS POINT



NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_IN\_P2.dgn  
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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 A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

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

S.P. 002-607-019

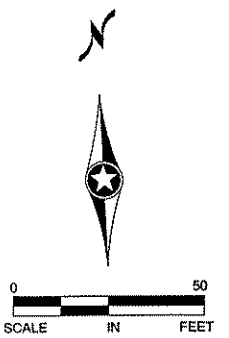
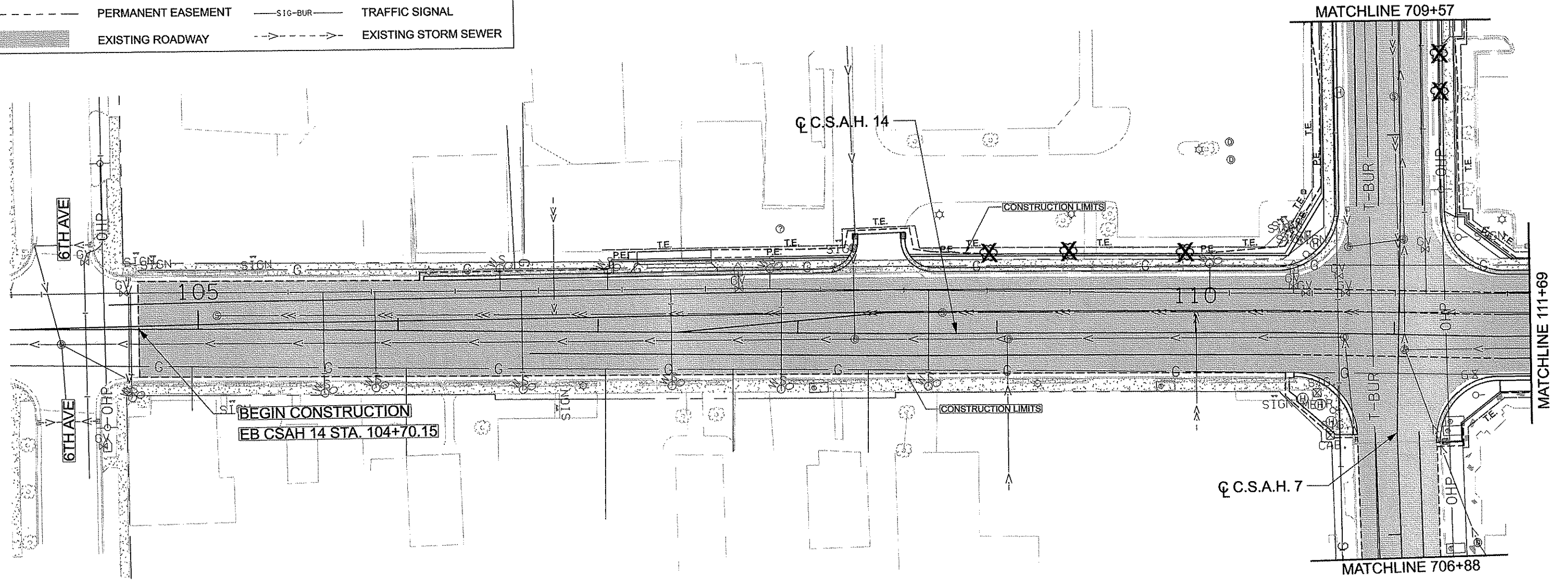
INTERSECTION DETAILS

Sheet 48 of 85 Sheets



LEGEND

	EXISTING SAN SEWER		CENTERPOINT ENERGY
	EXISTING WATER MAIN		COMCAST CABLE COMMUNICATIONS
	PROPOSED STORM DRAIN		CONNEXUS ENERGY/ GREAT RIVER ENERGY
	EXISTING R/W		QWEST CORPORATION
	PROPOSED R/W		TRAFFIC SIGNAL
	PERMANENT EASEMENT		EXISTING STORM SEWER
	EXISTING ROADWAY		



1 OF 4

NO.	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_UT\_P1.dgn 05/16/2012 3:55:44 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 A KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 24758

DRAWN BY DFF DATE 04-05-12  
 DESIGN BY BAV DATE 04-05-12  
 CHECKED BY JEO DATE 04-17-12



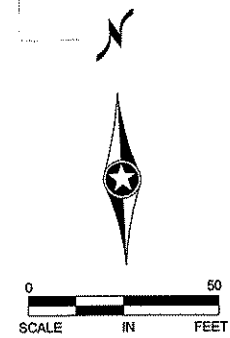
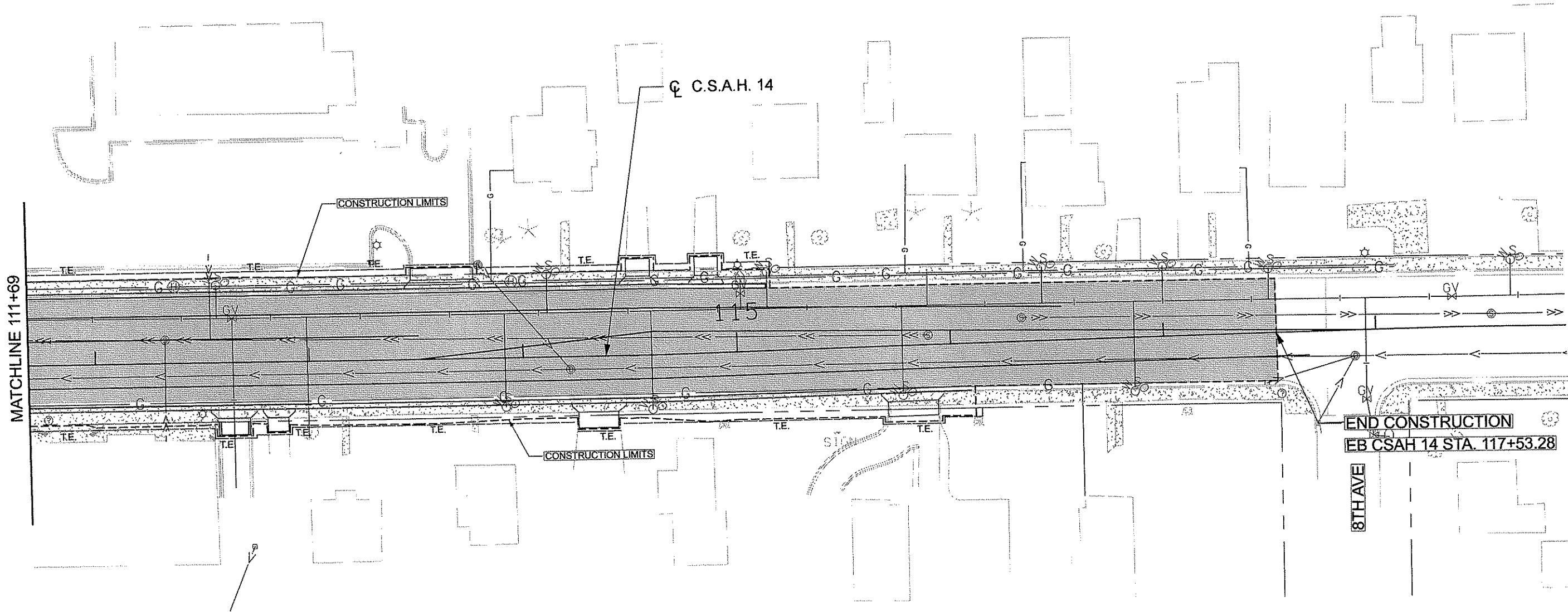
ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

UTILITY PLAN  
 Sheet 49 OF 85 Sheets

LEGEND

	EXISTING SAN SEWER		CENTERPOINT ENERGY
	EXISTING WATER MAIN		COMCAST CABLE COMMUNICATIONS
	PROPOSED STORM DRAIN		CONNEXUS ENERGY/ GREAT RIVER ENERGY
	EXISTING R/W		QWEST CORPORATION
	PROPOSED R/W		TRAFFIC SIGNAL
	PERMANENT EASEMENT		EXISTING STORM SEWER
	EXISTING ROADWAY		




2 OF 4

NO	DATE	BY	CHKD	APPR	REVISION

NAME: p:\02-607-19\plant\0260719\_UT\_P2.dgn 05/18/2012 3:55:50 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 A. KOBIARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JED DATE: 04-17-12



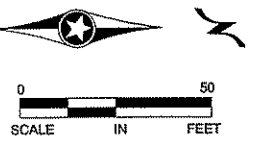
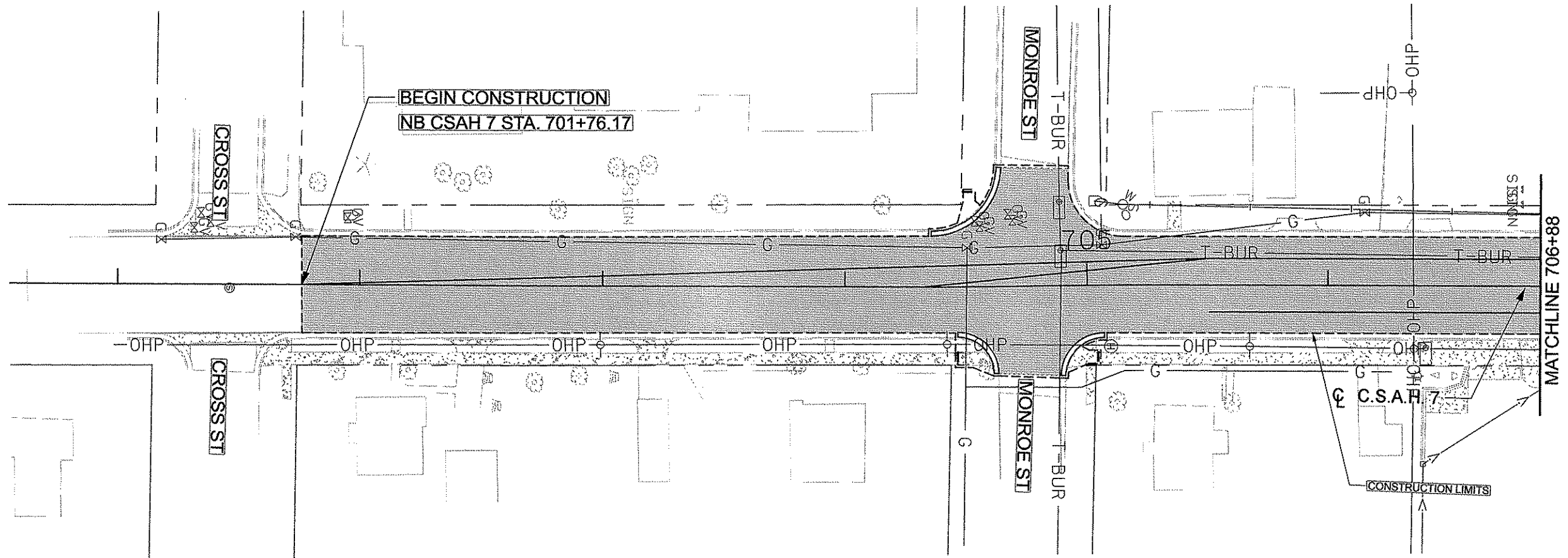
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

S.P. 002-607-019

UTILITY PLAN  
 Sheet 50 OF 85 Sheets

LEGEND

	EXISTING SAN SEWER		CENTERPOINT ENERGY
	EXISTING WATER MAIN		COMCAST CABLE COMMUNICATIONS
	PROPOSED STORM DRAIN		CONNEXUS ENERGY/ GREAT RIVER ENERGY
	EXISTING R/W		QWEST CORPORATION
	PROPOSED R/W		TRAFFIC SIGNAL
	PERMANENT EASEMENT		EXISTING STORM SEWER
	EXISTING ROADWAY		



3 OF 4


NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_UT\_P3.dgn 05/16/2012 3:55:55 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 A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarsik*  
 DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12



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

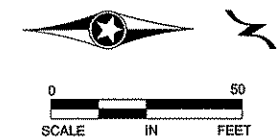
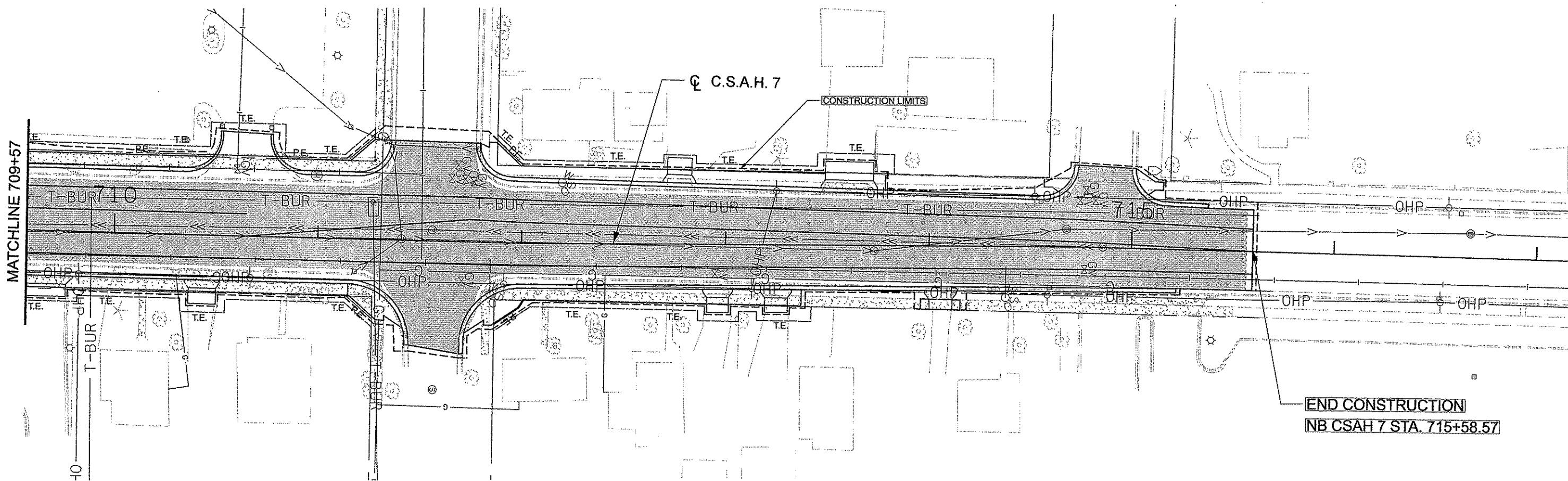
S.P. 002-607-019

UTILITY PLAN

Sheet 51 OF 85 Sheets

LEGEND

	EXISTING SAN SEWER		CENTERPOINT ENERGY
	EXISTING WATER MAIN		COMCAST CABLE COMMUNICATIONS
	PROPOSED STORM DRAIN		CONNEXUS ENERGY/ GREAT RIVER ENERGY
	EXISTING R/W		QWEST CORPORATION
	PROPOSED R/W		TRAFFIC SIGNAL
	PERMANENT EASEMENT		EXISTING STORM SEWER
	EXISTING ROADWAY		



4 OF 4

NO	DATE	BY	CKD	APPR	REVISION

NAME: p:\02-607-19\plan\0260719\_UT\_P4.dgn 05/16/2012 3:56:00 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 A. KOBIARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: DFF DATE: 04-05-12  
 DESIGN BY: BAV DATE: 04-05-12  
 CHECKED BY: JEO DATE: 04-17-12

ANOKA COUNTY  
 HIGHWAY DEPT.

S.P. 002-607-019

UTILITY PLAN  
 Sheet 52 OF 85 Sheets

**TEMPORARY & PERMANENT PAVEMENT MARKING PLAN**  
NOTES AND GUIDELINES

**GENERAL INFORMATION:**

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

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

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

**EPOXY:**

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

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

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

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

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

**PREFORMED THERMOPLASTIC:**

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

**PAINT:**

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

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

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

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

R TEMPORARY & PERMANENT PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
PAVEMENT MARKING REMOVAL	LIN FT	9705
RAISED PAVEMENT MARKER TEMPORARY	AMBY	487
REMOVABLE LANE TAPE	LIN FT	3700
4" SOLID LINE WHITE - PAINT	LIN FT	8800
4" SOLID LINE YELLOW - PAINT	LIN FT	600
4" DOUBLE YELLOW PAINT	LIN FT	4400
PAVEMENT MSSG (RT ARROW) PREFORMED THERMOPLASTIC	EACH	1
PAVEMENT MSSG (RT/THRU ARROW) PREFORMED THERMOPLASTIC	EACH	4
PAVEMENT MSSG (LT ARROW) PREFORMED THERMOPLASTIC	EACH	5
PAVEMENT MSSG (THRU ARROW) PREFORMED THERMOPLASTIC	EACH	4
24" SOLID LINE YELLOW - PREFORMED THERMOPLASTIC	LIN FT	392
24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	132
3' x 6' CROSSWALK MARKING - PREFORMED THERMOPLASTIC	SQ FT	648
4" SOLID LINE WHITE - EPOXY	LIN FT	8652
4" SOLID LINE YELLOW - EPOXY	LIN FT	370
4" BROKEN LINE WHITE - EPOXY (10 FT STRIPE / 40 FT GAP)	LIN FT	1270
8" BROKEN LINE WHITE - EPOXY (3 FT STRIPE / 12 FT GAP)	LIN FT	153
4" BROKEN LINE YELLOW - EPOXY (10 FT STRIPE / 40 FT GAP)	LIN FT	80
4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	5048

**SYMBOLS & MATERIALS LEGEND**

CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

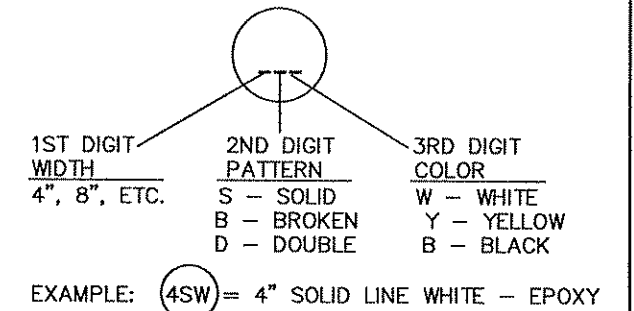
PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

**STRIPING KEY**

CIRCLE - EPOXY SQUARE - PREFORMED THERMOPLASTIC

TRIANGLE - PAINT

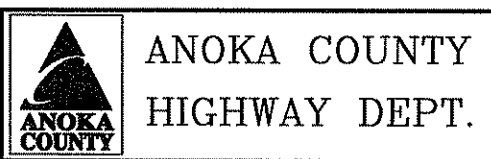
PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



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:   
 DATE: 5-18-12 LICENSE NO. 24756

DRAWN BY: MTH DATE 4/01/12  
 DESIGN BY: MTH DATE 4/01/12  
 CHECKED BY: JR DATE 4/01/12



S.P. 002-607-019

TEMPORARY & PERMANENT PAVEMENT MARKING NOTES & TABULATION  
 Sheet 53 of 85 Sheets



SIGN PANELS TYPE C

M.U.T.C.D. CODE	SIZE	INSERT	QTY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R1-1	30" x 30"		17	6.25	106.25	1	7.0'
X4-13	4" diameter x 15"		17				
R2-1	24" x 30"		1	5.00	5.00	1	7.0'
R2-1	24" x 30"		3	5.00	15.00	1	7.0'
R3-7	30" x 30"		1	6.25	6.25	1	7.0'
R3-30ACA	54" x 30"		1	11.25	11.25	1	7.0'
R3-30ACD	48" x 30"		3	10.0	30.00	1	7.0'
R8-3a	24" x 24"		4	4.00	16.00	1	7.0'

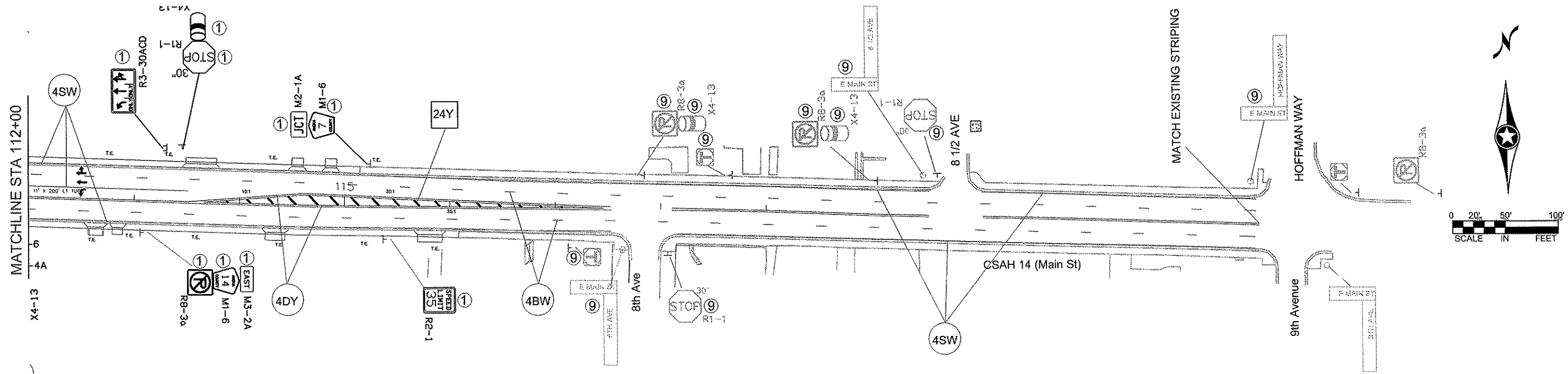
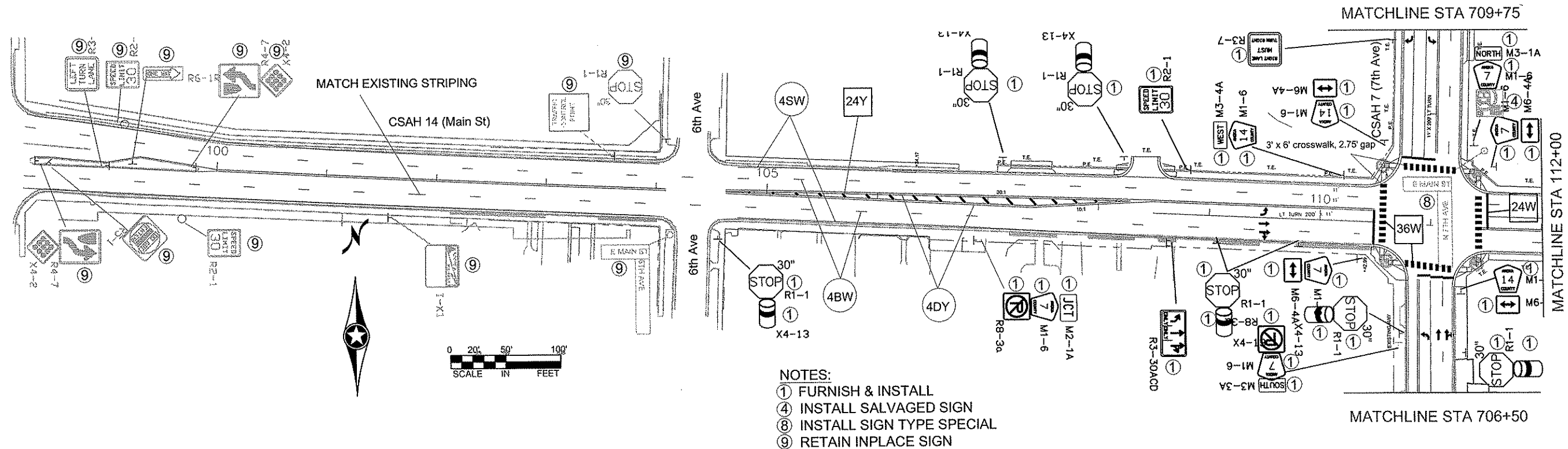
SIGN PANELS TYPE C

M.U.T.C.D. CODE	SIZE	INSERT	QTY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
W9-1	36" x 36"		1	9.00	9.00	2	
W20-100p	24" x 18"		1	3.00	3.00		7.0'
W14-3	48" x 36"		1	6.00	6.00	2	7.0'
M2-1	21" x 15"		2	2.19	4.38	1	7.0'
M3-1A	24" x 12"		1	2.00	2.00		
M3-3A	24" x 12"		1	2.00	2.00		
M1-6	24" x 24"		6	4.00	24.00	1	7.0'
M6-4A	21" x 15"		2	2.19	4.38		
M2-1	21" x 15"		2	2.19	4.38	1	7.0'
M3-2A	24" x 12"		1	2.00	2.00		
M3-4A	24" x 12"		1	2.00	2.00		
M1-6	24" x 24"		6	4.00	24.00	1	7.0'
M6-4A	21" x 15"		2	2.19	4.38		
<b>TOTAL</b>			<b>74</b>		<b>281.25</b>	<b>50</b>	

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 JANUARY, 2011
- 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.

1	1/06/2012	MTH	RB	REVISION DUE TO REDUCING LANE WIDTHS TO 11 FEET.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: CURT A. KOBILARCSIK SIGNATURE: DATE: 5-18-12 REG. NO. 24756	DRAWN BY: MTH DATE 10/11/11 DESIGN BY: MTH DATE 10/11/11 CHECKED BY: JR DATE 4/13/12	ANOKA COUNTY HIGHWAY DEPT.	S.P. 002-607-019	PERMANENT SIGNING QUANTITY Sheet 54 of 85 Sheets
NO	DATE	BY	CKD	APPR		REVISION			
NAME: P:\02-607-019\Bases\TRAFFIC\Permanent Signing & Striping.dwg									



1	1/06/2012	MTH	RB		REVISION DUE TO REDUCING LANE WIDTHS TO 11 FEET.
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-607-019\Base\TRAFFIC\Permanent Signing & Striping.dwg					

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

PRINT NAME: CURT A. KOBILARCSIK

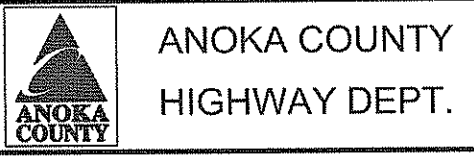
SIGNATURE: *Curt Kobilarcsik*

DATE: 5-18-12 REG. NO. 24756

DRAWN BY: MTH DATE 10/11/11

DESIGN BY: MTH DATE 10/11/11

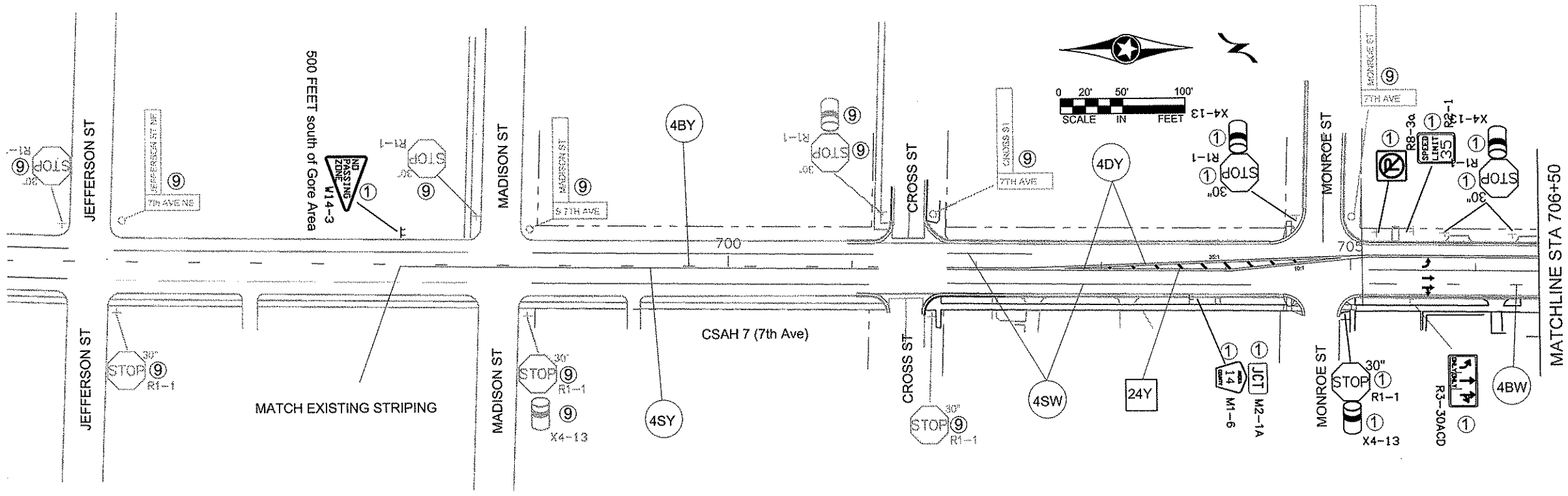
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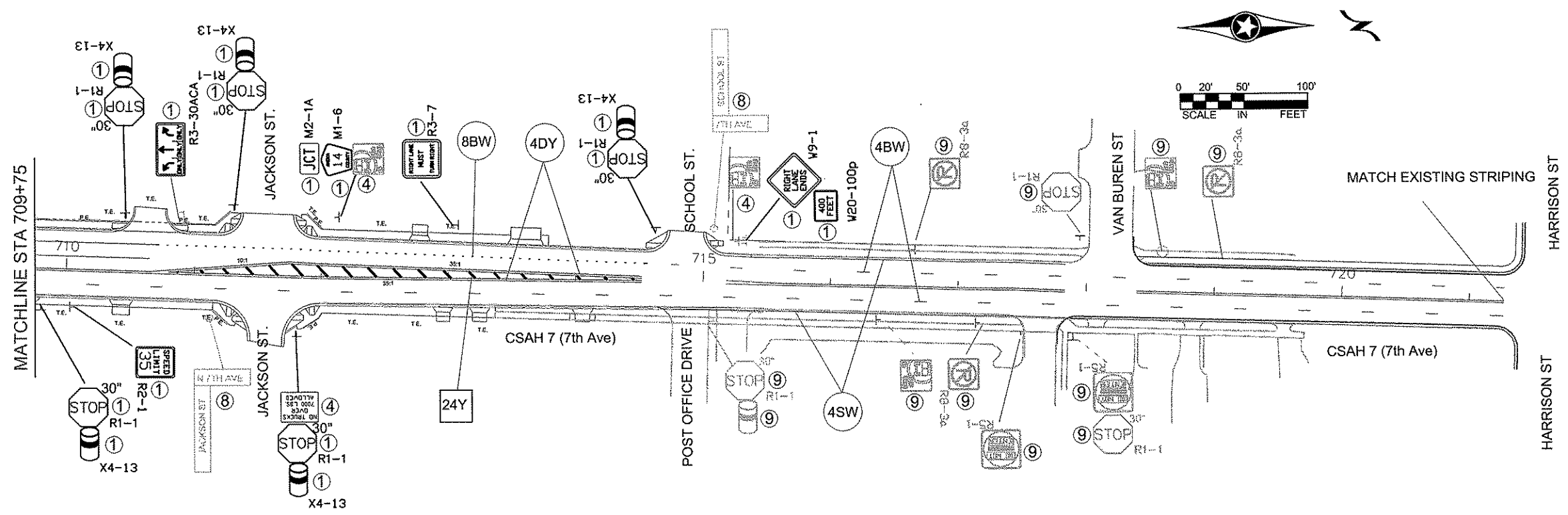
S.P. 002-607-019

PERMANENT SIGNING AND STRIPING PLAN

Sheet 55 of 85 Sheets



- NOTES:
- ① FURNISH & INSTALL
  - ④ INSTALL SALVAGED SIGN
  - ⑧ INSTALL SIGN TYPE SPECIAL
  - ⑨ RETAIN INPLACE SIGN



1	1/06/2012	MTH	RB	REVISION DUE TO REDUCING LANE WIDTHS TO 11 FEET.	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-607-019\Bose\TRAFFIC\Permanent Signing & Striping.dwg					

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PRINT NAME: CURT A. KOBIARCSIK

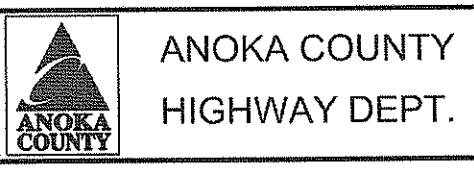
SIGNATURE: *Curt A. Kobilarcsik*

DATE: 5/18/12 REG. NO. 24756

DRAWN BY: MTH DATE 10/11/11

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CHECKED BY: JR DATE 4/13/12

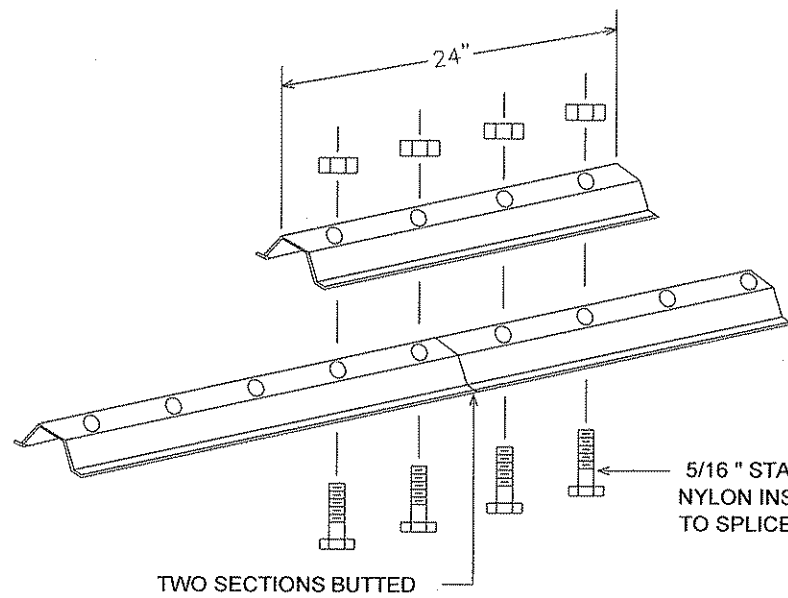


ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-607-019

PERMANENT SIGNING AND STRIPING PLAN

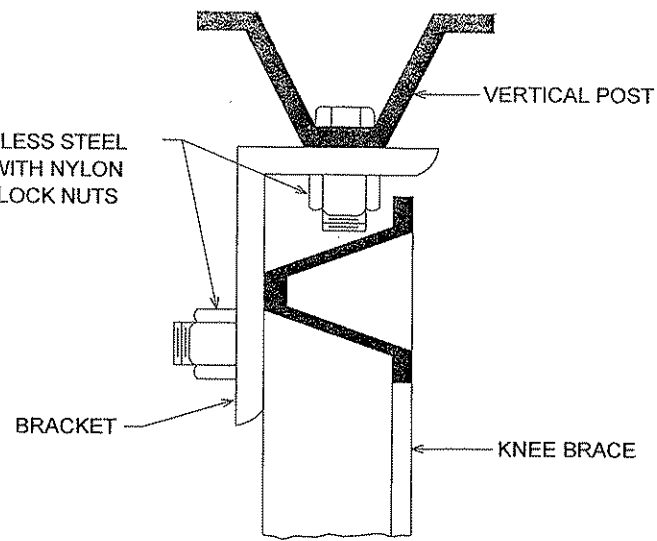
Sheet 56 of 85 Sheets



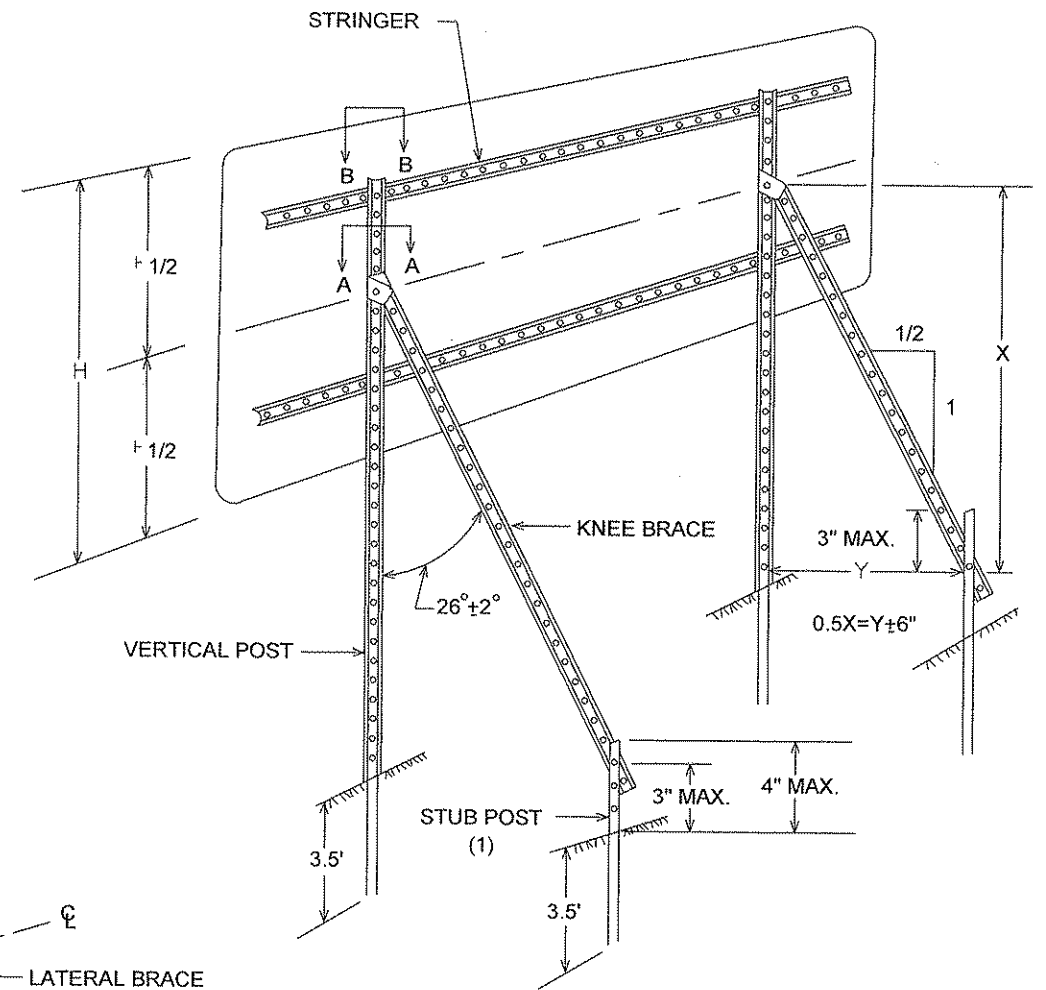
LATERAL BRACE OR STRINGER  
SPLICE DETAIL (EXPLODED VIEW)

5/16" STAINLESS STEEL  
BOLTS WITH NYLON  
INSERT LOCK NUTS

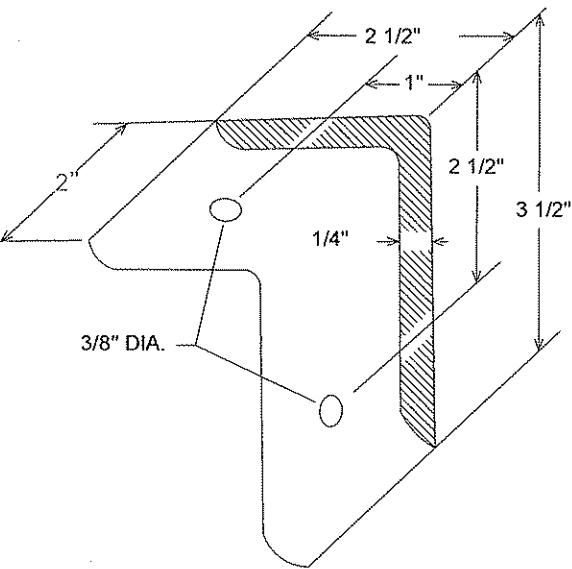
5/16" STAINLESS STEEL BOLTS WITH  
NYLON INSERT LOCK NUTS AS CLOSE  
TO SPLICE & OUTSIDE HOLES.



SECTION A-A

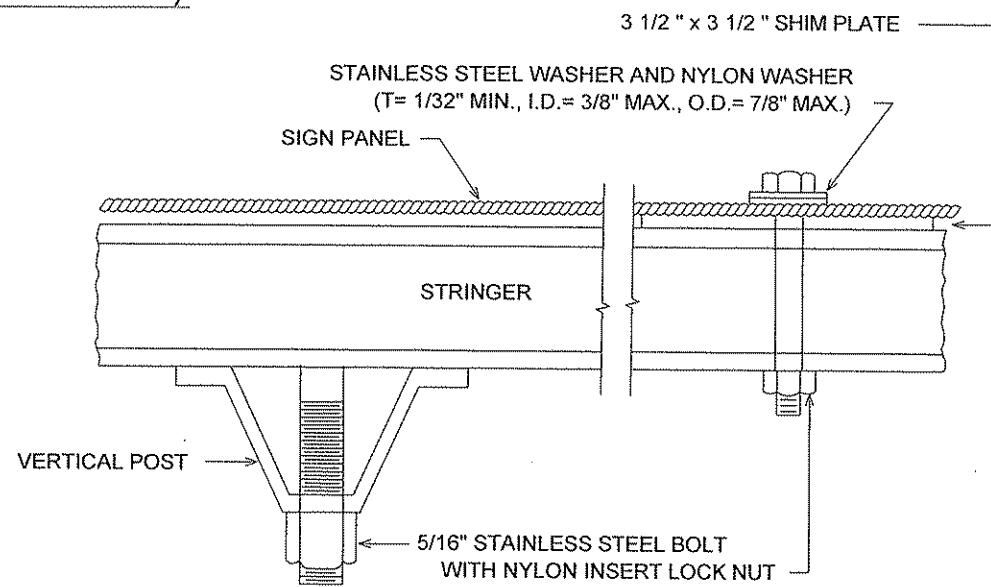


TYPICAL "A-FRAME" INSTALLATION  
TYPE "D" SIGNS

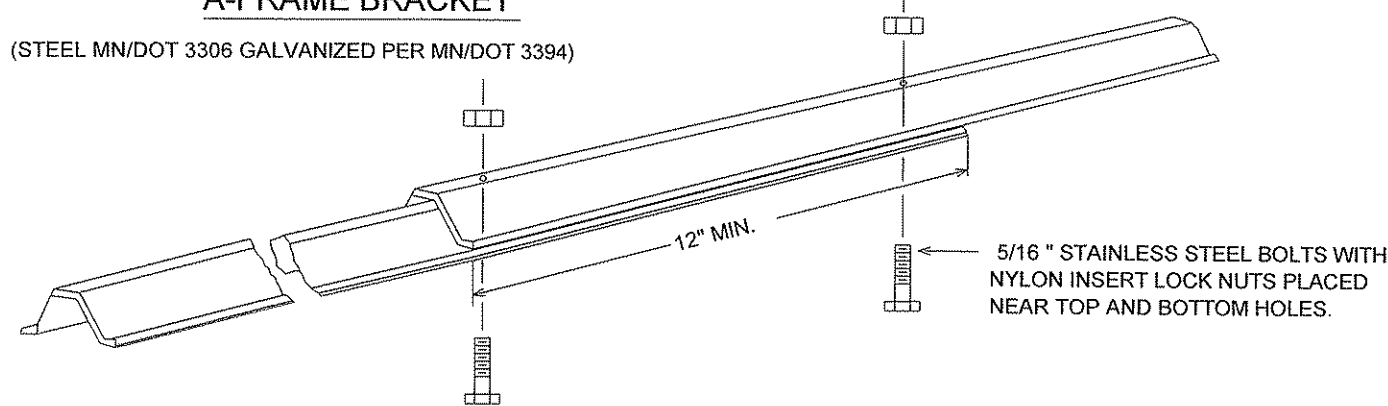


A-FRAME BRACKET

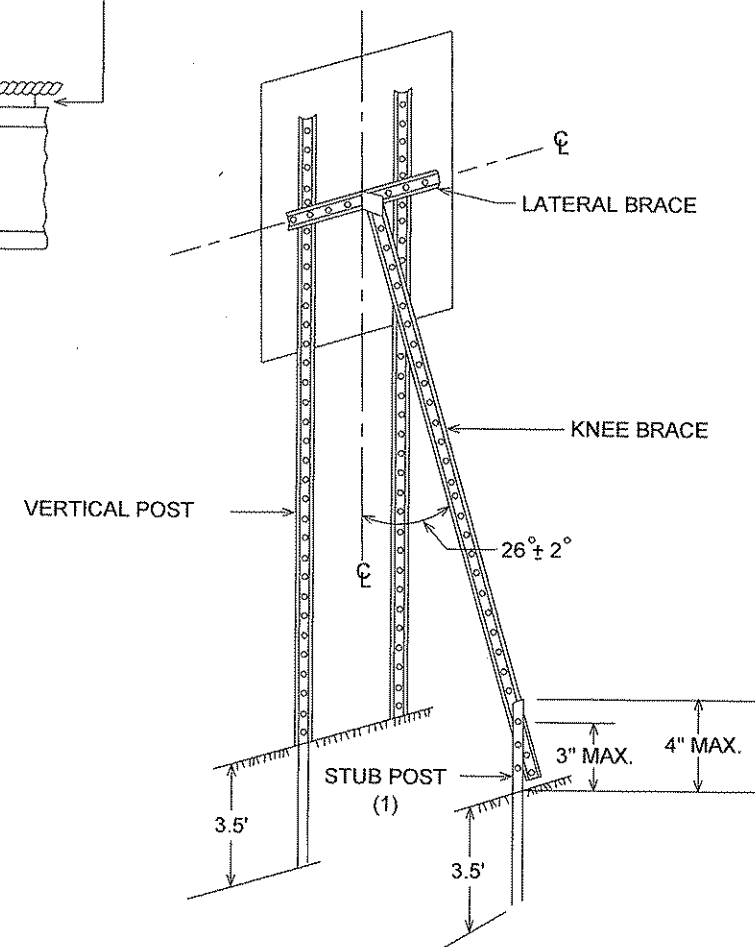
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



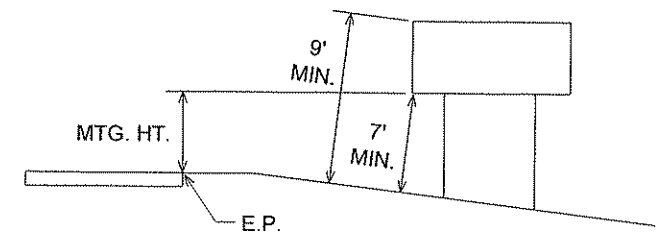
SECTION B-B



KNEE BRACE SPLICE



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



TYPICAL MOUNTING

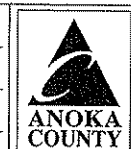
(1) OFFSET STUB POST 1' TOWARD ROADWAY  
RELATIVE TO VERTICAL POST.

TYPE C & D SIGN  
STRUCTURAL DETAILS

NO	DATE	BY	CKD	APPR	REVISION

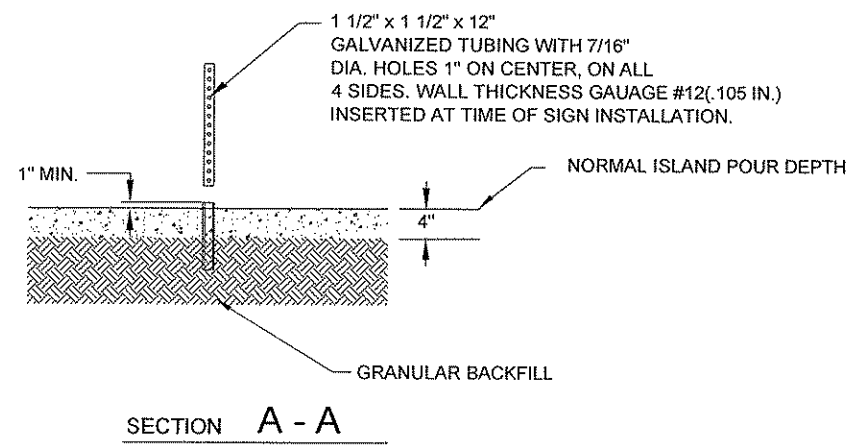
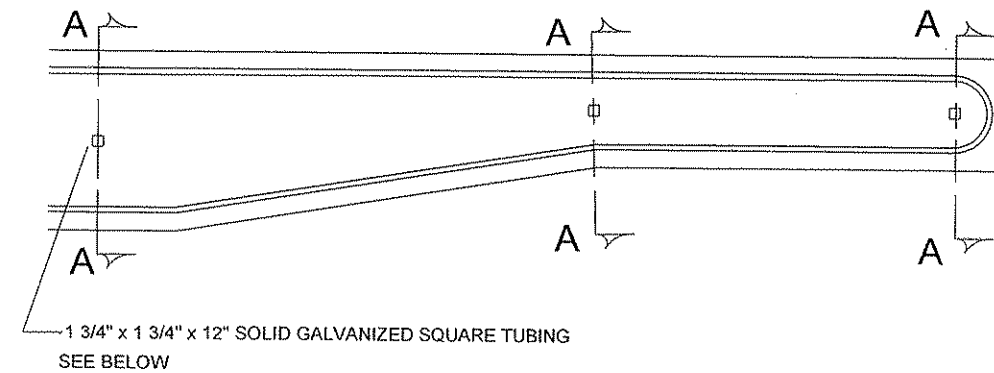
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME  
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY  
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF  
THE STATE OF MINNESOTA.  
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE: *Curt Kobilarcsik*  
DATE: 5-18-12 LICENSE NO. 247546

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

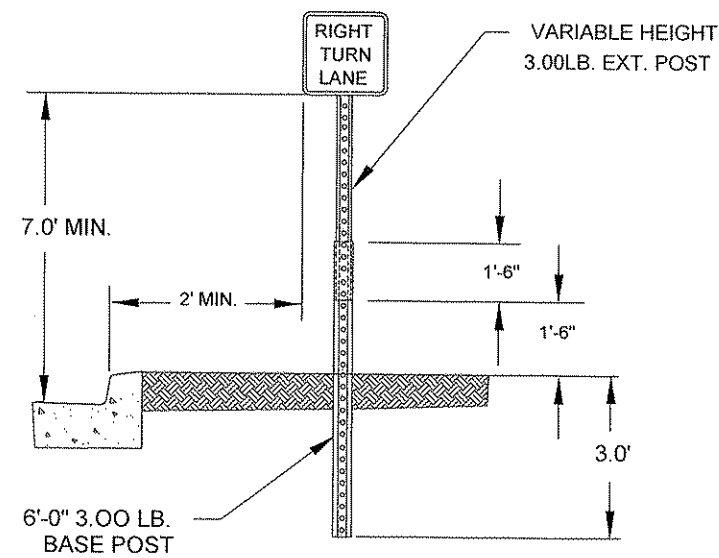


ANOKA COUNTY  
HIGHWAY DEPT.

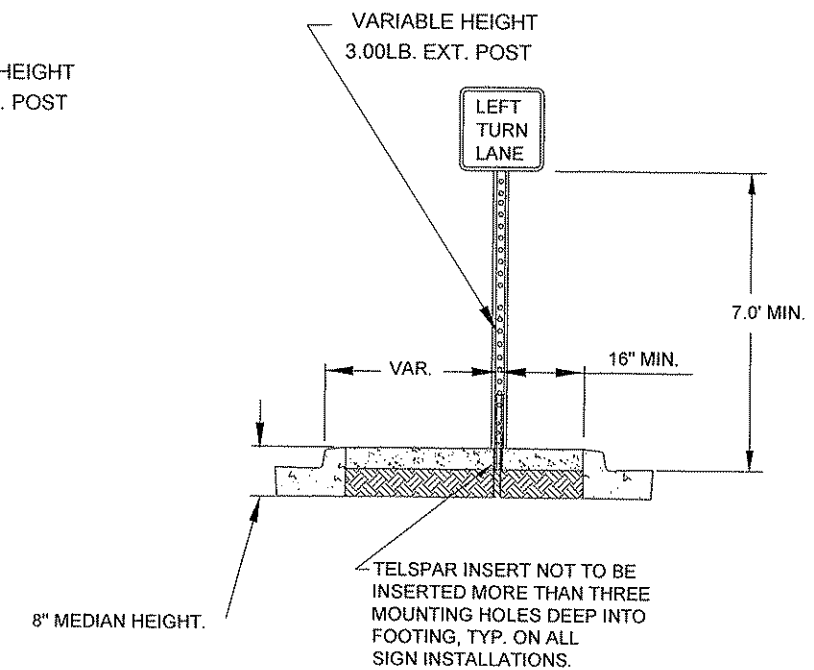
S.P. 002-607-019



GROUND POST MOUNT SIGN  
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN  
INSTALLATION TYPICAL



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: CHRISTOPHER KOBILARCSIK  
SIGNATURE: *[Signature]*  
DATE: 5-18-12 LICENSE NO. 247546

DRAWN BY MTH DATE 3-27-12

DESIGN BY MTH DATE 3-27-12

CHECKED BY JR DATE 3-28-12



ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-607-019

SIGNING DETAILS

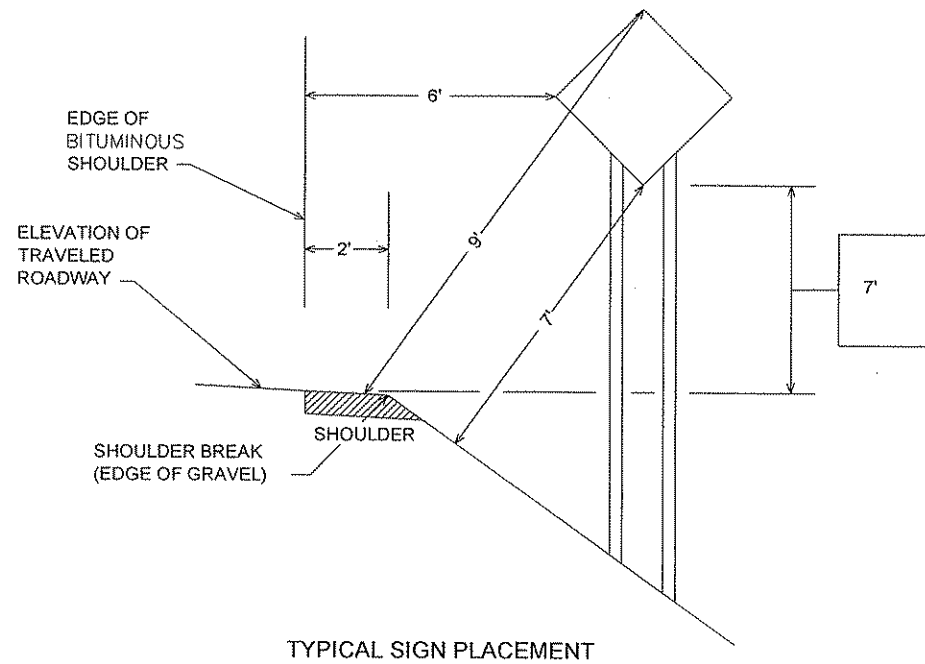
Sheet 58 of 85 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-607-019\Base\TRAFFIC\Sign&Stripe\_Details.dwg

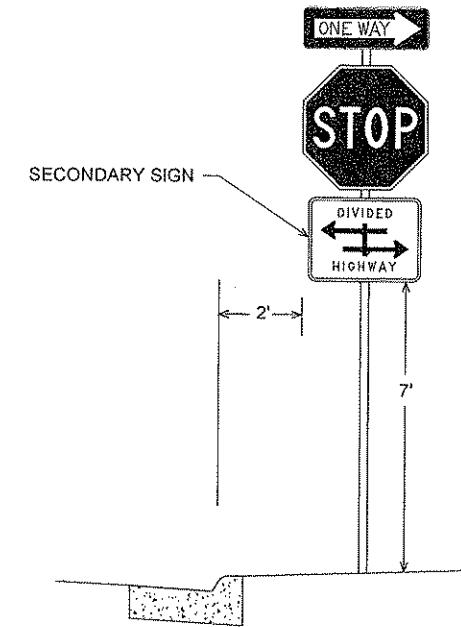
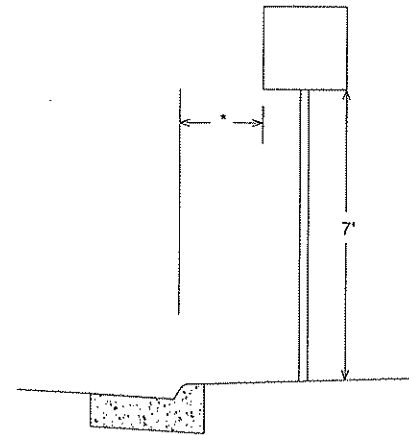


RURAL



URBAN

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



NOTE:

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

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: 5-18-12 LICENSE NO. 247546

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



ANOKA COUNTY  
HIGHWAY DEPT.

S.P. 002-607-019

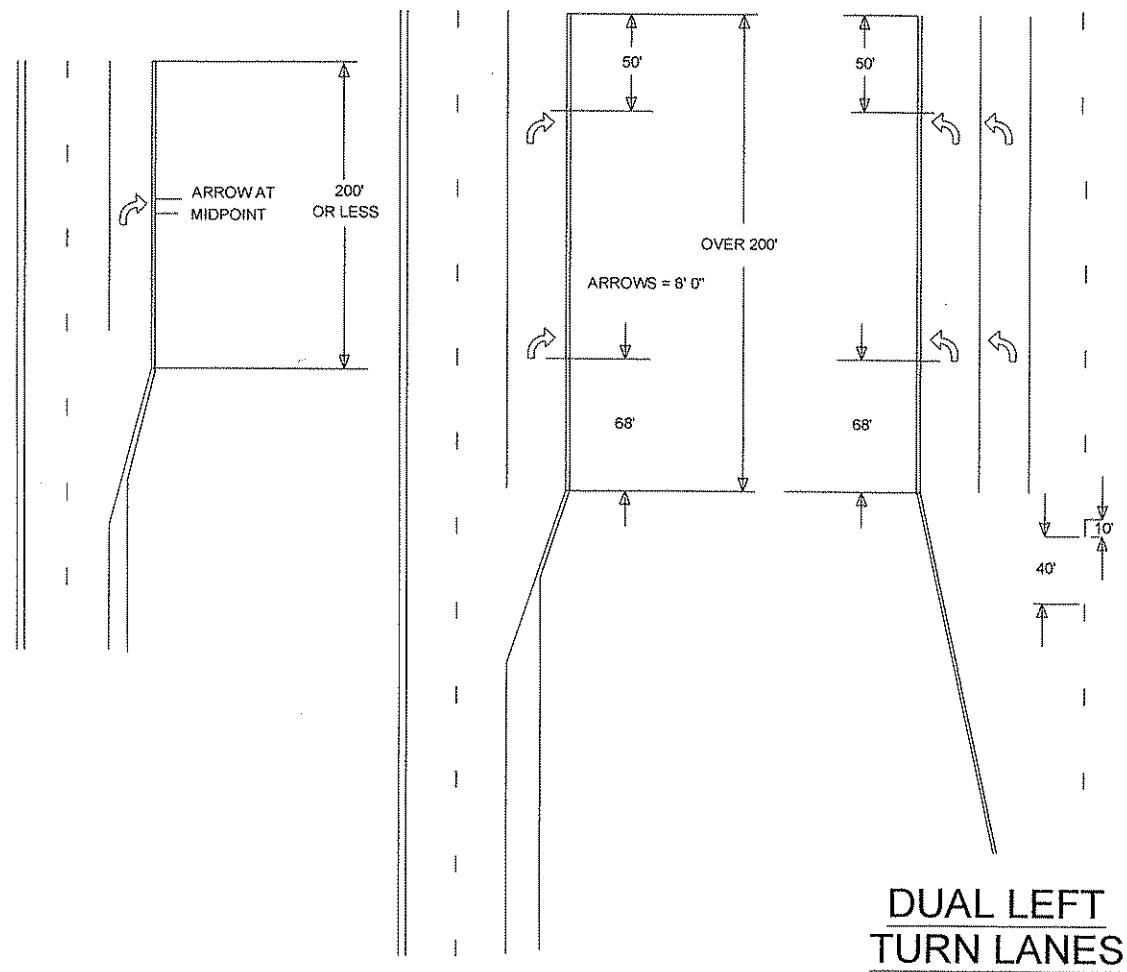
SIGNING DETAILS

Sheet 59 of 85 Sheets

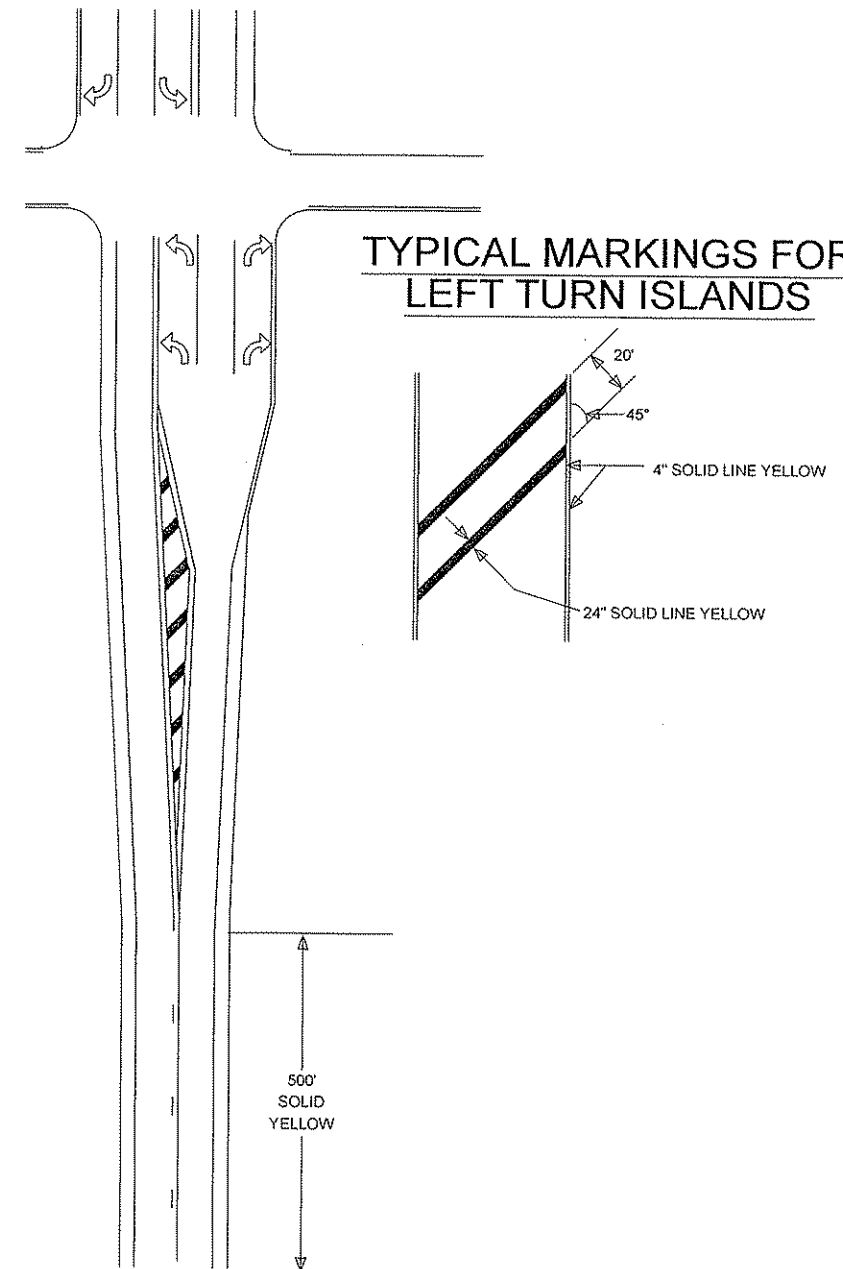
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-607-019\Bose\TRAFFIC\Sign&Stripe\_Details.dwg

**TYPICAL MESSAGE PLACEMENT  
FOR TURN LANES**



**TYPICAL MARKINGS FOR  
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-607-019\Base\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: 5-18-12 LICENSE NO. 247546

DRAWN BY MTH DATE 3-27-12

DESIGN BY MTH DATE 3-27-12

CHECKED BY JR DATE 3-28-12



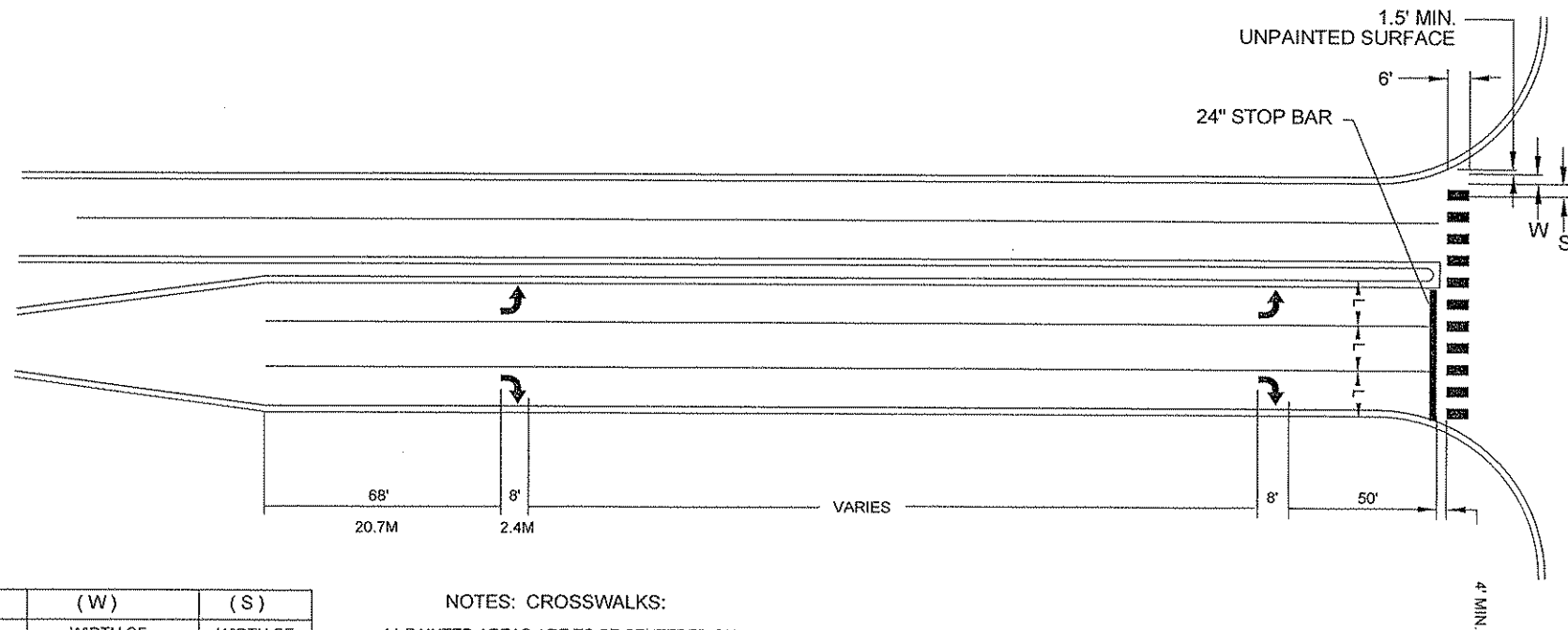
**ANOKA COUNTY  
HIGHWAY DEPT.**

S.P. 002-607-019

STRIPING DETAILS

Sheet 60 of 85 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 RAMP ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES. EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) NSIDE LANE.


NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-607-019\Base\TRAFFIC\Sign&Stripe\_Details.dwg

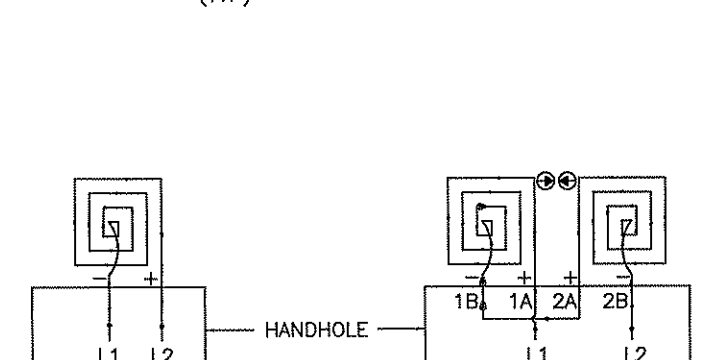
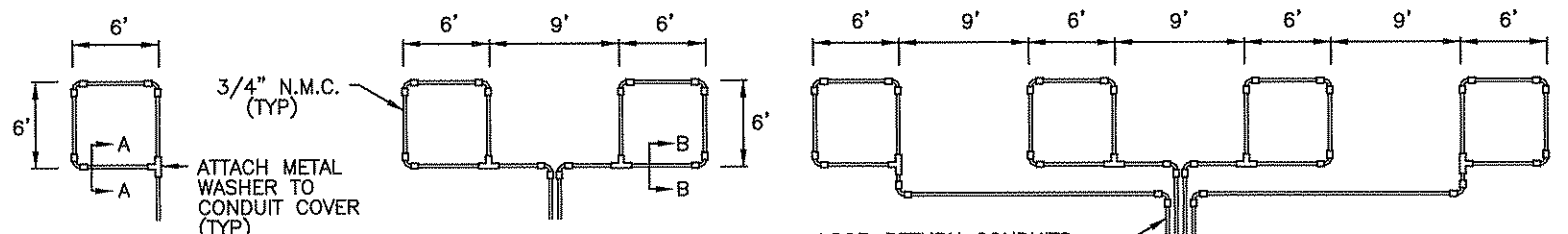
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A. KOBILARCSIK  
 SIGNATURE: *Curt Kobilarcsik*  
 DATE: 5-18-12 LICENSE NO. 247546

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


**ANOKA COUNTY  
HIGHWAY DEPT.**

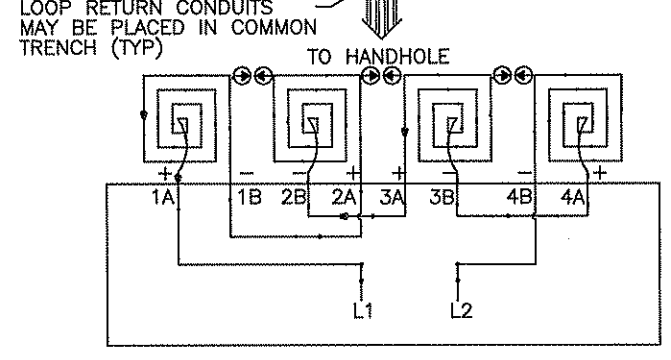
S.P. 002-607-019



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

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

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

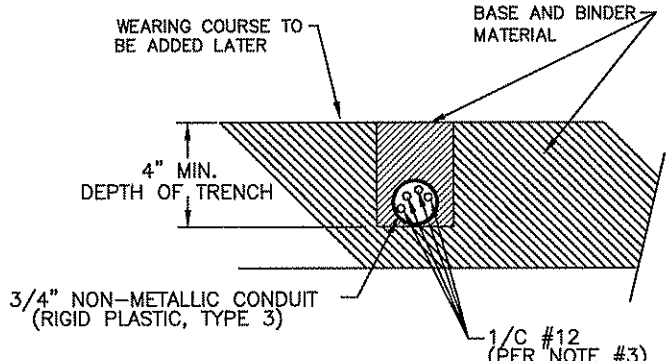


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

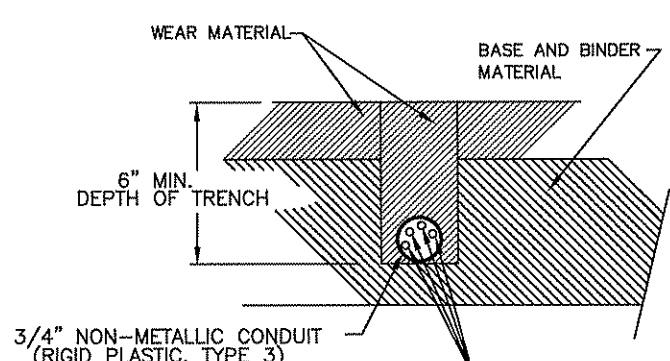
L1 TO 1A      3B TO 4A  
1B TO 2A      4B TO L2  
2B TO 3A

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

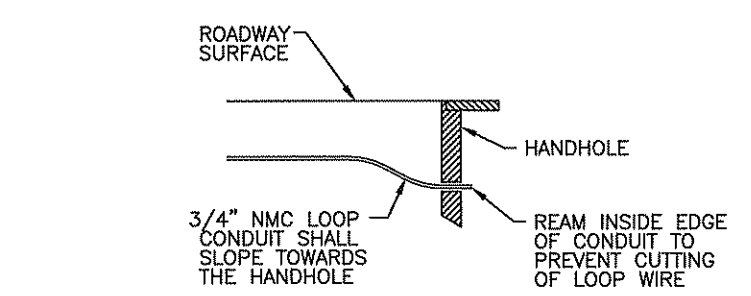
**LOOP DETECTOR DETAIL C**  
(LOOP PHASING FOR SERIES CONNECTION)



**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**

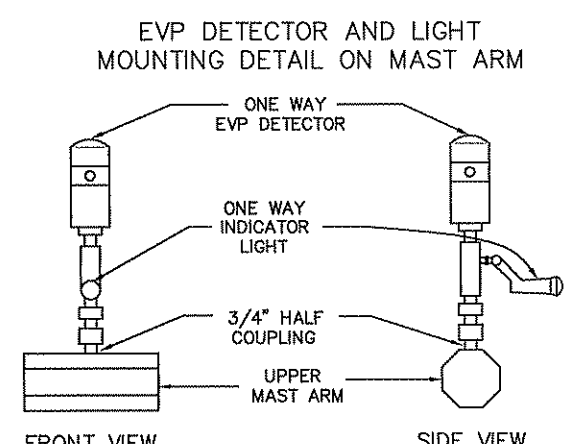
3-1(EG)	SIGNAL HEAD PHASE "3" - NO. "1"	P2-1(EG)	PED INDICATION PHASE "2" - NO. "1"
BR. GR.	BARE GROUND	PB	PUSH BUTTON
CH. SW.	CHECK SWITCH	PB2-1(EG)	PUSH BUTTON PHASE "2" - NO. "1"
CLR	CLEAR	PEC	PHOTOELECTRIC CELL
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	PED	PEDESTRIAN
DWK	DON'T WALK	R	RED
EQG	EQUIPMENT 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	PVC HANDHOLE	EACH	1
2565	2" RIGID STEEL CONDUIT	LIN. FT.	550



**TRAFFIC SIGNAL STANDARD PLATES**

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

PLATE NO.	DESCRIPTION
* 8000 I	STANDARD BARRICADES
* 8114 A	PVC HANDHOLE/PULLBOX (NO VEHICLE LOAD) (2 SHEETS)
* 8118 D	SERVICE EQUIPMENT & POLE-TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
* 8120 P	POLE FOUNDATION (PA85)
* 8121 G	TRANSFORMER BASE & POLE BASE PLATE (2 SHEETS)
* 8123 G	POLE & MAST ARM-LUMINAIRES & TRAFFIC LIGHTS ASSEMBLY (2 SHEETS)
* 8126 J	POLE FOUNDATION (PA90 & PA100)

\* - APPLIES TO THIS PROJECT

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.

*JMG*  
Name: John M. Gray, PE  
Date: May 30, 2012  
Lic. No. 22457

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

**ANOKA COUNTY, MN**  
CITY OF ANOKA

**TRAFFIC SIGNAL SYSTEM**  
DETAILS AND STANDARD PLATES  
CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)

FILE NO. ANOKC 116208  
SIGNAL SHEET SG1 OF SG10

**62**  
**85**

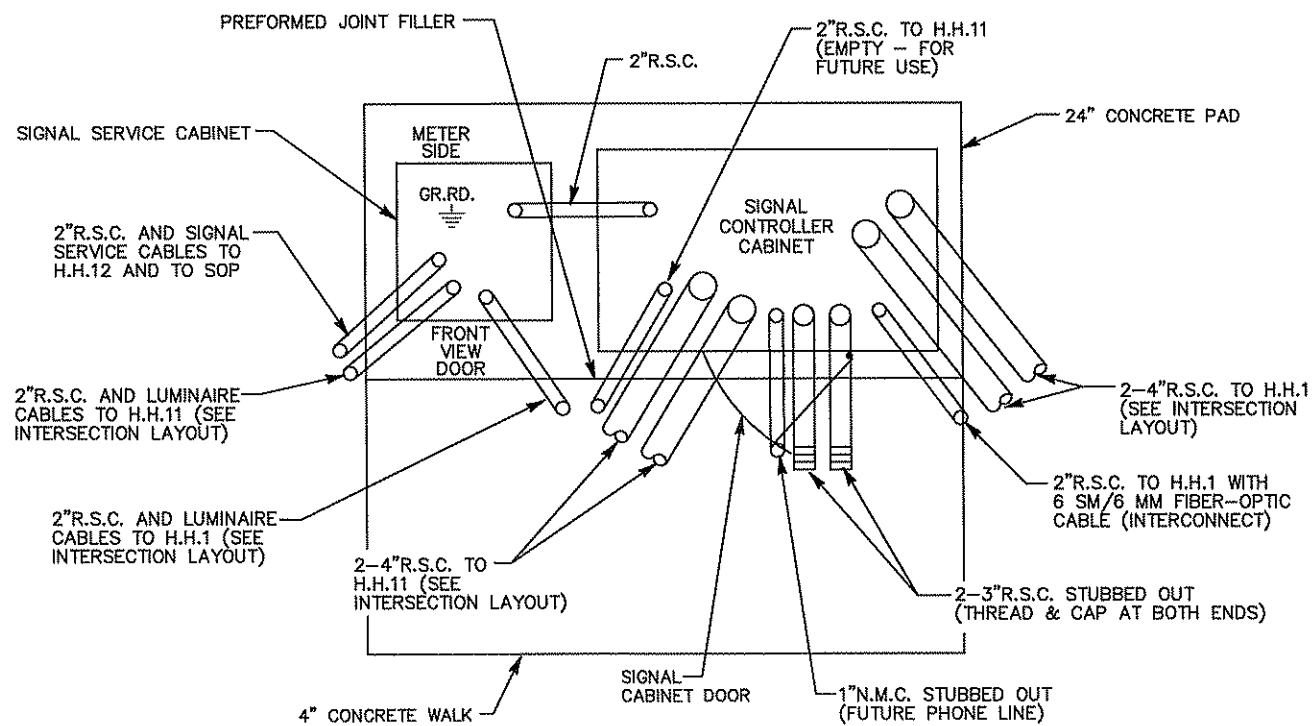
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S.P. 002-607-019

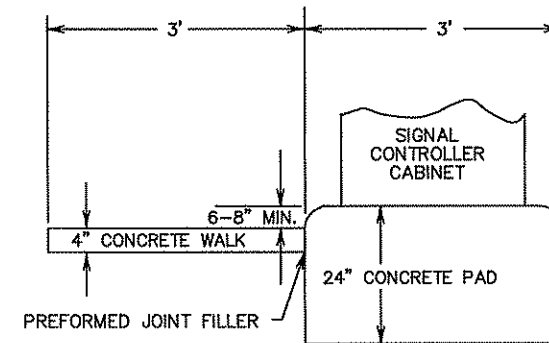
# TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)

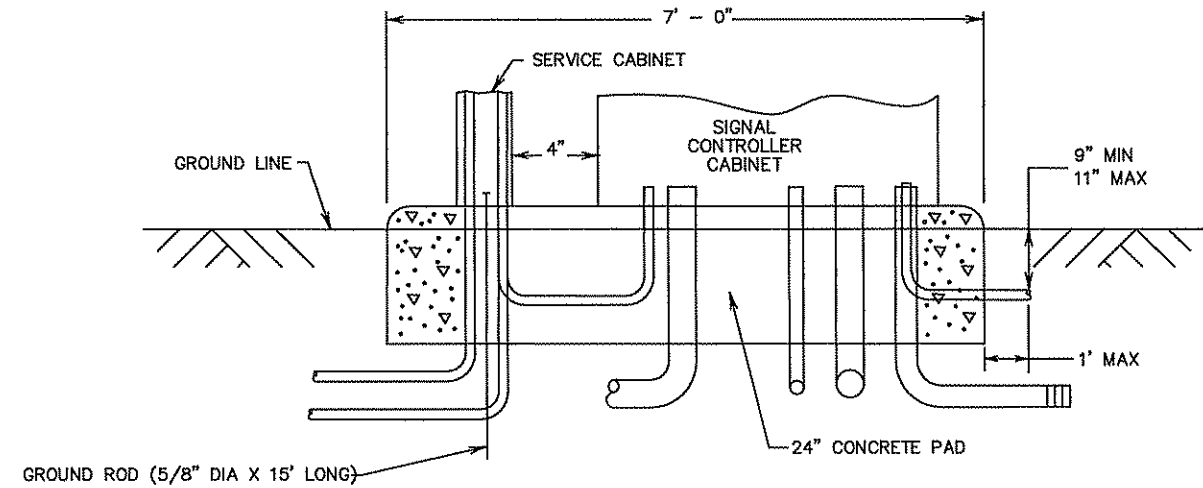
**PLAN VIEW**  
CSAH 7 (7TH AVENUE) AT CSAH 14 (MAIN STREET)



**SIDE VIEW**



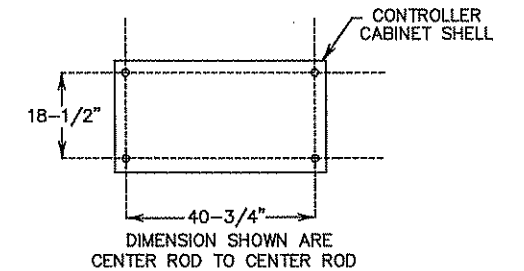
**FRONT VIEW**



**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. 002-607-019

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DESIGNER: JMG  
CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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Date: May 30, 2012 Name: John M. Gray, PE Lic. No. 22457

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

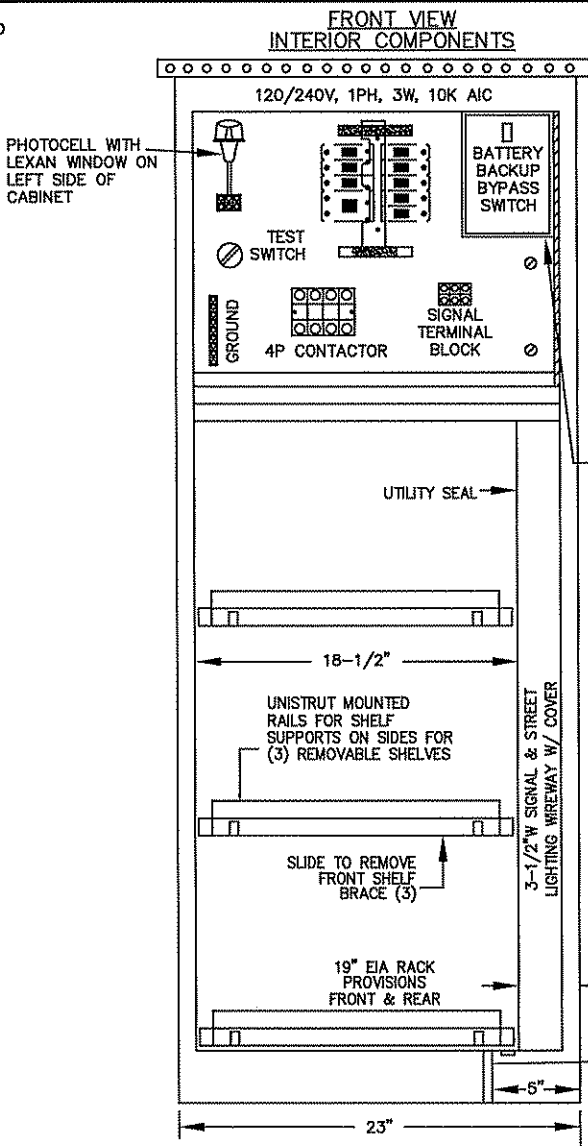
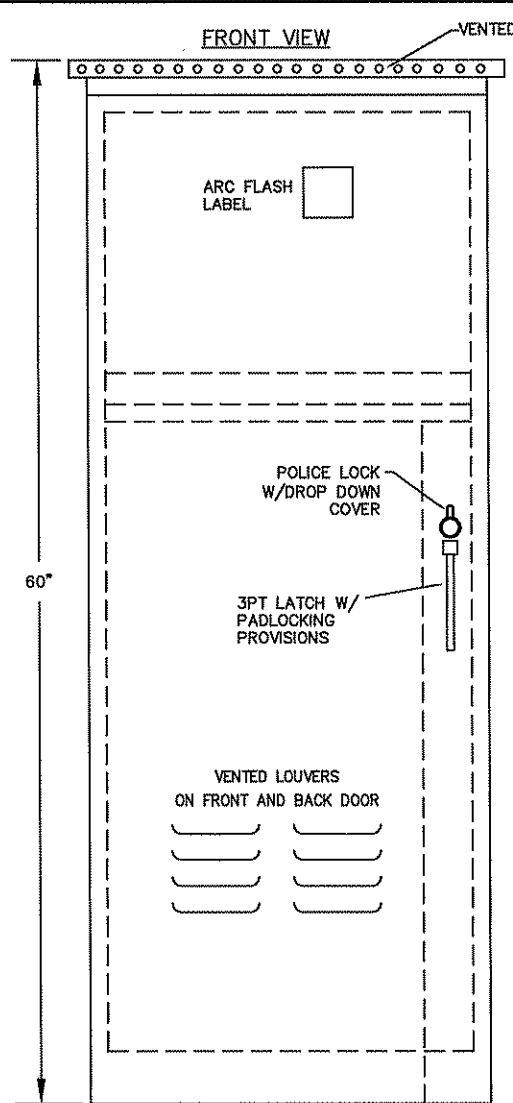
ANOKA COUNTY, MN  
CITY OF ANOKA

TRAFFIC SIGNAL SYSTEM  
EQUIPMENT PAD DETAILS  
CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)

FILE NO. ANOKC 116208  
SIGNAL SHEET SG2 OF SG10  
63  
85

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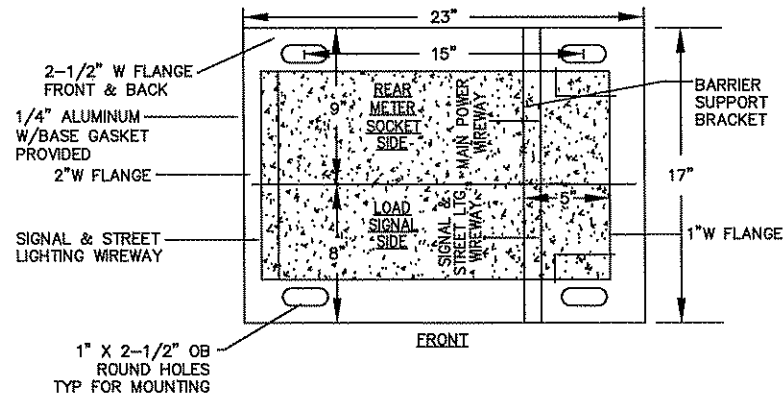
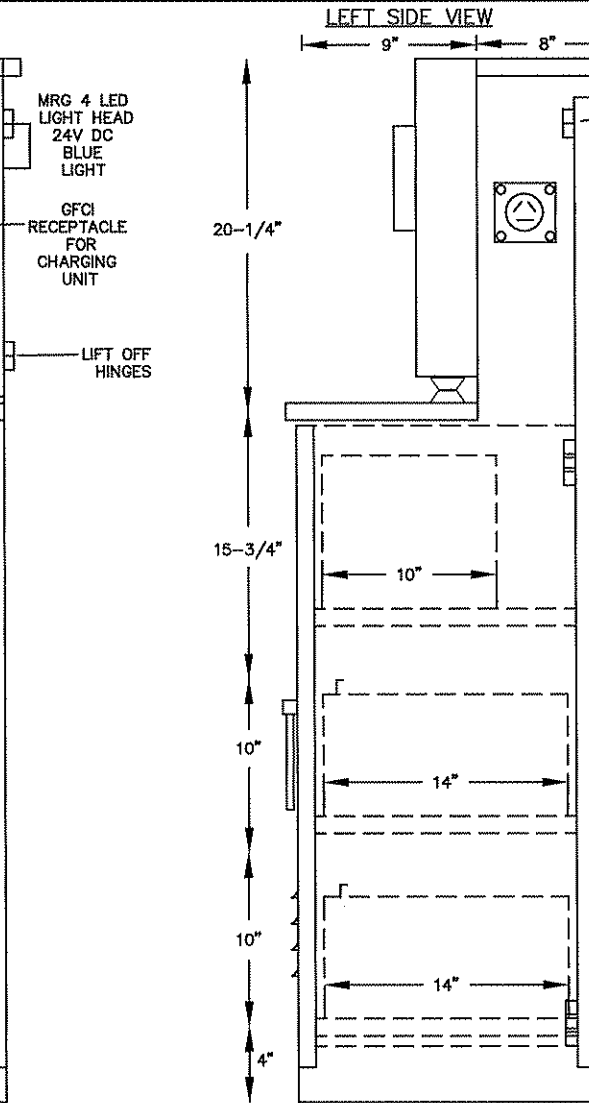
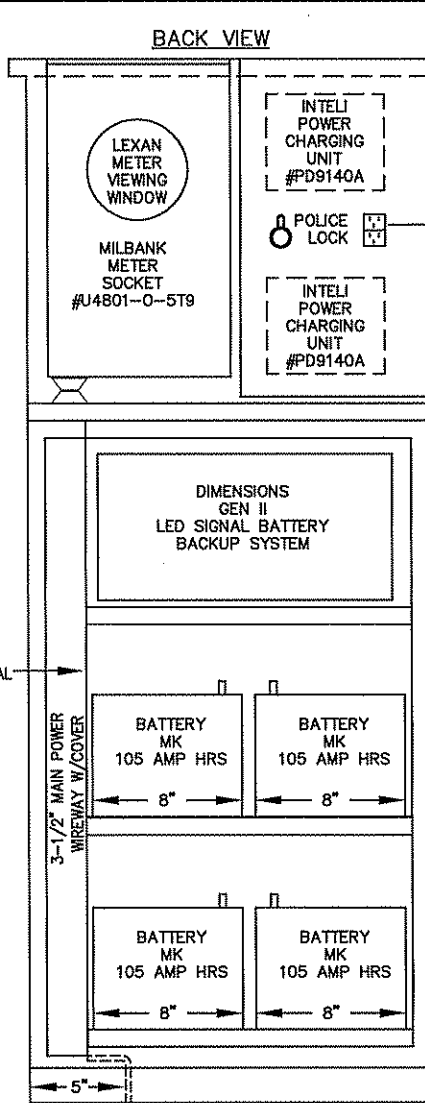




- LOAD CENTER CIRCUIT BREAKERS ITE "Q" TYPE  
 1-100A/2P SERVICE DISCONNECT  
 1-20A/1P GFCI RECEPTACLE  
 1-15/1P PHOTOCELL  
 4-15A/1P LUMINAIRES  
 1-30A/1P SIGNAL SVC  
 1 SPARE

CUTOUT PROVISIONS IN DEAD FRONT FOR BATTERY BACKUP BYPASS SWITCH

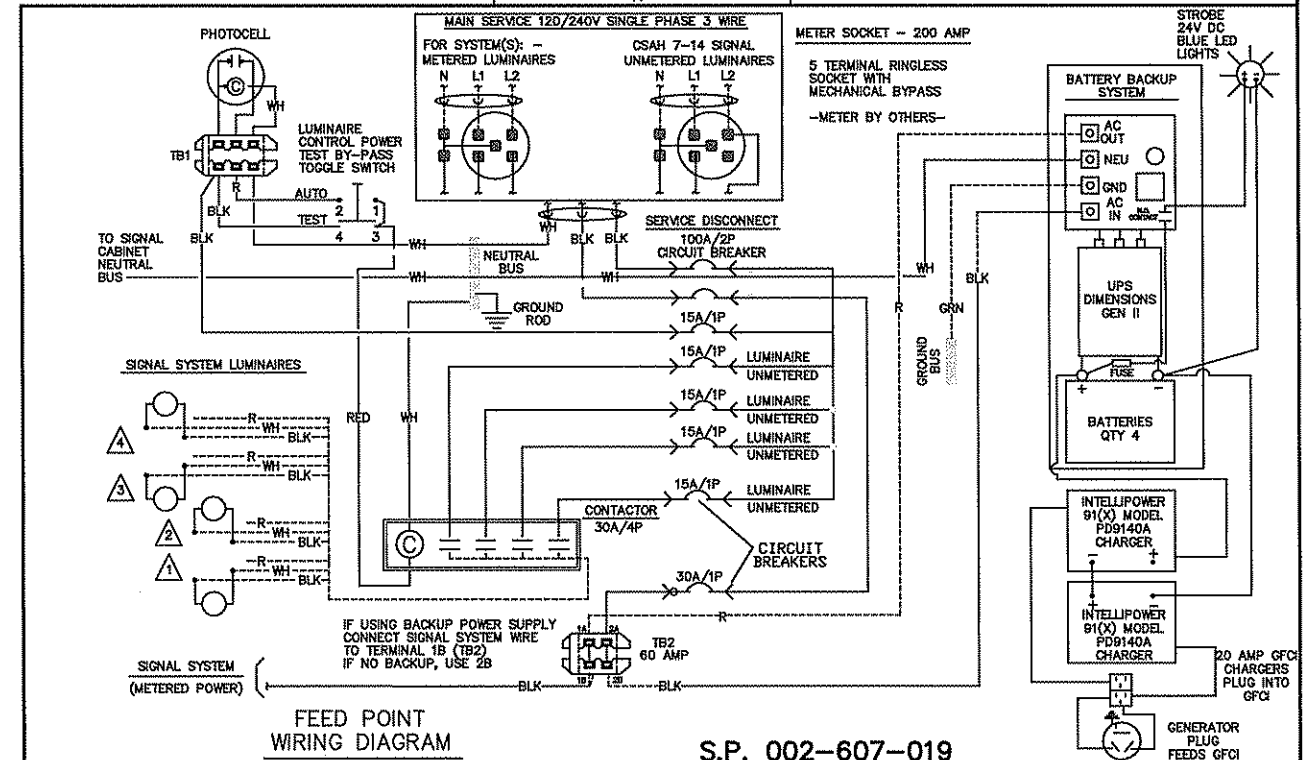
INTERIOR COMPONENTS BEHIND HINGED DEAD FRONT W/ (2)-1/4 TURN LATCHES



**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.



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 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: May 30, 2012 Name: John M. Gray, PE Lic. No. 22457

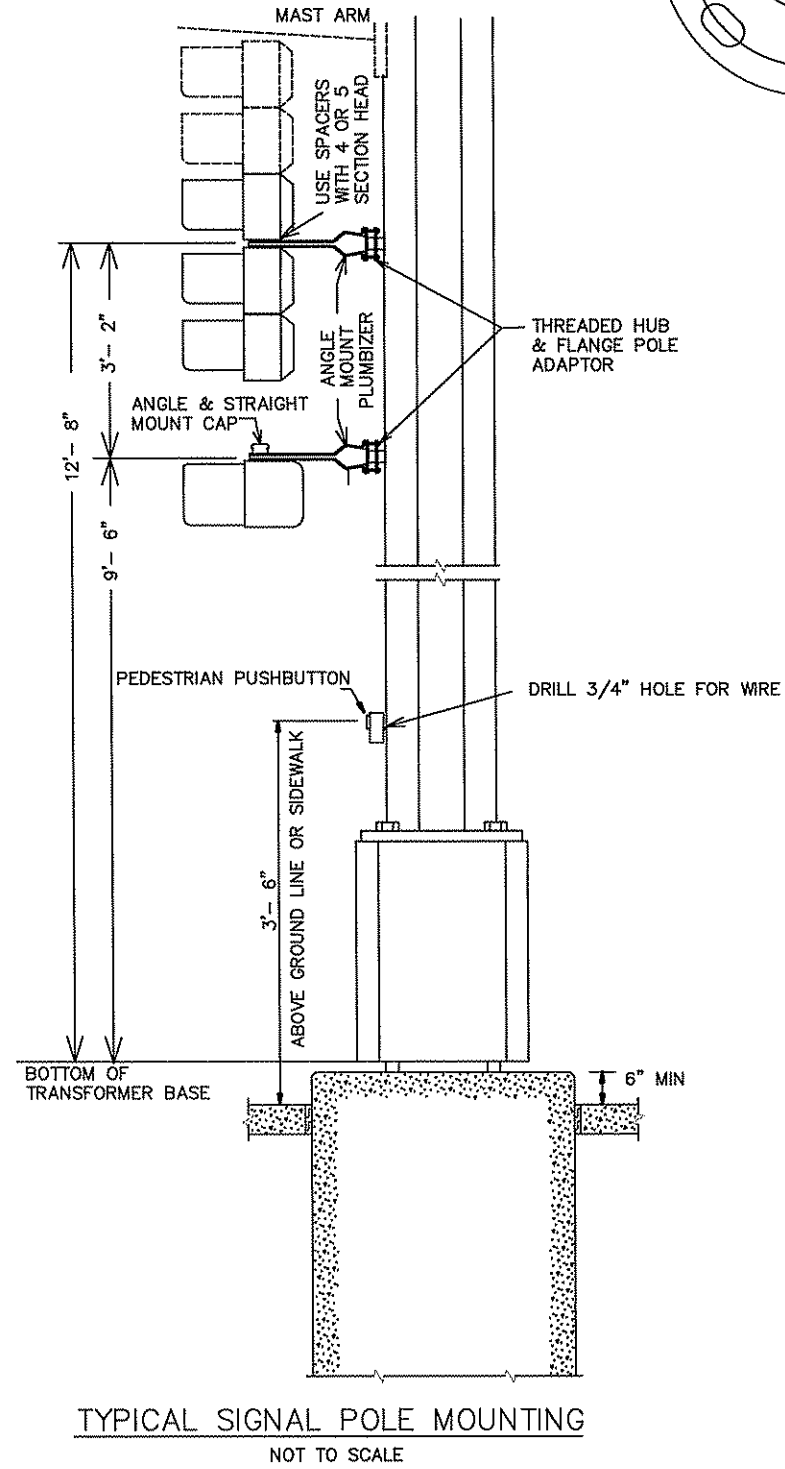
PHONE: (651) 490-2000  
 3535 WADNAIS CENTER DR.  
 ST. PAUL, MN 55110

**ANOKA COUNTY, MN**  
**CITY OF ANOKA**

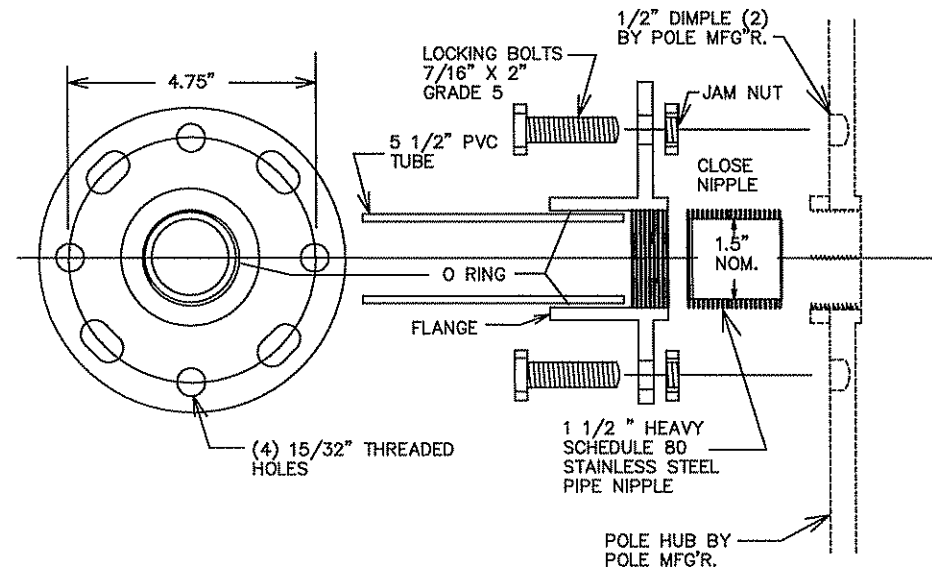
**TRAFFIC SIGNAL SYSTEM**  
**SERVICE CABINET DETAILS**  
 CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)

FILE NO. ANOKC 116208  
 SIGNAL SHEET SG3 OF SG10  
**64**  
**85**

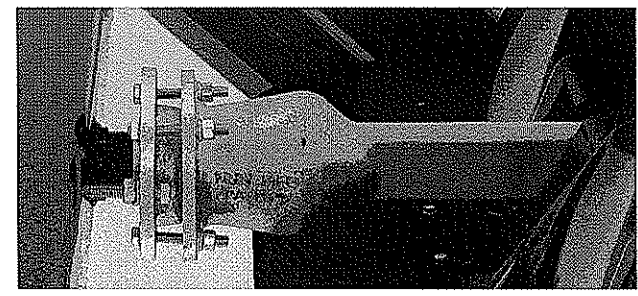
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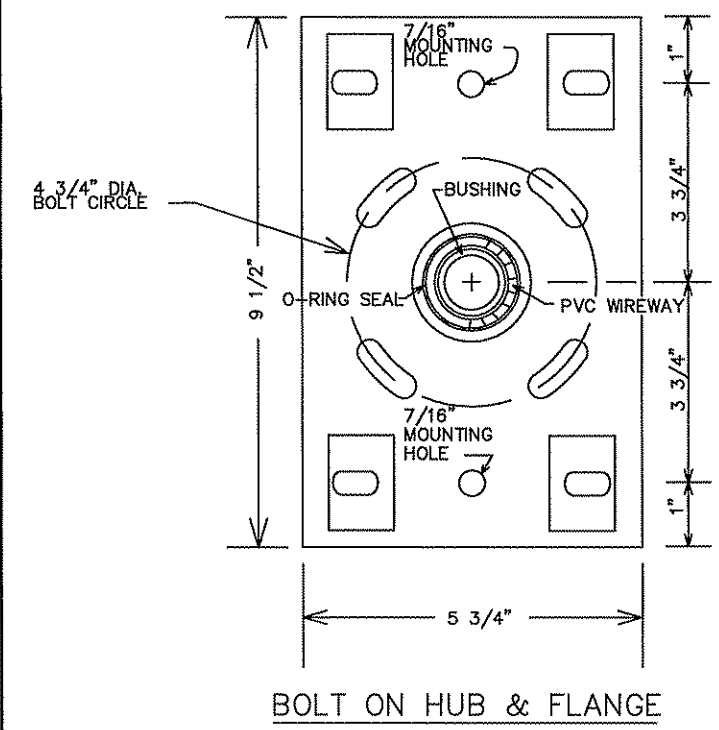
**TYPICAL SIGNAL POLE MOUNTING**  
NOT TO SCALE



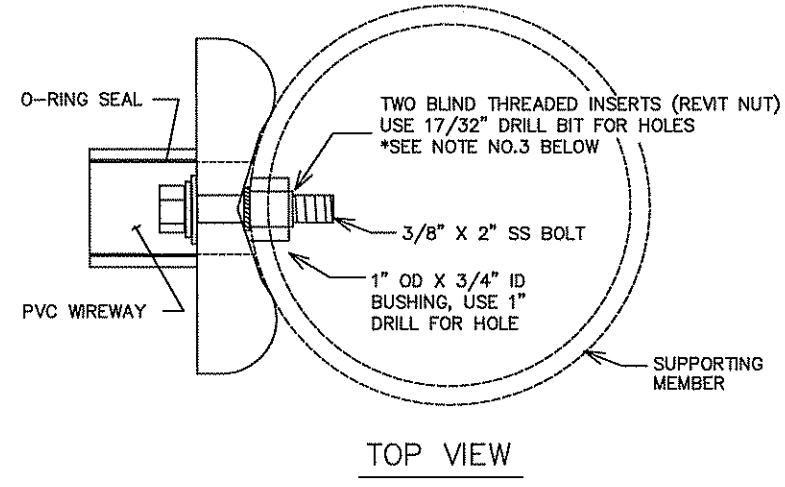
**THREADED HUB AND FLANGE POLE ADAPTOR**



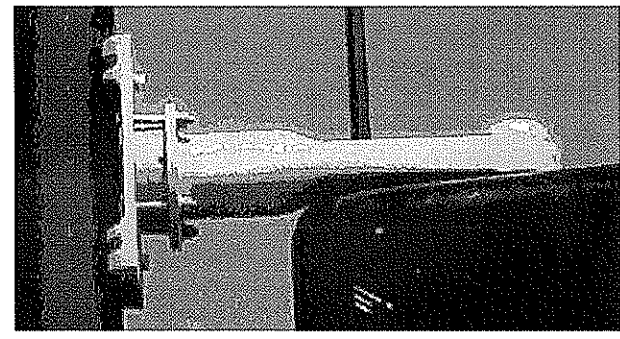
- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
  2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4. & 5 SECTION POLY HEADS.
  3. SEE STANDARD PLATE NUMBER 8123 FOR ADDITIONAL SIGNAL POLE DETAILS.



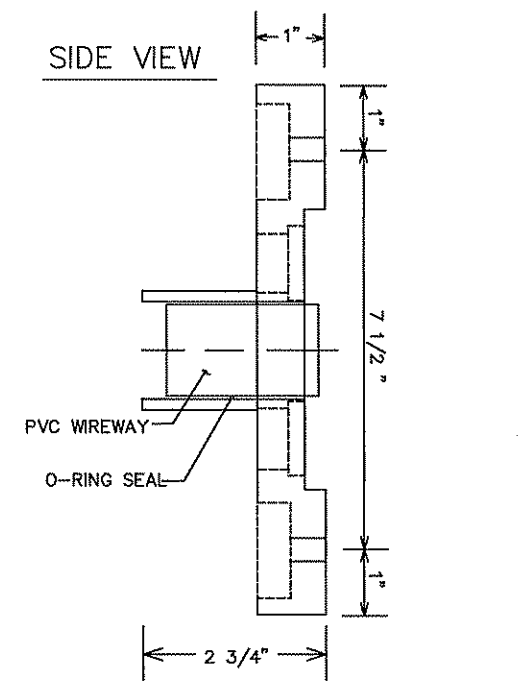
**BOLT ON HUB & FLANGE**



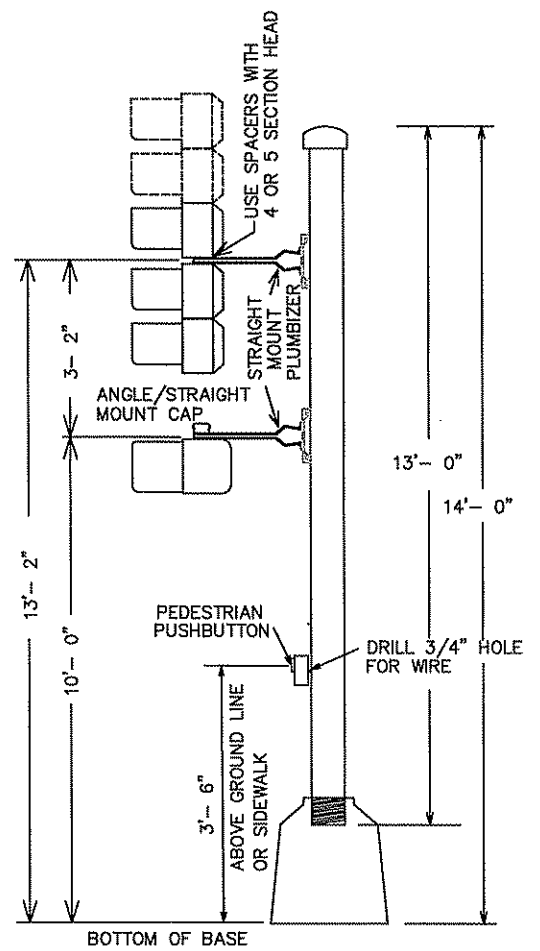
**TOP VIEW**



- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
  2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 & 5 SECTION POLY HEADS.
  3. BLIND THREADED INSERTS (RIVET NUT) MUST BE INSTALLED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
  4. SEE STANDARD PLATE NUMBER 8122 FOR ADDITIONAL PEDESTAL POLE DETAILS.



**TYPICAL PEDESTAL MOUNTING**  
NOT TO SCALE



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

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**ANOKA COUNTY, MN**  
CITY OF ANOKA

**TRAFFIC SIGNAL SYSTEM**  
POLE MOUNT DETAILS  
CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)

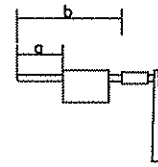
FILE NO. ANOKC 116208  
SIGNAL SHEET 65  
SG4 OF SG10 85

S.P. 002-607-019

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.	b
D-1	90x24	1	4	-	15.00	1	25'
D-2	90x24	1	4	-	15.00	2	25'
D-3	90x24	1	4	-	15.00	3	25'
D-4	90x24	1	4	-	15.00	4	25'
TOTALS		4			60.00		

(\*\*)= 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.

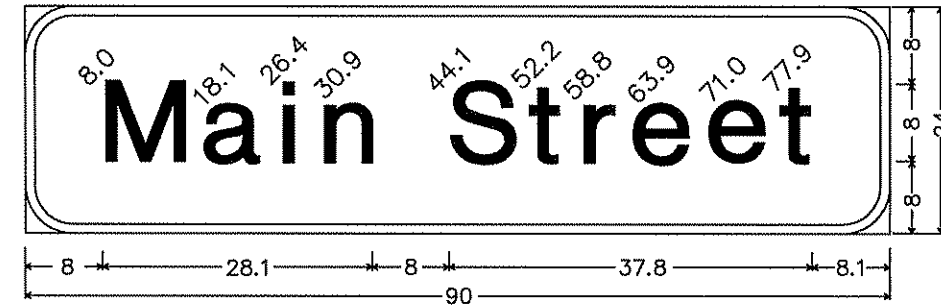
MAST ARM POLE MOUNTED SIGNS							
SIGN PANELS - TYPE C (FURNISH AND INSTALL)							
SIGN PANEL	SIZE (In.)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (In.)	SQ. FT. PER SIGN	POLE NO.	a
R10-12	36x48	4	2	-	12.00	1,2,3,4	1'
TOTALS		4			48.00		



GENERAL SIGNING NOTES:

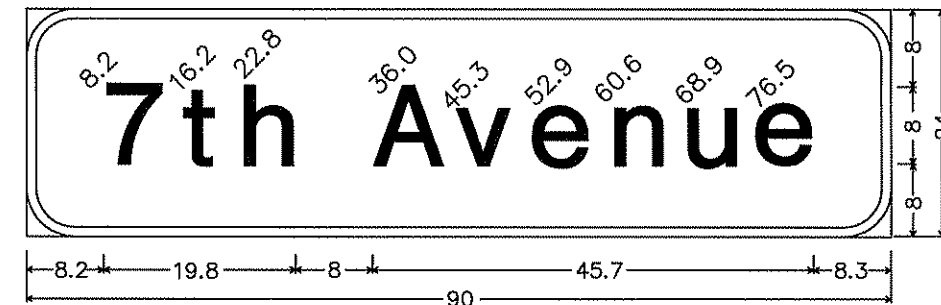
- COLOR FOR ALL TYPE D SIGNS SHALL BE WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS, SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/07), AND SPECIAL PROVISIONS.
- SEE STANDARD SIGNS MANUAL FOR DETAILED DRAWINGS OF TYPE C SIGN PANELS.
- FURNISHING AND INSTALLING TYPE C AND D SIGNS SHALL BE INCLUDED UNDER ITEM NO. 2565 (TRAFFIC CONTROL SIGNAL SYSTEM). SEE SPECIAL PROVISIONS.
- ALL NEW TYPE C AND D SIGN PANELS SHALL BE FABRICATED USING HP SHEETING. SEE SPECIAL PROVISIONS.

D-1, D-3



3.0" Radius, 1.0" Border, White on Green; [Main Street] E Mod;

D-2, D-4



3.0" Radius, 1.0" Border, White on Green; [7th Avenue] E Mod;

S:\AE\ANOKA\COMMON\SIGNS\157-1A\SIGNAL\_DESIGN\0260719-SIGDETS.DWG

S.P. 002-607-019

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: May 30, 2012 Name: John M. Gray, PE Lic. No. 22457

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

ANOKA COUNTY, MN  
 CITY OF ANOKA

TRAFFIC SIGNAL SYSTEM  
 SIGNAL SIGNING DETAILS  
 CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)

FILE NO.	66
SIGNAL SHEET	85
SGS OF SG10	

**NOTES:**

- 1) LOCATION OF FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
- 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
- 6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION "FILLED" COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
- 7) ALL VEHICLE SIGNAL INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
- 8) 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).
- 9) 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).
- 10) ALL VEHICLE AND PEDESTRIAN SIGNAL HOUSINGS, BACKGROUND SHIELDS, AND VISORS SHALL BE FABRICATED USING BLACK POLYCARBONATE MATERIALS. SEE SPECIAL PROVISIONS.
- 11) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
- 12) (EVP) DENOTES ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM). SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.

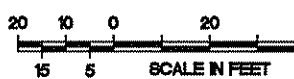
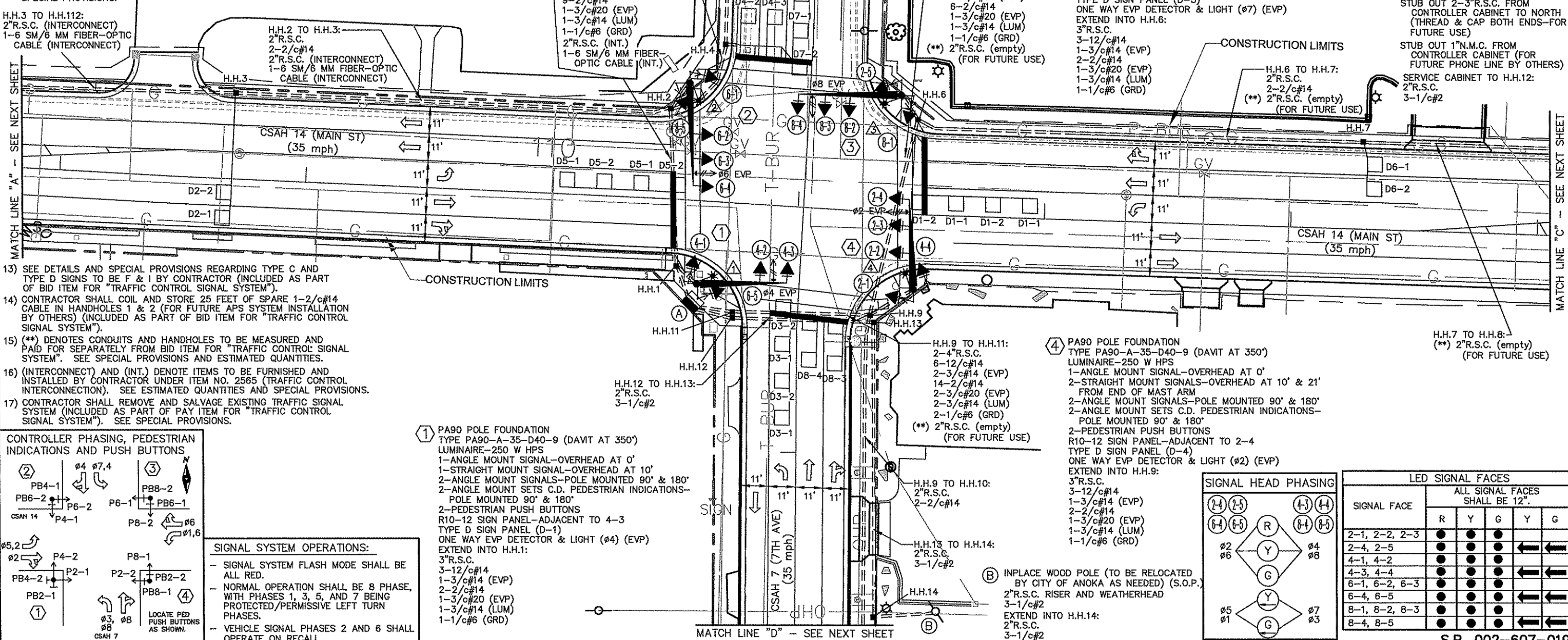
N.M.C. LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	2-6x6	10' & 40'	1
D1-2	2-6x6	0' & 25'	7
D2-1	6x6	180'	1
D2-2	6x6	180'	1
D3-1	2-6x6	10' & 40'	1
D3-2	2-6x6	0' & 25'	7
D4-1	6x6	180'	3,8
D4-2	2-6x6	0' & 15'	7
D4-3	2-6x6	0' & 15'	1
D5-1	2-6x6	10' & 40'	1
D5-2	2-6x6	0' & 25'	7
D6-1	6x6	180'	1
D6-2	6x6	180'	1
D7-1	2-6x6	10' & 40'	1
D7-2	2-6x6	0' & 25'	7
D8-1	6x6	120'	3,8
D8-2	6x6	120'	3,8
D8-3	2-6x6	0' & 15'	7
D8-4	2-6x6	0' & 15'	1

**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.

MATCH LINE "B" - SEE NEXT SHEET

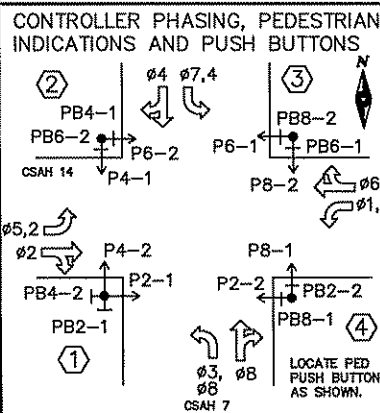


- (A) EQUIPMENT PAD FOUNDATION**  
 INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)  
 BATTERY BACK-UP SIGNAL SERVICE CABINET  
 BETWEEN CONTROLLER CABINET AND SERVICE CABINET:  
 METERED SIGNAL SERVICE  
 2"R.S.C.  
 3-1/c#6  
 CONTROLLER CABINET TO H.H.1:  
 2-4"R.S.C.  
 6-12/c#14  
 2-3/c#14 (EVP)  
 13-2/c#14  
 2-3/c#20 (EVP)  
 2-1/c#6 (GRD)  
 CONTROLLER CABINET TO H.H.1:  
 2"R.S.C. (INTERCONNECT)  
 1-6 SM/6 MM FO CABLE (INT.)  
 CONTROLLER CABINET TO H.H.11:  
 2-4"R.S.C.  
 6-12/c#14  
 2-3/c#14 (EVP)  
 14-2/c#14  
 2-3/c#20 (EVP)  
 2-1/c#6 (GRD)  
 CONTROLLER CABINET TO H.H.11:  
 2"R.S.C. (empty)  
 (FOR FUTURE USE)  
 STUB OUT 2-3"R.S.C. FROM CONTROLLER CABINET TO NORTH (THREAD & CAP BOTH ENDS-FOR FUTURE USE)  
 STUB OUT 1"N.M.C. FROM CONTROLLER CABINET (FOR FUTURE PHONE LINE BY OTHERS)  
 SERVICE CABINET TO H.H.12:  
 2"R.S.C.  
 3-1/c#2

MATCH LINE "A" - SEE NEXT SHEET

MATCH LINE "C" - SEE NEXT SHEET

- 13) SEE DETAILS AND SPECIAL PROVISIONS REGARDING TYPE C AND TYPE D SIGNS TO BE F & I BY CONTRACTOR (INCLUDED AS PART OF BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
- 14) CONTRACTOR SHALL COIL AND STORE 25 FEET OF SPARE 1-2/c#14 CABLE IN HANDHOLES 1 & 2 (FOR FUTURE APS SYSTEM INSTALLATION BY OTHERS) (INCLUDED AS PART OF BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
- 15) (\*\*) DENOTES CONDUITS AND HANDHOLES TO BE MEASURED AND PAID FOR SEPARATELY FROM BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM". SEE SPECIAL PROVISIONS AND ESTIMATED QUANTITIES.
- 16) (INTERCONNECT) AND (INT.) DENOTE ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECTION). SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 17) CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL SYSTEM (INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM"). SEE SPECIAL PROVISIONS.



**SIGNAL SYSTEM OPERATIONS:**

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

- (1) PA90 POLE FOUNDATION**  
 TYPE PA90-A-35-D40-9 (DAVIT AT 350")  
 LUMINAIRE-250 W HPS  
 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'  
 1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 10'  
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°  
 2-ANGLE MOUNT SETS C.D. PEDESTRIAN INDICATIONS-POLE MOUNTED 90° & 180°  
 2-PEDESTRIAN PUSH BUTTONS  
 R10-12 SIGN PANEL-ADJACENT TO 4-3  
 TYPE D SIGN PANEL (D-1)  
 ONE WAY EVP DETECTOR & LIGHT (Ø4) (EVP)  
 EXTEND INTO H.H.1:  
 3"R.S.C.  
 3-12/c#14  
 1-3/c#14 (EVP)  
 2-2/c#14  
 1-3/c#20 (EVP)  
 1-3/c#14 (LUM)  
 1-1/c#6 (GRD)

MATCH LINE "D" - SEE NEXT SHEET

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.

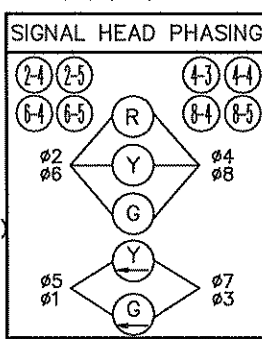
*John M. Gray, PE*  
 Name: John M. Gray, PE  
 Llc. No. 22457  
 Date: May 30, 2012

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

ANOKA COUNTY, MN  
 CITY OF ANOKA

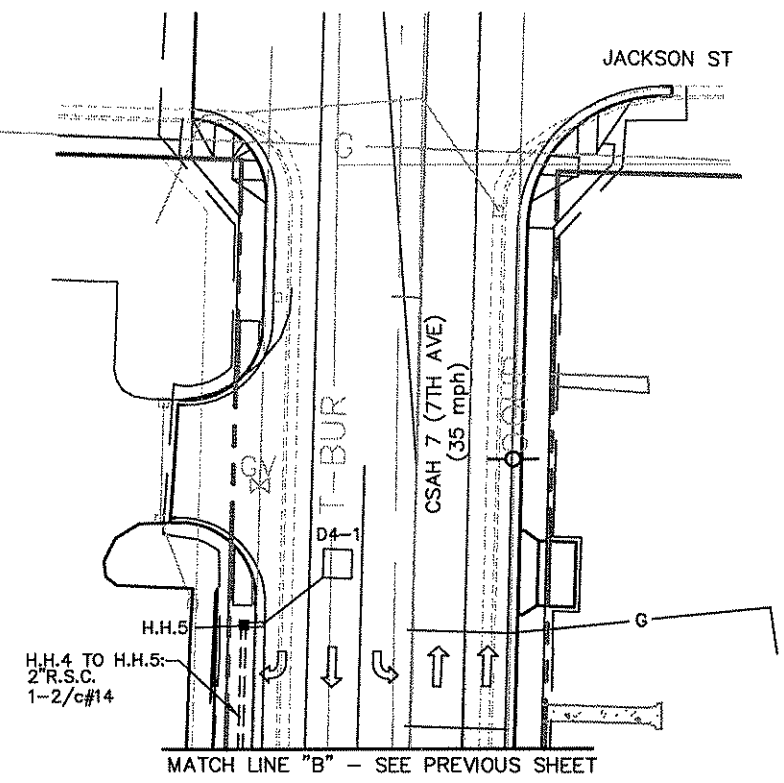
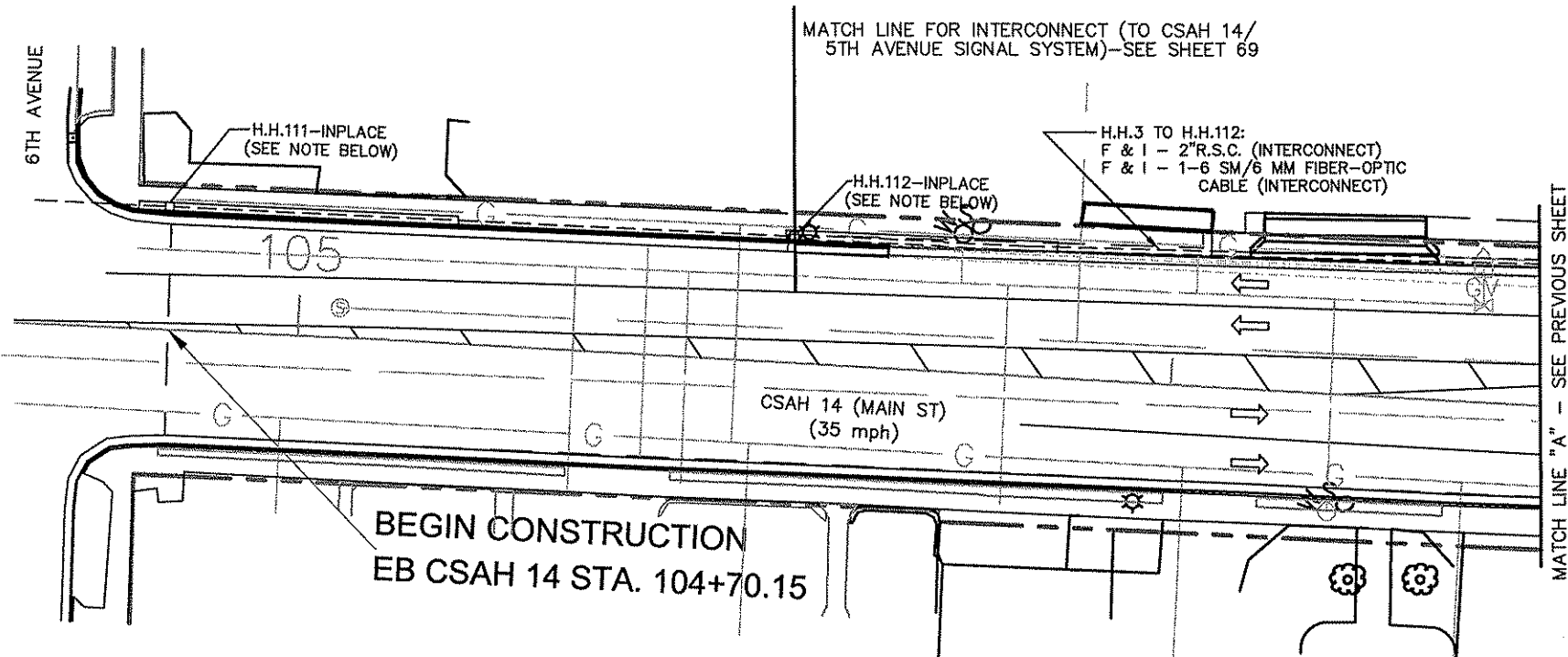
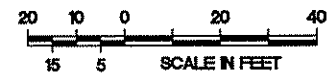
TRAFFIC SIGNAL SYSTEM  
 INTERSECTION LAYOUT  
 CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)

FILE NO. ANOKC 118208  
 SIGNAL SHEET 67  
 SG6 OF SG10 85



**LED SIGNAL FACES**

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

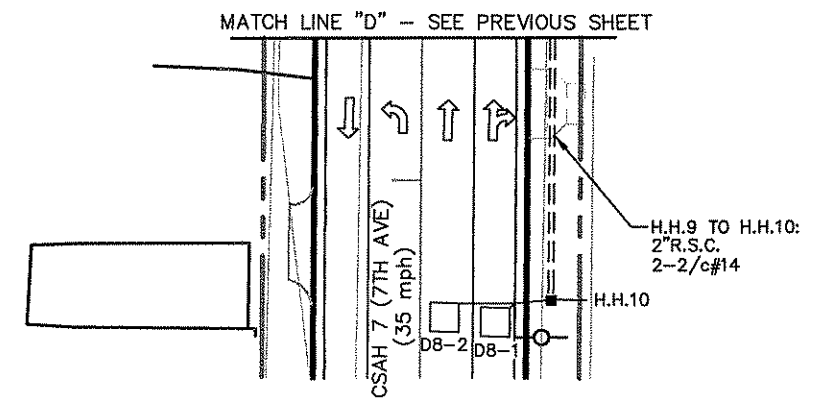
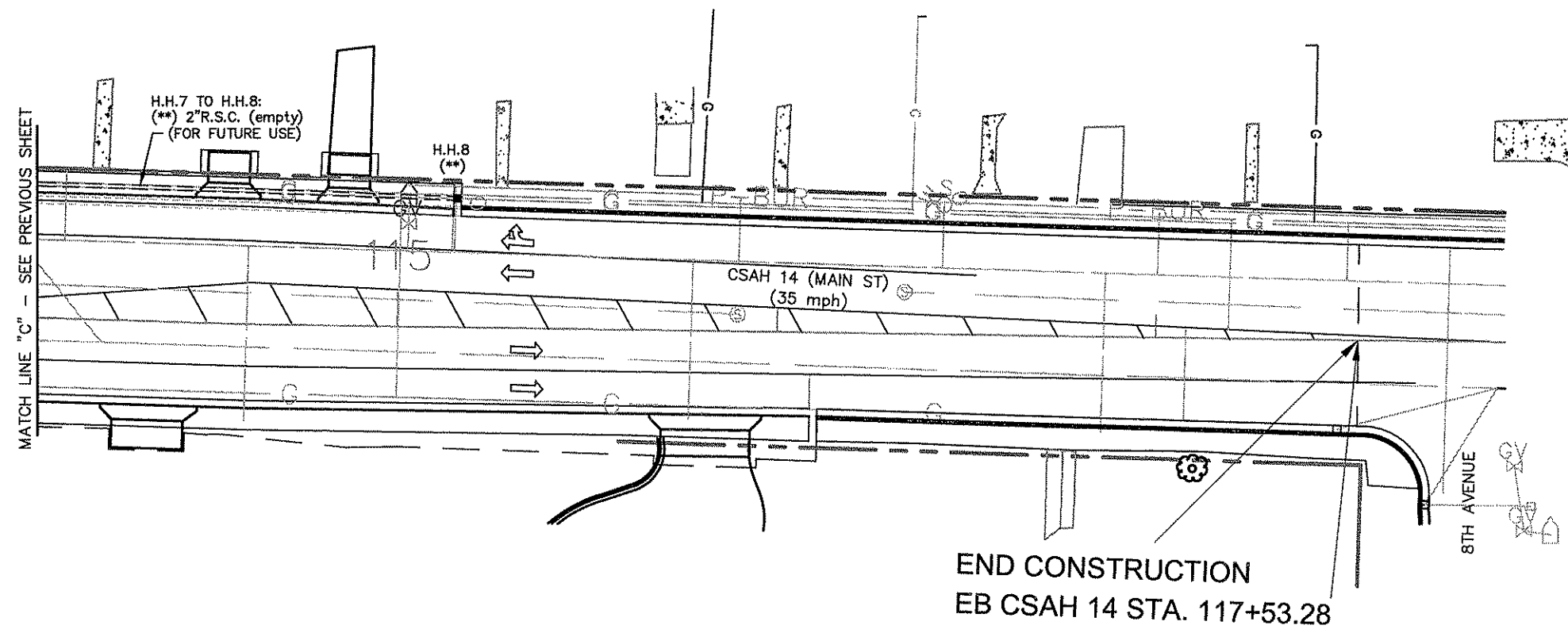


**INTERCONNECT NOTES:**

HANDHOLES 111 AND 112, AND 2"R.S.C. FROM HANDHOLE 112 TO THE WEST (TO THE CSAH 14/5TH AVENUE SIGNAL SYSTEM) WILL BE FURNISHED AND INSTALLED BY OTHERS AS PART OF THE CITY OF ANOKA'S "EAST MAIN STREET IMPROVEMENTS" PROJECT (CITY PROJECT 2012-02), TO BE COMPLETED DURING THE SUMMER OF 2012, AT NO EXPENSE TO THE CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING THE NEW 6 SM/6 MM FIBER-OPTIC INTERCONNECT CABLE FROM THE CSAH 14/CSAH 7 SIGNAL SYSTEM TO THE CONTROLLER CABINET AT THE CSAH 14/5TH AVENUE SIGNAL SYSTEM AS SHOWN ON PLAN SHEETS 67-69. SEE SPECIAL PROVISIONS FOR FURTHER INFORMATION.

CONTRACTOR SHALL COORDINATE ALL INTERCONNECT CABLE INSTALLATION WORK WITH HANDHOLE AND CONDUIT INSTALLATION WORK TO BE COMPLETED BY OTHERS AS PART OF THE CITY OF ANOKA'S "EAST MAIN STREET IMPROVEMENTS" PROJECT.



S:\A\ANOKA\COMMON\SIGNALS\7-14\SIGNAL\_DESIGN\0260719-UPDATE-SIGNAL12.DWG

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  
 Lic. No. 22457  
 Date: May 30, 2012

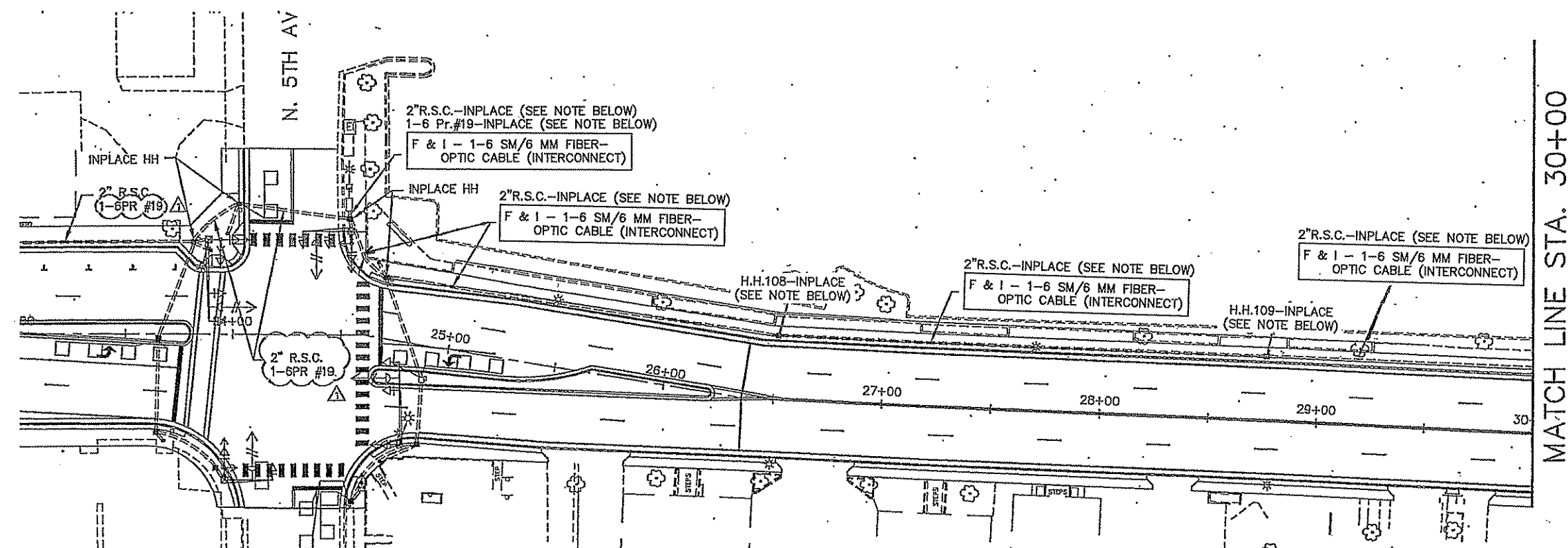
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 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

**ANOKA COUNTY, MN**  
**CITY OF ANOKA**

**TRAFFIC SIGNAL SYSTEM**  
**INTERSECTION LAYOUT**  
**CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)**

S.P. 002-607-019  
 FILE NO. ANOKC 116208  
 SIGNAL SHEET SG7 OF SG10  
**68**  
**85**





MATCH LINE STA. 30+00

H AVE

N. 5TH AV

MATCH LINE STA. 30+00

N. 6TH AVE.

S. 6TH AVE.



**Kimley-Horn  
and Associates, Inc.**

2550 UNIVERSITY AVE. WEST, SUITE 230N  
ST. PAUL, MINNESOTA 55114

TEL. NO. (651) 645-4197  
FAX. NO. (651) 645-5116

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT 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.

*Brandon J. Bourdon*  
BRANDON J. BOURDON, P.E.

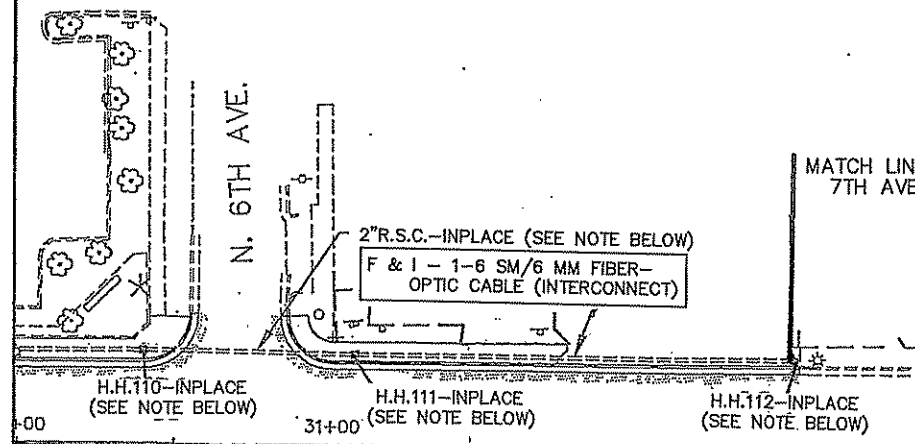
DATE: 02/14/2012 MN LIC. NO. 43709

CITY OF ANOKA  
EAST MAIN STREET IMPROVEMENTS



TRAFFIC SIGNAL SYSTEM  
INTERCONNECT PLAN

MATCH LINE FOR INTERCONNECT (TO CSAH 14/7TH AVENUE SIGNAL SYSTEM)—SEE SHEET 68



**INTERCONNECT NOTES:**

ALL HANDHOLES AND 2" R.S.C. FROM HANDHOLE 112 TO THE WEST (TO THE CSAH 14/5TH AVENUE SIGNAL SYSTEM) WILL BE FURNISHED AND INSTALLED BY OTHERS AS PART OF THE CITY OF ANOKA'S "EAST MAIN STREET IMPROVEMENTS" PROJECT (CITY PROJECT 2012-02), TO BE COMPLETED DURING THE SUMMER OF 2012, AT NO EXPENSE TO THE CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING THE NEW 6 SM/6 MM FIBER-OPTIC INTERCONNECT CABLE FROM THE CSAH 14/CSAH 7 SIGNAL SYSTEM TO THE CONTROLLER CABINET AT THE CSAH 14/5TH AVENUE SIGNAL SYSTEM AS SHOWN ON PLAN SHEETS 67-69. SEE SPECIAL PROVISIONS FOR FURTHER INFORMATION.

CONTRACTOR SHALL COORDINATE ALL INTERCONNECT CABLE INSTALLATION WORK WITH HANDHOLE AND CONDUIT INSTALLATION WORK TO BE COMPLETED BY OTHERS AS PART OF THE CITY OF ANOKA'S "EAST MAIN STREET IMPROVEMENTS" PROJECT.

ALL INTERCONNECT CONDUIT, HANDHOLES, AND CABLES FROM THE CSAH 14/5TH AVENUE SIGNAL SYSTEM TO THE WEST WILL BE FURNISHED AND INSTALLED BY OTHERS AS PART OF THE CITY OF ANOKA'S "EAST MAIN STREET IMPROVEMENTS" PROJECT.

HANDHOLES 108, 109, 110, 111, AND 112 WILL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS AND WILL BE INSTALLED ENTIRELY WITHIN PAVERS OR CONCRETE SIDEWALK SURFACES.

S.P. 002-607-019

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: May 30, 2012  
Lic. No. 22457

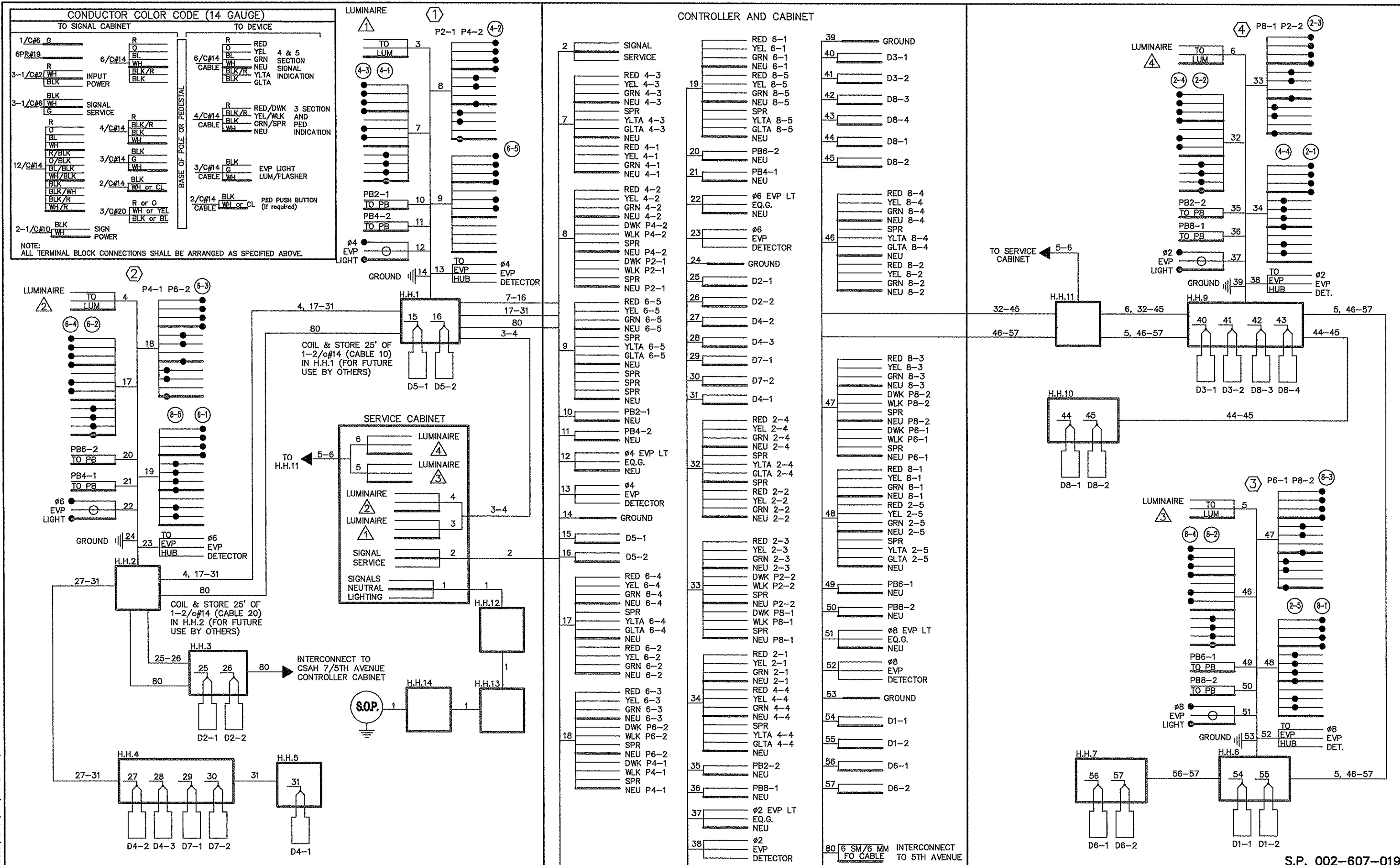
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ST. PAUL, MN 55110

**ANOKA COUNTY, MN  
CITY OF ANOKA**

**TRAFFIC CONTROL INTERCONNECTION  
INTERSECTION LAYOUT  
CSAH 14 (5TH AVENUE TO 7TH AVENUE)**

FILE NO. ANOKC 116208  
SIGNAL SHEET 58 OF 5610  
**69**  
**85**

S:\AE\ANOKA\COMMON SIGNALS\7-14 SIGNAL DESIGN\0260719-UPDATE-SIGNAL12.DWG



S:\AEA\COMMON\COMMON SIGNALS\7-14 SIGNAL DESIGN\0260718-SIGBASE.DWG

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NO.	BY	DATE	REVISIONS

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*John M. Gray*  
 Name: John M. Gray, PE  
 Date: May 30, 2012 Lic. No. 22457

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

**ANOKA COUNTY, MN**  
**CITY OF ANOKA**

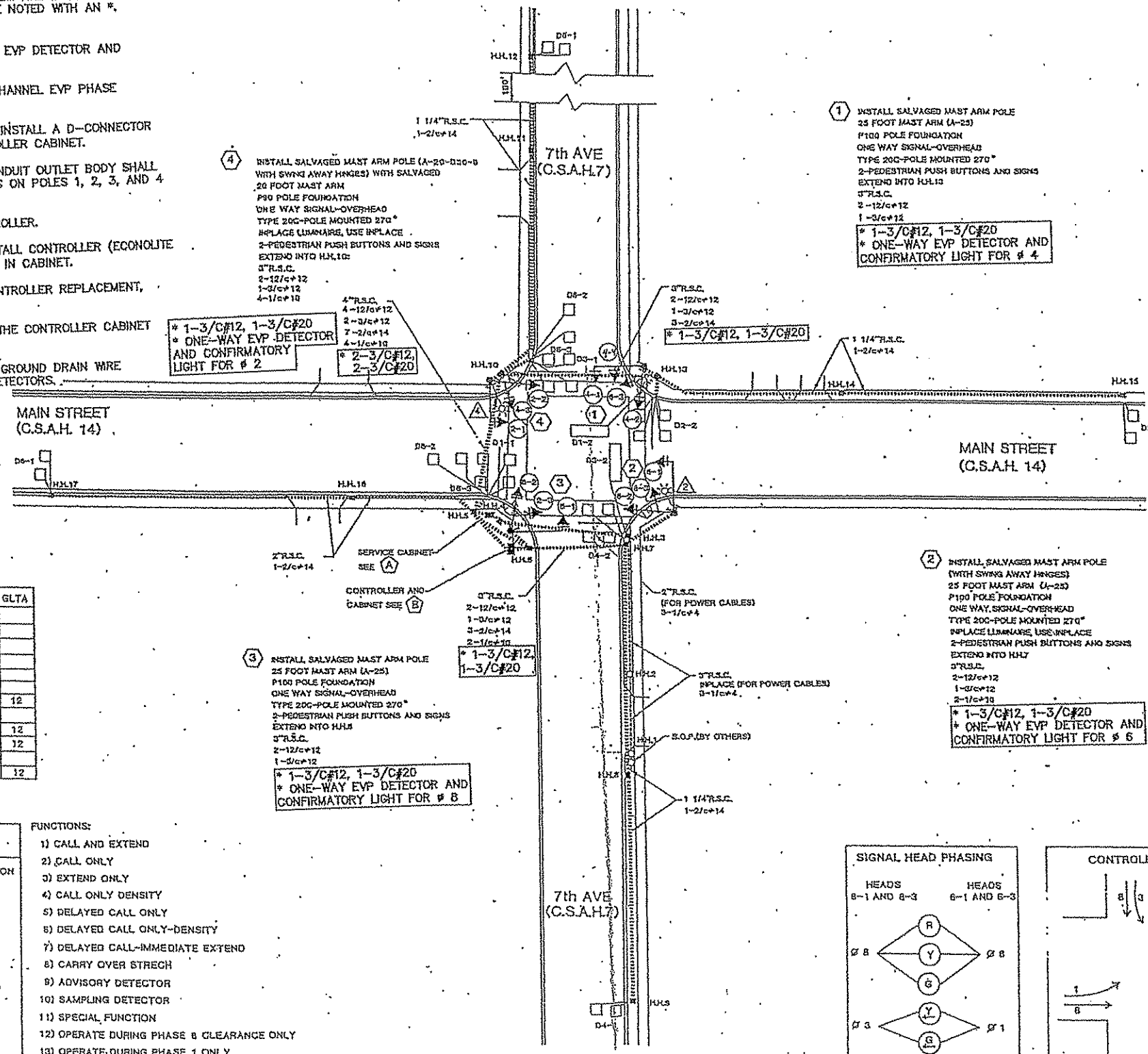
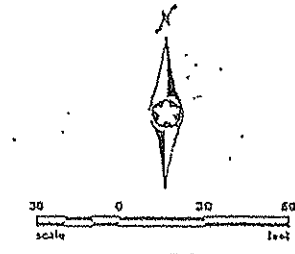
**TRAFFIC SIGNAL SYSTEM**  
**FIELD WIRING DIAGRAM**  
**CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)**

FILE NO. ANOKC 116208  
 SIGNAL SHEET SG9 OF SG10  
**70**  
**85**

S.P. 002-607-019

**CONSTRUCTION NOTES:**

- 1) REVISION DATE: 1/31/03. ALL ITEMS OF THIS SIGNAL SYSTEM ARE IN PLACE AND SHALL REMAIN IN PLACE AND FUNCTIONAL UNLESS OTHERWISE NOTED WITH AN \* (\* REPRESENTS WORK TO BE DONE)
- 2) THE CONTRACTOR SHALL FURNISH AND INSTALL A ONE-WAY EVP DETECTOR AND CONFIRMATORY LIGHT ON EACH TRAFFIC SIGNAL MAST ARM.
- 3) THE CONTRACTOR SHALL FURNISH AND INSTALL TWO TWO-CHANNEL EVP PHASE SELECTOR CARDS IN THE SIGNAL CABINET.
- 4) THE CONTRACTOR SHALL FURNISH AND THE COUNTY SHALL INSTALL A D-CONNECTOR ASSEMBLY (ECONOLITE ASC-8000) IN THE EXISTING CONTROLLER CABINET.
- 5) A KBR 3/4" PIPE THREAD HUB, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE INSTALLED SIX FEET FROM THE END OF THE MAST ARMS ON POLES 1, 2, 3, AND 4 FOR EMERGENCY VEHICLE PREEMPTION EQUIPMENT.
- 6) THE COUNTY SHALL REMOVE AND SALVAGE EXISTING CONTROLLER.
- 7) CONTRACTOR SHALL FURNISH AND THE COUNTY SHALL INSTALL CONTROLLER (ECONOLITE ASC2/S WITH ANOKA COUNTY 1440 CONFIGURATION PROM) IN CABINET.
- 8) CONTRACTOR SHALL COORDINATE CABLE INSTALLATION, CONTROLLER REPLACEMENT, AND CABINET WIRING WITH ANOKA COUNTY STAFF.
- 9) THE CONTRACTOR SHALL PULL NEW 3/C#12 CABLE FROM THE CONTROLLER CABINET TO EACH OF THE EVP CONFIRMATORY LIGHTS.
- 10) THE CONTRACTOR SHALL PULL NEW 3/C#20 CABLE WITH GROUND DRAIN WIRE FROM THE CONTROLLER CABINET TO EACH OF THE EVP DETECTORS.



**SIGNAL INDICATIONS**

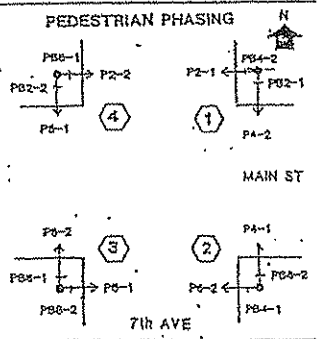
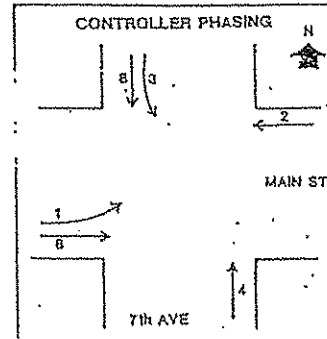
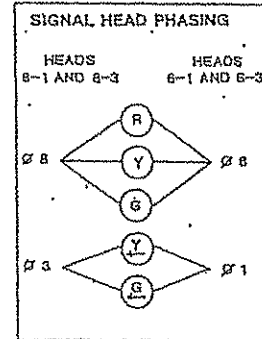
FACE	PHASE	FLASH	R	Y	G	RLTA	YLTA	GLTA
2-1	2	R	12	12	12			
2-2	2	R	12	12	12			
2-3	2	R	12	12	12			
4-1	4	R	12	12	12			
4-2	4	R	12	12	12			
4-3	4	R	12	12	12			
6-1	6, 1	R	12	12	12		12	12
6-2	6	R	12	12	12			
6-3	6, 1	R	12	12	12		12	12
8-1	8, 3	R	12	12	12		12	12
8-2	8	R	12	12	12			
8-3	8, 3	R	12	12	12		12	12

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

**LOOP DETECTOR**

NUMBER	SIZE	FUNCTION	LOCATION
D1-1	3-6'x6'	5, 12	---
D1-2	6'x20'	3, 13	---
D2-1	2-6'x6'	1	250'
D2-2	4-6'x6'	2	---
D3-1	3-6'x6'	5, 14	---
D3-2	6'x20'	3, 15	---
D4-1	2-6'x6'	1, 6	250'
D4-2	4-6'x6'	1	---
D6-1	2-6'x6'	1	250'
D6-2	1-6'x6'	2	---
D6-3	2-6'x6'	2	---
D8-1	2-6'x6'	1, 3	250'
D8-2	1-6'x6'	1	15'
D8-3	2-6'x6'	1	---

- 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 STRECH
  - 9) ADVISORY DETECTOR
  - 10) SAMPLING DETECTOR
  - 11) SPECIAL FUNCTION
  - 12) OPERATE DURING PHASE B CLEARANCE ONLY
  - 13) OPERATE DURING PHASE 1 ONLY
  - 14) OPERATE DURING PHASE B CLEARANCE ONLY
  - 15) OPERATE DURING PHASE 3 ONLY
- NOTE: LOCATION-DISTANCE FROM STOP LINE TO DETECTOR.



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

S.P. 002-607-019

S:\EV\ANOKA\CORPOR\SIG\FILES\7-1A\SIGNAL\_DESIGN\0260719-SIGETS.DWG

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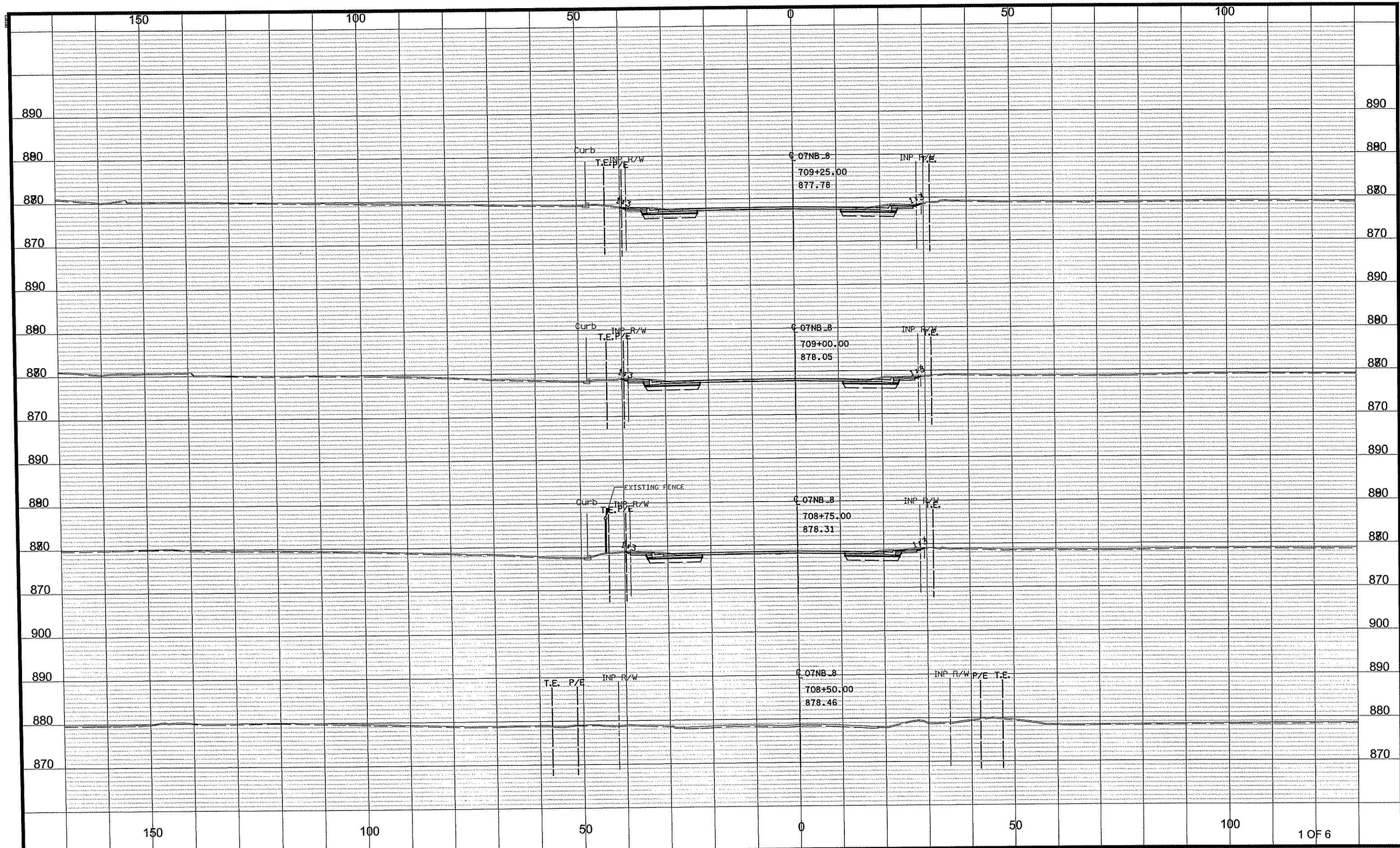
**SEH**  
 PHONE: (651) 490-2000  
 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

**ANOKA COUNTY, MN**  
**CITY OF ANOKA**

**INPLACE SIGNAL SYSTEM**  
**"FOR INFORMATION ONLY"**  
**CSAH 7 (7TH AVE) AT CSAH 14 (MAIN ST)**

FILE NO.  
 ANOKC 116208  
 SIGNAL SHEET  
 SG10 OF SG10

**71**  
**85**



DRAWN BY DFF DATE 04-05-12  
 DESIGN BY BAV DATE 04-05-12  
 CHECKED BY JEO DATE 04-17-12



**ANOKA COUNTY  
HIGHWAY DEPT.**

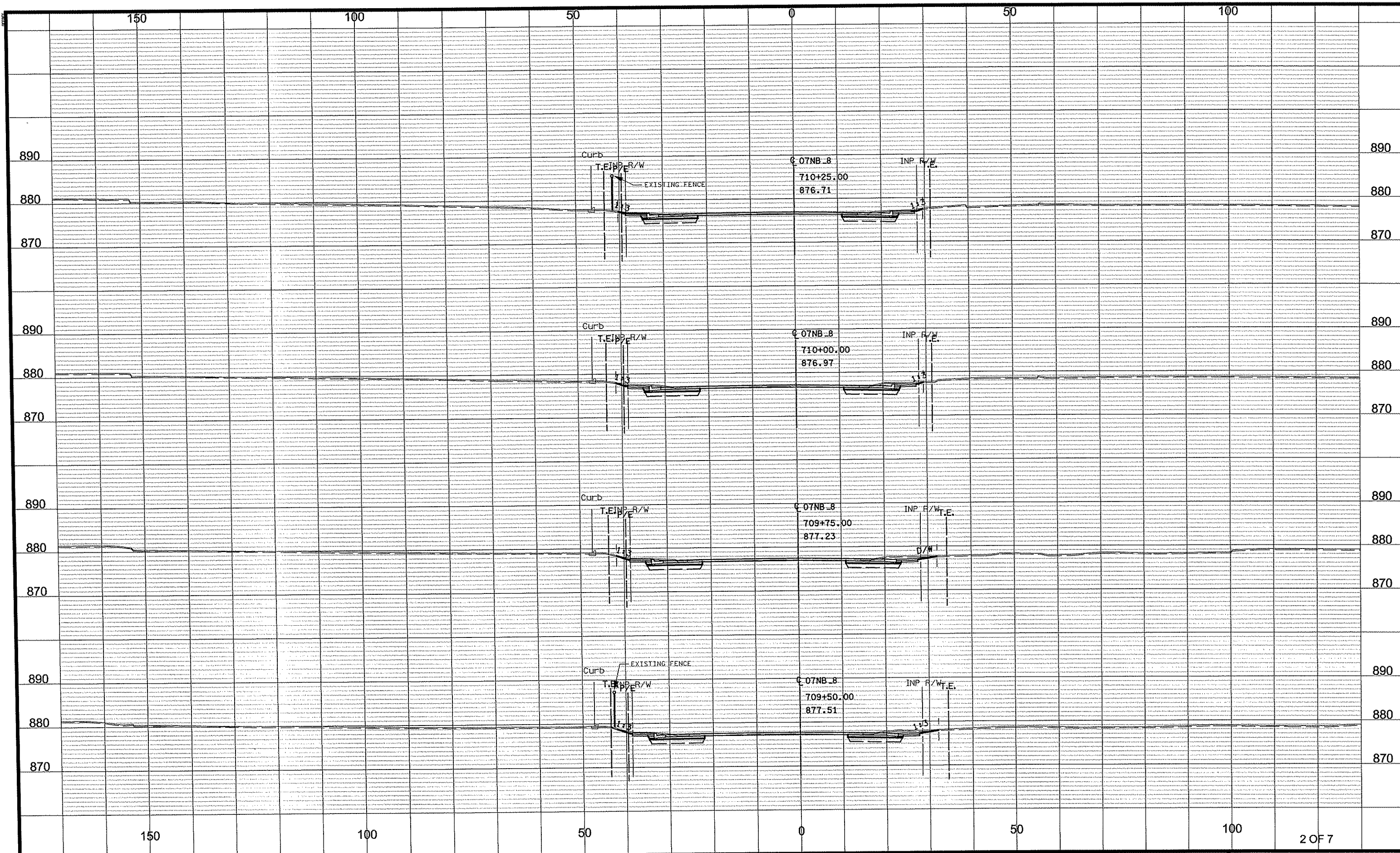
S.P. 002-607-019

**CROSS SECTIONS  
CSAH 7**  
 STA 708+50.00 TO 709+25.00  
 Sheet 72 of 85 Sheets

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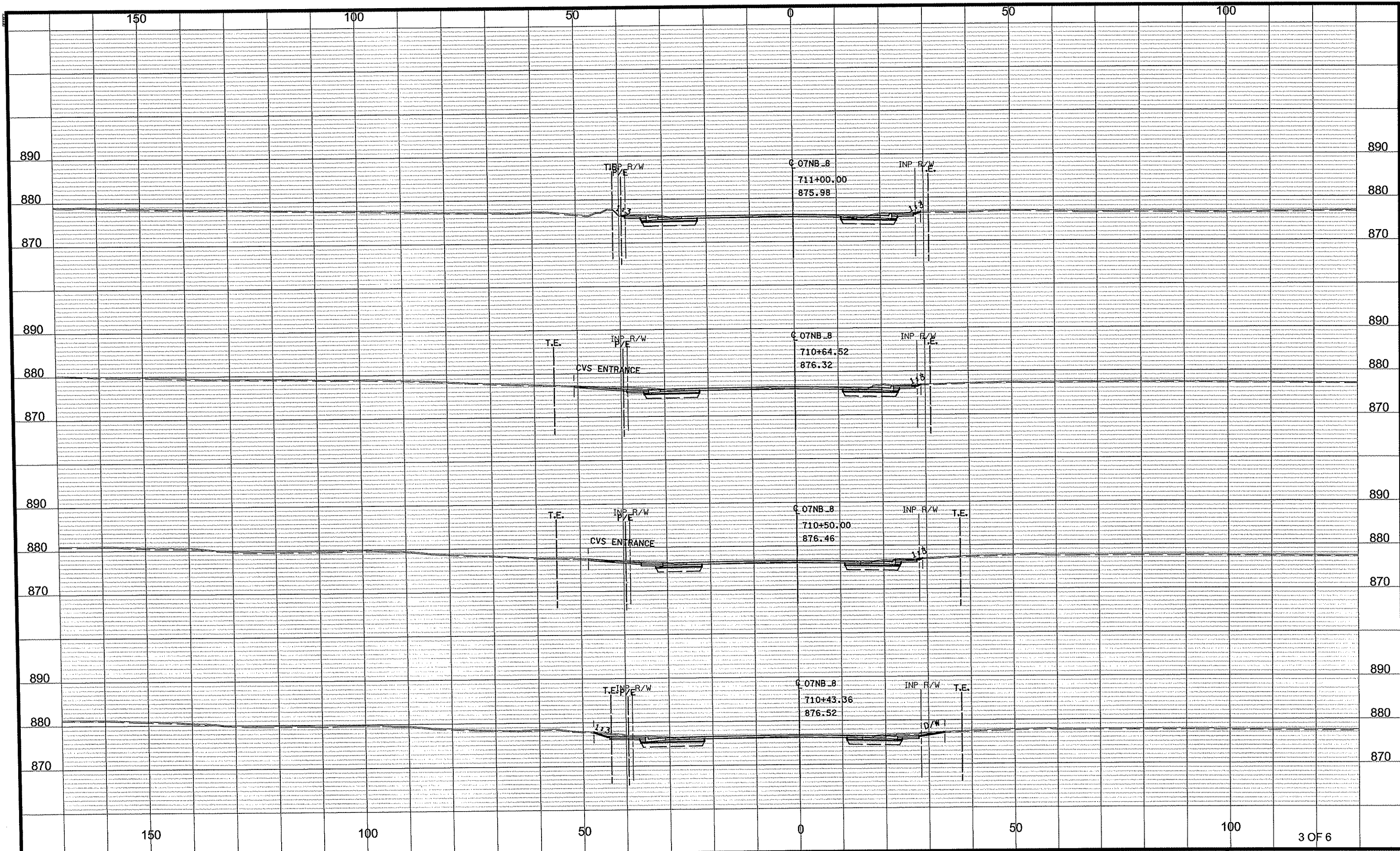
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**HIGHWAY DEPT.**

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**CROSS SECTIONS**  
**CSAH 7**  
 STA 709+50.00 TO 710+25.00  
 Sheet 73 of 85 Sheets





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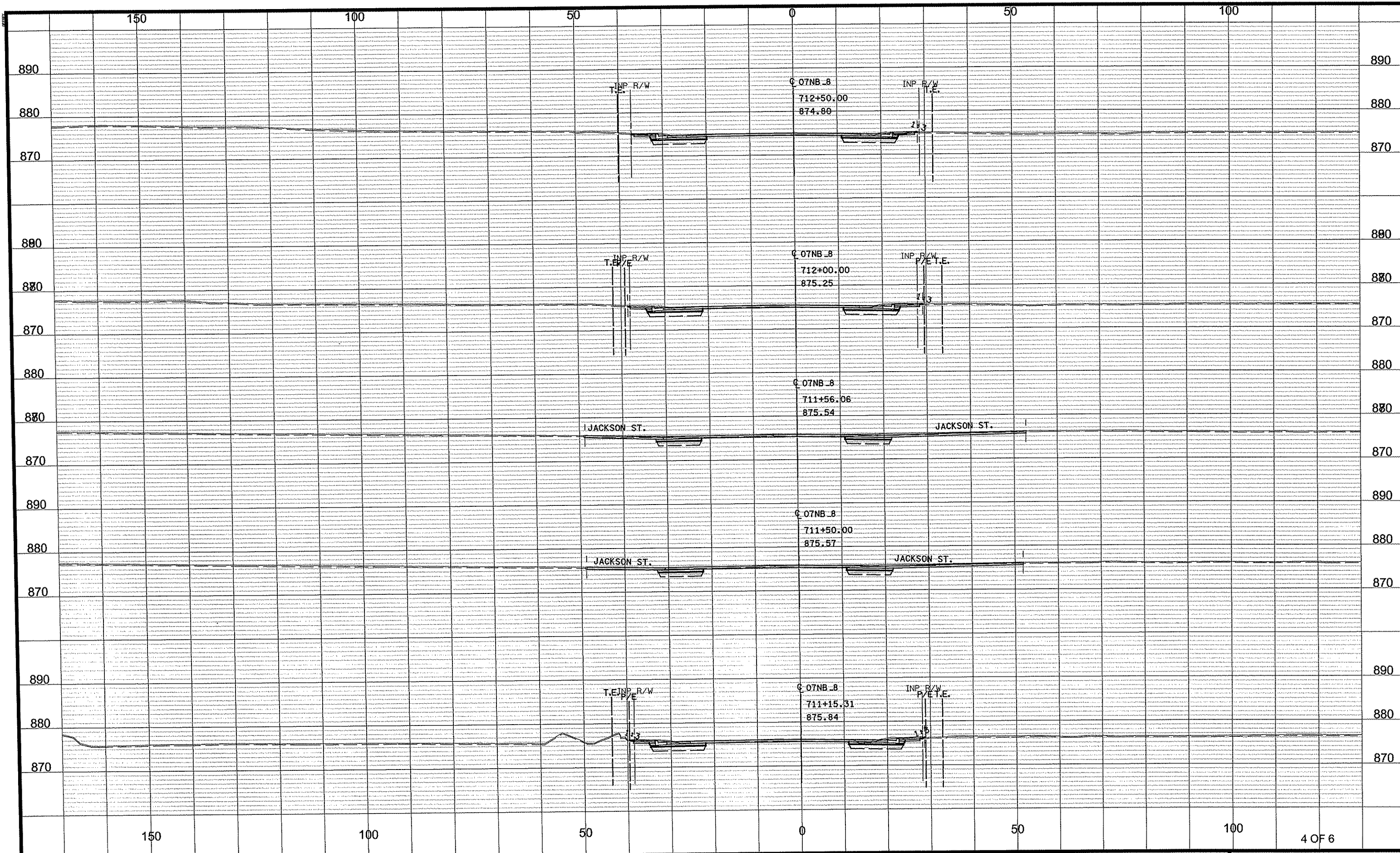
ANOKA COUNTY  
 HIGHWAY DEPT.

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CROSS SECTIONS  
 CSAH 7  
 STA 710+43.36 TO 711+00.00  
 Sheet 74 of 85 Sheets

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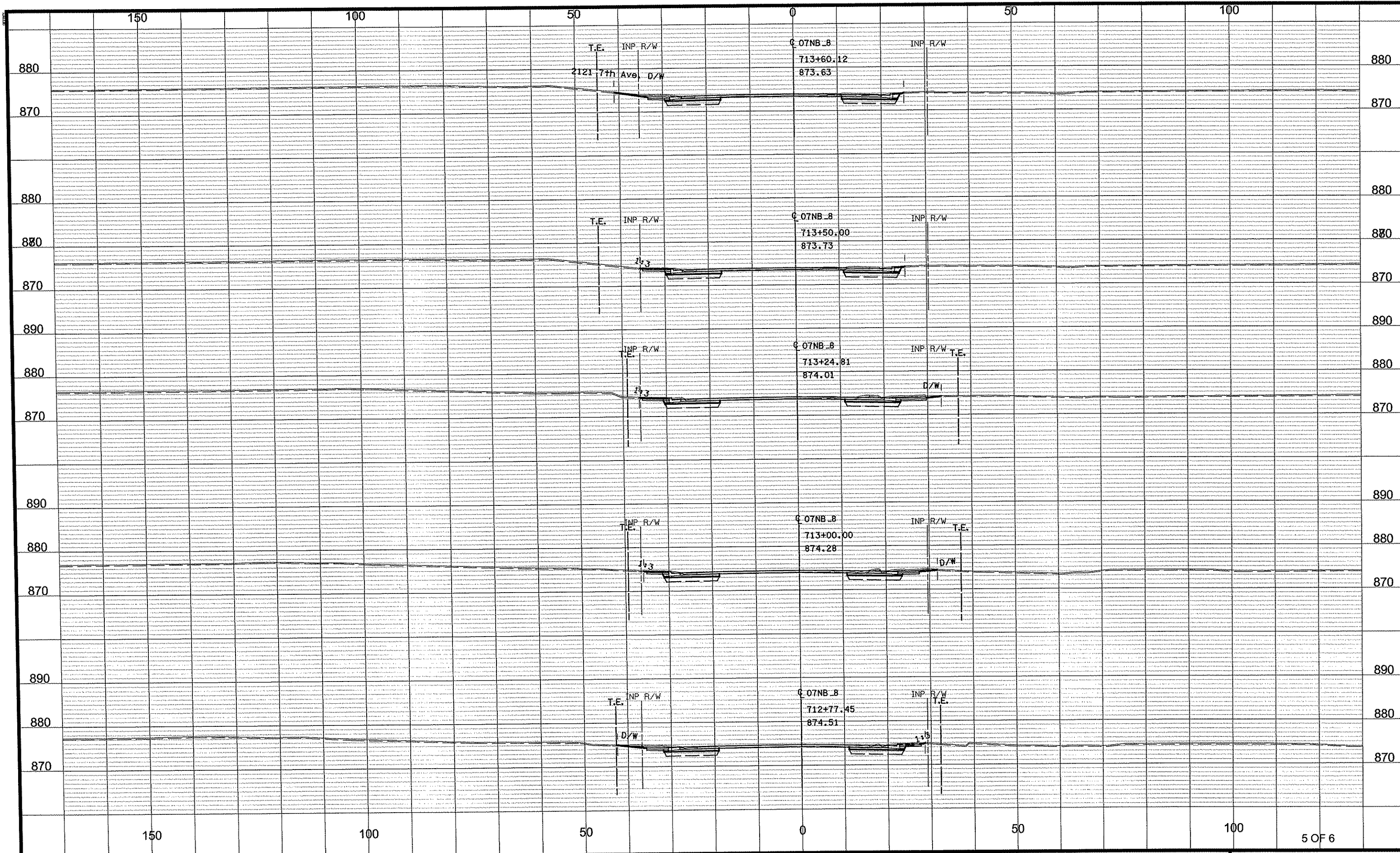


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**CROSS SECTIONS**  
**CSAH 7**  
 STA 711+15.31 TO 712+50.00  
 Sheet 75 of 85 Sheets





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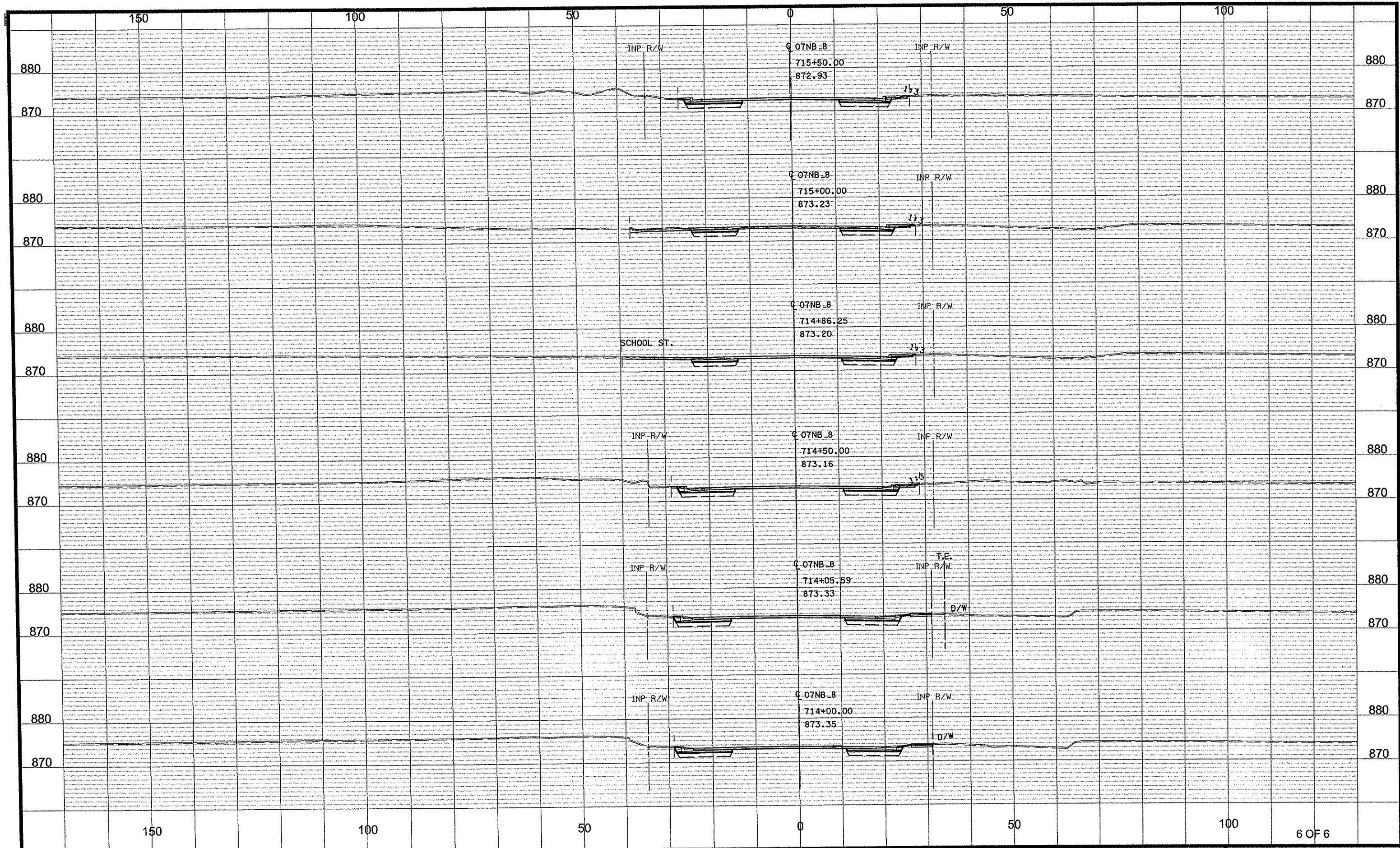
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 CHECKED BY JEO DATE 04-17-12



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

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**CROSS SECTIONS**  
**CSAH 7**  
 STA 712+77.45 TO 713+60.12  
 Sheet 76 of 85 Sheets



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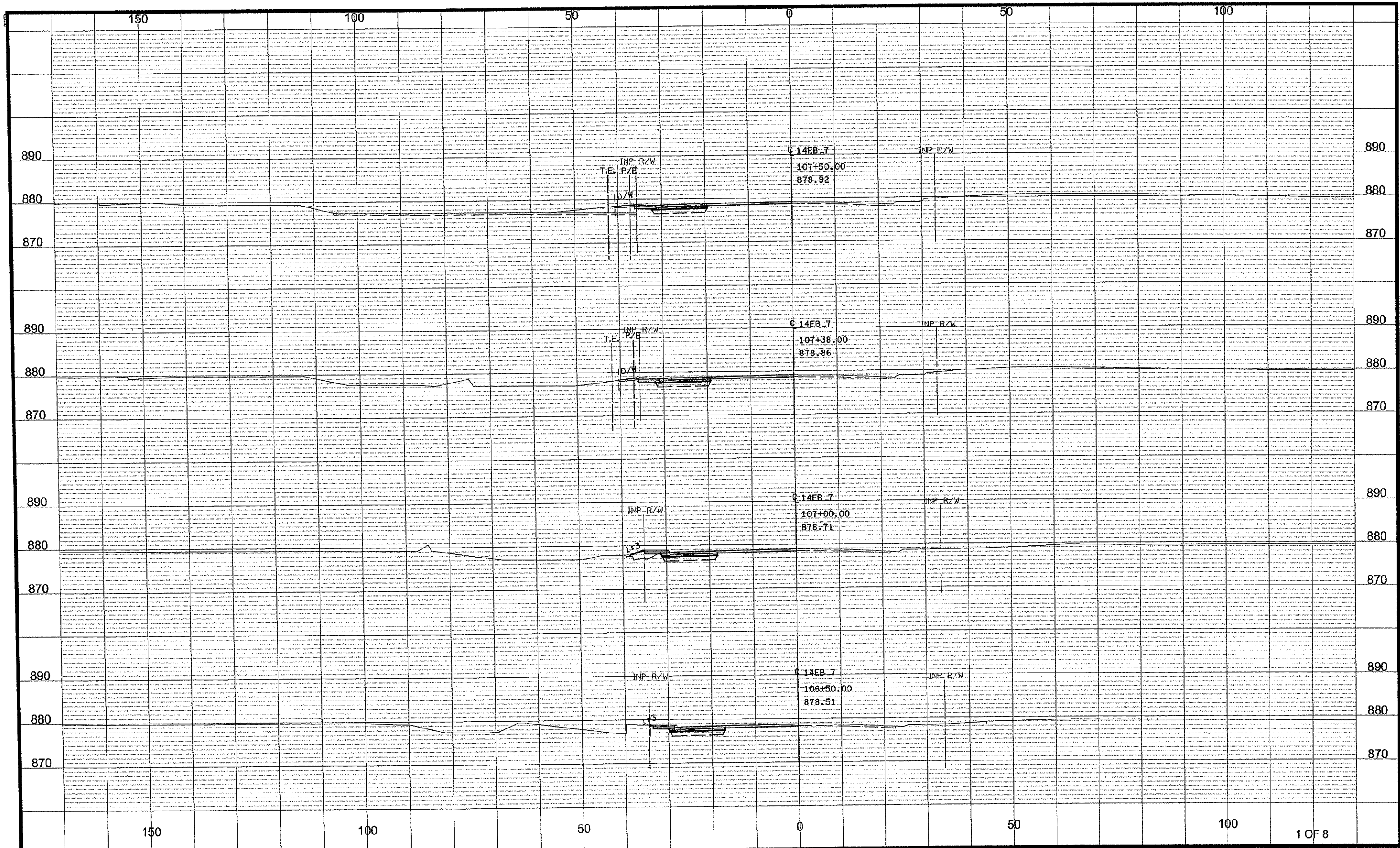
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CROSS SECTIONS  
 CSAH 7  
 STA 714+00.00 TO 715+50.00  
 Sheet 77 of 85 Sheets

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**HIGHWAY DEPT.**

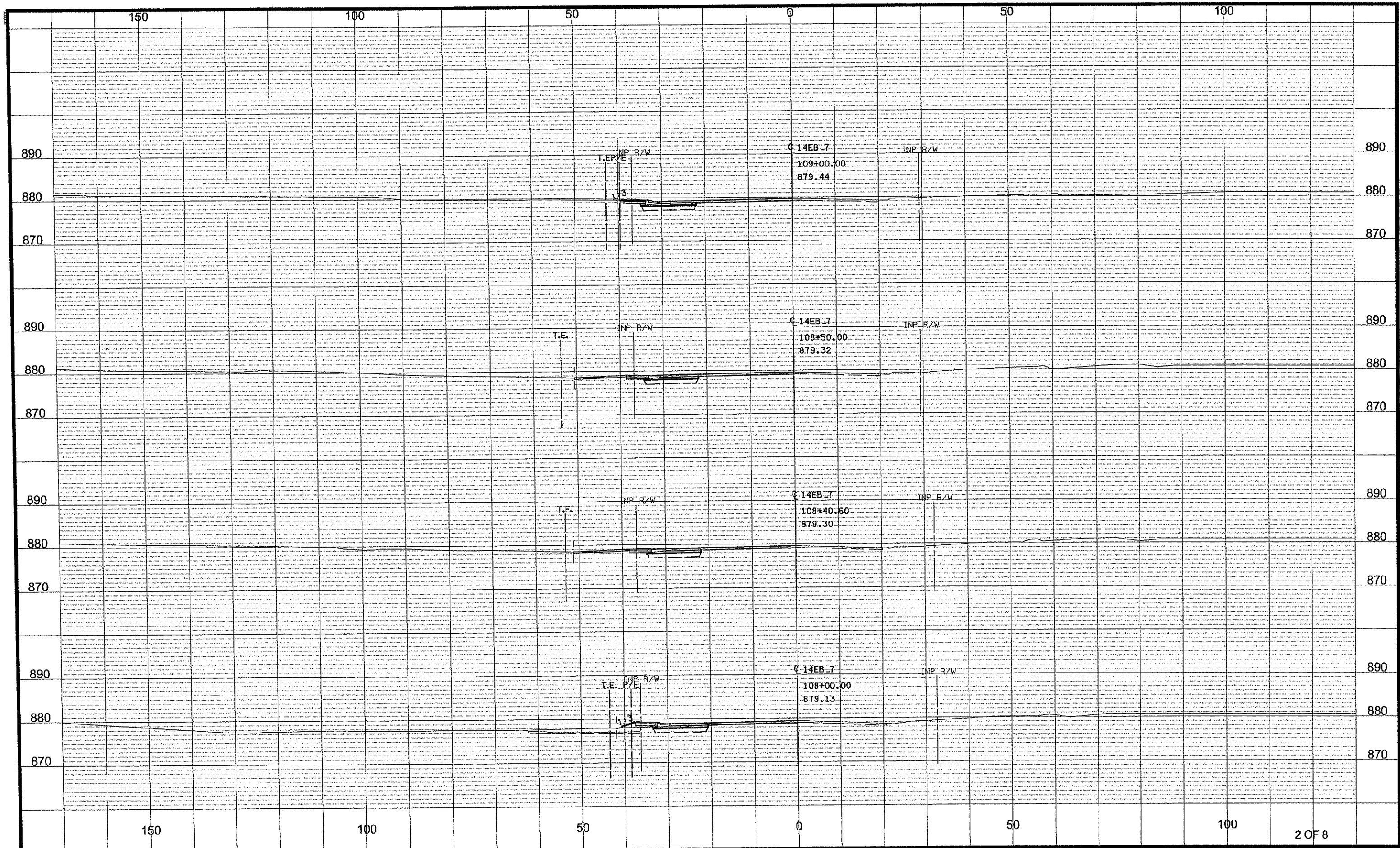
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**CROSS SECTIONS**  
**CSAH 14**  
 STA 106+50.00 TO 107+50.00  
 Sheet 78 of 85 Sheets

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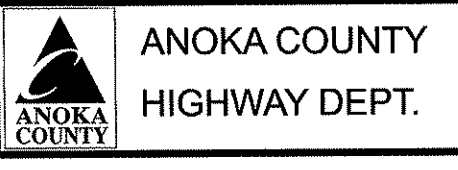




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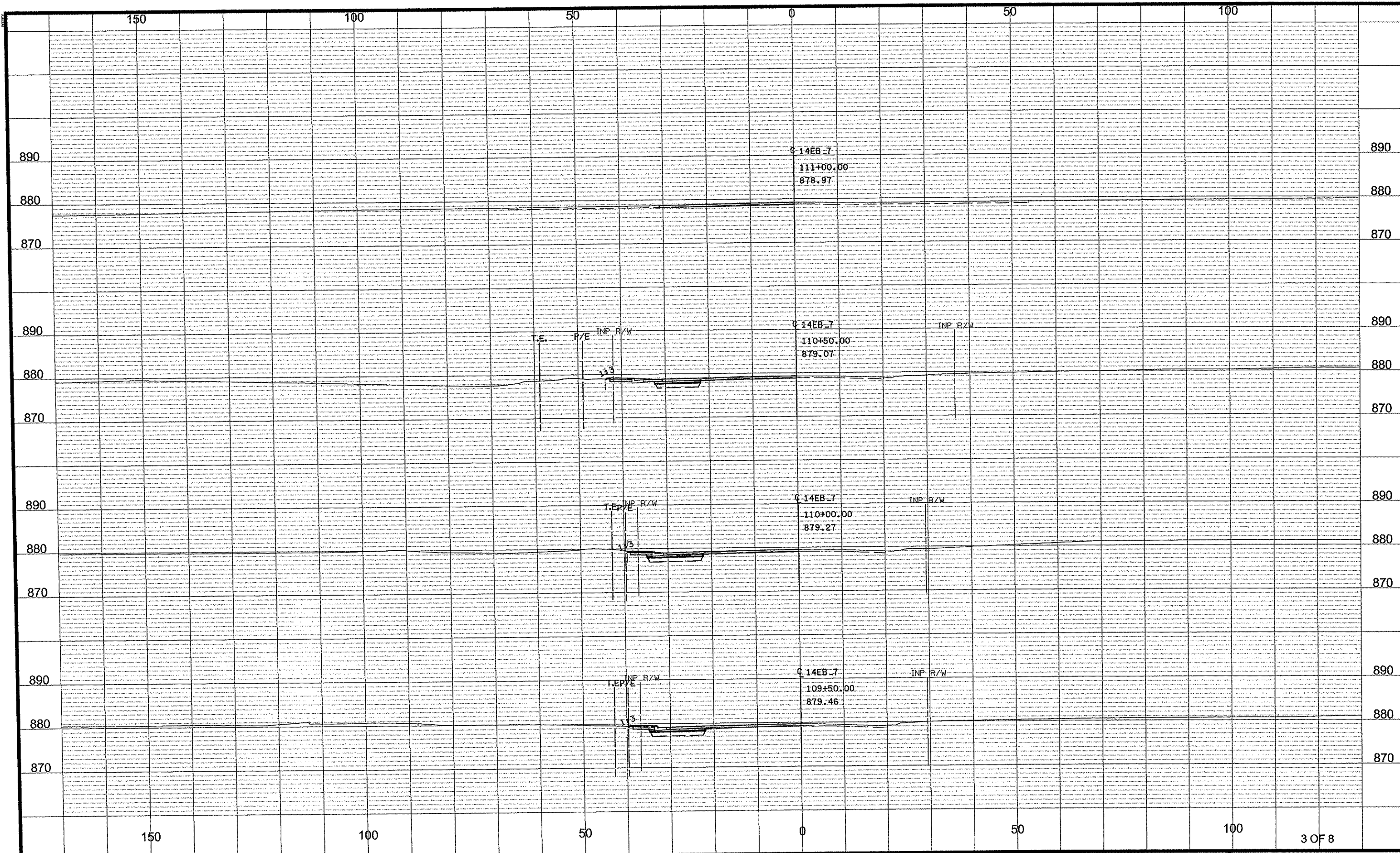
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**CROSS SECTIONS**  
**CSAH 14**  
 STA 108+00.00 TO 109+00.00  
 Sheet 79 of 85 Sheets



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

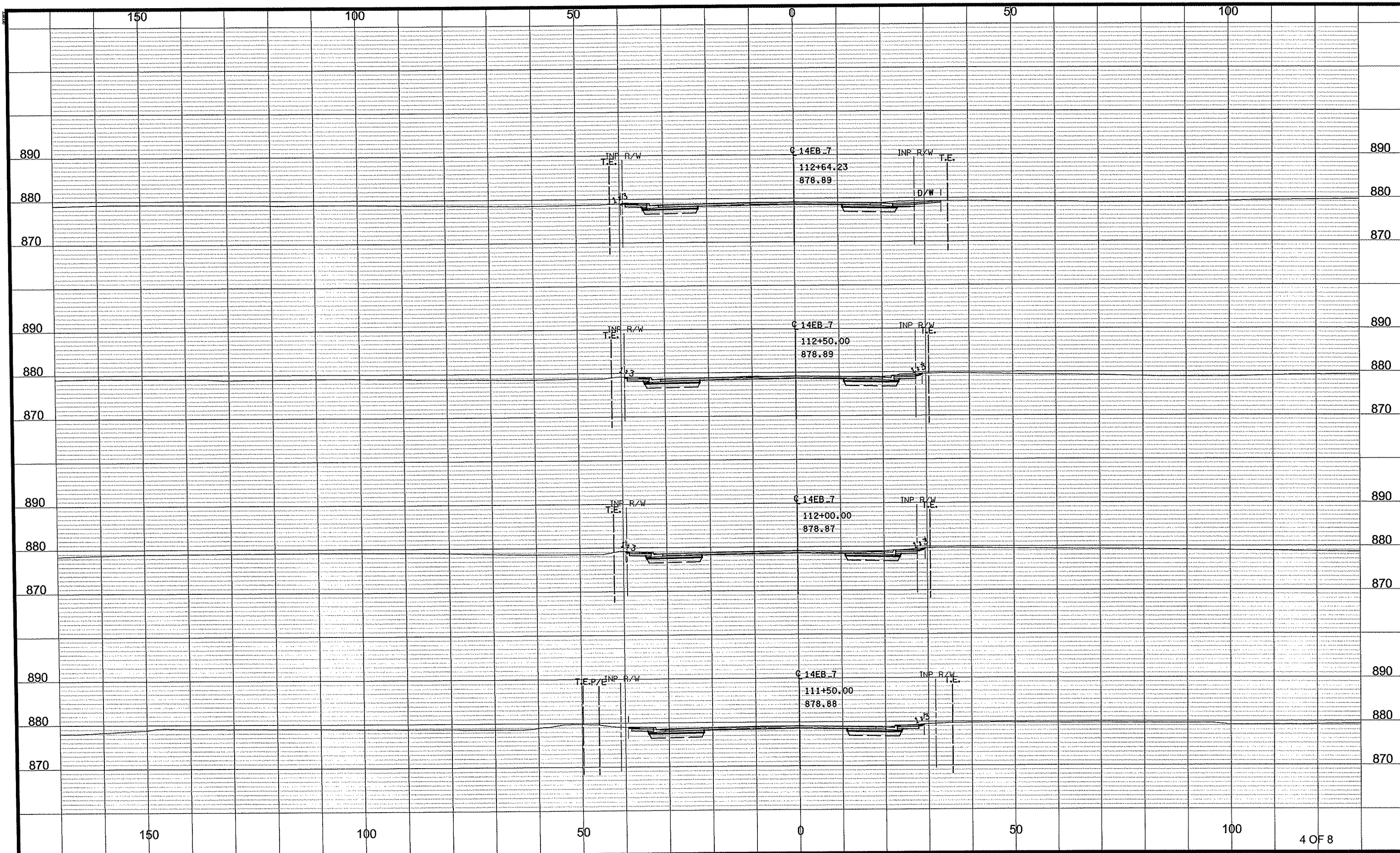
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**CROSS SECTIONS**  
**CSAH 14**  
 STA 109+50.00 TO 111+00.00  
 Sheet 80 of 85 Sheets

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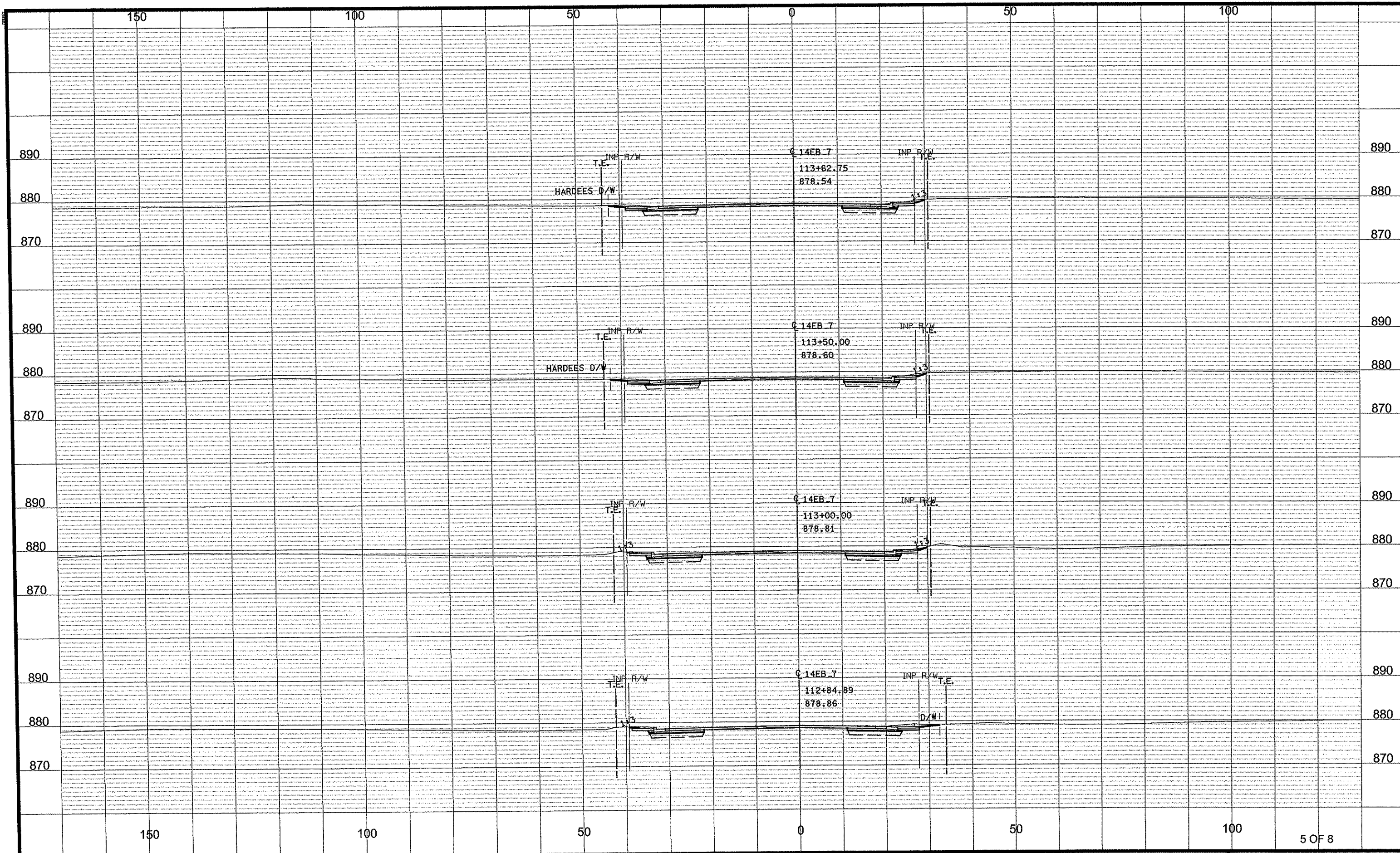
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

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**CROSS SECTIONS**  
**CSAH 14**  
 STA 111+50.00 TO 112+64.23  
 Sheet 81 of 85 Sheets

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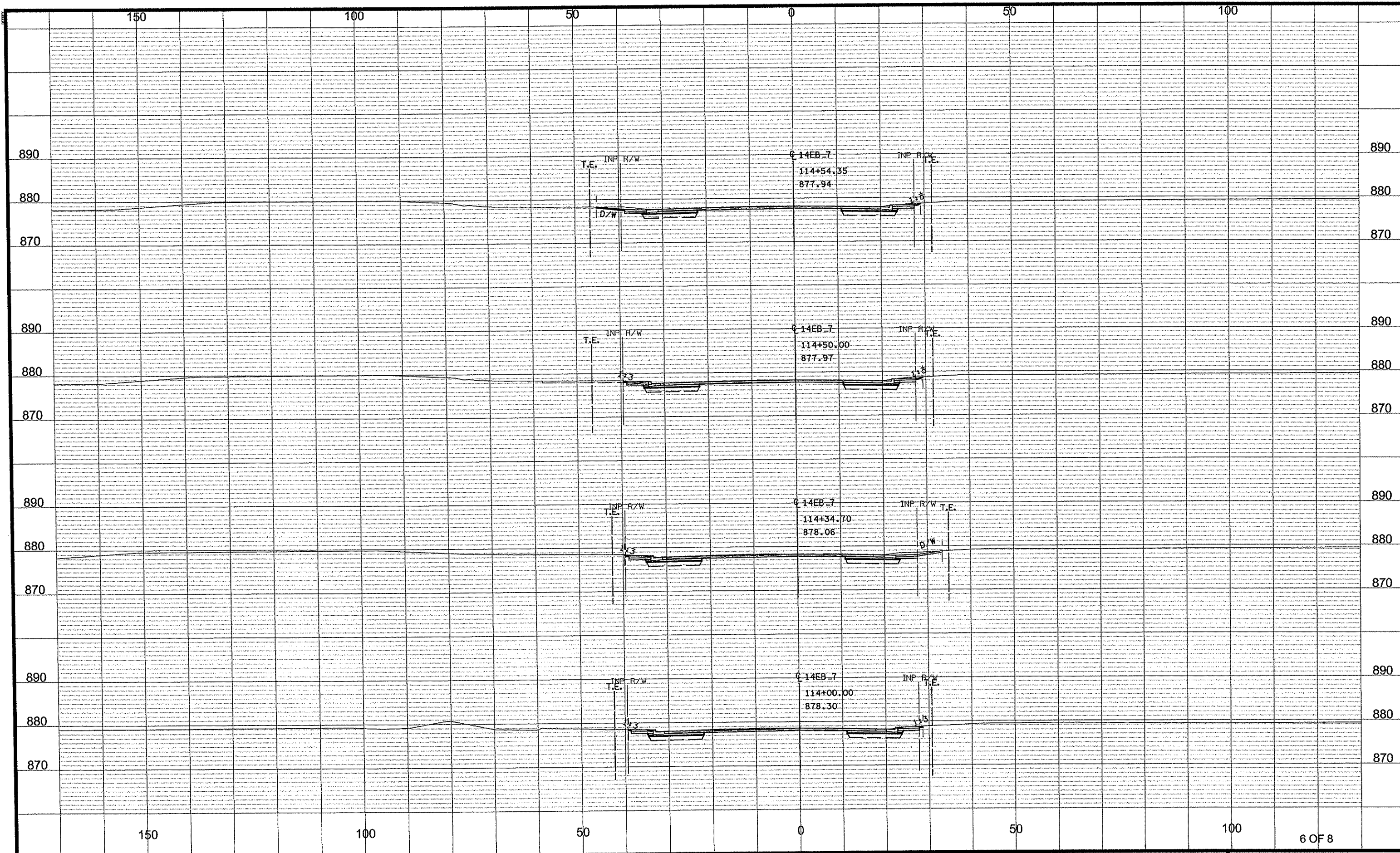


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CROSS SECTIONS  
CSAH 14  
STA 112+84.89 TO 113+62.75  
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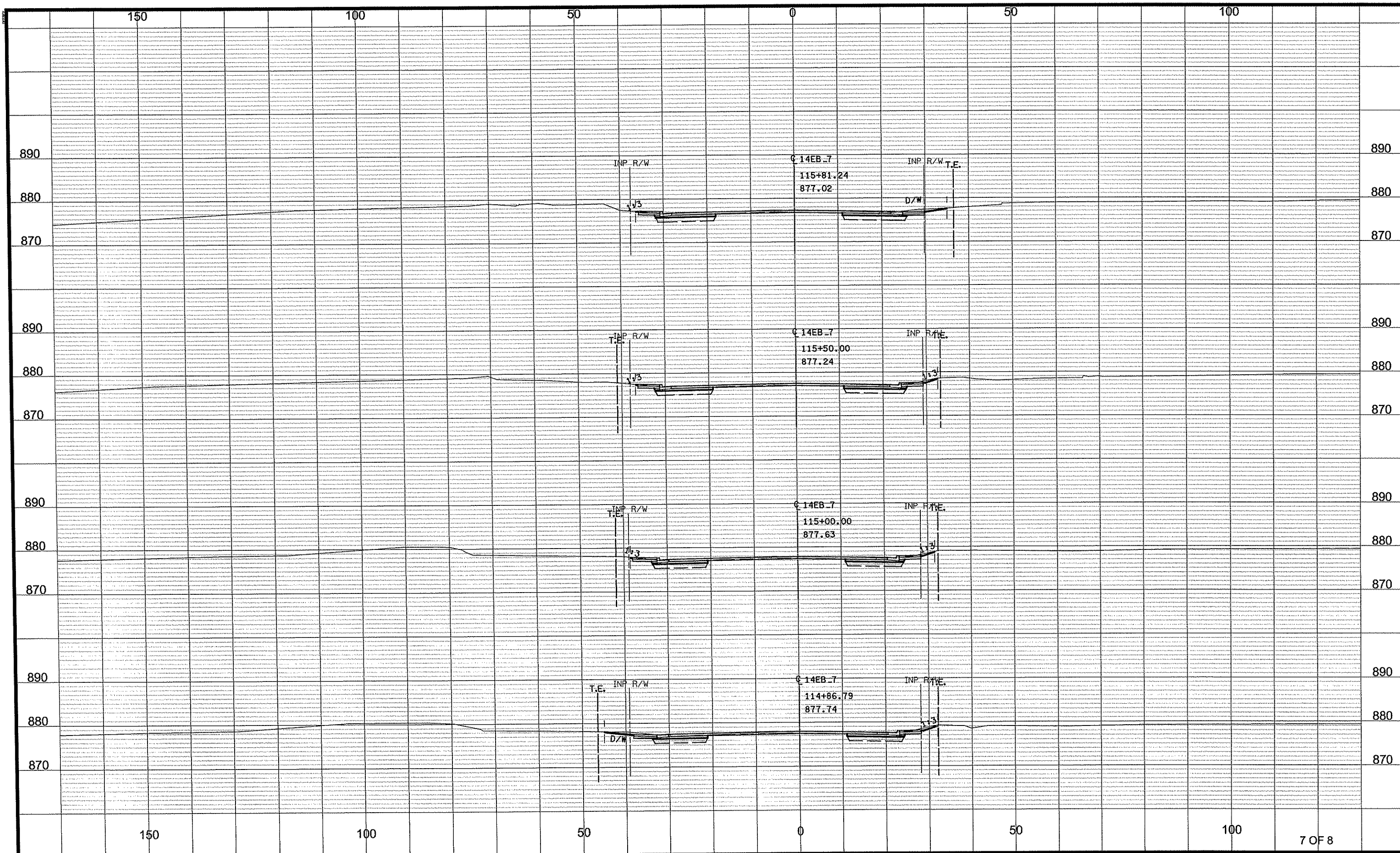
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**ANOKA COUNTY**  
**HIGHWAY DEPT.**

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**CROSS SECTIONS**  
**CSAH 14**  
 STA 114+00.00 TO 114+54.35  
 Sheet 83 of 85 Sheets





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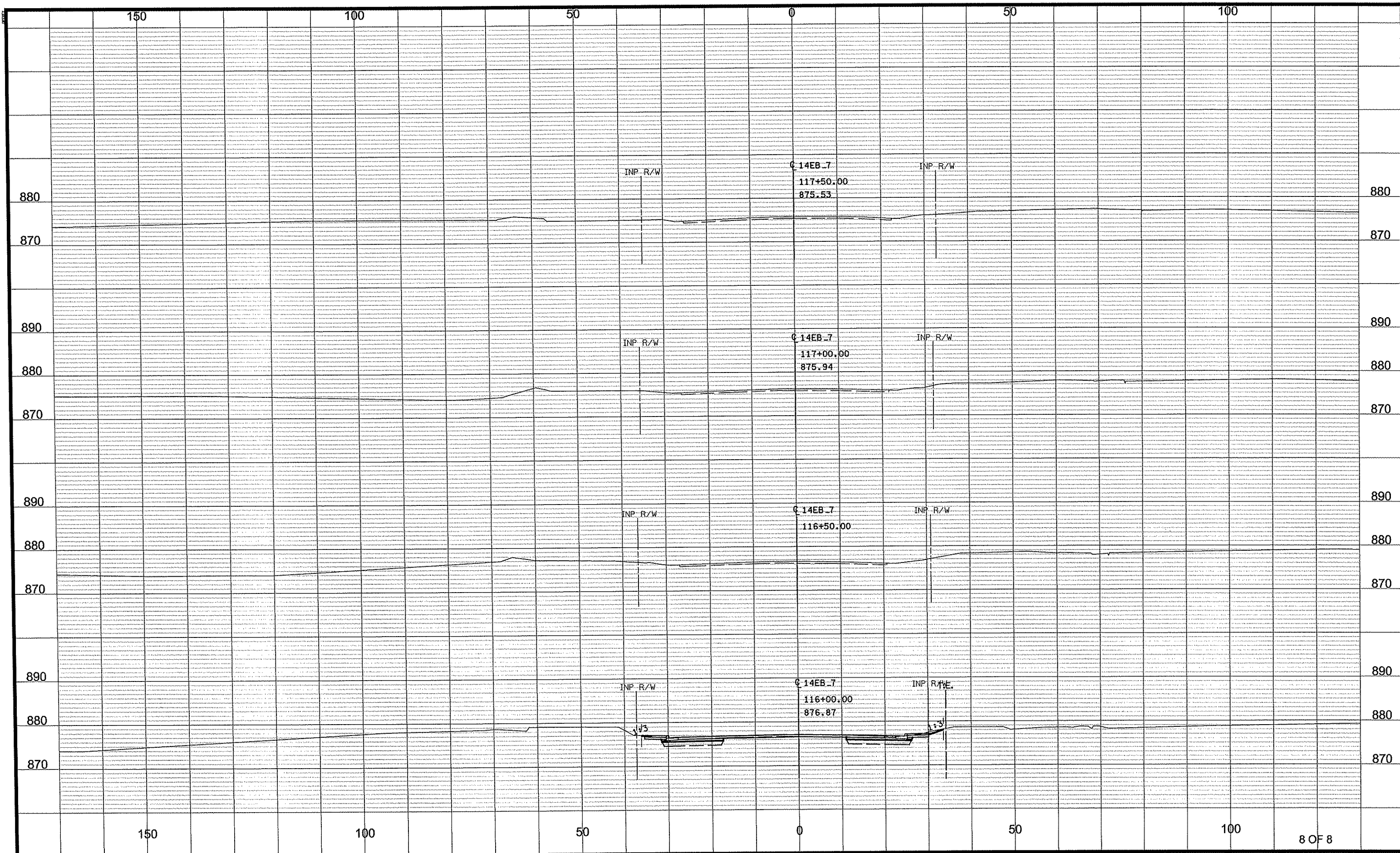
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

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**CROSS SECTIONS**  
**CSAH 14**  
 STA 114+86.79 TO 115+81.24  
 Sheet 84 of 85 Sheets

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

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**CROSS SECTIONS**  
**CSAH 14**  
 STA   116+00.00   TO   117+50.00    
 Sheet   85   of   85   Sheets