

# MINNESOTA DEPARTMENT OF TRANSPORTATION

## ANOKA COUNTY

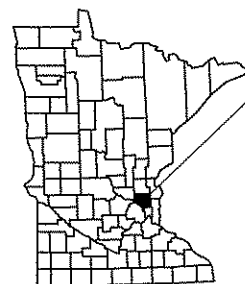
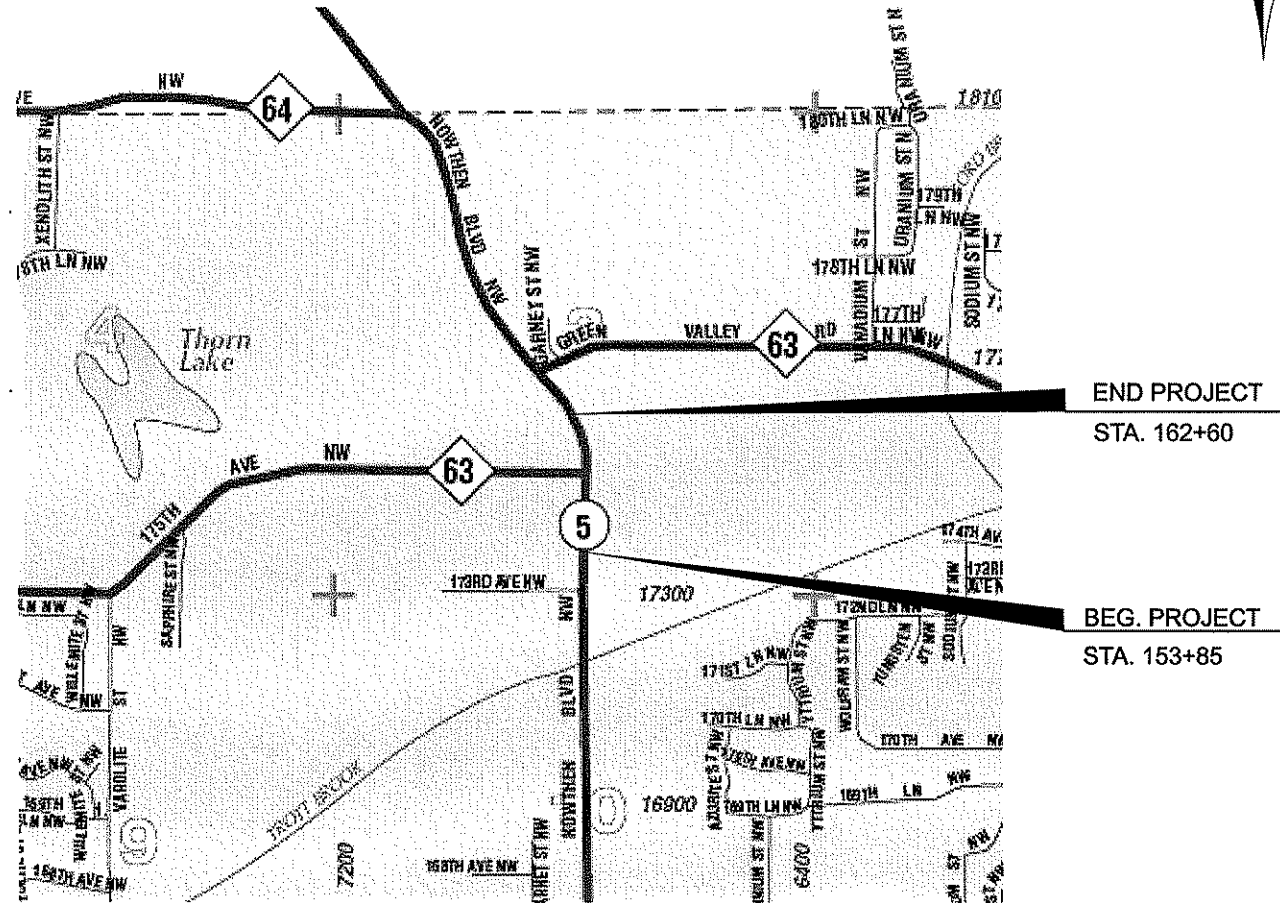
CONSTRUCTION PLAN FOR BYPASS / RTL CONSTRUCTION

LOCATED ON C.S.A.H. 5 AT SOUTH CR 63

COUNTY PROJ. NO. 09-19-05

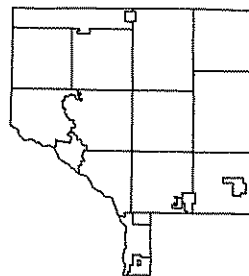
C.S.A.H. 5

GROSS LENGTH	875 FEET	0.17 MILES
BRIDGES-LENGTH	0 FEET	0.00 MILES
EXCEPTIONS-LENGTH	0 FEET	0.00 MILES
NET LENGTH	875 FEET	0.17 MILES



PROJECT LOCATION

CITY OF RAMSEY  
ANOKA COUNTY  
MN/DOT TRANSPORTATION DISTRICT - METRO  
SECTION X  
TOWNSHIP X NORTH  
RANGE X WEST



### STATEMENT OF ESTIMATED QUANTITIES

09-19-05

ITEM NO.	ITEM	NOTE NO.	UNIT	TOTAL EST. QUANT.
2021.501	MOBILIZATION		LUMP SUM	1
2104.505	REMOVE BITUMINOUS PAVEMENT		SQ YD	1278
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LN FT	1190
2105.501	COMMON EXCAVATION		CU YD	557
2105.507	SUBGRADE EXCAVATION		CU YD	641
2105.523	SELECT GRANULAR BORROW (LV)	1, 2	CU TD	111
2105.525	TOPSOIL BORROW (LV)	1	CU YD	54
2118.501	AGGREGATE BASE CLASS 5	1	TON	403
2123.503	MOTOR GRDER		HOUR	20
2123.509	DOZER		HOUR	20
2123.521	PNEUMATIC-TIRE ROLLER		HOUR	20
2130.501	WATER		M GALLON	25
2221.609	AGGREGATE SHOULDERING CLASS 7B	1	TON	38
2232.604	MILL BITUMINOUS SURFACE (2") ( JOINTS )		SQ YD	98
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	77
2360.609	TYPE MV3 WEAR ( 2" MVWE35035 B ) MAINLINE WEAR	1	TON	176
2360.609	TYPE MV3 NON-WEAR ( 2" MVNW35030 B ) MAINLINE NON-WEAR	1	TON	184
2540.602	INSTALL MAIL BOX SUPPORT		EACH	5
2563.601	TRAFFIC CONTROL	4	LUMP SUM	1
2575.523	EROSION CONTROLN BLANKET CATEGORY 3	3	SQ YD	1009

### NOTES

- NOTE 1 TRUCKING, PLACEMENT, AND COMPACTION INCIDENTAL TO ITEM.
- NOTE 2 AMOUNT SHORT OF SELECT GRANULAR BORROW FOR PROJECT
- NOTE 3 PLACEMENT, SEED MIXTURE 25B, COMM. FERT ANALYSIS 10-10-10, AND DISK ANCHOR INCIDENTAL TO BLANKET.
- NOTE 4 FINISHED STRIPING TO BE COMPLETED BY ANOKA COUNTY, CONTRACTOR TO COORDINATE WITH ANOKA COUNTY UPON COMPLETION OF CONSTRUCTION.

### BASIS OF PLANNED QUANTITIES

- |          |                                       |                           |
|----------|---------------------------------------|---------------------------|
| 2211.501 | AGGREGATE SURFACING CLASS 5           | CU YDS * 1.8 = TONS       |
| 2221.609 | AGGREGATE SHOULDERING CLASS 7B        | CU YDS * 1.8 = TONS       |
| 2357.502 | BITUMINOUS MATERIAL FOR TACK COAT     | .05 GAL / SQ YD           |
| 2360.609 | TYPE MV3 WEAR MIXTURE ( MVWE35035 B ) | 115 LBS/SQYD/IN THICKNESS |
| 2360.609 | TYPE MV3 WEAR MIXTURE ( MVNW35030 B ) | 115 LBS/SQYD/IN THICKNESS |
| 2757.523 | EROSION CONTROLN BLANKET CATEGORY 3   | LENGTH * 8'               |
|          | SEED MIXTURE 25B                      | 50LBS / ACRE              |
|          | COMM. FERT. ANALYSIS 10-10-10         | 500LBS / ACRE             |

### PLAN SET

Sheet	
1	TITLE / SEQ
2	PLAN
3	EARTHWORK BALANCE
4-13	CROSS SECTIONS

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: Charles Cadenhead  
SIGNATURE: *Charles Cadenhead*  
DATE: 7/23/09 LICENSE NO. 40416

DRAWN BY: JF DATE: 2/10/09  
DESIGN BY: JF DATE: 2/10/09  
CHECKED BY: DATE:



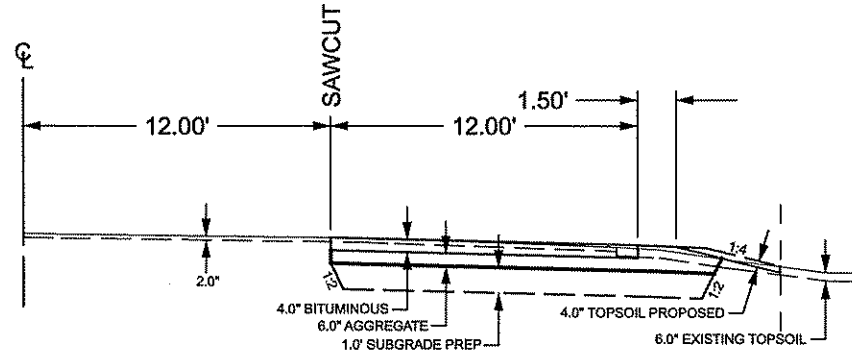
ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE PROJECT NO. \_\_\_\_\_  
STATE PROJECT NO. \_\_\_\_\_  
STATE PROJECT NO. 09-19-05

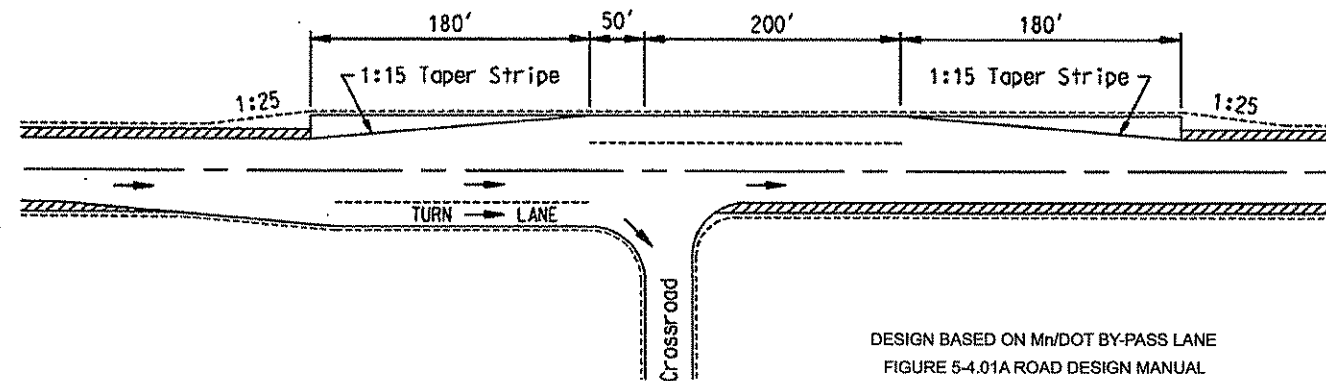
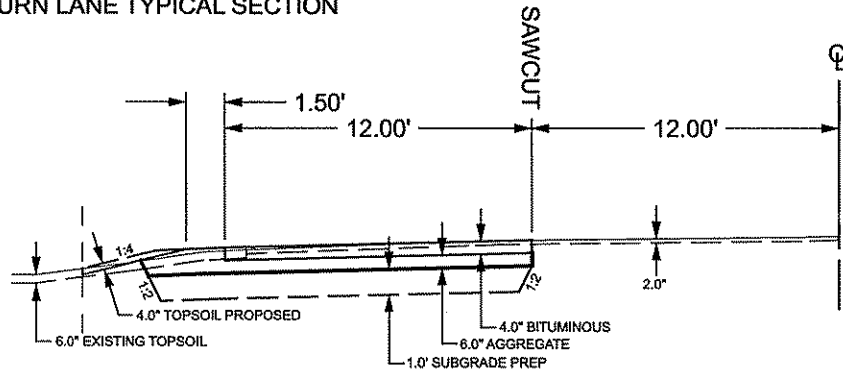
TITLE / SEQ

Sheet 1 of 13 Sheets

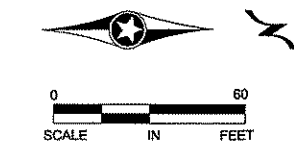
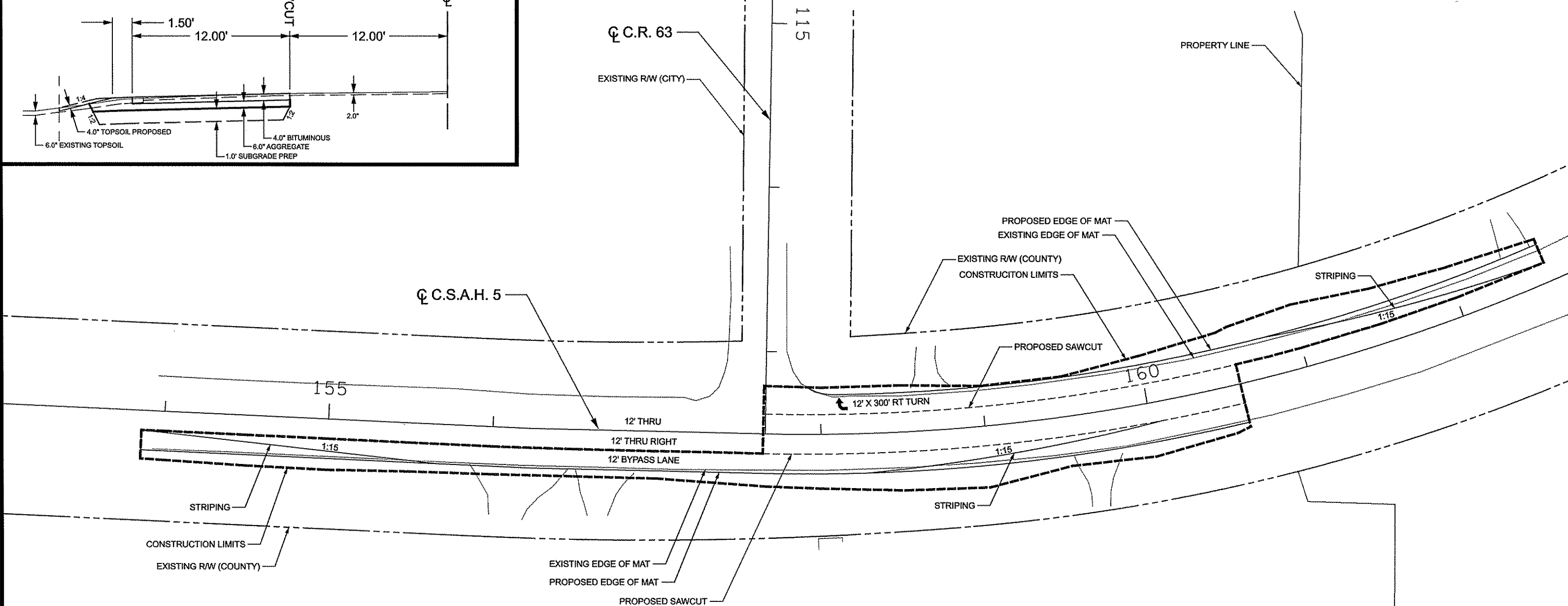
BYPASS LANE TYPICAL SECTION



TURN LANE TYPICAL SECTION



DESIGN BASED ON Mn/DOT BY-PASS LANE  
FIGURE 5-4.01A ROAD DESIGN MANUAL



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\09-01-00\CSAH\_5\Plan\CP\_P1.dgn      03/23/2009      10:11:53 AM

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

PRINT NAME: Charles Cadenhead  
SIGNATURE: *[Signature]*  
DATE: 3/23/09      LICENSE NO. 40416

DRAWN BY: NJD      DATE: 1-15-09  
DESIGN BY: NJD      DATE: 1-15-09  
CHECKED BY:      DATE:     



**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 09-19-05

PLAN

Sheet 2 of 13 Sheets

STATION EB C.R. 132	EXCAVATION TOTALS		EMBANKMENT VOLUMES			
	COMMON (C.Y.)	SUBGRADE (C.Y.)	TOPSOIL (C.Y.)	SUITABLE (C.Y.)	SEL. GRAN. (C.Y.)	AGGREGATE (C.Y.)
154+00.00						
154+50.00	24	27	2	1	27	16
155+00.00	24	27	2	2	27	16
155+50.00	23	27	2	2	27	16
156+00.00	22	27	1	1	27	16
156+50.00	21	27	1	1	27	16
157+00.00	21	27	1	0	27	16
157+66.00	40	50	3	2	50	29
158+00.00	28	35	2	2	35	21
158+50.00	48	54	5	5	54	33
159+00.00	50	53	6	8	54	33
159+50.00	43	53	4	6	54	32
160+00.00	42	53	4	4	54	32
160+50.00	47	53	5	5	54	33
160+58.00	8	9	1	1	9	5
161+00.00	33	34	5	5	34	21
161+50.00	27	27	5	6	27	17
162+00.00	25	27	3	4	27	17
162+58.00	31	31	2	1	31	19
<b>TOTAL</b>	<b>557</b>	<b>641</b>	<b>54</b>	<b>56</b>	<b>645</b>	<b>388</b>

EARTHWORK BALANCE

EXCAVATION (CY)

COMMON (EV) (P) (1) 557 ——— COMMON ——— 429 (EV) / 1.2 = 358 (CV)  
 COMMON (EV) (P) (1) 557 ——— EXISTING TOPSOIL ——— 128 (EV) / 1.2 = 107 (CV)

SUBGRADE EXCAVATION (CY)

SUBGRADE EXCAVATION (EV) (P) (2) 641 ——— SUBGRADE ——— 641 (EV) / 1.2 = 534 (CV)

EMBANKMENT (CY)

SUITABLE ——— 56 (CV)  
 TOPSOIL ——— 54 (CV)  
 SELECT GRANULAR ——— 645 (CV)  
 AGGREGATE ——— 388 (CV)

EXCESS (CY)

TOPSOIL ——— 107 (CV) - 54 (CV) = 53 (CV) (4)  
 SUITABLE ——— 358 (CV) - 56 (CV) = 302 (CV) (3)

BORROW (CY)

SELECT GRANULAR ——— 645 (CV) - 534 (CV) = 111 (CV) (5)

- (1) TOTAL COMMON EXCAVATION FOR PROJECT (INCLUDING TOPSOIL)
- (2) TOTAL SUBGRADE EXCAVATION FOR PROJECT
- (3) TOTAL SUITABLE GRADING EXCESS FOR PROJECT
- (4) TOTAL TOPSOIL EXCESS FOR PROJECT
- (5) TOTAL SELECT GRANULAR BORROW FOR PROJECT

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\09-01-00\CSAH\_5\Plant\EW\_P1.dgn      02/10/2009      11:00:06 AM

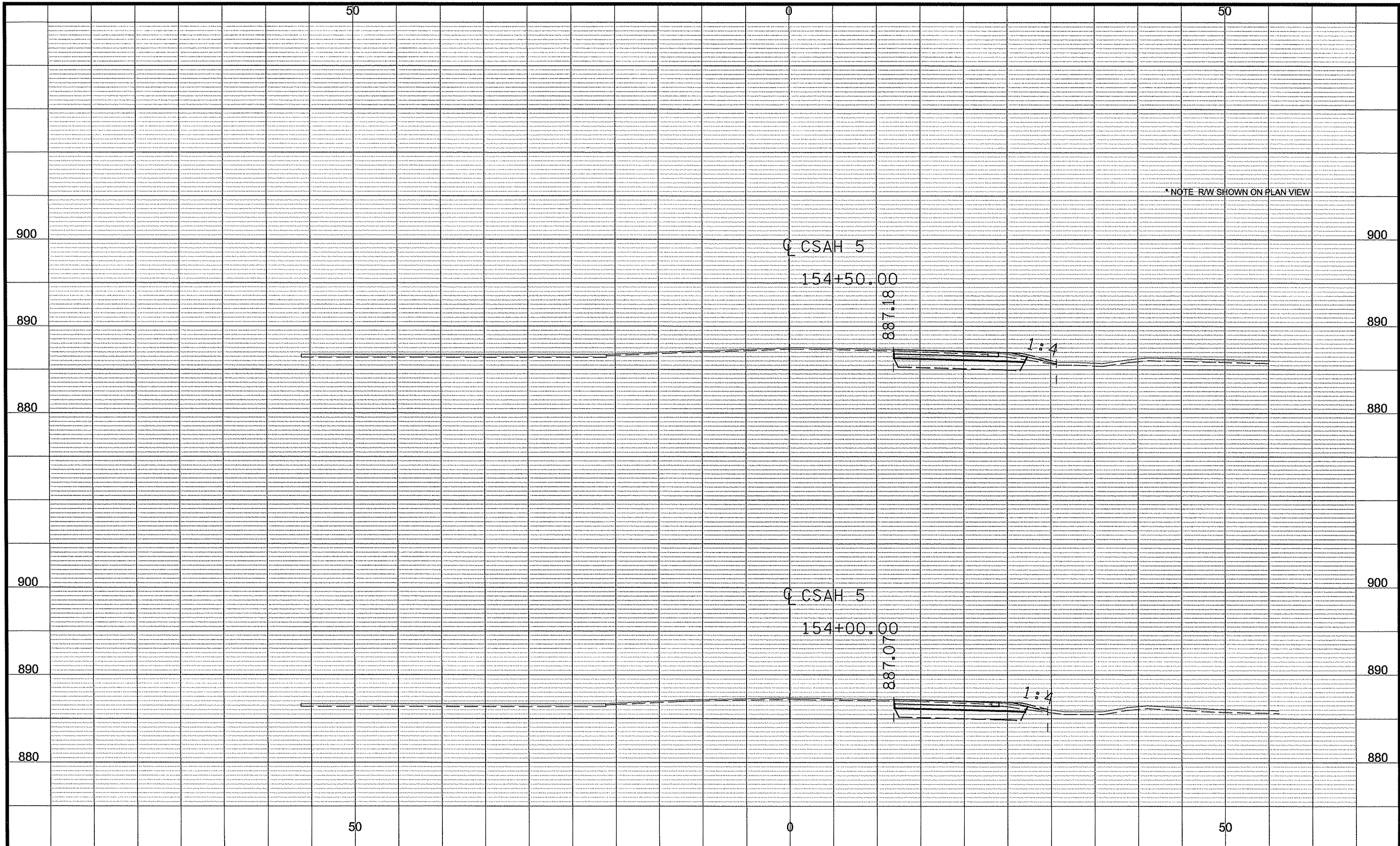
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: Charles Cadenhead  
 SIGNATURE: *Charles Cadenhead*  
 DATE: 3/23/09      LICENSE NO. 40416

DRAWN BY: NJD      DATE: 1-15-08  
 DESIGN BY: NJD      DATE: 1-15-08  
 CHECKED BY: \_\_\_\_\_      DATE: \_\_\_\_\_



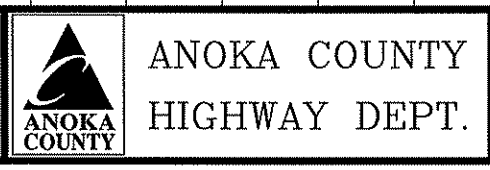
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\01-01-00\CSAH 5\Plan\XS P1.dgn					
02/10/2009 10:57:05 AM					

DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 154+00.00 TO 154+50.00  
 Sheet 4 of 13 Sheets

50

0

50

\*NOTE: RW SHOWN ON PLAN VIEW

900

900

CSAH 5  
155+50.00

887.14

890

890

880

880

900

900

CSAH 5  
155+00.00

887.19

890

890

880

880

50

0

50

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01-00\CSAH_5\Plan\XS_P1.dgn					
02/10/2009 10:57:22 AM					

DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 155+00.00 TO 155+50.00  
 Sheet 5 of 13 Sheets

50

0

50

\*NOTE: R/W SHOWN ON PLAN VIEW

900

900

CSAH 5

156+50.00

887.50

1:4

890

890

880

880

900

900

CSAH 5

156+00.00

887.28

1:4

890

890

880

880

50

0

50

DRAWN BY NJD DATE 1-15-09

DESIGN BY NJD DATE 1-15-09

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



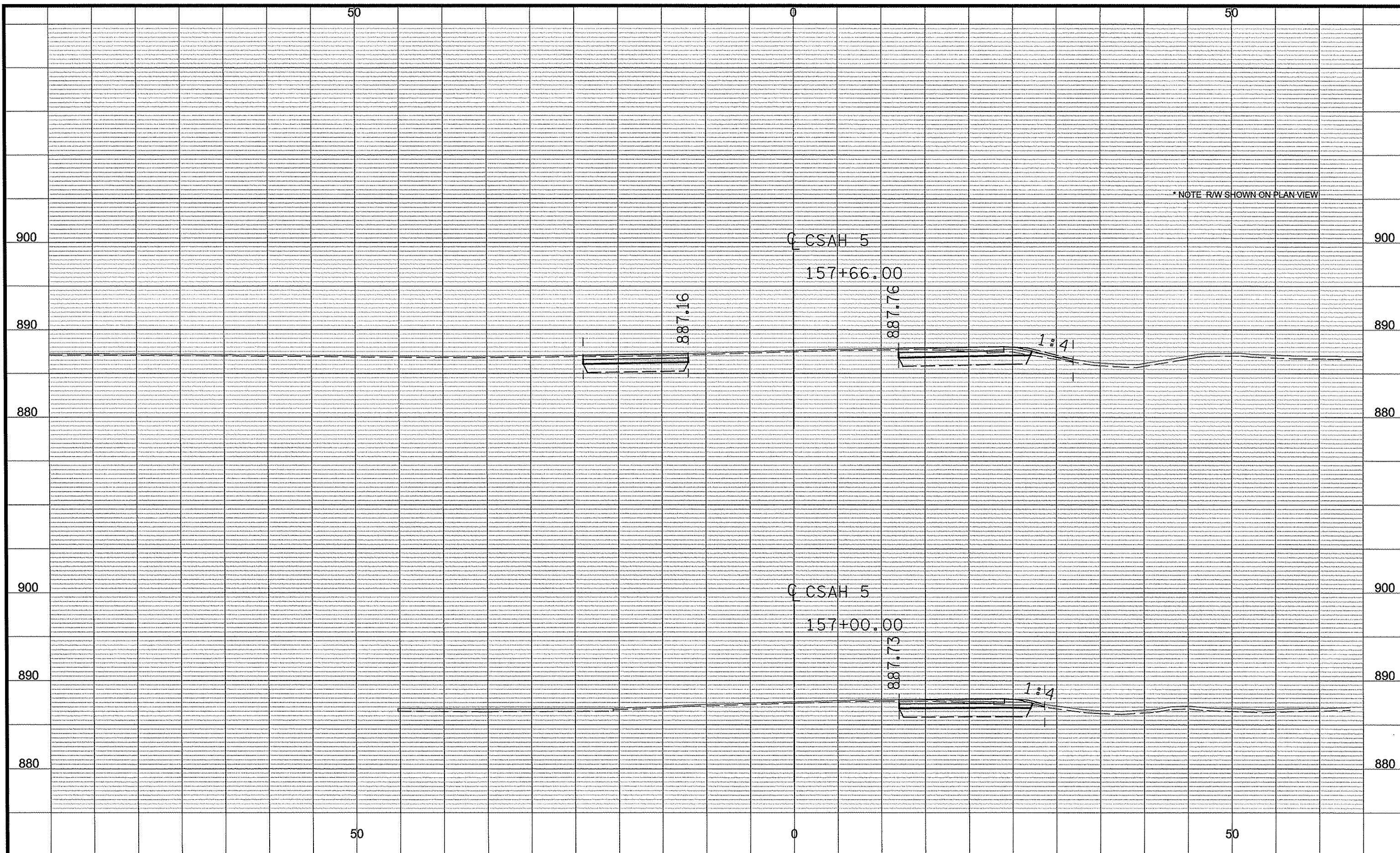
ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
STATE AID PROJECT NO. \_\_\_\_\_  
CITY PROJECT NO. \_\_\_\_\_  
COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
STA 156+00.00 TO 156+50.00  
Sheet 6 of 13 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\09-01-00CSAH\_5\Plan\XS\_P1.dgn 10:57:38 AM 02/10/2009



\*NOTE R/W SHOWN ON PLAN VIEW

900

900

890

890

880

880

900

900

890

890

880

880

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01\CSAH 5\Plan\XS_P1.dgn					
02/10/2009 10:57:51 AM					

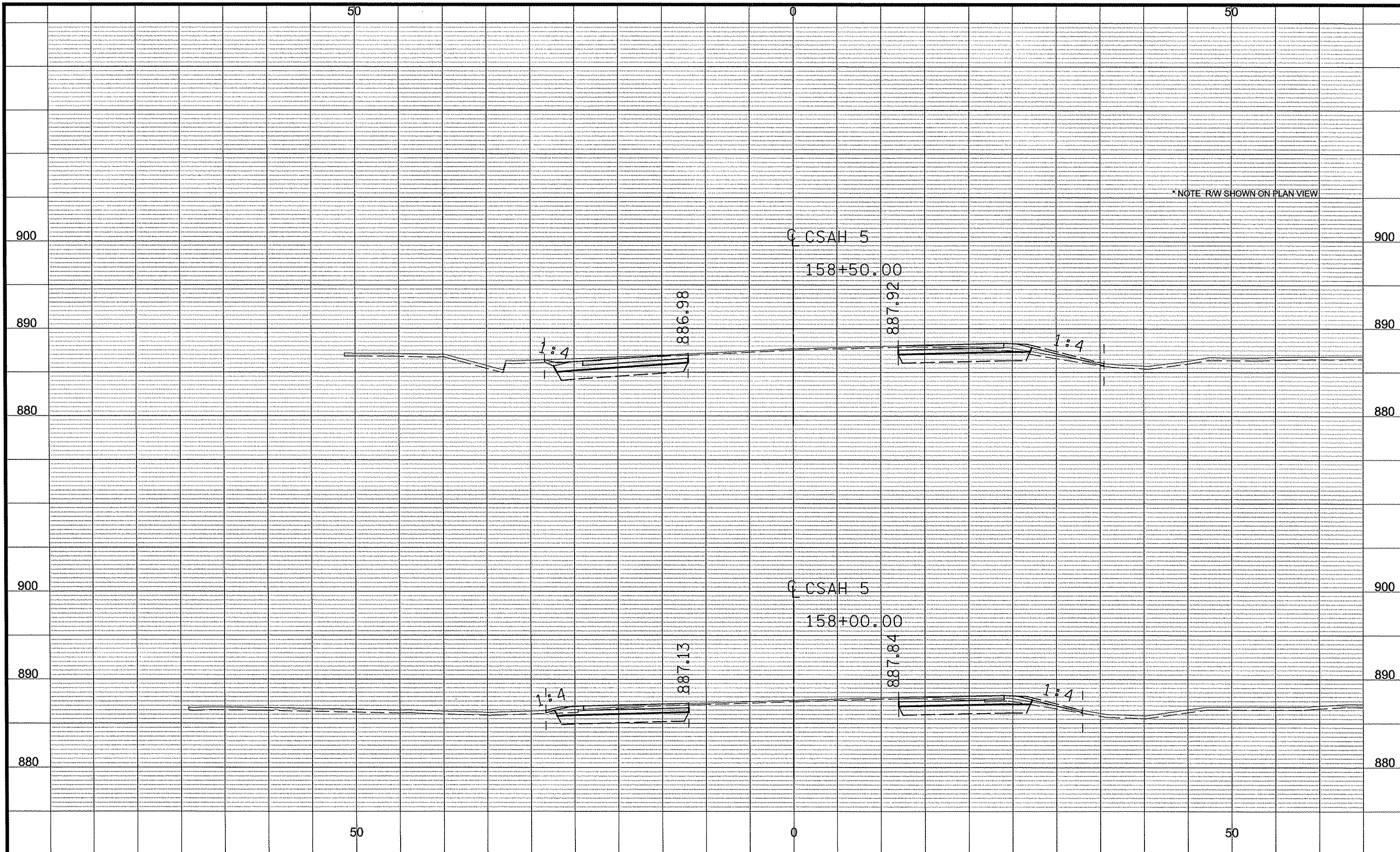
DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

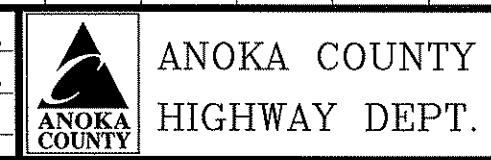
STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 157+50.00 TO 157+66.00  
 Sheet 7 of 13 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01-00\CSAH_5\Plan\XS_P1.dgn					
02/10/2009 10:58:06 AM					

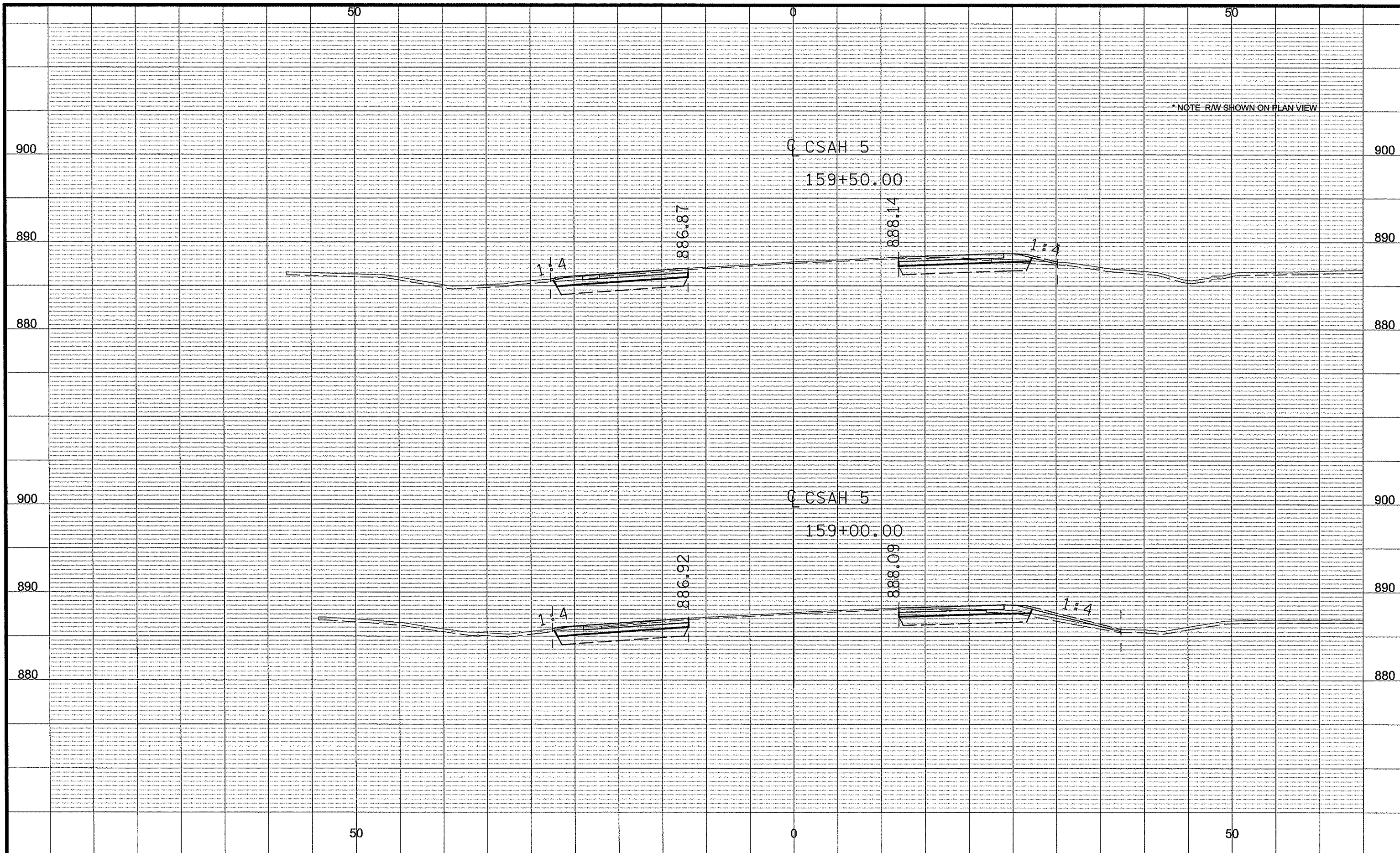
DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

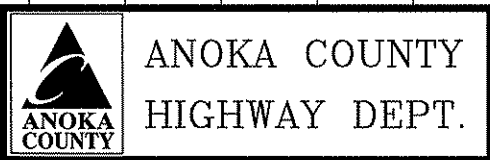
CROSS SECTIONS  
 STA 158+00 TO 158+50  
 Sheet 8 of 13 Sheets





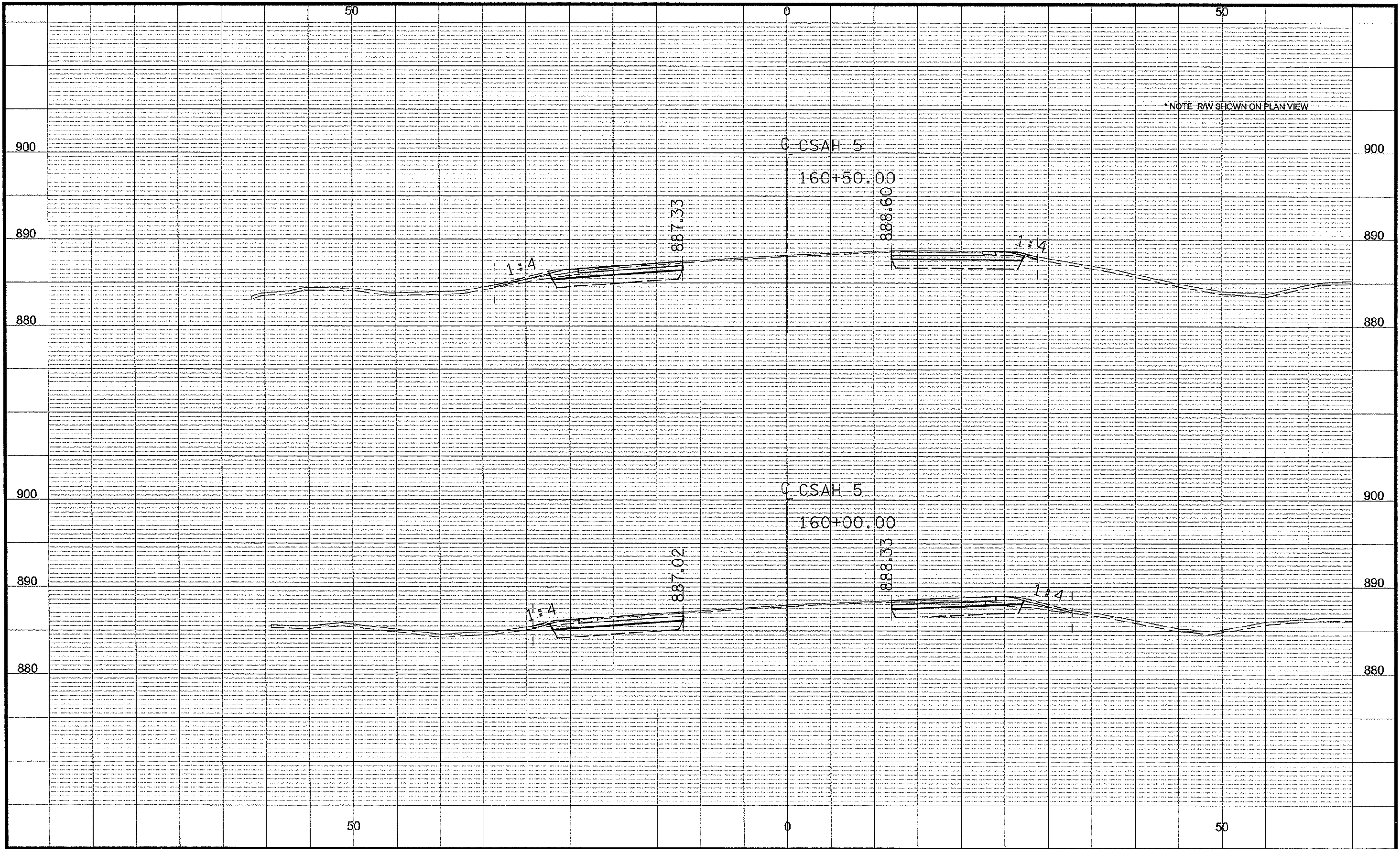
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01-00\CSAH_9\Plan\XS_P1.dgn					
10:58:28 AM					

DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 159+00.00 TO 159+50.00  
 Sheet 9 of 13 Sheets



\*NOTE RW SHOWN ON PLAN VIEW

Q CSAH 5

160+50.00

887.33

888.60

1:4

Q CSAH 5

160+00.00

887.02

888.33

1:4

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01-00\CSAH_5\Plan\XS_P1.dgn					
02/10/2009 10:58:40 AM					

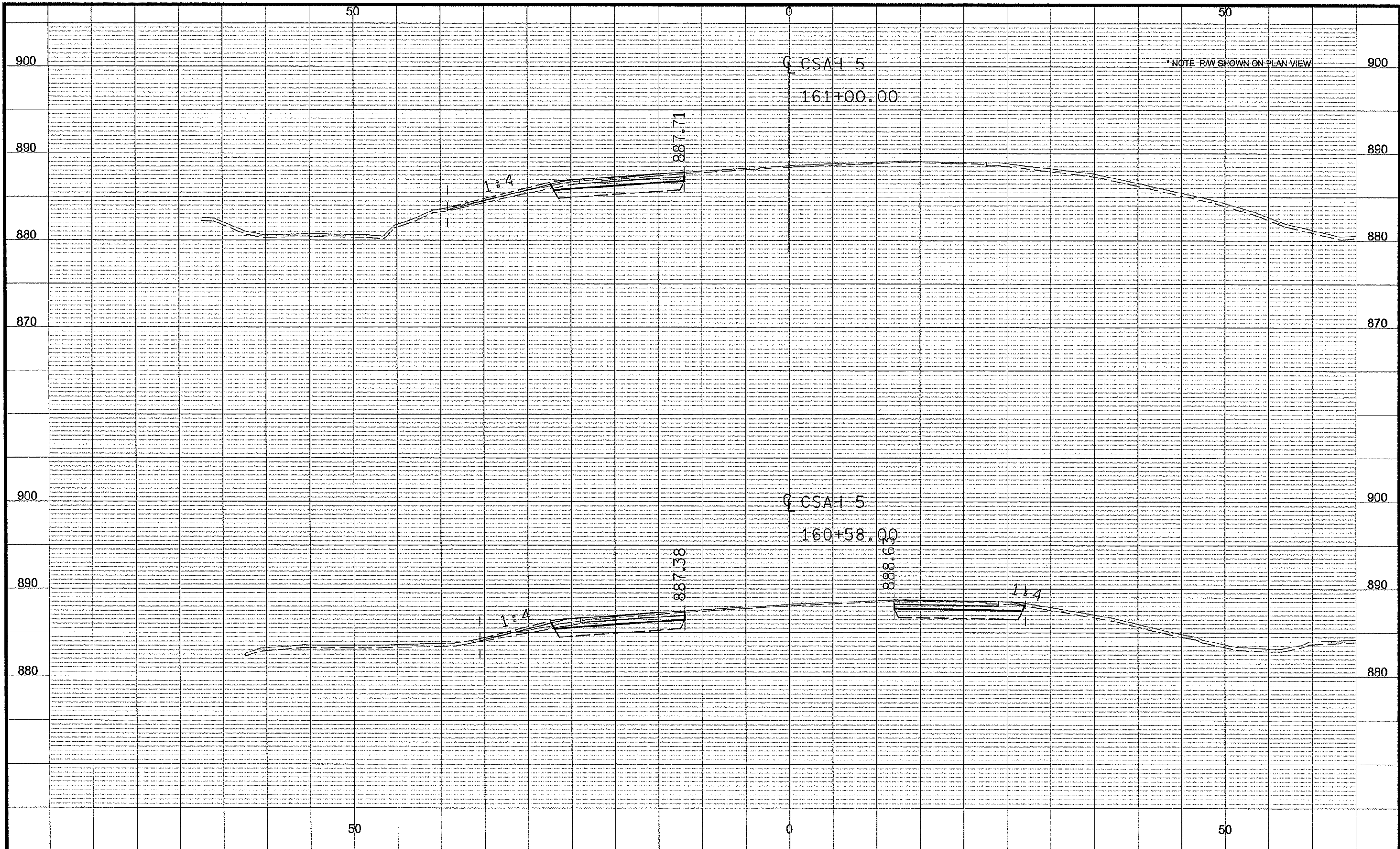
DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

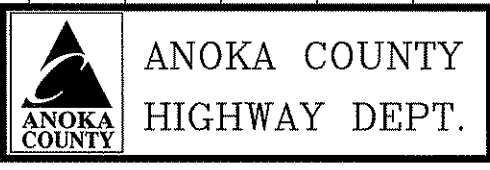
STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 160+00.00 TO 160+50.00  
 Sheet 10 of 13 Sheets



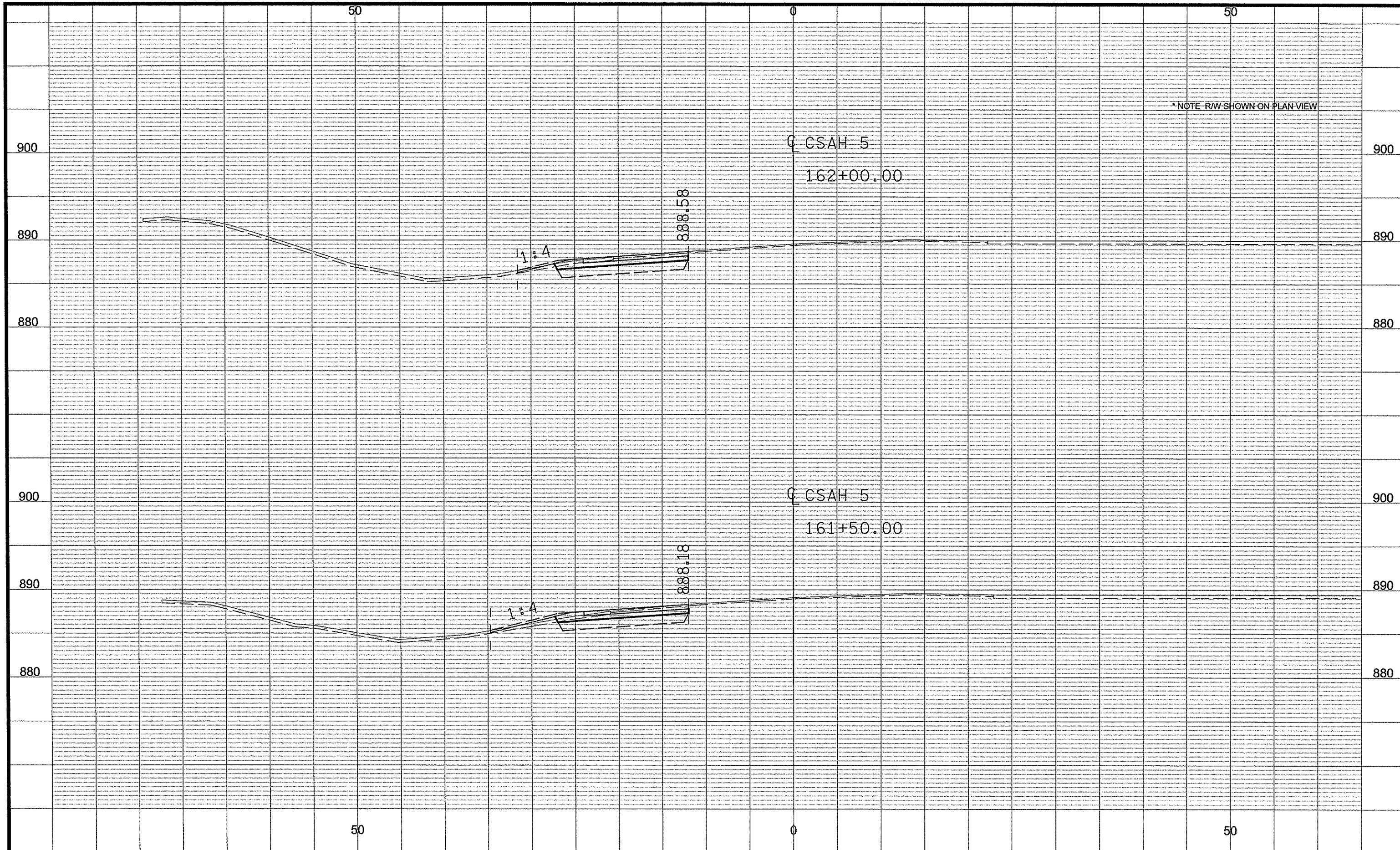
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01-00\CSAH_5\Plan\XS_P1.dgn					
02/10/2009 10:58:54 AM					

DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 160+58.00 TO 161+00  
 Sheet 11 of 13 Sheets



\*NOTE RW SHOWN ON PLAN VIEW

900

900

890

890

880

880

900

900

890

890

880

880

50

0

50

50

0

50

NO	DATE	BY	CHKD	APPR	REVISION
1	02/10/2009				10:59:05 AM

NAME: P:\09-01-00\CSAH\_5\Plan\XS\_P1.dgn

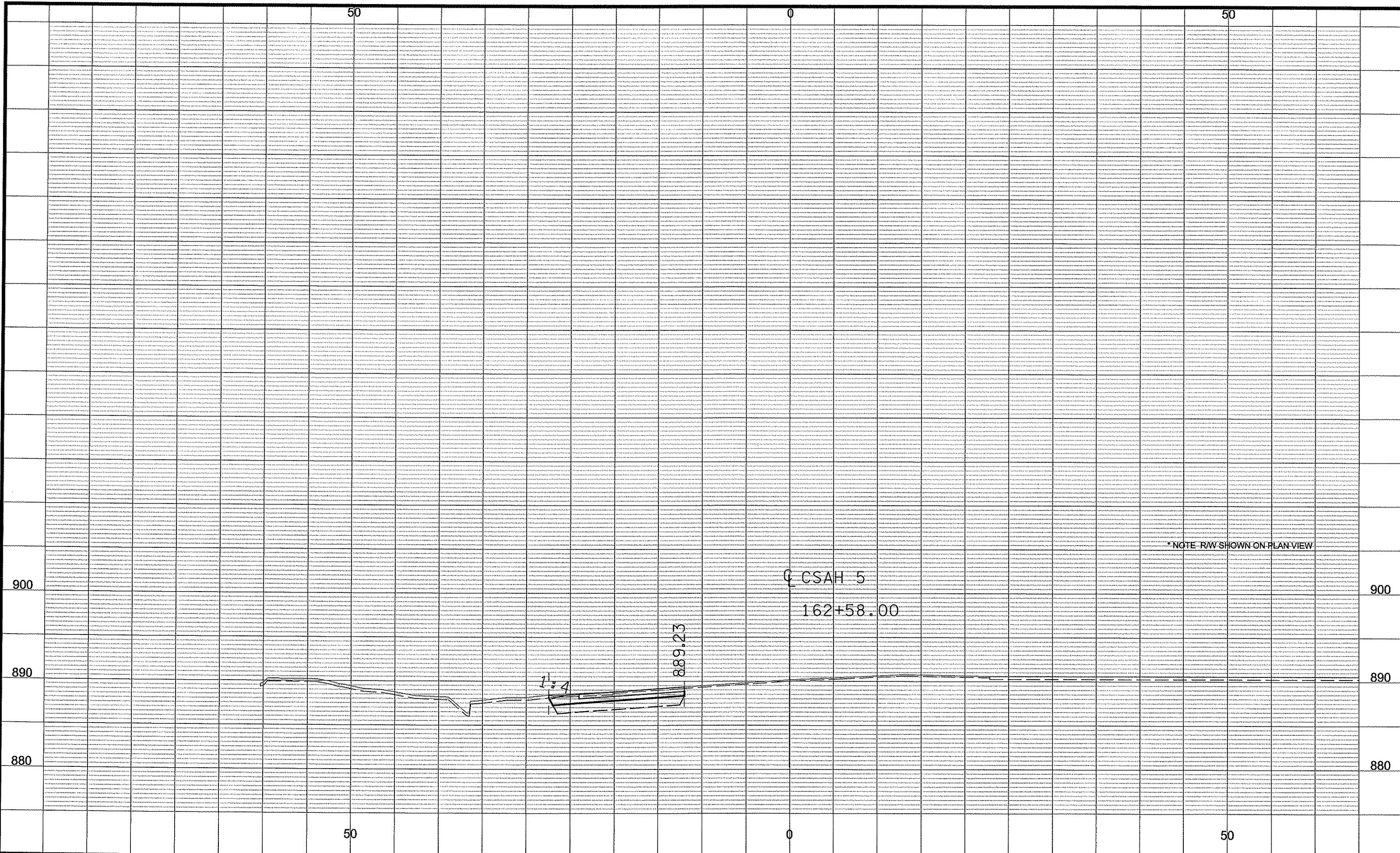
DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 161+50.00 TO 162+00.00  
 Sheet 12 of 13 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\09-01-00\CSAH_5\Plan\XS_P1.dgn					
02/10/2009 10:59:17 AM					

DRAWN BY NJD DATE 1-15-09  
 DESIGN BY NJD DATE 1-15-09  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. \_\_\_\_\_  
 CITY PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 09-19-05

CROSS SECTIONS  
 STA 162+58.00  
 Sheet 13 of 13 Sheets