

ANOKA COUNTY HIGHWAY DEPARTMENT

ANOKA COUNTY, MINNESOTA
 PLANS FOR: BITUMINOUS RECLAMATION, BITUMINOUS SURFACING

C.S.A.H. 78

BETWEEN 1000' N. OF C.S.A.H. 20 AND C.R. 58

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' (MN MUTCD) AND PART VI, 'FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS'.

INDEX

SHEET NO.	SHEET DESCRIPTION
1	TITLE SHEET
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3	TYPICAL SECTIONS
4-6	MISCELLANEOUS DETAILS
7-10	CONSTRUCTION PLANS
11-12	PROFILES
13-16	SIGNING AND STRIPING PLANS
17	DETOUR PLAN

PLAN SYMBOLS

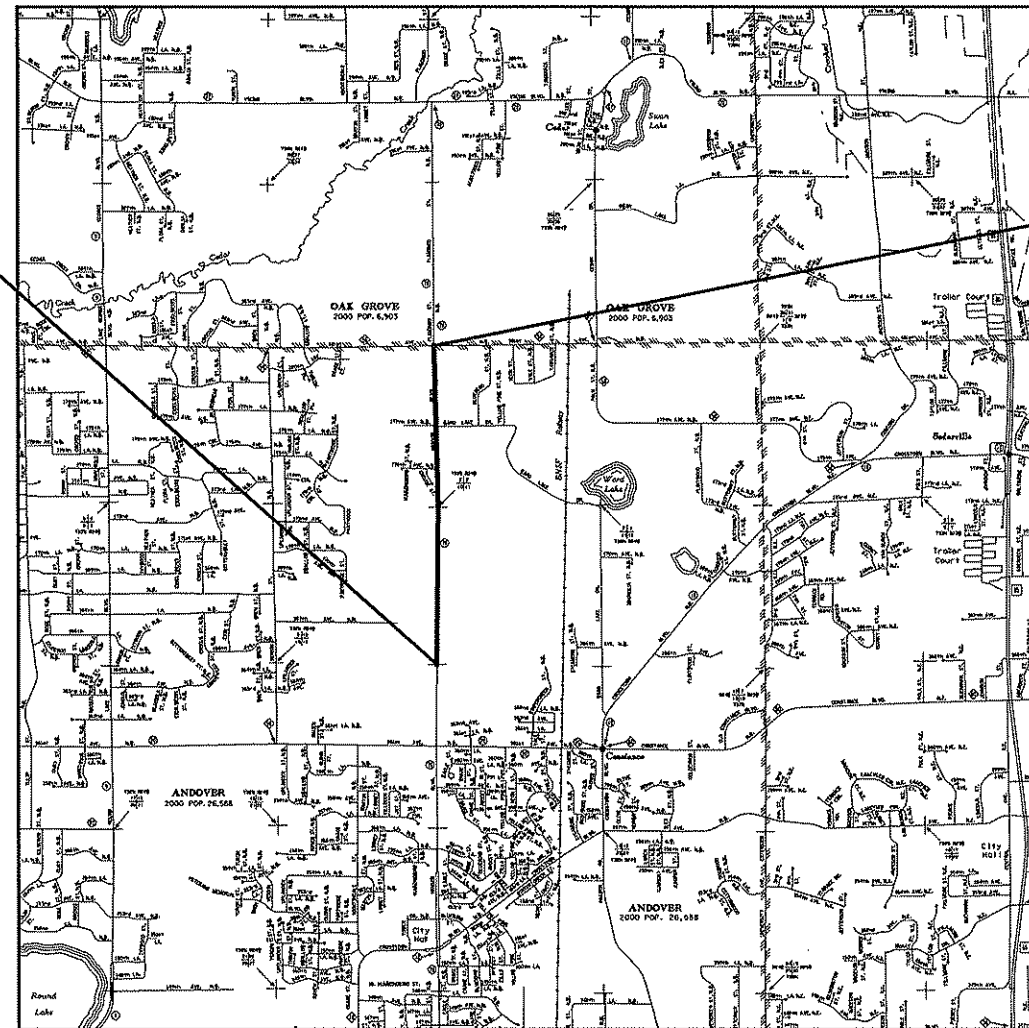
STATE LINE	-----
COUNTY LINE	-----
TOWNSHIP OR RANGE LINE	-----
SECTION LINE	-----
QUARTER LINE	-----
SIXTEENTH LINE	-----
RIGHT-OF-WAY LINE	-----
PRESENT RIGHT-OF-WAY LINE	-----
CONTROL OF ACCESS LINE	-----
PROPERTY LINE (EXCEPT LAND LINES)	-----
VACATED PLATTED PROPERTY	-----
CORPORATE OR CITY LIMITS	-----
TRUNK HIGHWAY CENTER LINE	-----
CONC. RETAINING WALL	-----
RAILROAD	-----
RAILROAD RIGHT-OF-WAY LINE	-----
RIVER OR CREEK	-----
DRY RUN	-----
DRAINAGE DITCH	-----
DRAIN TILE	-----
CULVERT	-----
DROP INLET	-----
GUARD RAIL	-----
BARBED WIRE FENCE	-----
WOVEN WIRE FENCE	-----
CHAIN LINK FENCE	-----
RAILROAD SHOW FENCE	-----
STONE WALL OR FENCE	-----
HEDGE	-----
RAILROAD CROSSING SIGN	-----
RAILROAD CROSSING BELL	-----
ELECTRIC WARNING SIGN	-----
CROSSING GATE	-----
MEANDER CORNER	-----
MAIL BOX	-----
SPRINGS	-----
MARSH	-----
TIMBER	-----
ORCHARD	-----
BRUSH	-----
NURSERY	-----
CATCH BASIN	-----
FIRE HYDRANT	-----
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	-----
IRON PIPE OR ROD	-----
MONUMENT (STONE, CONCRETE, OR METAL)	-----
WOODEN HUB	-----
GRAVEL PIT	-----
SAND PIT	-----
BORROW PIT	-----
ROCK QUARRY	-----

UTILITY SYMBOLS

POWER POLE LINE	-----
TELEPHONE OR TELEGRAPH POLE LINE	-----
JOINT TELEPHONE AND POWER ON POWER POLES ON TELEPHONE POLES	-----
ANCHOR	-----
STEEL TOWER	-----
STREET LIGHT	-----
PEDESTAL (TELEPHONE CABLE TERMINAL)	-----
GAS MAIN	-----
WATER MAIN	-----
CONDUIT	-----
TELEPHONE CABLE IN CONDUIT	-----
ELECTRIC CABLE IN CONDUIT	-----
TELEPHONE MANHOLE	-----
ELECTRIC MANHOLE	-----
BURIED TELEPHONE CABLE	-----
BURIED ELECTRIC CABLE	-----
AERIAL TELEPHONE CABLE	-----
SEWER, (SANITARY)	-----
SEWER, (STORM)	-----
SEWER MANHOLE	-----
HANDHOLE	-----

BEGIN CO. PROJ. NO. 11-24-78
 ROAD STA. 176+65

END CO. PROJ. NO. 11-24-78
 ROAD STA. 296+82



THIS PLAN CONTAINS ...17... SHEETS

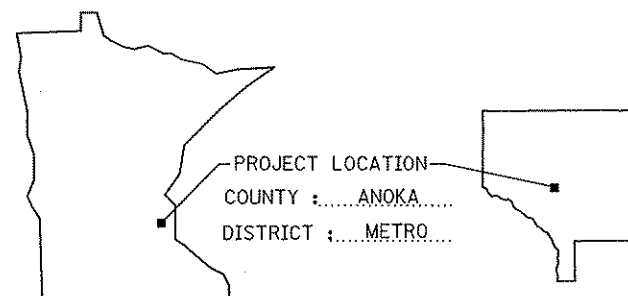


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE James R. Dvorak
 DATE 09/14/11 LIC. NO. 17803 PRINT NAME JAMES R. DVORAK

RECOMMENDED FOR APPROVAL [Signature] 9/15/11
 ANOKA COUNTY ENGINEER

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY



SCALES	
INDEX MAP	3000'
PLAN	100'
PROFILE	10' HORIZ. / 10' VERT.
X-SECTION	20' HORIZ. / 20' VERT.

THIS PLAN AND/OR SPECIFICATION WAS PREPARED SPECIFICALLY FOR THIS PROJECT, AND ANY RE-USE OF DETAILS OR SPECIFICATIONS ON OTHER PROJECTS IS NOT INTENDED OR AUTHORIZED BY THE DESIGNER. LIABILITY FOR ANY RE-USE ON OTHER PROJECTS IS THE RESPONSIBILITY OF THE PERSON, AGENCY, OR CORPORATION USING PLAN OR SPECIFICATION DATA FROM THIS PROJECT.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO GUIDELINES OF CI/ASCE 58-02. ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

COUNTY PROJ. NO. 11-24-78 SHEET NO. 1 OF 17 SHEETS

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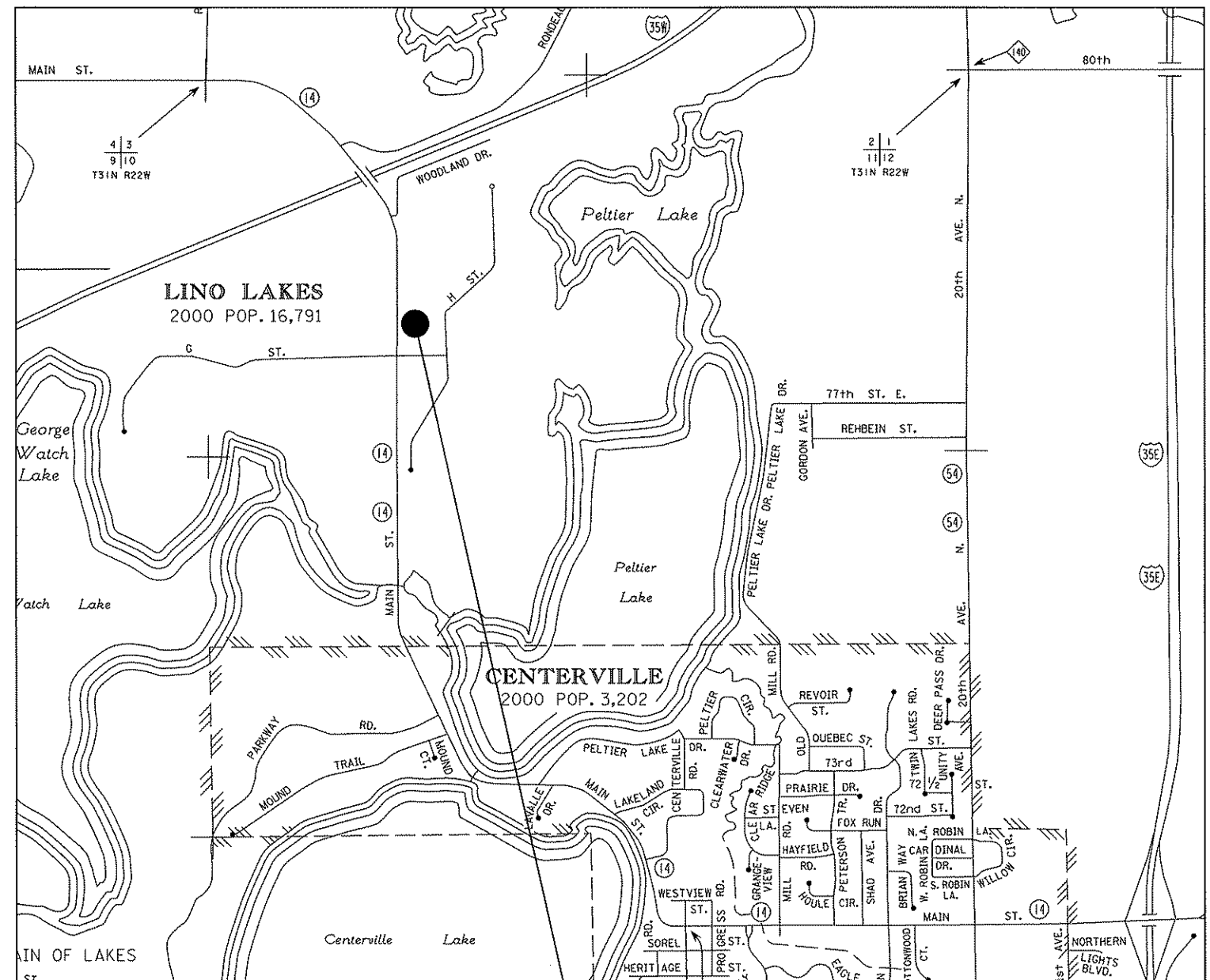
STATEMENT OF ESTIMATED QUANTITIES

NOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED
				QUANTITIES
				EST
	2021.501	MOBILIZATION	LUMP SUM	1
(1)	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	12
(1)	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	40
	2105.501	COMMON EXCAVATION (P)	CU YD	38338
	2105.604	GEOTEXTILE FABRIC TYPE V	SQ YD	44000
	2105.607	HAUL AND STOCKPILE MATERIAL (LV)	CY	11500
	2105.607	FILL SPECIAL 1 (LV)	CY	11500
	2105.607	FILL SPECIAL 2 (LV)	CY	6500
(2)	2123.503	POWER SHOVEL (3 CU YD)	HOUR	36
(2)	2123.503	PNEUMATIC-TIRED ROLLER	HOUR	24
(2)	2123.503	MOTOR GRATER	HOUR	36
	2130.501	WATER	MGAL	200
(3)	2211.501	AGGREGATE BASE CLASS 5	TON	2643
(1)	2232.501	MILL BITUMINOUS SURFACE (2" JOINTS)	SQ YD	350
	2301.501	CONCRETE PAVEMENT (6" DRIVEWAYS)	SQ YD	24
(4)	2331.604	BITUMINOUS PAVEMENT RECLAMATION	SQ YD	64091
	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1962
	2360.501	TYPE SP 12.5 SPWEB440C MAINLINE WEAR (2")	TON	6281
	2360.501	TYPE SP 12.5 SPWEB440C STREET APPROACH WEAR (VAR.)	TON	150
	2360.502	TYPE SP 12.5 SPWEB440C MAINLINE BASE (2")	TON	4102
	2501.511	24" RC PIPE CULVERT CL IV	LIN FT	196
	2501.515	24" RC PIPE APRON	EACH	6
	2501.515	48" RC PIPE CULVERT CL IV	LIN FT	84
	2501.515	48" RC PIPE APRON	EACH	2
	2501.515	72" RC PIPE CULVERT CL V	LIN FT	88
	2501.515	72" RC PIPE APRON	EACH	2
	2501.521	22" SPAN RC PIPE-ARCH CULV CL V	LIN FT	64
	2501.525	22" SPAN RC PIPE-ARCH APRON	EACH	2
(5)	2535.501	BITUMINOUS CURB (4")	LIN FT	1720
(6)	2540.602	INSTALL MAIL BOX SUPPORT	EACH	22
(7)(11)	2563.601	TRAFFIC CONTROL	LUMP SUM	1
(11)	2564.531	SIGN PANELS TYPE C	SQ FT	171
	2573.502	SILT FENCE, TYPE HEAVY DUTY	LIN FT	7000
(8)	2575.555	TURF ESTABLISHMENT (PROJECT)	LUMP SUM	1
(9)	2575.555	TURF ESTABLISHMENT (STOCKPILE)	LUMP SUM	1
	2581.501	REMOVABLE PREFORM PLASTIC MARKINGS	LIN FT	960
(10)	2582.502	4" SOLID LINE WHITE - EPOXY	LIN FT	25234
(10)	2582.502	4" SOLID LINE YELLOW - EPOXY	LIN FT	3390
(10)	2582.502	4" BROKEN LINE YELLOW - EPOXY	LIN FT	1830
(10)	2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	2910

NOTES:

- (1) LOCATION TO BE DETERMINED BY ENGINEER.
- (2) TO BE USED ONLY AT THE DIRECTION OF THE ENGINEER.
- (3) SHLDR. LEVELING/ NEW 1.5' SHLDRS./ AGG. ST APPROACHES & AGG. DRIVEWAYS
- (4) CL YLW SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH LIFT (MUST BE APPLIED BEFORE CONTRACTOR LEAVES FOR THE DAY). INCLUDES REMOVAL OF EXISTING BITUMINOUS CURB.
- (5) SEE STRIPING PLANS FOR LOCATIONS.
- (6) MAILBOXES TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION.
- (7) DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE AND BUMP/BUMP AHEAD SIGNS - TO BE INPLACE DURING RECLAIM/PAVING OPERATIONS.
- (8) APPROXIMATELY 2.5 ACRES OF SEEDING AND 500 SQ. YDS. OF SOD.
- (9) INCLUDES SHAPING AND RESTORING STOCKPILE SITE IN RICE CREEK CHAIN OF LAKES REGIONAL PARK; APPROXIMATELY 2.5 ACRES OF SEEDING.
- (10) PERMANENT MARKINGS TO BE IN PLACE WITHIN 72 HOURS OF FINAL MAINLINE PAVING.
- (11) ALL TRAFFIC CONTROL METHODS SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (12) ALL LIGHT WEIGHT FILL FROM STOCKPILED SHALL BE USED BEFORE MATERIAL ACCEPTED FROM ANY OTHER SOURCE. SEE SPECIAL PROVISIONS.

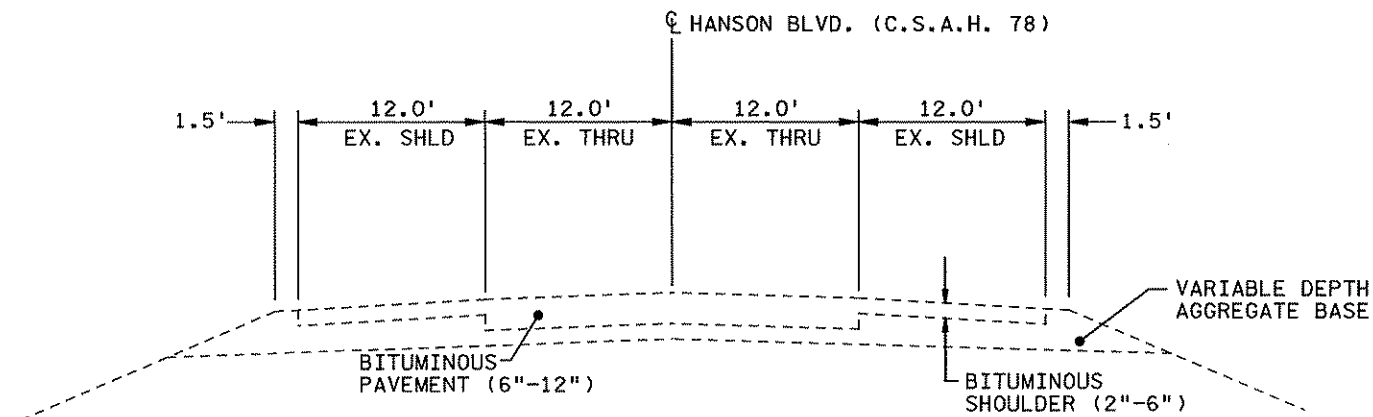
BASIS OF PLANNED QUANTITIES		
2211.501	AGGREGATE BASE CLASS 5	CU YDS * 1.8 = TONS
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	.05 GAL/SQ YD
2360.501	TYPE SP 12.5 SPWEB440C WEAR	115 LBS/SQYD/IN THICKNESS
2360.502	TYPE SP 12.5 SPWEB440C BASE	115 LBS/SQYD/IN THICKNESS
2580.603	REMOVABLE PREFORM PLASTIC MARKINGS	4' AT 50' INTERVALS FOR SKIPS



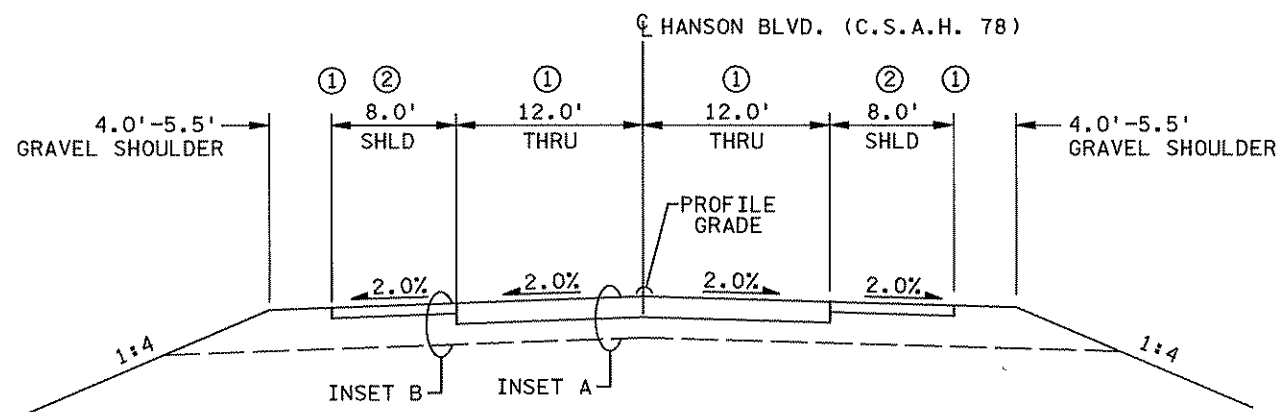
LIGHT WEIGHT FILL
STOCKPILE (TIRES)

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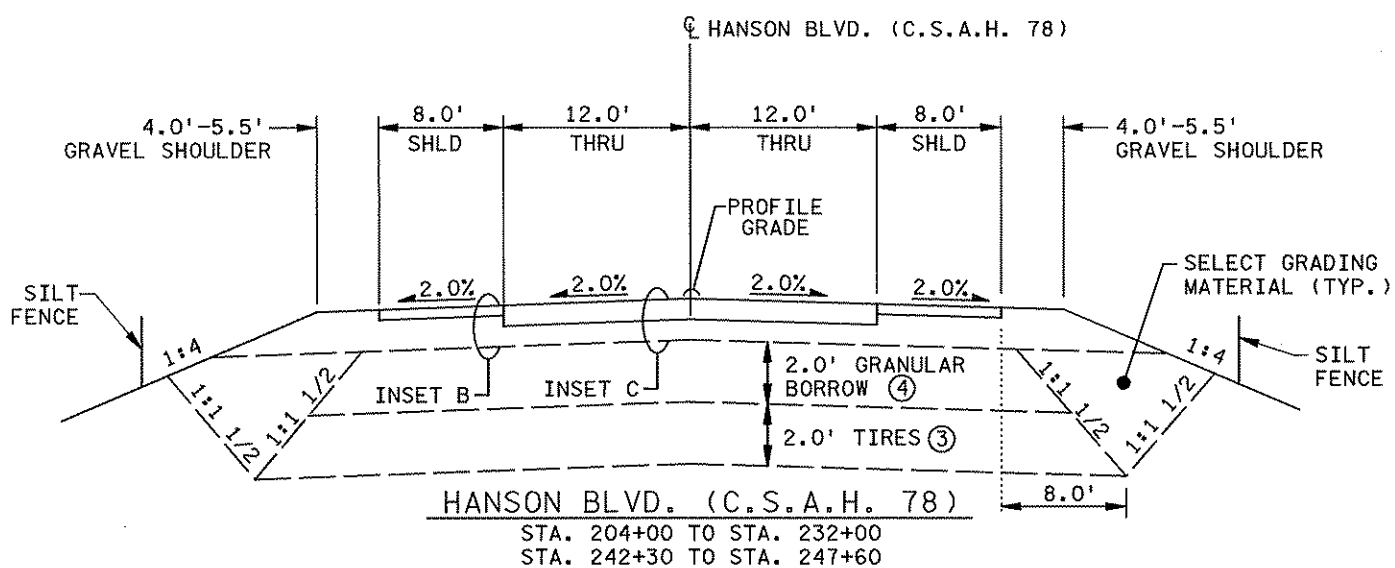
		COUNTY PROJECT NO. 11-24-78	DRAWN BY D.FITCHORN DESIGNED BY J. DVORAK CHECKED BY J. DVORAK COMM. NO. 0117493		ANOKA COUNTY HIGHWAY DEPARTMENT STATEMENT OF ESTIMATED QUANTITIES C.S.A.H. 78	SHEET 2 OF 17
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Print Name: JAMES R. DVORAK <i>James R. Dvorak</i> Date <u>09/14/11</u> License # <u>17803</u>						
NO	DATE	BY	CKD	APPR	REVISION	



EXISTING TYPICAL SECTION
HANSON BLVD. (C.S.A.H. 78)



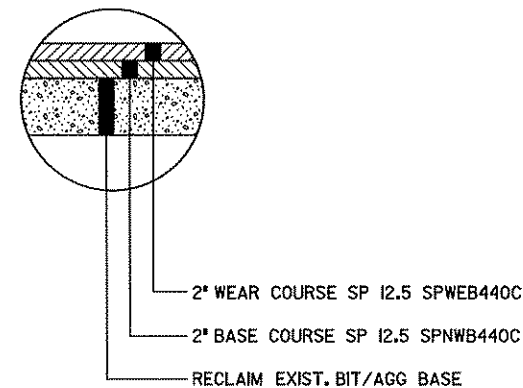
HANSON BLVD. (C.S.A.H. 78)
STA. 176+65 TO STA. 204+00
STA. 232+00 TO STA. 242+30
STA. 247+60 TO STA. 296+82



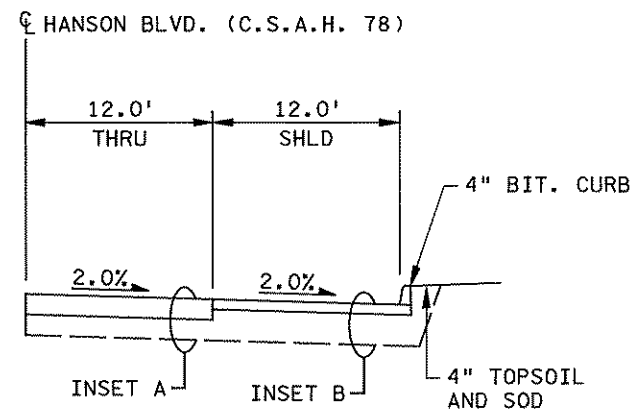
HANSON BLVD. (C.S.A.H. 78)
STA. 204+00 TO STA. 232+00
STA. 242+30 TO STA. 247+60

NOTES:

- ① FULL DEPTH RECAMMATION AND OVERLAY EXISTING ROADWAY
- ② EXISTING SHOULDER TO BE PAVED TO 8.0', OUTSIDE 4.0' WILL BE GRAVEL
- ③ TIRES SUPPLIED BY ANOKA COUNTY SEE SPECIAL PROVISIONS
- ④ ASSUME GRANULAR BORROW AVAILABLE ON SITE

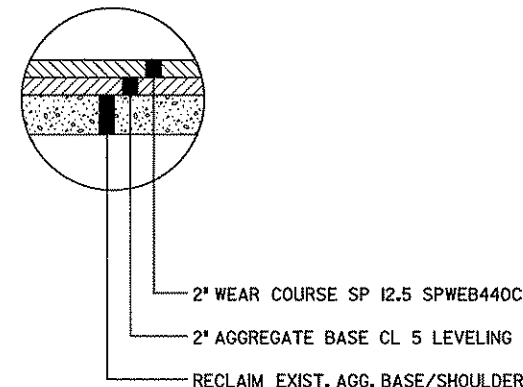


INSET A

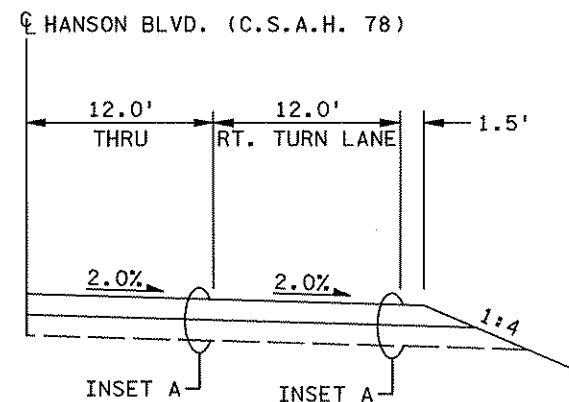


BITUMINOUS CURB SECTION

STA. 274+65 TO STA. 283+70 RT.
STA. 289+70 TO STA. 294+15 RT.

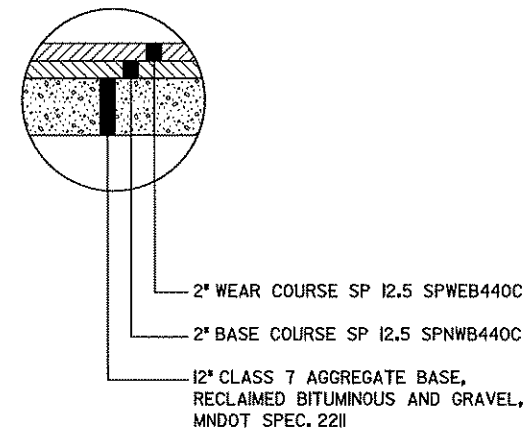


INSET B



RIGHT TURN AND BYPASS LANE
PAVEMENT SECTION

STA. 265+40 TO STA. 270+20 RT.
STA. 271+38 TO STA. 276+18 LT.
STA. 292+00 TO STA. 296+80 RT.
STA. 257+30 TO STA. 262+10 LT.
STA. 253+30 TO STA. 259+50 RT.



INSET C

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NO	DATE	BY	CHKD	APPR	REVISION

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.
Print Name: JAMES R. DVORAK
Date: 09/14/11 License #: 17803

COUNTY PROJECT NO. 11-24-78

DRAWN BY D. FITCHORN
DESIGNED BY J. DVORAK
CHECKED BY J. DVORAK
COMM. NO. 0117493

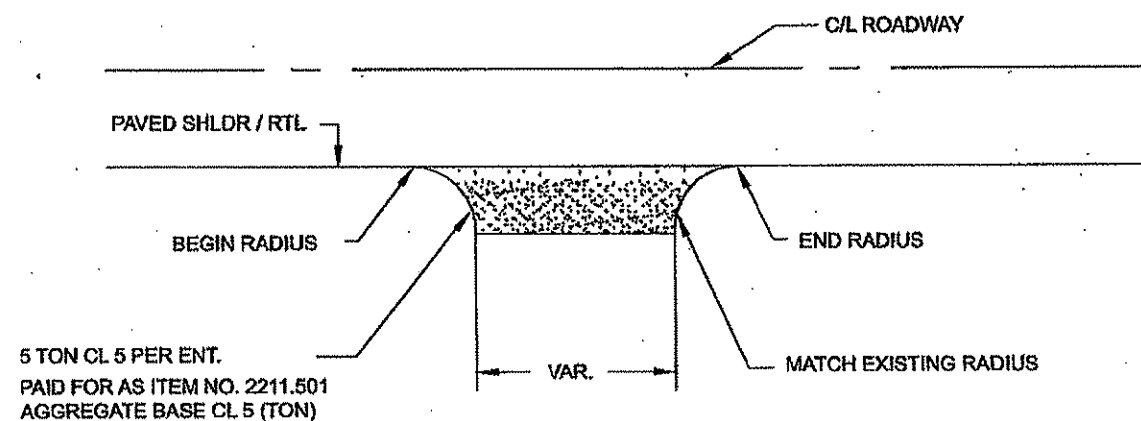


ENGINEERS
PLANNERS
DESIGNERS

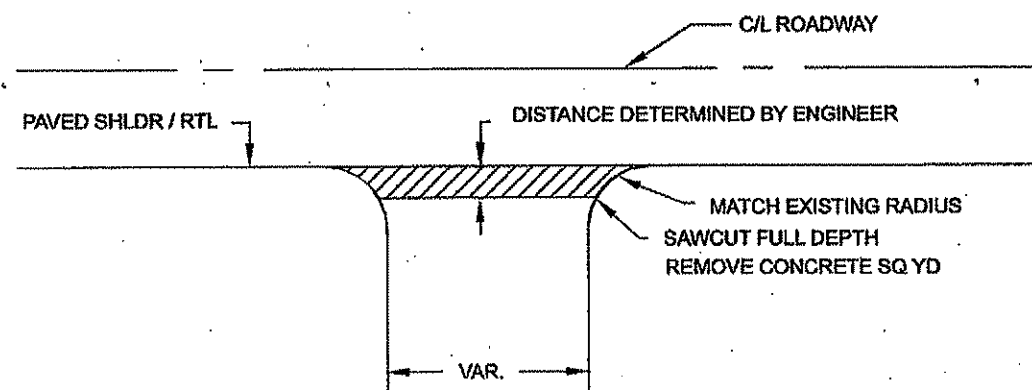
ANOKA COUNTY HIGHWAY DEPARTMENT
TYPICAL SECTIONS
C.S.A.H. 78

SHEET
3
OF
17

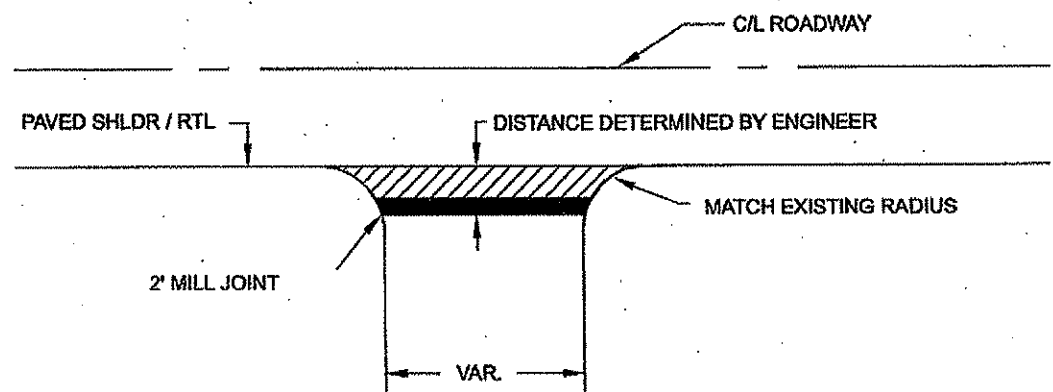
GRAVEL DR. WAYS AND FEILD ENT.



CONCRETE DR. WAYS

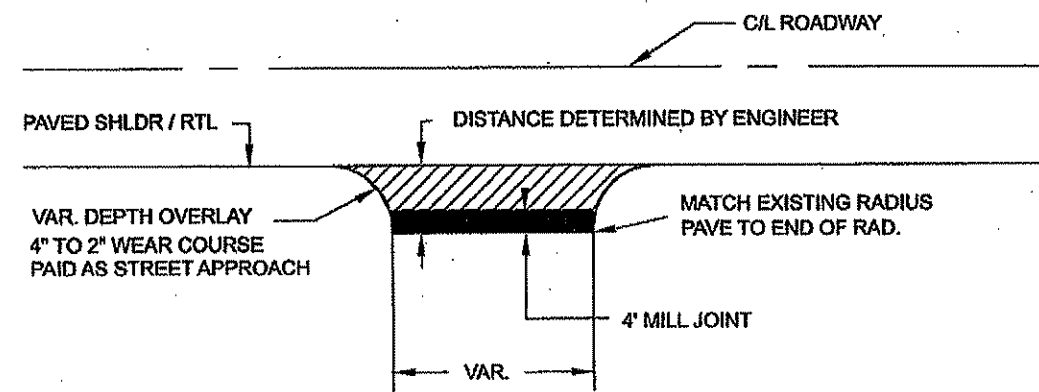


PAVED DR. WAYS



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

PAVED STREET APPROACHES



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NO	DATE	BY	CHKD	APPR	REVISION

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James R. Dvorak
 Date 09/14/11 License # 17803

COUNTY PROJECT NO.
11-24-78

DRAWN BY
D. FITCHORN
 DESIGNED BY
J. DVORAK
 CHECKED BY
J. DVORAK
 COMM. NO. 0117493



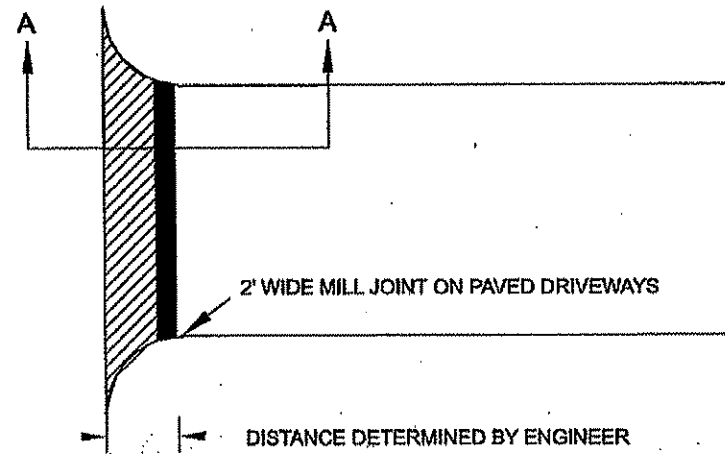
**ENGINEERS
PLANNERS
DESIGNERS**

ANOKA COUNTY HIGHWAY DEPARTMENT
 DETAILS
C.S.A.H. 78

SHEET
4
OF
17

PAVED DRIVEWAYS

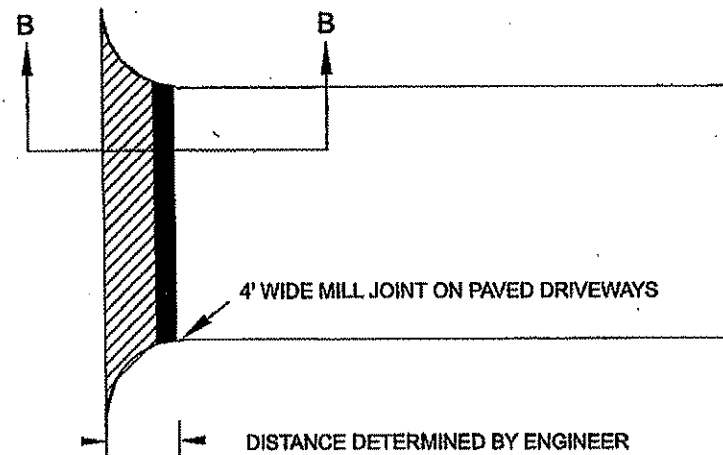
JOINT DETAILS



DRIVEWAYS TO BE PAVED IN SEPERATE OPERATION THAN MAINLINE WEAR.
PAID AS STREET APPROACH WEAR

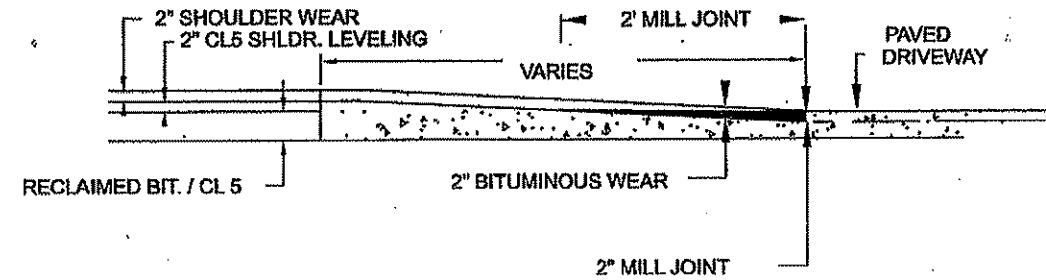
PAVED STREETS

JOINT DETAILS

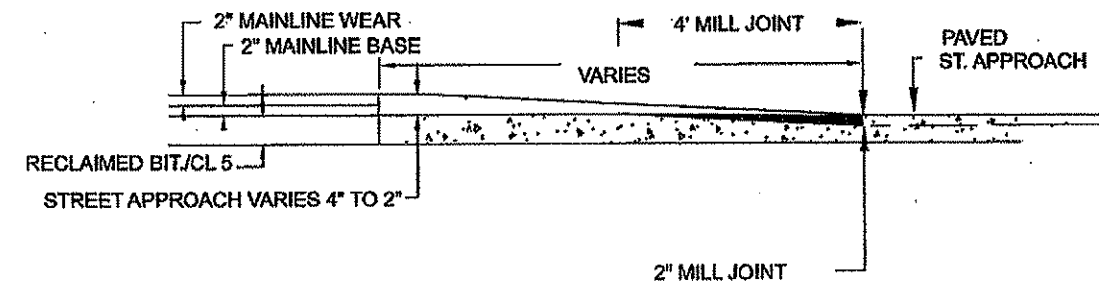


OVERLAY EXISTING STEET APPROACH, DO NOT RECLAIM
STREETS TO BE PAVED IN SEPERATE OPERATION THAN MAINLINE WEAR.
PAID AS STREET APPROACH BASE AND WEAR

DRIVEWAY JOINT DETAILS A - A



STREET APPROACH JOINT DETAILS B - B



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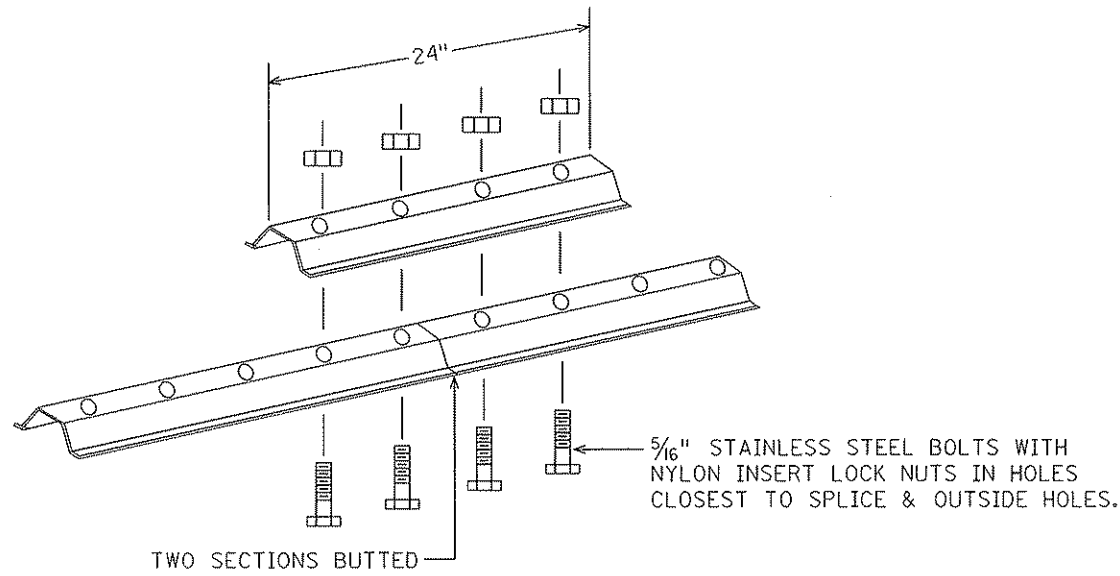
ENGINEERS
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DESIGNERS

ANOKA COUNTY HIGHWAY DEPARTMENT
DETAILS
C.S.A.H. 78

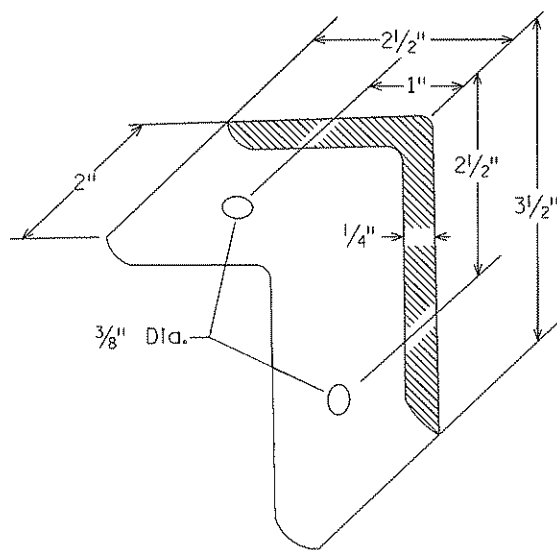
SHEET
5
OF
17

PLOTTED/REVISED: \$\$\$DATE\$\$\$

DISTRICT #: \$\$\$DISTRICT\$\$\$
PLOT NAME: \$\$\$PLOTNAME\$\$\$
PATH & FILENAME: \$\$\$PATHFILENAME\$\$\$

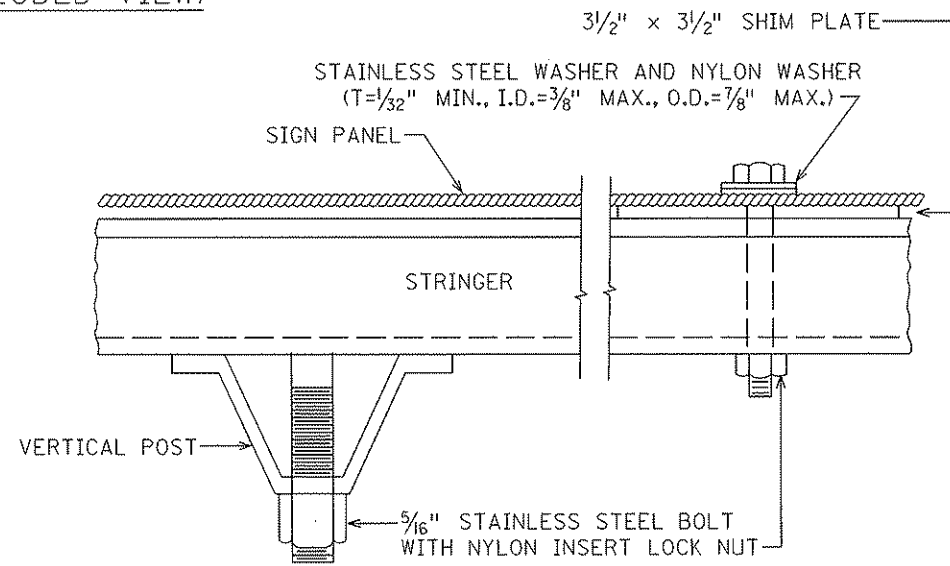


LATERAL BRACE OR STRINGER SPLICE DETAIL (EXPLODED VIEW)

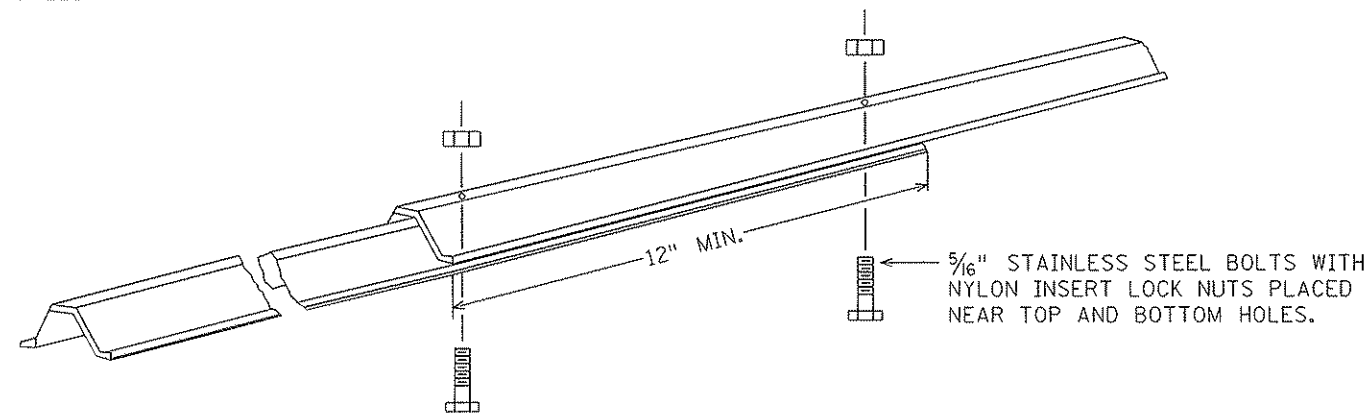


A-FRAME BRACKET

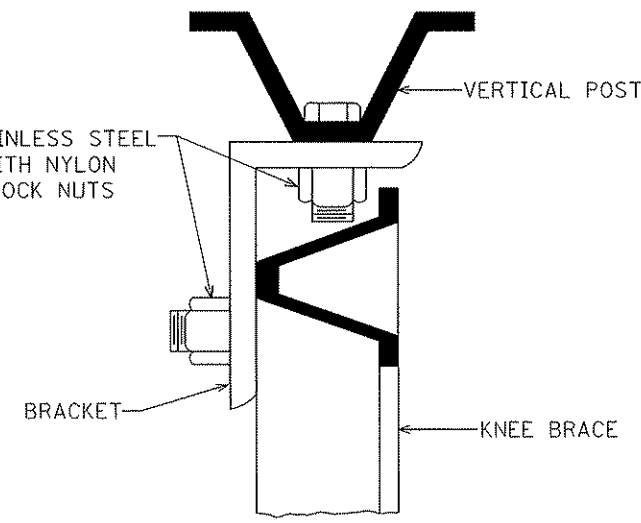
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



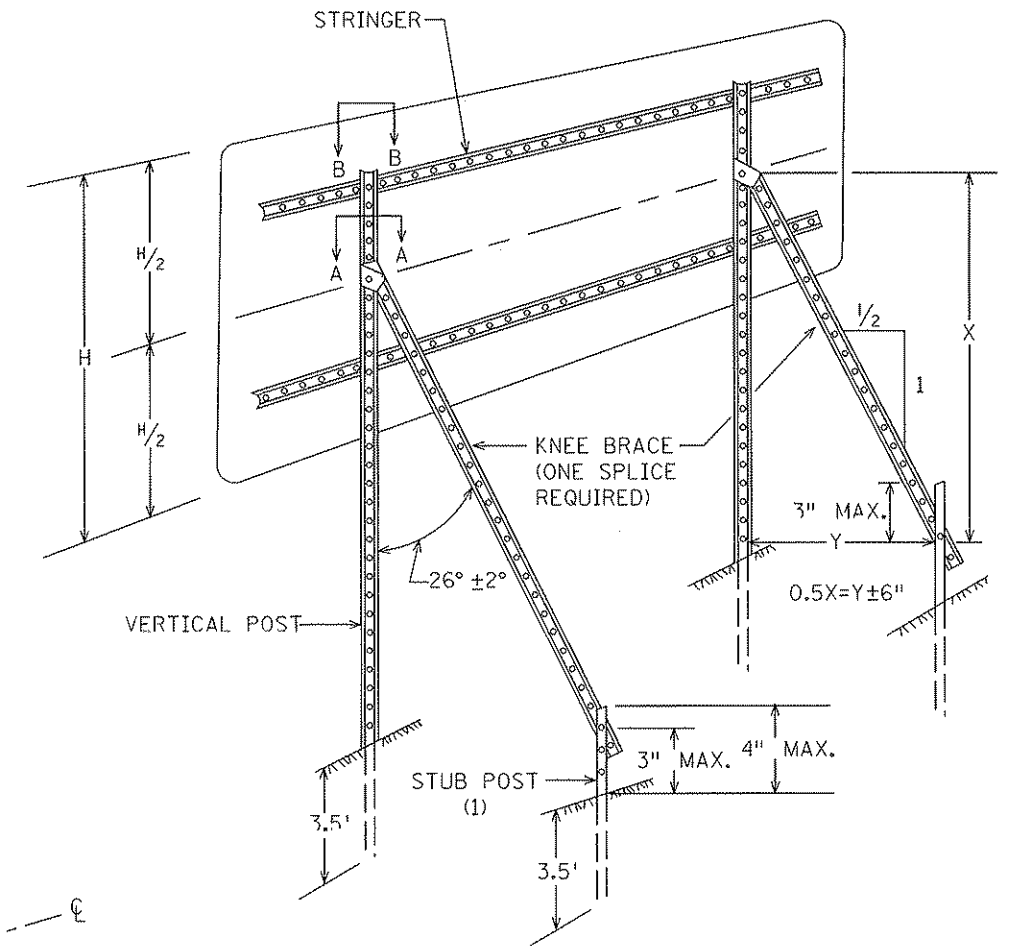
SECTION B-B



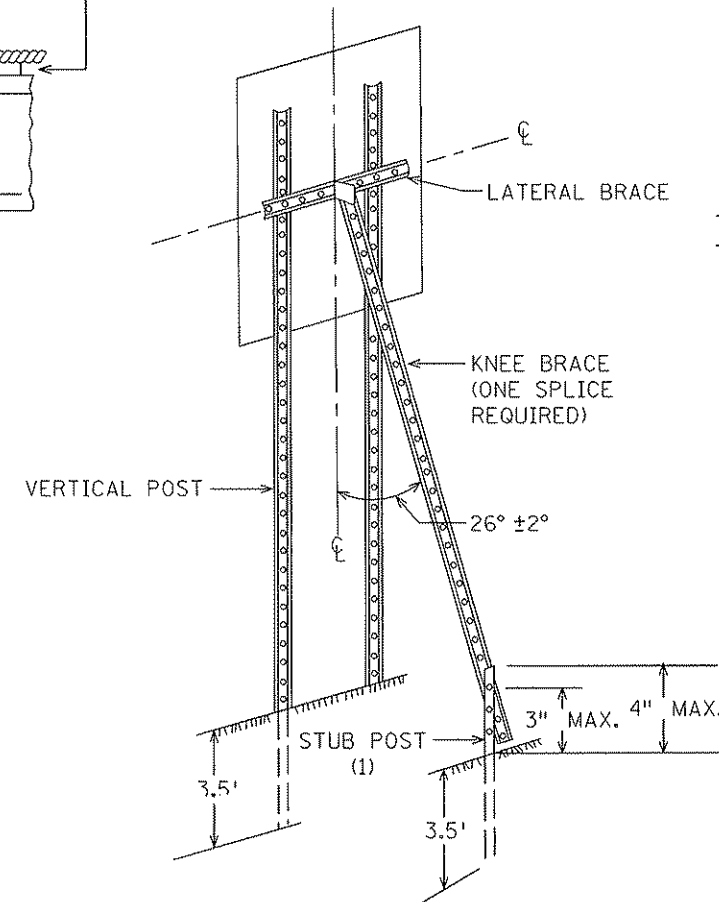
KNEE BRACE SPLICE



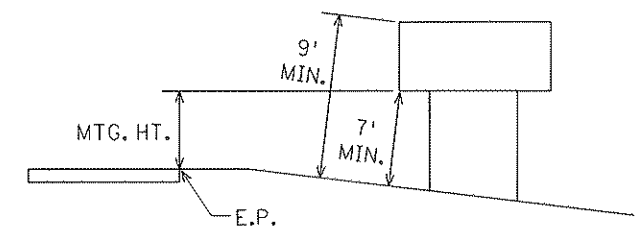
SECTION A-A



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



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



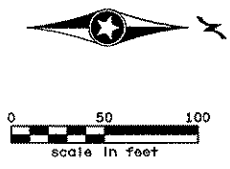
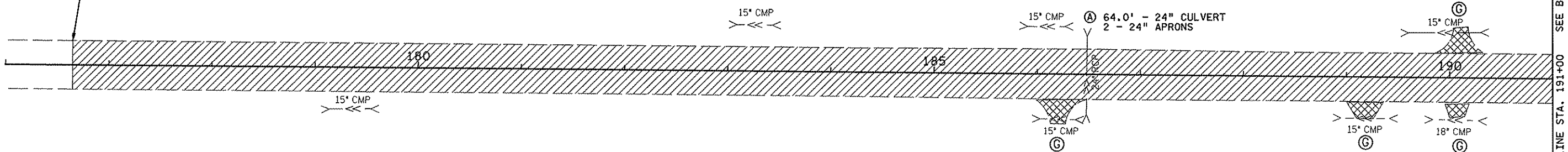
TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY RELATIVE TO VERTICAL POST. ATTACH STUB POST AND KNEE BRACE BACK TO BACK.

TYPICAL TYPE C & D SIGN STRUCTURAL DETAILS

BM #23 ELEV. 904.60
 TOP SE CORNER POWER POLE
 BASE PLATE
 STA. 183+30, 55.0' LT.

BEGIN RECLAIM AND OVERLAY SECTION
 STA. 176+65



LEGEND

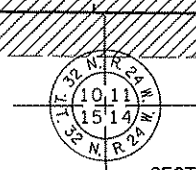
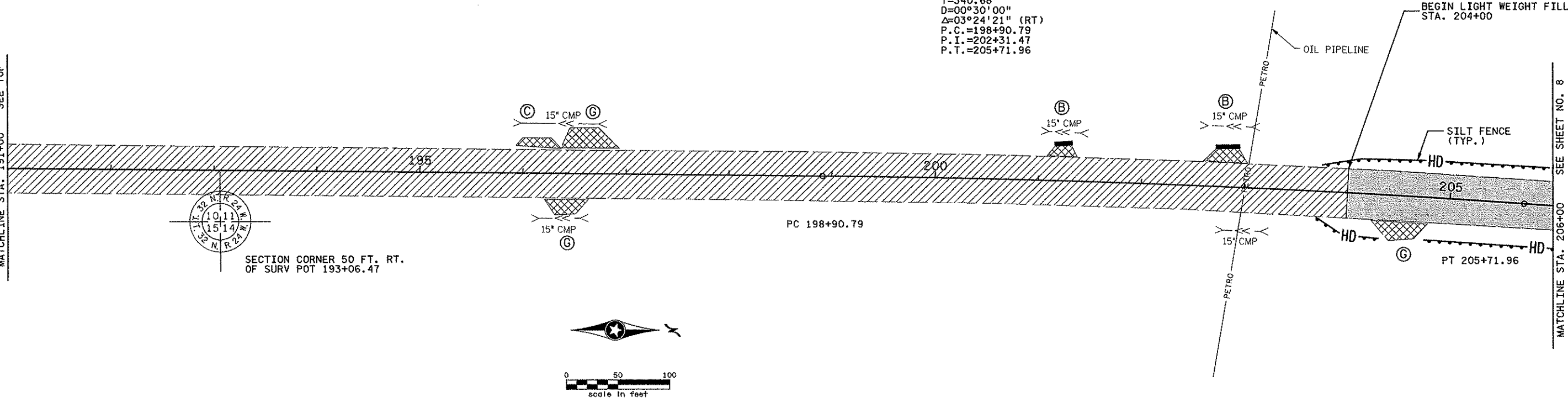
- RECLAIM AND OVERLAY MAINLINE AREA
- OVERLAY EXISTING APPROACH
- LIGHT WEIGHT FILL SECTION
- MILL JOINT

Ⓔ = GRAVEL; Ⓑ = BIT; Ⓒ = CONCRETE

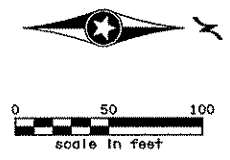
NOTES:
 Ⓐ REMOVE EXISTING CULVERT;
 F&I NEW CULVERT (RCP)
 WITH APRONS AT EXISTING ELEVATIONS
 UNLESS OTHERWISE NOTED.

MATCHLINE STA. 191+00 SEE BOTTOM

CURVE NO. 1
 R=11,459.16'
 L=681.17'
 T=340.68'
 D=00°30'00"
 Δ=03°24'21" (RT)
 P.C.=198+90.79
 P.I.=202+31.47
 P.T.=205+71.96



SECTION CORNER 50 FT. RT.
 OF SURV POT 193+06.47



MATCHLINE STA. 206+00 SEE SHEET NO. 8

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 3/1/2011
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NO	DATE	BY	CHKD	APPR	REVISION

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.
 Print Name: JAMES R. DVORAK
James R. Dvorak
 Date 09/14/11 License # 17803

COUNTY PROJECT NO.
 11-24-78

DRAWN BY
 D.FITCHORN
 DESIGNED BY
 J. DVORAK
 CHECKED BY
 J. DVORAK
 COMM. NO. 0117493

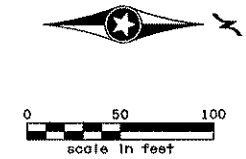
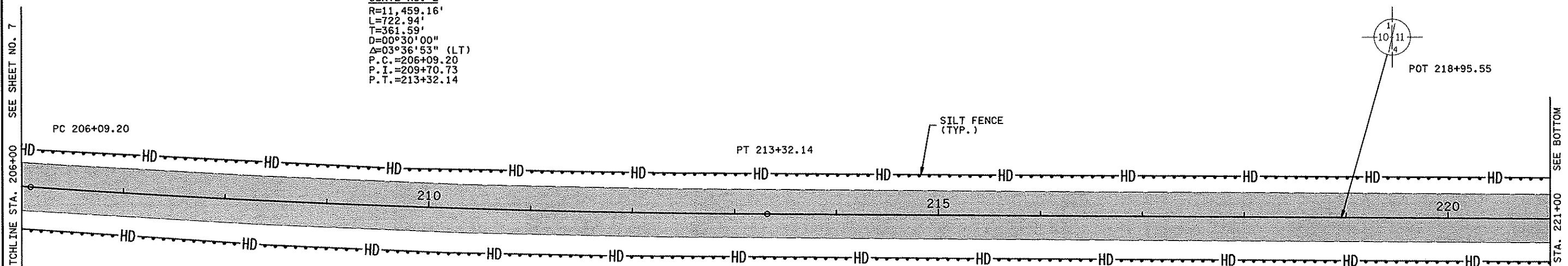
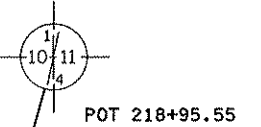


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 CONSTRUCTION PLAN
 C.S.A.H. 78

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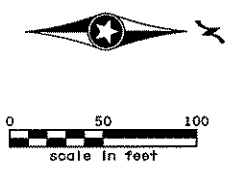
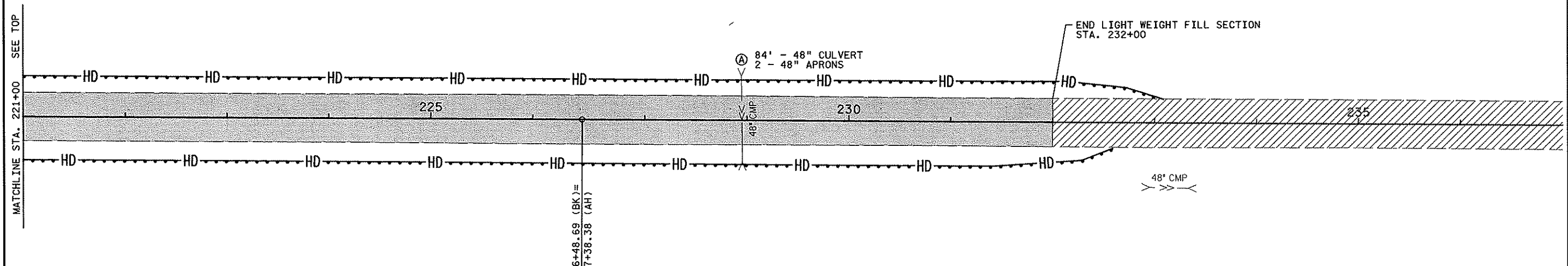
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 L=722.94'
 T=361.59'
 D=00°30'00"
 Δ=03°36'53" (LT)
 P.C.=206+09.20
 P.I.=209+70.73
 P.T.=213+32.14



LEGEND

- RECLAIM AND OVERLAY MAINLINE AREA
- OVERLAY EXISTING APPROACH
- LIGHT WEIGHT FILL SECTION
- MILL JOINT
- Ⓒ = GRAVEL; Ⓑ = BIT; Ⓓ = CONCRETE

NOTES:
 Ⓐ REMOVE EXISTING CULVERT;
 F&I NEW CULVERT (RCP)
 WITH APRONS AT EXISTING ELEVATIONS
 UNLESS OTHERWISE NOTED.



226+48.59 (BK) =
 227+38.38 (AH)
 EQUATION

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Print Name: **JAMES R. DVORAK**

James R. Dvorak

Date 09/14/11 License # 17803

COUNTY PROJECT NO.
 11-24-78

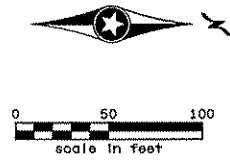
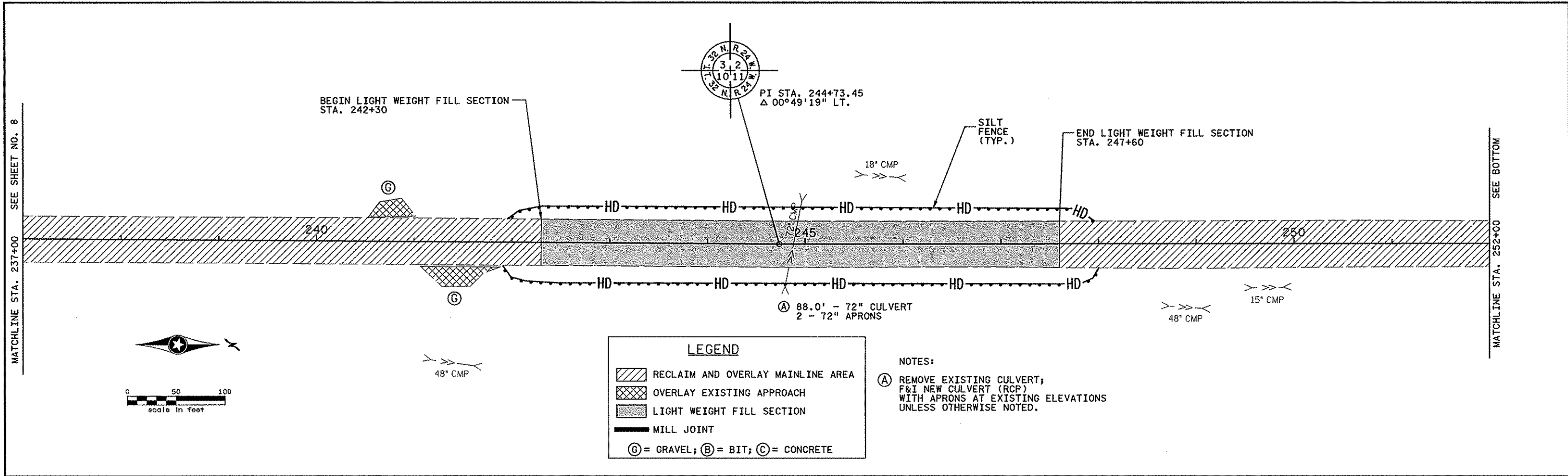
DRAWN BY
 D. FITCHORN
 DESIGNED BY
 J. DVORAK
 CHECKED BY
 J. DVORAK
 COMM. NO. 0117493



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 CONSTRUCTION PLAN
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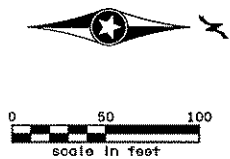
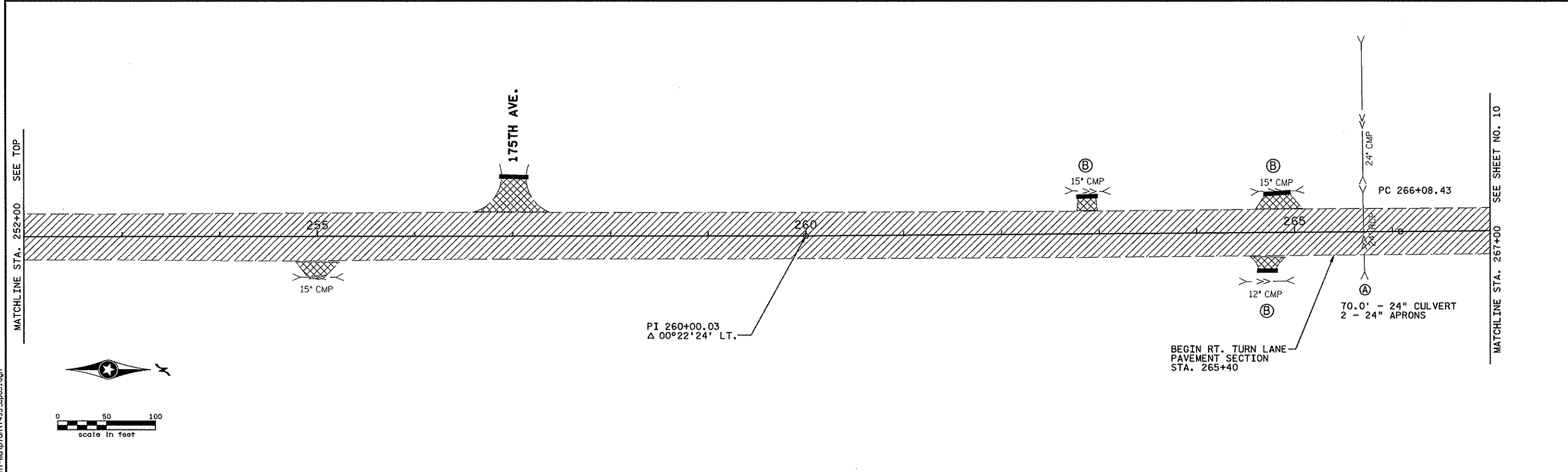
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LEGEND

- RECLAIM AND OVERLAY MAINLINE AREA
- OVERLAY EXISTING APPROACH
- LIGHT WEIGHT FILL SECTION
- MILL JOINT
- (G)** = GRAVEL; **(B)** = BIT; **(C)** = CONCRETE

NOTES:
(A) REMOVE EXISTING CULVERT; F&I NEW CULVERT (RCP) WITH APRONS AT EXISTING ELEVATIONS UNLESS OTHERWISE NOTED.



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James R. Dvorak
 Date 09/14/11 License # 17803

COUNTY PROJECT NO.
 11-24-78

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 D.FITCHORN
 DESIGNED BY
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 CHECKED BY
 J. DVORAK
 COMM. NO. 0117493



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 CONSTRUCTION PLAN
 C.S.A.H. 78

**SHEET
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 OF
 17**

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NO	DATE	BY	CRD	APPR	REVISION

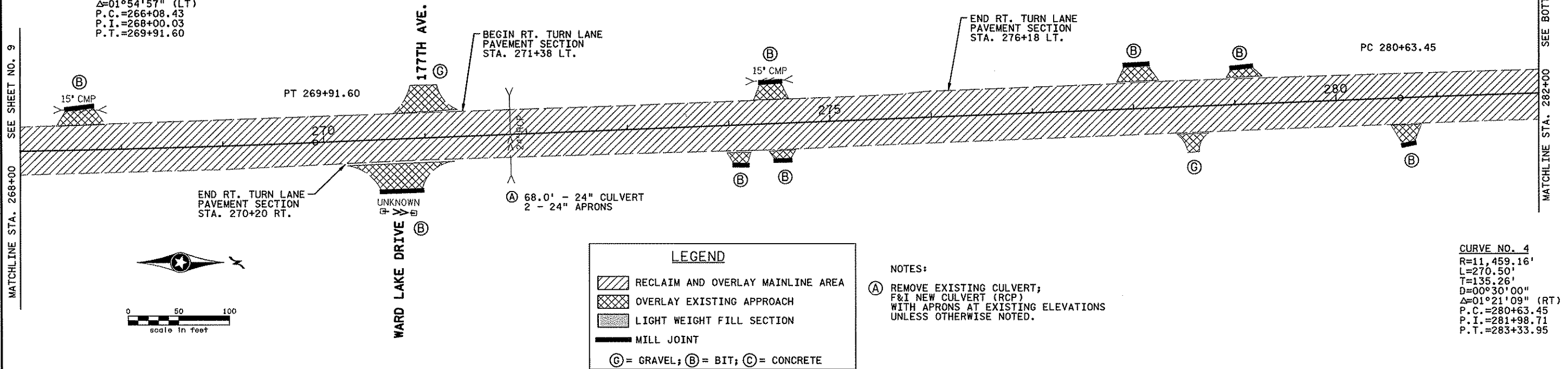
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 L=383.17'
 T=191.60'
 D=00°30'00"
 Δ=01°54'57" (LT)
 P.C.=266+08.43
 P.I.=268+00.03
 P.T.=269+91.60

BM #38 ELEV. 892.26

TOP BOTTOM STEP NE COR.
 STA. 296+00, 96.0' LT.

MATCHLINE STA. 268+00 SEE SHEET NO. 9

MATCHLINE STA. 282+00 SEE BOTTOM



LEGEND

- RECLAIM AND OVERLAY MAINLINE AREA
- OVERLAY EXISTING APPROACH
- LIGHT WEIGHT FILL SECTION
- MILL JOINT

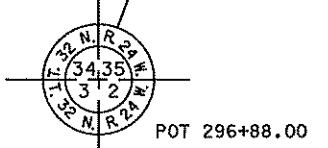
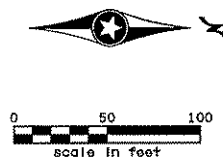
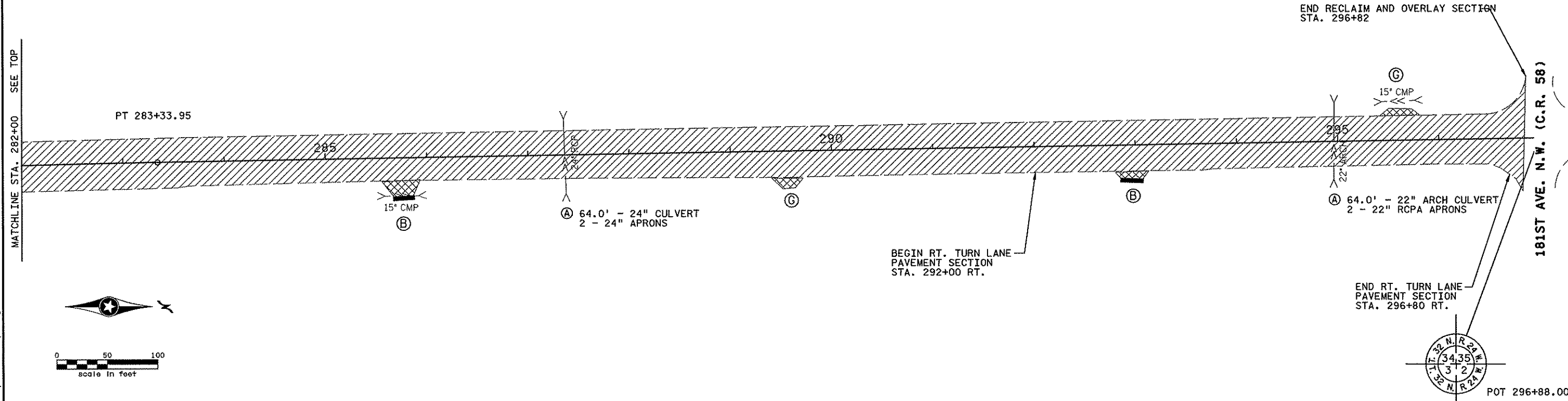
Ⓒ = GRAVEL; Ⓓ = BIT; Ⓔ = CONCRETE

NOTES:
 Ⓐ REMOVE EXISTING CULVERT;
 F&I NEW CULVERT (RCP)
 WITH APRONS AT EXISTING ELEVATIONS
 UNLESS OTHERWISE NOTED.

CURVE NO. 4
 R=11,459.16'
 L=270.50'
 T=135.26'
 D=00°30'00"
 Δ=01°21'09" (RT)
 P.C.=280+63.45
 P.I.=281+98.71
 P.T.=283+33.95

MATCHLINE STA. 282+00 SEE TOP

181ST AVE. N.W. (C.R. 58)



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.
 Print Name: JAMES R. DVORAK
 Date: 09/14/11 License #: 17803

COUNTY PROJECT NO.
 11-24-78

DRAWN BY
 D. FITCHORN
 DESIGNED BY
 J. DVORAK
 CHECKED BY
 J. DVORAK
 COMM. NO. 0117493



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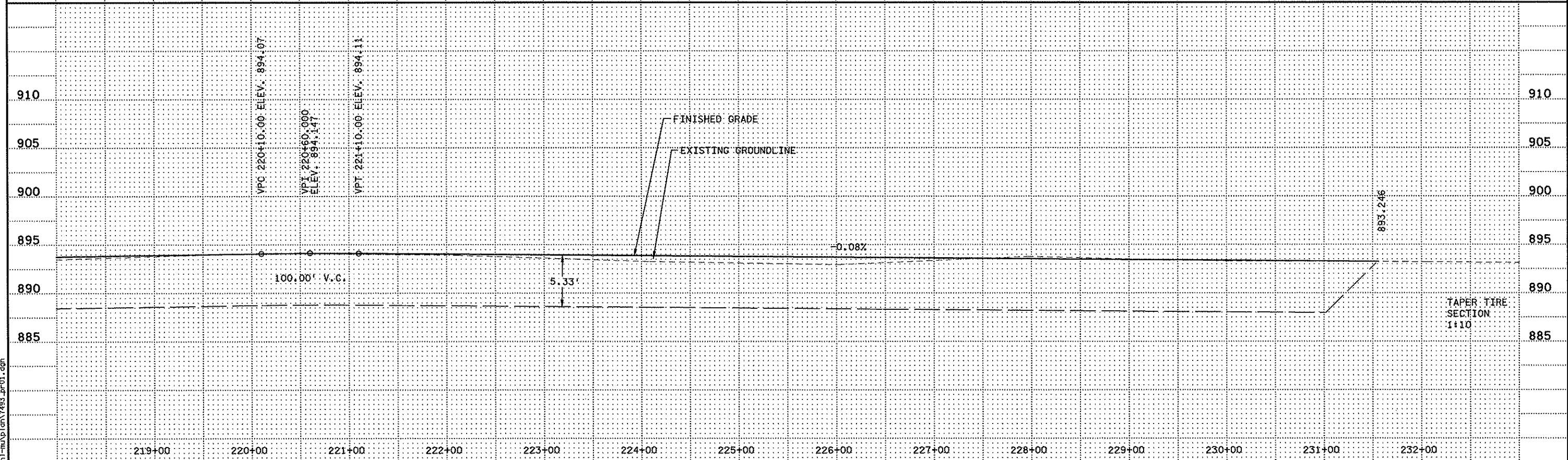
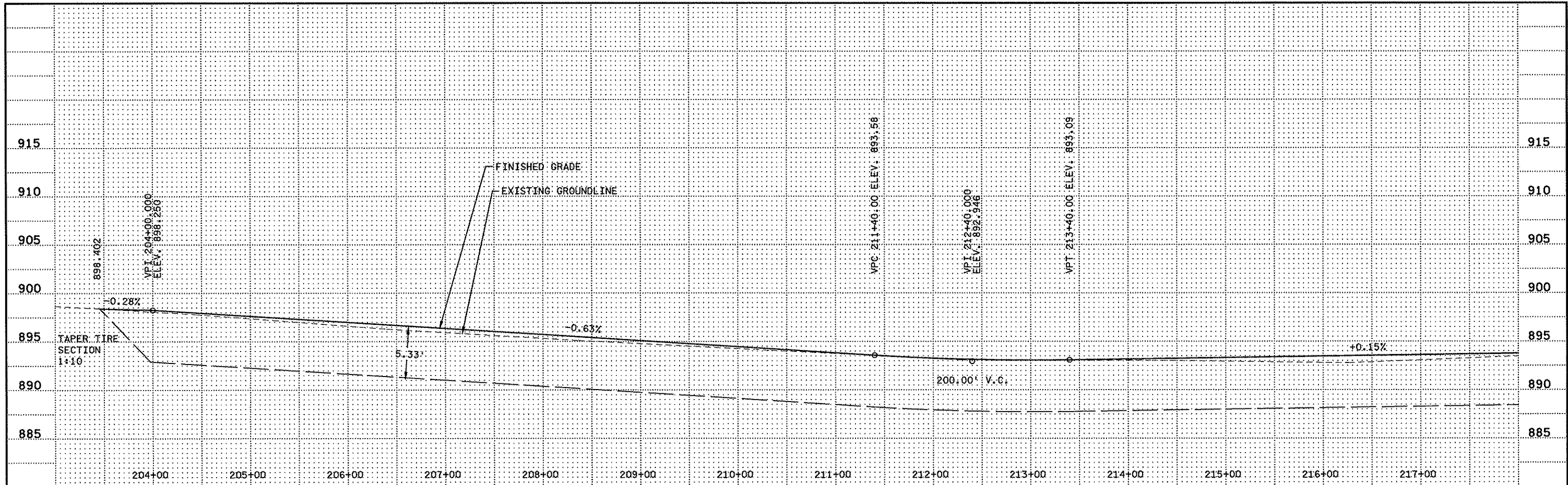
ANOKA COUNTY HIGHWAY DEPARTMENT

CONSTRUCTION PLAN
 C.S.A.H. 78

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 17

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NO	DATE	BY	CHKD	APPR	REVISION



NO	DATE	BY	CKD	APPR	REVISION

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Print Name: **JAMES R. DVORAK**

James R. Dvorak

Date: 09/14/11 License #: 17803

COUNTY PROJECT NO.
11-24-78

DRAWN BY
D. FITCHORN
DESIGNED BY
J. DVORAK
CHECKED BY
J. DVORAK
COMM. NO. 0117493

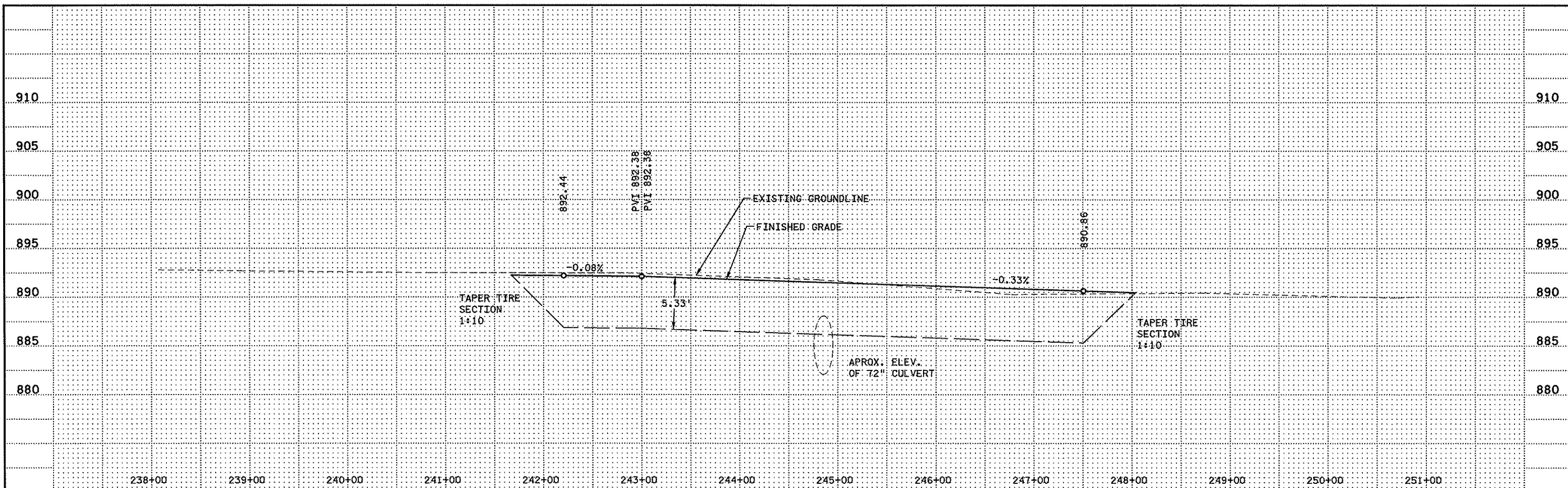


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C.S.A.H. 78

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 Print Name: JAMES R. DVORAK
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 Date: 09/14/11 License #: 17803

COUNTY PROJECT NO.
 11-24-78

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 CHECKED BY
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 COMM. NO. 0117493

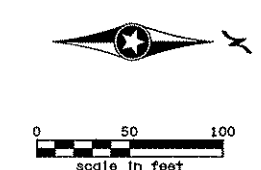
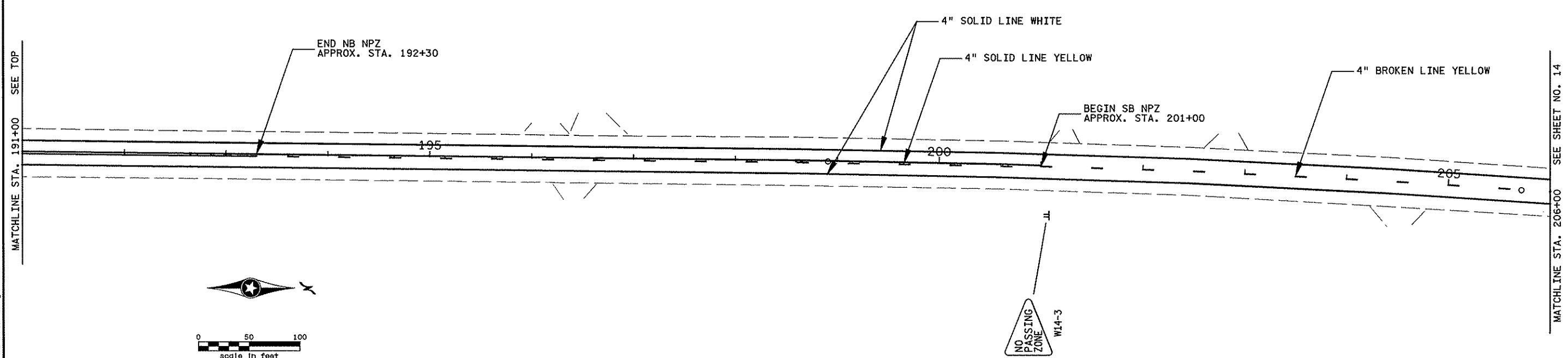
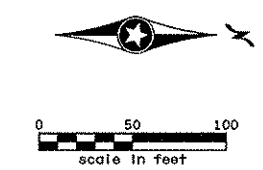
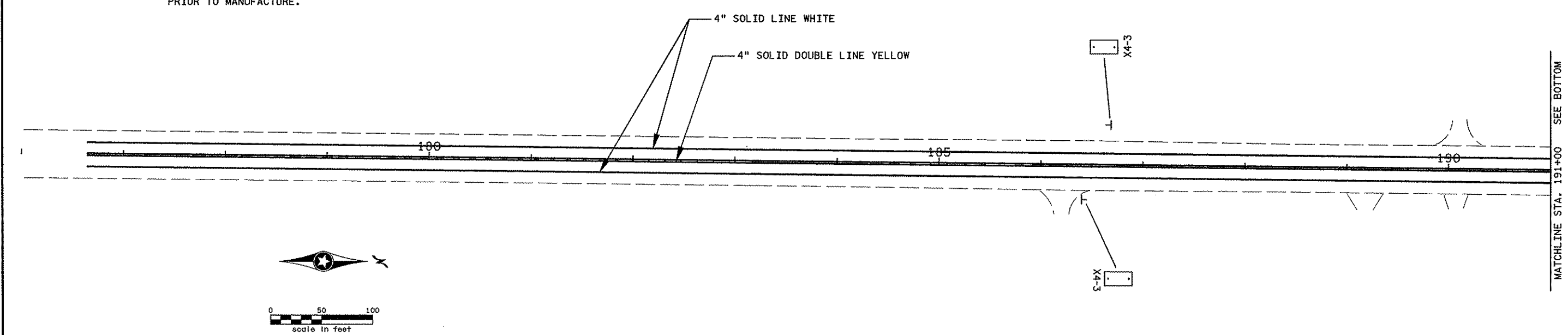


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ANOKA COUNTY HIGHWAY DEPARTMENT
 PROFILES
C.S.A.H. 78

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NOTES:
 1) LOCATIONS OF "NO PASSING ZONES" ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
 2) ALL SIGN SIZES MUST BE APPROVED BY THE ENGINEER PRIOR TO MANUFACTURE.



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COUNTY PROJECT NO.
 11-24-78

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 D. FITCHORN
 DESIGNED BY
 J. DVORAK
 CHECKED BY
 J. DVORAK
 COMM. NO. 0117493

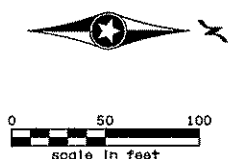
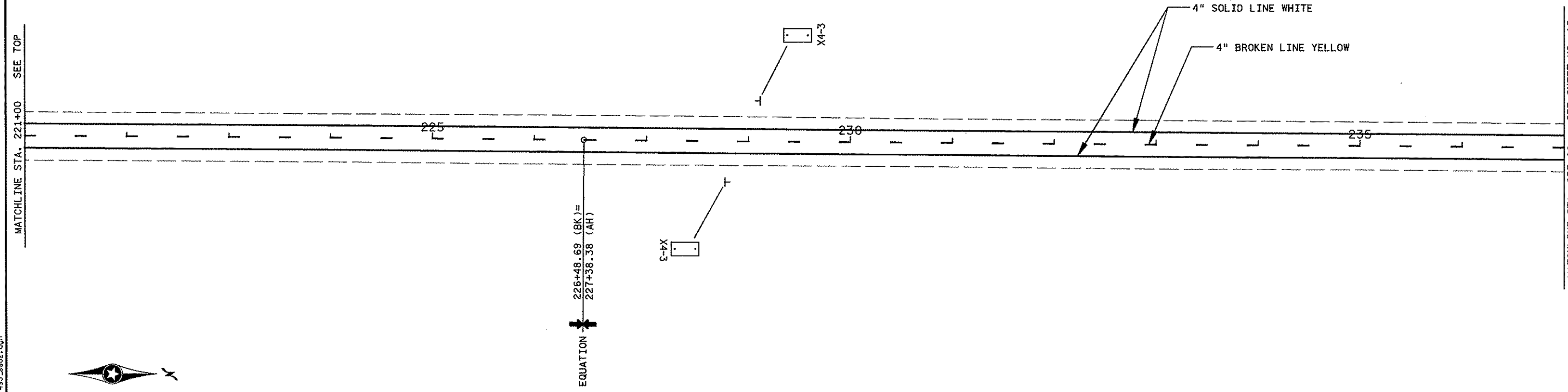
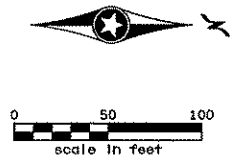
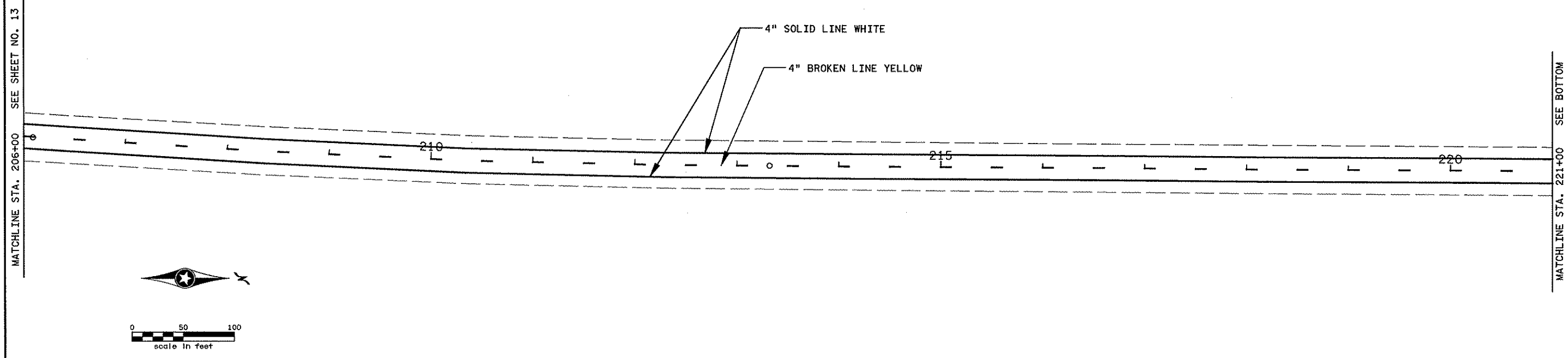


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ANOKA COUNTY HIGHWAY DEPARTMENT
 SIGNING AND STRIPING PLAN
 C.S.A.H. 78

SHEET
 13
 OF
 17

- NOTES:
- 1) LOCATIONS OF "NO PASSING ZONES" ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
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James R. Dvorak

Date 09/14/11 License # 17803

COUNTY PROJECT NO.
11-24-78

DRAWN BY
D. FITCHORN

DESIGNED BY
J. DVORAK

CHECKED BY
J. DVORAK

COMM. NO. 0117493



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DESIGNERS

ANOKA COUNTY HIGHWAY DEPARTMENT

SIGNING AND STRIPING PLAN

C.S.A.H. 78

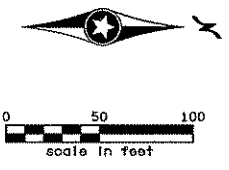
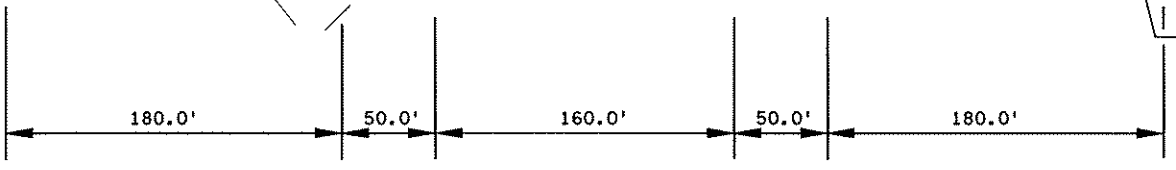
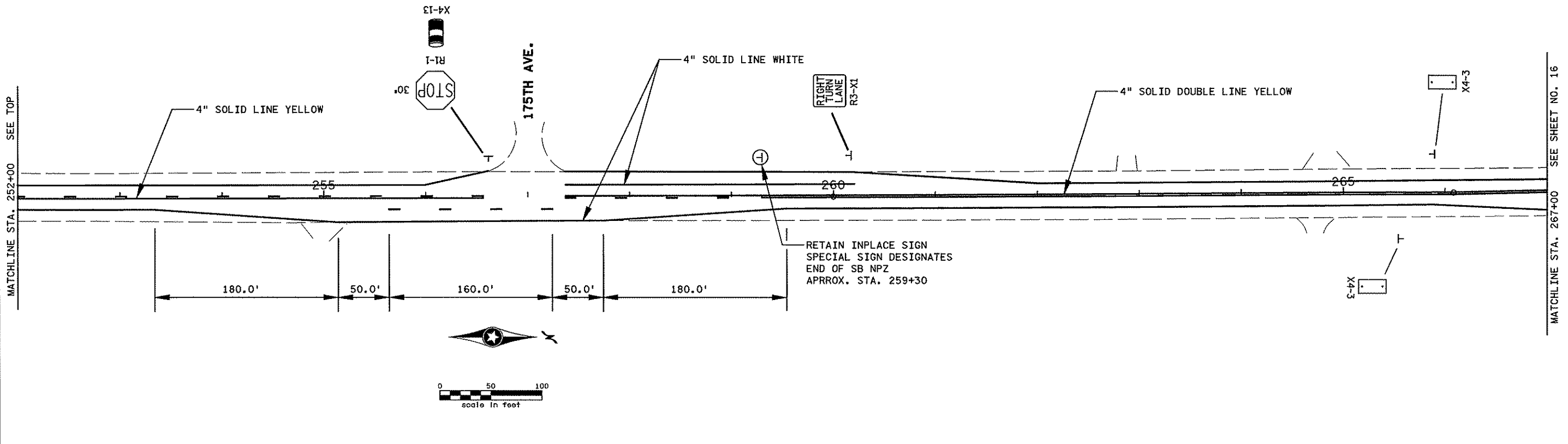
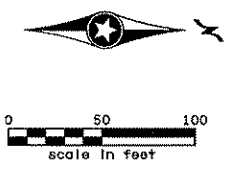
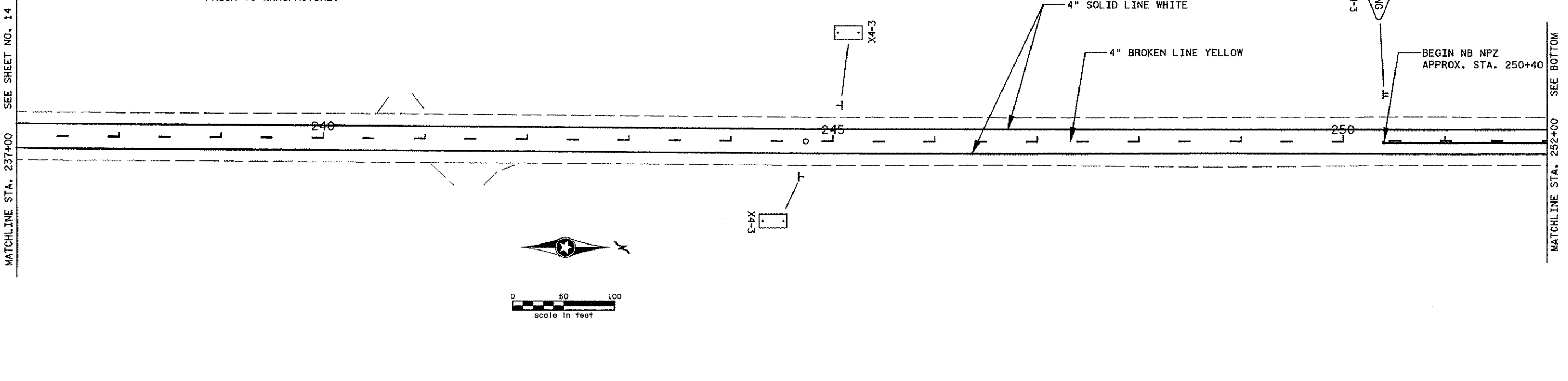
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- NOTES:
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James R. Dvorak

Date: 09/14/11 License #: 17803

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11-24-78

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D. FITCHORN

DESIGNED BY
J. DVORAK

CHECKED BY
J. DVORAK

COMM. NO. 0117493

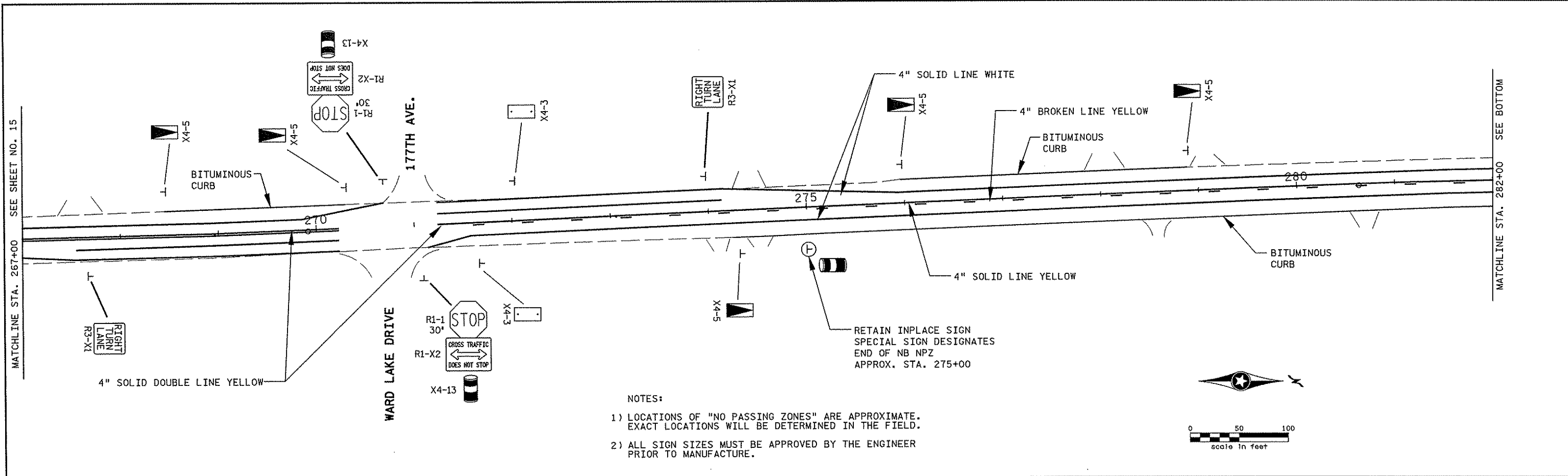


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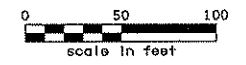
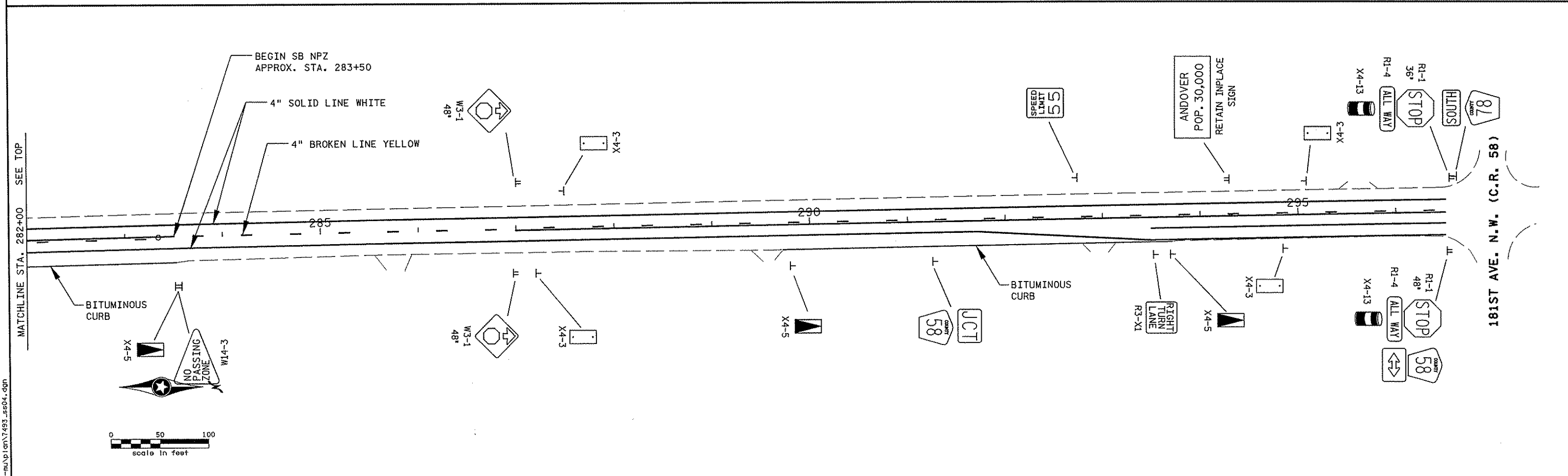
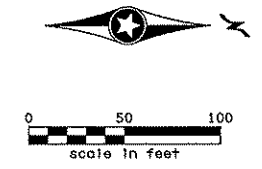
ANOKA COUNTY HIGHWAY DEPARTMENT

SIGNING AND STRIPING PLAN
C.S.A.H. 78

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- NOTES:
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NO	DATE	BY	CHKD	APPR	REVISION

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Date: 09/14/11 License #: 17803

COUNTY PROJECT NO.
11-24-78

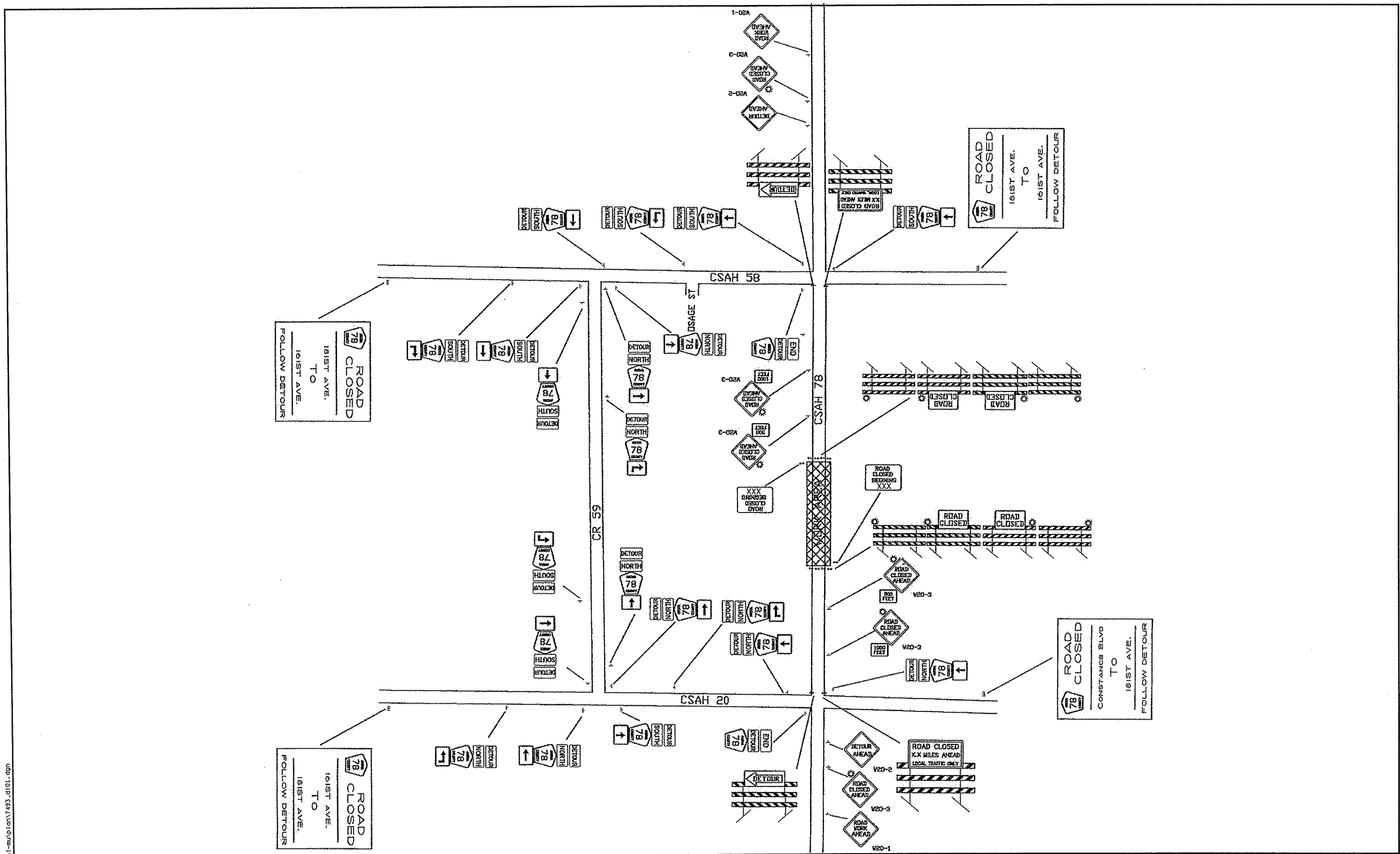
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DESIGNED BY
J. DVORAK
CHECKED BY
J. DVORAK
COMM. NO. 0117493



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NO	DATE	BY	CHKD	APPR	REVISION

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Pr Int Name: **JAMES R. DVORAK**

Date 09/14/11 License # 17803

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 11-24-78

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 D. FITCHORN
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 CHECKED BY
 J. DVORAK
 COMM. NO. 0117493



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DETOUR PLAN
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 17