

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	STREET DETAILS
4-8	STANDARD DETAILS PLAN
9-11	TABULATIONS
12	CONSTRUCTION NOTES/STANDARD PLATES
13-16	TYPICAL SECTIONS
17	ALIGNMENT PLAN
18-19	REMOVALS
20-22A	CONSTRUCTION PLAN & PROFILES
23-27B,28-31	CROSS SECTIONS
32-38	TRAFFIC SIGNAL PLAN
39-42	SIGNING AND STRIPING PLANS
43-47	DETOUR PLAN

THIS PLAN CONTAINS 50 SHEETS.

DESIGN DESIGNATION (RURAL)

STOPPING SIGHT DISTANCE BASED ON:
3.5' HEIGHT OF EYE 0.5' HEIGHT OF OBJECT

	CSAH 9 (ROUND LAKE BLVD) S.P. 02-609-11
DESIGN	9 TON
DESIGN SPEED	55 M.P.H.
R VALUE	70
ESAL	3,534,000
EXISTING A.D.T. (2003)	14,100
20 YR. PROJECTED A.D.T. (2023)	19,368
% H.C.A.D.T.	7.1
FUNCTIONAL CLASSIFICATION	B MINOR ARTERIAL
NO. OF TRAFFIC LANES	2
NO. OF PARKING LANES	0

	CSAH 20/161ST AVE NW S.P. 02-620-06 S.P. 198-106-03
DESIGN	9 TON
DESIGN SPEED	55 M.P.H./35 M.P.H.
R VALUE	70
ESAL	1583000
EXISTING A.D.T. (2001)	6000
20 YR. PROJECTED A.D.T. (2021)	9000
% H.C.A.D.T.	7.1
FUNCTIONAL CLASSIFICATION	B MINOR ARTERIAL
NO. OF TRAFFIC LANES	2
NO. OF PARKING LANES	0

APPROVED: *[Signature]* 5/29 2003
COUNTY ENGINEER OF ANOKA DATE

APPROVED: *[Signature]* 5/29 2003
CITY ENGINEER OF ANDOVER DATE

[Signature] 5/30 2003
METRO-ASSISTANT DIVISION ENGINEER-STATE AID: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

[Signature] 6/2 2003
APPROVED FOR STATE AND FEDERAL AID FUNDING: STATE AID ENGINEER

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: THOMAS G. TABLER
Signature: *[Signature]*
Date: 4/23/01 License No.: 26861

S.P. 02-609-11 S.P. 198-106-03
S.P. 02-620-06

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY CONSTRUCTION PLANS FOR GRADING, AGG. BASE, CURB & GUTTER, BITUMINOUS SURFACING, AND TRAFFIC SIGNAL SYSTEM C.S.A.H. 9 AND C.S.A.H. 20

LOCATED ON CSAH 9 FROM 1404 FT SOUTH OF CSAH 20 NORTH TO 929 FT NORTH OF CSAH 20
GROSS LENGTH = 2333 FT, 0.442 MILES
BRIDGE LENGTH = 0 FT, 0 MILES
EXCEPTIONS LENGTH = 0 FT, 0 MILES
NET LENGTH = 2333 FT, 0.442 MILES

LOCATED ON CSAH 20 FROM CSAH 9 TO 1237 FT EAST OF CSAH 9
GROSS LENGTH = 1237 FT, 0.234 MILES
BRIDGE LENGTH = 0 FT, 0 MILES
EXCEPTIONS LENGTH = 0 FT, 0 MILES
NET LENGTH = 1237 FT, 0.234 MILES

LOCATED ON 161ST AVE NW FROM 379.2 FT WEST OF CSAH 9 TO CSAH 9
GROSS LENGTH = 379 FT, 0.072 MILES
BRIDGE LENGTH = 0 FT, 0 MILES
EXCEPTIONS LENGTH = 0 FT, 0 MILES
NET LENGTH = 379 FT, 0.072 MILES

END S.P. 02-609-11
STA. 280+54

BEGIN S.P. 02-620-06
STA. 0+85

BEGIN S.P. 198-106-03
STA. 0+28

END S.P. 198-106-03
STA. 4+07

BEGIN S.P. 02-609-11
STA. 257+21

NOTE:
THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBEROPTIC, ELECTRIC, CABLE TV, AND PIPE LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL BEFORE COMMENCING EXCAVATION.

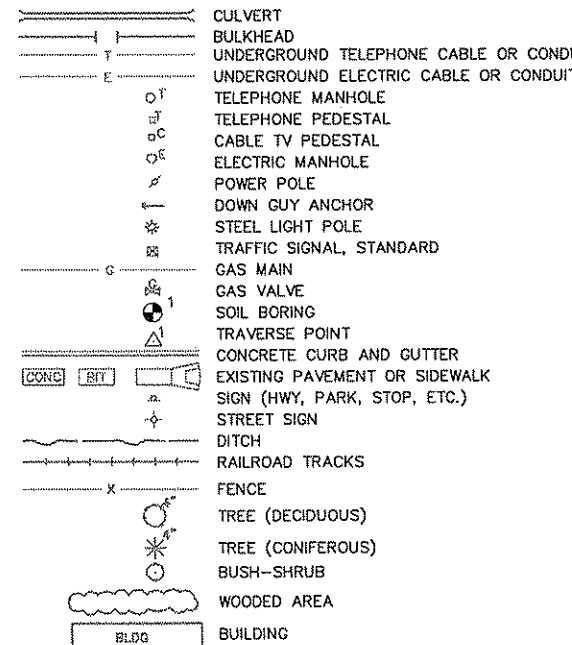
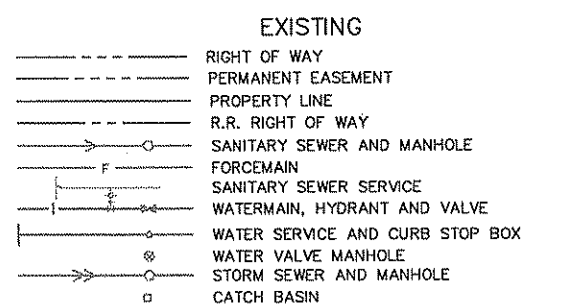
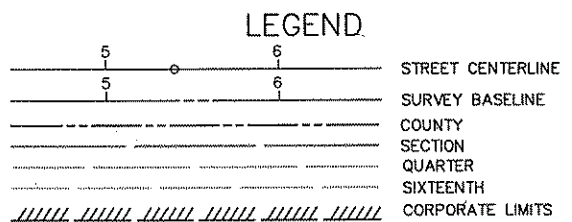
GOPHER STATE ONE CALL SYSTEM.....1-800-252-1166

S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

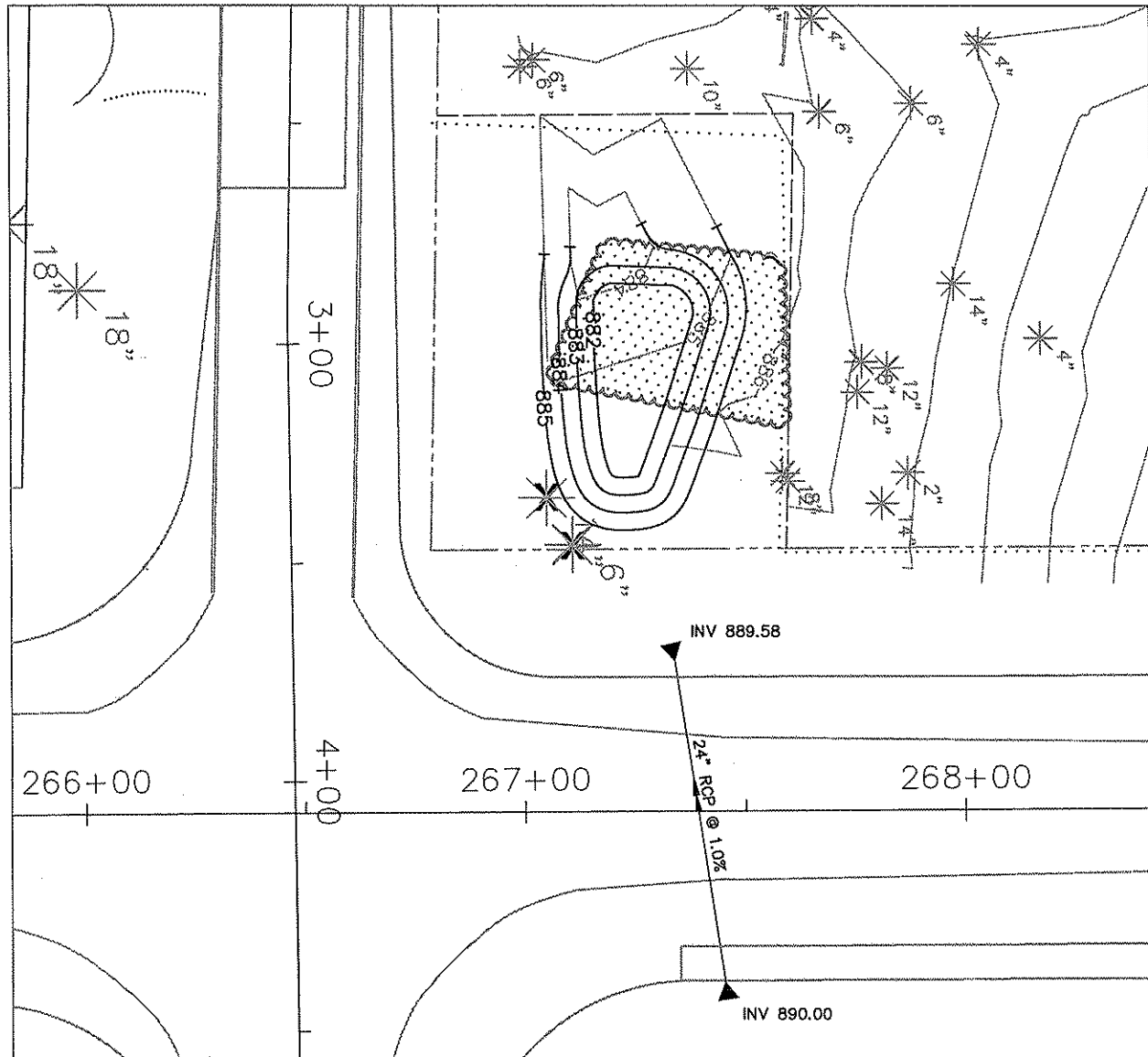
END S.P. 02-620-06
STA. 13+22



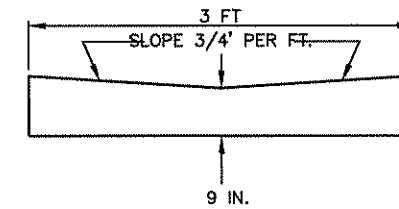
© SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.



PLOTTED: W:\AE\ANOKA\990200\DWG\AC902ITL.DWG USER: NWASS DATE: 05-22-03 TIME: 4:20 pm XREFS:



CSAH 9 (ROUND LAKE BLVD.)



BITUMINOUS DRAINAGE FLUME
SEE PLANS FOR LOCATIONS

POND

ELEVATION	AREA (SF)
882'	670
883'	1270
884'	1995
885'	3313

- X - REMOVE TREE
- CLEAR AND GRUB



G:\CLIENTS\A_F\ANOKA\9902.00\EP\POND\9902.POND.DWG
 DATE: 02-15-02 TIME: 2:21 pm USER: CP4517SP
 XREFS: G:\CLIENTS\A_F\ANOKA\9902.00\AKC9902G.G; G:\CLIENTS\A_F\ANOKA\9902.00\EP\AKG902BA1

DRAWN BY: BEM
 DESIGNER: TGT
 CHECKED BY: TGT

NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

 Thomas G. Tabler, P.E.
 Date: 4/23/01 Lic. No. 26861

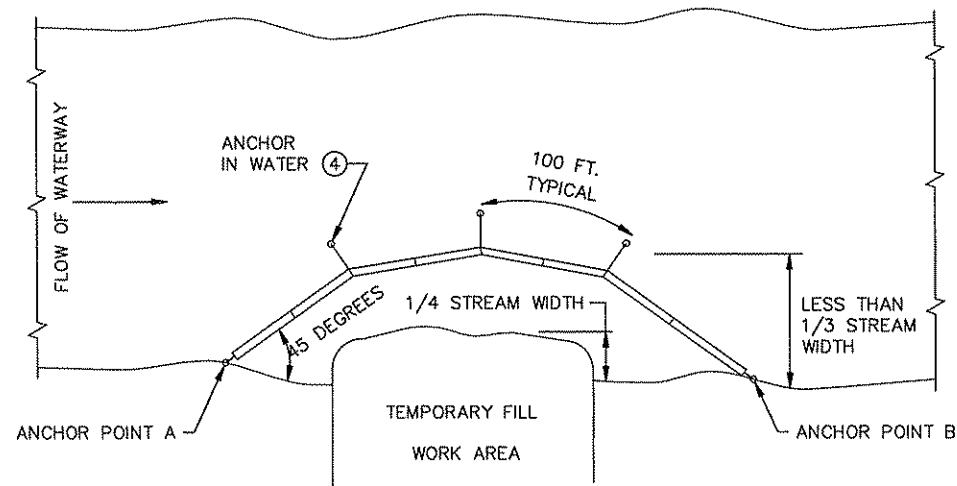
ANOKA COUNTY
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110
 PHONE: (651) 480-2000

CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

DETAILS

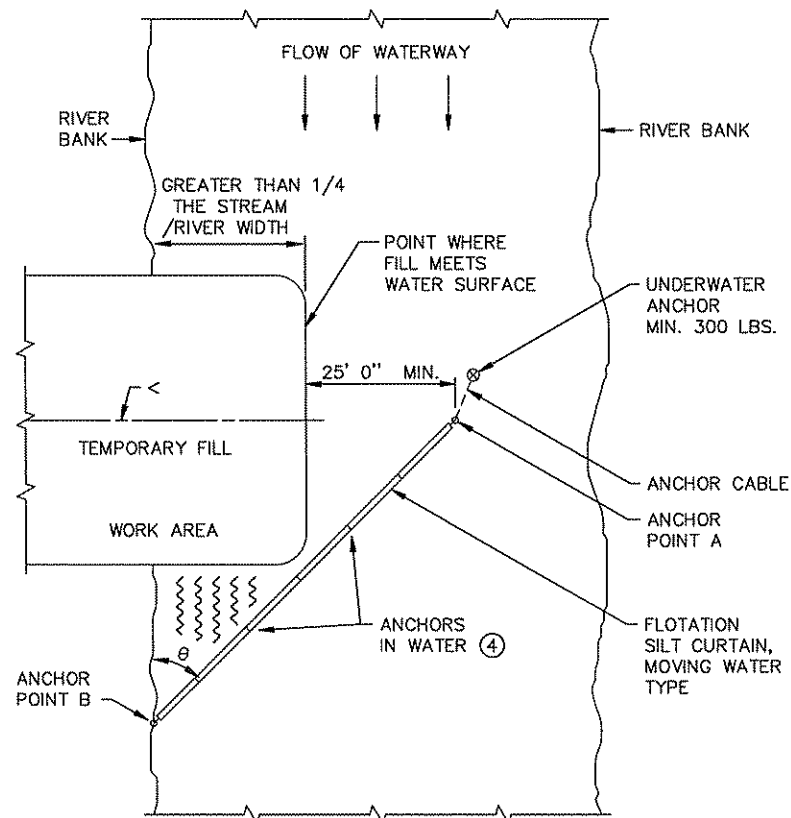
FILE NO.
 AANOKC9902.00
 DATE
 4/23/01

3
47



PLAN VIEW OF SILT CURTAIN ENCLOSING A WORK AREA FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS

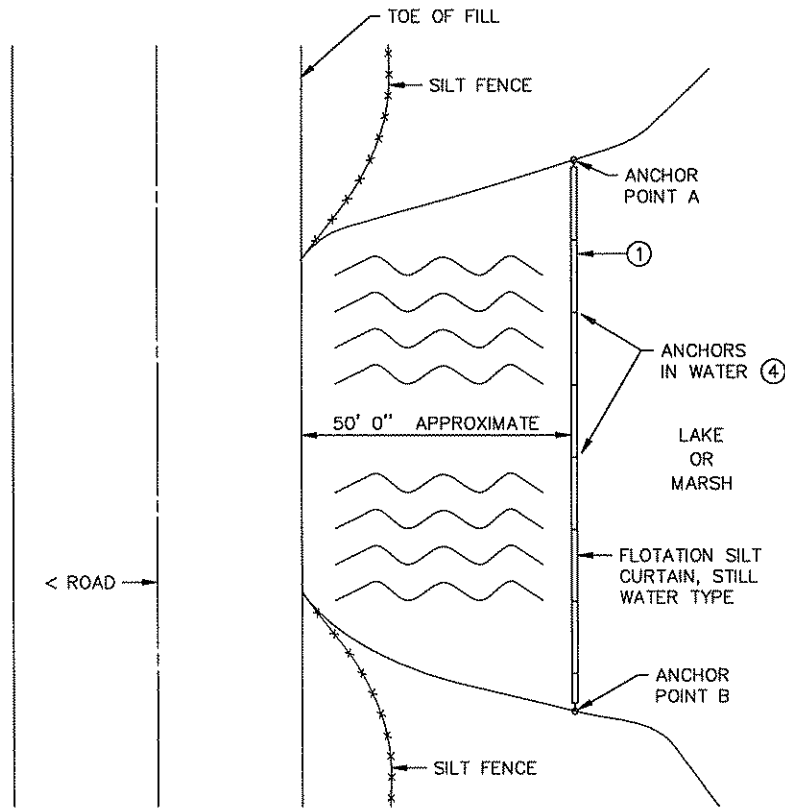
DESIGN GUIDELINES:
 WHEN TEMPORARY FILL ENCKROACHES LESS THAN 1/4 OF THE WIDTH OF STREAM.
 MAXIMUM FLOW VELOCITY: 5 FT./SEC.
 MAXIMUM FLOW DEPTH: 4 FT.



$\angle \theta$	RIVER VELOCITY
45°	SLOW, LESS THAN 5 FT./SEC.
35°	MODERATE, 5 - 7 FT./SEC.

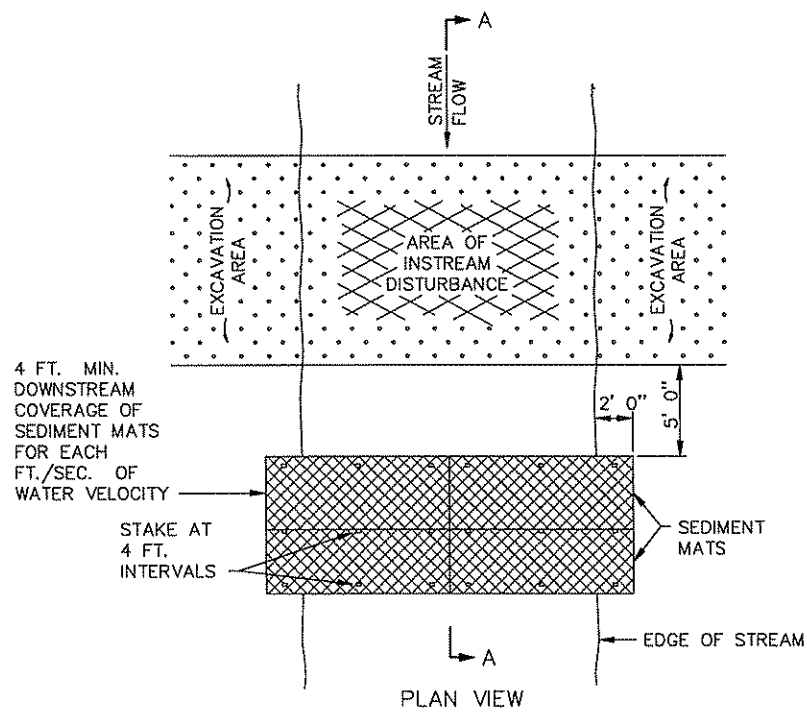
PLAN VIEW OF SILT CURTAIN - MOVING WATER

DESIGN GUIDELINES:
 WHEN TEMPORARY FILL ENCKROACHES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.
 MAXIMUM WATER DEPTH: 12 FT.
 MINIMUM WATER DEPTH: 3 FT.
 MAXIMUM WATER VELOCITY: 7 FT./SEC.

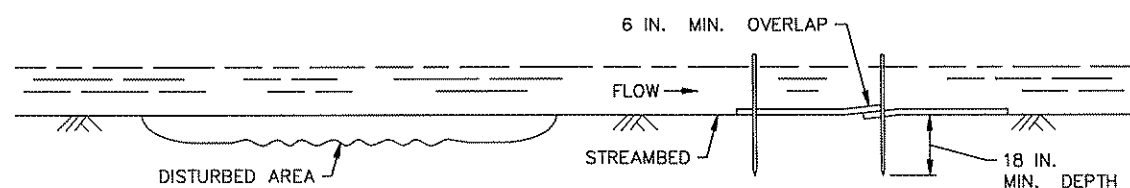


PLAN VIEW OF SILT CURTAIN - STILL WATER

DESIGN GUIDELINES:
 MAXIMUM WATER DEPTH: 12 FT.
 MINIMUM WATER DEPTH: 3 FT.

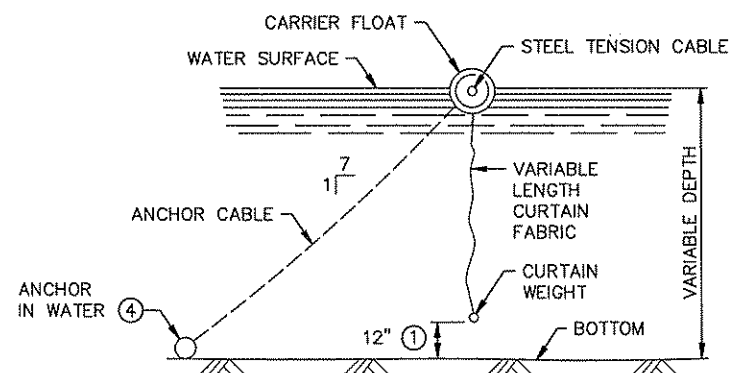


PLAN VIEW

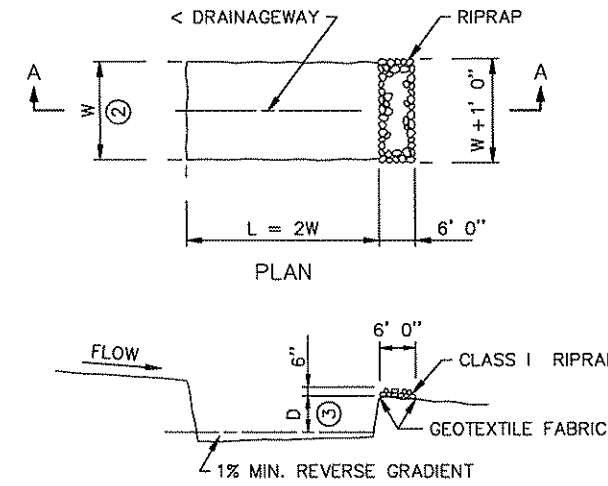


SECTION A-A
 SEDIMENT MAT
 TYPICAL STREAMBED INSTALLATION

DESIGN GUIDELINES:
 MAXIMUM FLOW VELOCITY: 5 FT./SEC.
 MAXIMUM FLOW DEPTH: 2 FT.



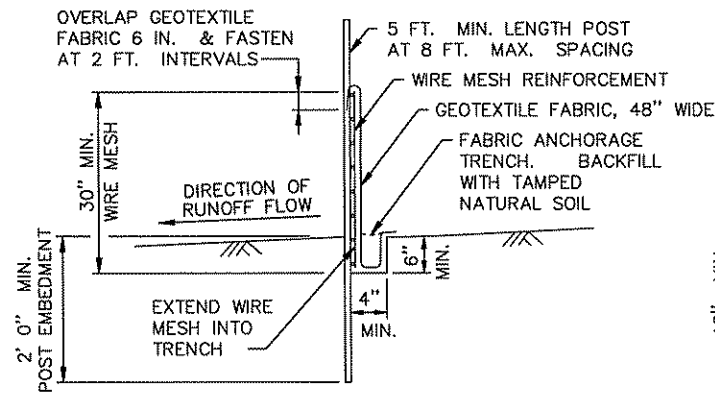
FLOTATION SILT CURTAIN DETAIL
 (SEE SPEC. 3887)



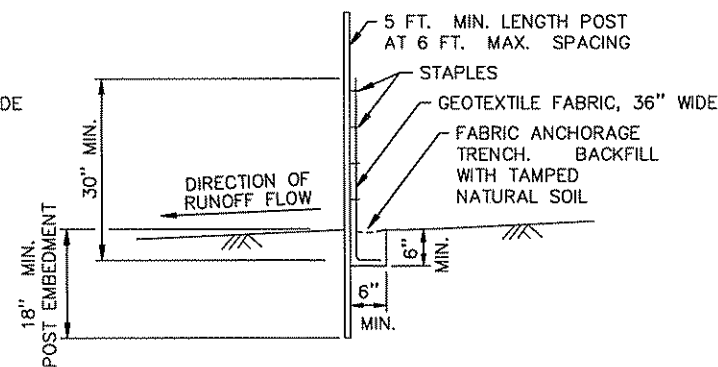
TEMPORARY SEDIMENT TRAP DETAIL

- NOTES:
 SEE SPECS. 2573, 3887 & 3894.
 ① CURTAIN 1 FT. FROM BOTTOM
 ② W = 10 FT. MIN., 20 FT. MAX.
 ③ D = 2 FT.
 ④ 100 FT. MAXIMUM SPACING BETWEEN ANCHORS, MINIMUM 40 LBS.

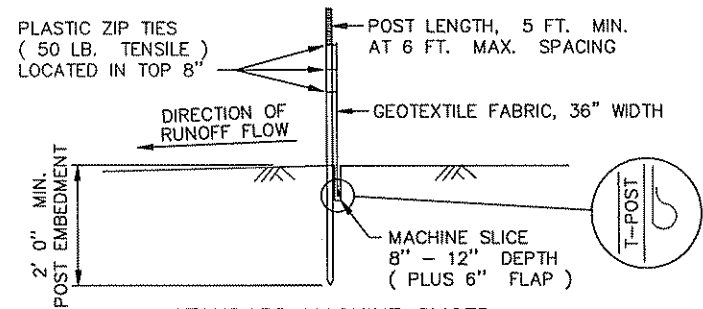
DATE: 05-22-03
 USER: HW/ASS
 TIME: 4:24 PM
 XREFS:
 W:\REV\HW\03\0522\DWG\4032\21ECL1.BWG



HEAVY DUTY



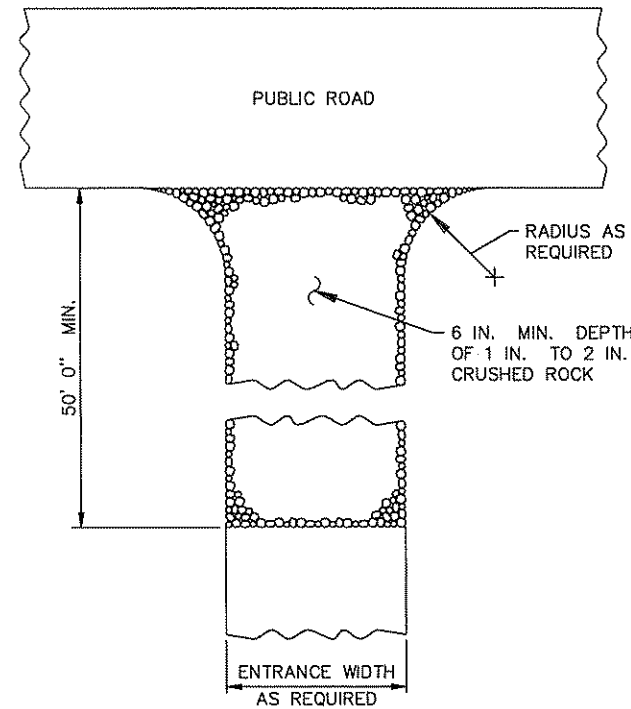
PREASSEMBLED



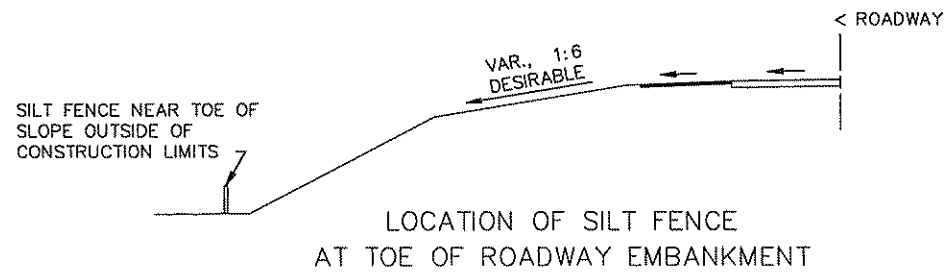
STANDARD MACHINE SLICED

DESIGN GUIDELINES:
MAXIMUM CONTRIBUTING AREA: 3 ACRES

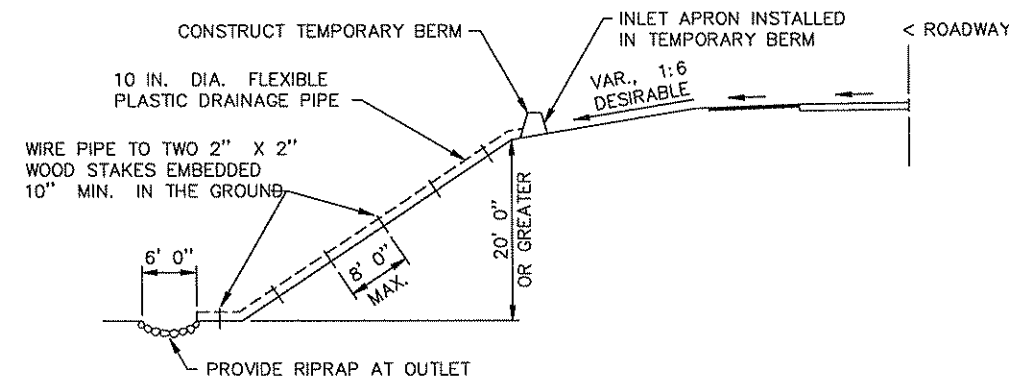
SILT FENCE DETAILS
TO PROTECT AREAS FROM SHEET FLOW
(SEE SPEC. 3886)



ROCK CONSTRUCTION ENTRANCE ①

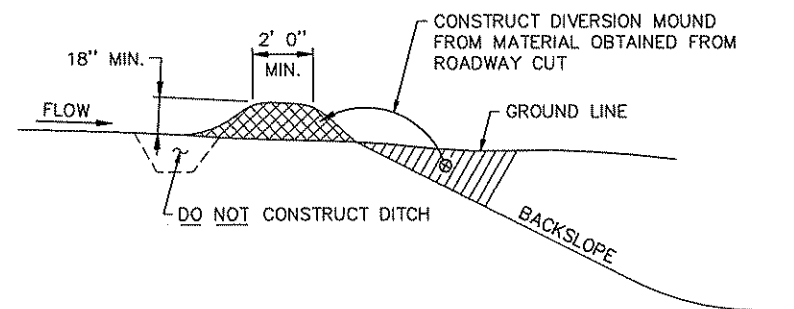


LOCATION OF SILT FENCE
AT TOE OF ROADWAY EMBANKMENT



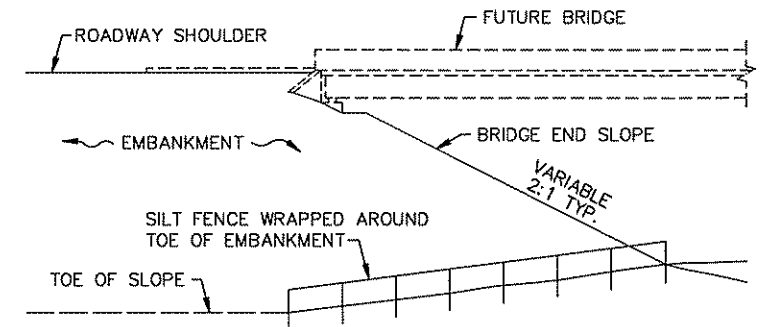
TEMPORARY DRAIN ON FILL SLOPE

DESIGN GUIDELINES:
STORM FREQUENCY: 2 YEAR - 24 HOUR
MAXIMUM DRAINAGE AREA: 3 ACRES



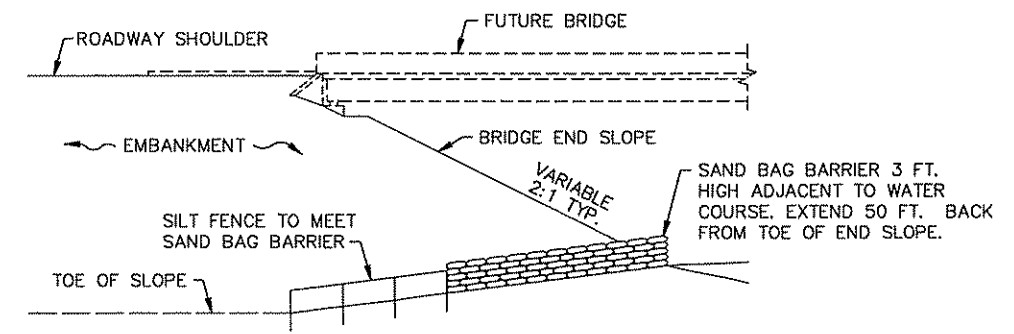
DIVERSION MOUND

DESIGN GUIDELINES:
STORM FREQUENCY: 10 YEAR - 24 HOUR
MAXIMUM DRAINAGE AREA: 5 ACRES
MAXIMUM DIVERSION: GRADE 5%



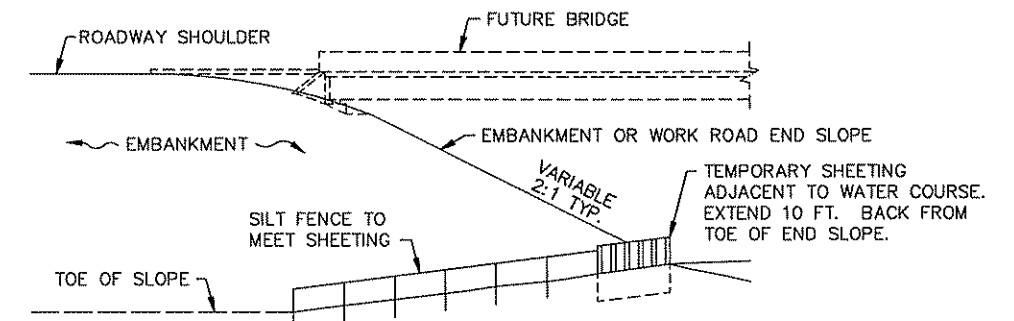
BRIDGE FILL

DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: STAGNANT
CONTRIBUTING SLOPE AREA: 1/2 ACRE



BRIDGE FILL

DESIGN GUIDELINES:
MAX. WATER COURSE FLOW VELOCITY: 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1 ACRE



EMBANKMENT OR WORK ROAD FILL

DESIGN GUIDELINES:
MAX. WATER COURSE FLOW VELOCITY: 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES

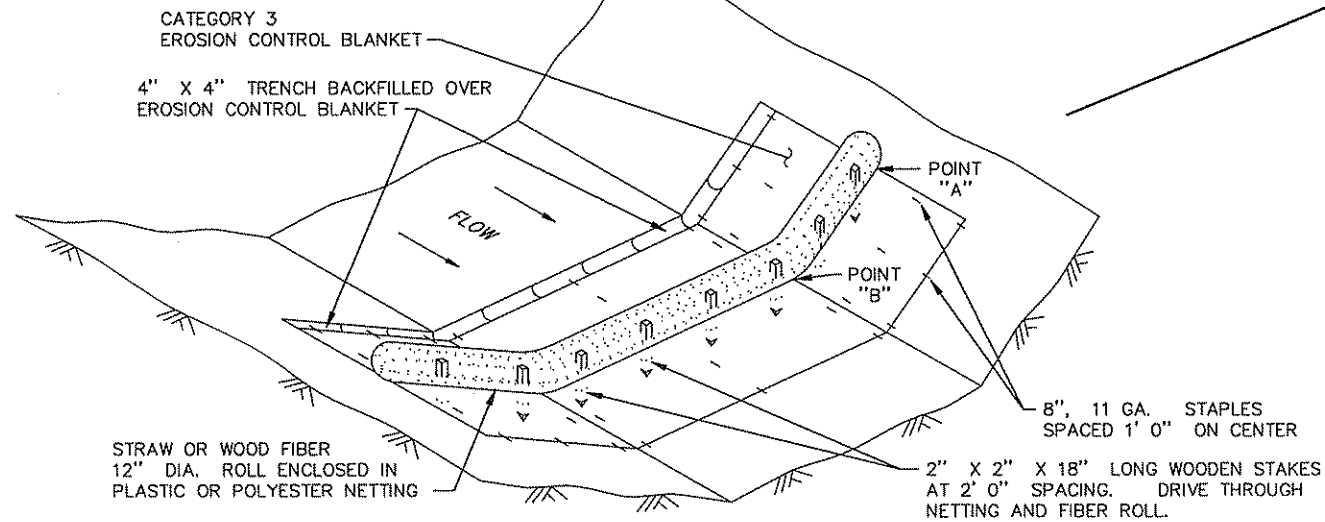
SILT FENCE AT BRIDGE EMBANKMENT

NOTES:

SEE SPECS. 2573 & 3886.

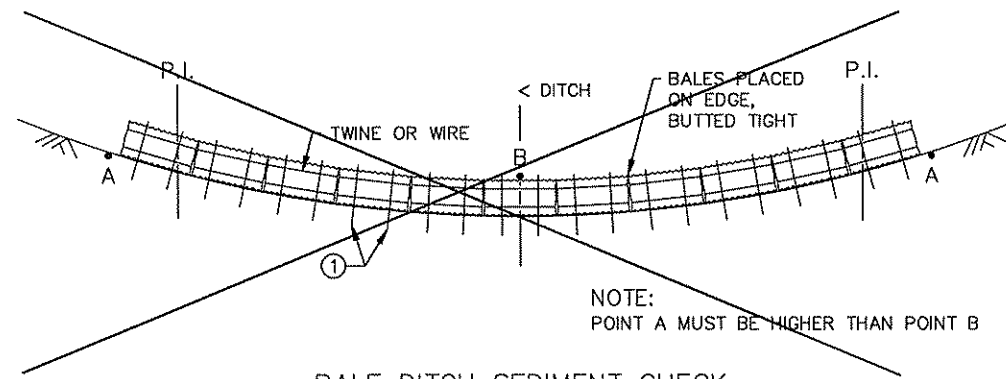
① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE DRIVING ON MAIN ROAD. THIS WILL PREVENT AUTO DAMAGE. WE NEED TO KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS.

STANDARD SHEET NO. 5-297.405 (2 OF 4)	TITLE: TEMPORARY EROSION CONTROL
STANDARD APPROVED: JULY 30, 2001	
STATE PROJ. NO. 02-609-11	S.P. NO. 198-106-03
STATE PROJ. NO. 02-620-06	SHEET NO. 5 OF 47 SHEETS

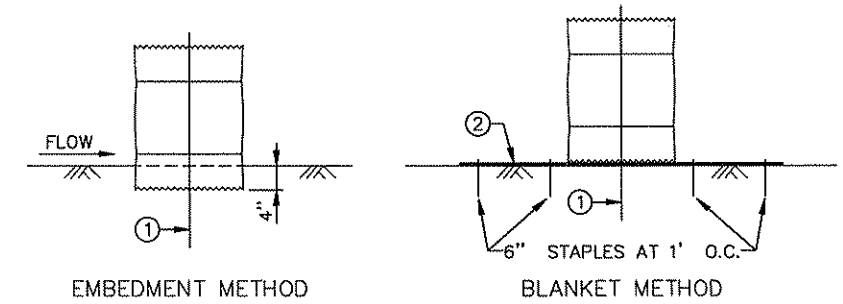


POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

BIOROLL BLANKET SYSTEM DITCH CHECK



BALE DITCH SEDIMENT CHECK

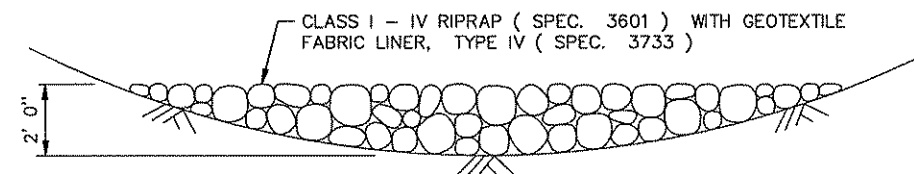


EMBEDMENT METHOD

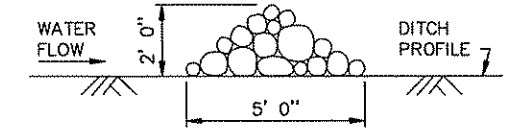
BALE CHECK DETAIL

DESIGN GUIDELINES:

	BALE	ROCK
STORM FREQUENCY:	2 YR. - 24 HR.	10 YR. - 24 HR.
MAX. FLOW VELOCITY:	5 FT./SEC.	12 FT./SEC.
MAX. DITCH GRADE:	5%	5%
MAX. DRAINAGE AREA:	2 ACRES	5 ACRES

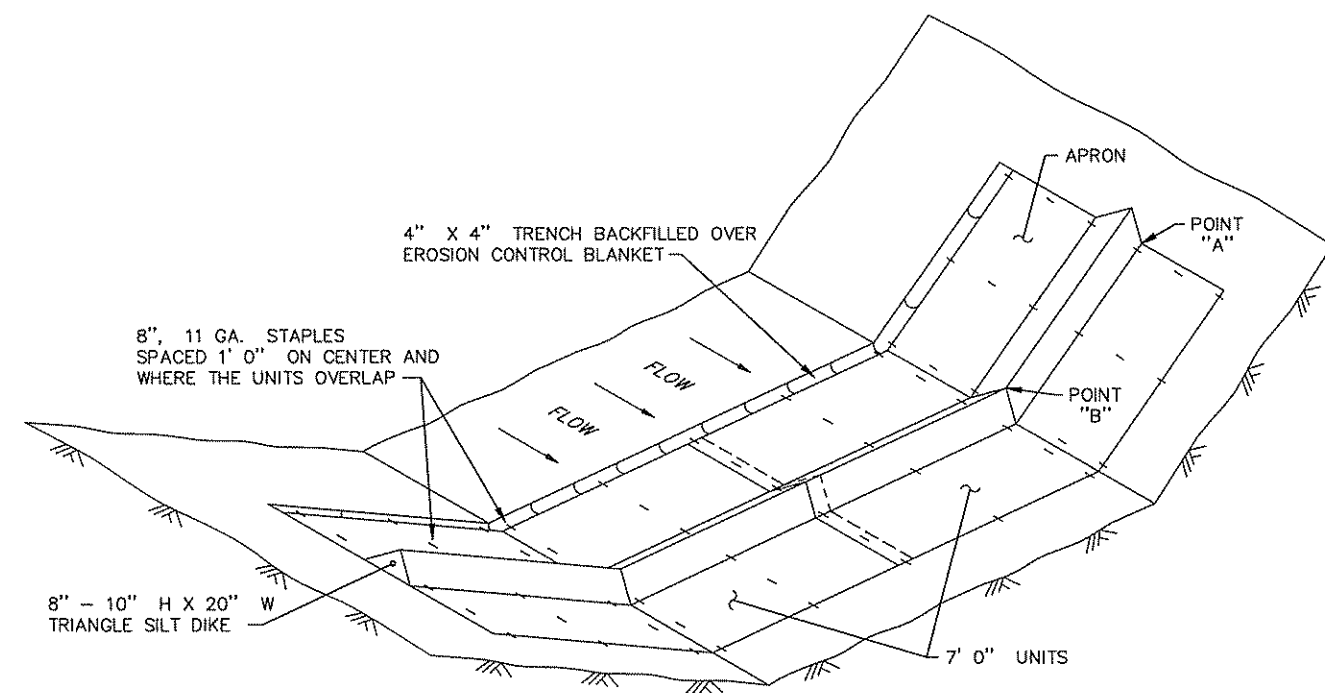


CROSS SECTION



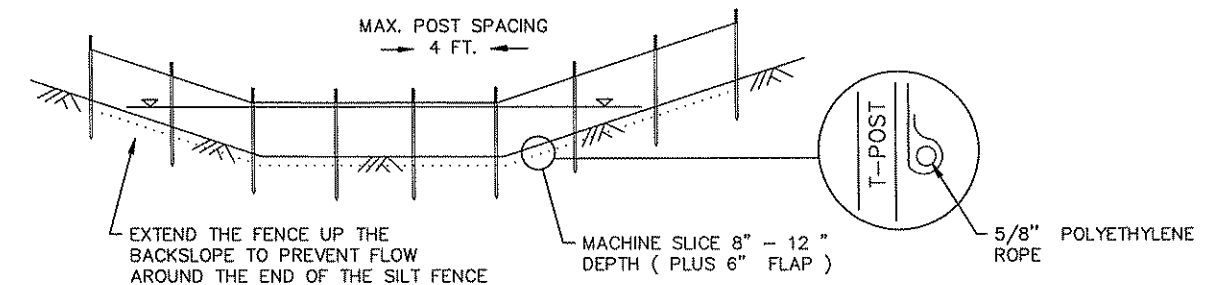
PROFILE VIEW

ROCK DITCH CHECK



POINT "A" MUST BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

GEOTEXTILE TRIANGULAR DIKE DITCH CHECK



SPACING DISTANCE = SILT FENCE HEIGHT / % CHANNEL SLOPE

DESIGN GUIDELINES	
STORM FREQUENCY	2 YR. - 24 HR.
MAX. DITCH GRADE	5%
MAX. DRAINAGE AREA	1 ACRE

NOTE:
WHEN SEDIMENT BUILD UP REACHES 1.5 FT., THE SILT SHOULD BE REMOVED OR A SECOND SILT FENCE BUILT UPSTREAM FROM THE EXISTING ONE AT A SUITABLE DISTANCE.

SILT FENCE DITCH CHECK, TYPE MACHINE SLICED

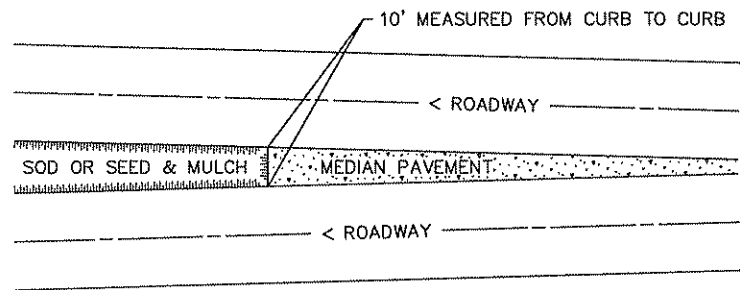
NOTES:

- SEE SPECS. 2573, 3885, 3886 & 3889.
- SPACING OF DITCH CHECKS IS DEPENDENT ON DRAINAGE AREA AND GRADES. SEE DISTRICT HYDRAULICS ENGINEER FOR RECOMMENDATIONS.
- ① TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10 IN. MINIMUM.
- ② PLACE A CATEGORY 3 EROSION CONTROL BLANKET, 6 FT. WIDE MINIMUM, UNDER THE BALE DITCH CHECK INSTEAD OF TRENCHING.

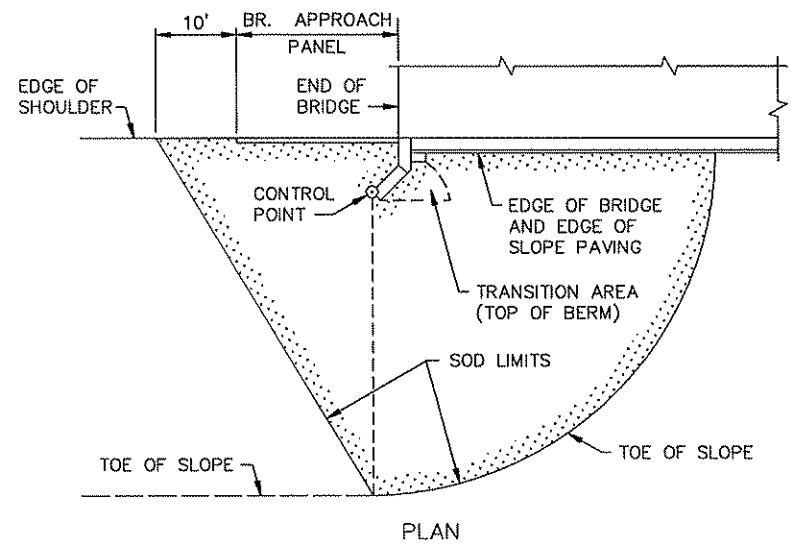
W:\A\K\K\K\960200\DWG\AC907\EC3.DWG USER: MWASS DATE: 05-22-03 TIME: 4:32 pm XREFS:

STANDARD SHEET NO. 5-297.405 (3 OF 4)	TITLE: TEMPORARY EROSION CONTROL DITCH CHECKS
STANDARD APPROVED: JULY 30, 2001	
STATE PROJ. NO. 02-609-11 S.P. NO. 198-106-03	SHEET NO. 6 OF 47 SHEETS
STATE PROJ. NO. 02-620-06	

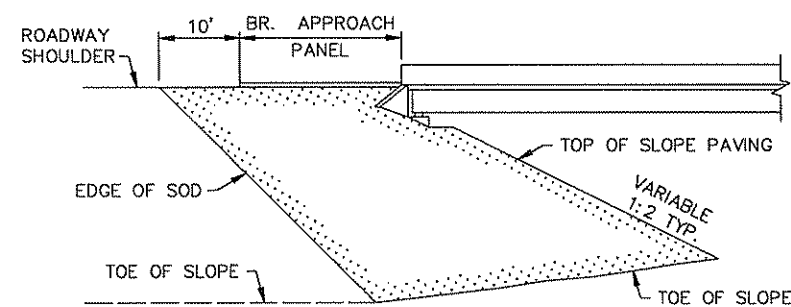
PLOTTED



SODDING LIMITS AT GORE AREA

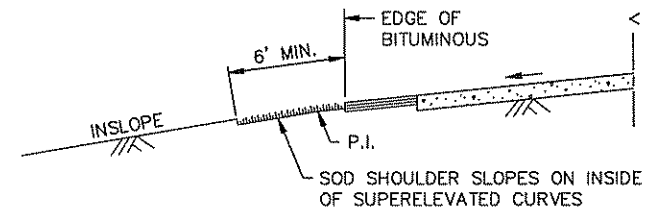


PLAN

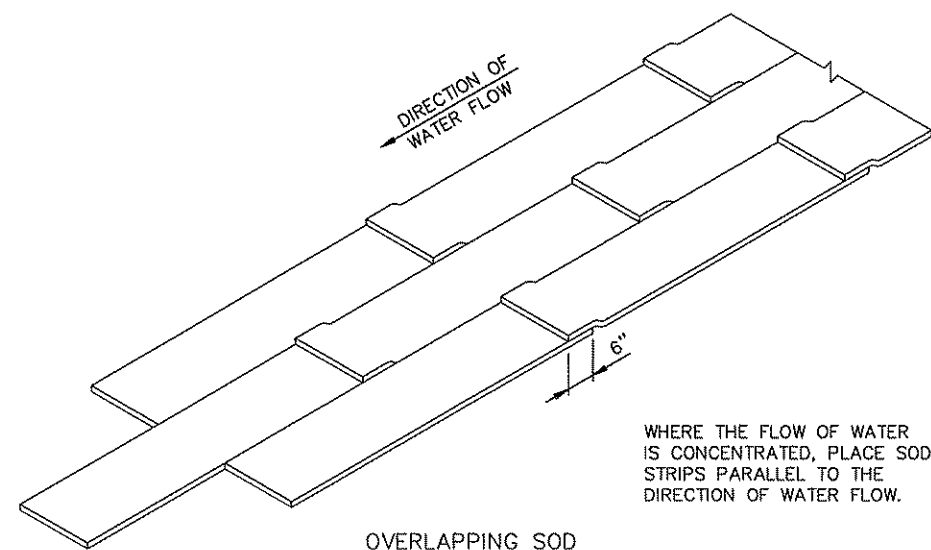


ELEVATION

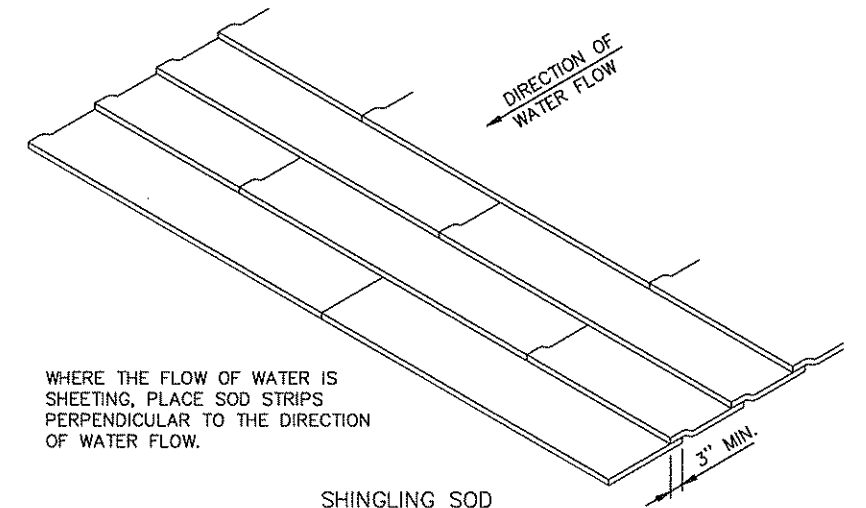
SODDING LIMITS AT BRIDGE APPROACH FILLS



SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

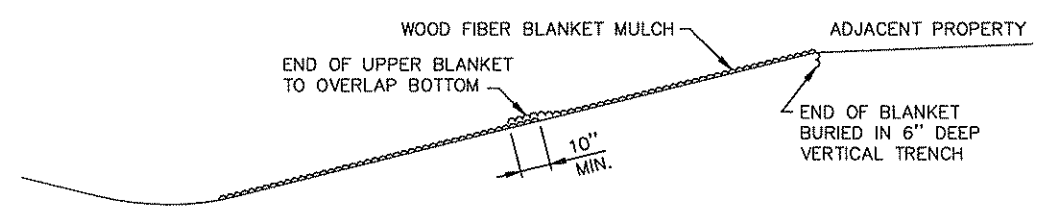


SHINGLING SOD

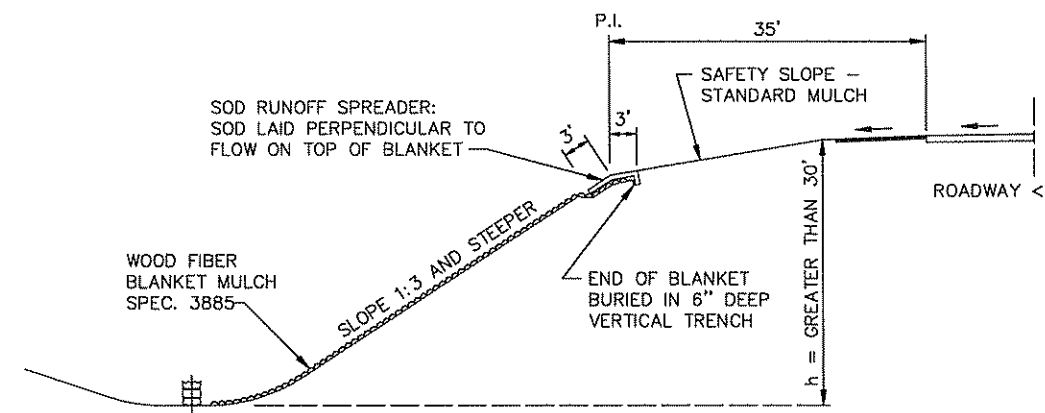
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.

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

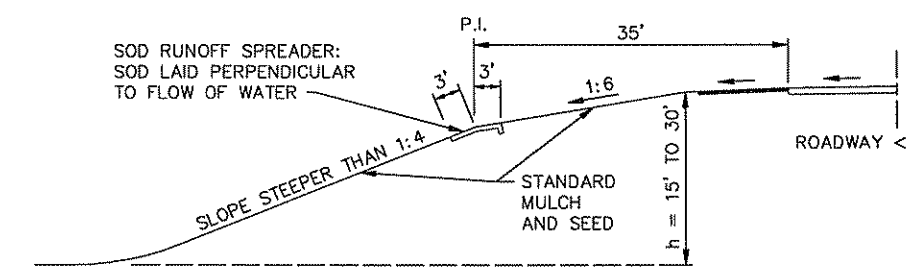
SPECIAL SOD PLACEMENT TECHNIQUES



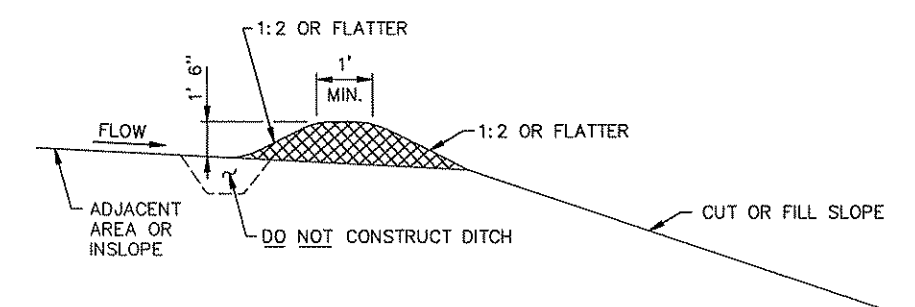
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)



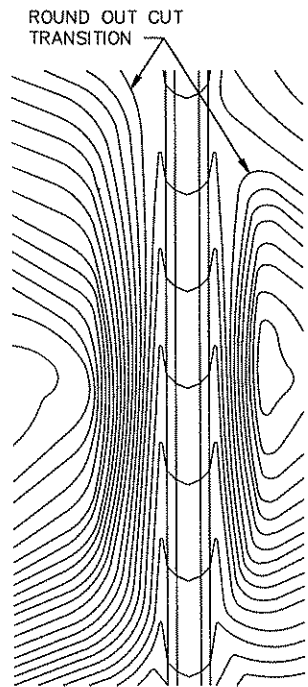
BROKEN-BACK SAFETY FILL SLOPE



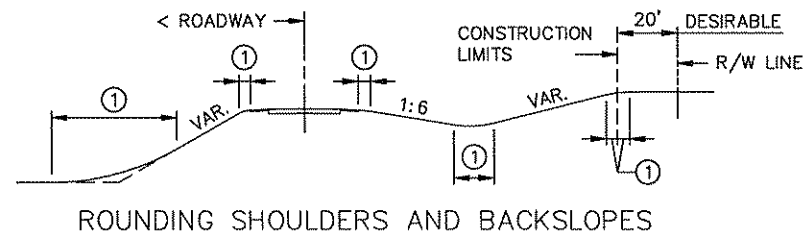
PERMANENT SLOPE PROTECTION DIKE

NAME: JANDY 990209 JMG/ACS/SPECT/IMG USER: NVA55 DATE: 02-28-03 TIME: 11:03 am REF: 5

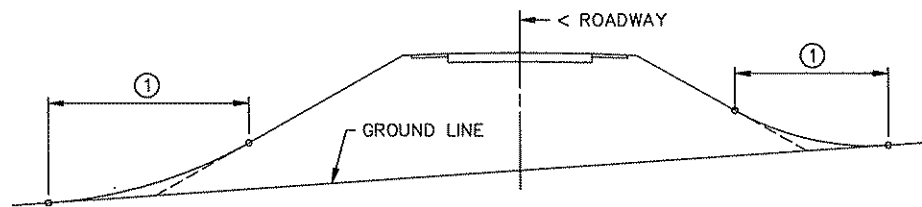
STANDARD SHEET NO. 5-297.406	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
STANDARD APPROVED: JULY 30, 2001	
REVISION DATE 10-26-2000	STATE PROJ. NO. 02-609-11 S.P. NO. 198-106-03 STATE PROJ. NO. 02-620-06
	SHEET NO. 7 OF 47 SHEETS



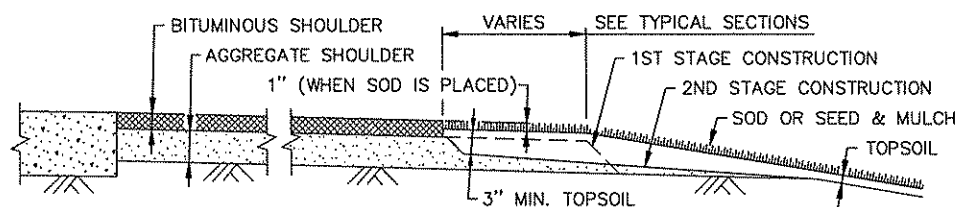
CONTOURING ROAD CUTS



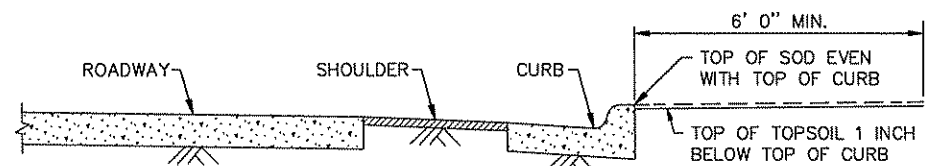
ROUNDING SHOULDERS AND BACKSLOPES



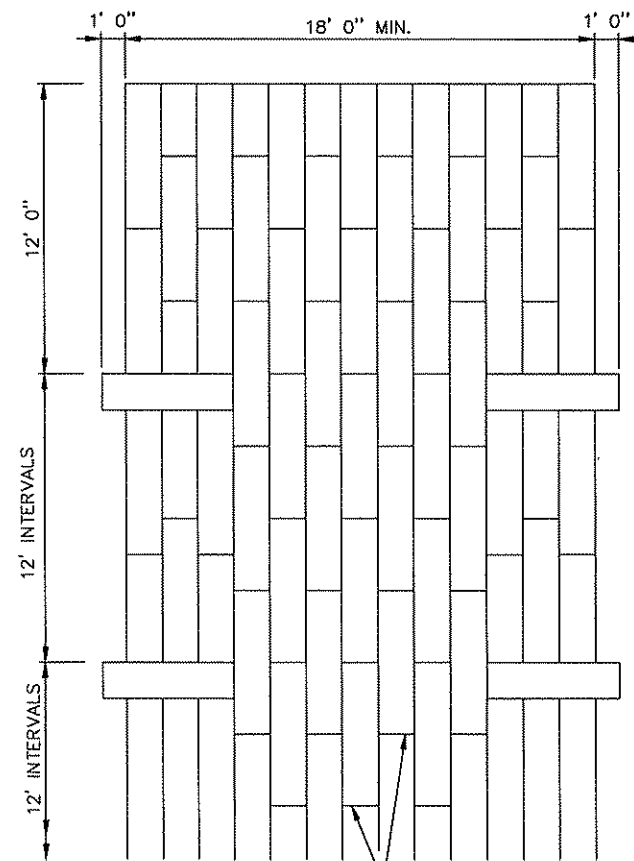
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



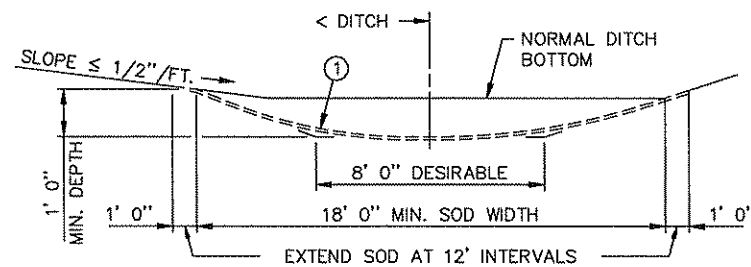
SHAPING AND TOPSOILING INSLOPES



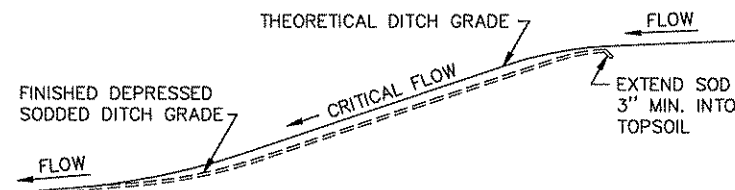
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



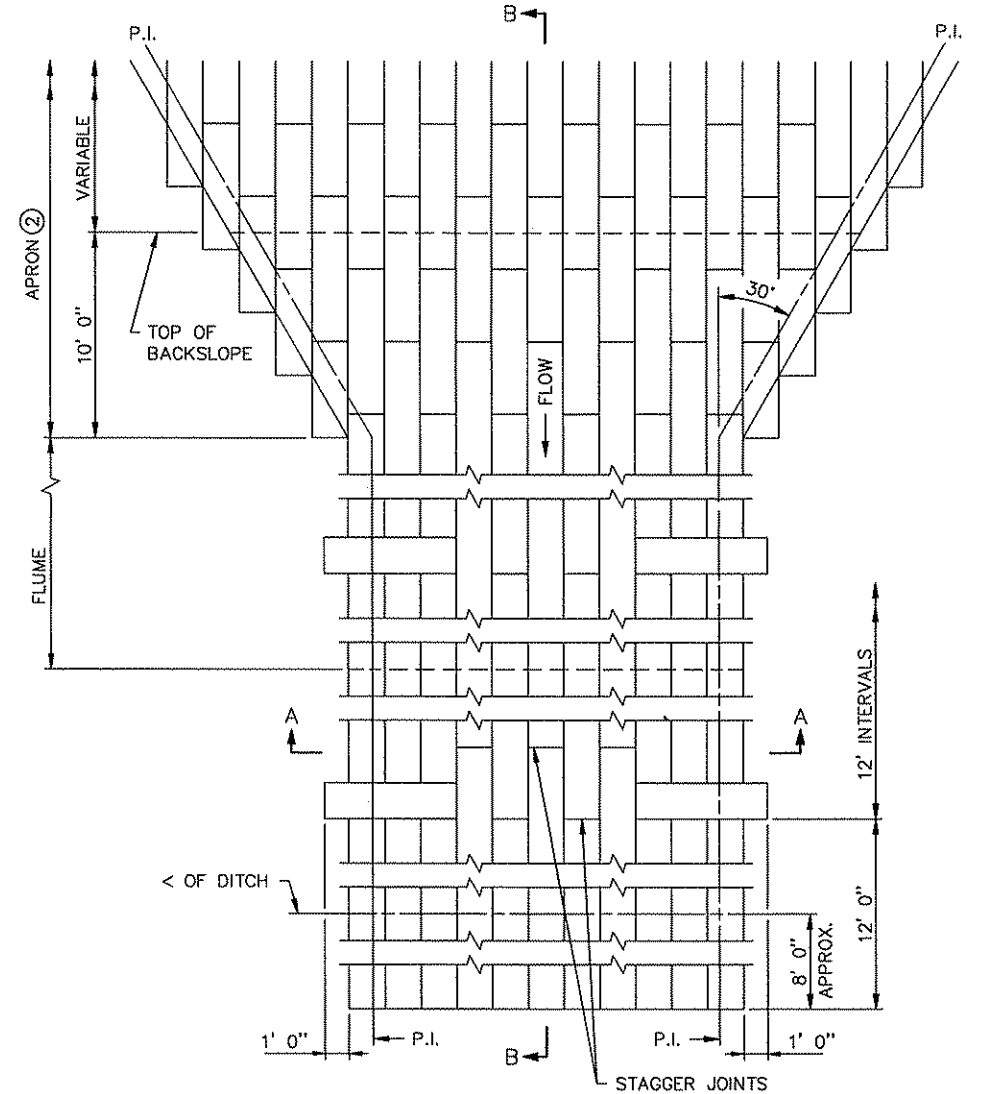
STAGGER JOINTS
PLAN VIEW



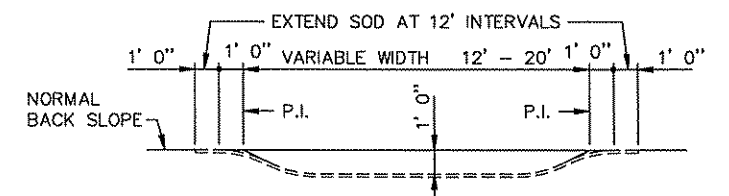
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.),
FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



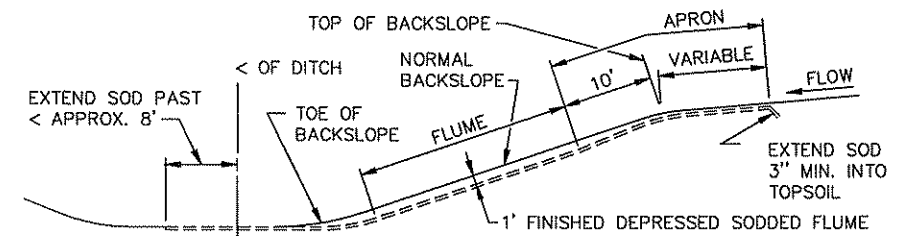
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B
SODDED FLUME DETAILS

- NOTES:
SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
① FOR ROUNDING, SEE ROAD DESIGN MANUAL.
② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO.
5-297.404
STANDARD APPROVED:
JULY 30, 2001

TITLE:
PERMANENT EROSION CONTROL
ALONG ROADWAYS, DITCHES AND FLUMES

REVISION DATE
10-26-2000

STATE PROJ. NO. 02-609-11 S.P. NO. 198-106-03
STATE PROJ. NO. 02-620-06

SHEET NO. 8 OF 47 SHEETS

A CLEARING AND GRUBBING					
STATION	LOCATION	CLEARING		GRUBBING	
		EACH	acre	EACH	acre
C.S.A.H. 9					
256+70-258+58	40'-59' LT		0.05		0.05
259+30-261+30	40'-59' RT		0.07		0.07
262+85	59 RT	X		X	
263+59	59 RT	X		X	
263+81-264+70	43'-59' RT		0.03		0.03
269+04	50' LT	X		X	
269+33	44' LT	X		X	
269+45	44' LT	X		X	
269+90	45' LT	X		X	
269+96	44' LT	X		X	
270+76	53' LT	X		X	
270+82	44' LT	X		X	
270+86	40' LT	X		X	
270+96	48' LT	X		X	
274+12	40' LT	X		X	
274+16	48' LT	X		X	
TOTALS			13	0.15	13

A CLEARING AND GRUBBING					
STATION	LOCATION	CLEARING		GRUBBING	
		EACH	acre	EACH	acre
C.S.A.H. 20					
2+88	48' RT	X		X	
3+38	67' LT	X		X	
7+07	57' LT	X		X	
9+81	43' RT	X		X	
9+85	44' RT	X		X	
9+91	49' RT	X		X	
9+92	49' RT	X		X	
10+00	43' RT	X		X	
10+96	48' RT	X		X	
11+16	43' RT	X		X	
12+65	42' RT	X		X	
12+74	44' RT	X		X	
13+15	47' RT	X		X	
TOTALS			13		13

B PAVEMENT REMOVAL AND SAW CUT						
ALIGNMENT	STATION	LOCATION	SALVAGE	REMOVE	MILL	SAW CUT
			BITUMINOUS	BITUMINOUS		BITUMINOUS
			SY	SY	SY	FT
C.S.A.H. 9	257+21	CL				
C.S.A.H. 9	257+21-266+47.65	CL	4994.1			46
C.S.A.H. 9	266+47.65-280+54	CL	4051.79		1043	170
TOTAL C.S.A.H. 9			9045.9		1043	216
C.S.A.H. 20	0+17-3+15	13 LT				331
C.S.A.H. 20	0+92-12+48	CL			4642	1224
TOTAL C.S.A.H. 20					4642	1555
161ST AVE NW	0+28-4+07		675		1236	30
TOTAL			9721		6921	1801

C DRIVEWAY REMOVAL / REPLACEMENT					
STATION	LOCATION	REMOVAL	SAWCUT	REPLACEMENT	
				BIT. 2in	AGG.* 4in
		SY	FT	SY	CY
C.S.A.H. 9					
275+64	54 LT	72.2	12	46.7	5.1
258+90	51 LT	73.3	12	64.4	7.1
259+89	41 LT	62.7		64.4	7.1
263+37	60 RT	67.9	12	34.7	3.8
270+76	60 RT	185.9	34	113.5	12.5
271+82	55 RT	141.3	30	92.3	10.2
TOTAL C.S.A.H. 9		603.3	100	416	45.8
C.S.A.H. 20					
3+94	60 LT	170.8			18.9
5+19	58 LT	164.2	34	121.8	13.4
11+50	55 LT	77.7	30	85.7	9.4
TOTAL C.S.A.H. 20		412.7	64	207.5	41.7
161ST AVE		78			
TOTAL		1094	164	623.5	87.5

* N O T E :
AGGREGATE BASE IS INCIDENTAL TO DRIVEWAY REPLACEMENT

GENERAL NOTES:

- 1) PROTECT ALL EXISTING UTILITIES.
- 2) ALL OFFSETS SHOWN ARE FROM THE PROPOSED ALIGNMENT.
- 3) CONSTRUCT ALL RADII AS PER PLANS.
- 4) EROSION CONTROL TO BE PLACED BEFORE REMOVAL OF BITUMINOUS PAVEMENT.
- 5) SAW CUT ALL BITUMINOUS AND CONCRETE AS DIRECTED BY THE ENGINEER IN THE FIELD. MILLING MAY BE USED IN LIEU OF SAWCUT AS DIRECTED BY THE ENGINEER.
- 6) THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED IN THE FIELD BEFORE DIGGING. CONTRACTOR SHALL COORDINATE WITH RELOCATION OF PRIVATE UTILITIES.
- 7) CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES AS SHOWN ON THESE PLANS AND SPECIFICATIONS AND IMPLEMENT ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY, OR AS DIRECTED BY ENGINEER, IN ORDER TO PROTECT ADJACENT PROPERTY.

D PROPOSED CULVERT TABULATION								
ALIGNMENT	STATION	LOCATION	INLET ELEVATION	OUTLET ELEVATION	F&I 15" CMP CULVERT (FT)*	F&I 15" CMP SAFETY APRON	F&I 24" CMP CULVERT (FT)*	F&I 24" CMP SAFETY APRON
C.S.A.H. 9	257+46	46 LT		885.23	56		2	
C.S.A.H. 9	260+07	50 LT	889.39					
C.S.A.H. 9	267+40	43 RT	890.00					
C.S.A.H. 9	267+40	42 LT		889.58			85	2
C.S.A.H. 9	270+41	49 RT		890.96	80	2		
C.S.A.H. 9	271+06	47 RT	891.29					
C.S.A.H. 9	271+49	47 RT		891.50	112	2		
C.S.A.H. 9	272+12	47 RT	891.82					
TOTAL C.S.A.H. 9					248	6	85	2
C.S.A.H. 20	4+81	45 LT		890.98	72	2		
C.S.A.H. 20	5+53	45 LT	891.34					
TOTAL C.S.A.H. 20					72	2		
TOTAL					320	8	85	2

* N O T E : LENGTH INCLUDES APRONS

DATE: 05-29-01 TIME: 1:39 PM USER: JTABLER

W:\ME\ANOKA\990200\DWG\AC902\TBL.DWG

DRAWN BY: SLP				
DESIGNER: SLP				
CHECKED BY: GFA				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

© SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
Thomas G. Tabler
THOMAS G. TABLER
Date: 4/23/01 Lic. No. 26861

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

ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

TABULATIONS

FILE NO. AANOKC9902.00	9
DATE 4/23/01	47

E BITUMINOUS PAVEMENT AND AGGREGATE BASE SUMMARY						
LOCATION	NOTES	MV WE35035C WEARING TON	MV NW35035C BINDER TON	LV NW35030B BASE TON	TACK COAT GAL	AGGREGATE BASE CL 5 CY
C.S.A.H. 9						
257+21-261+20		381	381	444	158	912
261+20 - 263+20		211	211	285	87	480
263+20-266+47.65		358	358	495	148	812
266+47.65-269+70		303	303	515	125	689
269+70-275+09		436	436	515	180	1039
275+09-280+54		427	301	303	176	744
TOTAL C.S.A.H. 9		2117	1991	2458	875	4676
C.S.A.H. 20						
0+43-5+52		213	213		88	469
0+92-13+22		562			232	
5+52-9+62		121	121		50	268
9+62-13+22		59	59		145	130
TOTAL C.S.A.H. 20		955	393		394	867
161ST AVE						
		150	109		62	240
TOTAL		3222	2493	2458	1331	5783

GENERAL NOTES:

- 1) PROTECT ALL EXISTING UTILITIES.
- 2) ALL OFFSETS SHOWN ARE FROM THE PROPOSED ALIGNMENT.
- 3) CONSTRUCT ALL RADII AS PER PLANS.
- 4) EROSION CONTROL TO BE PLACED BEFORE REMOVAL OF BITUMINOUS PAVEMENT.
- 5) SAW CUT ALL BITUMINOUS AND CONCRETE AS DIRECTED BY THE ENGINEER IN THE FIELD. MILLING MAY BE USED IN LIEU OF SAWCUT AS DIRECTED BY THE ENGINEER.
- 6) THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED IN THE FIELD BEFORE DIGGING. CONTRACTOR SHALL COORDINATE WITH RELOCATION OF PRIVATE UTILITIES.
- 7) CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES AS SHOWN ON THESE PLANS AND SPECIFICATIONS AND IMPLEMENT ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY, OR AS DIRECTED BY ENGINEER, IN ORDER TO PROTECT ADJACENT PROPERTY.

F TURF ESTABLISHMENT							
STATION	LOCATION	SOD	SEEDING	SEED, MIX 50B	FERTILIZER 22-5-10*	MULCH TYPE 1	EROS. CONT. BLNT. CAT. 2
		SY	ACRE	LBS	LBS	TON	SY
C.S.A.H. 9							
257+01-266+22	LT	521	0.49	24.5	490	0.98	2372
257+01-266+23	RT	482	0.43	21.5	430	0.86	2081
266+75-280+54	LT		.72	36.0	760	1.52	2315
266+75-280+54	RT		.81	40.5	940	1.88	2800
TOTAL C.S.A.H. 9		1003	2.45	122.5	2620	5.24	9568
C.S.A.H. 20							
0+40-12+48	LT		0.58	29.0	580	1.16	2807
0+40-12+48	RT		0.23	11.5	230	0.46	1113
TOTAL C.S.A.H. 20		0	0.81	40.5	810	1.62	3920
161ST AVE							
	LT & RT	125	.08	4	80	0.16	337
TOTAL		1128	3.34	167	3510	7.02	13825
				50 LB/ACRE	300 LB/ACRE		

* SLOW RELEASE

H CMP CULVERT REMOVALS			
STATION	LOCATION	LENGTH	SIZE
	LT/RT	FT	IN
C.S.A.H. 9			
257+47-257+78	44 LT	31	15
258+73-259+06	37 LT	33	15
270+52-270+98	32 RT	46	15
271+68-272+05	33 RT	37	18
TOTAL C.S.A.H. 9		147	
C.S.A.H. 20			
3+71-4+22	40 LT	51	15
4+96-5+41	41 LT	45	15
6+30-6+62	40 LT	32	15
TOTAL C.S.A.H. 20		128	
TOTAL		275	

I SILT FENCE			
STATION	LOCATION	SILTFENCE	SILT CHECK
	LT/RT	FT	EACH
C.S.A.H. 9			
256+96-261+00	40-55 RT	404	
257+00	45 LT		5
260+25	45 LT		5
263+50	45 LT		5
266+80-268+80	50 LT	200	
268+80	40 LT		5
270+00-275+00	40-55 LT	500	
271+10	50 RT<		10
281+00	50 RT<		10
TOTAL C.S.A.H. 9		1104	40
C.S.A.H. 20			
0+70-3+50	50 LT	280	
3+50	40 LT		5
3+00	35 RT		5
5+50-7+50	50LT&35RT	400	
8+00	40 LT		5
8+50	35 RT		5
TOTAL C.S.A.H. 20		680	20
TOTAL		1784	60

G CONCRETE WALK/CURB AND GUTTER				
STATION	LOCATION	CURB AND GUTTER		
		B618 FT	B418 FT	
C.S.A.H. 9				
257+40-260+18	25.66-30+72 LT		278	
261+20-265+80	40.50-44+50 RT		460	
TOTAL C.S.A.H. 9			738	
C.S.A.H. 20				
0+28-3+42	LT	314		
2+65-3+22	RT	57		
TOTAL C.S.A.H. 20		371		
TOTAL		371	738	

W:\E\ANOKA\990200\DWG\ACS02TB2.DWG
 DATE: 05-28-03 TIME: 1:24 pm
 USER: MWASS
 REF:

DRAWN BY: SLP				
DESIGNER: SLP				
CHECKED BY: GFA				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

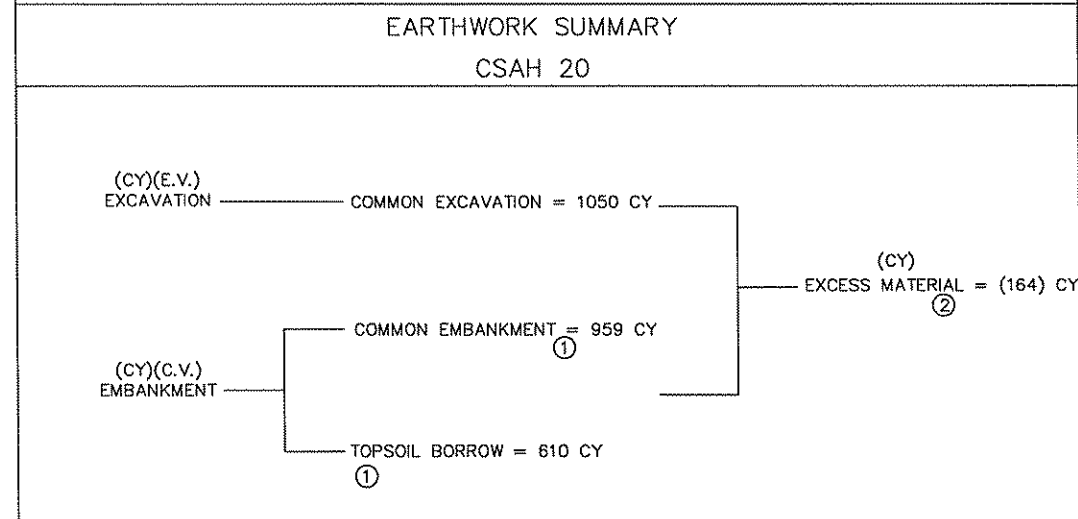
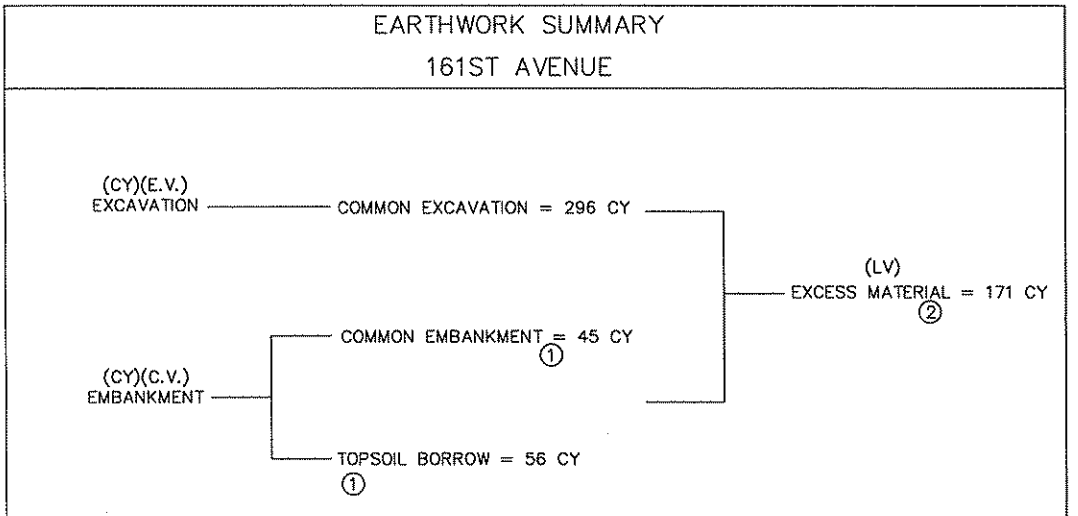
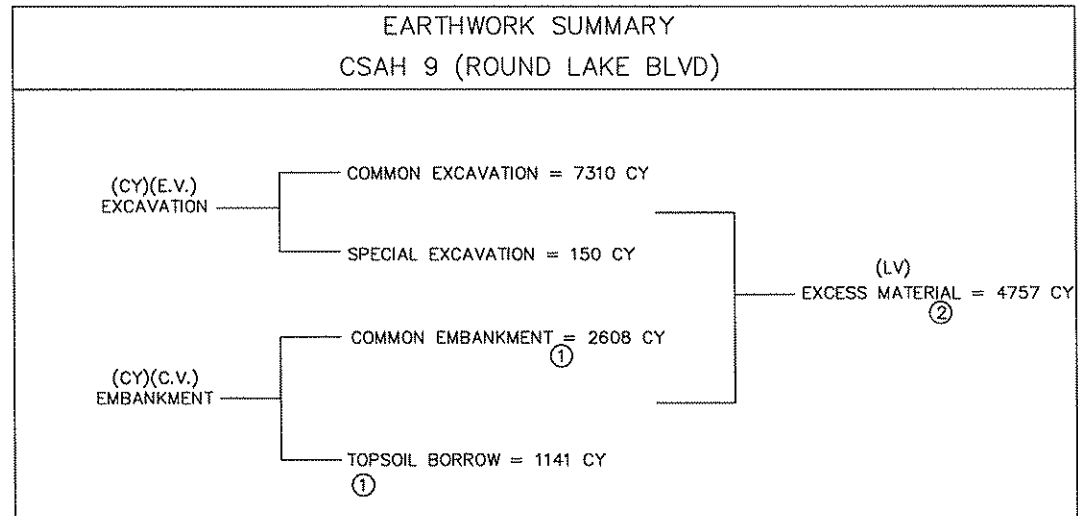
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 THOMAS G. TABLER
 Date: 4/23/01 Lic. No. 26861



ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

TABULATIONS

FILE NO. AANOKC9902.00
 DATE 4/23/01
 10
 47



- ① 125% SHRINKAGE FACTOR USED FROM LOOSE VOLUME (L.V.) TO COMPACTED VOLUME (C.V.).
- ② CALCULATED FROM DIFFERENCE OF EXCAVATION (E.V.) AND EMBANKMENT OF SUITABLE MATERIAL (L.V.)

W:\AE\ANOKC\990200\DWG\ACR02TBUILDING USER: MIVASS
 DATE: 05-23-03 TIME: 8:59 am
 XREFS:

DRAWN BY: SLP				
DESIGNER: SLP				
CHECKED BY: GFA				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
 THOMAS G. TABLER
 Date: 4/23/01 Lic. No. 26861



ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

TABULATIONS

FILE NO. AANOKC9902.00	11 47
DATE 4/23/01	

CONSTRUCTION/SOILS NOTES

1. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL MEET THE REQUIREMENTS OF MN/DOT STANDARD SPECIFICATION 3149.2B1
2. ITEMS REFERRED TO AS INCIDENTAL ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL WITH NO DIRECT COMPENSATION MADE THEREFORE.
3. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B2
4. BITUMINOUS AND CONCRETE SURFACING REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED OR DISPOSED OF OFF THE PROJECT, IN ACCORDANCE WITH THE PROVISIONS OF SPEC. 2104 AND 2105.
5. UNSUITABLE MATERIALS SHALL BE PLACED IN EMBANKMENTS OUTSIDE OF A 1-1/2H:1V SLOPE EXTENDING DOWN AND OUTWARD FROM THE GRADING PI OR THE BOULEVARD PI.
6. COMPACTION OF THE GRADING ITEMS OF THIS PROJECT SHALL BE BY THE "SPECIFIED DENSITY METHOD", EXCEPT WHEN WITHIN 3 FT. OF THE WATER TABLE, THEN BY THE "QUALITY COMPACTION METHOD".
7. COMPACTION OF THE AGGREGATE BASE ITEMS OF THIS PROJECT SHALL BE BY THE "SPECIFIED DENSITY METHOD" EXCEPT WHEN THE CONTRACTOR ELECTS TO USE RECYCLED MATERIALS FOR THE AGGREGATE BASE ITEMS, THEN THE PENETRATION INDEX METHOD SHALL BE UTILIZED.
8. WHERE WIDENING ADJACENT TO EXISTING PAVEMENT, CUT VERTICALLY TO THE BOTTOM OF THE CLASS 5 AGGREGATE BASE AND THEN AT A 1/2H:1V SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION (AS SHOWN ON THE TYPICAL SECTIONS AND THE CROSS SECTIONS). BACKFILL PROMPTLY TO AVOID UNDERMINING THE EXISTING PAVEMENT.
9. PROVIDE 20H:1V LONGITUDINAL TAPERS BETWEEN CHANGES IN SUBGRADE AND SUBCUT DEPTHS.
10. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND WHERE CONCRETE CURBING ABUTS BITUMINOUS MIXTURES.
11. STRIP AND REUSE AS SLOPE DRESSING ALL EXISTING TOPSOIL, WHERE PRESENT, IN AREAS TO BE DISTURBED BY CONSTRUCTION. TOPSOIL STRIPING IS CONSIDERED TO BE COMMON EXCAVATION.
12. PLACE A MINIMUM OF SLOPE DRESSING ON ALL AREAS SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. ALL EXCESS TOPSOIL SHALL BE USED AS SLOPE DRESSING BY PROVIDING A THICKNESS GREATER THAN 4 INCHES.
13. SEEDING REQUIREMENTS ON THIS PROJECT SHALL BE AS FOLLOWS:
 - a. SEED MIXTURE 50B SHALL BE APPLIED AT A RATE OF 50 POUNDS PER ACRE.
 - b. MULCH MATERIAL TYPE I SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE.
 - c. COMMERCIAL FERTILIZER ANALYSIS 22-5-10 (SLOW RELEASE) OR EQUIVALENT, SHALL BE APPLIED AT A RATE OF 300 POUNDS PER ACRE.
14. 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.
15. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, JANUARY 2001.
16. COMMON BORROW MATERIAL SHALL HAVE A MINIMUM R-VALUE OF 55. BORROW MATERIAL PLACED WITHIN THE UPPER 4 FT. OF THE EMBANKMENT BELOW THE GRADING GRADE SHALL BE SELECT GRANULAR MATERIAL.

These standard plates, approved by the FEDERAL HIGHWAY ADMINISTRATION, shall apply on this project.

MN/DOT STANDARD PLATES	
PLATE NO.	DESCRIPTION
3041 D	CORRUGATED METAL PIPE
3128 H	METAL SAFETY APRON & GRATE (2 SHEETS)
3134 C	RIP RAP AT CMP OUTLETS
3221 C	CORRUGATED STEEL PIPE COUPLING BAND (3 SHEETS)
7100 G	CONCRETE CURB & GUTTERS (DESIGN B AND DESIGN V)
8000 I	STANDARD BARRICADES

DATE: 05-23-2001 9:07 am

W:\AEV\ANOKA\990200\DWG\AC902C01.DWG

DRAWN BY:	XREFS:							
DESIGNER:	SLP							
CHECKED BY:	GFA							
DESIGN TEAM	NO.	BY	DATE	REVISIONS				

©SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

 THOMAS G. TABLER
 Date: 4/23/01 Lic. No. 26861

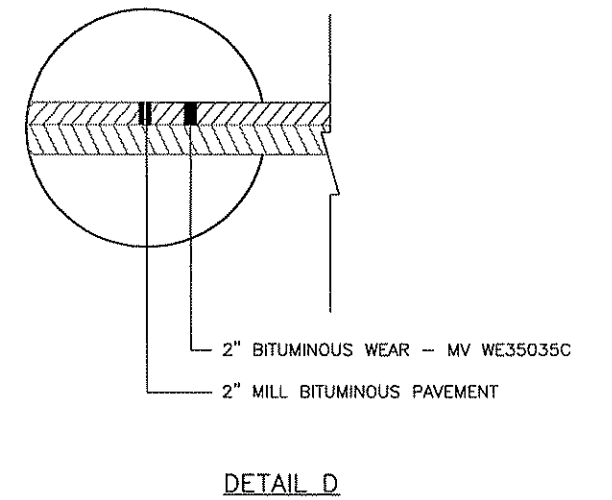
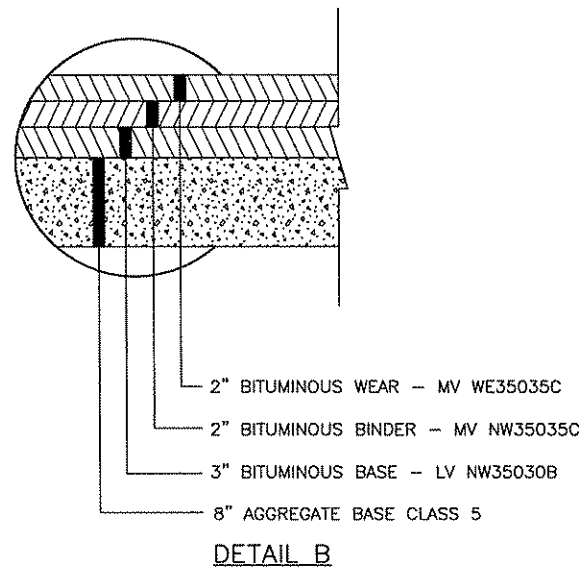
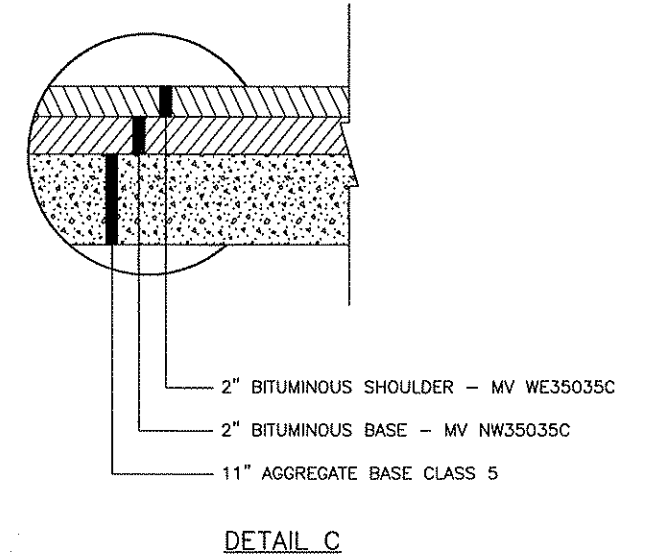
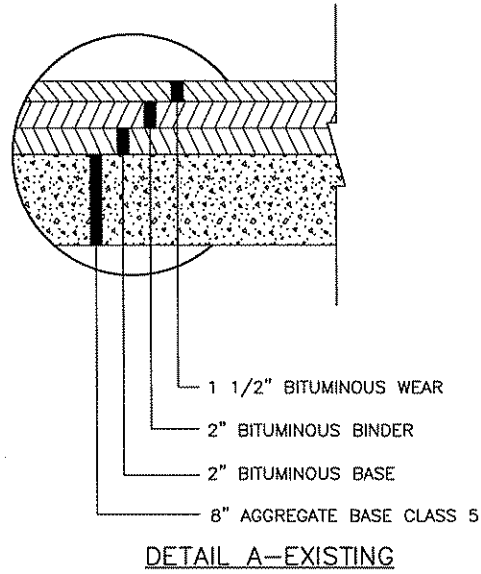
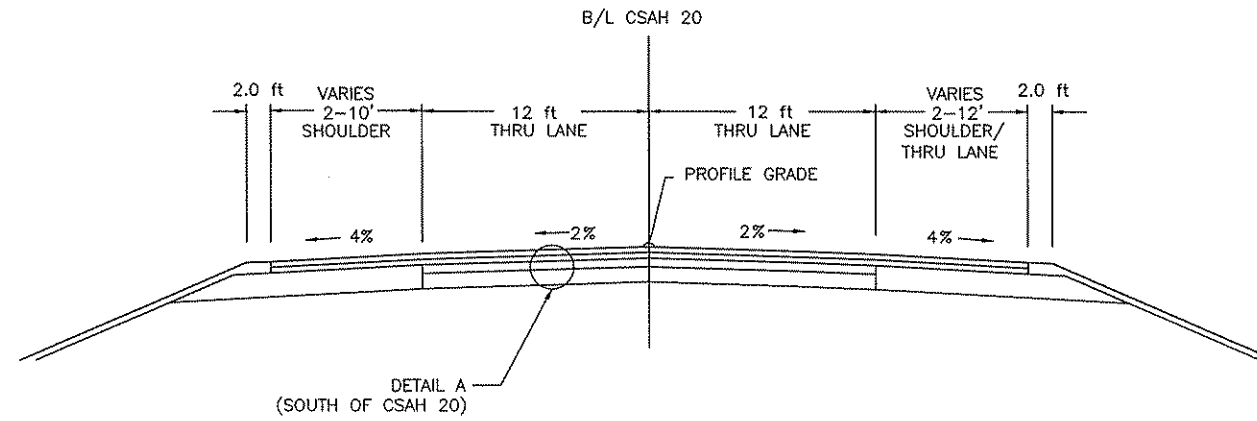


ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

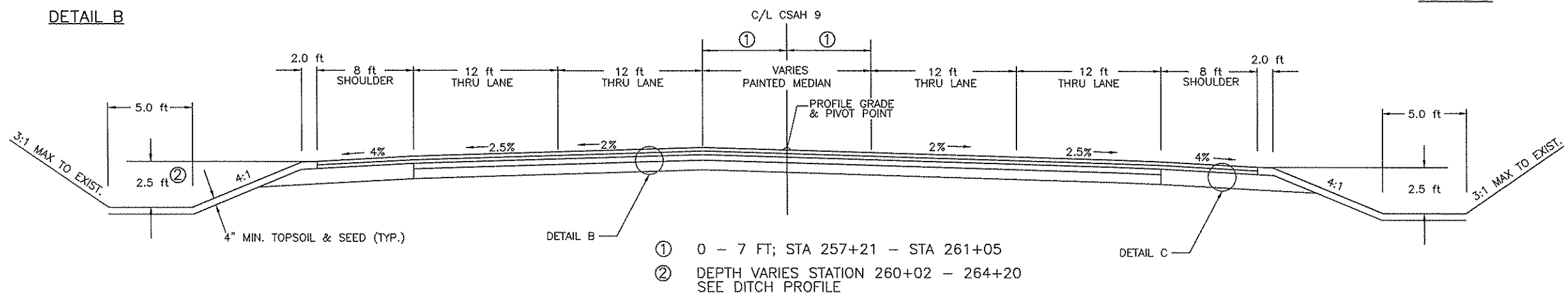
CONSTRUCTION NOTES

FILE NO. AANOKC9902.00	12
DATE 4/23/01	47

CSAH 9
EXISTING SECTION



CSAH 9
STA 257+01 - STA 261+20



DATE: 05-23-2001 9:11 am
W:\AE\ANOKC\990200\DWG\ACS902TY1.DWG

DRAWN BY:	XREFS:			
DESIGNER:	SLP			
CHECKED BY:	GFA			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
THOMAS G. TABLER
Date: 4/23/01 Reg. No. 26861

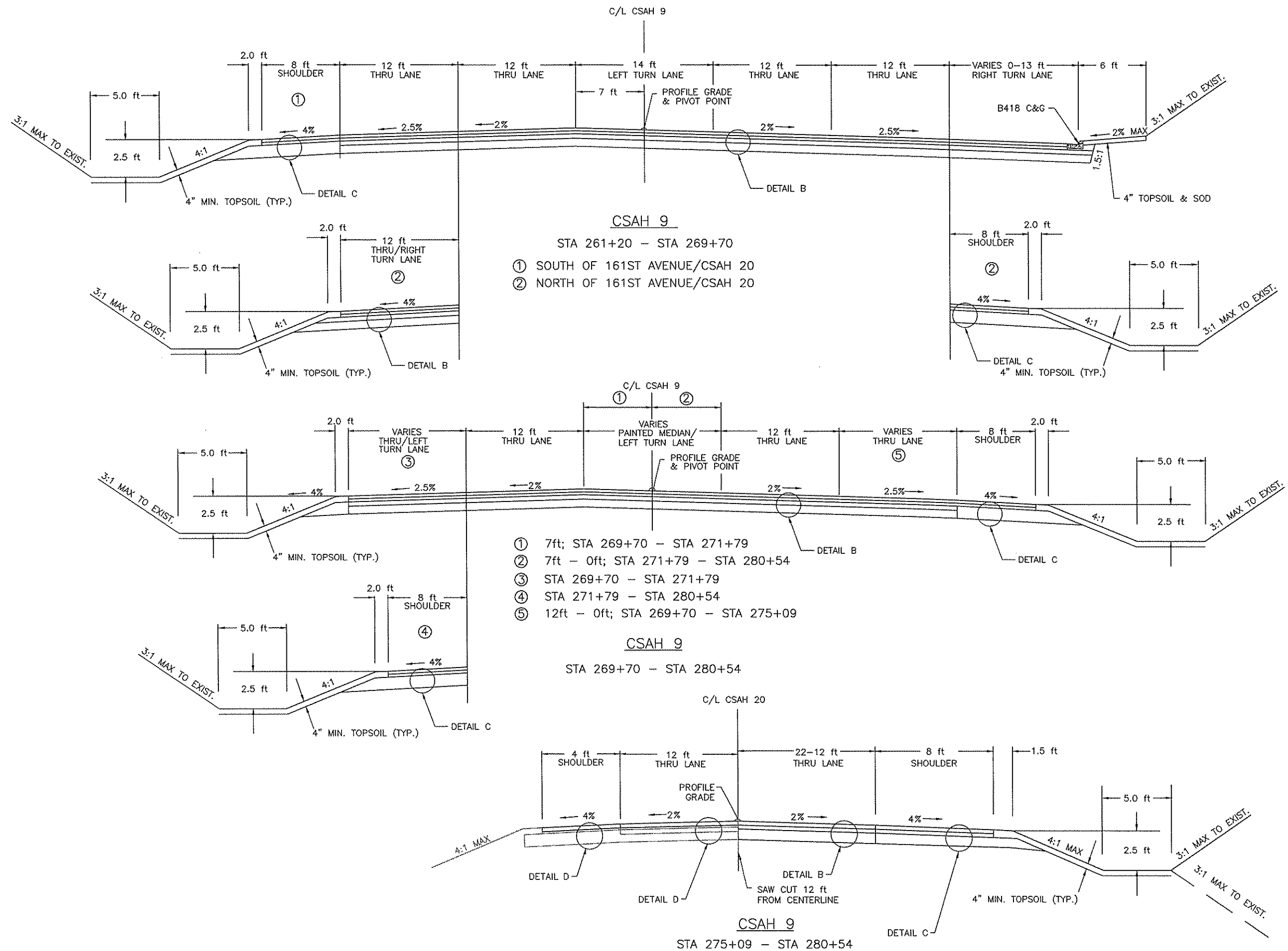
SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

TYPICAL SECTIONS

FILE NO.
AANOKC9902.00
DATE
4/23/01

13
47



CSAH 9
 STA 261+20 - STA 269+70
 ① SOUTH OF 161ST AVENUE/CSAH 20
 ② NORTH OF 161ST AVENUE/CSAH 20

CSAH 9
 STA 269+70 - STA 280+54
 ① 7ft; STA 269+70 - STA 271+79
 ② 7ft - 0ft; STA 271+79 - STA 280+54
 ③ STA 269+70 - STA 271+79
 ④ STA 271+79 - STA 280+54
 ⑤ 12ft - 0ft; STA 269+70 - STA 275+09

CSAH 9
 STA 275+09 - STA 280+54

DATE: 05-28-00; 4:17 PM
 W:\AE\ANOKA\990200\DWG\AC902TY2.DWG

DRAWN BY:	SLP			
DESIGNER:	XREFS:			
CHECKED BY:	GFA			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

© SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
 THOMAS G. TABLER
 Date: 4/23/01 Lic. No. 26861

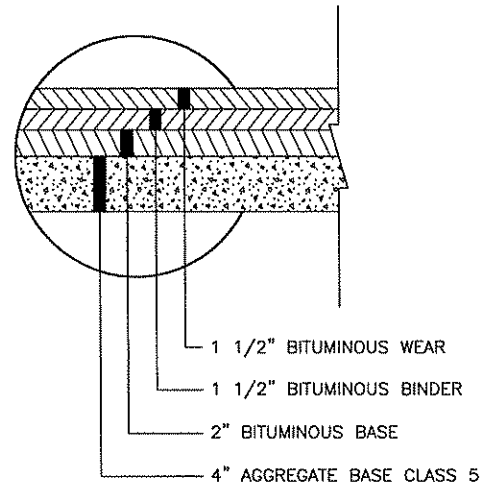


ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

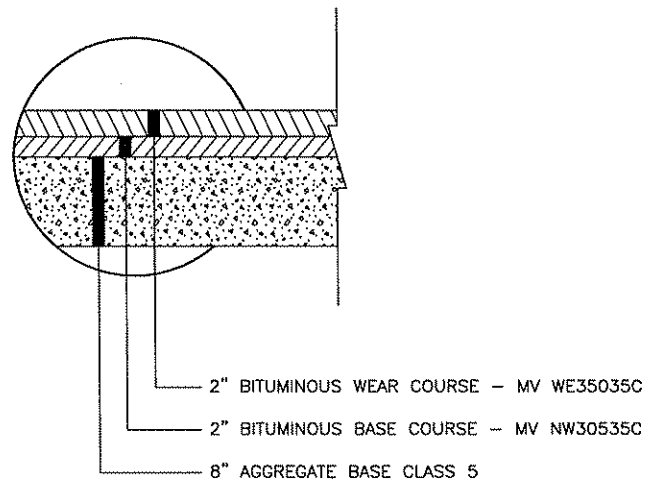
TYPICAL SECTIONS

FILE NO.
 AANOKC9902.00
 DATE
 4/23/01

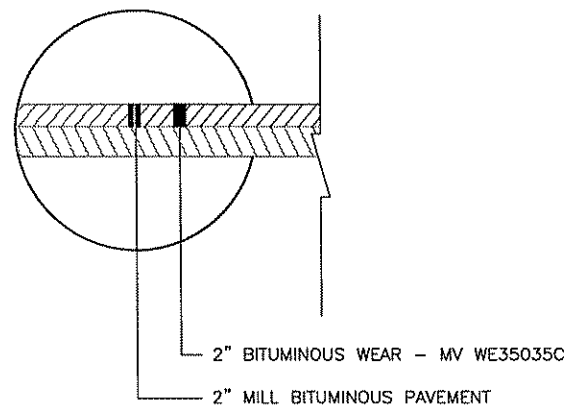
14
 47



DETAIL A-EXISTING

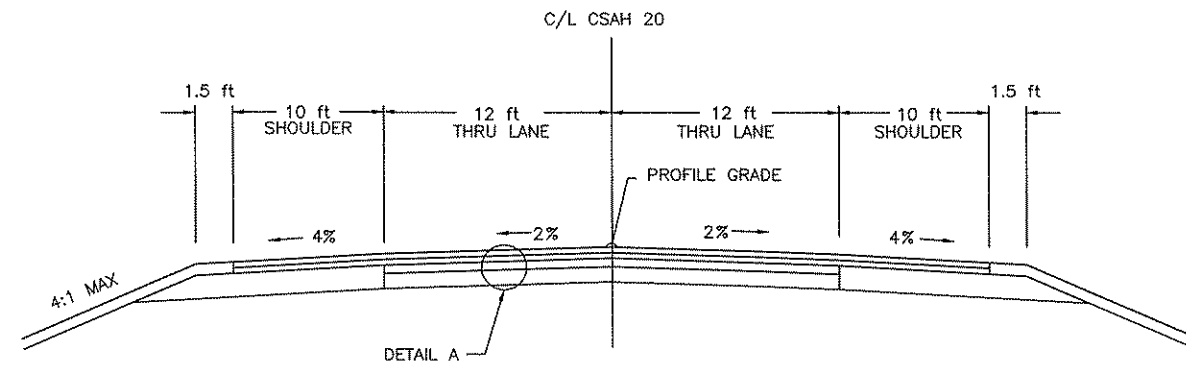


DETAIL B

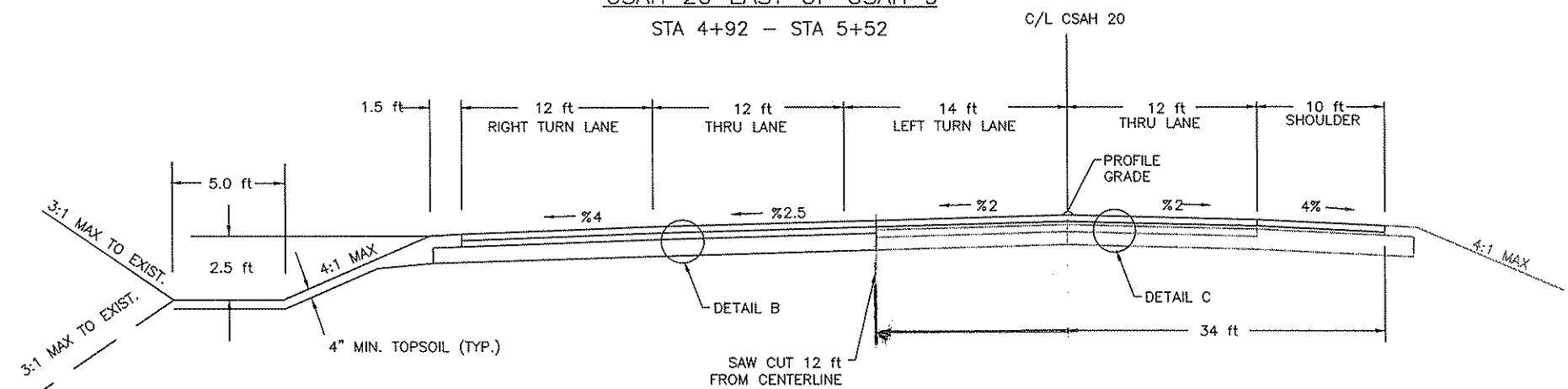


DETAIL C

CSAH 20
 EXISTING SECTION



CSAH 20 EAST OF CSAH 9
 STA 4+92 - STA 5+52



DATE: 05-29-06: 8:32 am
 W:\AE\ANOKA\990200\DWG\AC902TY3.DWG

DRAWN BY:	XREFS:			
DESIGNER:	SLP			
CHECKED BY:	GFA			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
 THOMAS G. TABLER
 Date: 4/23/01 Reg. No. 26861

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

ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

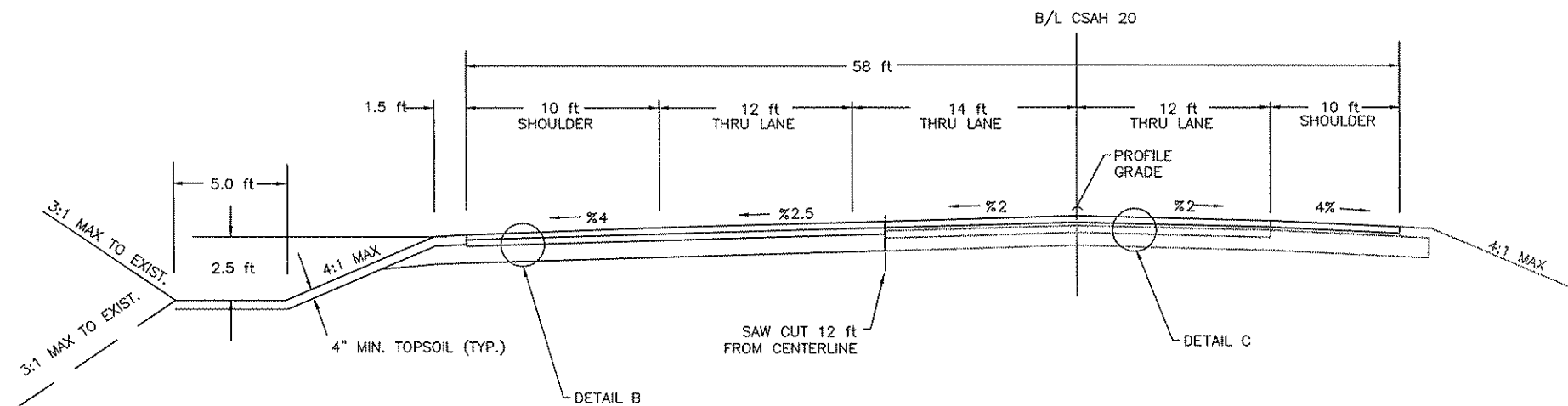
TYPICAL SECTIONS

FILE NO.
 AANOKC9902.00
 DATE
 4/23/01

15
 47

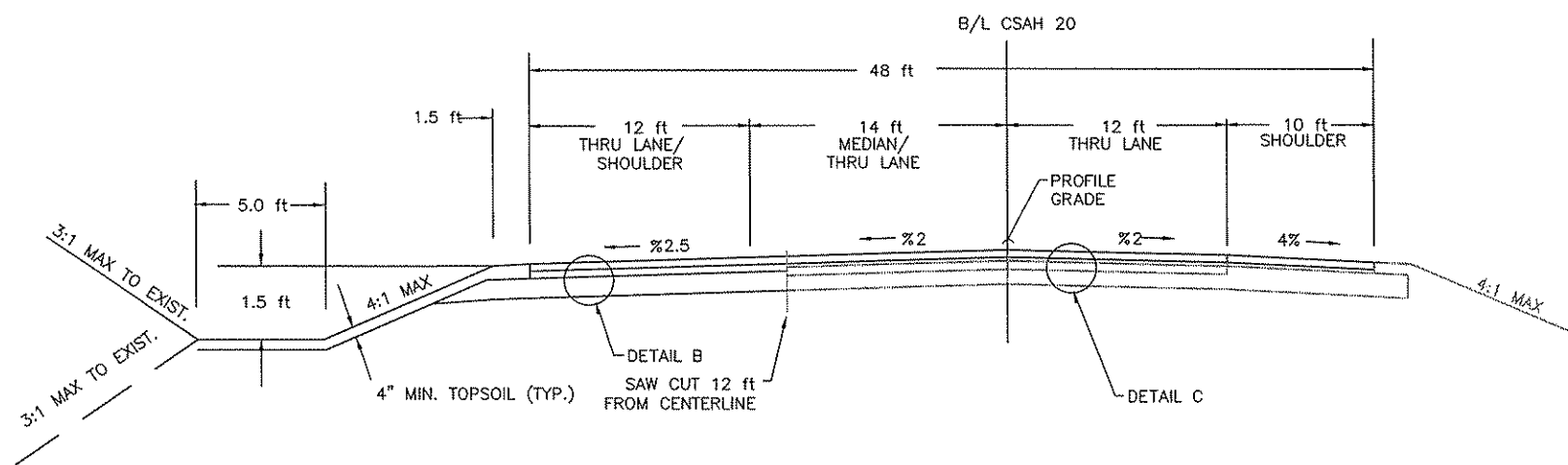
CSAH 20 EAST OF CSAH 9

STA 5+52 - STA 9+62



CSAH 20 EAST OF CSAH 9

STA 9+62 - STA 13+22



DATE: 05-29-2001 8:38 am

W:\AE\ANOKA\990200\DWG\AC902TY4.DWG

DRAWN BY: SLP
 DESIGNER: SLP
 CHECKED BY: GFA

DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 2000. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
 THOMAS G. TABLER
 Date: 4/23/01 Reg. No. 26861

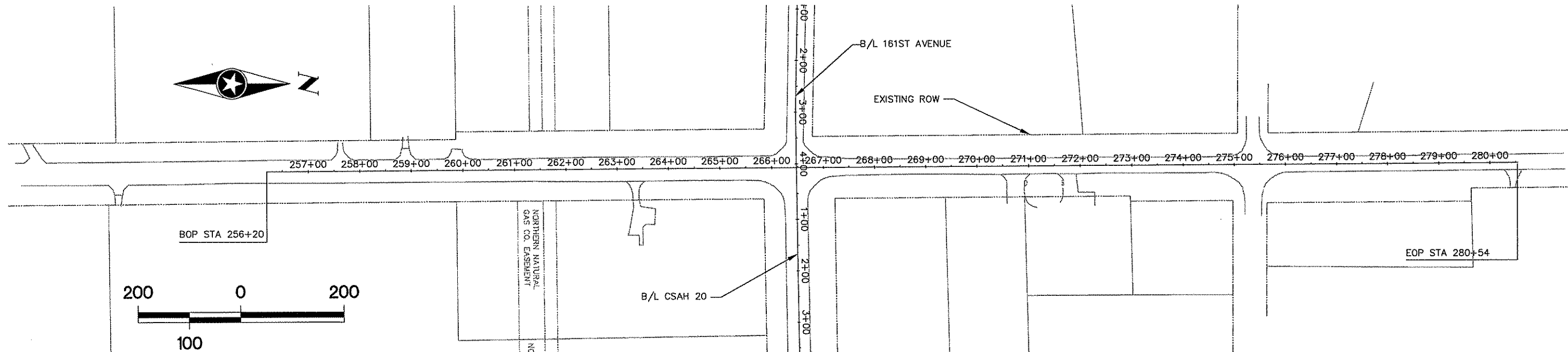
SEH
 PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

TYPICAL SECTIONS

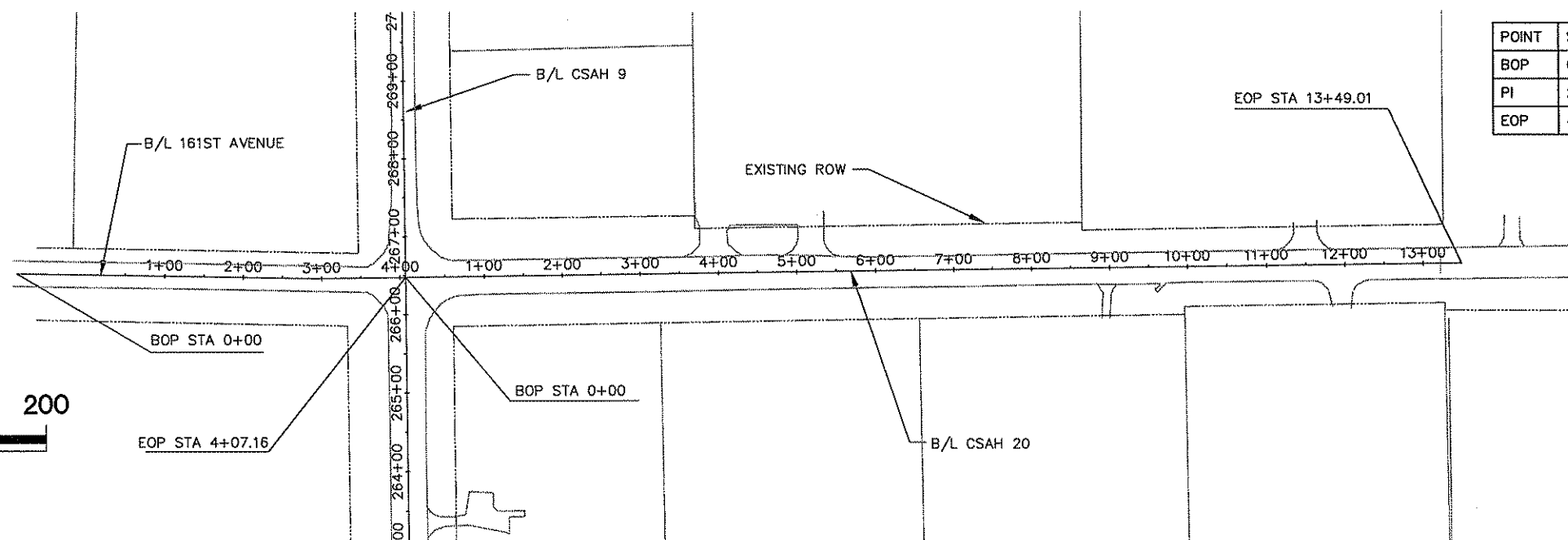
FILE NO.
 AANOKC9902.00
 DATE
 4/23/01

16
 47



POINT	STATION	NORTHING	EASTING	DIRECTION	DISTANCE
BOP	256+20.00	26073.3170	25012.5912	N 00°22'24" W	2434.00
EOP	280+54.00	26507.2660	24996.7323		

CSAH 9 (Round Lake Blvd.)



POINT	STATION	NORTHING	EASTING	DIRECTION	DISTANCE
BOP	0+00.00	27105.0866	24598.7941	S 88°54'03" E	292.74
PI	2+92.74	27099.5091	24891.4796	N 89°17'01" E	114.42
EOP	4+07.16	27100.9399	25005.8955		

161ST AVENUE

POINT	STATION	NORTHING	EASTING	DIRECTION	DISTANCE
BOP	0+00.00	27100.9399	25005.8955	N 89°17'01" E	1349.01
EOP	13+49.01	27117.8084	26354.8026		

CSAH 20

W:\AE\ANOKA\980200\DWG\AC902AT1.DWG
 DATE: 05-28-03 TIME: 4:30 pm USER: MWASS
 PREFERENCES:

DRAWN BY:	MJM			
DESIGNER:	MJM			
CHECKED BY:	TAS			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

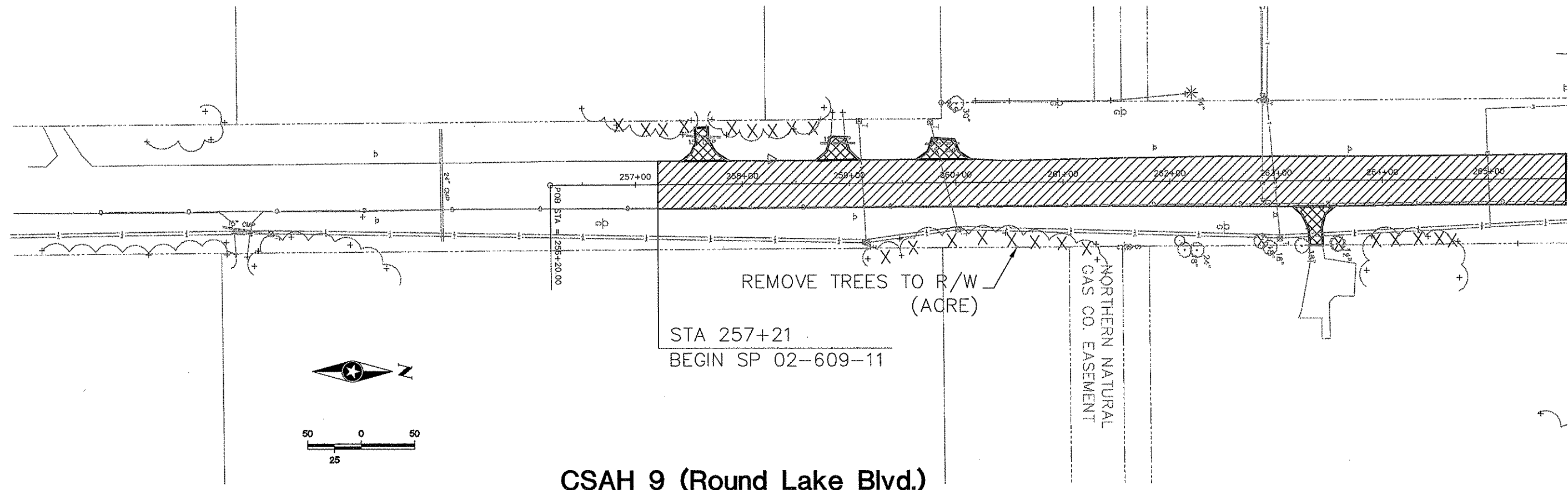
Thomas G. Tobler
 Thomas G. Tobler, P.E.
 Date: 4/23/01 Lic. No. 26861

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

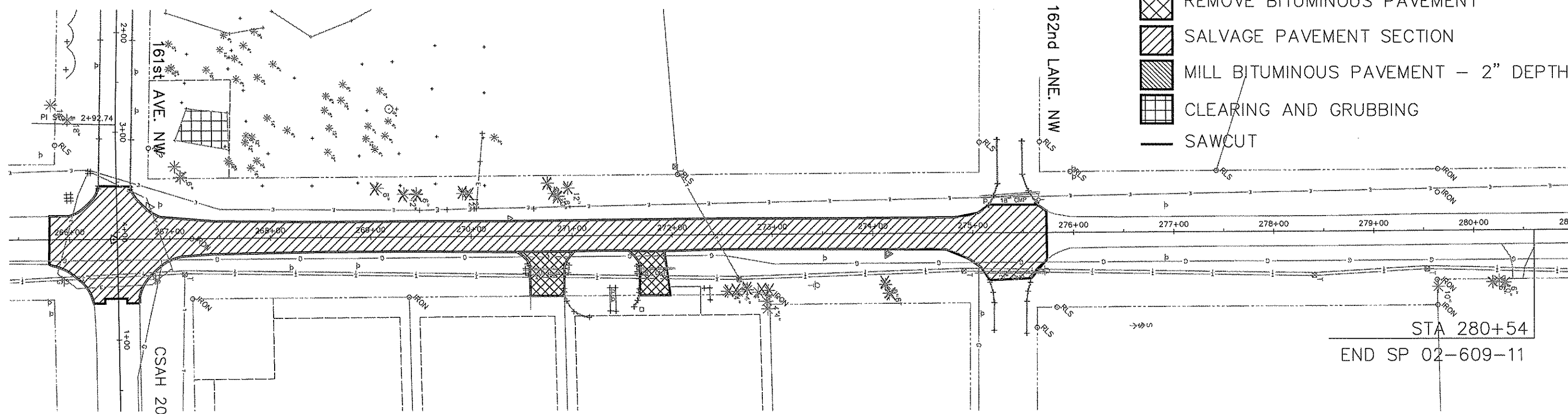
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

ALIGNMENT PLAN

FILE NO.	17
DATE	4/23/01
	47



CSAH 9 (Round Lake Blvd.)



CSAH 9 (Round Lake Blvd.)

W:\AE\ANOKKC\990200\DWG\AC902B1.DWG USER: MWASS
 DATE: 05-28-03 TIME: 3:02 pm
 XREFS: G:\CLIENTS\AE\ANOKKC\990200\DWG\REMOVAL W:\AE\ANOKKC\990200\EP\AC902B1 W:\AE\ANOKKC\990200\DWG\REMOVAL W:\AE\ANOKKC\990200\EP\AC902B1

DRAWN BY:	MJM			
DESIGNER:	MJM			
CHECKED BY:	TAS			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

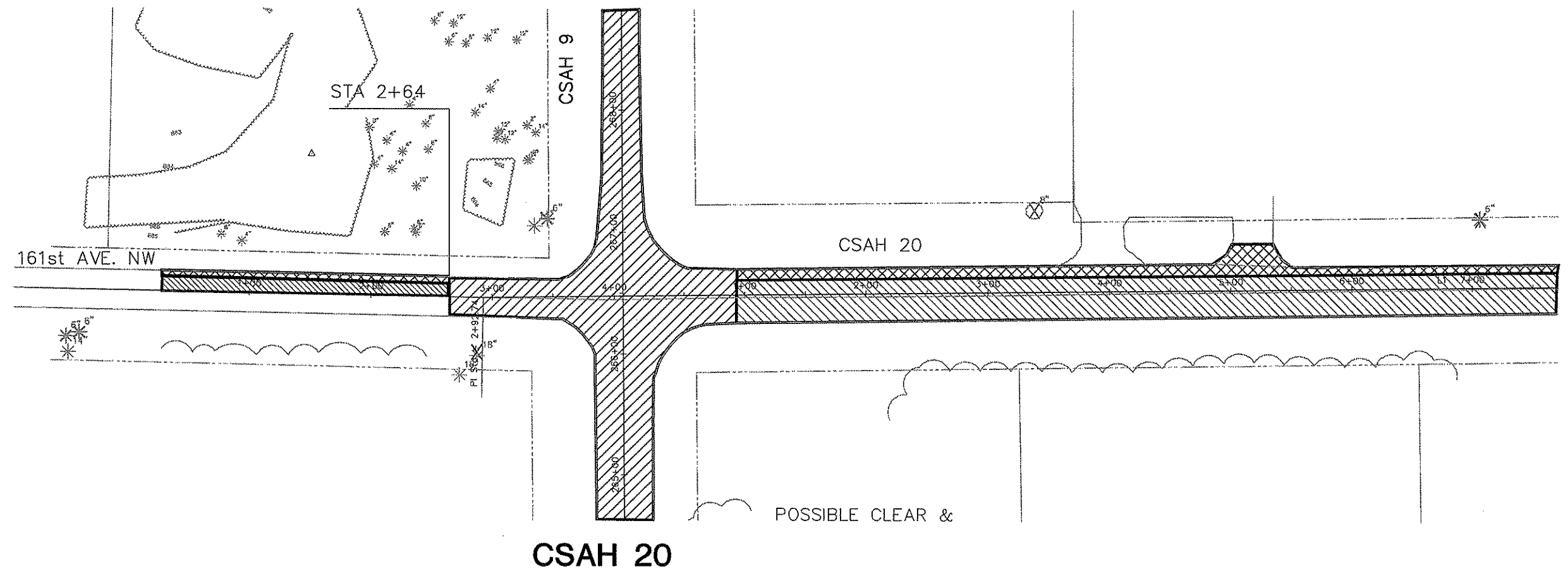
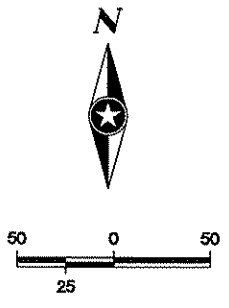
Thomas C. Tabler, P.E.
 Reg. No. 26861
 Date: 4/23/01

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

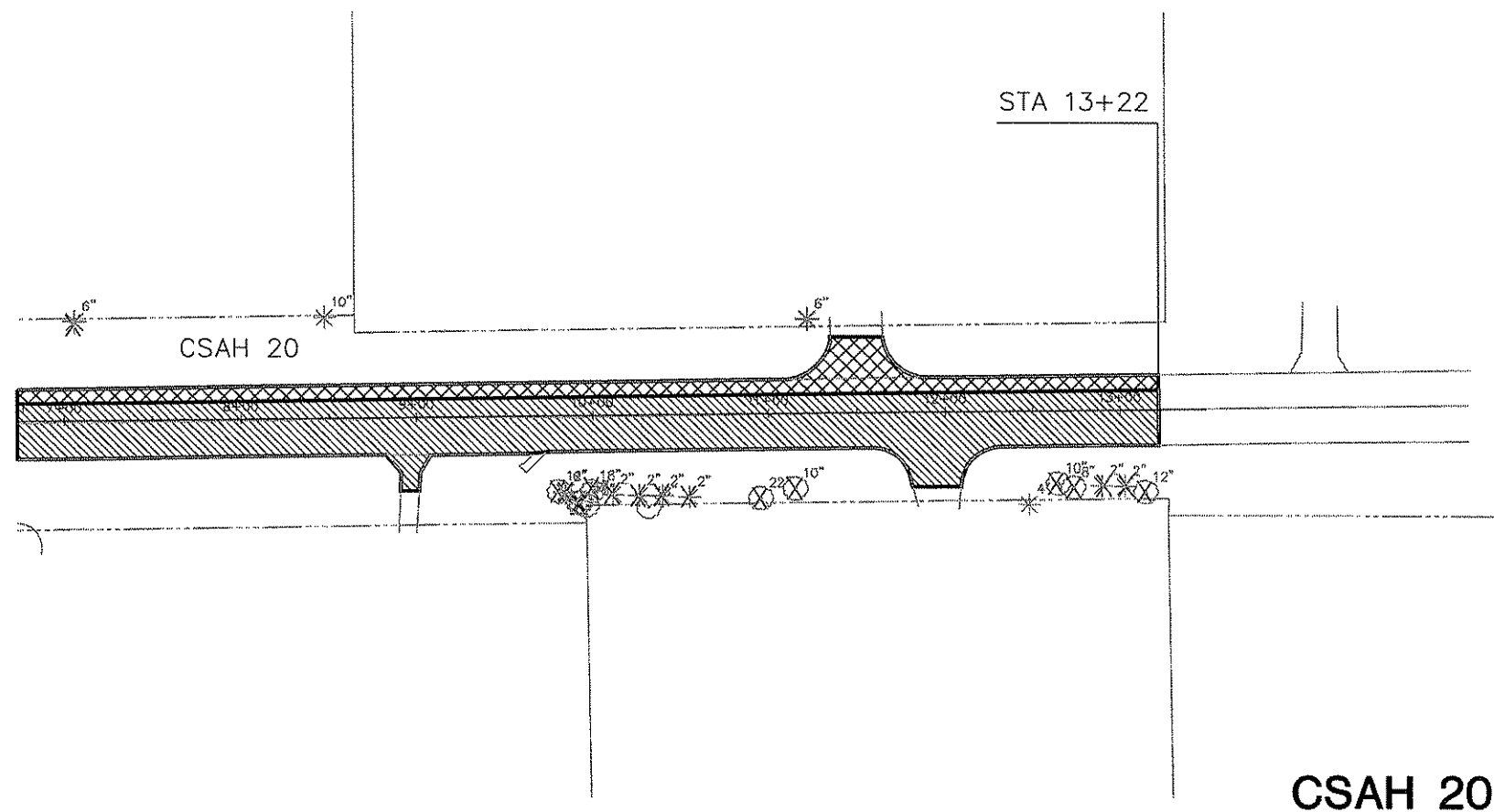
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

**EXISTING CONDITIONS
 REMOVALS**





FILE NO.	AANOKC0002.00	18 47
DATE	4/23/01	



CSAH 20



CSAH 20

-  SALVAGE PAVEMENT SECTION
-  REMOVE BITUMINOUS PAVEMENT
-  MILL BITUMINOUS PAVEMENT - 2" DEPTH
-  SAWCUT

W:\AE\ANOKA\990200\DWG\AC902RM2.DWG USER: HWASS
 DATE: 05-28-03 TIME: 3:14 pm
 XREFS: C:\CLIENTS\VA\ANOKA\990200\DWG\REMOVAL W:\AE\ANOKA\990200\EP\AC902B1 W:\AE\ANOKA\990200\AC902G W:\AE\ANOKA\990200\DWG\REMOVAL

DRAWN BY:	MJM			
DESIGNER:	MJM			
CHECKED BY:	TAS			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

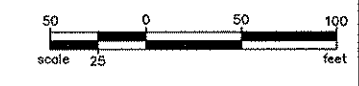
Thomas G. Tabler
 Thomas G. Tabler, P.E.
 Date: 4/23/01 Reg. No. 26861



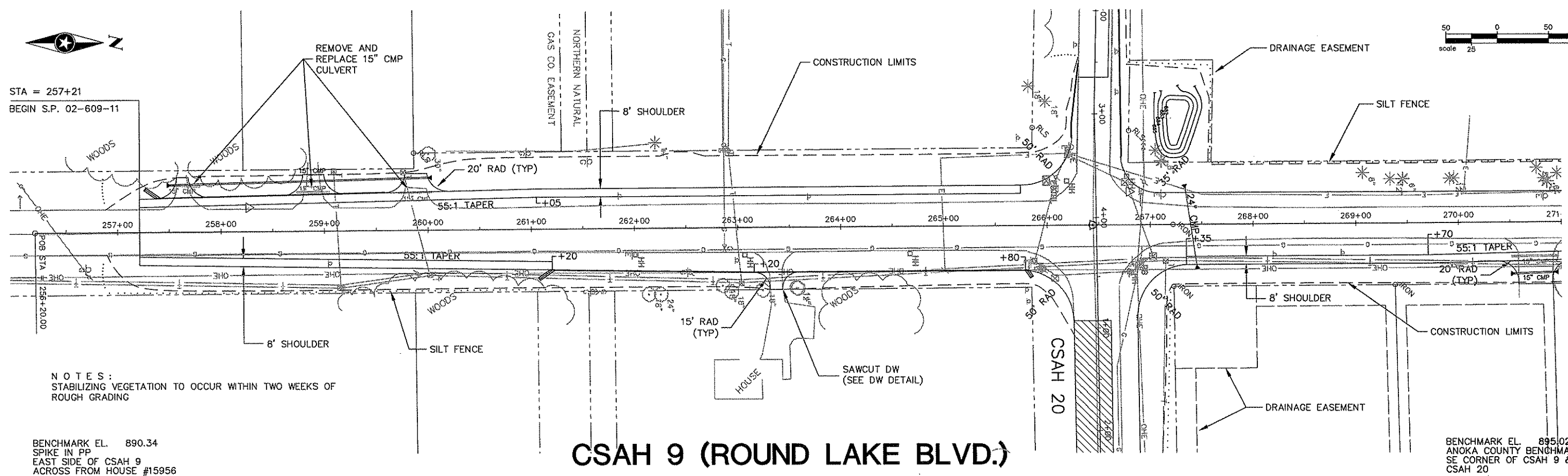
ANOKA COUNTY
CSAH 20 (161ST AVE. N.W.)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

EXISTING CONDITIONS REMOVALS

FILE NO.	19
DATE	4/23/01
	47



STA = 257+21
 BEGIN S.P. 02-609-11

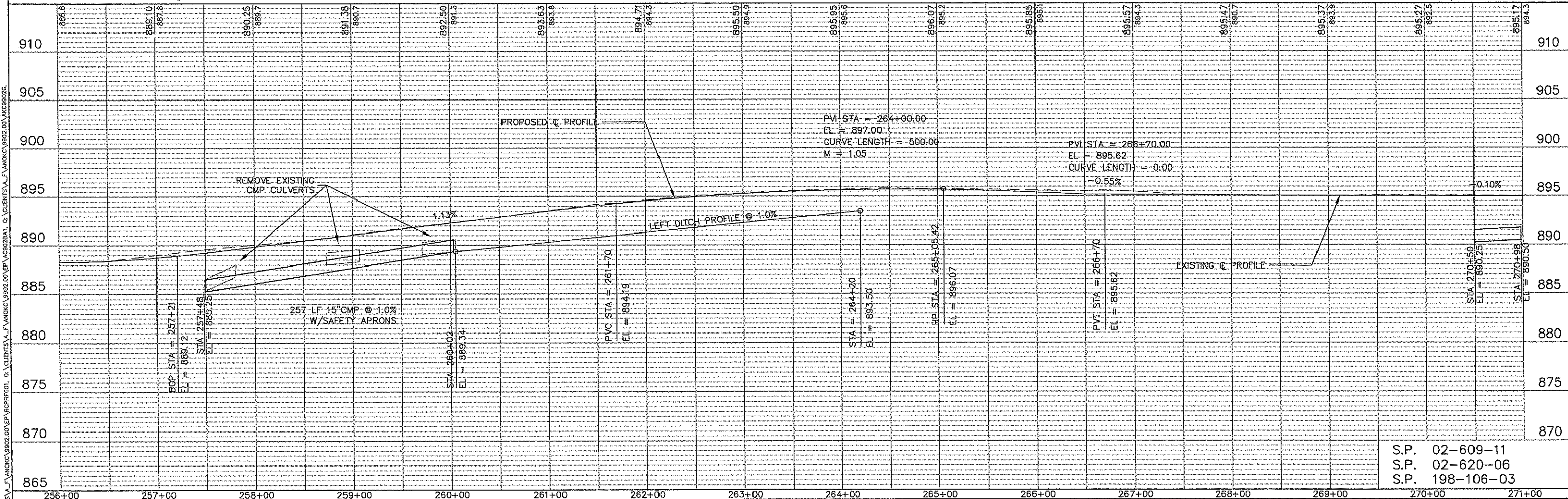


NOTES:
 STABILIZING VEGETATION TO OCCUR WITHIN TWO WEEKS OF
 ROUGH GRADING

BENCHMARK EL. 890.34
 SPIKE IN PP
 EAST SIDE OF CSAH 9
 ACROSS FROM HOUSE #15956

CSAH 9 (ROUND LAKE BLVD.)

BENCHMARK EL. 895.02
 ANOKA COUNTY BENCHMARK
 SE CORNER OF CSAH 9 &
 CSAH 20



W:\A\ANOKA\990200\EP\PCP\01.DWG
 DATE: 05-23-03 TIME: 10:46 am USER: MWISS
 XREFS: G:\CLIENTS\A\F\ANOKA\990200\EP\PCP\01.DWG

DESIGN TEAM	NO.	BY	DATE

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

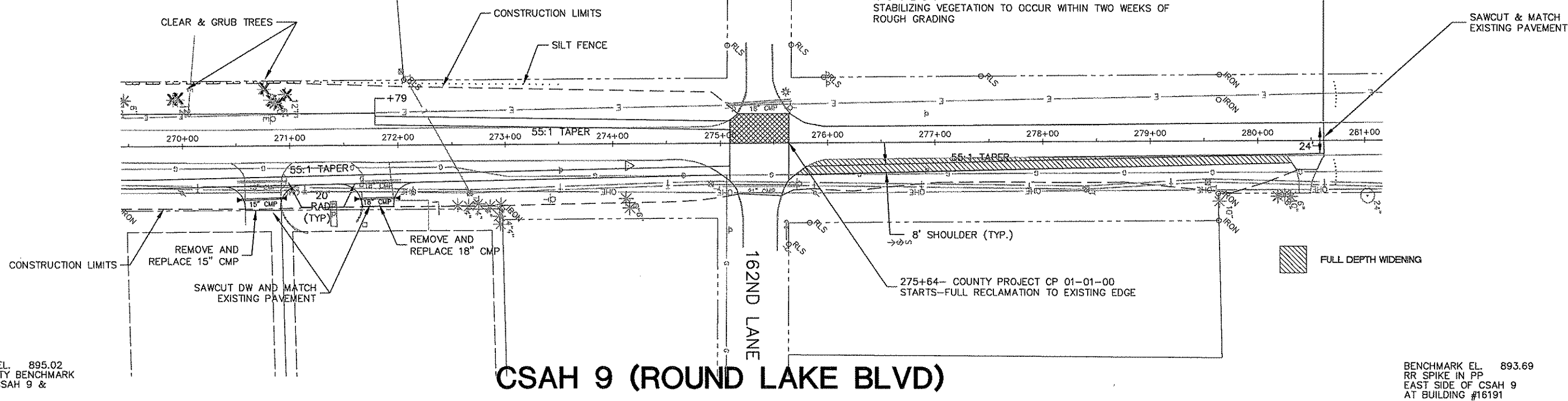
Thomas G. Tabler
 Thomas G. Tabler, P.E.
 Lic. No. 26861
 Date: 4/23/01

ANOKA COUNTY
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

CSAH 9 (ROUND LAKE BLVD)
 CONSTRUCTION PLAN & PROFILE
 STA 257+00 TO STA 271+00

FILE NO. **20**
 ANOKC9902.00
 DATE 4/23/01

47

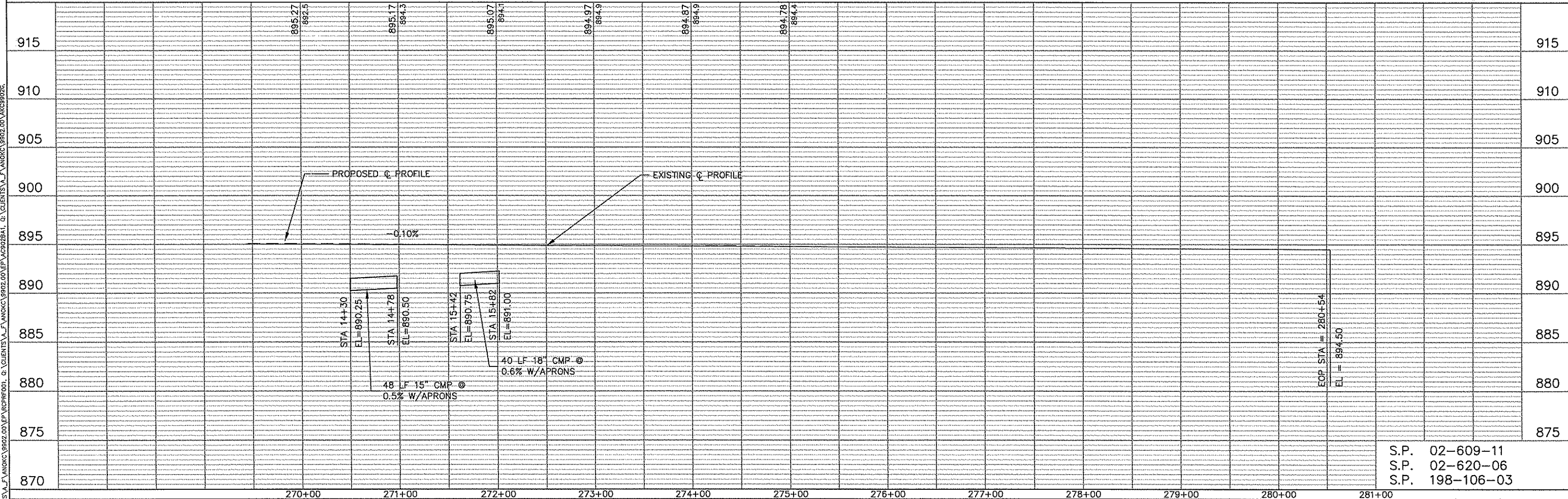


NOTES:
STABILIZING VEGETATION TO OCCUR WITHIN TWO WEEKS OF
ROUGH GRADING

BENCHMARK EL. 895.02
ANOKA COUNTY BENCHMARK
SE CORNER CSAH 9 &
CSAH 20

BENCHMARK EL. 893.69
RR SPIKE IN PP
EAST SIDE OF CSAH 9
AT BUILDING #16191

CSAH 9 (ROUND LAKE BLVD)



©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

Thomas G. Tobler, P.E.
Date: 4/23/01 Reg. No. 26861



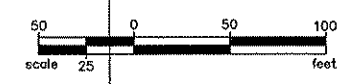
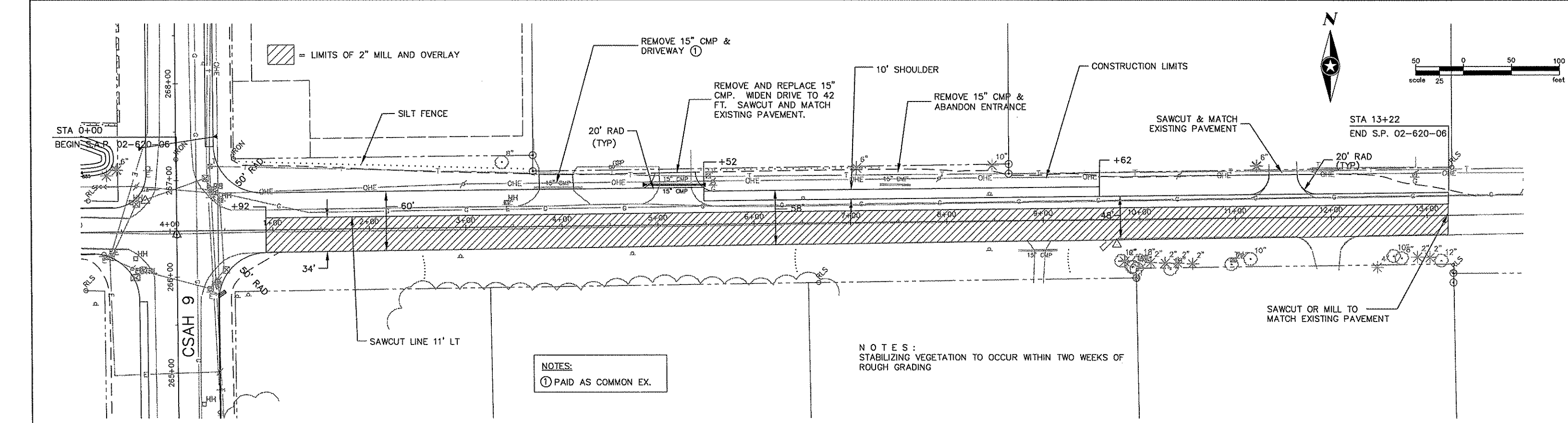
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

CONSTRUCTION PLAN AND PROFILE
STA 271+00 TO STA 280+54

FILE NO.	21
AAANOKC9902.00	
DATE	4/23/01
47	

W:\AE\ANOKC\990200\EP\RCF\02001.DWG USER: MWASS
 DATE: 05-23-03 TIME: 10:49 am
 XREFS: G:\CLIENTS\A_F\ANOKC\9902.00\EP\RCF\001, G:\CLIENTS\A_F\ANOKC\9902.00\EP\RCF\02001, G:\CLIENTS\A_F\ANOKC\9902.00\EP\RCF\02002, G:\CLIENTS\A_F\ANOKC\9902.00\EP\RCF\02003

DRAWN BY: SLP	
DESIGNER: GFA	
CHECKED BY: GFA	
DESIGN TEAM	NO. BY DATE
	REVISIONS



CSAH 20 (161ST ST.)

BENCHMARK EL. 895.02
ANOKA COUNTY BENCHMARK
SE CORNER CSAH 9 &
CSAH 20

BENCHMARK EL. 893.95
SPIKE IN PP
NORTH SIDE OF CSAH 20
ACROSS FROM HOUSE #3074

NOTES:
① PAID AS COMMON EX.

NOTES:
STABILIZING VEGETATION TO OCCUR WITHIN TWO WEEKS OF
ROUGH GRADING

915	895.54 895.54	895.15 895.08	894.77 894.75	894.39 894.44	894.14 894.22	894.74 894.60	895.49 895.27	896.24 896.06	896.98 896.75	897.73 897.59	898.48 898.36	899.16 898.83	898.06 898.02	898.58 898.67	915
910															910
905															905
900															900
895															895
890															890
885															885
880															880
875															875
870															870

W:\ME\ANOKA\990200\EP\RCR0102.DWG USER: HWASS
 DATE: 05-28-03 TIME: 4:24 pm
 XREFS: C:\CLIENTS\A_F\ANOKA\990200\EP\RCR0102.DWG C:\CLIENTS\A_F\ANOKA\990200\EP\RCR0102.DWG C:\CLIENTS\A_F\ANOKA\990200\EP\RCR0102.DWG

DRAWN BY: SLP
 DESIGNER: SLP
 CHECKED BY: GFA

DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF
 THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED
 DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT
 OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR
 ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR
 DAMAGES RESULTING THEREFROM.

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.

Thomas G. Tabler, P.E.
 Reg. No. 26861
 Date: 4/23/01

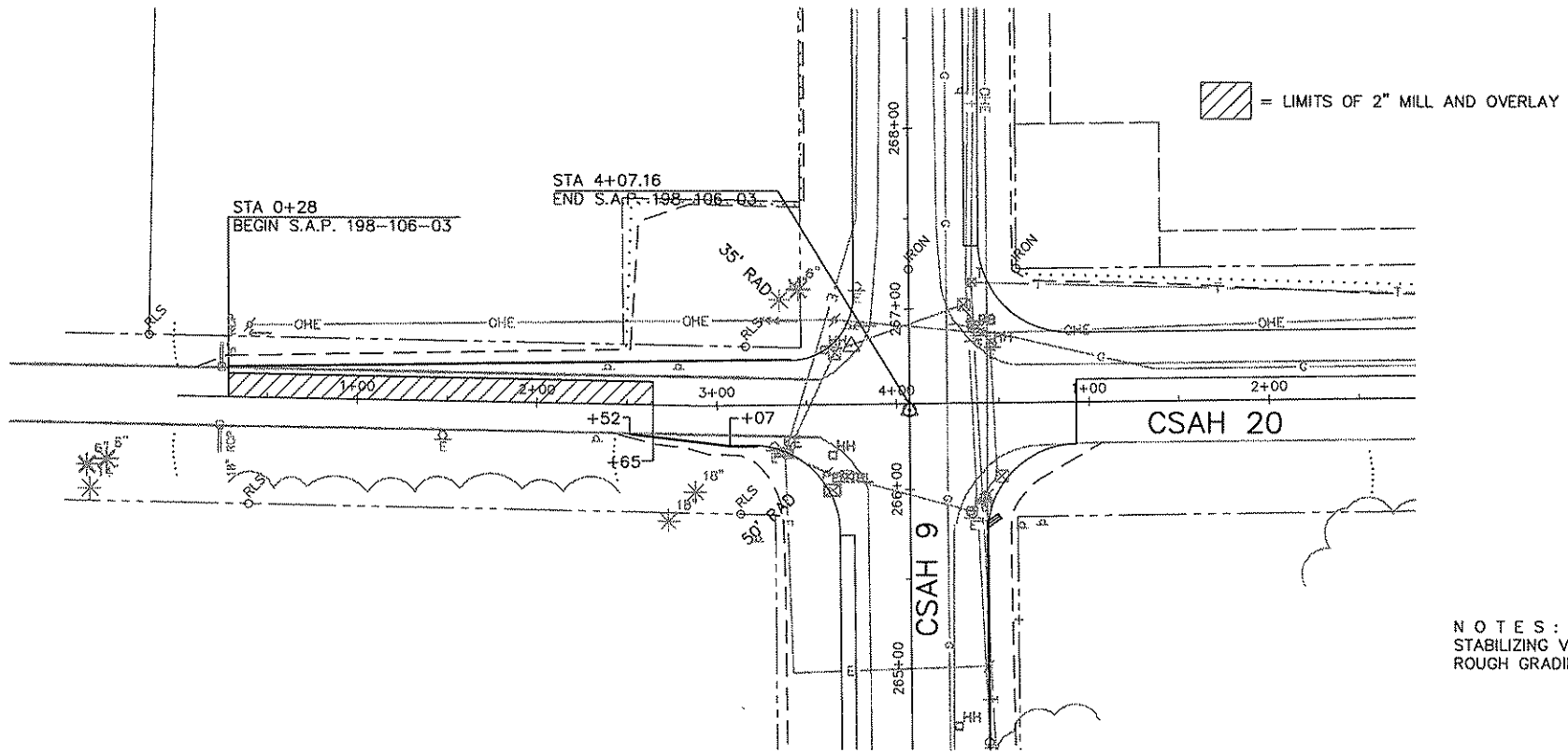
PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY
CSAH 20 (161ST AVE. N.W.)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

CONSTRUCTION PLAN & PROFILE
 STA 0+00 TO STA 12+48

FILE NO. AANOKC9902.00	22
DATE 4/23/01	47

S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03



NOTES:
STABILIZING VEGETATION TO OCCUR WITHIN TWO WEEKS OF
ROUGH GRADING

BENCHMARK EL. 895.02
ANOKA COUNTY BENCHMARK
SE CORNER CSAH 9 &
CSAH 20

161ST AVE NW

BENCHMARK EL. 893.95
SPIKE IN PP
NORTH SIDE OF CSAH 20
ACROSS FROM HOUSE #3074

Station		Elevation		Grade (%)		Profile		
Prop.	Exc.	Prop.	Exc.	Prop.	Exc.	Prop.	Exc.	
910								910
905								905
900								900
895								895
890								890
885								885
880								880
875								875
870								870
865								865

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
Thomas G Tobler, P.E.
Date: 4/23/01 Reg. No. 26861



ANOKA COUNTY
161ST AVE NW
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

CONSTRUCTION PLAN & PROFILE
STA 0+00 TO STA 4+07

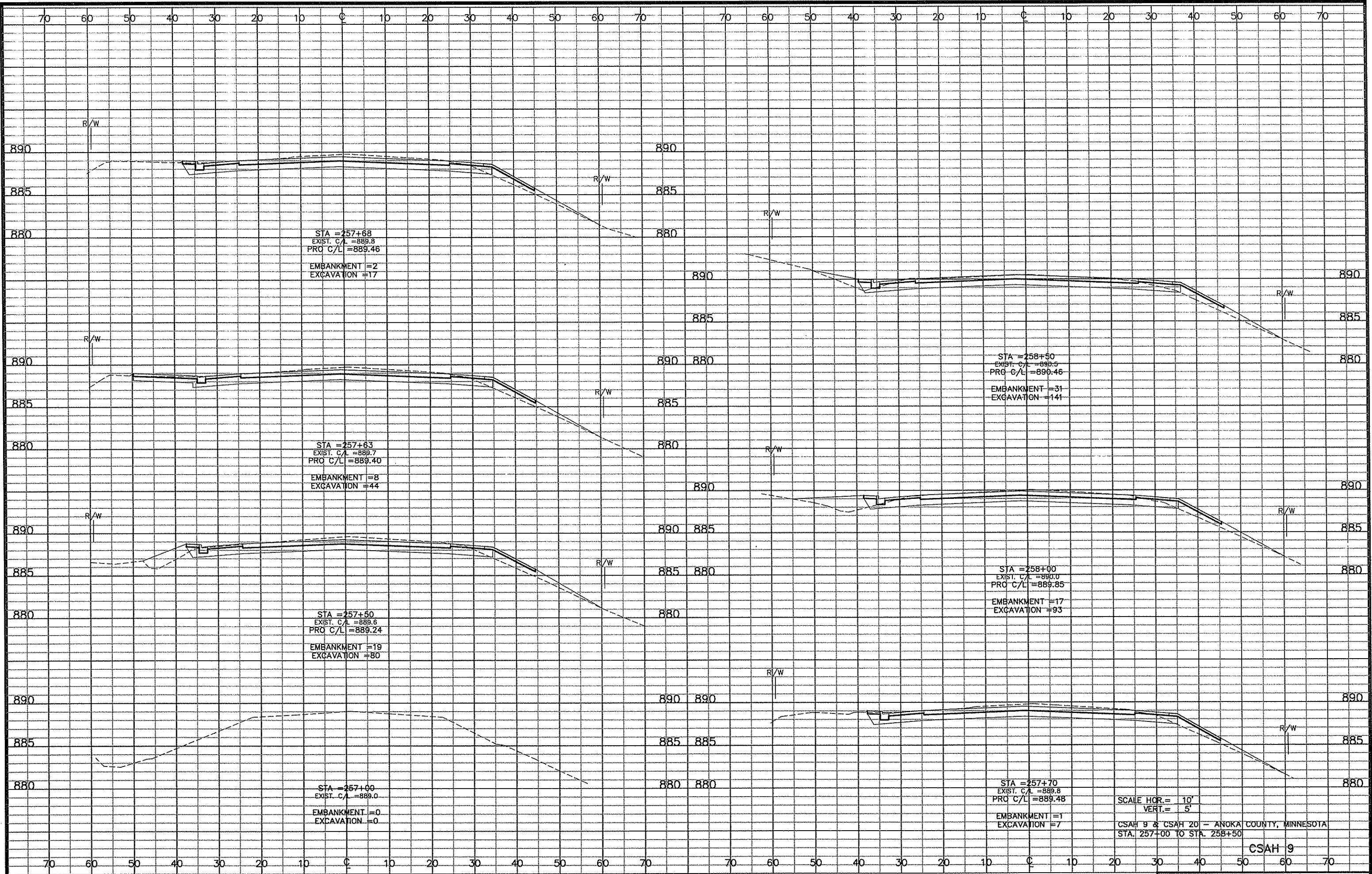
FILE NO. 22A
DATE 4/23/01
47

W:\AE\ANOKA\990200\EP\RC\106103.DWG USER: MWASS
DATE: 05-23-03 TIME: 10:34 am
XREFS: G:\VALENTIS_A_A\ANOKA\990200\EP\RC\106103.DWG G:\VALENTIS_A_A\ANOKA\990200\EP\RC\106103.DWG G:\VALENTIS_A_A\ANOKA\990200\EP\RC\106103.DWG

DRAWN BY: X
DESIGNER: X
CHECKED BY: X

DESIGN TEAM	NO.	BY	DATE

REVISIONS



STA = 257+68
 EXIST. C/L = 889.8
 PRO C/L = 889.46
 EMBANKMENT = 2
 EXCAVATION = 17

STA = 257+63
 EXIST. C/L = 889.7
 PRO C/L = 889.40
 EMBANKMENT = 8
 EXCAVATION = 44

STA = 257+50
 EXIST. C/L = 889.6
 PRO C/L = 889.24
 EMBANKMENT = 19
 EXCAVATION = 80

STA = 257+00
 EXIST. C/L = 889.0
 EMBANKMENT = 0
 EXCAVATION = 0

STA = 258+50
 EXIST. C/L = 890.5
 PRO C/L = 890.46
 EMBANKMENT = 31
 EXCAVATION = 141

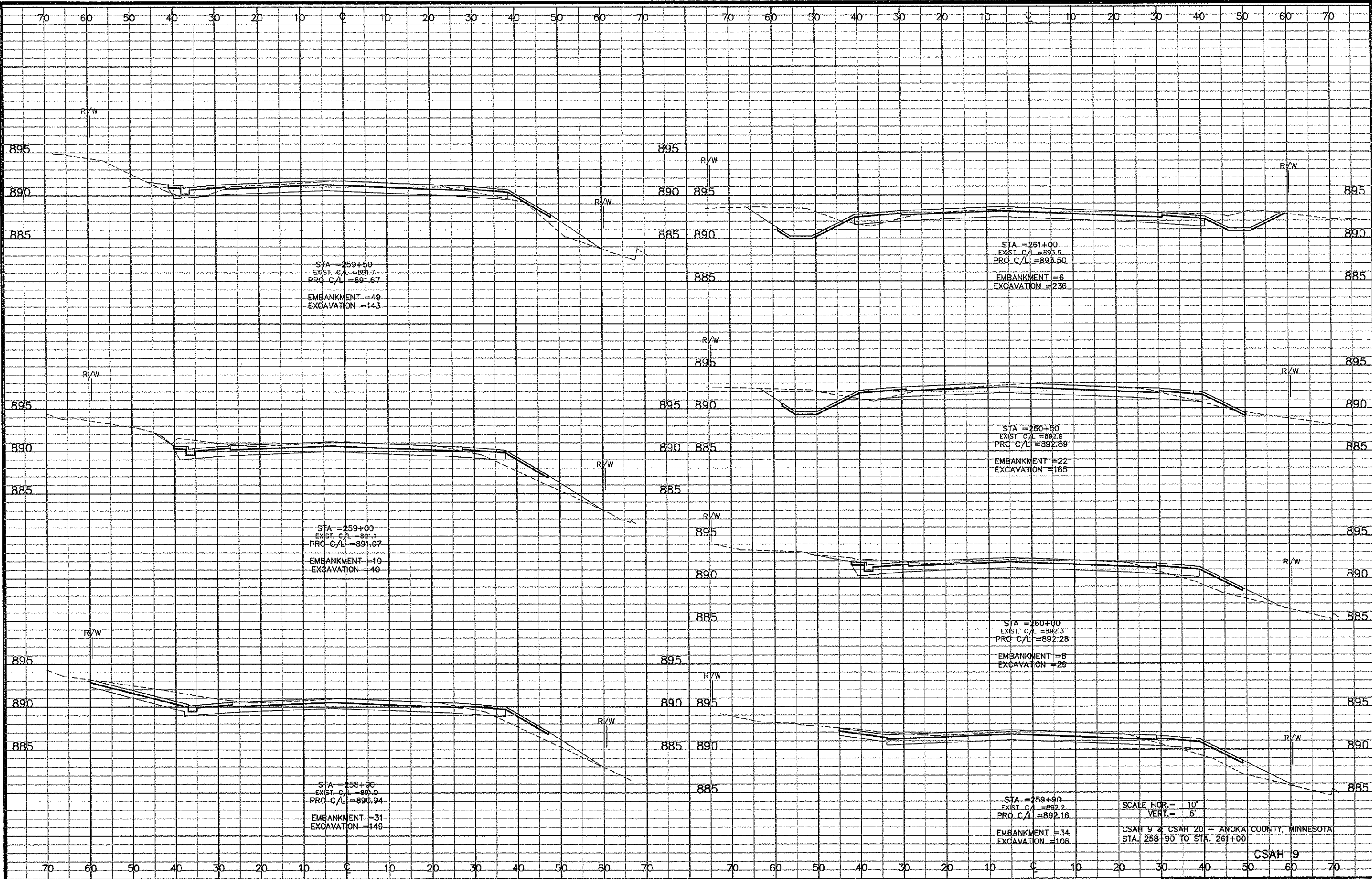
STA = 258+00
 EXIST. C/L = 890.0
 PRO C/L = 889.85
 EMBANKMENT = 17
 EXCAVATION = 93

STA = 257+70
 EXIST. C/L = 889.8
 PRO C/L = 889.48
 EMBANKMENT = 1
 EXCAVATION = 7

SCALE HOR. = 10'
 VERT. = 5'
 CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
 STA. 257+00 TO STA. 258+50

CSAH 9

G:\CLIENTS\A\ANOKA\980200\EP\RC001001.DWG
 DATE: 02-16-02 TIME: 2:45 pm
 USER: CPU157SP
 XREFS:



STA = 259+50
 EXIST. C/L = 891.7
 PRO C/L = 891.67
 EMBANKMENT = 49
 EXCAVATION = 143

STA = 261+00
 EXIST. C/L = 893.6
 PRO C/L = 893.50
 EMBANKMENT = 6
 EXCAVATION = 236

STA = 259+00
 EXIST. C/L = 891.1
 PRO C/L = 891.07
 EMBANKMENT = 10
 EXCAVATION = 40

STA = 260+50
 EXIST. C/L = 892.9
 PRO C/L = 892.89
 EMBANKMENT = 22
 EXCAVATION = 165

STA = 258+90
 EXIST. C/L = 891.0
 PRO C/L = 890.94
 EMBANKMENT = 31
 EXCAVATION = 149

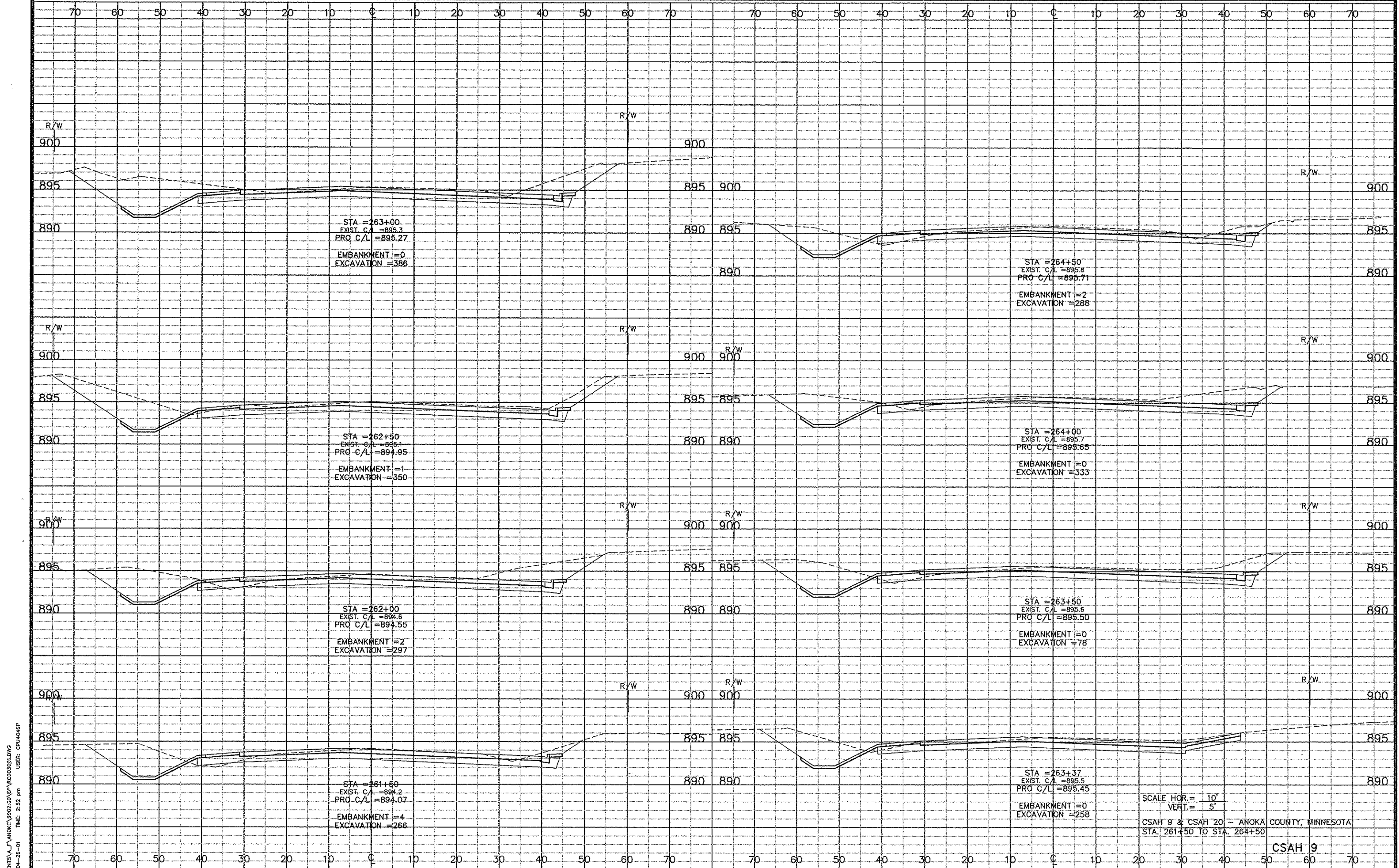
STA = 260+00
 EXIST. C/L = 892.3
 PRO C/L = 892.28
 EMBANKMENT = 8
 EXCAVATION = 29

STA = 259+90
 EXIST. C/L = 892.2
 PRO C/L = 892.16
 EMBANKMENT = 34
 EXCAVATION = 106

SCALE HOR. = 10'
 VERT. = 5'
 CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
 STA. 258+90 TO STA. 261+00

CSAH 9

G:\CLIENTS\VA\ANOKA\9902.dwg
 DATE: 02-18-02 TIME: 2:51 pm USER: CPU157SP
 XREFS:

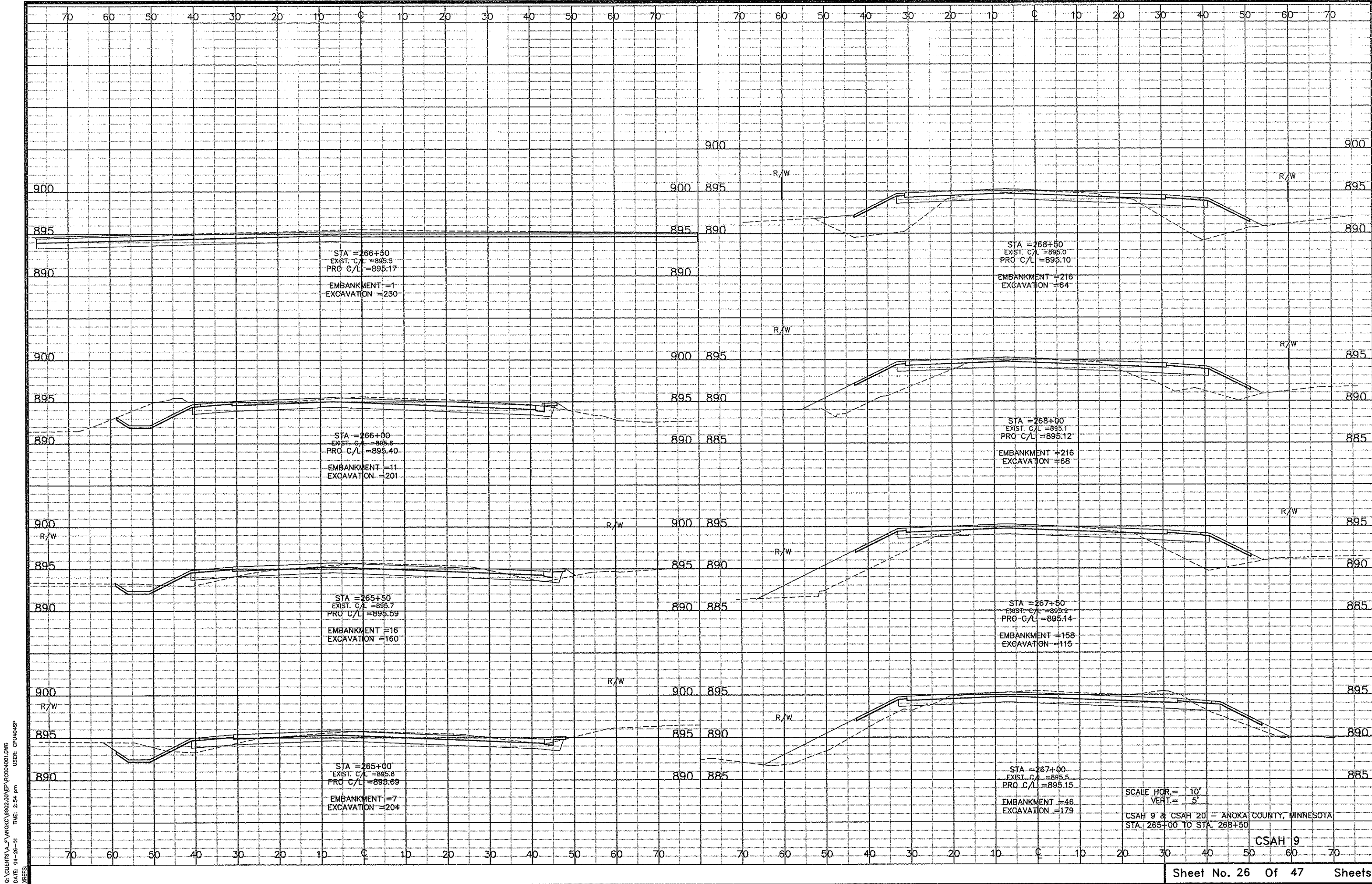


SCALE HOR. = 10'
 VERT. = 5'

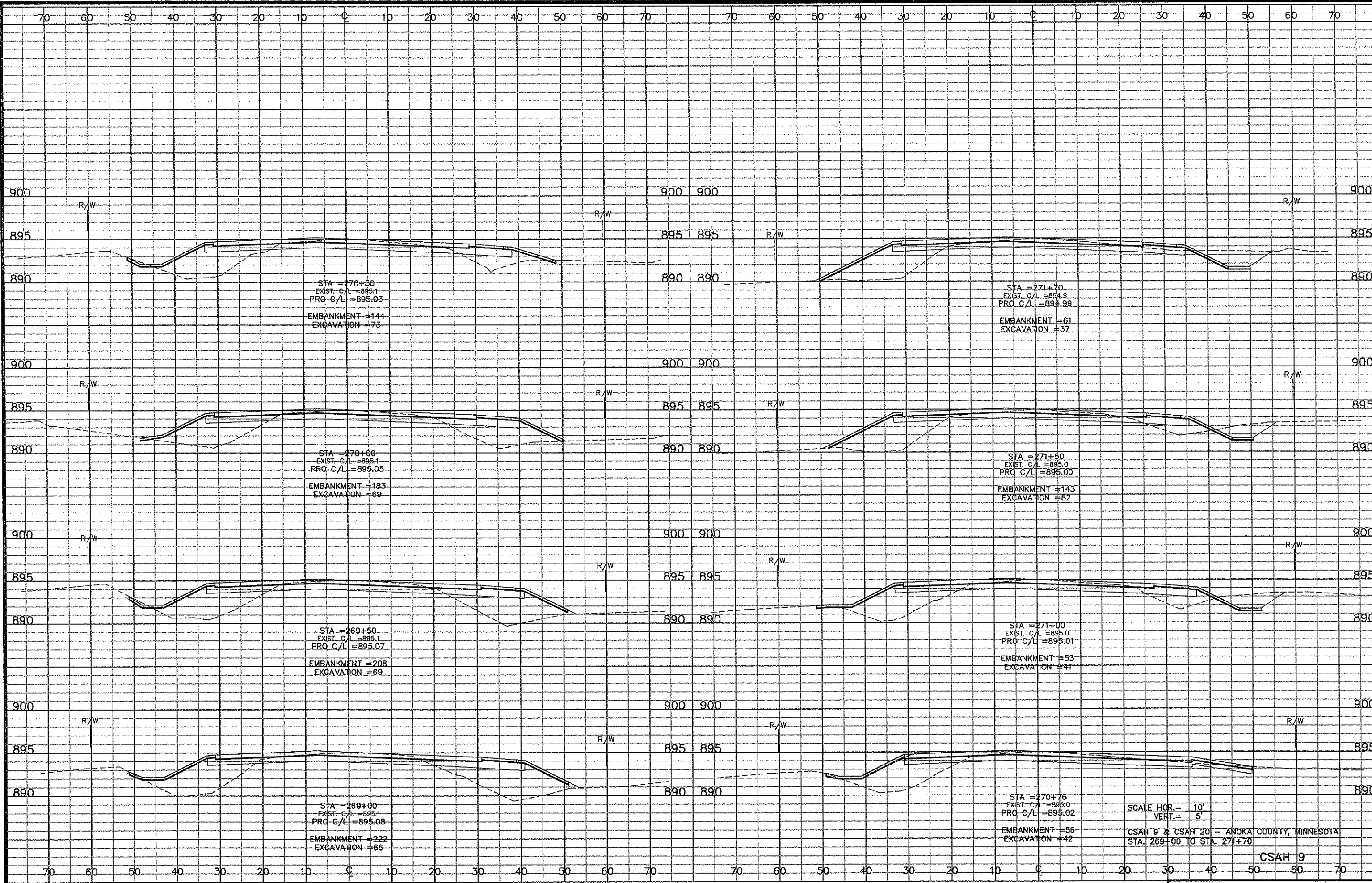
CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
 STA. 261+50 TO STA. 264+50

CSAH 9

Q:\CLIENTS\A\1\AKOKA\9802-20\SP\PC00301.DWG
 DATE: 04-28-01 TIME: 2:52 pm USER: CP1404SP
 XREFS:



G:\CLIENTS\A\ANOKA\9802\00\STA\RC004001.DWG
 DATE: 01-26-01 TIME: 2:54 pm USER: CPU404SP
 XREFS:

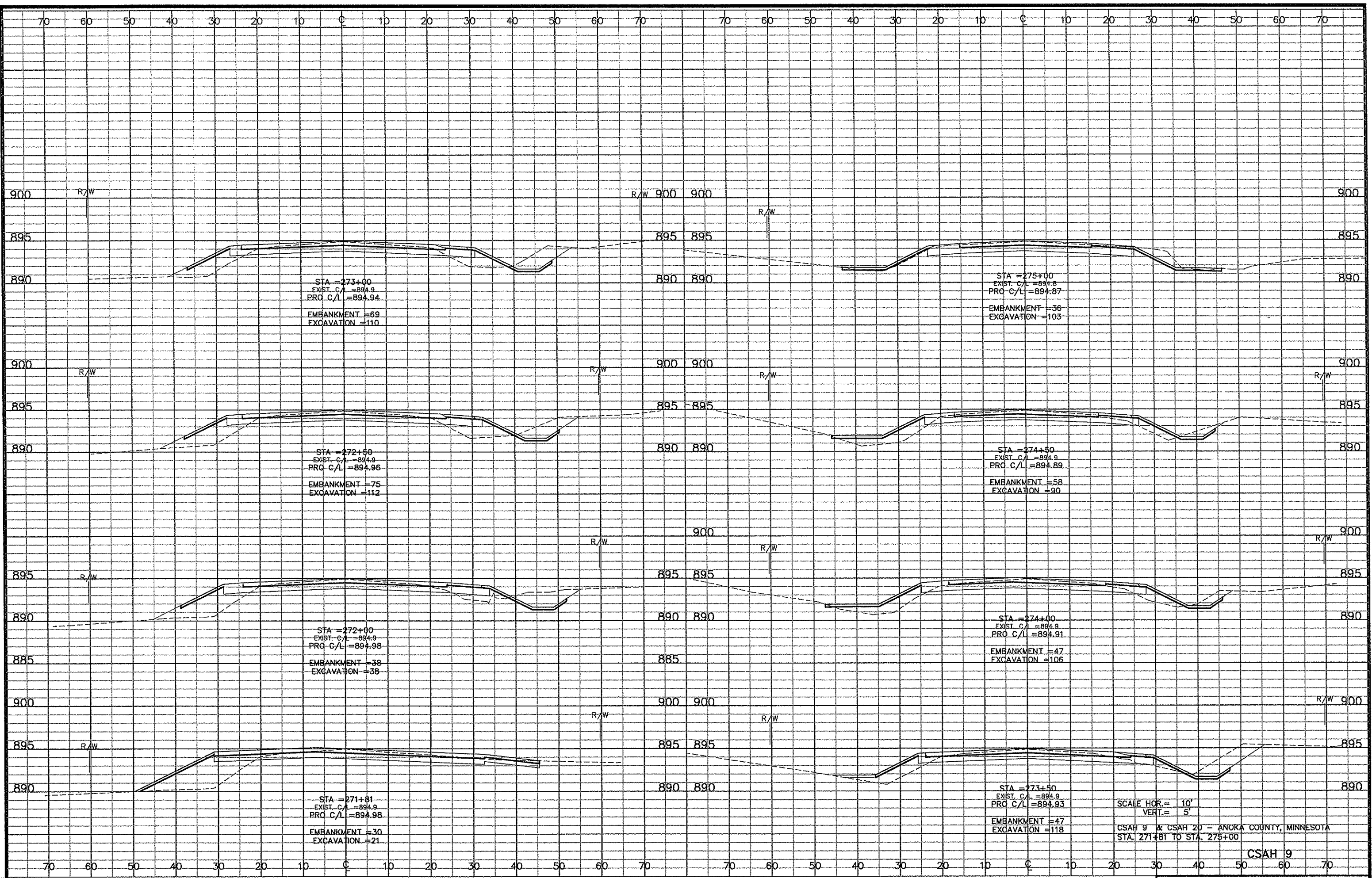


SCALE HOR. = 10'
 VERT. = 5'
 CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
 STA. 269+00 TO STA. 271+70

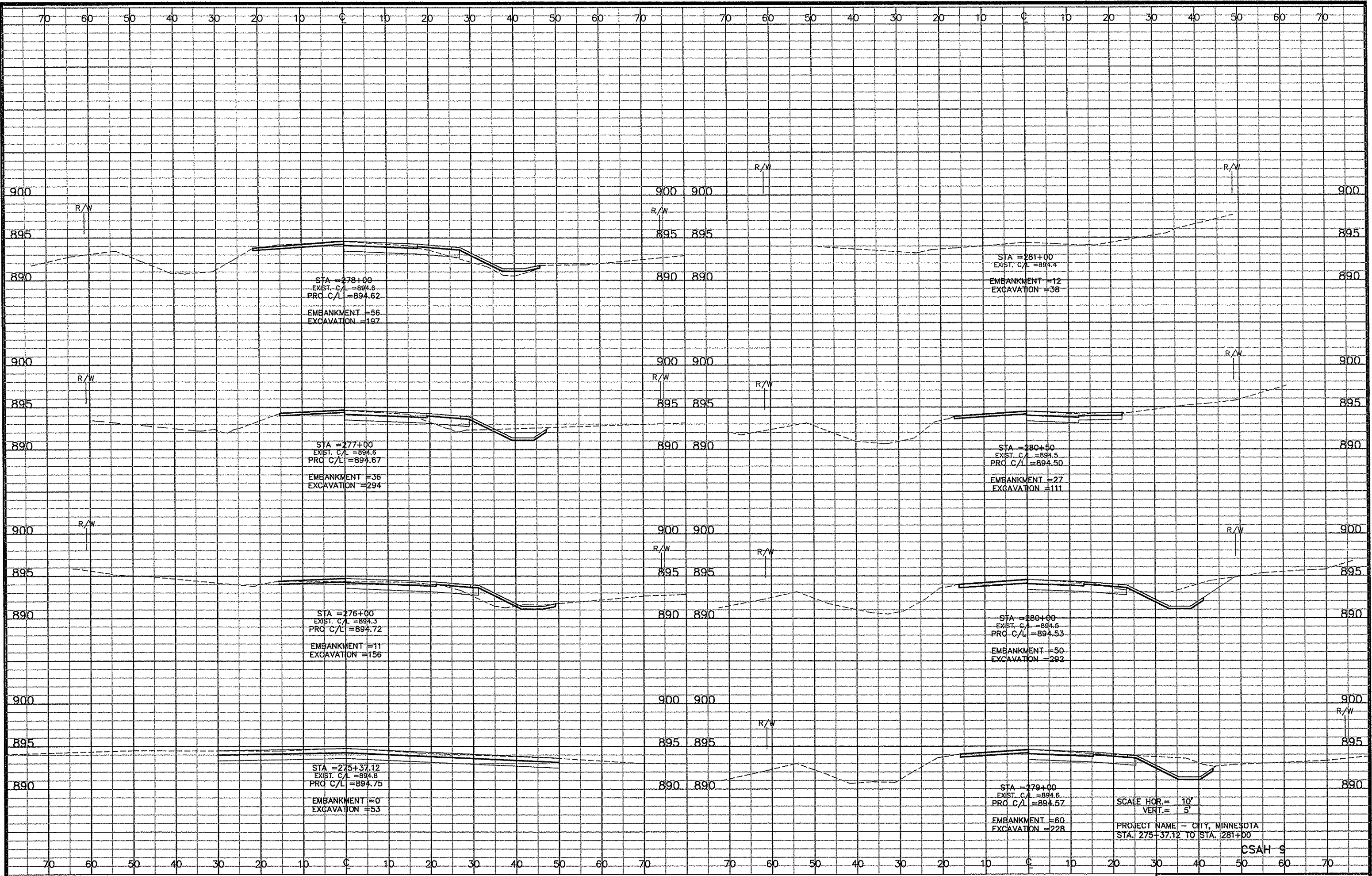
CSAH 9

Q:\CLIENTS\A\ANOKA\9902\00\REF\0005001.DWG
 DATE: 02-18-02 TIME: 3:11 pm USER: CPU157SP
 PREE:

Q:\CLIENTS\A\ANOKA\9802.00\EP\VC060501.DWG
DATE: 02-18-02 TIME: 4:04 pm
USER: CPU517SP



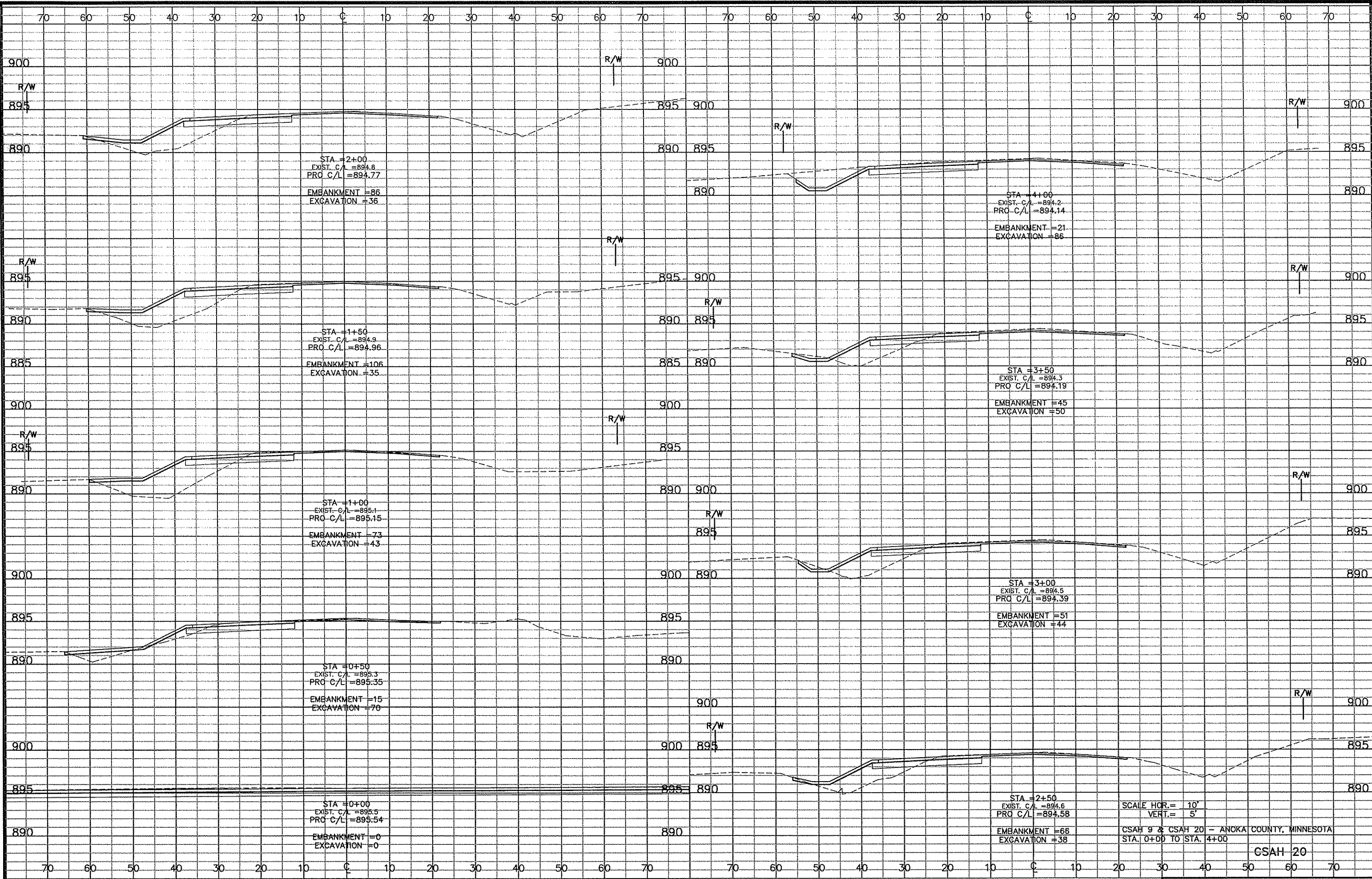
SCALE HOR. = 10'
VERT. = 5'
CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
STA. 271+81 TO STA. 275+00



SCALE HOR. = 10'
 VERT. = 5'
 PROJECT NAME - CITY, MINNESOTA
 STA. 275+37.12 TO STA. 281+00

CSAH 9

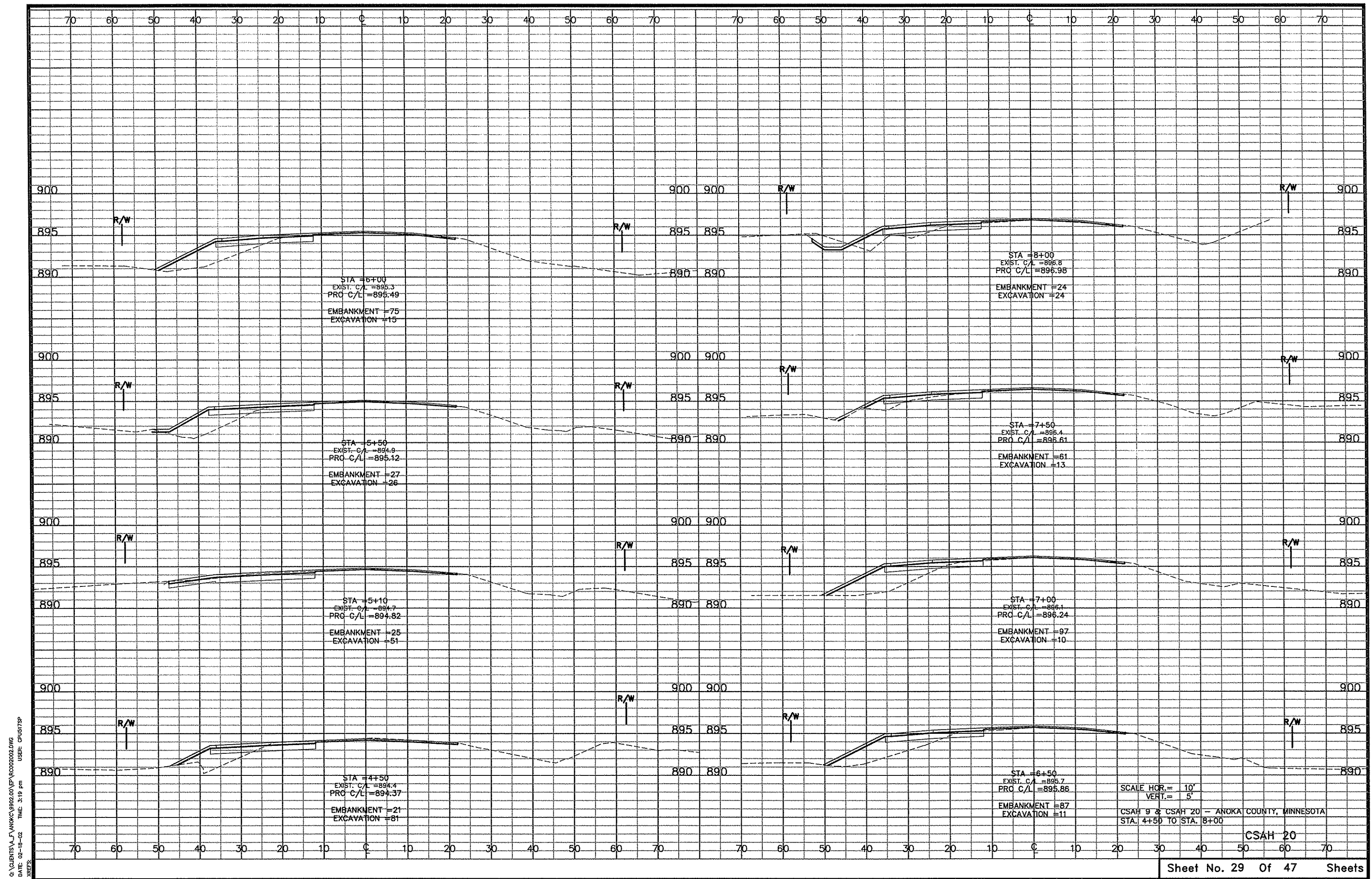
Q:\CLIENTS\JF\ANOKA\9802.00\EP\ARC007001.DWG
 DATE: 02-18-02 TIME: 4:05 PM
 USER: CPU157SP



G:\ALBERTS\AJ\ANOKA\9802.DWG
 DATE: 04-26-01 TIME: 3:40 pm USER: CPU404SP

SCALE HOR. = 10'
 VERT. = 5'
 CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
 STA. 0+00 TO STA. 4+00

CSAH 20



STA = 6+00
 EXIST. C/L = 895.3
 PRO C/L = 895.49
 EMBANKMENT = 75
 EXCAVATION = 15

STA = 8+00
 EXIST. C/L = 896.8
 PRO C/L = 896.98
 EMBANKMENT = 24
 EXCAVATION = 24

STA = 5+50
 EXIST. C/L = 894.8
 PRO C/L = 895.12
 EMBANKMENT = 27
 EXCAVATION = 26

STA = 7+50
 EXIST. C/L = 896.4
 PRO C/L = 896.61
 EMBANKMENT = 61
 EXCAVATION = 13

STA = 5+10
 EXIST. C/L = 894.7
 PRO C/L = 894.82
 EMBANKMENT = 25
 EXCAVATION = 51

STA = 7+00
 EXIST. C/L = 896.1
 PRO C/L = 896.24
 EMBANKMENT = 97
 EXCAVATION = 10

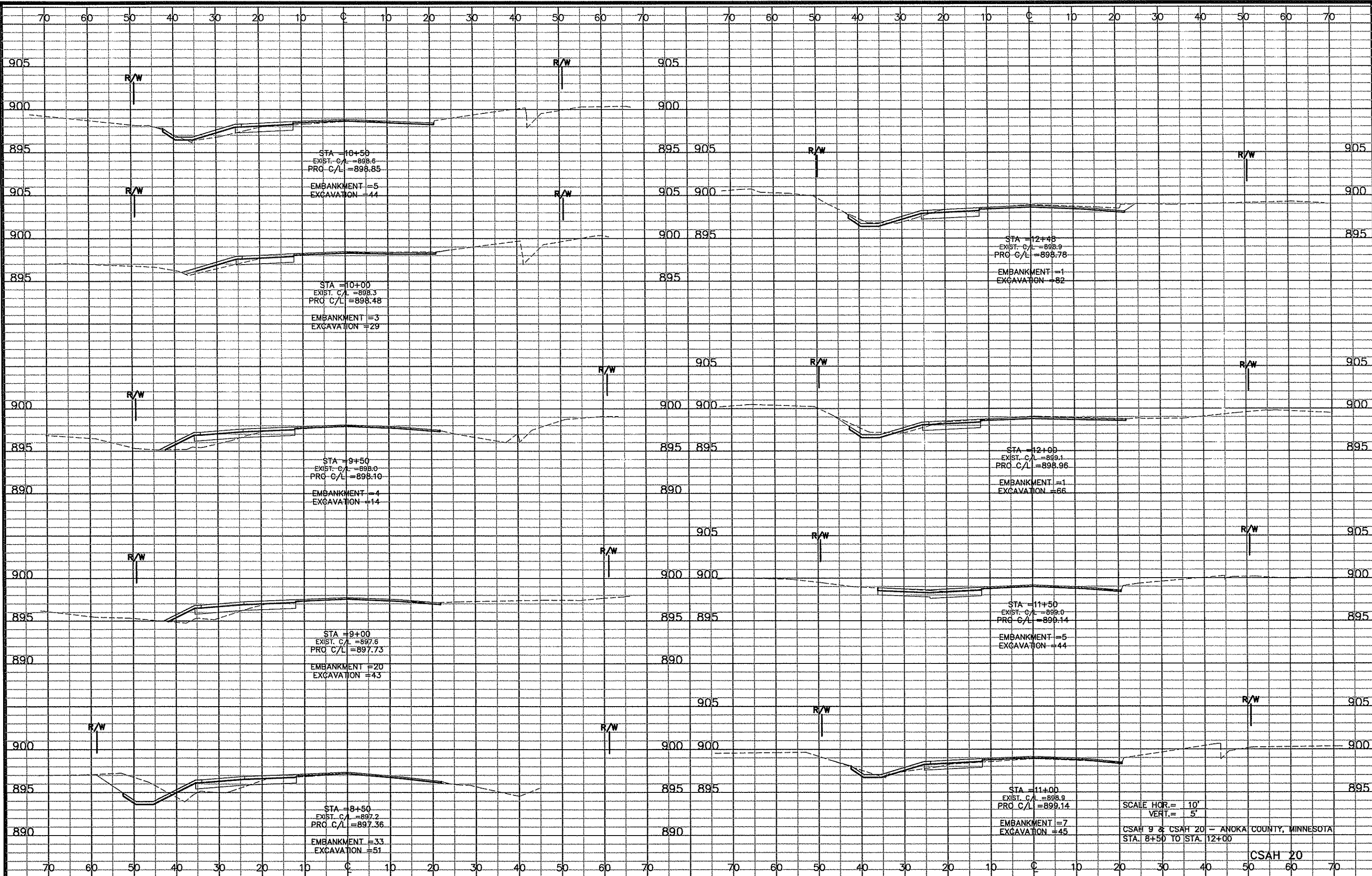
STA = 4+50
 EXIST. C/L = 894.4
 PRO C/L = 894.37
 EMBANKMENT = 21
 EXCAVATION = 81

STA = 6+50
 EXIST. C/L = 895.7
 PRO C/L = 895.86
 EMBANKMENT = 87
 EXCAVATION = 11

SCALE HOR. = 10'
 VERT. = 5'
 CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
 STA. 4+50 TO STA. 8+00

CSAH 20

Q:\CLIENTS\A_F\ANOKA\9902.00\EP\RC002002.DWG
 DATE: 02-18-02 TIME: 3:19 pm USER: CP0517SP
 XREFS:

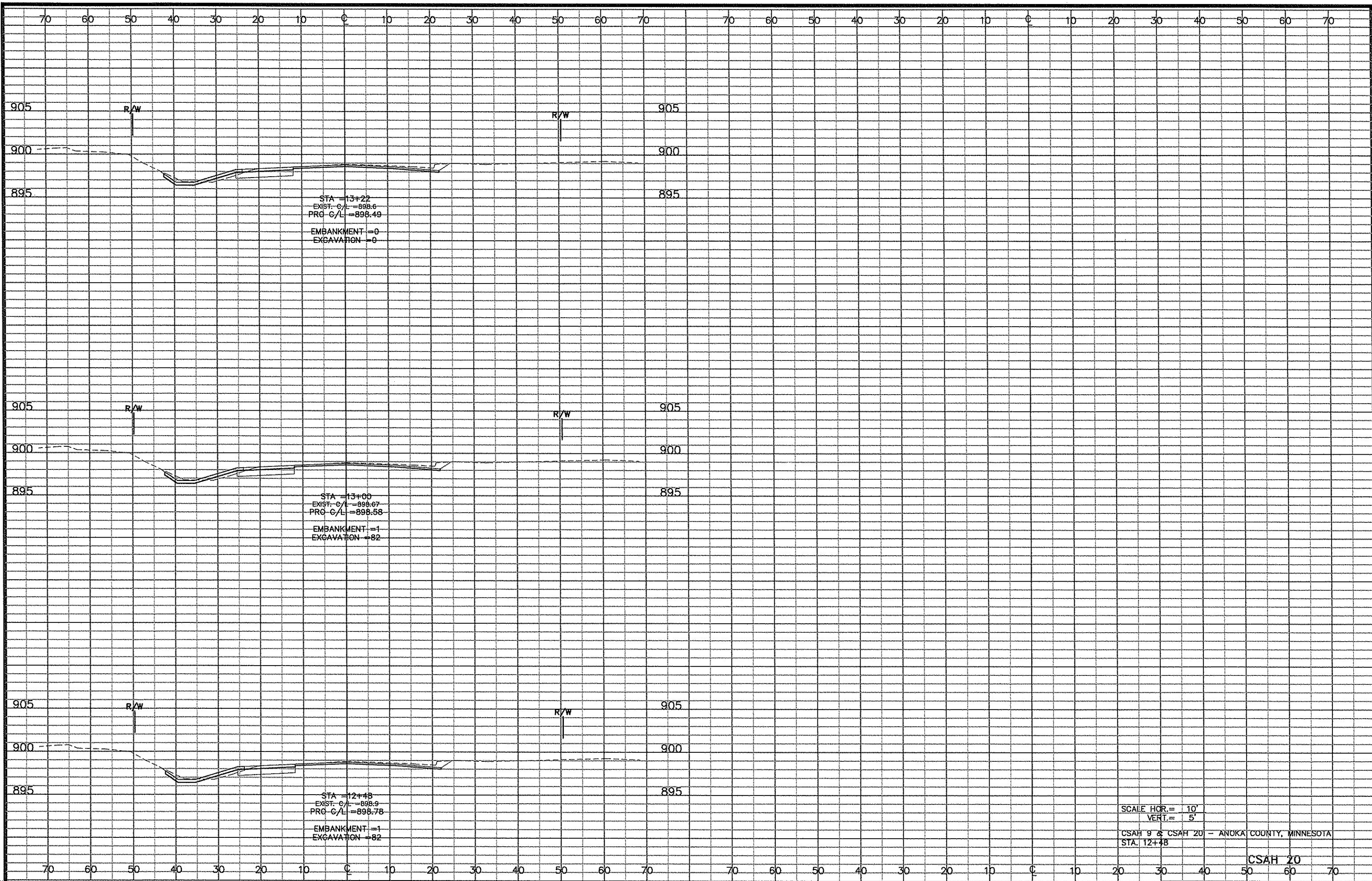


SCALE HOR. = 10'
 VERT. = 5'
 CSAH 9 & CSAH 20 - ANDA COUNTY, MINNESOTA
 STA. 8+50 TO STA. 12+00

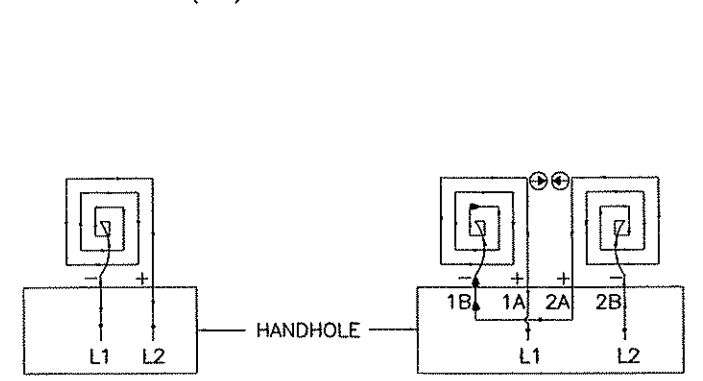
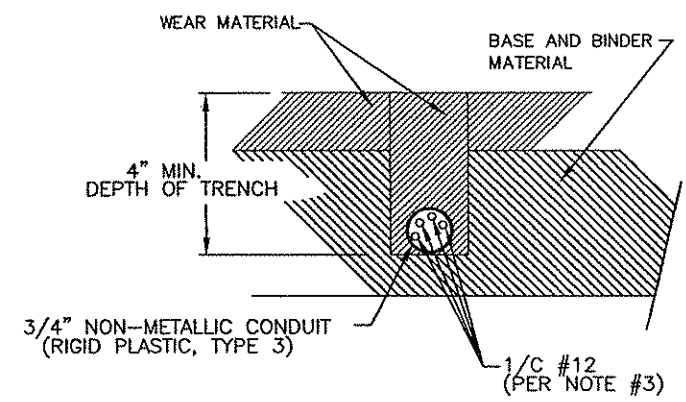
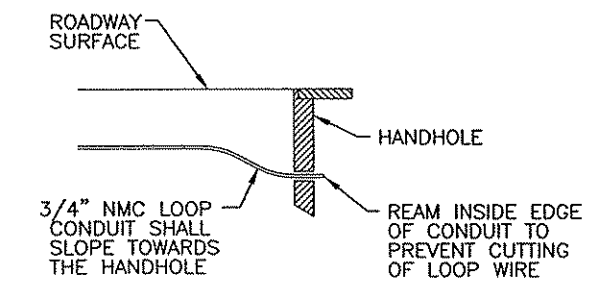
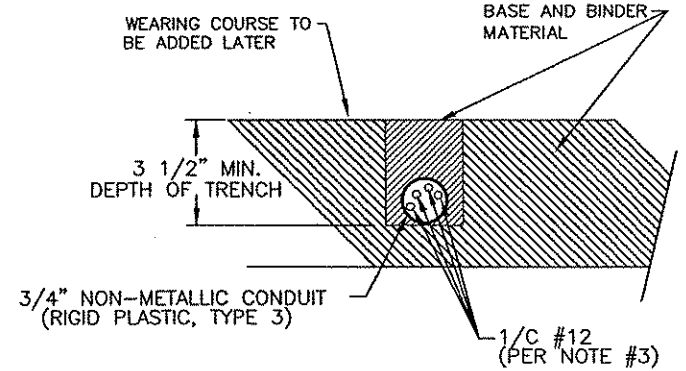
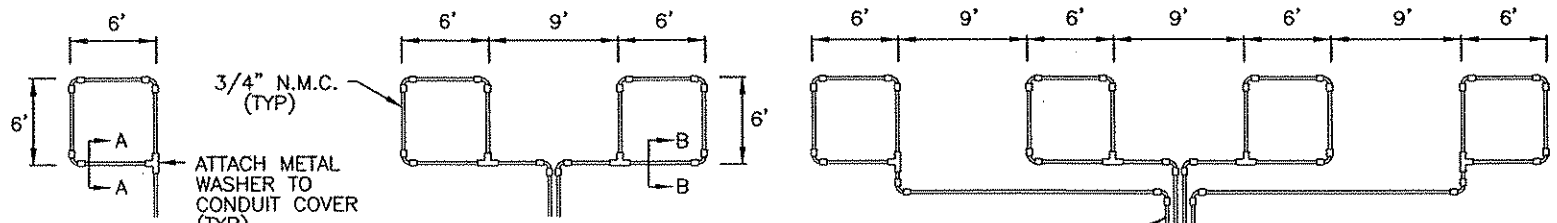
CSAH 20

Q:\CLIENTS\A-F\ANDKC\9802.00\EP\ARC003002.DWG
 DATE: 02-18-02 TIME: 3:57 pm USER: CRU517SP
 XREFS:

\\s:\net\anock\990200\EP\PC0402.DWG
DATE: 05-28-03 TIME: 1:34 pm
USER: KSTERLY
XREFS:



SCALE HOR. = 10'
VERT. = 5'
CSAH 9 & CSAH 20 - ANOKA COUNTY, MINNESOTA
STA. 12+48

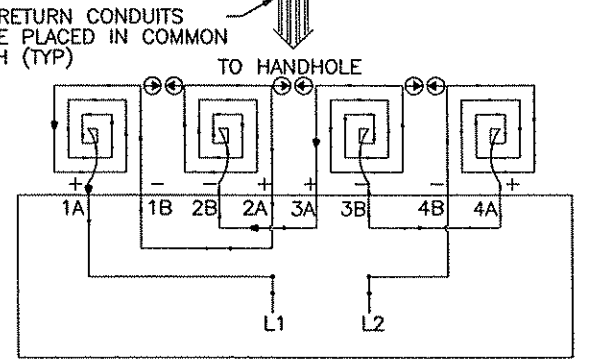


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

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



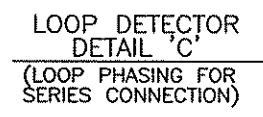
LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:



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

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

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



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.

STANDARD PLATES	
THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:	
PLATE NO.	DESCRIPTION
* 7035 L	CONCRETE WALK AND CURB RETURNS AT ENTRANCES
* 8110 D	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 C	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
8112 C	PEDESTAL FOUNDATION
* 8114 A	PVC HANDHOLE/PULLBOX
8115 D	PEDESTRIAN PUSH BUTTON INSTALLATION
* 8118 C	SERVICE EQUIPMENT AND POLE-TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 K	PA85 POLE FOUNDATION
* 8121 D	TRANSFORMER BASE AND POLE BASE PLATE
8122 C	PEDESTAL AND PEDESTAL BASE
* 8123 E	POLE AND MAST ARM
* 8124 E	MAST ARM SIGNAL HEAD MOUNTS
* 8126 F	PA90 AND PA100 POLE FOUNDATION

* - APPLIES TO THIS PROJECT

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO's	(A)
SIGNAL BASE NO.	(B)
SIGNAL FACE NO.	(C)
LUMINAIRE NO.	(D)
CONTROLLER AND CABINET	(E)
CONTROLLER AND CABINET - IN PLACE	(F)
HANDHOLE	(G)
HANDHOLE - IN PLACE	(H)
RIGID STEEL CONDUIT (RSC)	(I)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(J)
SIGNAL FACE WITH BACKGROUND SHIELD	(K)
SIGNAL FACE W/O BACKGROUND SHIELD	(L)
SIGNAL FACE - IN PLACE	(M)
PEDESTRIAN INDICATORS	(N)
PEDESTRIAN INDICATORS - IN PLACE	(O)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(P)
PEDESTRIAN PUSH BUTTON STATION	(Q)
TRAFFIC SIGNAL PEDESTAL	(R)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(S)
TRAFFIC SIGNAL POLE AND MAST ARM	(T)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(U)
STREET LIGHT POLE AND LUMINAIRE	(V)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(W)
MAST ARM AND LUMINAIRE	(X)
MAST ARM AND LUMINAIRE - INPLACE	(Y)
WOOD POLE	(Z)
WOOD POLE - IN PLACE	(AA)
SOURCE OF POWER	(AB)
RAILROAD SIGNAL - IN PLACE	(AC)
RIGHT OF WAY LINE	(AD)
CENTERLINE	(AE)
EDGE OF ROADWAY	(AF)
SHOULDERLINE	(AG)
CURB LINE	(AH)
STOP BAR	(AI)
EMERGENCY VEHICLE PREEMPTION DETECTOR	(AJ)

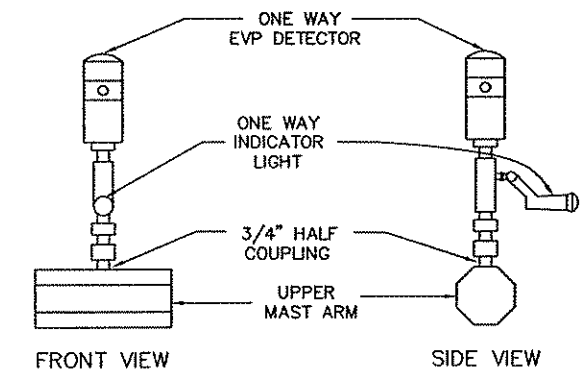
ABBREVIATIONS

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

EVP DETECTOR AND LIGHT MOUNTING DETAIL ON MAST ARM



S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

G:\CLIENTS\VA\F\ANOKA\9902.00\TRAFFIC SIGNALS\92002.00.DWG 2/23/01

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

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
John M. Gray, P.E.
Date: April 23, 2001 Lic. No. 22457

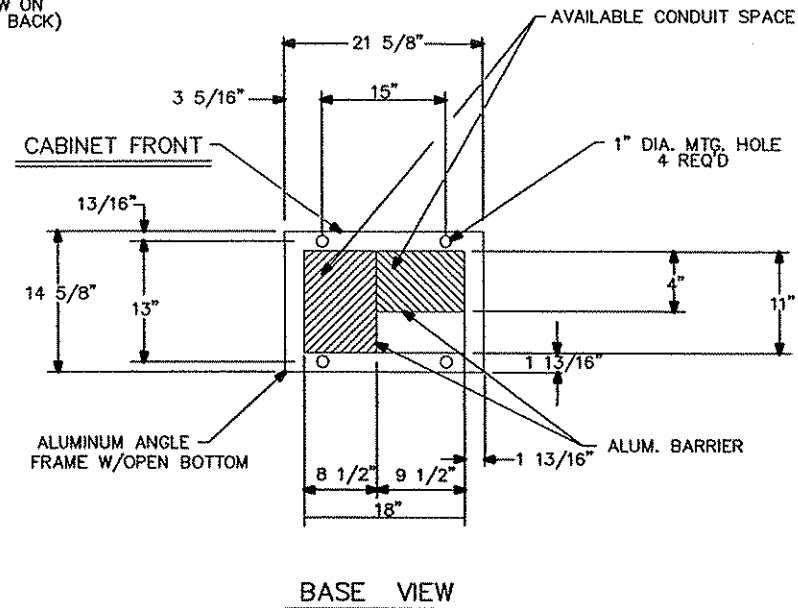
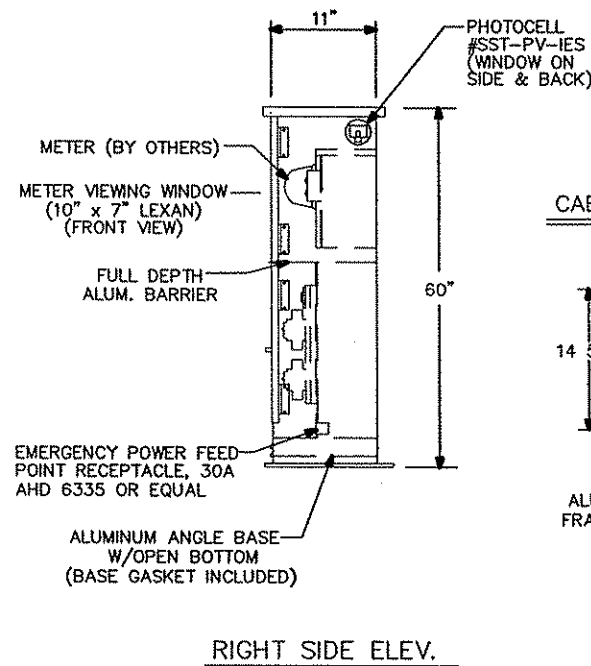
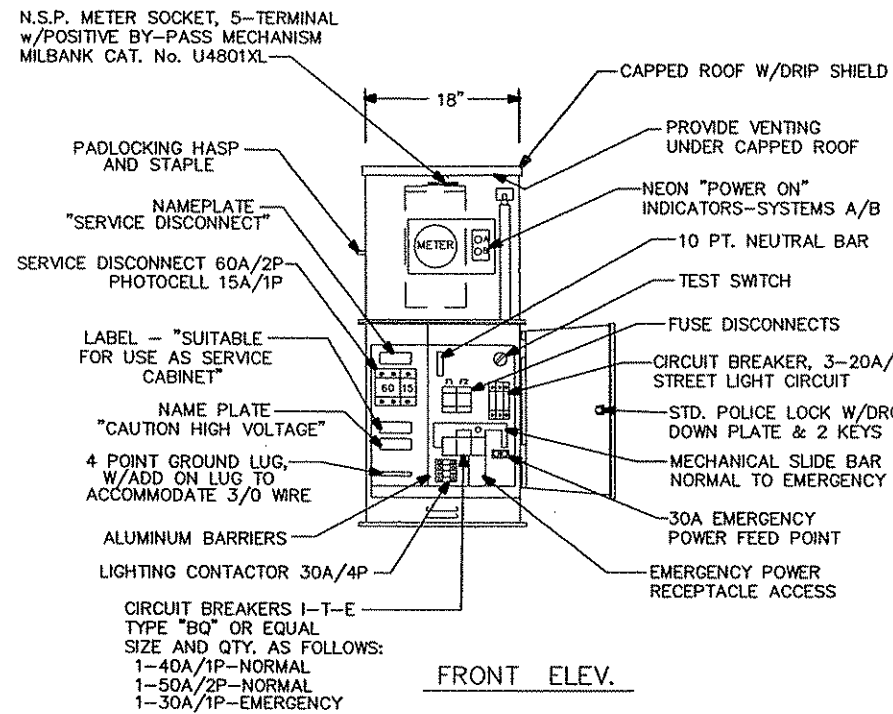


ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD.)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

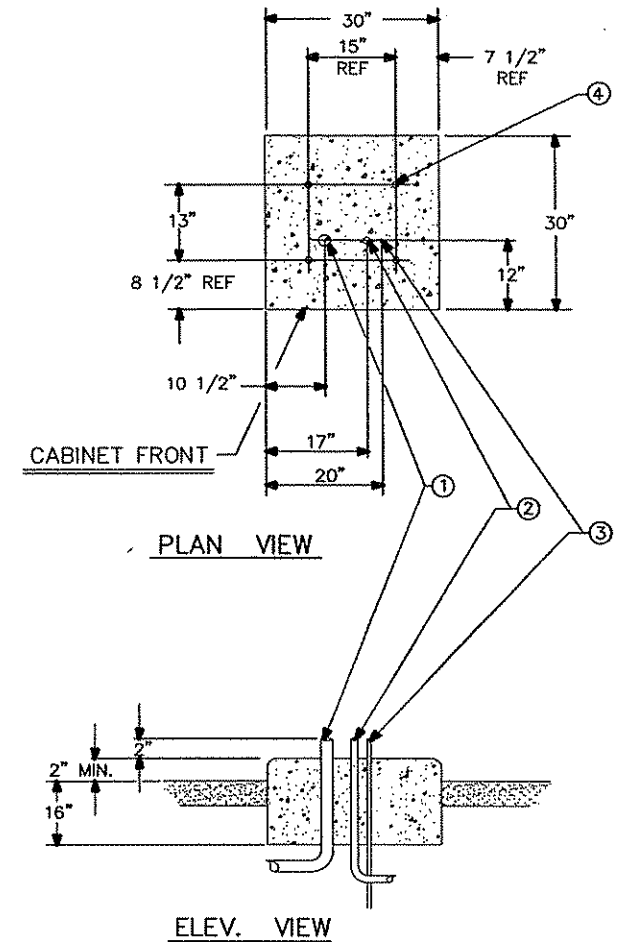
TRAFFIC SIGNAL SYSTEM
DETAILS & STANDARD PLATES
CSAH 9 AT CSAH 20/161ST AVE

FILE NO.	32
ANCKC9902.00	
DATE	47
4-23-01	

SIGNAL SERVICE CABINET



SERVICE CABINET FOUNDATION



- ① 2" RSC STUB OUT (FOR SOP)
- ② 2" RSC TO HANDHOLE (SIGNAL/LIGHTING SERVICE)
- ③ GROUNDING ROD
- ④ ANCHOR BOLT LOCATIONS (4 REQUIRED)

CONSTRUCTION NOTES

ENCLOSURE SHALL BE FABRICATED FROM 1/8" ALUMINUM FOR OUTDOOR WEATHERPROOF SERVICE.

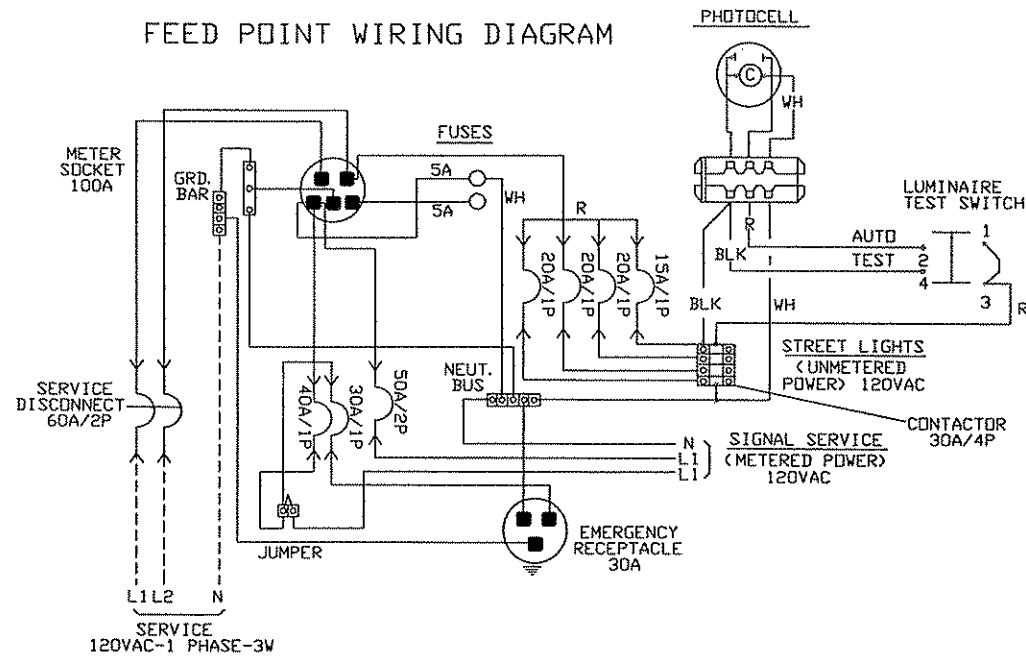
DOORS TO BE NEOPRENE GASKETED. ALL HINGES, PINS AND LOCKS TO BE OF NON-CORRODING CONSTRUCTION.

CABINET SHALL HAVE ANODIC COATING FOR ALL ALUMINUM SURFACES. SEE SPECIAL PROVISIONS.

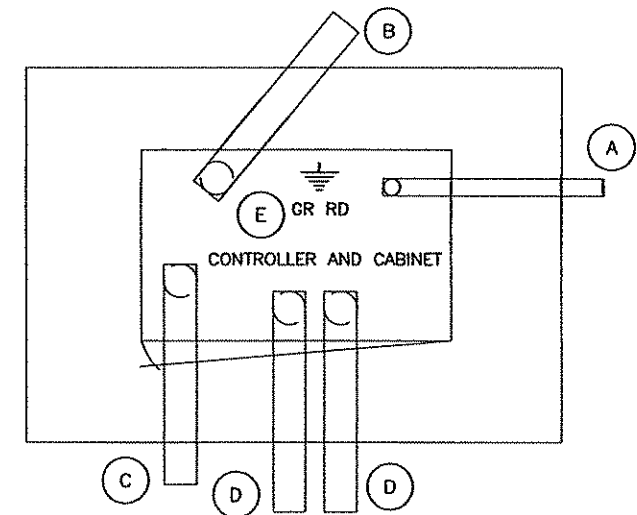
NEMA 3R ENCLOSURE SHALL BE "UL" APPROVED.

CABINET SHALL HAVE BASE GASKET INCLUDED.

FEED POINT WIRING DIAGRAM



- (A) 2" R.S.C. FOR SERVICE CONNECTION (VIA HH 15)
- (B) 4" R.S.C. TO HH 1
- (C) 4" R.S.C. TO HH 14
- (D) 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).
- (E) 5/8" DIA X 15' GROUND ROD



S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

DESIGNED BY: JMG	1	JMG	03/03	REVISED TO CURRENT STANDARDS PER COUNTY
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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

John M. Gray, P.E.
John M. Gray, P.E.
Lic. No. 22457
Date: April 23, 2001

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

ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD.)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

**TRAFFIC SIGNAL SYSTEM
EQUIPMENT PAD DETAILS
CSAH 9 AT CSAH 20/161ST AVE**

FILE NO.
ANOKC9902.00
DATE
4-23-01

33
47

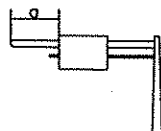
MAST ARM MOUNTED SIGNING

SIGN PANELS - TYPE D							
SIGN PANEL	SIZE (inches)	NO. REQ.	BRACKETS PER SIGN	BRACKET SPACING (**)	AREA (sq.ft.) PER SIGN	POLE NO.	Ø
D-1	120x24	1	4	-	20.00	1	8'
D-2	96x24	1	4	-	16.00	2	28'
D-3	120x24	1	4	-	20.00	3	8'
D-4	96x24	1	4	-	16.00	4	28'
TOTALS		4			72.00		

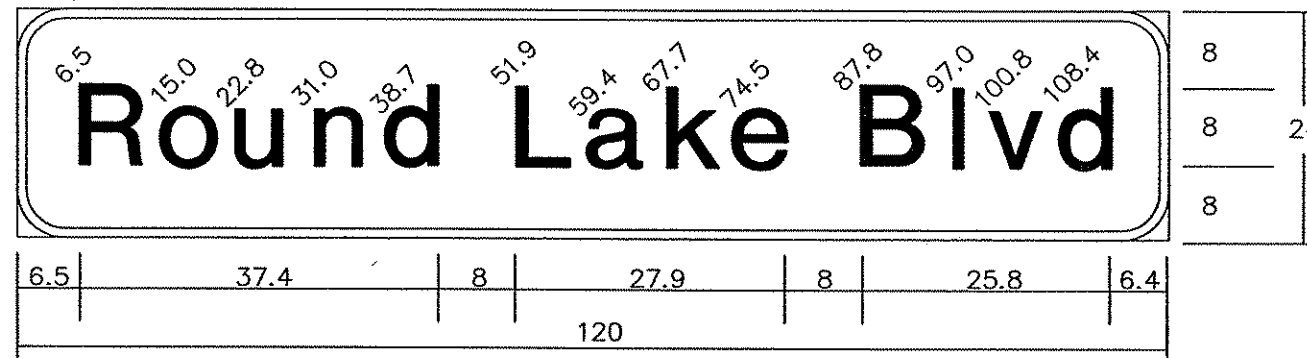
(**) = SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE SPECIAL PROVISIONS FOR BRACKET SPACING REQUIREMENTS.

NOTES:

- 1) TYPE D SIGN COLOR-WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- 2) CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- 3) FOR STRUCTURAL DETAILS, TYPE D SIGNS, SEE STANDARD SIGNS MANUAL AND SPECIAL PROVISIONS (PAGE 105A).
- 4) TYPE D SIGN PANELS SHALL BE FURNISHED AND INSTALLED BY SIGNAL CONTRACTOR INCIDENTAL TO ITEM NO. 2565.511 FOR SIGNAL SYSTEM. SEE SPECIAL PROVISIONS.
- 5) ALL SIGNS SHALL BE FABRICATED USING VIP SHEETING.

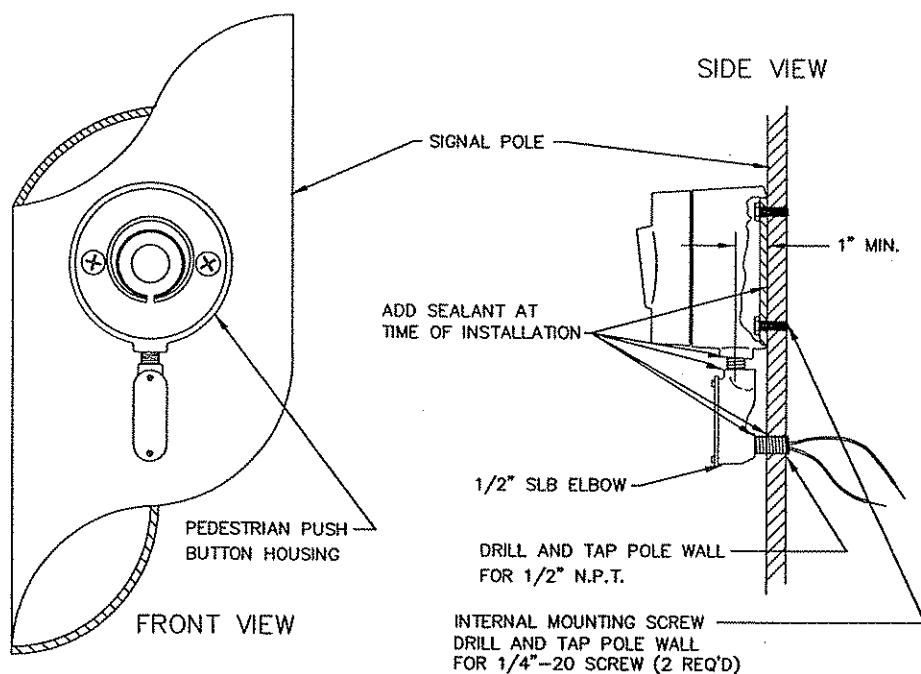


D-1, D-3

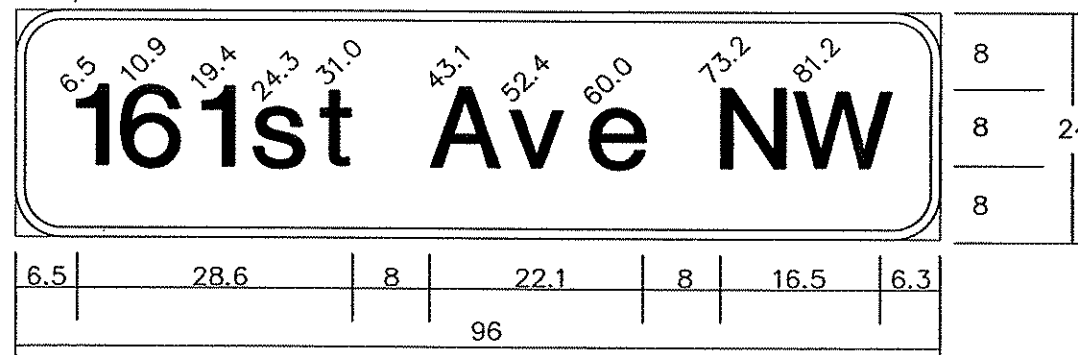


D-1, D-3; 120" x 24", 3.0" Radius, 1.0" Border, White on Green "Round Lake Blvd" E Mod.

MAST ARM POLE PEDESTRIAN PUSH BUTTON DETAIL



D-2, D-4



D-2, D-4; 96" x 24", 3.0" Radius, 1.0" Border, White on Green "161st Ave NW" E Mod.

S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

DRAWN BY: JMG	1	JMG	03/03	REVISED TO CURRENT STANDARDS
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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
John M. Gray, P.E.
Date: April 23, 2001 Lic. No. 22457



ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD.)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

TRAFFIC SIGNAL SYSTEM
DETAILS & SIGNING
CSAH 9 AT CSAH 20/161ST AVE

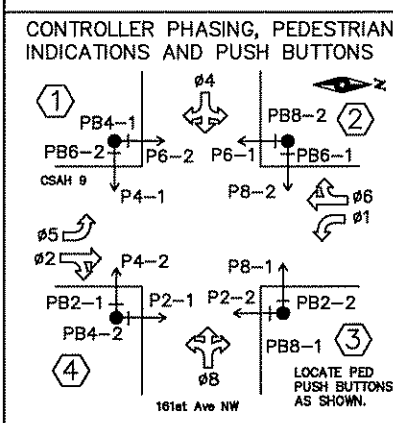
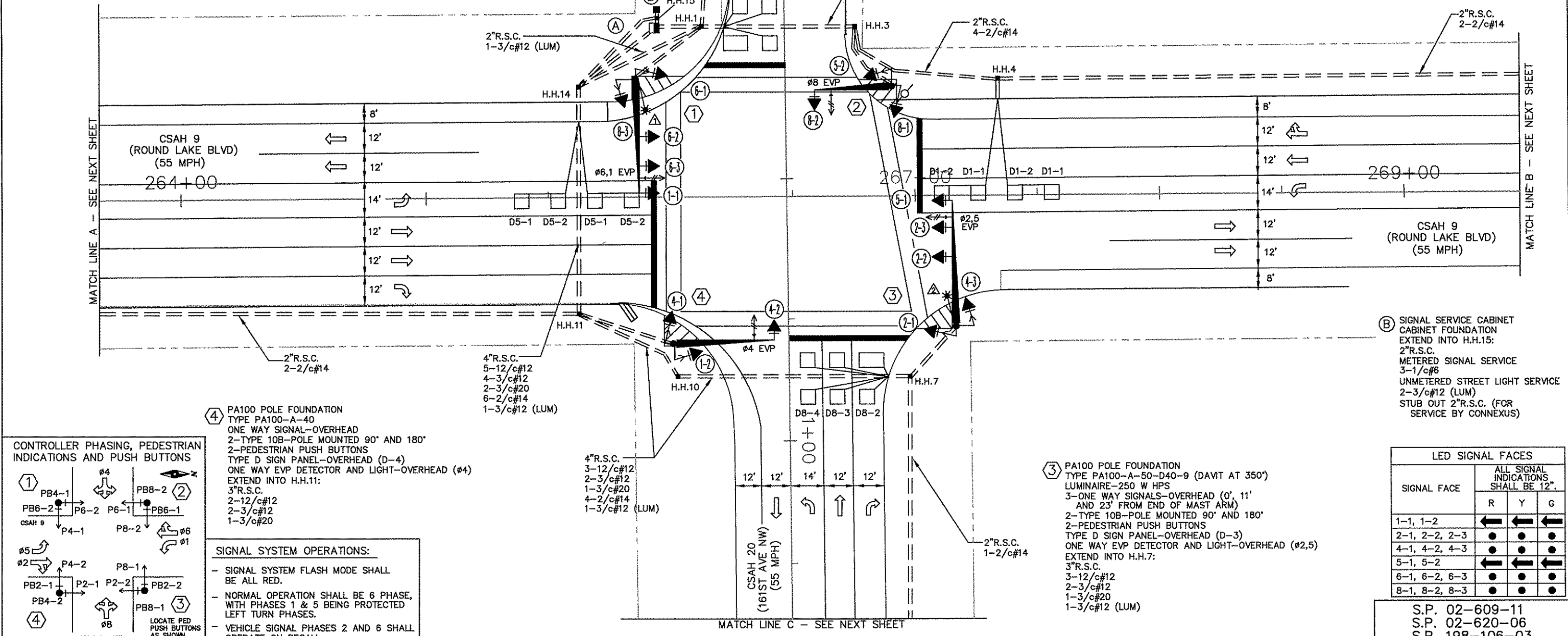
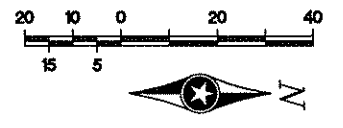
FILE NO. ANOKC9902.00
DATE 4-23-01
34
47

- NOTES:**
- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, 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) HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO. 8114A.
 - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
 - 6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
 - 7) ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
 - 8) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGN PANELS AND CONCRETE WALK TO BE FURNISHED AND INSTALLED BY CONTRACTOR (INCIDENTAL TO ITEM NO. 2565.511).
 - 9) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL FACE.
 - 10) 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).
 - 11) SEE SPECIAL PROVISIONS REGARDING REMOVAL AND SALVAGING OF INPLACE SIGNAL SYSTEM (INCIDENTAL TO ITEM NO. 2565.511).
 - 12) SEE SPECIAL PROVISIONS REGARDING "DUMMY ORDERS" PLACED BY THE COUNTY FOR TRAFFIC SIGNAL MATERIALS AND ELECTRICAL EQUIPMENT, FOR ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565.511.

N.M.C. LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	2-6x6	20' & 50'	1
D1-2	2-6x6	5' & 35'	1
D2-1	6x6	475'	1
D2-2	6x6	475'	1
D4-1	6x6	180'	3,8
D4-2	6x6 & 6x10	5' & 20'	7
D4-3	2-6x6	5' & 20'	7
D5-1	2-6x6	20' & 50'	1
D5-2	2-6x6	5' & 35'	1
D6-1	6x6	475'	1
D6-2	FUTURE	-	-
D8-1	2-6x6	400'	3,8
D8-2	6x6 & 6x10	5' & 20'	7
D8-3	2-6x6	5' & 20'	7
D8-4	2-6x6	5' & 20'	7

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

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



- SIGNAL SYSTEM OPERATIONS:**
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
 - NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES.
 - VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

- (B) SIGNAL SERVICE CABINET**
 CABINET FOUNDATION
 EXTEND INTO H.H.15:
 METERED SIGNAL SERVICE
 2"R.S.C.
 3-1/c#6
 UNMETERED STREET LIGHT SERVICE
 2-3/c#12 (LUM)
 STUB OUT 2"R.S.C. (FOR SERVICE BY CONNEXUS)

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

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

NO.	BY	DATE	REVISIONS
1	JMG	03/03	REVISED PER COUNTY COMMENTS
2	JMG	05/03	RELOCATED CABINETS TO SW CORNER PER COUNTY

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

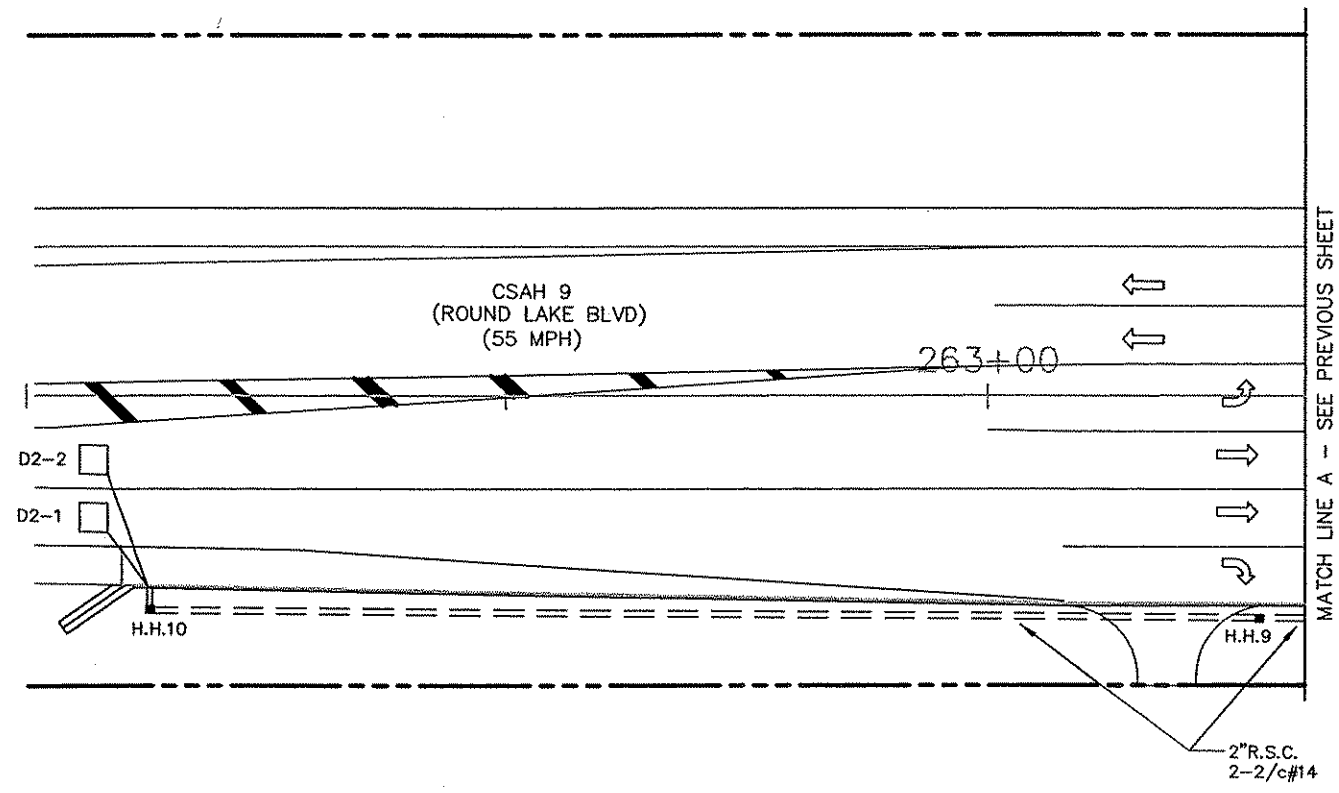
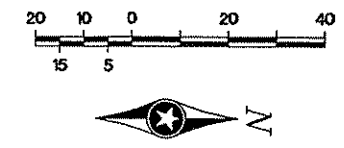
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 John M. Gray, P.E.
 Date: May 6, 2003 Lic. No. 22457



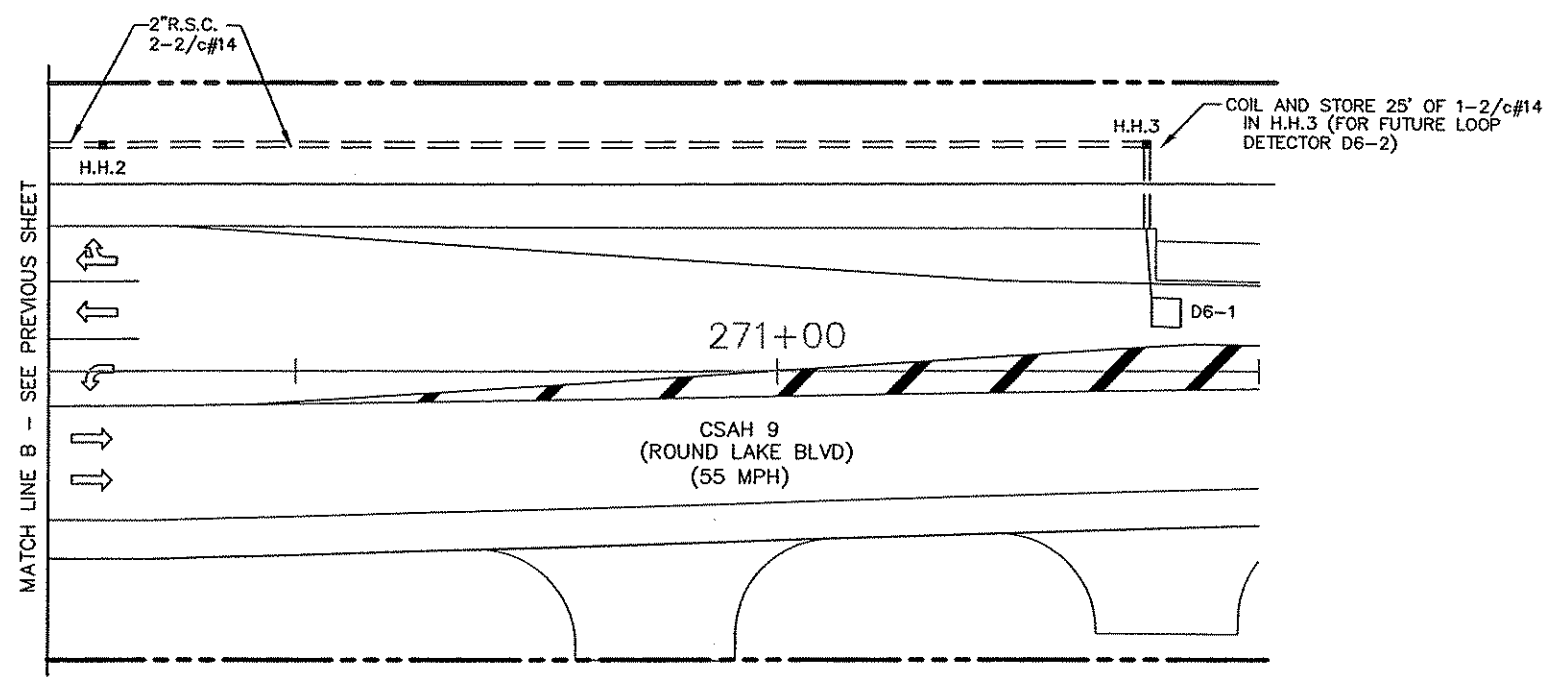
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD.)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
CSAH 9 AT CSAH 20/161ST AVE

FILE NO. ANOKC9902.00
 DATE 4-23-01
35
47

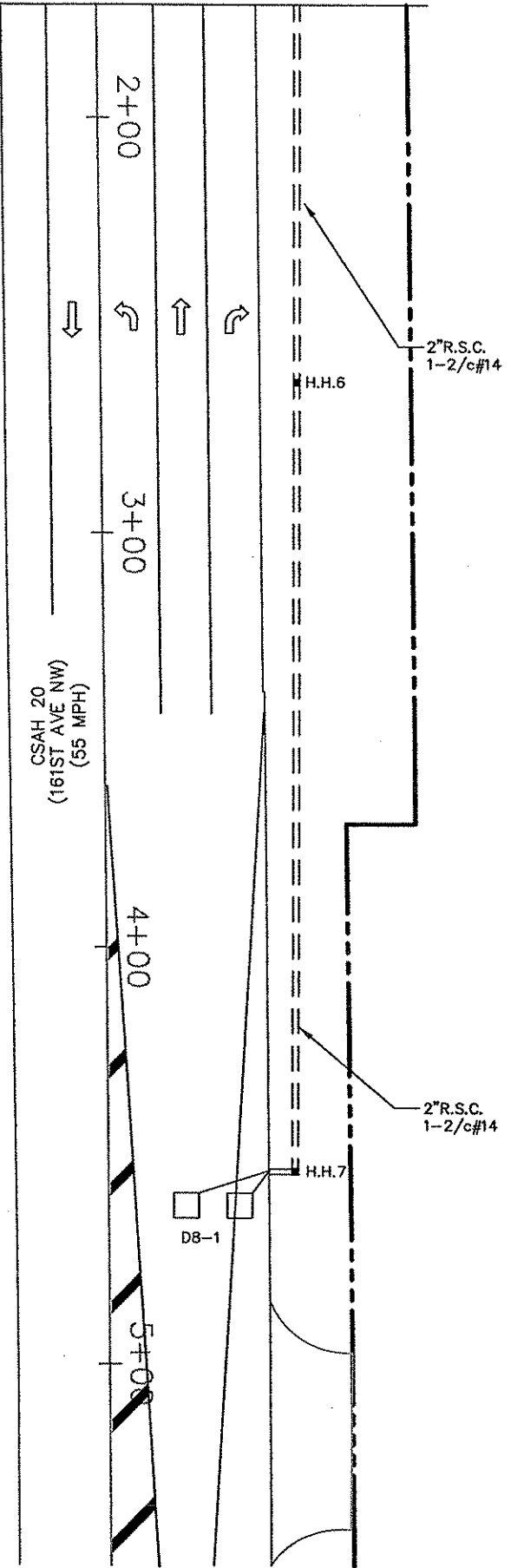


MATCH LINE A - SEE PREVIOUS SHEET



MATCH LINE B - SEE PREVIOUS SHEET

MATCH LINE C - SEE PREVIOUS SHEET



S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

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

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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
John M. Gray, P.E.
Lic. No. 22457
Date: April 23, 2001

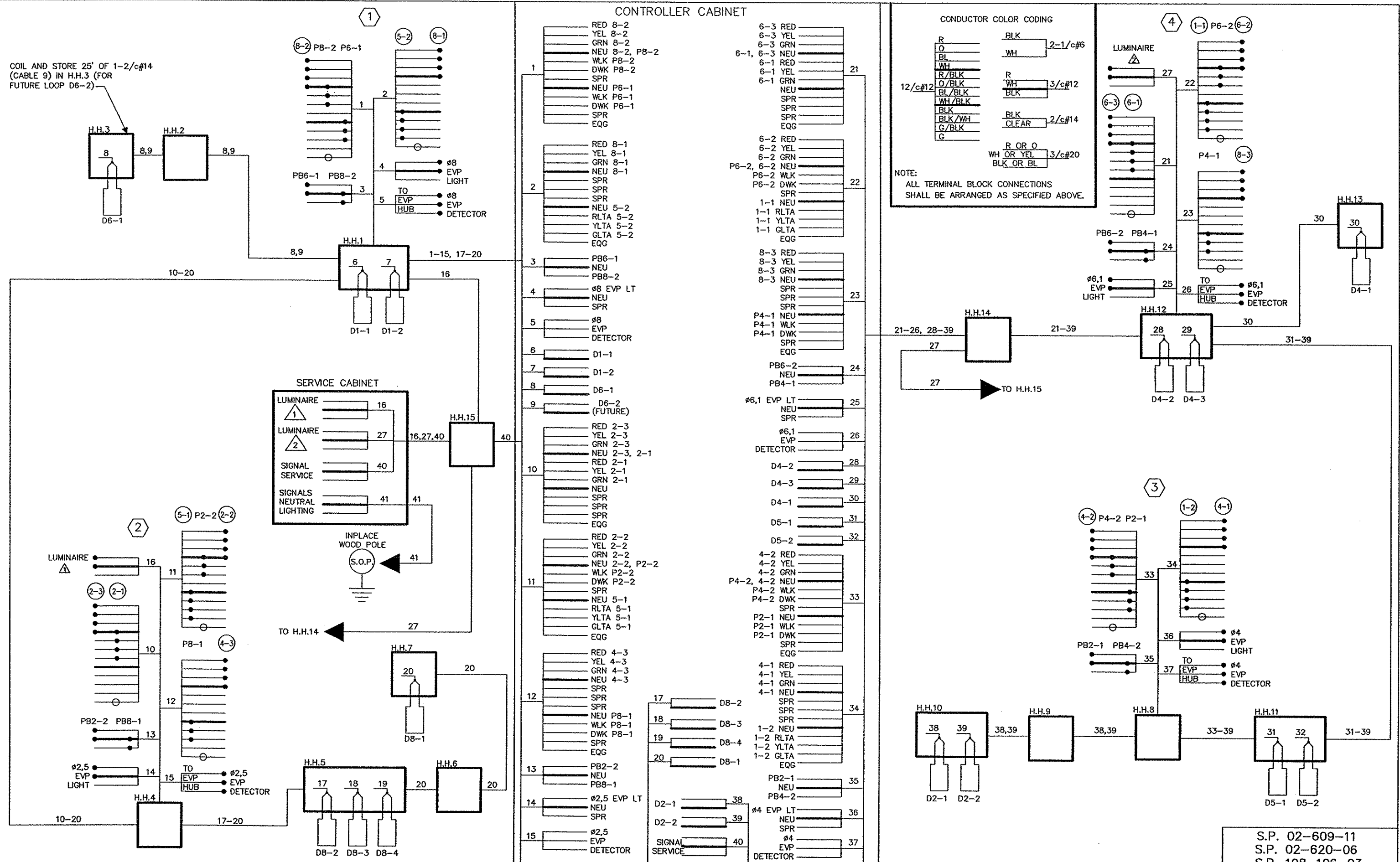


ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD.)
S.P. 02-609-11
S.P. 02-620-06
S.P. 198-106-03

TRAFFIC SIGNAL SYSTEM
INTERSECTION LAYOUT
CSAH 9 AT CSAH 20/161ST AVE

FILE NO.	ANOKC9902.00	36
DATE	4-23-01	47

G:\CLIENTS\ANOKA\9902\TRAFFIC SIGNALS\2009REV.DWG 4/23/01



DESIGNED BY: JMG	1	JMG	03/03	REVISED PER COUNTY COMMENTS
CHECKED BY: JMG				
DATE: 03/03				
NO.	BY	DATE	REVISIONS	

© SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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

John M. Gray, P.E.
 Date: April 23, 2001 Lic. No. 22457



ANOKA COUNTY
 CSAH 9 (ROUND LAKE BLVD.)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

TRAFFIC SIGNAL SYSTEM
 FIELD WIRING DIAGRAM
 CSAH 9 AT CSAH 20/161ST AVE

FILE NO. ANOKC9902.00	37
DATE 4-23-01	47

C:\CLIENTS\ANOKA\9902.00\TRAFFIC SIGNALS\9902RWDWG 2/23/01

NOTES:

- 1) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY FOR THE LOCATION OF UTILITIES.
- 2) ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
- 3) SEE SPECIAL PROVISIONS FOR ANOKA COUNTY SERVICE CABINET DETAILS.
- 4) ALL HANDHOLES SHALL BE CONCRETE WITH TYPE 'C' COVERS.
- 5) LOOP DETECTOR WIRES SHALL BE CROSS LINKED POLYETHYLENE (XLP) IN 1" N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
- 6) ALL PEDESTRIAN INDICATIONS SHALL BE 12"x12".
- 7) HUBS FOR POLE MOUNTED SIGNAL INDICATIONS SHALL BE PROVIDED ON 4 SIDES OF MAST ARM POLES. SEE SPECIAL PROVISIONS
- 8) DIRECTIONAL SIGN TO BE FURNISHED AND INSTALLED ON MAST ARMS AT POLES 1, 2, 3 AND 5. SEE SPECIAL PROVISIONS.
- 9) PEDESTRIAN PUSH BUTTON SIGNS TO BE FURNISHED AND INSTALLED BY OTHERS.

1) TYPE P90-A-30
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 108-POLE MOUNTED 90°
TYPE 108-POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO H.H.11:
3"R.S.C.
2-12/c#12
1-3/c#12

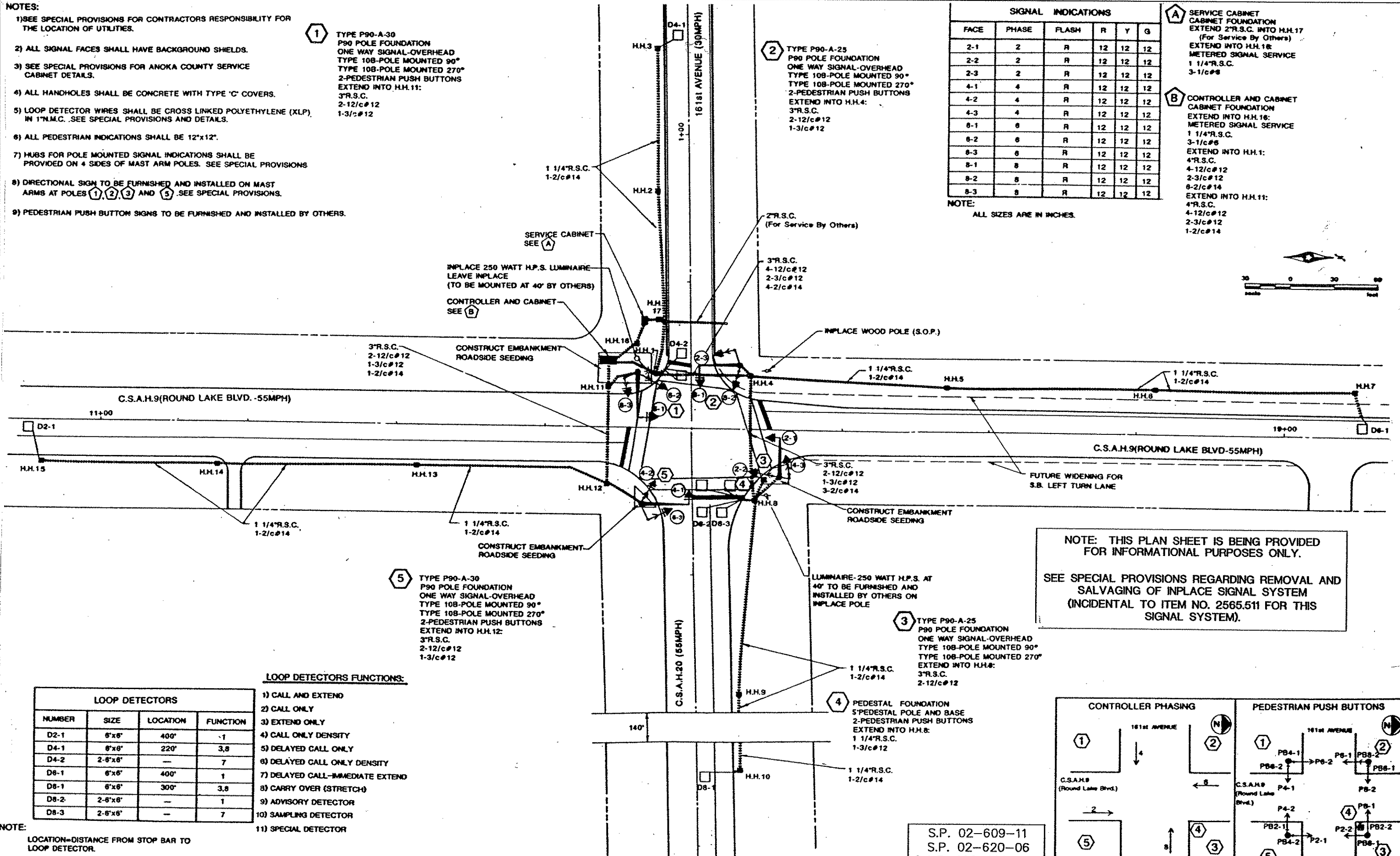
2) TYPE P90-A-25
P90 POLE FOUNDATION
ONE WAY SIGNAL-OVERHEAD
TYPE 108-POLE MOUNTED 90°
TYPE 108-POLE MOUNTED 270°
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO H.H.4:
3"R.S.C.
2-12/c#12
1-3/c#12

SIGNAL INDICATIONS						
FACE	PHASE	FLASH	R	Y	G	
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	R	12	12	12	
6-2	6	R	12	12	12	
6-3	6	R	12	12	12	
8-1	8	R	12	12	12	
8-2	8	R	12	12	12	
8-3	8	R	12	12	12	

NOTE:
ALL SIZES ARE IN INCHES.

A) SERVICE CABINET
CABINET FOUNDATION
EXTEND 2"R.S.C. INTO H.H.17
(For Service By Others)
EXTEND INTO H.H.16:
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#8

B) CONTROLLER AND CABINET
CABINET FOUNDATION
EXTEND INTO H.H.16:
METERED SIGNAL SERVICE
1 1/4"R.S.C.
3-1/c#8
EXTEND INTO H.H.1:
4"R.S.C.
4-12/c#12
2-3/c#12
6-2/c#14
EXTEND INTO H.H.11:
4"R.S.C.
4-12/c#12
2-3/c#12
1-2/c#14



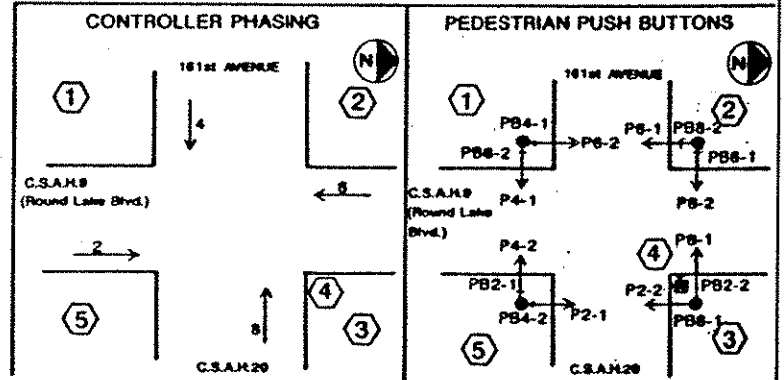
NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
SEE SPECIAL PROVISIONS REGARDING REMOVAL AND SALVAGING OF INPLACE SIGNAL SYSTEM (INCIDENTAL TO ITEM NO. 2565.511 FOR THIS SIGNAL SYSTEM).

LOOP DETECTORS FUNCTIONS:

LOOP DETECTORS			
NUMBER	SIZE	LOCATION	FUNCTION
D2-1	6'x6'	400'	1
D4-1	6'x6'	220'	3,8
D4-2	2-6'x6'	-	7
D6-1	6'x6'	400'	1
D8-1	6'x6'	300'	3,8
D8-2	2-6'x6'	-	1
D8-3	2-6'x6'	-	7









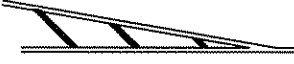
- 1) CALL AND EXTEND
- 2) CALL ONLY
- 3) EXTEND ONLY
- 4) CALL ONLY DENSITY
- 5) DELAYED CALL ONLY
- 6) DELAYED CALL ONLY DENSITY
- 7) DELAYED CALL-IMMEDIATE EXTEND
- 8) CARRY OVER (STRETCH)
- 9) ADVISORY DETECTOR
- 10) SAMPLING DETECTOR
- 11) SPECIAL DETECTOR

NOTE:
LOCATION-DISTANCE FROM STOP BAR TO LOOP DETECTOR.



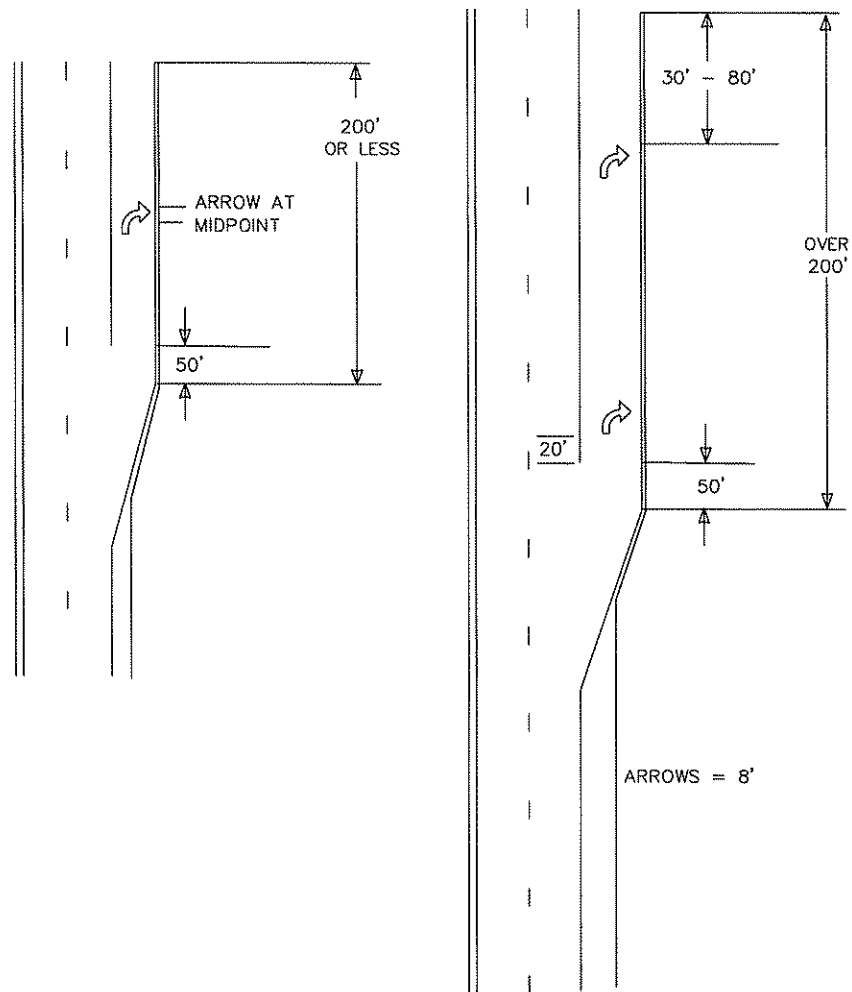
S.P. 02-609-11
S.P. 02-620-06
S.A.P. 198-106-03

LEGEND OF SYMBOLS

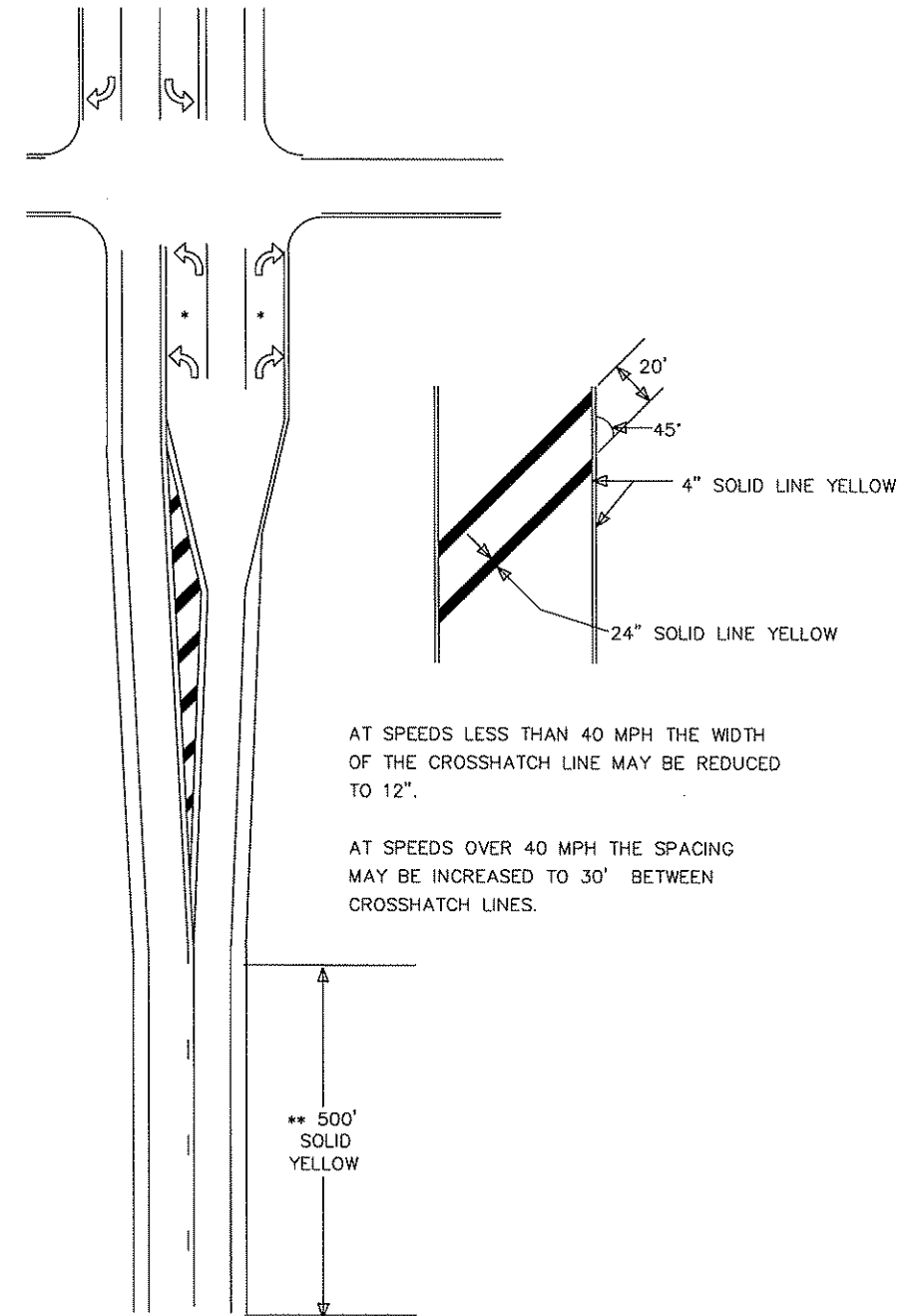
-  TYPE "C" SIGN PANEL SUPPORT (SEE TABLE FOR NUMBER OF POSTS.)
-  4" DOUBLE SOLID YELLOW PAVEMENT MARKINGS
-  4" SOLID WHITE PAVEMENT MARKINGS
-  4" BROKEN WHITE PAVEMENT MARKINGS
-  EPOXY PAVEMENT MESSAGES
-  PAINT PAVEMENT MESSAGES
-  ZEBRA CROSSWALK - WHITE
-  24" SOLID WHITE STOP BAR
-  4" DOUBLE SOLID YELLOW WITH 24" SOLID YELLOW AT 45° (20' SPACING)
- ① FURNISH AND INSTALL TYPE "C" SIGN OR DELINEATOR
- ② INPLACE TYPE "C" SIGN OR DELINEATOR
- ③ SALVAGE TYPE "C" SIGN OR DELINEATOR
- ④ INSTALL TYPE "C" SIGN OR DELINEATOR
- ✦ SYMBOL FOR INPLACE STREET NAME SIGN AND POST TO BE SALVAGED CONTRACTOR

PAVEMENT MARKING TABULATION		
ITEM	UNIT	QUANT.
4" SOLID LINE WHITE - LATEX	ft	5300
4" BROKEN LINE WHITE - LATEX	ft	420
4" DOUBLE SOLID LINE YELLOW - LATEX	ft	3650
24" SOLID LINE WHITE - POLY PREFORMED	ft	100
24" SOLID LINE YELLOW - LATEX	ft	550
ZEBRA CROSSWALK WHITE - POLY PREFORMED	ft ²	950
PAVEMENT MESSAGE WHITE (LEFT ARROW) - POLY PREFORMED	EACH	6
PAVEMENT MESSAGE WHITE (RIGHT ARROW) - POLY PREFORMED	EACH	4
PAVEMENT MESSAGE WHITE (THRU/RIGHT ARROW) - POLY PREFORMED	EACH	2

TYPICAL MESSAGE PLACEMENT FOR TURN LANES

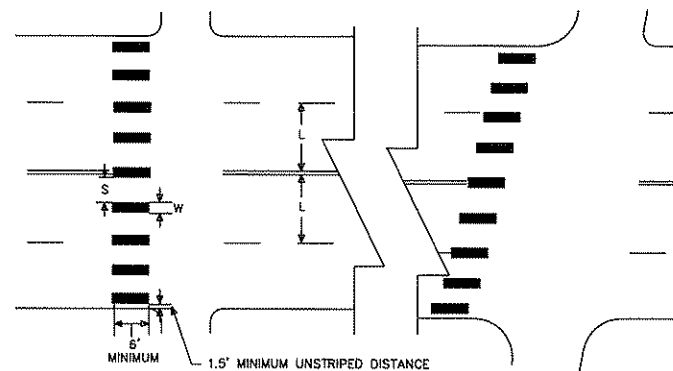


TYPICAL MARKINGS FOR LEFT TURN ISLANDS



MARKINGS FOR PEDESTRIAN CROSSWALKS

(L) WIDTH OF INSIDE LANE	(W) WIDTH OF PAINTED AREA	(S) 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:

- PAINTED AREAS TO BE CENTERED ON CENTERLINE AND LANE LINES.
- A MINIMUM OF 1.5 FEET CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
- ON TWO LANE TWO WAY STREETS, USE SPACING SHOWN FOR AN 11 FOOT INSIDE LANE.
- FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
- AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.

DRAWN BY: MJM			
DESIGNER: MJM			
CHECKED BY: TAS			
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

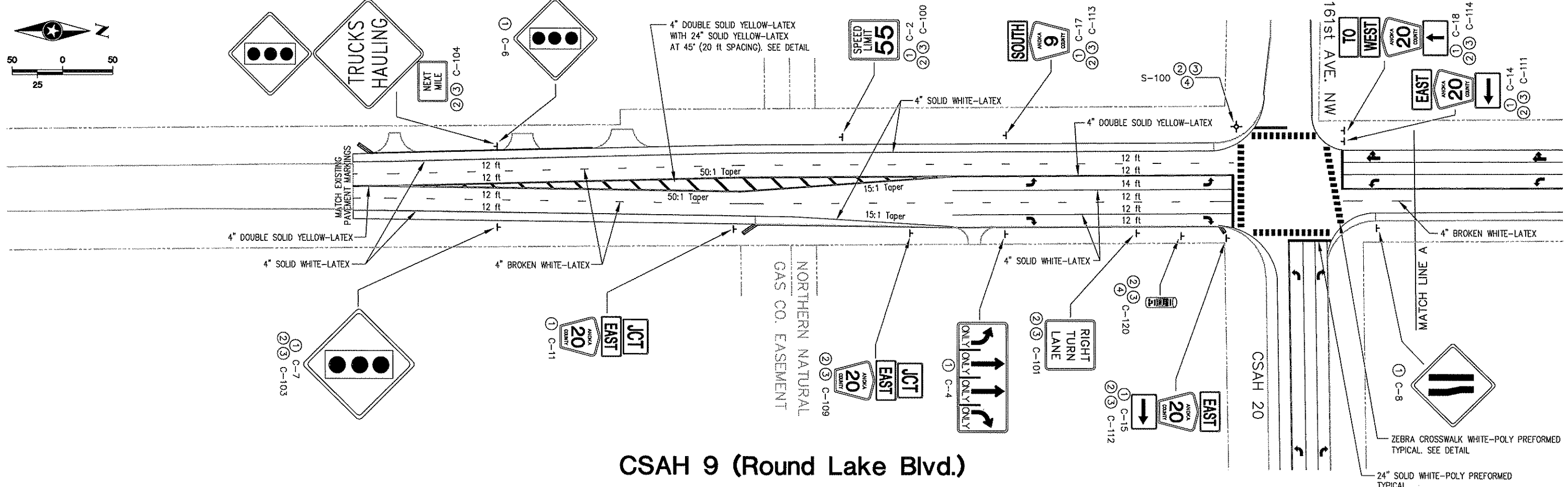
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Thomas A. Schwelbe, P.E.
 Date: 4/23/01 Reg. No. 20943



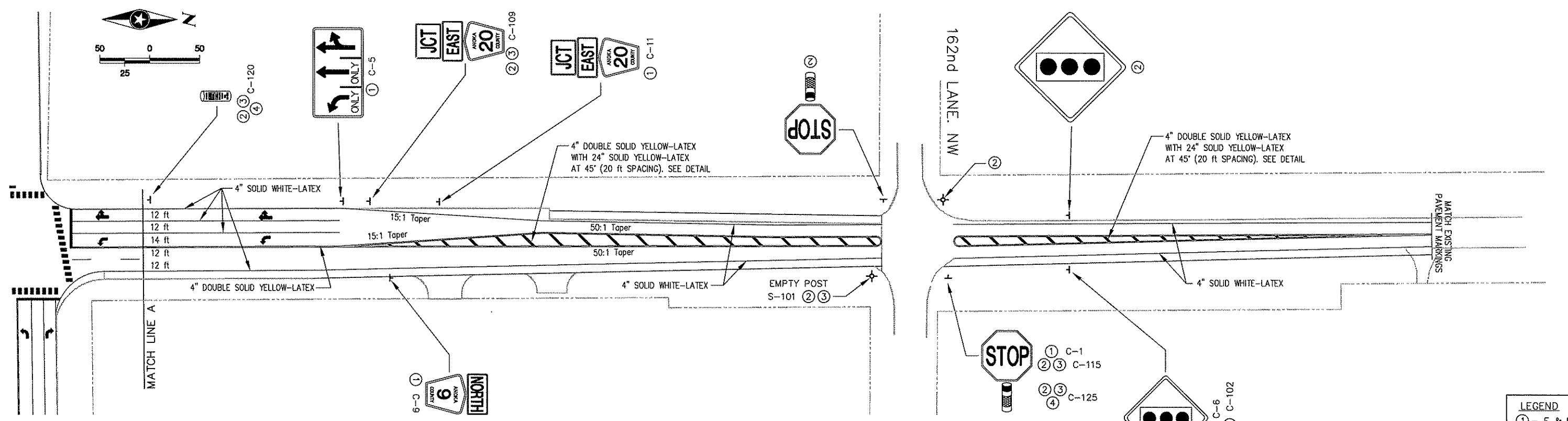
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

**SIGNING AND STRIPING PLANS
 DETAILS AND TABULATIONS**

FILE NO. AANOKC0002.00	40
DATE 4/23/01	47



CSAH 9 (Round Lake Blvd.)



CSAH 9 (Round Lake Blvd.)

LEGEND

①	- F & I
②	- INPLACE
③	- SALVAGE
④	- INSTALL

G:\CLIENTS\A\F\ANOKA\9902\00\TRAFFIC\SIGN&STRIPING\ST03.DWG
 DATE: 04-27-01 TIME: 5:10 pm USER: CPU163SP
 XREFS: G:\CLIENTS\A\F\ANOKA\9902\00\TRAFFIC\SIGN&STRIPING\9--205BASE, G:\CLIENTS\A\F\ANOKA\9902\00\TRAFFIC\SIGN&STRIPING\9--209BASE

DRAWN BY:	MJM				
DESIGNER:	MJM				
CHECKED BY:	TAS				
DESIGN TEAM	NO.	BY	DATE	REVISIONS	

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

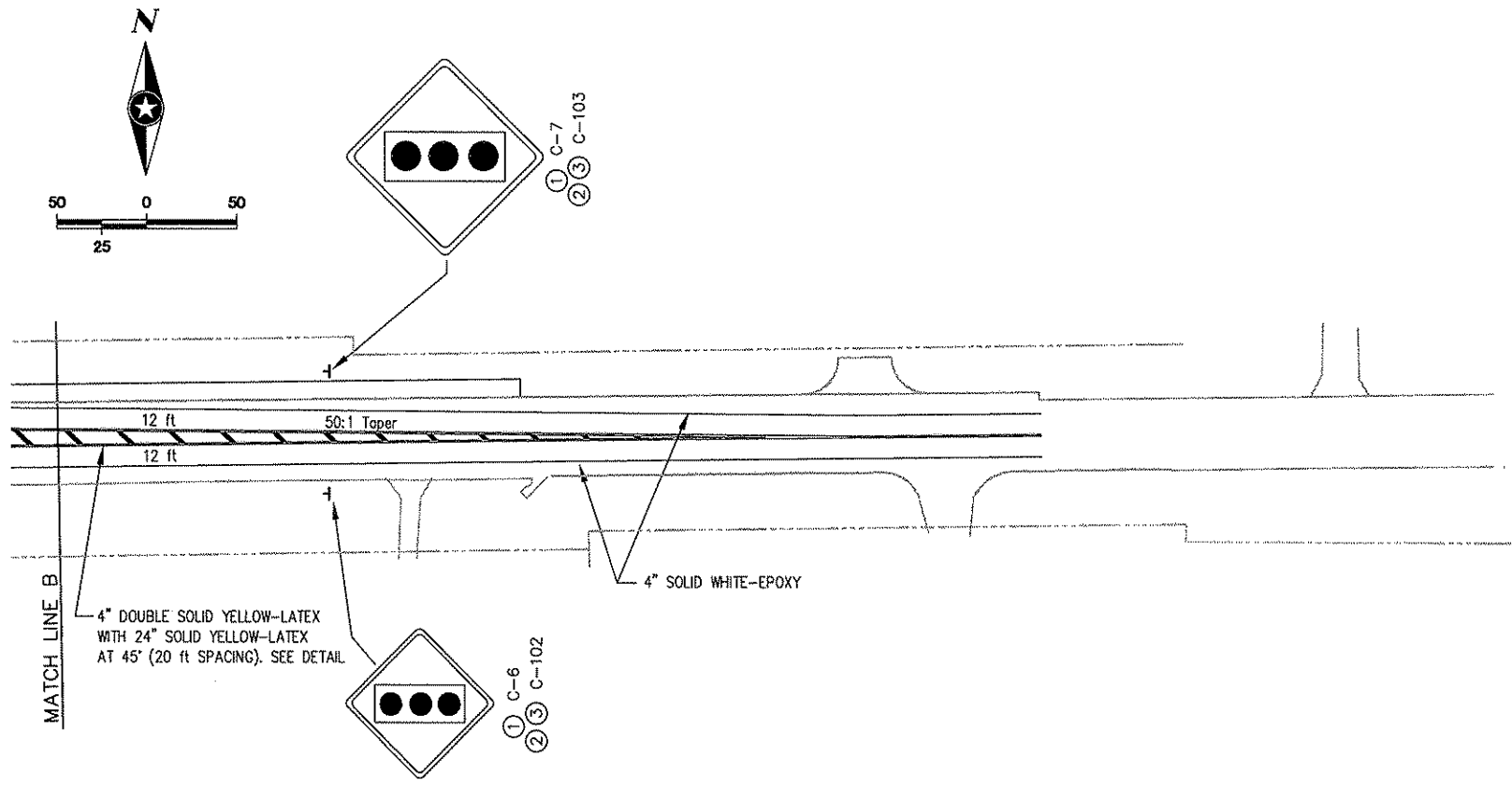
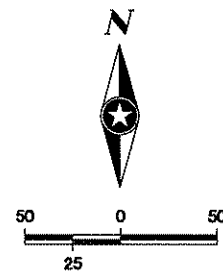
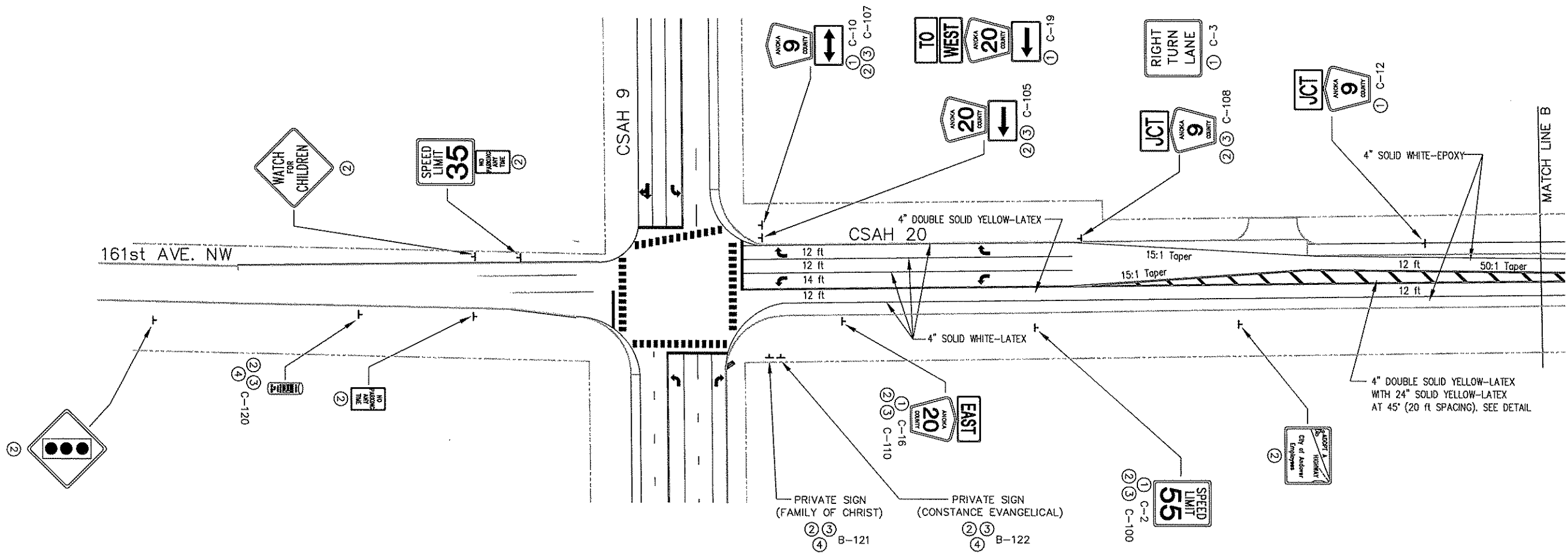
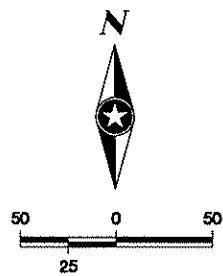
Thomas A. Schwelbe
 Thomas A. Schwelbe, P.E.
 Date: 4/23/01 Reg. No. 20943

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

ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

SIGNING AND STRIPING PLANS

FILE NO.	41
AANOKC0002.00	
DATE	4/23/01
	47



CSAH 20

LEGEND	
①	- F & I
②	- INPLACE
③	- SALVAGE
④	- INSTALL

G:\CLIENTS\A\F\ANOKC\9902.00\TRAFFIC\SIGN&STRIPES\95104.DWG
 DATE: 07-18-01 TIME: 6:19 am USER: CPU11SP
 XREFS: Q:\CLIENTS\A\F\ANOKC\9902.00\TRAFFIC\SIGN&STRIPES\9-20BASE.

DRAWN BY:	MJM			
DESIGNER:	MJM			
CHECKED BY:	TAS			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

Thomas A. Schwelde
 Thomas A. Schwelde, P.E.
 Date: 4/23/01 Reg. No. 20943



ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

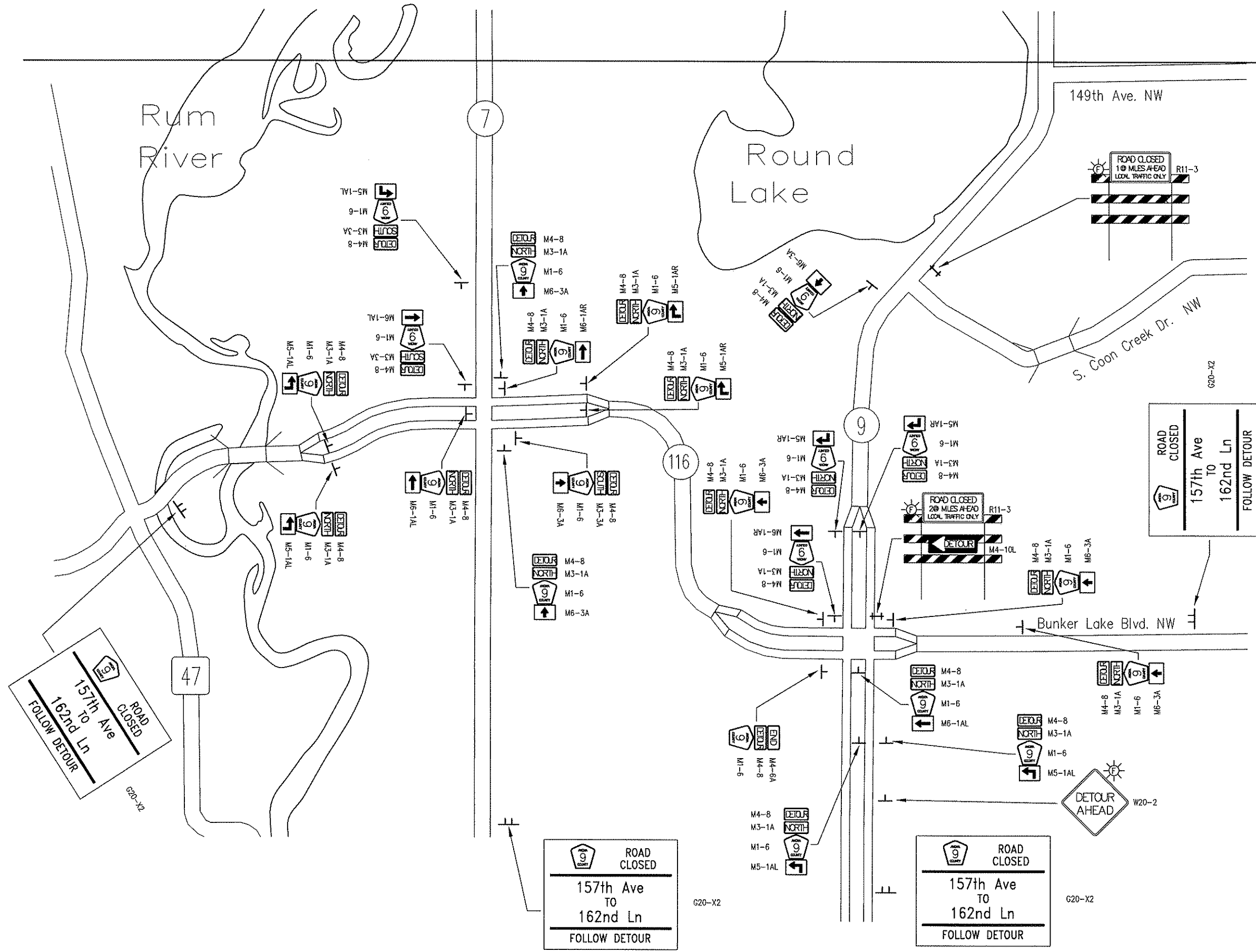
SIGNING AND STRIPING PLANS

FILE NO.	AAANOKC0002.00	42
DATE	4/23/01	47

MATCH LINE A



NOT TO SCALE



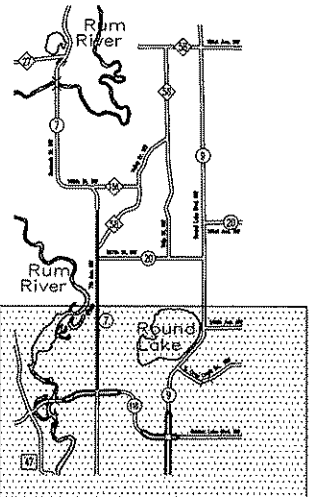
LEGEND

- ⊥ TYPE "C" SIGN SUPPORT
- ⊥⊥ TYPE III BARRICADE SUPPORT
- ⊥⊥ TYPE "D" SIGN SUPPORT
- ▨ PROJECT LOCATION

NOTES

Drawing not to scale. Sign spacing shall be in accordance with the MMUTCD.

ANDOVER



DRAWN BY:	MJM				
DESIGNER:	MJM				
CHECKED BY:	TAS				
DESIGN TEAM	NO.	BY	DATE	REVISIONS	

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

Thomas A. Sohrweide
 Thomas A. Sohrweide, P.E.
 Date: 4/23/01 Reg. No. 20943



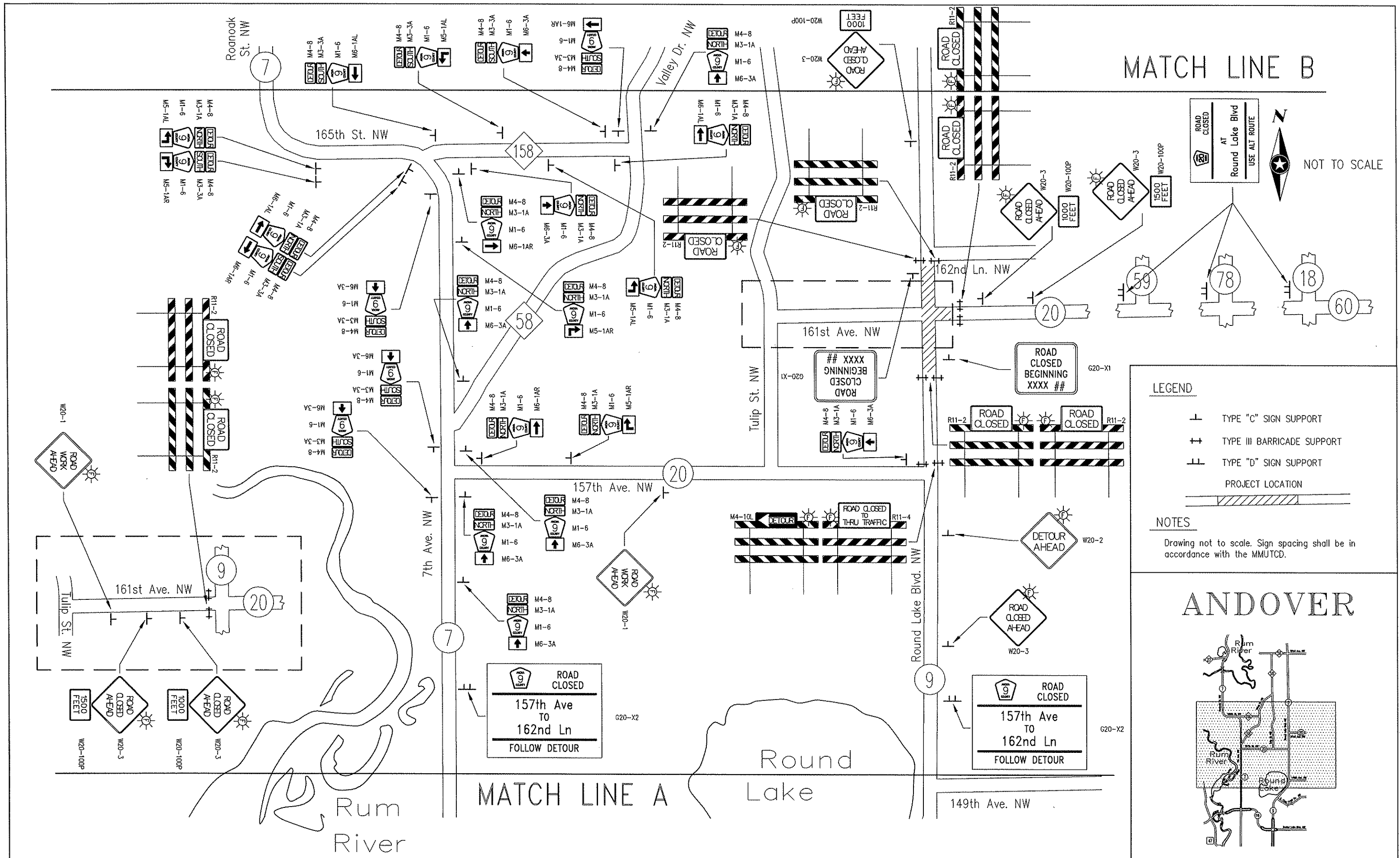
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

FILE NO.	AANOKC0002.00	43
DATE	4/23/01	47

DETOUR PLAN

G:\CLIENTS\A\F\ANDOCK\980220\TRAFFIC\DETOUR\DETOUR.DWG
 DATE: 07-18-01 TIME: 8:24 am USER: CPU11SP
 XREFS:

Q:\CLIENTS\A\ANOKA\9402.00\TRAFFIC\DETOUR\DETOUR.DWG
 DATE: 07-18-01 TIME: 8:25 am USER: CRJ115P

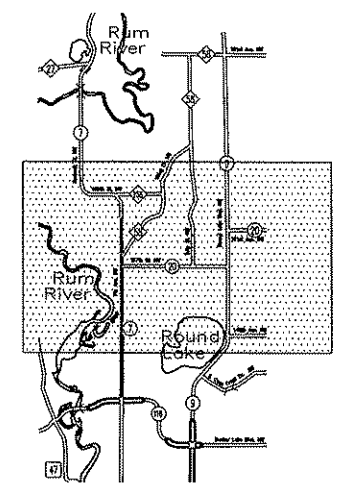


- LEGEND**
- ⊥ TYPE "C" SIGN SUPPORT
 - ⊥ TYPE III BARRICADE SUPPORT
 - ⊥ TYPE "D" SIGN SUPPORT
 - ▨ PROJECT LOCATION

NOTES

Drawing not to scale. Sign spacing shall be in accordance with the MMUTCD.

ANDOVER



DRAWN BY:	MJM			
DESIGNER:	MJM			
CHECKED BY:	TAS			
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.

Thomas A. Schewe
 Thomas A. Schewe, P.E.
 Date: 4/23/01 Reg. No. 20843



ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

FILE NO.	AANOKC0002.00	44
DATE	4/23/01	47

G20-X2

ROAD CLOSED
157th Ave
TO
162nd Ave
FOLLOW DETOUR



NOT TO SCALE

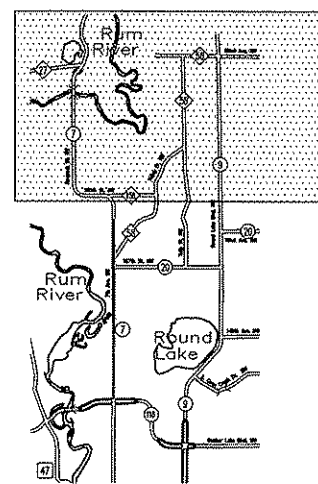
LEGEND

- ⊥ TYPE "C" SIGN SUPPORT
- ≡≡≡ TYPE III BARRICADE SUPPORT
- ⊥≡≡ TYPE "D" SIGN SUPPORT
- PROJECT LOCATION

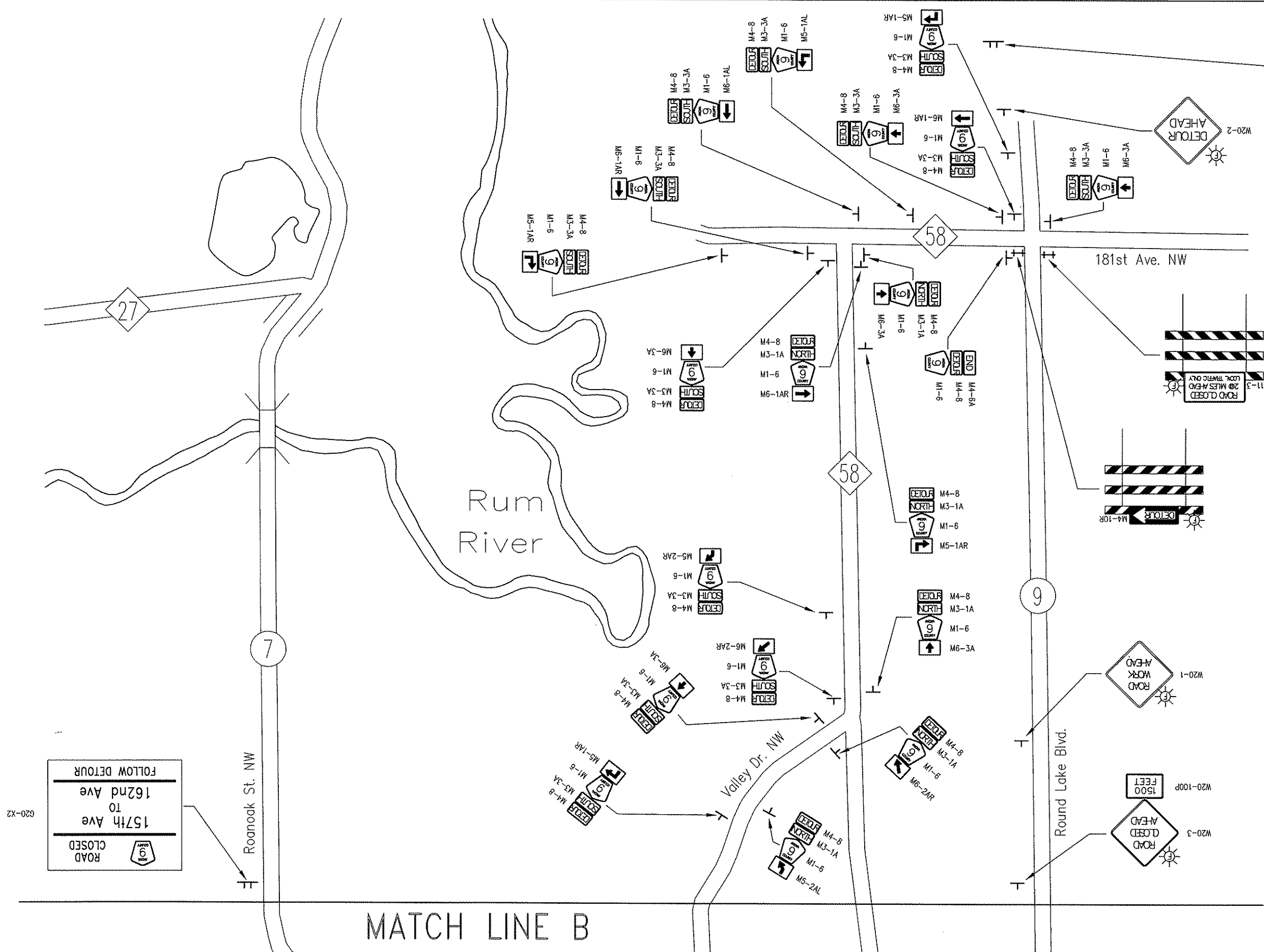
NOTES

Drawing not to scale. Sign spacing shall be in accordance with the MMUTCD.

ANDOVER



DRAWN BY: MJM DESIGNER: MJM CHECKED BY: TAS DATE: 07-18-01 TIME: 8:28 am USER: CPWTSF SHEETS:	<table border="1"> <tr><th>NO.</th><th>BY</th><th>DATE</th><th>REVISIONS</th></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	NO.	BY	DATE	REVISIONS									<p>©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.</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><i>Thomas A. Schweide</i> Thomas A. Schweide, P.E. Date: 4/23/01 Reg. No. 20943</p>	<p>ANOKA COUNTY CSAH 9 (ROUND LAKE BLVD) S.P. 02-609-11 S.P. 02-620-06 S.P. 198-106-03</p>	<table border="1"> <tr><td>FILE NO.</td><td>AANOKC0002.00</td></tr> <tr><td>DATE</td><td>4/23/01</td></tr> </table>	FILE NO.	AANOKC0002.00	DATE	4/23/01	<table border="1"> <tr><td>45</td></tr> <tr><td>47</td></tr> </table>	45	47
NO.	BY	DATE	REVISIONS																					
FILE NO.	AANOKC0002.00																							
DATE	4/23/01																							
45																								
47																								



ROAD CLOSED
157th Ave
TO
162nd Ave
FOLLOW DETOUR

G20-X2

DETOUR NOTES & GUIDELINES

GENERAL INFORMATION:

1. THE DEVICES IN THIS DETOUR PLAN WILL BE FURNISHED, INSTALLED, AND MAINTAINED UNLESS OTHERWISE NOTED.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, JANUARY 2001.

SIGNING:

1. ALL TRAFFIC CONTROL DEVICES OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATION SHALL BE COVERED, REMOVED OR REVISED.
2. WHEN SIGNS ARE INSTALLED, THEY SHALL BE MOUNTED AT THE PROPER HEIGHT AND LATERAL OFFSET AS DETAILED IN THE MMUTCD.
3. ALL ORANGE SIGNS SHALL BE MADE OF DIAMOND GRADE ORANGE REFLECTIVE SHEETING OR AN APPROVED SUBSTITUTE.
4. THE REMOVAL OF THE TEMPORARY SIGNS WILL BE COORDINATED TO ASSURE THAT THE FINAL SIGNS ARE INSTALLED AS NEEDED, OR TEMPORARY SIGNING WILL BE PROVIDED UNTIL THE FINAL SIGNING IS INSTALLED.
5. PERMANENT SIGNING IN ACCORDANCE WITH THE SIGNING PLANS SHALL BE INSTALLED IN THOSE AREAS WHERE CONSTRUCTION IS SUBSTANTIALLY COMPLETED AT THE DIRECTION OF THE ENGINEER AS THE SIGNS ARE NEEDED TO REGULATE, GUIDE, OR WARN TRAFFIC IN THE PROJECT AREA.
6. ALL G20-X1 (ROAD CLOSED BEGINNING MONTH DAY) SIGNS SHALL BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL DATE OF ROAD CLOSURE AND IMPLEMENTATION OF DETOUR SIGNING. SIGNS TO BE REMOVED AT THE TIME OF DETOUR INSTALLATION.

MMUTCD CODE	SIZE	INSERT	QUANTITY
W20-1	48" x 48"		3
W20-2	48" x 48"		3
W20-3	48" x 48"		1
W20-3	48" x 48"		3
W20-100P	36" x 24"		3
M4-6A	24" x 12"		2
M4-8A	24" x 12"		
M1-6	24" x 24"		
M4-8A	24" x 12"		7
M3-1A	24" x 12"		6
M1-6	24" x 24"		1
VAR.	21" x 15"		5
			4
			1
			15

MMUTCD CODE	SIZE	INSERT	QUANTITY
M4-8A	24" x 12"		4
M3-3A	24" x 12"		3
M1-6	24" x 24"		1
VAR.	21" x 15"		4
			3
		1	
		9	
G20-X1	60" x 48"		2
G20-X2	132" x 108"		7
G20-X2	132" x 108"		1
G20-X2	132" x 108"		3

C:\CLIENTS\ANOKA\PROJECTS\TRAFFIC\DETOUR\DETOUR.DWG
 DATE: 07-18-01 TIME: 8:28 am
 USER: CPU15P
 XREFS:

DRAWN BY: M.J.M.				
DESIGNER: M.J.M.				
CHECKED BY: T.A.S.				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.

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.
 Thomas A. Sohrweide, P.E.
 Date: 4/23/01 Reg. No. 20943

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

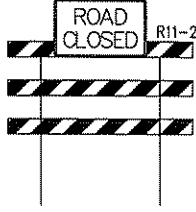
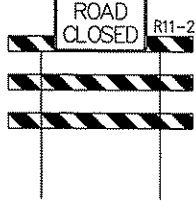
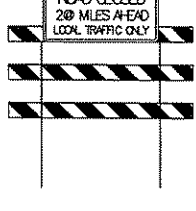
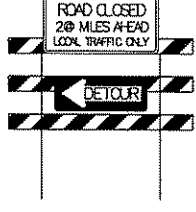
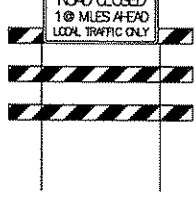
ANOKA COUNTY
CSAH 9 (ROUND LAKE BLVD)
 S.P. 02-609-11
 S.P. 02-620-06
 S.P. 198-106-03

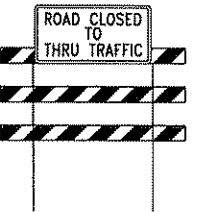
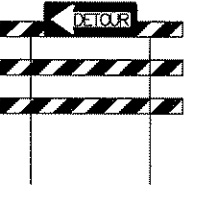
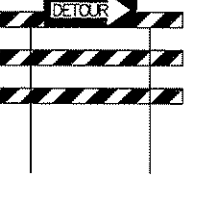

DETOUR PLAN

FILE NO.
 AANOKC0002.00
 DATE
 4/23/01

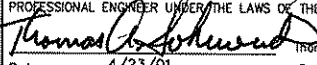

46

47

MMUTCD CODE	SIZE	INSERT	QUANTITY
R11-2 TYPE III	60" x 30" 8 FOOT		4
R11-2 TYPE III	60" x 30" 8 FOOT		4
R11-3 TYPE III	60" x 30" 8 FOOT		1
R11-3 TYPE III M4-10L	60" x 30" 8 FOOT 48" x 18"		1
R11-3 TYPE III	60" x 30" 8 FOOT		1

MMUTCD CODE	SIZE	INSERT	QUANTITY
R11-4 TYPE III	60" x 30" 8 FOOT		1
M4-10L TYPE III	48" x 18" 8 FOOT		1
M4-10R TYPE III	48" x 18" 8 FOOT		1
TYPE "A" FLASHER	-		28

G:\CLIENTS\LA\ANOKA\9802\TRAFFIC\DETOUR\DETOUR.DWG
 DATE: 07-15-01 TIME: 8:28 am USER: CP11SP
 XREFS

DRAWN BY: <u>MJM</u> DESIGNER: <u>MJM</u> CHECKED BY: <u>TAS</u>	NO. BY DATE REVISIONS	©SHORT ELLIOTT HENDRICKSON 1998. ANY USE OR REUSE OF THIS PLAN/DRAWING AND THE CORRESPONDING COMPUTER AIDED DESIGN/DRAFTING FILES WITHOUT THE EXPRESS WRITTEN CONSENT OF SEH, IS PROHIBITED. SEH SHALL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED USE OR REUSE OF THESE MATERIALS, OR DAMAGES RESULTING THEREFROM.	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.  Thomas A. Sohrweide, P.E. Date: <u>4/23/01</u> Reg. No. <u>20943</u>	 ANOKA COUNTY CSAH 9 (ROUND LAKE BLVD) S.P. 02-609-11 S.P. 02-620-06 S.P. 198-106-03	DETOUR PLAN	FILE NO. AANOKC0002.00 DATE 4/23/01	47 47
--	--------------------------	---	---	---	--------------------	--	----------