

GOVERNING SPECIFICATIONS  
THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN

**INDEX**

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40-41A	TEMPORARY SIGNAL
42-45B	TRAFFIC CONTROL

THIS PLAN CONTAINS 48 SHEETS

# MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

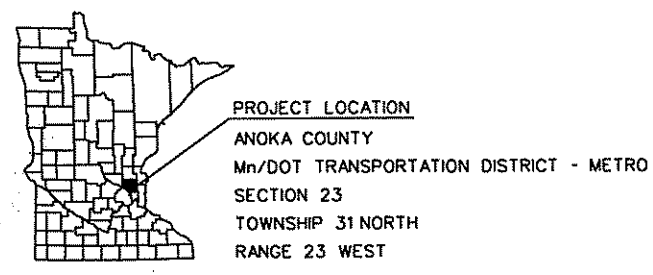
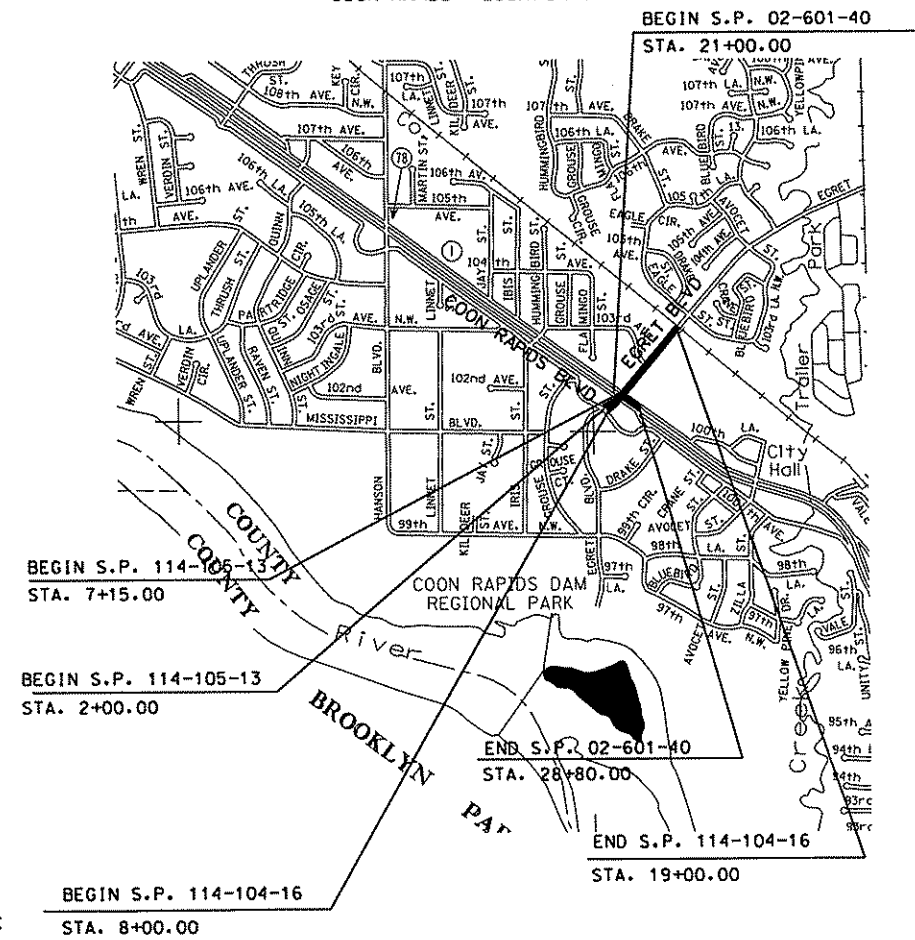
## CONSTRUCTION PLAN FOR GRADING, CURB & GUTTER, BITUMINOUS PAVEMENT, DRAINAGE, AND TRAFFIC SIGNALS

S.P. NO. 02-601-40  
S.P. NO. 114-105-13  
S.P. NO. 114-104-16

LOCATED AT INTERSECTION OF  
COON RAPIDS BLVD. (CSAH 1) & EGRET BLVD.



COON RAPIDS - LOCATION MAP



**PROJECT LOCATION**  
ANOKA COUNTY  
Mn/DOT TRANSPORTATION DISTRICT - METRO  
SECTION 23  
TOWNSHIP 31 NORTH  
RANGE 23 WEST

**NOTES:**  
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

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MN MUTCD INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS"

DESIGN DESIGNATION  
BASED ON: STopping SIGHT DISTANCE  
HEIGHT OF EYE: 3.5 FT. HEIGHT OF OBJECT: 0.5 FT.

S.P. 114-105-13 - EGRET BLVD 2+00 - 7+15

GROSS LENGTH	515.00 FT.	0.098 MILES
BRIDGE LENGTH	0 FT.	0 MILES
EXCEPTION LENGTH	0 FT.	0 MILES
FUNCTIONAL CLASSIFICATION	COLLECTOR	
NO. OF TRAFFIC LANES	2	
NO. OF PARKING LANES EGRET BLVD	0	
STRUCTURAL DESIGN	9 TON	
R VALUE	60	
ESALS	751000	
EXISTING ADT (2003)	2600	
20 YEAR PROJECTED ADT (2023)	5300	
% HCADT	7.1	
DESIGN SPEED	30	

S.P. 114-104-16 - EGRET BLVD 8+00 - 19+00

GROSS LENGTH	1100.00 FT.	0.208 MILES
BRIDGE LENGTH	0 FT.	0 MILES
EXCEPTION LENGTH	0 FT.	0 MILES
FUNCTIONAL CLASSIFICATION	COLLECTOR	
NO. OF TRAFFIC LANES	2	
NO. OF PARKING LANES EGRET BLVD	0	
STRUCTURAL DESIGN	9 TON	
R VALUE	60	
ESALS	2272000	
EXISTING ADT (2003)	10300	
20 YEAR PROJECTED ADT (2023)	13600	
% HCADT	7.1	
DESIGN SPEED	40	

S.P. 02-601-40 - COON RAPIDS BLVD 21+00 - 28+80 (N.B.)

GROSS LENGTH	780.00 FT.	0.148 MILES
BRIDGE LENGTH	0 FT.	0 MILES
EXCEPTION LENGTH	0 FT.	0 MILES
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL	
NO. OF TRAFFIC LANES (N.B.)	3	
NO. OF PARKING LANES EGRET BLVD	0	
STRUCTURAL DESIGN	9 TON	
R VALUE	60	
ESALS	990000	
EXISTING ADT (2003)	4590	
20 YEAR PROJECTED ADT (2023)	5830	
% HCADT	7.1	
DESIGN SPEED	45	

Approved *[Signature]* 4/30/03  
COUNTY ENGINEER - ANOKA

Approved *[Signature]* 5/15/03  
CITY ENGINEER - COON RAPIDS

*[Signature]* 7/30/03  
METRO ASSISTANT DISTRICT ENGINEER-STATE AID  
REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

*[Signature]* 7/30/03  
APPROVED FOR FEDERAL AID AND STATE 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.  
*[Signature]* NAME: THOMAS TABLER, PE  
DATE: 8/15/02 REG. NO. 26861

I HEREBY CERTIFY THAT THIS SIGNAL PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
*[Signature]* NAME: JOHN GRAY, PE  
DATE: 8/15/02 REG. NO. 22457

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

FILE NO. AANOKC0106.00  
SHEET 1 OF 45





STATEMENT OF ESTIMATED QUANTITIES

TAB	LINE	ITEM NO.	ITEM	UNIT	TOTAL QUANTITY		EGRET BLVD S.P. 114-105-13				EGRET BLVD S.P.114-104-16				COON RAPIDS BLVD S.P. 02-601-40			
							ROADWAY		STORM SEWER		ROADWAY		STORM SEWER		ROADWAY		STORM SEWER	
					EST.	FINAL	PART.	NON PART.	PART.	NON PART.	PART.	NON PART.	PART.	NON PART.	PART.	NON PART.	PART.	NON PART.
	71	2545.602	RELOCATE TEMPORARY SIGN PANEL, TYPE C	EA	24									24				
	72	2557.603	INSTALL SALVAGED WOOD FENCE	LF	95					95								
	73	2557.603	INSTALL SALVAGED GALVANIZED CHAIN LINK FENCE	LF	39									39				
	74	2563.601	TRAFFIC CONTROL	LS	1		0.12			0.43		0.07		0.37		0.01		
	75	2563.610	POLICE OFFICER	HR	50									50				
	76	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	DAY	7									7				
	77	2564.531	SIGN PANELS - TYPE C	SF	312.82		117.25			151.57				44				
	78	2564.537	INSTALL SIGN - TYPE C	EA	1					1								
	79	2564.550	HAZARD MARKER X4-2	EA	6		2			2				2				
	80	2564.602	SIGN PANELS TYPE SPECIAL	EA	2		1							1				
	81	2564.602	PVMT MESSAGE (LEFT ARROW) - POLY PREFORM.	EA	9		2	1		5				2	1			
	82	2564.602	PVMT MESSAGE (RIGHT ARROW) - POLY PREFORM.	EA	2									2				
	83	2564.602	PVMT MESSAGE (RR CROSSING) - POLY PREFORM.	EA	1					1								
	84	2564.603	24" SOLID LINE WHITE - POLY PREFORM.	LF	235		35			65				135				
	85	2564.603	24" SOLID LINE YELLOW - POLY PREFORM.	LF	250		80			170								
	86	2564.603	4" BROKEN LINE WHITE - EPOXY	LF	185									185				
	87	2564.603	4" DBL SOLID LINE YELLOW - EPOXY	LF	1,300		420			880								
	88	2564.603	4" SOLID LINE WHITE - EPOXY	LF	2,900		530			1,770				600				
	89	2564.618	ZEBRA CROSSWALK WHITE - POLY PREFORM.	S.F.	1,770		730			280				760				
	90	2565.511	FULL T ACT T CONTROL SIGNAL SYSTEM	SIG SYS	1									1				
	91	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LS	1		0.5			0.5								
	92	2565.601	SALVAGE SIGNAL SYSTEM	LS	1									1				
	93	2573.502	SILT FENCE TYPE MACHINE SLICED	LF	800		480					320						
	94	2575.501	SEEDING	ACRE	0.13							0.13						
	95	2575.502	SEED, MIXTURE TYPE SPECIAL	POUND	4							4						
	96	2575.523	WOOD FIBER BLANKET, CATEGORY 3	SY	660							660						
	97	2575.532	COMMERCIAL FERTILIZER, ANALYSIS 22-0-5	POUND	26							26						
	98	2775.505	SODDING TYPE SALT RESISTANT	SY	920		255			461				204				

BASIS FOR ESTIMATED QUANTITIES:

- 2350 - WEAR COURSE MIXTURE - 110 LB/SY/INCH
- 2350 - NON WEAR COURSE MIXTURE - 110 LB/SY/INCH
- 2357 - BIT, MATERIAL FOR TACK - 0.05 GAL./SY
- 2575 - SEED MIXTURE APPLICATION RATE - 30 LB/ACRE
- 2575 - FERTILIZER - 200 LB/ACRE

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

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DRAWN BY: TGT	1	TGT	9/11/03	REVISED FROM DELETION OF STAGING PLAN AND ADDITION OF DETOUR PLAN PER COUNTY COMMENTS
DESIGNER: TGT				
CHECKED BY: SMM				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
Name: TOM TABLER, PE  
Date: 8/15/02 Reg. No. 26861



ANOKA COUNTY,  
MINNESOTA

STATEMENT OF ESTIMATED QUANTITIES

FILE NO. AANOKC0106.00  
DATE 8/15/02

3  
45

The following Standard Plates, approved by the FEDERAL HIGHWAY ADMINISTRATION, shall apply on this project.

MN/DOT STANDARD PLATES	
3000 L	REINFORCED CONCRETE PIPE
3006 G	GASKET JOINT FOR R.C. PIPE
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133 C	RIPRAP AT RCP OUTLETS
3145 E	CONCRETE PIPE TIES
4006 L	MANHOLE OR CATCH BASIN
4010 H	CONCRETE SHORT CONE & ADJUSTING RING
4011 E	PRECAST CONCRETE BASE
4020 I	MANHOLE OR CATCH BASIN COVER
4022 A	3' X 2' OPENING MANHOLE OR CATCH BASIN COVER
4026 A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4180 J	MANHOLE OR CATCH BASIN STEP
7035 L	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 E	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
7100 G	CONCRETE CURB & GUTTER, DESIGN B618
7100 G	CONCRETE CURB & GUTTER, DESIGN B418
7111 J	INSTALLATION OF CATCH BASIN CASTINGS
7113 A	CONCRETE APPROACH NOSE DETAIL
8000 I	STANDARD BARRICADES
8110 D	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 D	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 SIGNALS
8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 K	PABS POLE FOUNDATION
8121 D	TRANSFORMER BASE AND POLE BASE PLATE
8122 C	PEDESTAL & PEDESTAL BASE
8123 E	POLE & MAST ARM
8124 E	MAST ARM SIGNAL HEAD MOUNTS
8126 F	POLE FOUNDATION

### GENERAL NOTES

- (1) TOPSOIL AND OTHER UNSUITABLE MATERIALS SHALL BE ELIMINATED FROM ABOVE THE "GRADING GRADE" AS FOLLOWS:  
"GRADING GRADE" ON THIS PROJECT IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE.
- (2) UNSUITABLE GRADING MATERIALS SHALL CONSIST OF TOPSOIL AND OTHER ORGANIC SOILS, ALL NON-SELECT GRANULAR MATERIALS, CONCRETE AND ROCK DEBRIS AND OTHER RUBBLE.
- (3) EMBANKMENT GRADING MATERIAL SHALL BE OBTAINED FROM SITE AND SHALL BE USED BEFORE BORROW MATERIAL IS OBTAINED FROM OTHER SOURCES.
- (4) WHEN A PROPOSED ROADWAY MATCHES AN EXISTING ROADWAY, PROVIDE A VERTICAL NOTCH TO THE BOTTOM OF THE INPLACE BASE AND THEN A 1:20 TAPER TO THE BOTTOM OF THE SUBGRADE EXCAVATION UNLESS NOTED DIFFERENTLY ON PLAN.
- (5) MATERIALS TO BE REMOVED AS SUBGRADE, MUCK, AND UNCLASSIFIED EXCAVATION INCLUDE PEAT AND OTHER ORGANIC MATERIAL, CONCRETE, ROCK DEBRIS AND OTHER RUBBLE. BACKFILL WITH SELECT GRANULAR BORROW.
- (6) STRIP TOPSOIL AND SOD FROM ALL AREAS TO BE DISTURBED BY CONSTRUCTION FOR REPLACEMENT AS SLOPE DRESSING.
- (7) PLACE 4" TOPSOIL ON ALL SODDED AREAS. FERTILIZE ALL SODDED AREAS WITH COMMERCIAL FERTILIZER, ANALYSIS 22-0-5 OR ITS NUTRIENT EQUIVALENT AT THE RATE OF 300 LBS. PER ACRE. (FERTILIZER AND APPLICATION INCIDENTAL TO SODDING)
- (8) PROTECT ALL EXISTING PUBLIC OR PRIVATE UTILITIES AND STRUCTURES EXCEPT WHERE INDICATED OTHERWISE IN PLANS.
- (9) COMPACTION OF ALL EMBANKMENT CONSTRUCTION, INCLUDING UTILITY BACKFILLS, SHALL BE OBTAINED BY THE "SPECIFIED DENSITY" METHOD
- (10) COMPACTION OF AGGREGATE BASE SHALL BE ACHIEVED BY THE "PENETRATION INDEX COMPACTION" METHOD
- (11) ALL PAVEMENTS WILL BE COMPACTED IN ACCORDANCE WITH MAXIMUM DENSITY METHOD UNLESS OTHERWISE SPECIFIED.

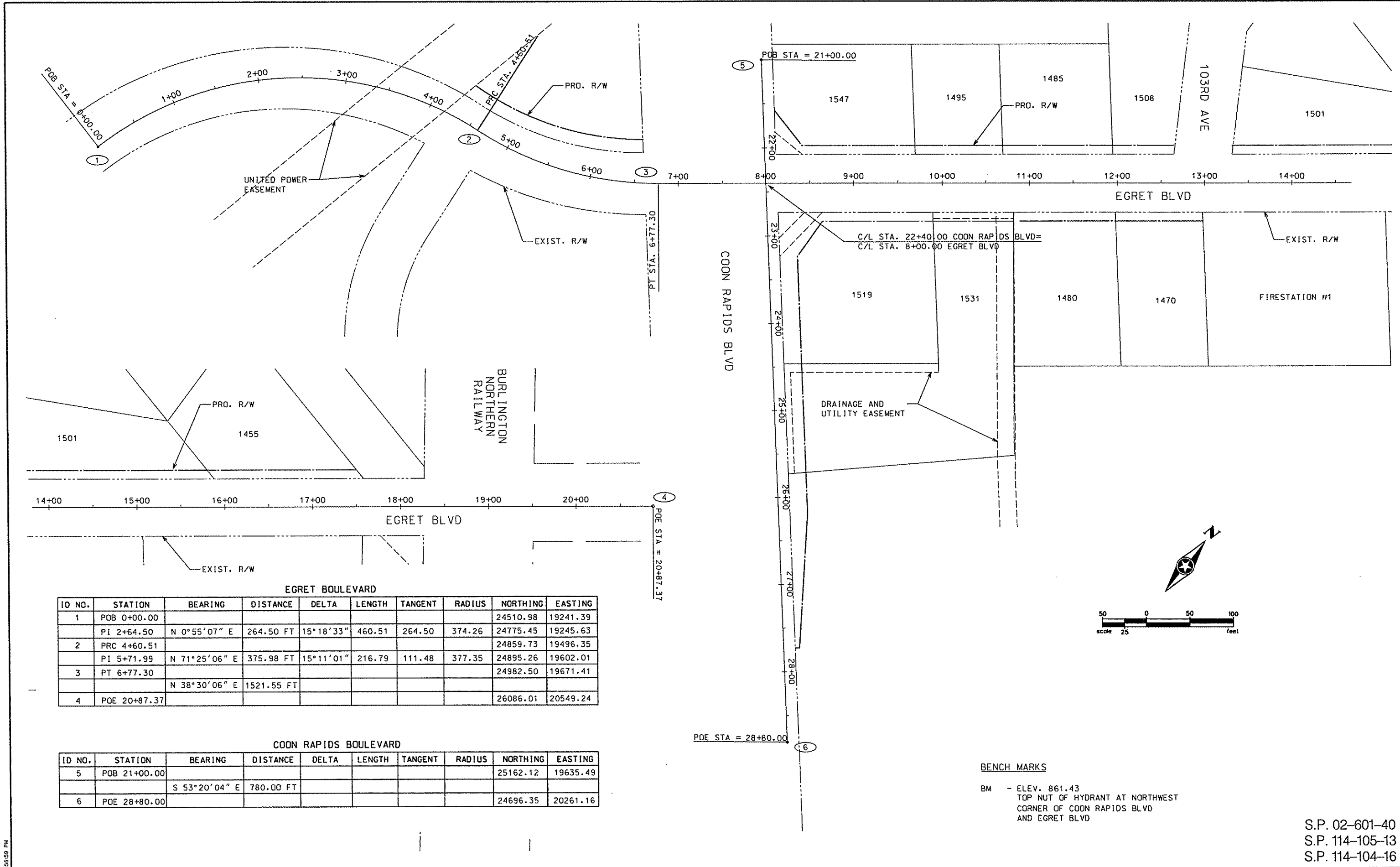
TABULATION INDEX		
TAB	SHEET NO.	DESCRIPTION
A	7	STORM SEWER
B	8	PAVEMENT REMOVAL
C	8	SAWCUT PAVEMENT
D	8	CLEARING & GRUBBING
E	8	SALVAGE & INSTALL FENCE
F	8	FENCE TABULATION
G	8	DRIVEWAY PAVEMENT

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S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

DRAWN BY: <u>TGT</u>	NO.	BY	DATE	REVISIONS
DESIGNER: <u>TGT</u>				
CHECKED BY: <u>SMM</u>				
DESIGN TEAM				

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  Name: TOM TABLER, PE Reg. No. 26861 Date: 8/15/02	 <b>ESEH</b> <small>PHONE: (651) 490-2000 3535 VADNAIS CENTER DR. ST. PAUL, MN 55110</small>	<b>ANOKA COUNTY, MINNESOTA</b>
STANDARD PLATES AND CONSTRUCTION NOTES		
FILE NO.	4	45
DATE	8/15/02	



**EGRET BOULEVARD**

ID NO.	STATION	BEARING	DISTANCE	DELTA	LENGTH	TANGENT	RADIUS	NORTHING	EASTING
1	POB 0+00.00							24510.98	19241.39
	PI 2+64.50	N 0°55'07" E	264.50 FT	15°18'33"	460.51	264.50	374.26	24775.45	19245.63
2	PRC 4+60.51							24859.73	19496.35
	PI 5+71.99	N 71°25'06" E	375.98 FT	15°11'01"	216.79	111.48	377.35	24895.26	19602.01
3	PT 6+77.30							24982.50	19671.41
		N 38°30'06" E	1521.55 FT						
4	POE 20+87.37							26086.01	20549.24

**COON RAPIDS BOULEVARD**

ID NO.	STATION	BEARING	DISTANCE	DELTA	LENGTH	TANGENT	RADIUS	NORTHING	EASTING
5	PGB 21+00.00							25162.12	19635.49
		S 53°20'04" E	780.00 FT						
6	POE 28+80.00							24696.35	20261.16

**BENCH MARKS**

BM - ELEV. 861.43  
 TOP NUT OF HYDRANT AT NORTHWEST  
 CORNER OF COON RAPIDS BLVD  
 AND EGRET BLVD

04/29/2003 12:56:59 PM

DRAWN BY: BEM				
DESIGNER: TGT				
CHECKED BY: TGT				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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.  
*Tom Tabler*  
 Name: TOM TABLER, PE  
 Date: 8/15/02 Reg. No. 26861

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

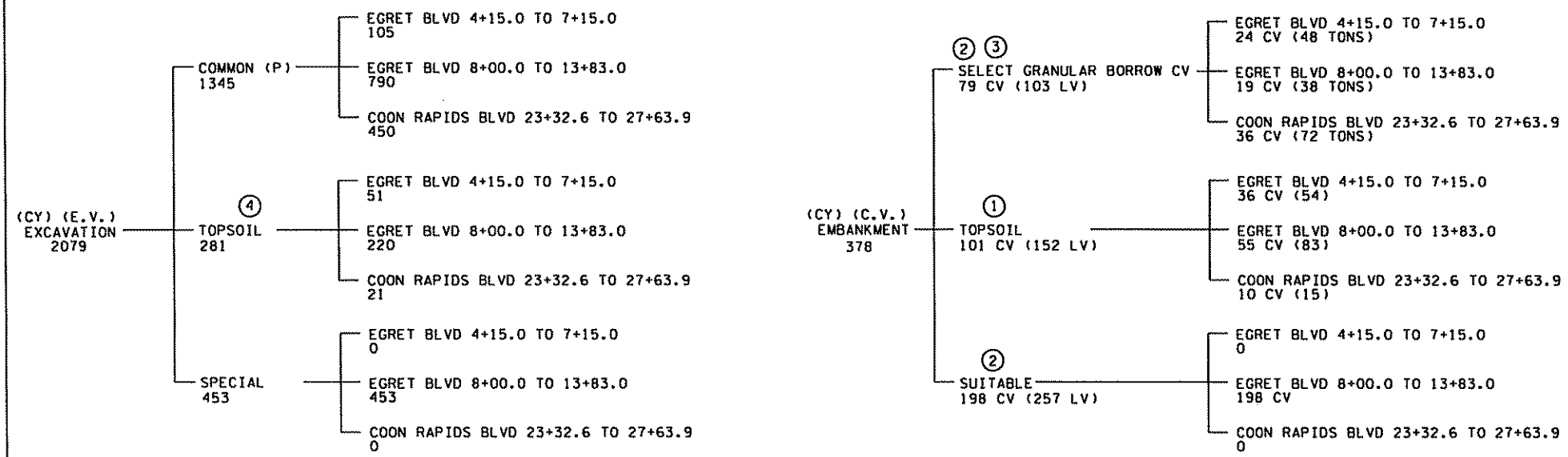
ANOKA COUNTY,  
 MINNESOTA

ALIGNMENT PLAN  
 AND TABULATIONS

FILE NO.	5
AANOKC0106.00	
DATE	8/15/02
	45

S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

## EARTHWORK SUMMARY



**NOTES:**

- ① 150% SHRINKAGE FACTOR USED FROM LOOSE VOLUME (L.V.) TO COMPACTED VOLUME (C.V.).
- ② 130% SHRINKAGE FACTOR USED FROM LOOSE VOLUME (L.V.) TO COMPACTED VOLUME (C.V.).
- ③ 2 x SELECT GRANULAR BORROW CV TO TONS
- ④ INCLUDED FOR PAYMENT UNDER COMMON EXCAVATION

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S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

DRAWN BY: TGT				
DESIGNER: TGT				
CHECKED BY: SMM				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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

*[Signature]*  
Name: TOM TABLER, PE  
Date: 8/15/02 Reg. No. 26861



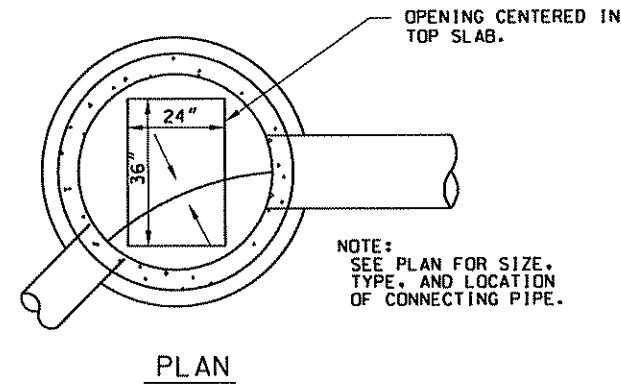
ANOKA COUNTY,  
MINNESOTA

EARTHWORK SUMMARY

FILE NO. AANOKC0106.00	6
DATE 8/15/02	45

STORM SEWER TABULATION																					
LINE	STRUCT NO.	LOCATION		DESIGN				CASTING TYPE	TOP OF CAST	OUTLET ELEV.	DRAINS TO			REMARKS	LINE	12" RCP LF	15" RCP LF	18" RCP LF	21" RCP LF	24" RCP LF	PIPE CL
		STATION	CONST. €	SURVEY LINE	M.H.	C.B.	PAY DEPTH				NO.	% GRADE	INLET ELEV.								
1	1	23+54.4	19.5	C.R.		X	1.95	A	857.87	854.92	2	0.30	854.84								
2	2	23+73.9	6.0	C.R.	G		2.24	B	857.08	854.84	EX			CONNECT TO EXIST 12" STORM PIPE	2	25					V
3	3	26+30.3	6.0	C.R.	G		2.46	B	856.75	854.29	EX			CONNECT TO EXIST 12" STORM PIPE	3	13					V
4	4	26+30.3	18.4	C.R.		X	2.07	A	856.40	854.33	3	0.30	854.29								
5	5	10+25.00	29.5	EGRET		X	4.64	A	857.25	852.61	6	0.30	852.43								
6	6	10+25.00	29.5	EGRET		Y	4.74	A	857.17	852.43	7	0.30	851.74			230					V
7	7	12+55.00	29.5	EGRET		Y	5.04	A	856.78	851.74	8	0.30	850.84								V
8	8	15+55.00	28.3	EGRET		Y	4.58	A	855.42	850.84	9	0.30	850.22				300				V
9	9	17+60.00	22.0	EGRET		4020-54	4.72	A	854.94	850.22	10	0.30	850.09				205				V
10	10	17+60.00	21.5	EGRET		Y	4.79	A	854.88	850.09	11	0.30	850.00						45		III
11	11	17+67.8	51.1	EGRET										850.00	POND	0.30				31	III
12																					
13	12	17+80.7	134.6	EGRET							13	0.00	849.70								
14	13	17+68.9	171.8	EGRET		SPEC.	3.60		853.30	849.70	14	1.35	849.20								V
15	14	17+59.8	207.6	EGRET							EX										III
16																					
17																					
TOTAL															98	230	544	37	76		

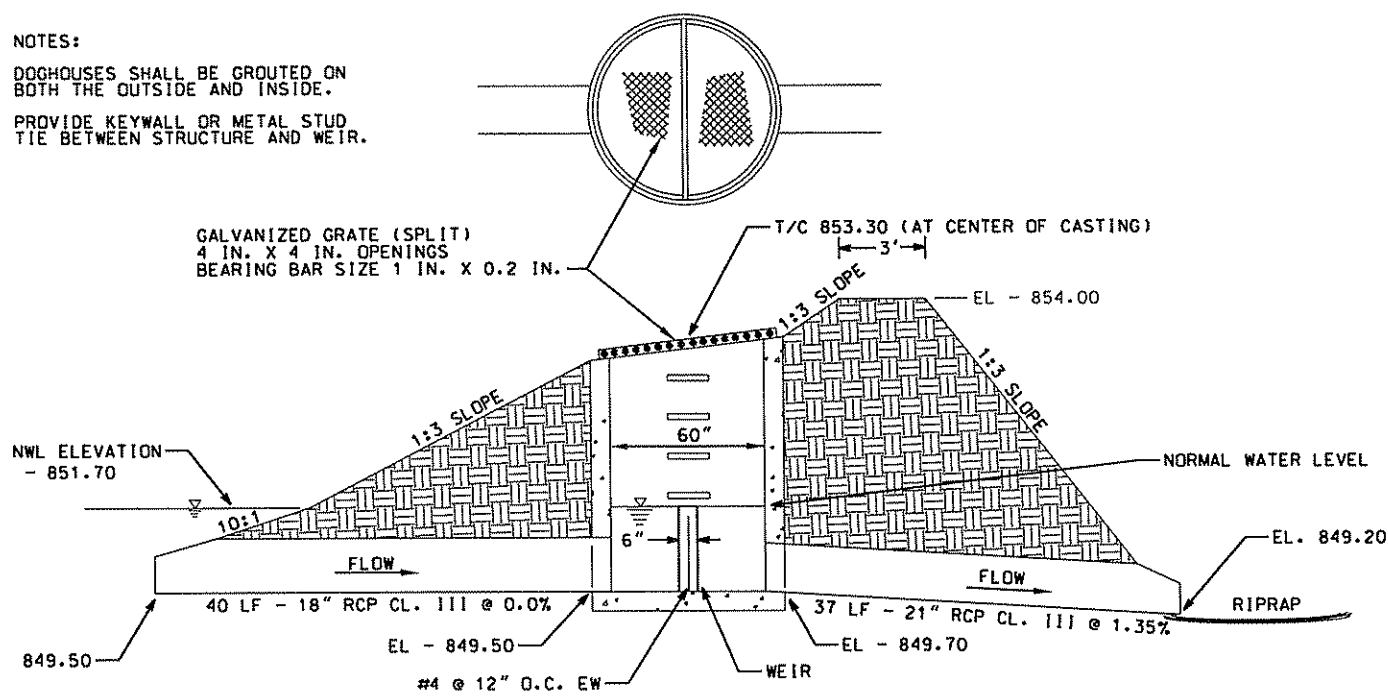
NOTES:  
LT. AND RT. OFFSETS ARE TO CENTER OF STRUCTURE



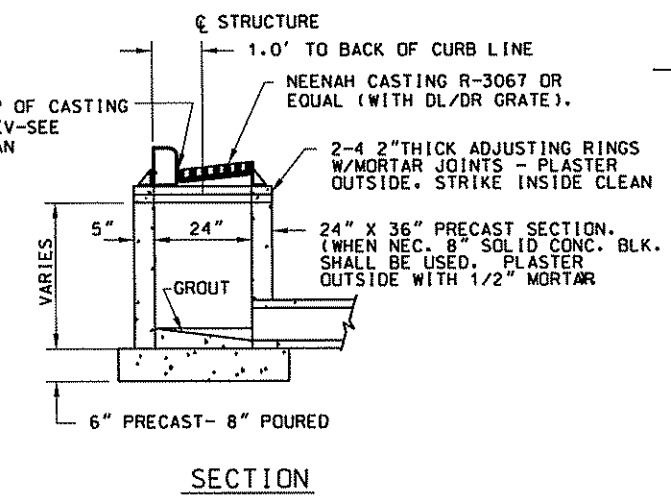
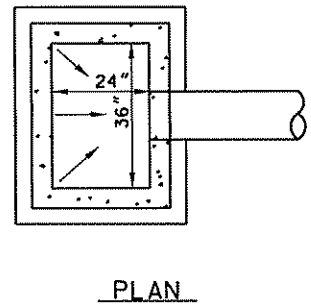
DESIGN	CASTING TYPES
A	NEENAH R-3067 FRAME, GRATE, AND CURB BOX - OR EQUAL
B	NEENAH R-1642 FRAME AND LID - OR EQUAL

DESIGN	CATCH BASIN TYPES	TOTAL BUILD
G	MNDOT 4006, DESIGN G	4.70
X	SEE DETAIL	8.66
Y	SEE DETAIL	23.87
SPEC.	SEE DETAIL	3.6

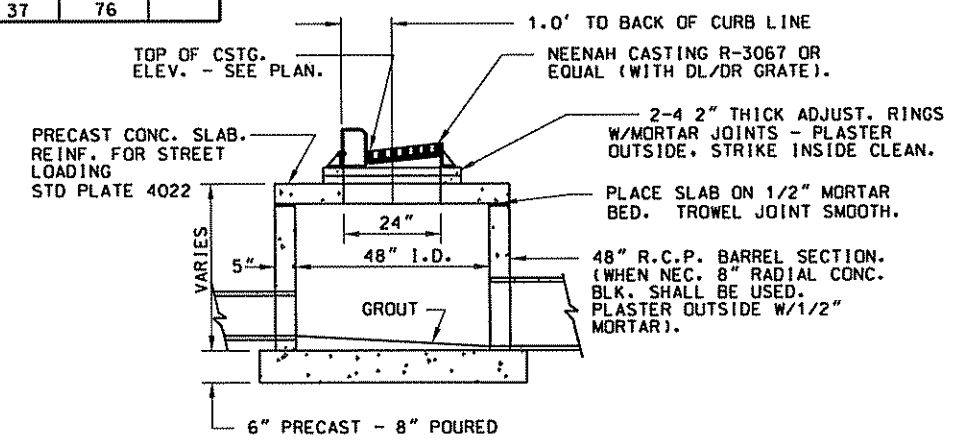
NOTES:  
DOGHOUSES SHALL BE GROUTED ON BOTH THE OUTSIDE AND INSIDE.  
PROVIDE KEYWALL OR METAL STUD TIE BETWEEN STRUCTURE AND WEIR.



SKIMMER STRUCTURE  
NOT TO SCALE



TYPE X CATCH BASIN  
(RECTANGULAR)



TYPE Y CATCH BASIN  
(RECTANGULAR CASTING)

08/06/2003 09:40:35 AM

DRAWN BY: BEM				
DESIGNER: TGT				
CHECKED BY: TGT				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
Name: TOM TABLER, PE  
Date: 8/15/02 Reg. No. 26861

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

ANOKA COUNTY,  
MINNESOTA

STORM SEWER TABULATIONS  
AND DETAILS

FILE NO. AANOKC0106.00	7
DATE 8/15/02	45

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

B PAVEMENT REMOVAL TABULATION							
STATION	LOCATION	BITUMINOUS PAVEMENT	BITUMINOUS DRIVEWAY PAVEMENT	MILL 1 1/2" BITUMINOUS PAVEMENT	CONCRETE SIDEWALK	CONCRETE PAVEMENT	CURB AND GUTTER
		SY	SY	SY	SY	SY	LF
EGRET BLVD.							
4+25 - 7+15	-			933			322
4+61 - 6+84	-	925					
6+68 - 7+10	LT				36		
7+00	LT		55				
8+00 - 12+85	LT						559
8+00 - 13+14	-	2839					
8+00 - 13+83	RT						604
8+04 - 8+46	LT				41		
8+04 - 9+10	RT				77		
8+22 - 8+67	RT		1883				
8+46 - 9+68	LT				66		
8+64 - 9+10	RT					49	
9+25	RT		290				
9+25	RT					29	
9+36 - 9+53	RT					10	
9+38 - 10+52	RT				57		
9+78	LT		167				
9+78	LT					9	
9+85 - 10+85	RT				51		
10+65	RT					60	
10+75 - 10+87	RT				6		
10+94	LT		293				
10+94	LT					13	
11+00	RT					57	
11+05 - 12+83	LT				99		
11+08 - 12+62	RT				81		
12+68	RT		181				
12+68	RT					18	
12+78 - 13+52	RT				39		
13+14 - 17+44	-	648		1564			
13+15 - 17+70	LT						487
13+16 - 15+08	LT				101		
13+88 - 17+70	-						
15+12	LT		124				
15+12	LT					11	
15+18 - 16+48	LT				79		
16+75	LT		195				
16+75	LT					16	
COON RAPIDS BLVD.							
23+28 - 23+70	LT					91	
23+37 - 27+90	LT						453
23+65 - 27+64	LT	256		1564			
23+70 - 24+40	LT					15	
23+80 - 24+05	LT				39		
24+40 - 25+05	LT					47	
25+05 - 25+35	LT						
25+05 - 25+43	LT		440				
25+35 - 25+89	LT				30		
25+89 - 26+14	LT					34	
26+14 - 27+09	LT				65		
27+09 - 27+34	LT					37	
27+34 - 27+52	LT				13		
TOTALS		4668	5192	2497	880	496	2425

F FENCE TABULATION				
STATION	LOCATION	SALVAGE FENCE	INSTALL WOOD FENCE	INSTALL GALVAN. FENCE
		LF	LF	LF
EGRET BLVD.				
8+85 - 9+66	35' LT	95		
8+85 - 9+66	43' LT		95	
COON RAPIDS BLVD.				
23+57 - 23+67	20' LT	39		
23+57 - 23+67	33' LT			39
TOTAL		134	95	39

C SAWCUT PAVEMENT TABULATION			
STATION	LOCATION	BITUMINOUS PAVEMENT	CONCRETE PAVEMENT
		LF	LF
EGRET BLVD.			
4+25	LT		3
4+62	RT		8
4+66 - 6+84	-	308	
6+65	RT		5
7+00	LT	10	
7+15	LT		3
8+10	LT		6
8+64 - 9+10	RT		46
9+10 - 9+37	RT	28	
9+36 - 9+55	RT		18
9+72 - 9+83	LT	11	
10+65	RT		25
10+83 - 11+03	LT	20	
10+94	RT		32
12+64 - 12+80	RT	16	
12+88	LT		3
13+19	LT		3
13+52	RT		5
13+83	RT		3
13+83 - 17+70	-	433	
15+05 - 15+16	LT	11	
16+67 - 16+88	LT	22	
16+82	LT		5
COON RAPIDS BLVD.			
23+30	LT		42
23+70 - 24+40	LT	70	
24+52 - 27+64	LT	624	
25+05 - 25+41	LT	37	
27+52	LT		5
TOTALS		1590	212

E CONCRETE PAVEMENT TABULATION							
STATION	LOCATION	CURB & GUTTER		4" CONCRETE WALK	4" CONCRETE WALK (MEDIAN)	CONCRETE MEDIAN NOSE	CONCRETE PED. RAMP
		B618	B618 MEDIAN				
		LF	LF	SF	SF	EA	EA
EGRET BLVD.							
4+71	MEDIAN					1	
4+71 - 6+78	MEDIAN		422	1377	1179		
4-15 - 7+09	LT	314					1
6+78	LT					1	
8+06 - 12+85	LT	534					
8+06 - 9+62	LT			945			
8+26	LT						1
8+26 - 13+83	RT	596					
8+26 - 9+02	RT			515			
8+36	RT					1	
8+36 - 12+74	MEDIAN		890		1152		
8+40	RT						
9+47 - 10+43	RT			476			
9+93 - 10+73	LT			400			
11+13 - 12+76	LT			790			
11+19 - 12+54	RT			680			
12+74	LT					1	1
13+17 - 17+70	LT	470					1
13+27 - 14+97	LT			808			
15+27 - 16+60	LT			713			
17+00 - 18+00	LT			170			
COON RAPIDS BLVD.							
23+08 - 23+67	LT			398			1
23+57 - 27+64	LT	432					
23+92 - 25+18	LT			640			
25+3 - 25+48	LT			68			
25+65 - 25+88	LT			116			
26+12 - 27+08	LT			481			
27+33 - 27+64	LT			137			
TOTALS		2346	1312	8714	2331	4	5

G DRIVEWAY PAVEMENT TABULATION				
STATION	LOCATION	DRIVEWAY OPENING WIDTH	6" CONCRETE DRIVEWAY PAVEMENT	BITUMINOUS DRIVEWAY PAVEMENT
		LF	SY	SY
EGRET BLVD.				
9+24	RT	25	25	22
9+79	LT	12	18	10
10+63	RT	30	45	
10+88	LT	20	22	16
10+99	RT	27	64	
12+72	RT	15	24	20
15+11	LT	12	18	9
16+76	LT	15	22	22
COON RAPIDS BLVD.				
23+80	LT	25	36	
25+20	LT	16	24	
25+60	LT	16	24	
26+00	LT	25	35	
27+22	LT	25	35	
TOTALS			392	99

D CLEARING AND GRUBBING TABULATION					
STATION	LOCATION	CLEARING	GRUBBING	CLEARING	GRUBBING
		TREE	TREE	ACRE	ACRE
EGRET BLVD.					
5+95 - 6+55	30' RT			0.05	0.05
8+95	31' LT	1	1		
9+60	30' LT	1	1		
9+94	30' LT	1	1		
10+03	36' LT	1	1		
10+29	35' LT	1	1		
10+75	32' LT	1	1		
11+28	35' RT	1	1		
11+85	38' LT	1	1		
12+63	36' LT	1	1		
13+35	25' LT	1	1		
14+92	34' LT	1	1		
15+94	33' LT	1	1		
POND				0.05	0.05
TOTALS		12	12	0.1	0.1

08/01/2003 09:04:50 AM

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

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

*T. Tabler*  
Name: TOM TABLER, PE  
Date: 8/15/02 Reg. No. 26861

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

ANOKA COUNTY,  
MINNESOTA

TABULATIONS

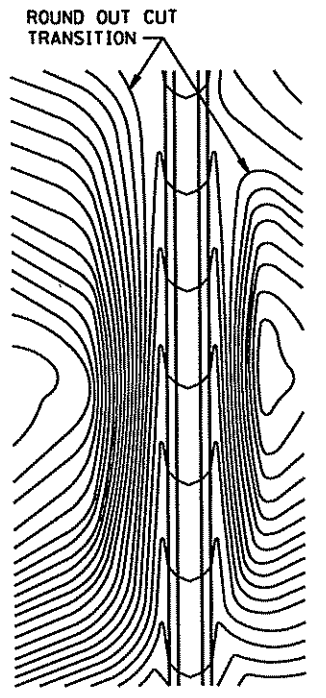
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DATE  
8/15/02

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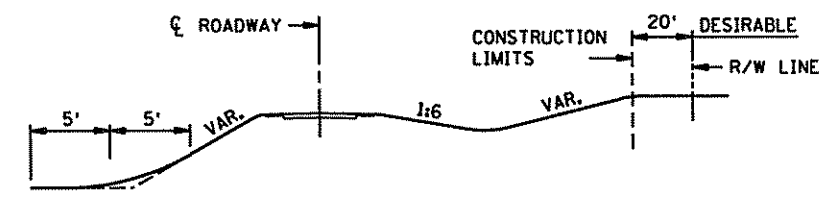
S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16



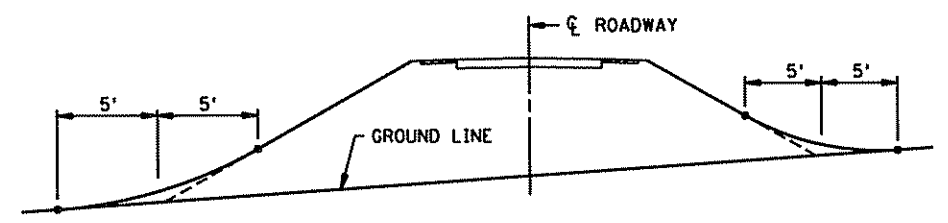
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 FILE NAME: S404K02.SPN



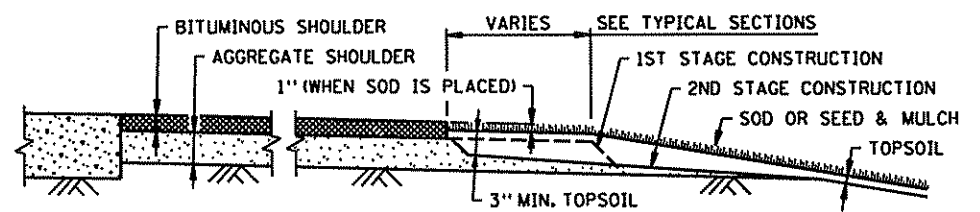
CONTOURING ROAD CUTS



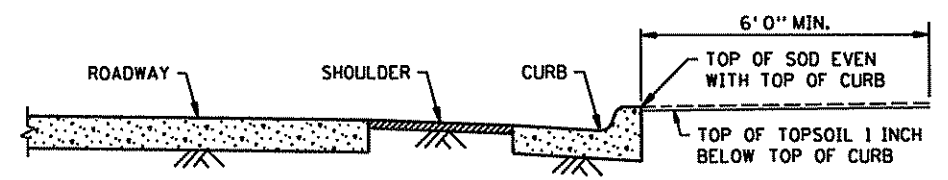
ROUNDING SHOULDERS AND BACKSLOPES



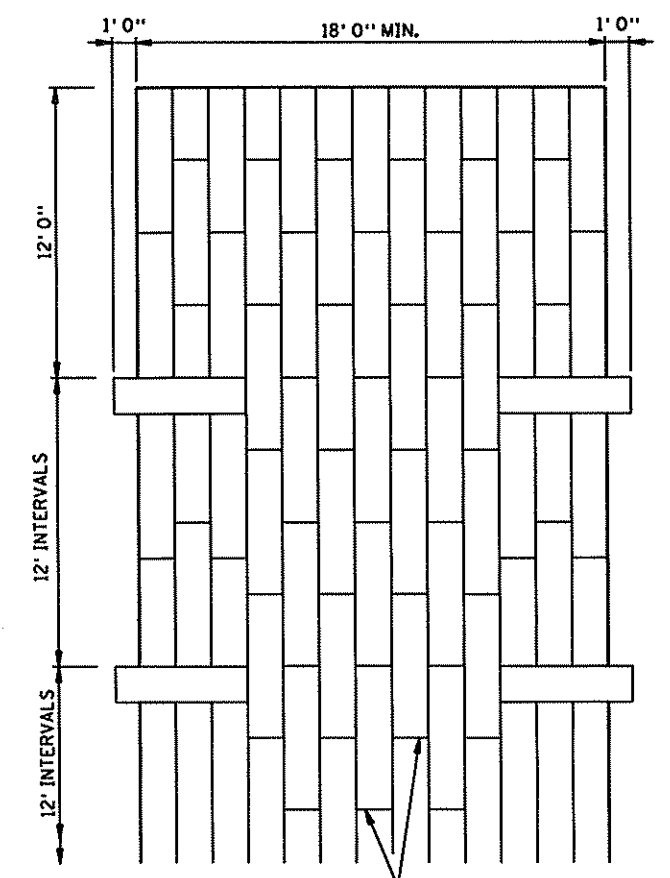
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



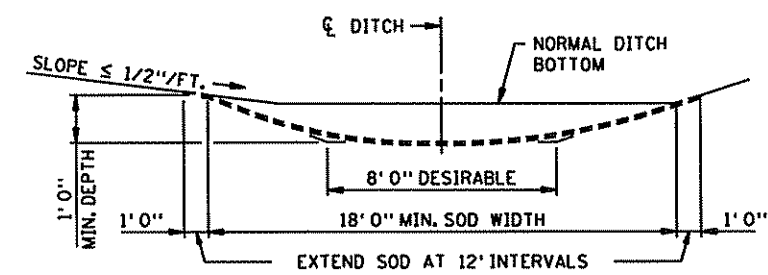
SHAPING AND TOPSOILING INSLOPES



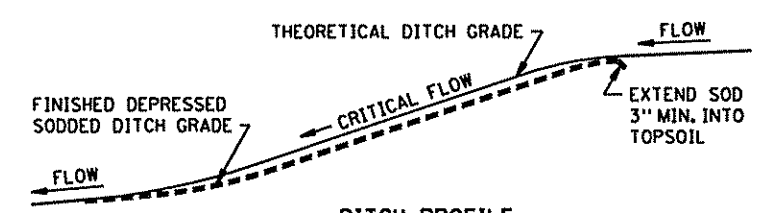
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



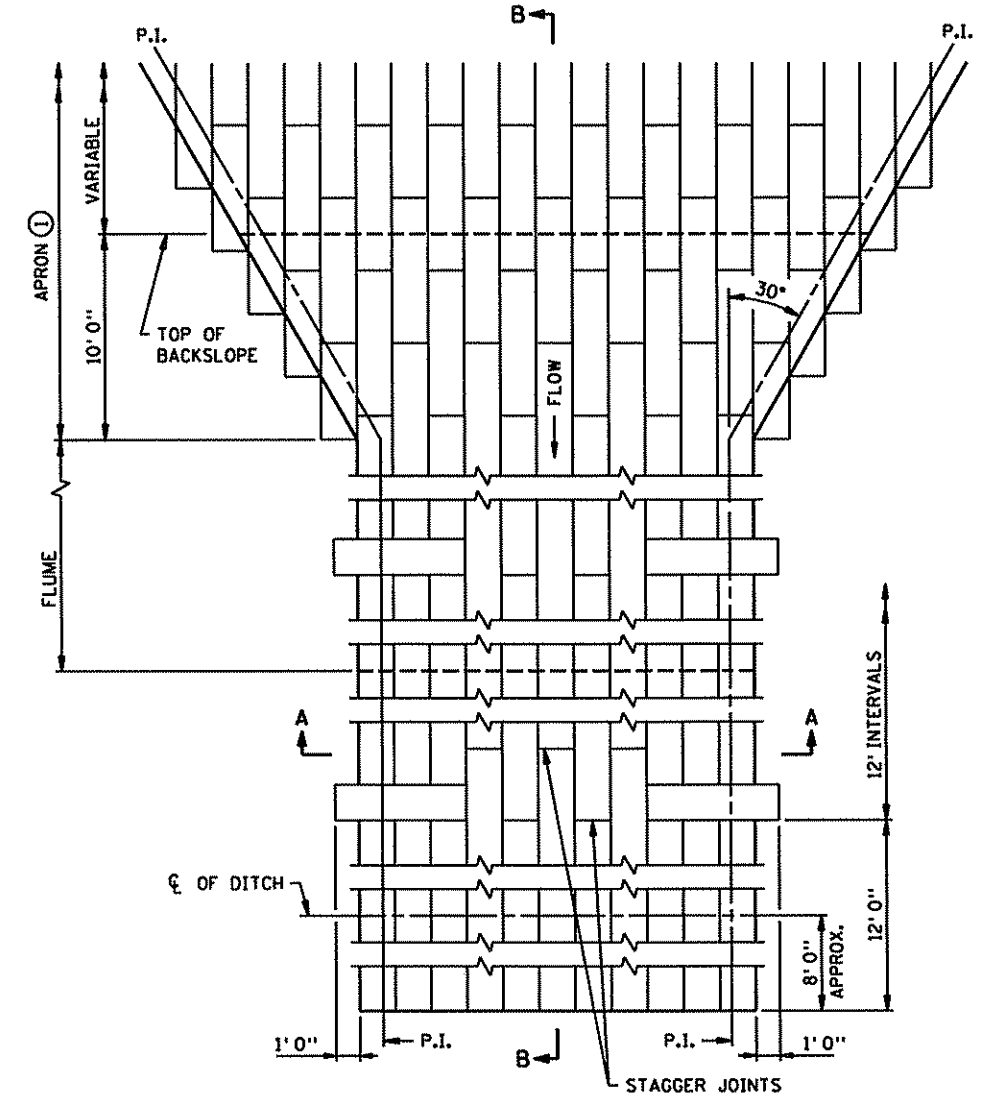
STAGGER JOINTS  
PLAN VIEW



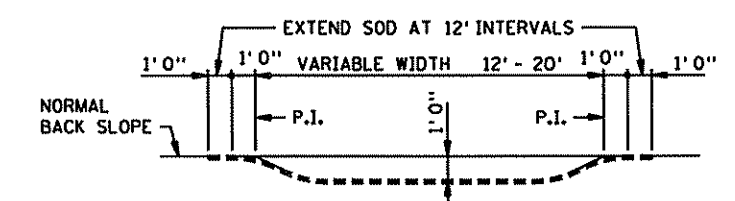
SODDED DITCH CROSS SECTION  
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



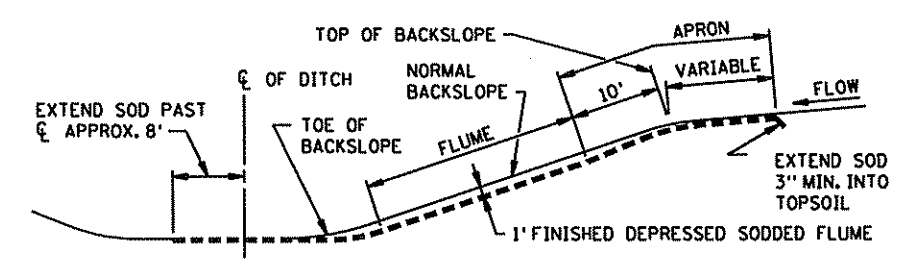
DITCH PROFILE  
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A

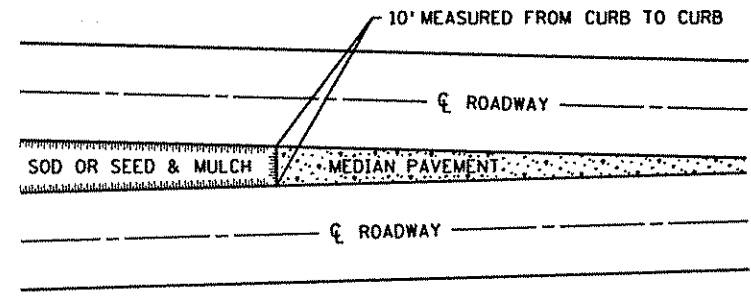


SECTION B-B  
SODDED FLUME DETAILS

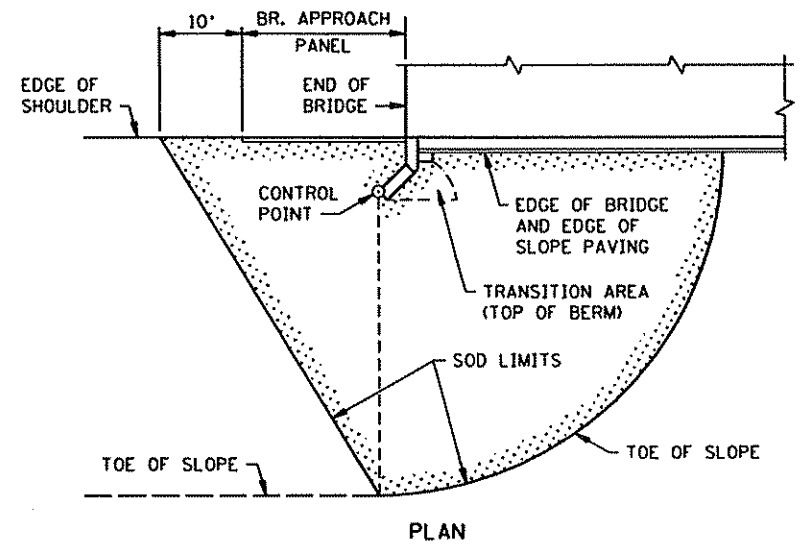
**NOTES:**  
 SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.  
 ① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD APPROVED: NOVEMBER 20, 2002	
STATE PROJ. NO. S.P._02-601-40 SHEET NO. 9 OF 45 SHEETS	

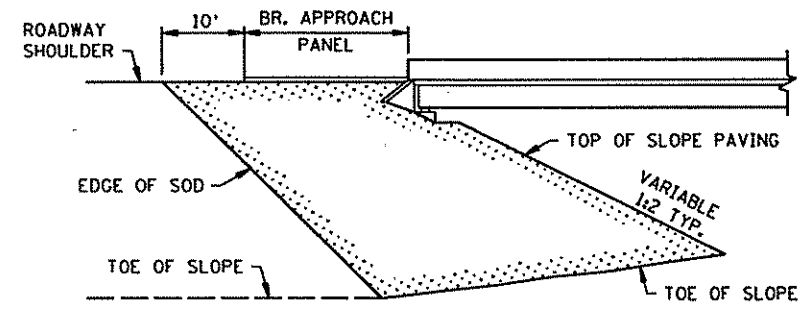
PLOTTED/REVISED: \$\$\$@DATE\$\$\$\$  
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 \$\$\$@PLOTNAME\$\$\$  
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 FILE NAME S406485.SPN



SODDING LIMITS AT GORE AREA

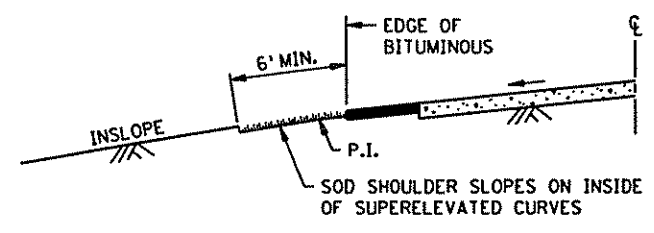


PLAN

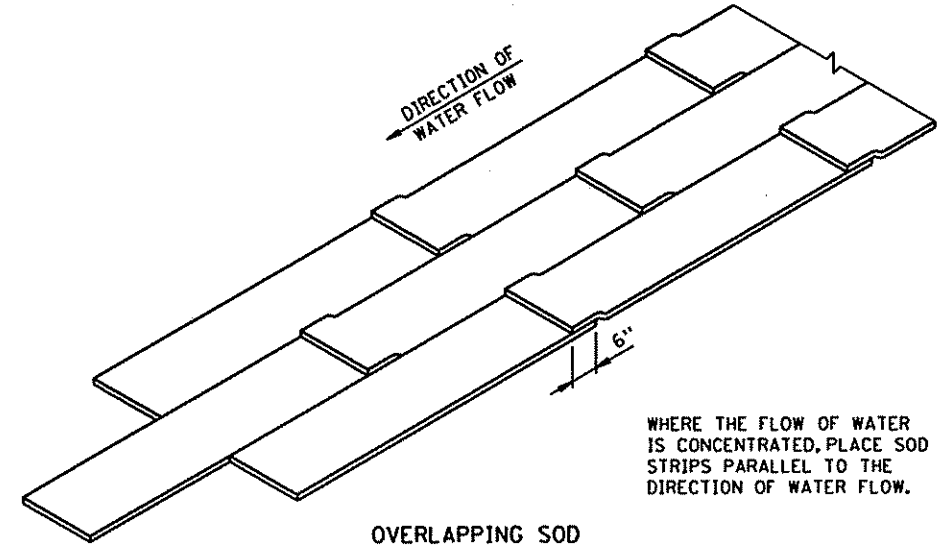


ELEVATION

SODDING LIMITS AT BRIDGE APPROACH FILLS

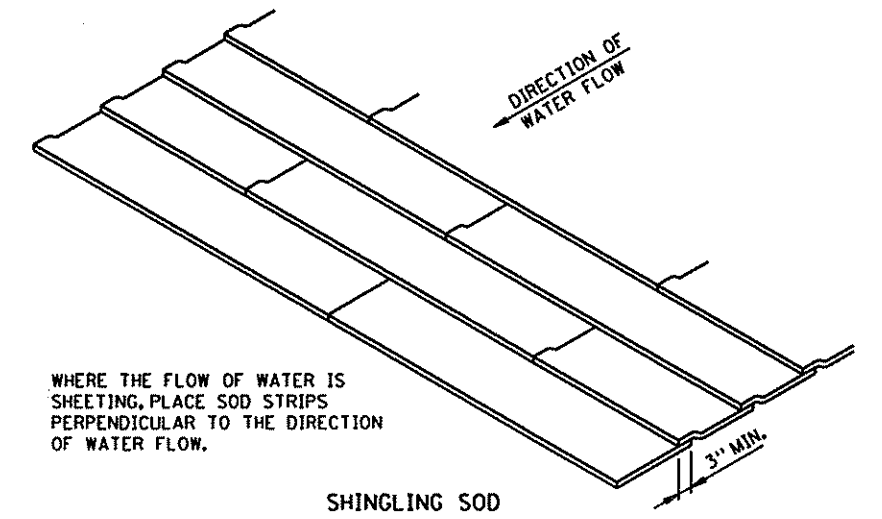


SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

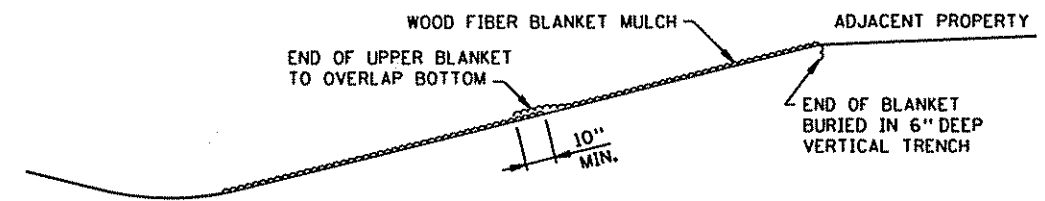
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.



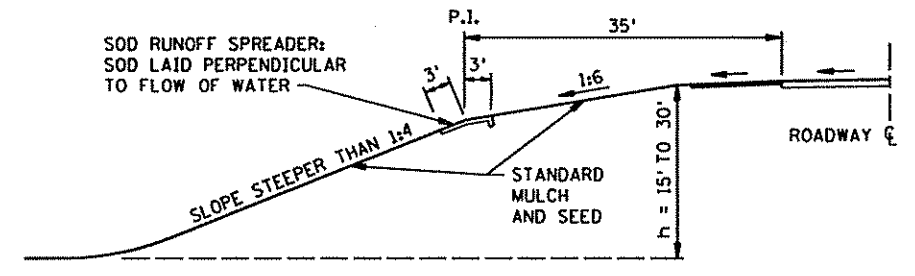
SHINGLING SOD

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

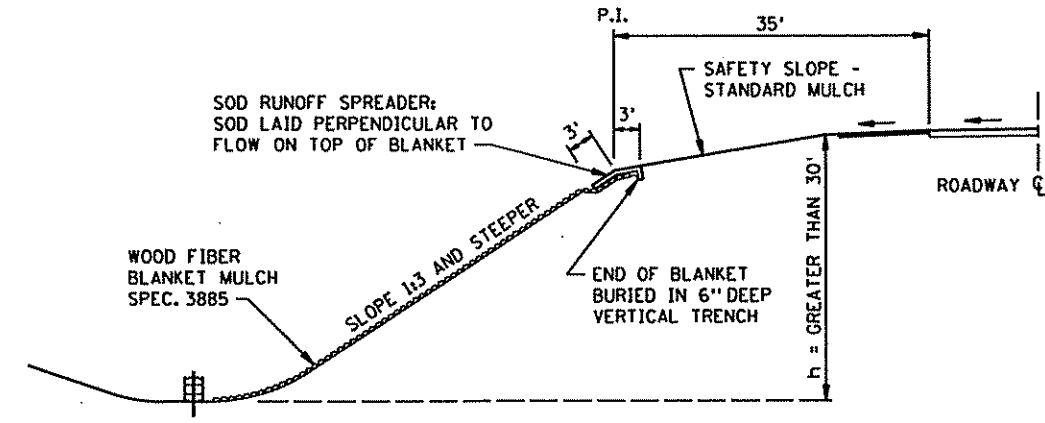
SPECIAL SOD PLACEMENT TECHNIQUES



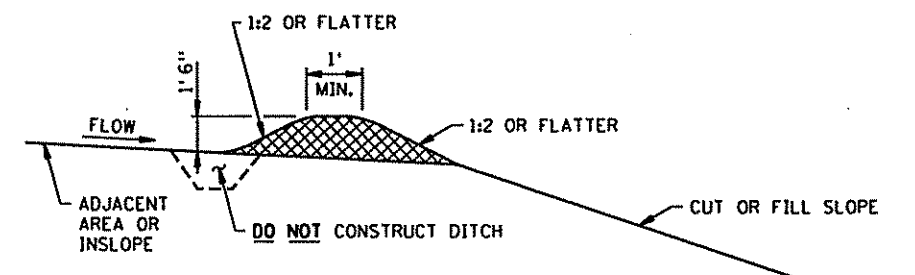
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)



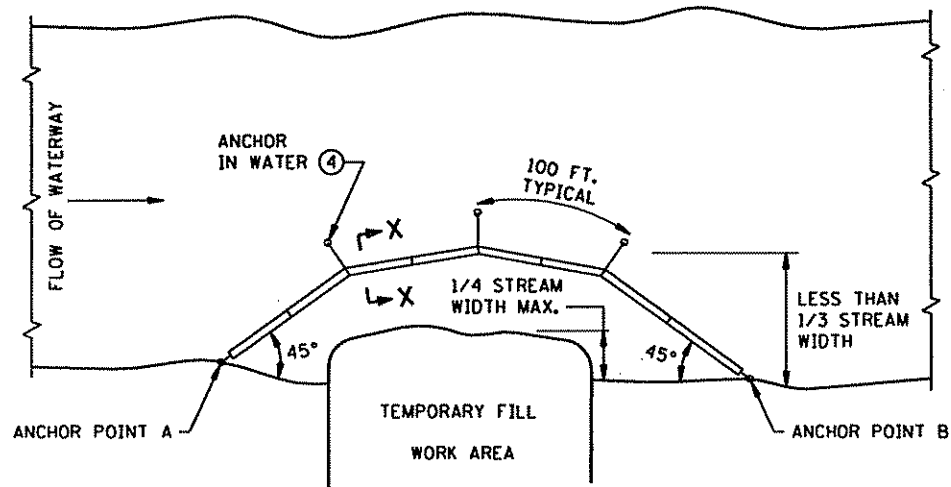
PERMANENT SLOPE PROTECTION DIKE

STANDARD SHEET NO. 5-297.406	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
STANDARD APPROVED: JANUARY 31, 1985	
REVISION DATE: 10-26-2000	STATE PROJ. NO. S.P. 02-601-40 SHEET NO. 10 OF 45 SHEETS

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

\$\$\$PATHFILENAME\$\$\$

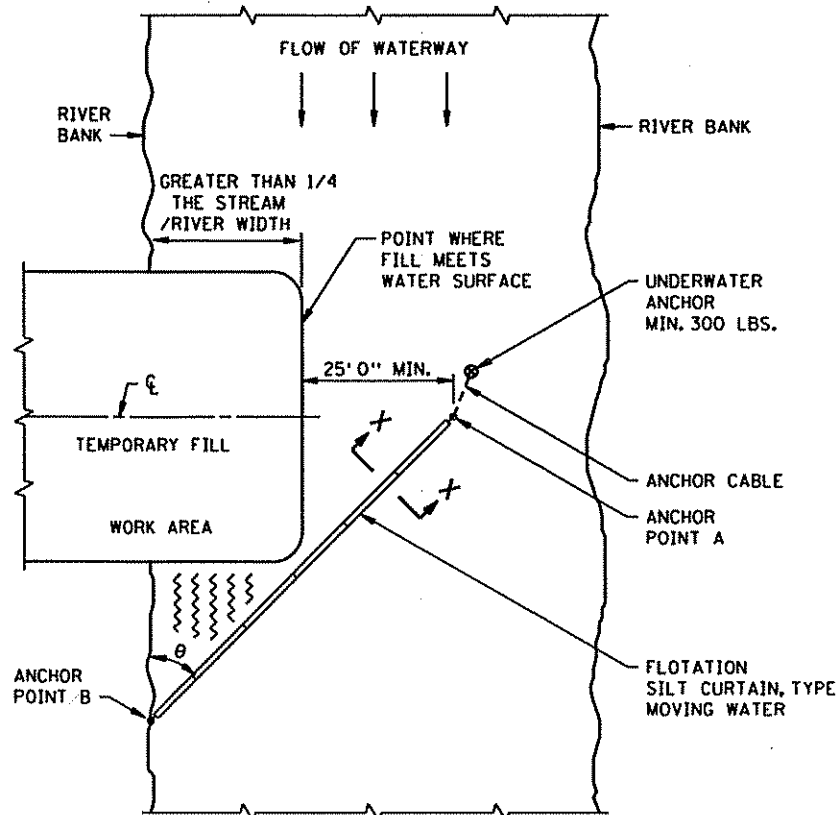
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 FILE NAME: S4051G01.SPN



**PLAN VIEW**  
**FLOTATION SILT CURTAIN - TYPE WORK AREA**  
 (SPEC. 3887)

FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS

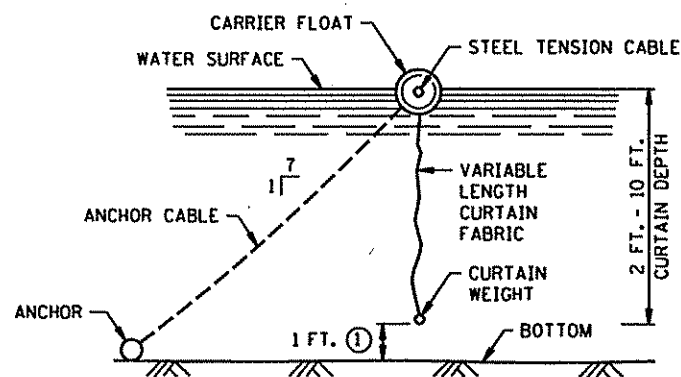
**DESIGN GUIDELINES:**  
 WHEN TEMPORARY FILL ENCLOSES LESS THAN 1/4 OF THE WIDTH OF STREAM.  
 MAXIMUM WATER VELOCITY: 5 FT./SEC.  
 MAXIMUM WATER DEPTH: 11 FT.



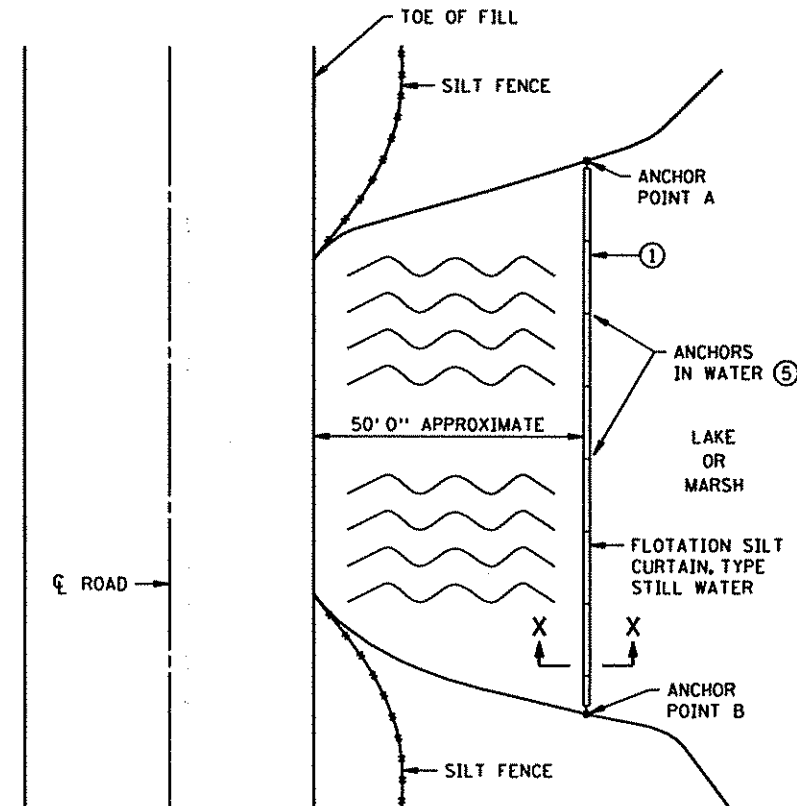
$\angle \theta$	RIVER VELOCITY
45°	SLOW, LESS THAN 3 FT./SEC.
35°	MODERATE, 3 - 5 FT./SEC.

**PLAN VIEW**  
**FLOTATION SILT CURTAIN - TYPE MOVING WATER**  
 (SPEC. 3887)

**DESIGN GUIDELINES:**  
 WHEN TEMPORARY FILL ENCLOSES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.  
 MAXIMUM WATER DEPTH: 11 FT. ①  
 MINIMUM WATER DEPTH: 3 FT.  
 MAXIMUM WATER VELOCITY: 5 FT./SEC.

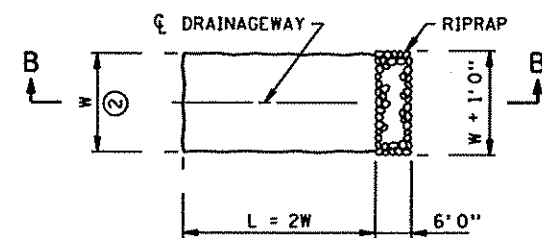


**SECTION X-X**  
**FLOTATION SILT CURTAINS**  
 (SPEC. 3887)

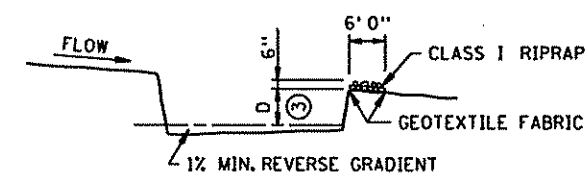


**PLAN VIEW**  
**FLOTATION SILT CURTAIN - TYPE STILL WATER**  
 (SPEC. 3887)

**DESIGN GUIDELINES:**  
 MAXIMUM WATER DEPTH: 11 FT. ①  
 MINIMUM WATER DEPTH: 3 FT.

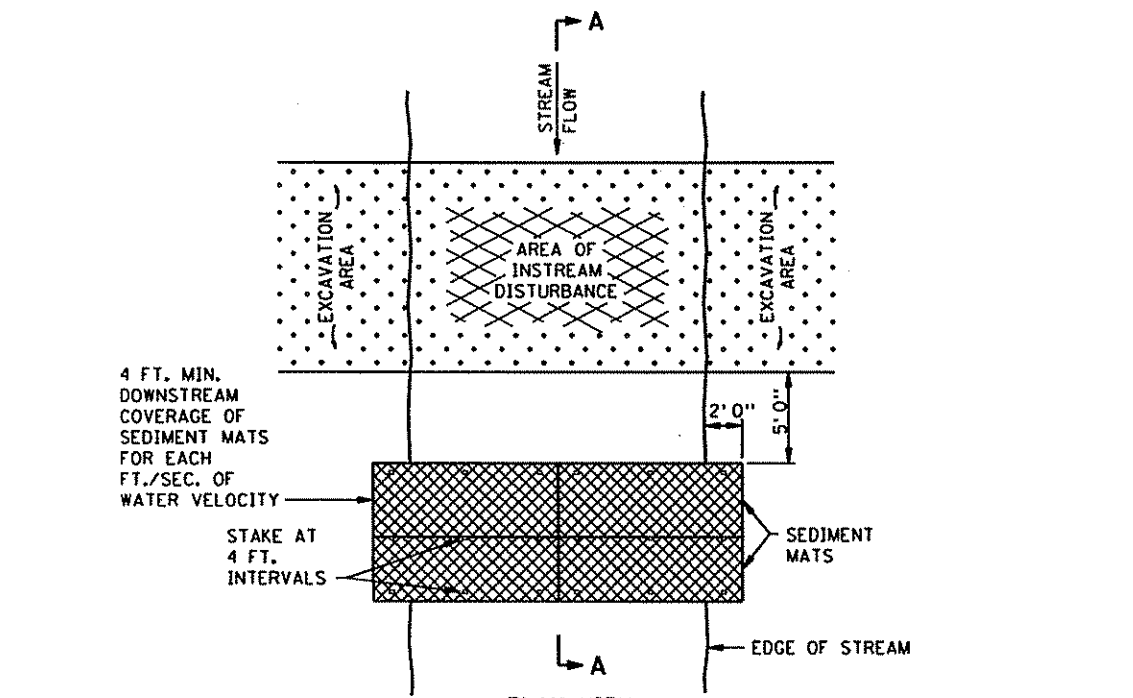


**PLAN**

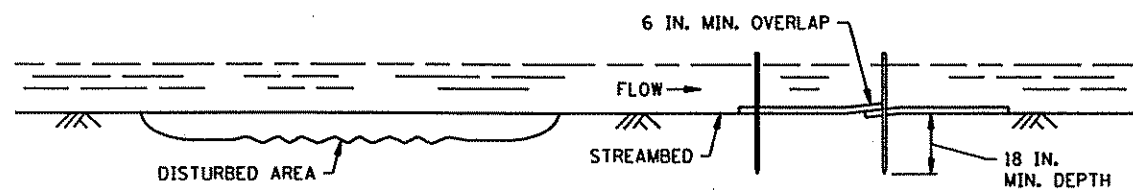


**SECTION B-B**  
**SEDIMENT TRAP DETAIL**  
 (SPEC. 2573)

- 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. MAX. SPACING BETWEEN ANCHORS, MIN. 40 LBS.  
 ⑤ USE ENOUGH ANCHORS TO HOLD SILT CURTAIN IN PLACE.



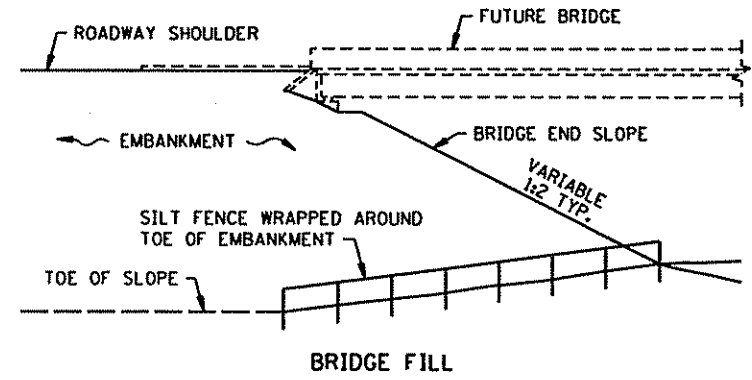
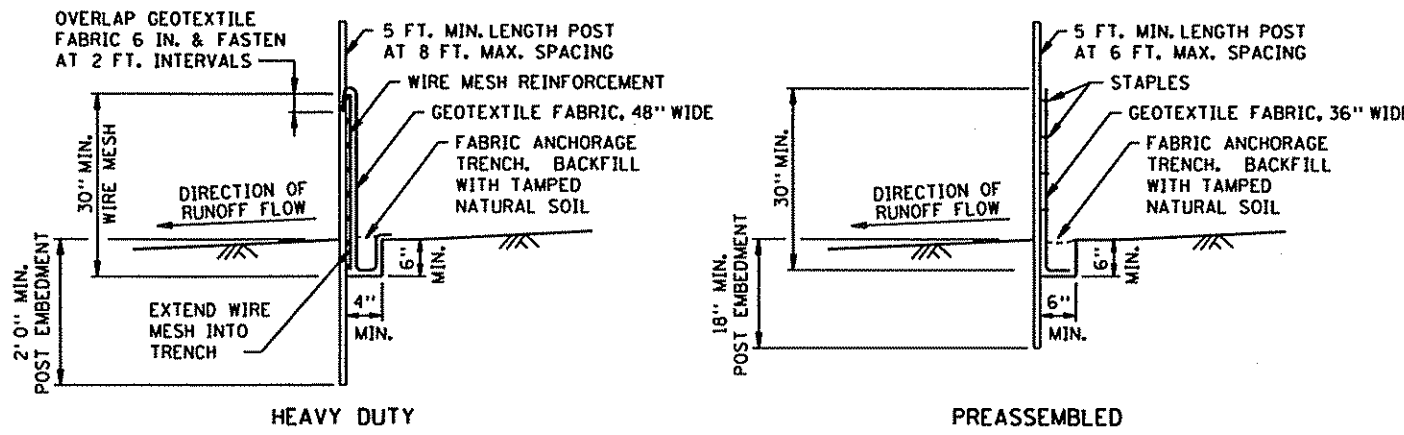
**PLAN VIEW**



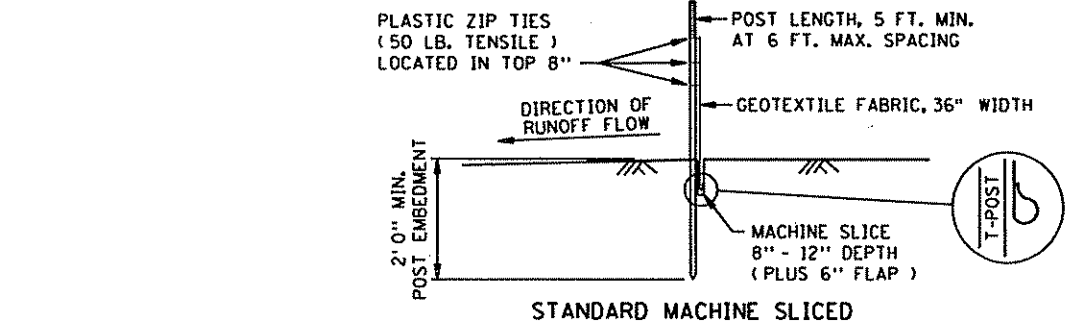
**SECTION A-A**  
**SEDIMENT MAT**  
 (SPEC. 3894)

TYPICAL STREAMBED INSTALLATION  
**DESIGN GUIDELINES:**  
 MAXIMUM FLOW VELOCITY: 5 FT./SEC.  
 MAXIMUM FLOW DEPTH: 2 FT.

PLOT NAME: \$PLOTNAME\$  
 FILE NAME: \$FILENAME\$.SPN  
 PATH & FILE NAME: \$PATH & FILE NAME\$  
 PLOTTED/REVISED: \$DATE\$  
 \$\$\$PATHFILENAME\$\$\$

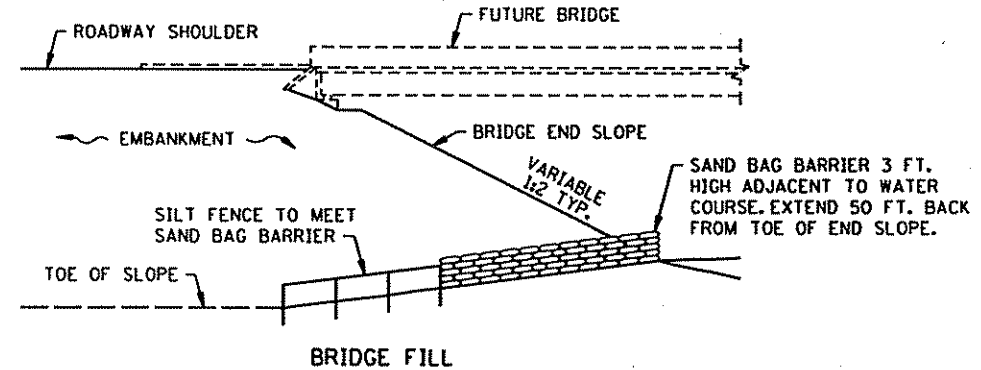
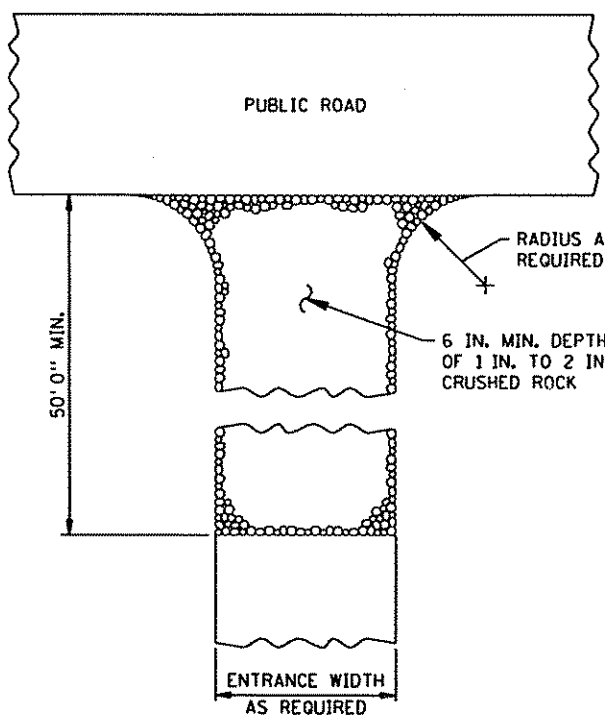


**DESIGN GUIDELINES:**  
 WATER COURSE FLOW VELOCITY: STAGNANT  
 CONTRIBUTING SLOPE AREA: 1/2 ACRE

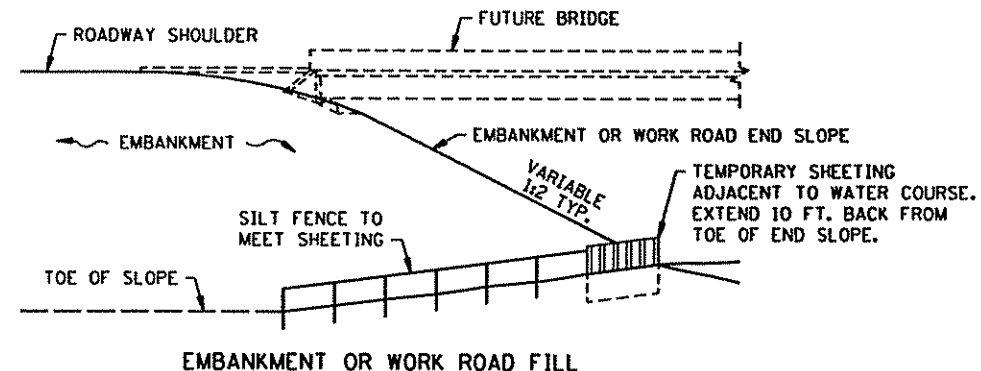
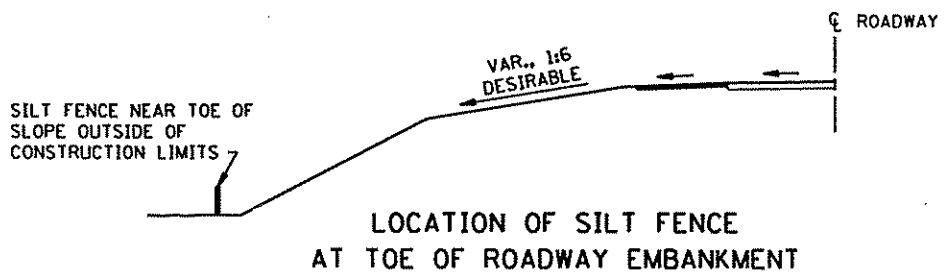


**DESIGN GUIDELINES:**  
 MAXIMUM CONTRIBUTING AREA: 3 ACRES

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



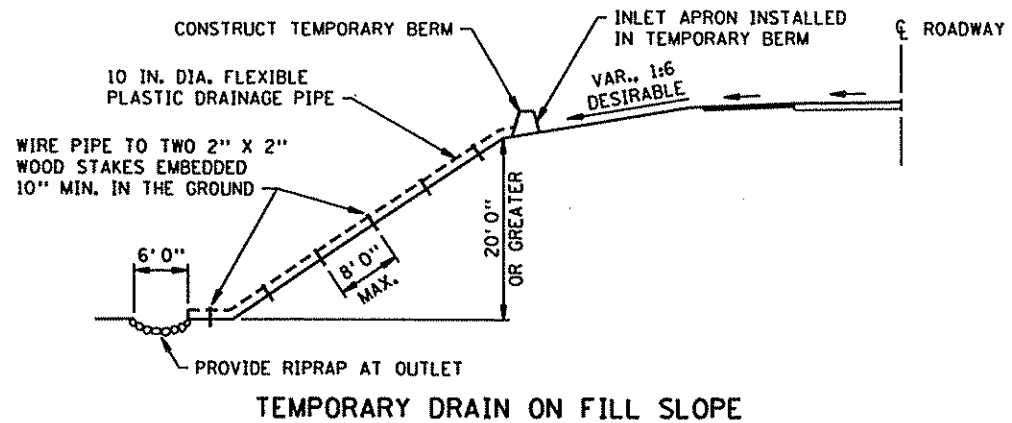
**DESIGN GUIDELINES:**  
 MAX. WATER COURSE FLOW VELOCITY: 7 FT./SEC.  
 CONTRIBUTING SLOPE AREA: 1 ACRE



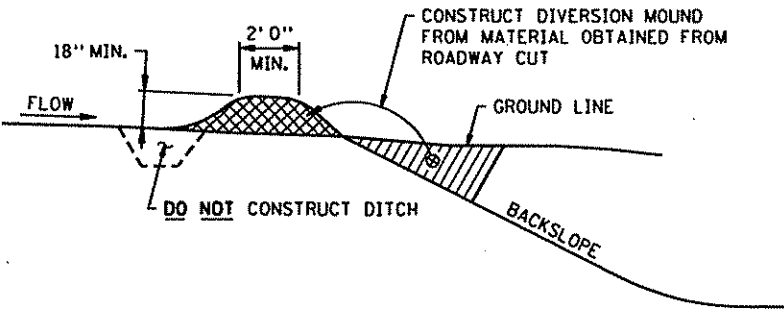
**DESIGN GUIDELINES:**  
 MAX. WATER COURSE FLOW VELOCITY: 15 FT./SEC.  
 CONTRIBUTING SLOPE AREA: 3 ACRES

**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.



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

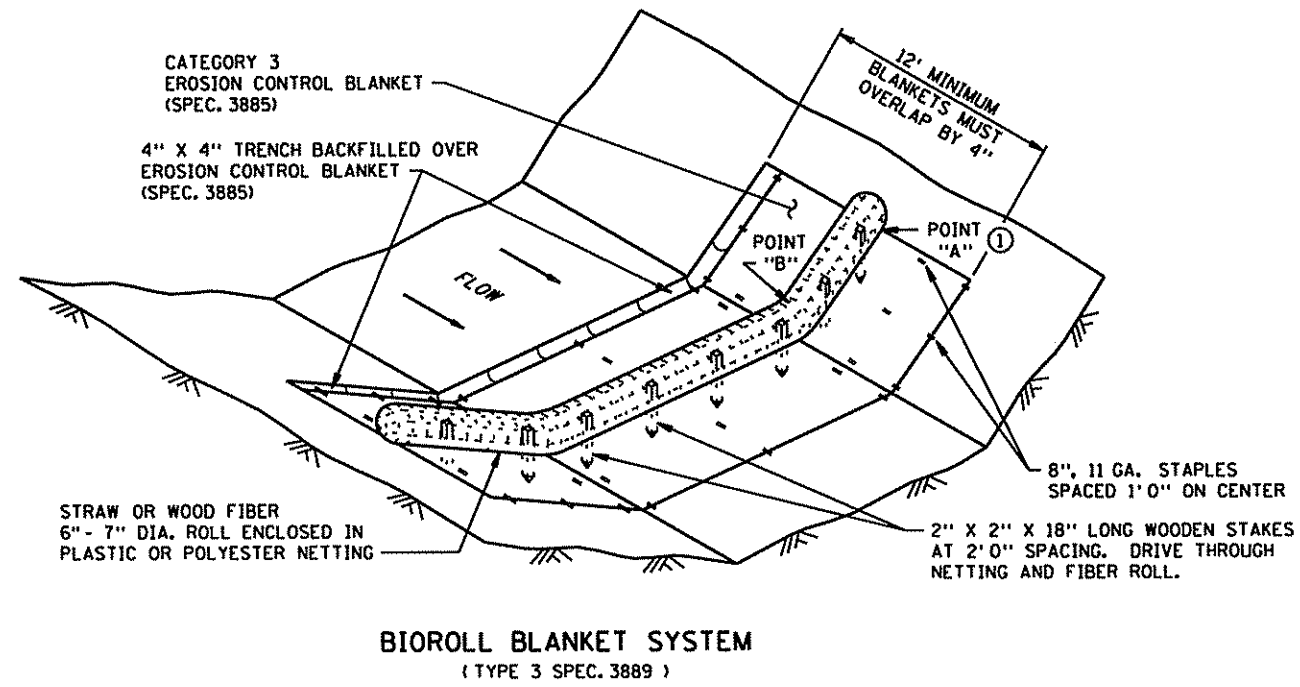


**DESIGN GUIDELINES:**  
 STORM FREQUENCY: 10 YEAR - 24 HOUR  
 MAXIMUM DRAINAGE AREA: 5 ACRES  
 MAXIMUM DIVERSION: GRADE 5%

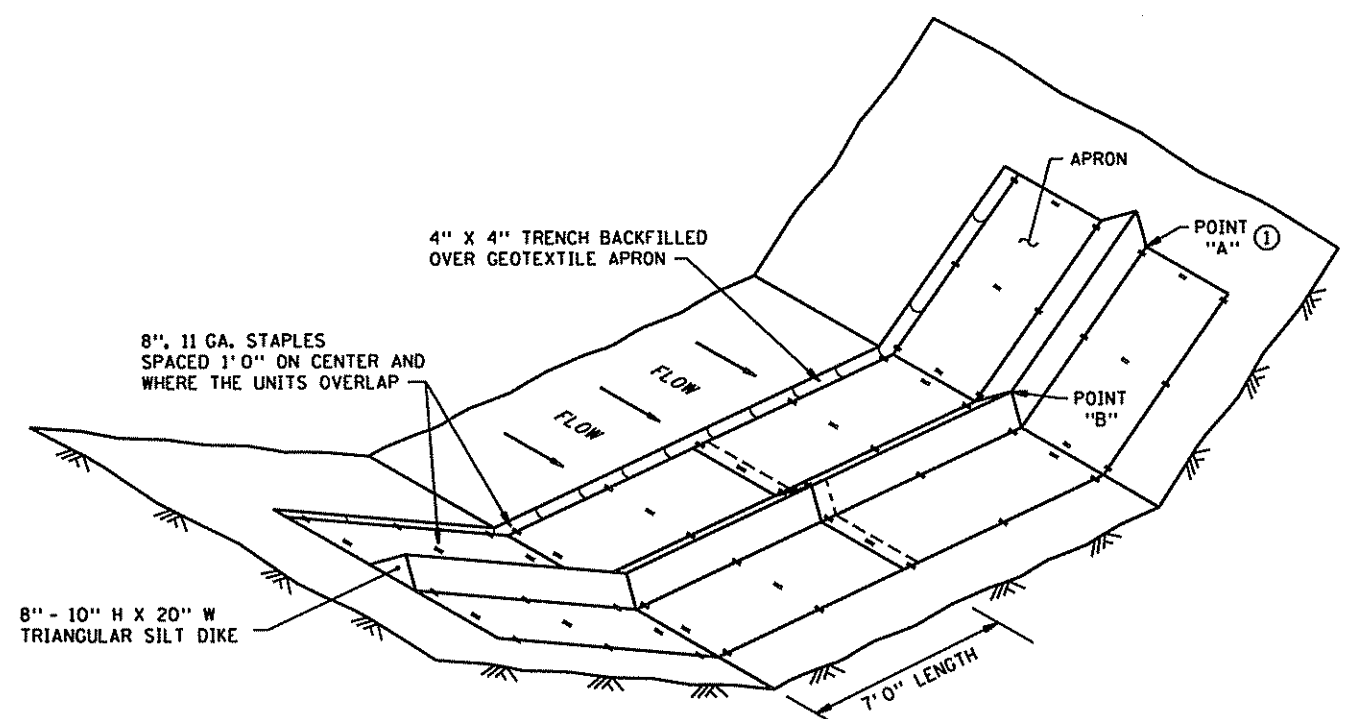
STANDARD SHEET NO. 5-297.405 (2 OF 4)  
 STANDARD APPROVED: JULY 30, 2001

TITLE: TEMPORARY EROSION CONTROL

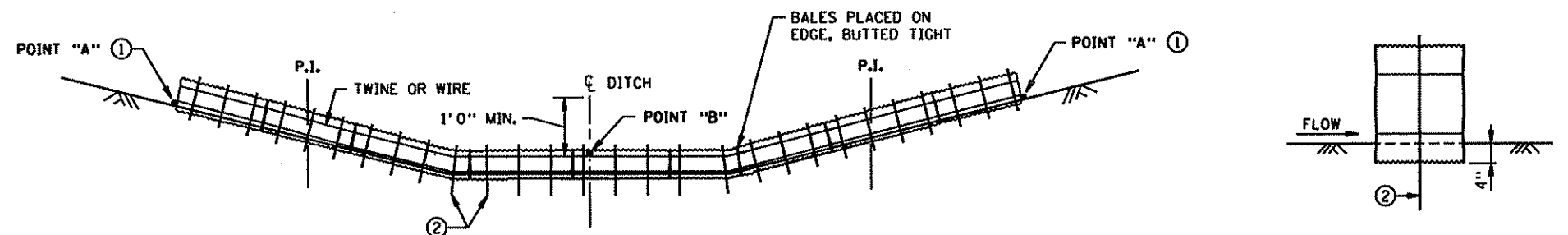
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 FILE NAME: S4053K02.SPN  
 PATH & FILE NAME:



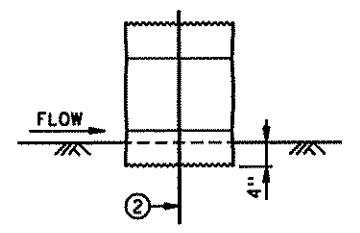
**BIOROLL BLANKET SYSTEM**  
(TYPE 3 SPEC. 3889)



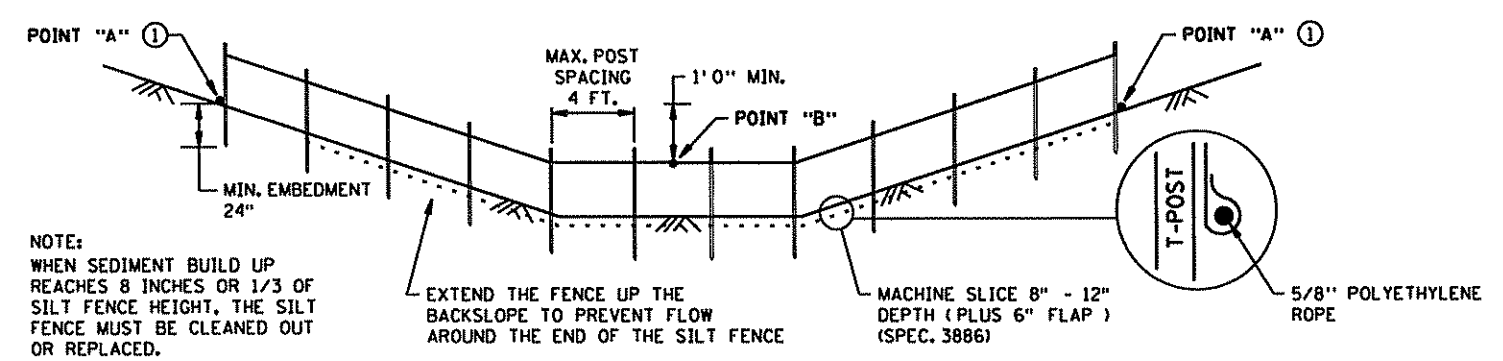
**GEOTEXTILE TRIANGULAR DIKE**  
(TYPE 6 SPEC. 3889)



**BALE DITCH CHECK**  
(USED ON ROUGH GRADED SOIL. REMOVE AFTER ROUGH GRADING IS COMPLETED. CAN BE USED AT WETLAND PERIMETERS ANYTIME)

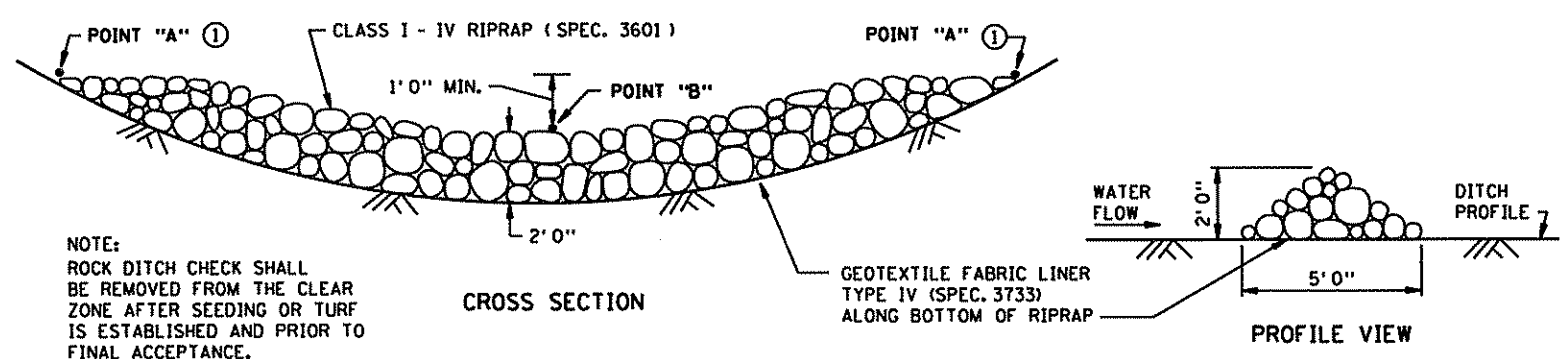


**EMBEDMENT METHOD  
BALE CHECK DETAIL**



NOTE:  
WHEN SEDIMENT BUILD UP REACHES 8 INCHES OR 1/3 OF SILT FENCE HEIGHT, THE SILT FENCE MUST BE CLEANED OUT OR REPLACED.

**MACHINE SLICED SILT FENCE**  
(TYPE 1 SPEC. 3889)



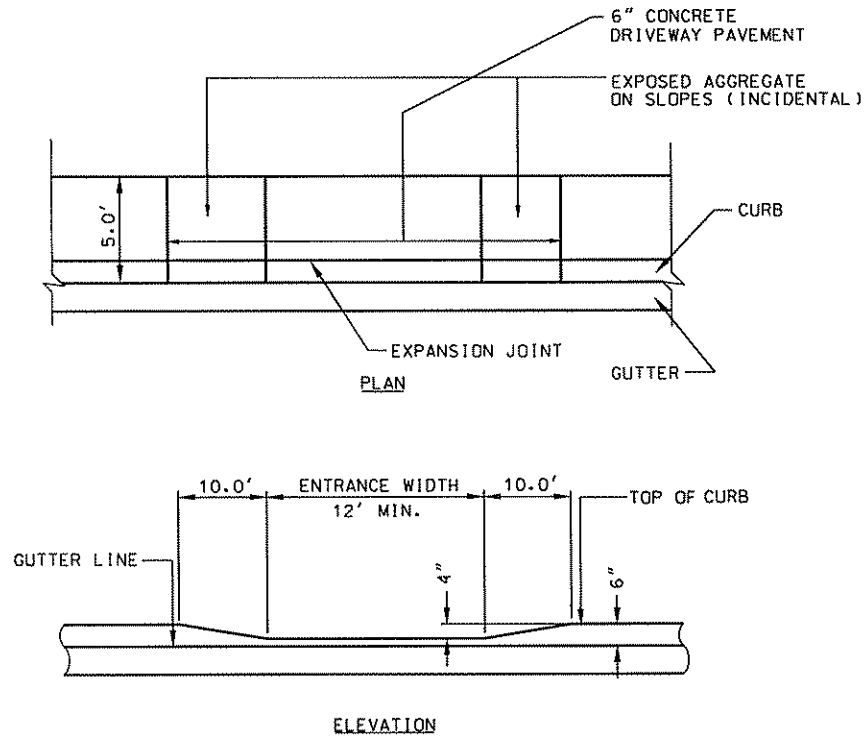
NOTE:  
ROCK DITCH CHECK SHALL BE REMOVED FROM THE CLEAR ZONE AFTER SEEDING OR TURF IS ESTABLISHED AND PRIOR TO FINAL ACCEPTANCE.

**ROCK CHECK**  
(TYPE 7 SPEC. 3889)

**NOTES:**  
SEE SPECS. 2573, 3882, 3885, 3886 & 3889.  
SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM SPACING FORMULA:  

$$\text{SPACING OF DITCH CHECKS (FT)} = \frac{(\text{HEIGHT OF DITCH CHECK (FT)} \times 100)}{\text{DITCH GRADE IN PERCENT}}$$
 ① POINT A MUST BE 1'0" MIN. HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.  
 ② TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10 IN. MINIMUM.

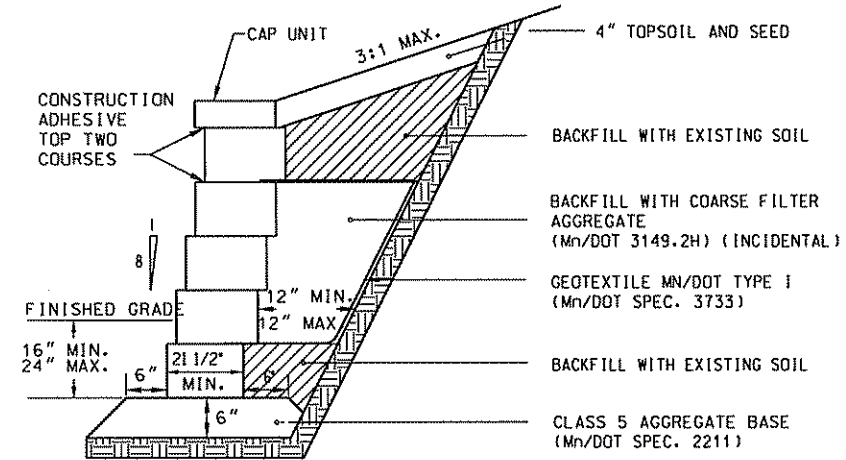
STANDARD SHEET NO. <b>5-297.405 (3 OF 4)</b>	TITLE: <b>TEMPORARY EROSION CONTROL DITCH CHECKS</b>
STANDARD APPROVED: NOVEMBER 5, 2002	
STATE PROJ. NO. <b>S.P. 02-601-40</b> SHEET NO. <b>13</b> OF <b>45</b> SHEETS	



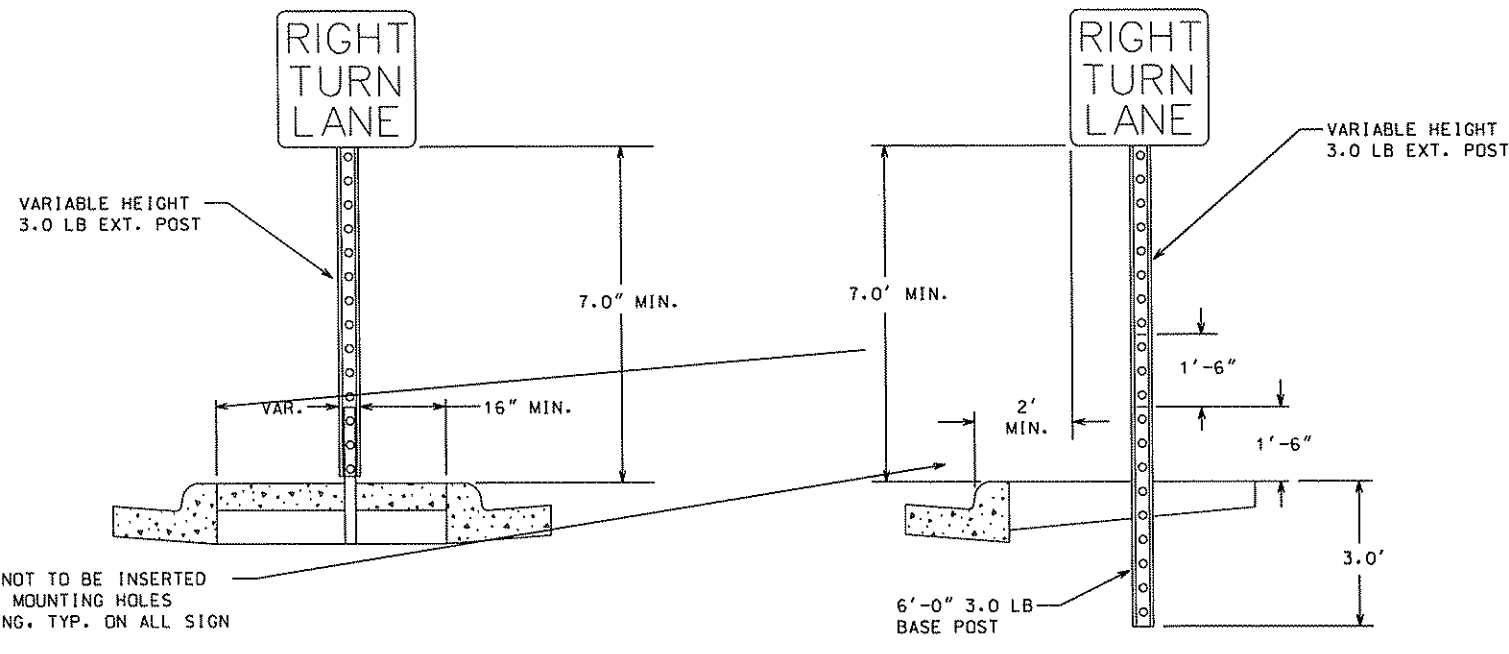
CURB/SIDEWALK DETAIL AT DRIVEWAYS

NOTES:

- 1) MAXIMUM EXPOSED HEIGHT NOT TO EXCEED 2 FEET.
- 2) FILL ALL VOID AREAS IN MODULAR BLOCK UNITS WITH COARSE FILTER AGGREGATE (Mn/DOT SPEC. 3149.2H) (INCIDENTAL)
- 3) MODULAR BLOCK UNITS MUST HAVE INTERLOCKING LIP OR PIN CONNECTIONS.
- 4) RETAINING WALL LOCATION SHOWN ON PLANS.
- 5) WALL BATTER MUST EXCEED 7 DEGREES.
- 6) PROVIDE 4" POLYETHYLENE DRAIN AS DIRECTED BY ENGINEER. (INCIDENTAL)
- 7) CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR PROPOSED MODULAR BLOCK UNITS.
- 8) A SPECIFIC ENGINEERED DESIGN IS REQUIRED FOR WALLS OVER 2 FEET.
- 9) EXCAVATION INCIDENTAL TO WALL



RETAINING WALL DETAIL

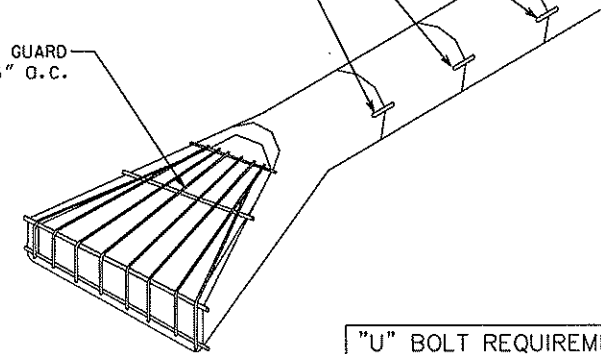


ISLAND MOUNT BREAK-AWAY SIGN INSTALLATION TYPICAL

GROUND POST MOUNT SIGN INSTALLATION TYPICAL

GLAVANIZED "U" BOLT FASTENERS - 2 PER JOINT LOCATED ON EACH SIDE OF THE PIPE AT 60° FROM THE TOP Q OF THE PIPE. TIE THREE JOINTS UNLESS OTHERWISE NOTED ON THE PLAN

GALVANIZED TRASH GUARD 1/2" DIA. ROD AT 6" O.C.



CONCRETE APRON

"U" BOLT REQUIREMENTS		
PIPE SIZE	BOLT DIA.	WIDTH
21" & LESS	1/2"	24"
24" TO 36"	5/8"	24"
42" TO 54"	3/4"	24"
60" & GREATER	1"	24"

SEE DETAIL FOR RIPRAP AT R.C.P. APRONS.

TELSPAR INSERT NOT TO BE INSERTED MORE THAN THREE MOUNTING HOLES DEEP INTO FOOTING. TYP. ON ALL SIGN INSTALLATIONS.

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

DRAWN BY: TGT				
DESIGNER: TGT				
CHECKED BY: SMM				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

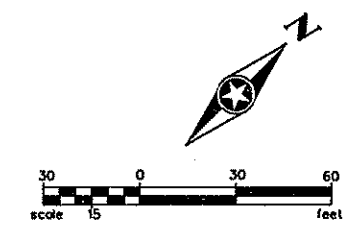
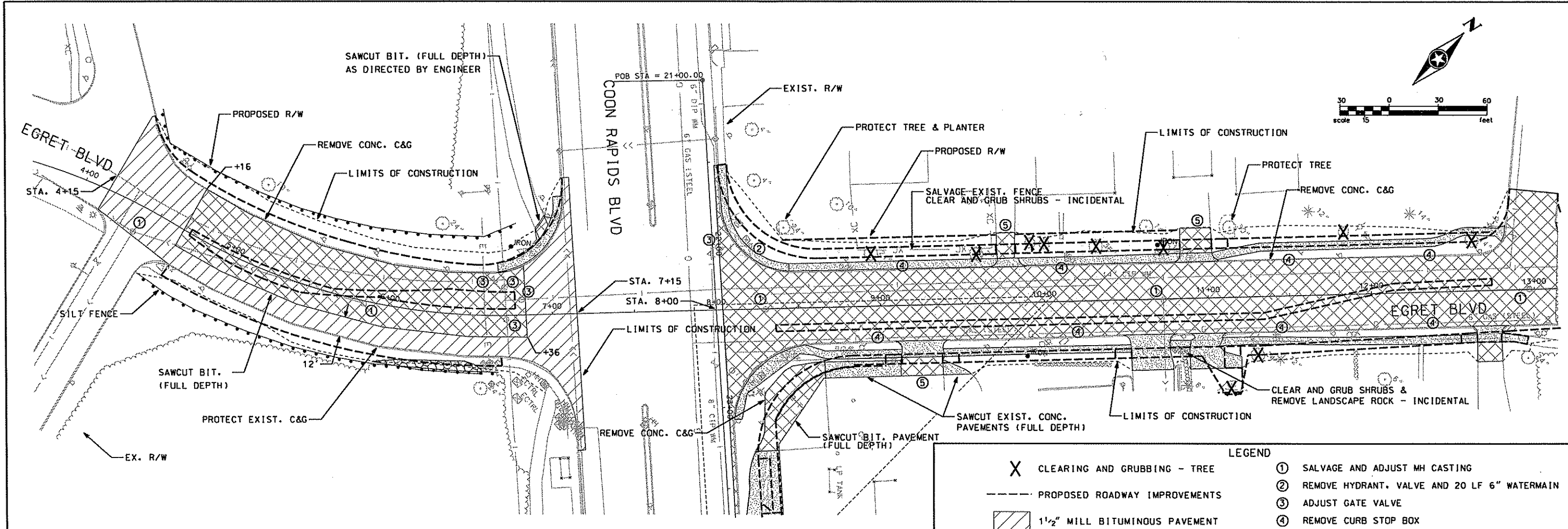
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
Name: TOM TABLER, PE  
Date: 8/15/02 Reg. No. 26861

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

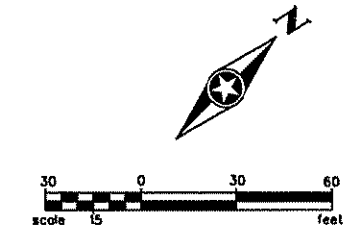
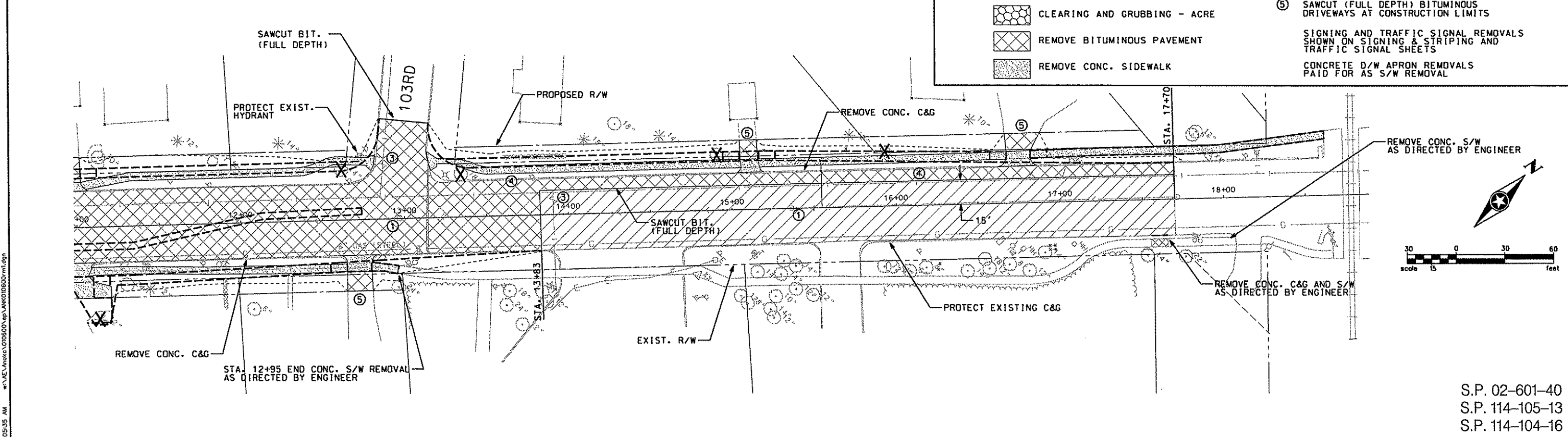
ANOKA COUNTY,  
MINNESOTA

DETAILS

FILE NO. AANOKC0106.00	14
DATE 8/15/02	45



- LEGEND**
- X CLEARING AND GRUBBING - TREE
  - PROPOSED ROADWAY IMPROVEMENTS
  - 1 1/2" MILL BITUMINOUS PAVEMENT
  - CLEARING AND GRUBBING - ACRE
  - REMOVE BITUMINOUS PAVEMENT
  - REMOVE CONC. SIDEWALK
- ① SALVAGE AND ADJUST MH CASTING
  - ② REMOVE HYDRANT, VALVE AND 20 LF 6" WATERMAIN
  - ③ ADJUST GATE VALVE
  - ④ REMOVE CURB STOP BOX
  - ⑤ SAWCUT (FULL DEPTH) BITUMINOUS DRIVEWAYS AT CONSTRUCTION LIMITS
- SIGNING AND TRAFFIC SIGNAL REMOVALS SHOWN ON SIGNING & STRIPING AND TRAFFIC SIGNAL SHEETS
- CONCRETE D/W APRON REMOVALS PAID FOR AS S/W REMOVAL



DRAWN BY: TGT				
DESIGNER: TGT				
CHECKED BY: SMM				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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Tom Tabler, PE  
 Name: TOM TABLER, PE  
 Date: 8/15/02 Reg. No. 26861

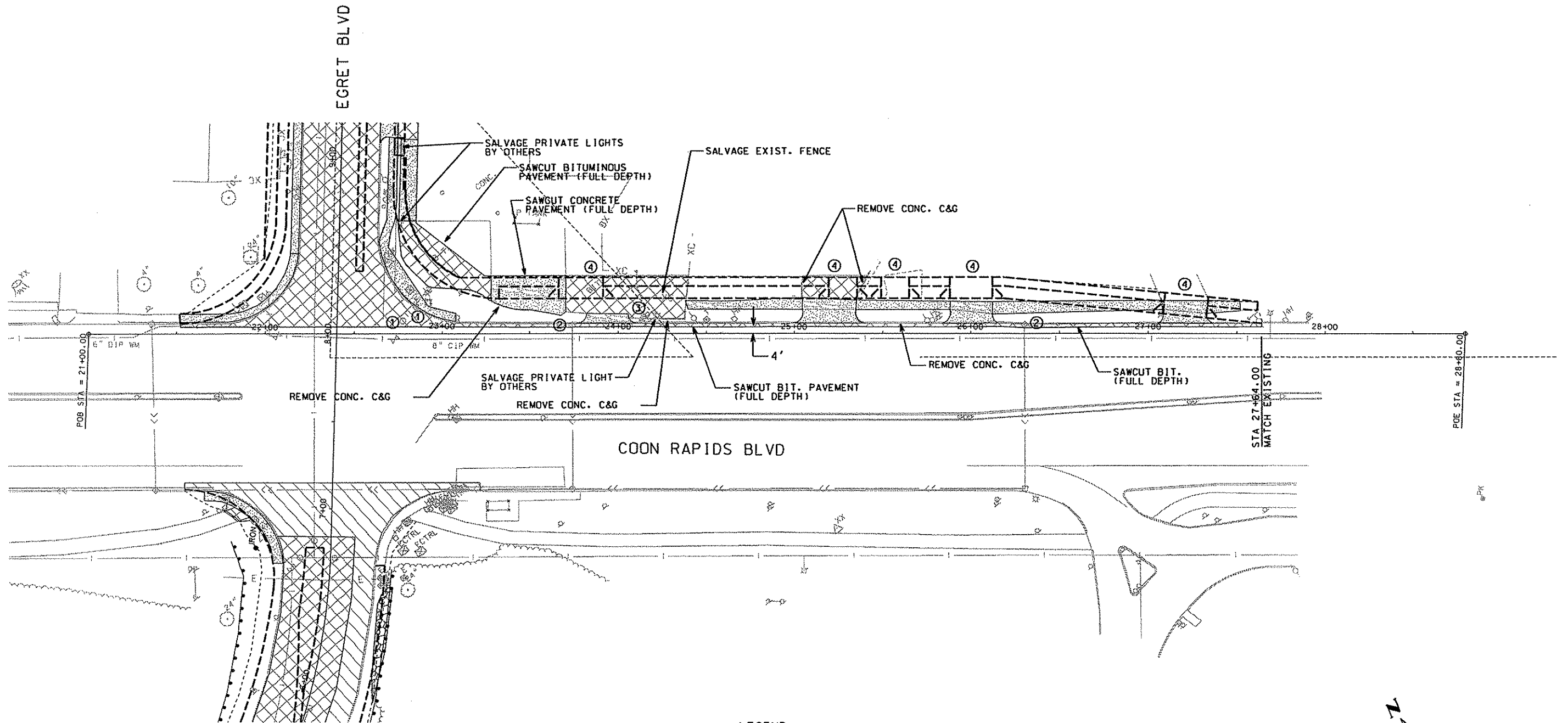
**ES&H**  
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 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA

MISCELLANEOUS REMOVALS

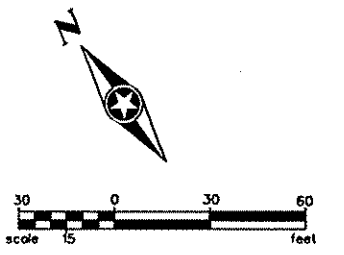
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 DATE 8/15/02 45

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LEGEND

- X CLEARING AND GRUBBING - TREE
  - PROPOSED ROADWAY IMPROVEMENTS
  - ▨ 1 1/2" MILL BITUMINOUS PAVEMENT
  - ▩ CLEARING AND GRUBBING - ACRE
  - ▧ REMOVE BITUMINOUS PAVEMENT
  - ▤ REMOVE CONC. SIDEWALK
  - ① SALVAGE AND ADJUST MH CASTING
  - ② REMOVE CASTING, STORM SEWER MANHOLE, AND STORM SEWER PIPE TO FIRST JOINT. PAID FOR AS REMOVE STORM SEWER MANHOLE
  - ③ REMOVE CURB STOP BOX
  - ④ SAWCUT (FULL DEPTH) BITUMINOUS DRIVEWAYS AT CONSTRUCTION LIMITS
- SIGNING AND TRAFFIC SIGNAL REMOVALS SHOWN ON SIGNING & STRIPING AND TRAFFIC SIGNAL SHEETS
- CONCRETE D/W APRON REMOVALS PAID FOR AS S/W REMOVAL



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DESIGNER: TGT				
CHECKED BY: SMM				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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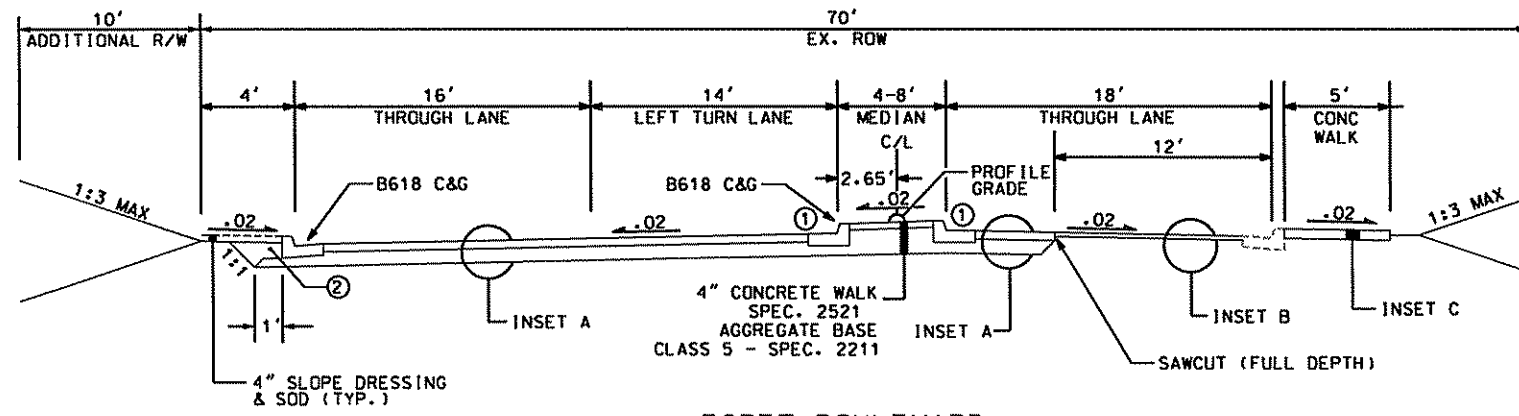
ANOKA COUNTY, MINNESOTA

MISCELLANEOUS REMOVALS

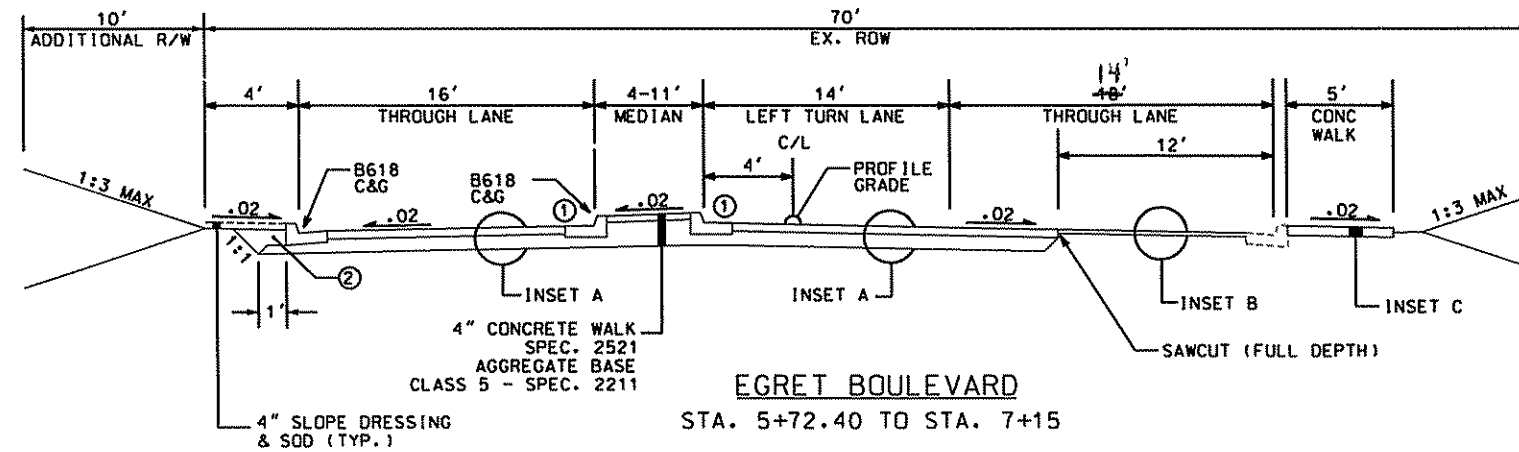
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S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

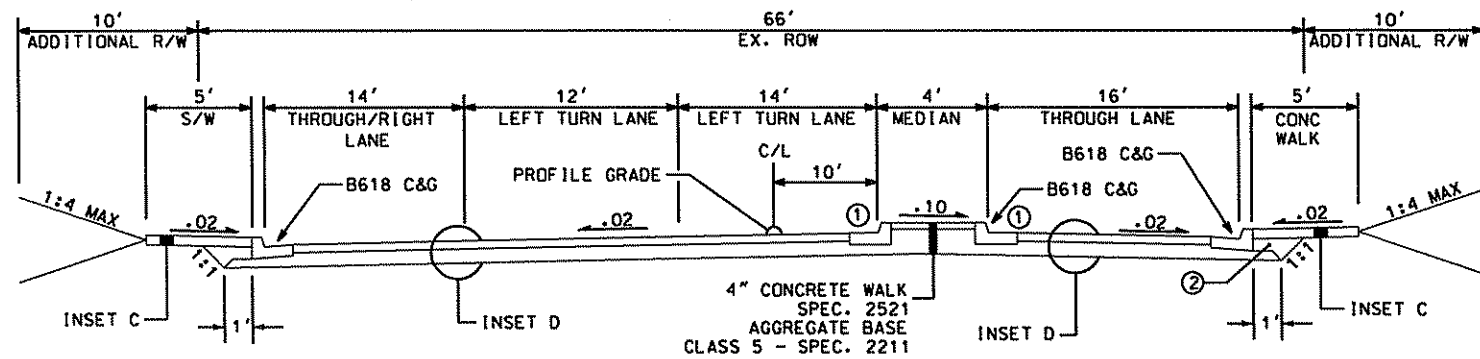




**EGRET BOULEVARD**  
STA. 4+15 TO STA. 5+72.40

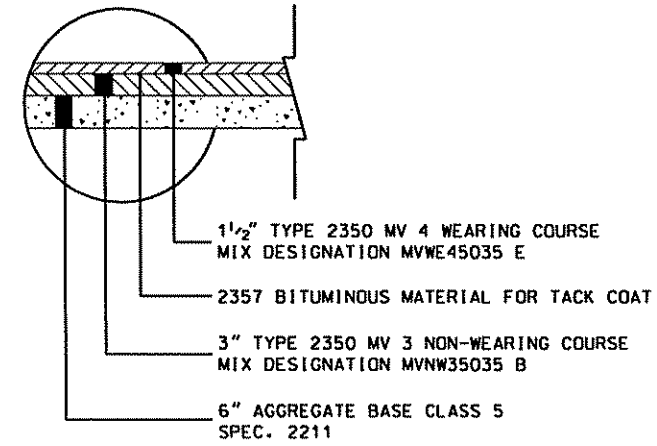


**EGRET BOULEVARD**  
STA. 5+72.40 TO STA. 7+15

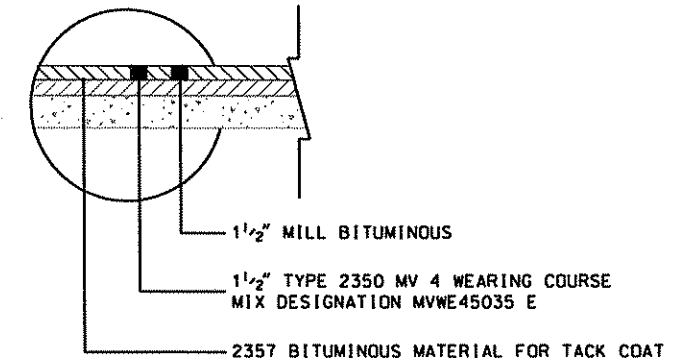


**EGRET BOULEVARD**  
STA. 8+00 TO STA. 12+04.30

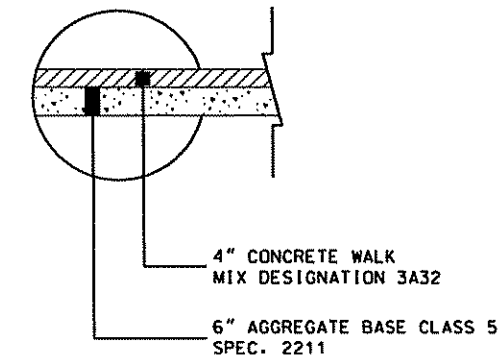
**INSET A**



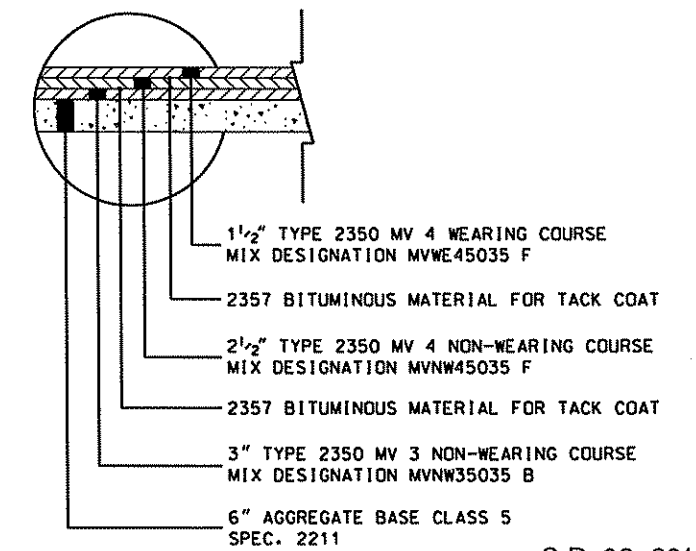
**INSET B**



**INSET C**



**INSET D**



**NOTES:**

- ① GUTTERS SLOPED TO ROADWAY AT 0.02' PER FOOT NORMAL
- ② BACKFILL WITH SUITABLE MATERIAL (TYP)

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

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Name: Thomas G. Tobler, PE  
Date: 8/15/02 Reg. No. 26861

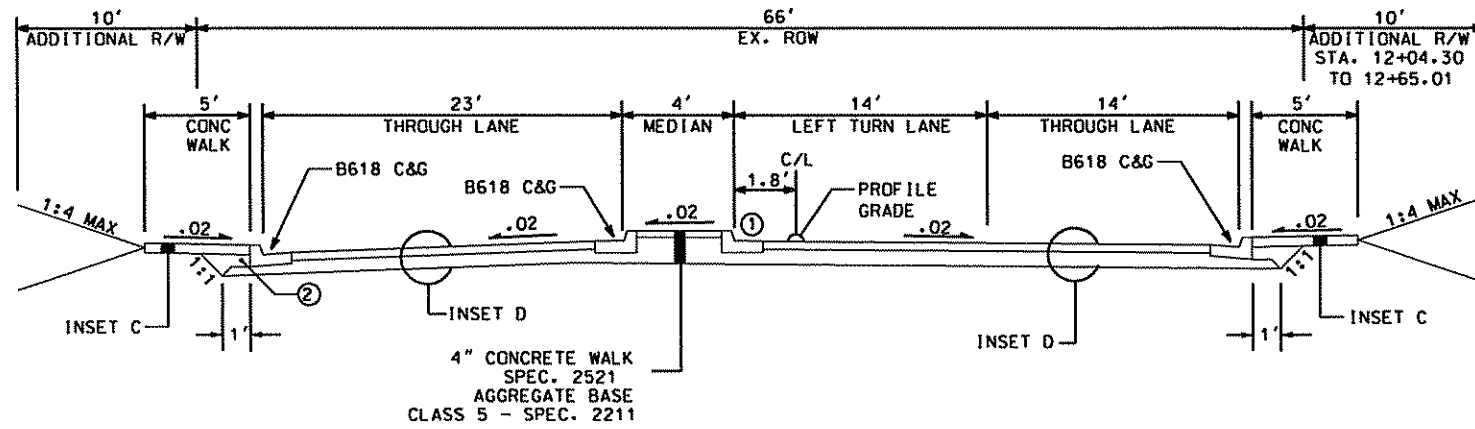
**ES&H**  
PHONE: (651) 490-2000  
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ST. PAUL, MN 55110

ANOKA COUNTY,  
MINNESOTA

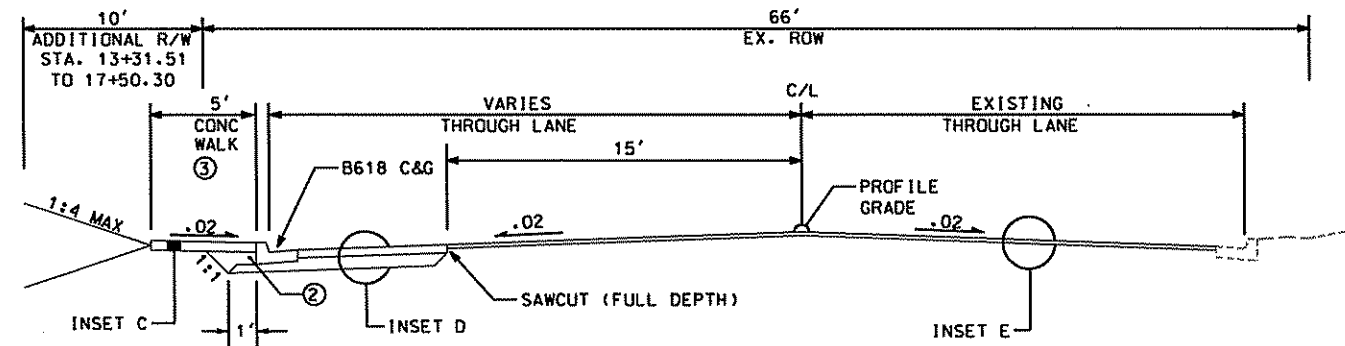
TYPICAL SECTIONS

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DATE 8/15/02	45

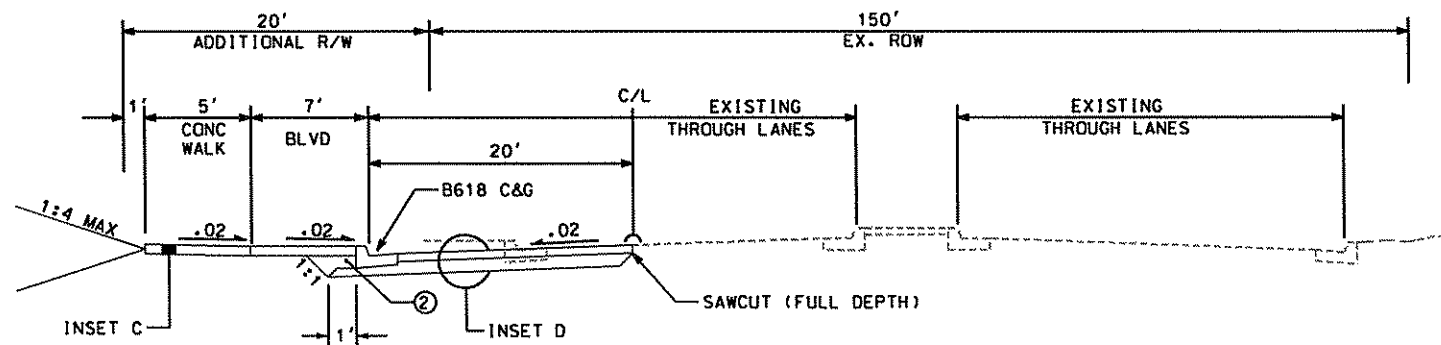
S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16



EGRET BOULEVARD  
STA. 12+04.30 TO STA. 13+83

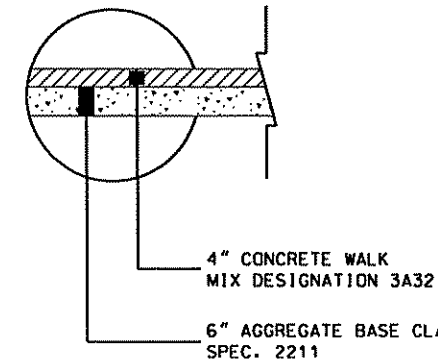


EGRET BOULEVARD  
STA. 13+83 TO STA. 17+70

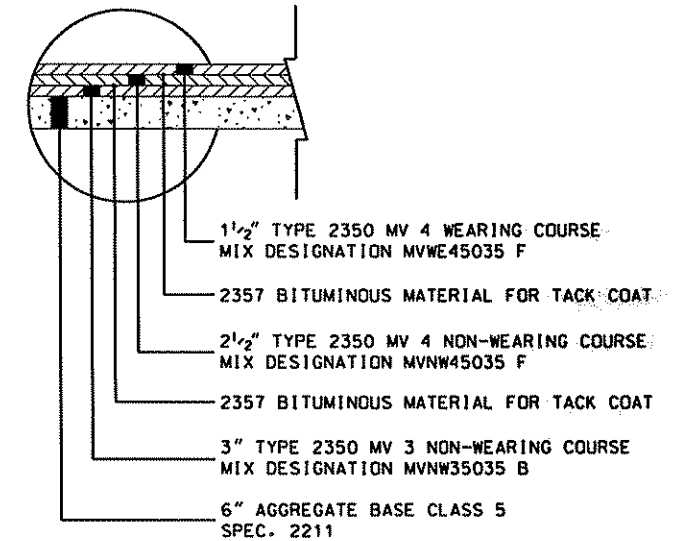


COON RAPIDS BOULEVARD  
STA. 23+33.60 TO STA. 27+64

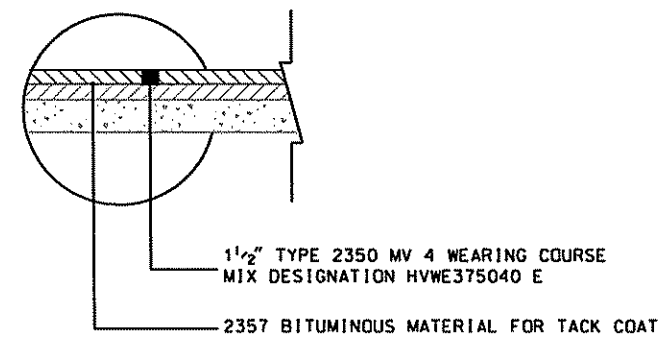
INSET C



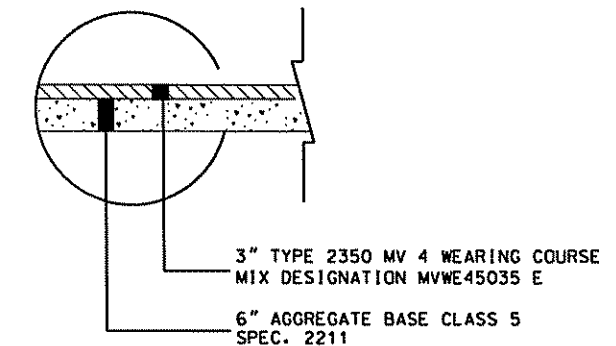
INSET D



INSET E



BITUMINOUS DRIVEWAY SECTION



NOTE S:

- ① GUTTERS SLOPED TO ROADWAY AT 0.02' PER FOOT NORMAL
- ② BACKFILL WITH SUITABLE MATERIAL
- ③ SIDEWALK CONTINUES TO STA 18+00

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

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

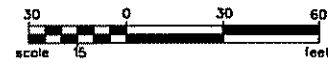
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
Name: Thomas G. Tobler, PE  
Date: 8/15/02 Reg. No. 26861

**ESEH**  
PHONE: (651) 490-2000  
3535 VADNAIS CENTER DR.  
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ANOKA COUNTY,  
MINNESOTA

TYPICAL SECTIONS

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DATE	8/15/02
	45

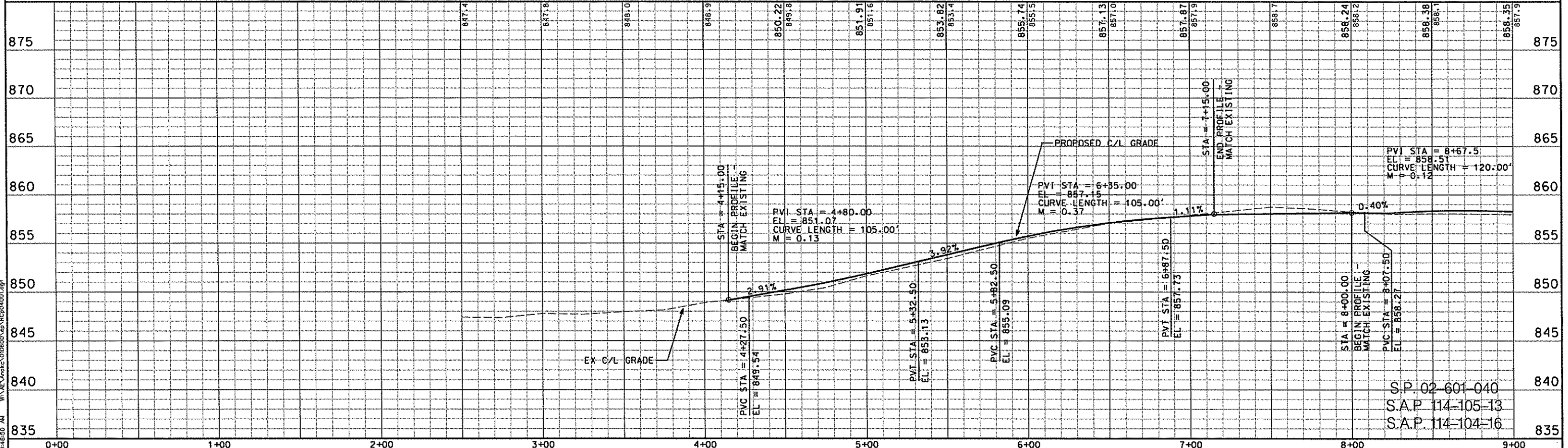
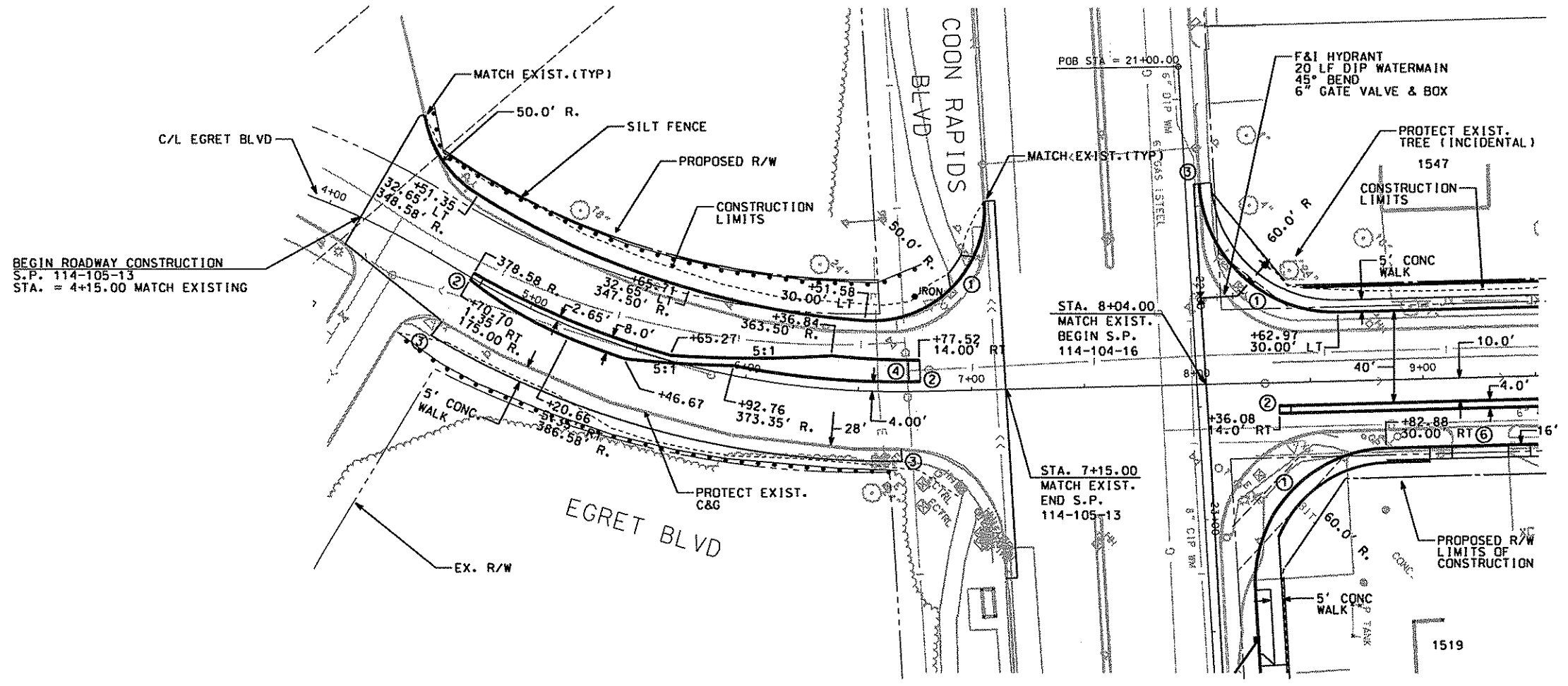


BEGIN ROADWAY CONSTRUCTION  
S.P. 114-105-13  
STA. = 4+15.00 MATCH EXISTING

NOTES:

- ① CONSTRUCT CONC. PED. RAMP  
SEE STD. PLATE 7036  
PAID FOR AS 6" CONCRETE WALK
  - ② CONSTRUCT CONC. APPROACH NOSE  
SEE STD. PLATE 7113
  - ③ MATCH EXIST. S/W GRADE W/  
PROPOSED S/W
  - ④ 4" CONC. MEDIAN
  - ⑤ CONSTRUCT CONC. CURB RETURN  
SEE STD. PLATE 7035
  - ⑥ CONSTRUCT DRWY. ENTRANCE  
SEE DRIVEWAY DETAIL
- ALL DIMENSIONS ARE TO FACE OF CURB  
UNLESS OTHERWISE NOTED

BENCHMARK EL. 861.43  
DESCRIPTION  
TNH AT NW CORNER OF COON RAPIDS  
BLVD AND EGRET BLVD



DRAWN BY:	BEM
DESIGNER:	TGT
CHECKED BY:	SMM
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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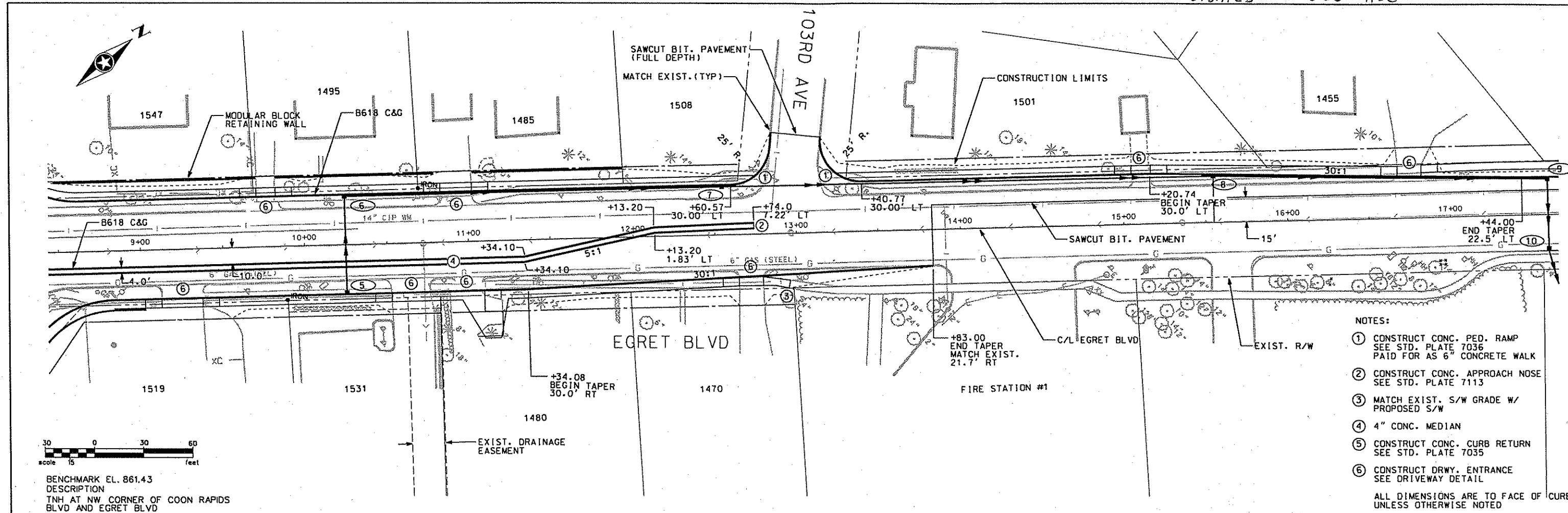
*Tom Tabler*  
Name: TOM TABLER, PE  
Date: 8/15/02 Reg. No. 26861

ANOKA COUNTY,  
MINNESOTA

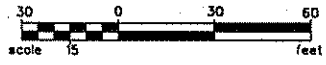
PHONE: (651) 490-2000  
3535 VADNAIS CENTER DR.  
ST. PAUL, MN 55110

FILE NO.	AANDKC0106.00
DATE	8/15/02
PLAN AND PROFILE	19 / 45

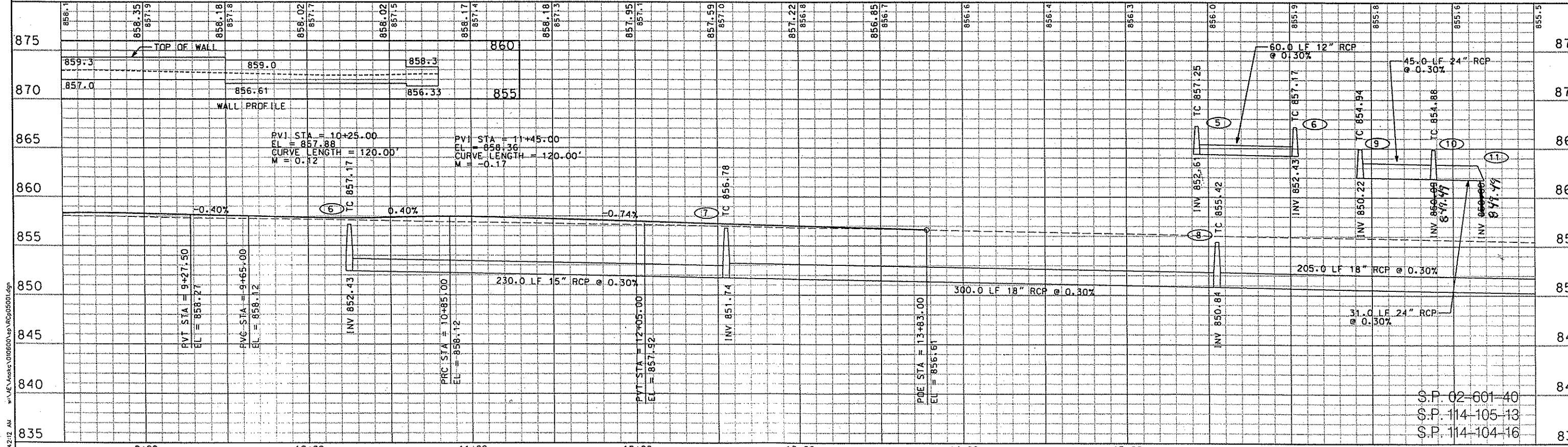
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- NOTES:
- ① CONSTRUCT CONC. PED. RAMP SEE STD. PLATE 7036 PAID FOR AS 6" CONCRETE WALK
  - ② CONSTRUCT CONC. APPROACH NOSE SEE STD. PLATE 7113
  - ③ MATCH EXIST. S/W GRADE W/ PROPOSED S/W
  - ④ 4" CONC. MEDIAN
  - ⑤ CONSTRUCT CONC. CURB RETURN SEE STD. PLATE 7035
  - ⑥ CONSTRUCT DRWY. ENTRANCE SEE DRIVEWAY DETAIL
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED



BENCHMARK EL. 861.43  
 DESCRIPTION  
 TNH AT NW CORNER OF COON RAPIDS  
 BLVD AND EGRET BLVD



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DRAWN BY:	TGT
DESIGNER:	TGT
CHECKED BY:	SMM
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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*T. Tabler* Name: TOM TABLER, PE  
 Date: 8/15/02 Reg. No. 26861

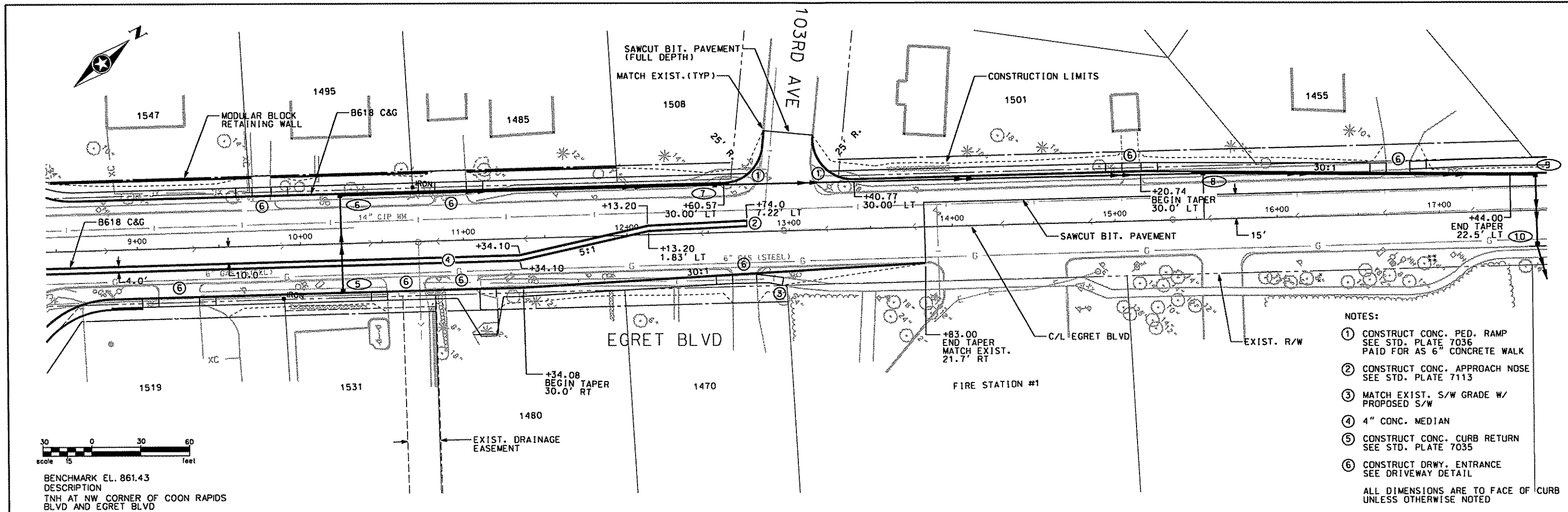


ANOKA COUNTY,  
 MINNESOTA

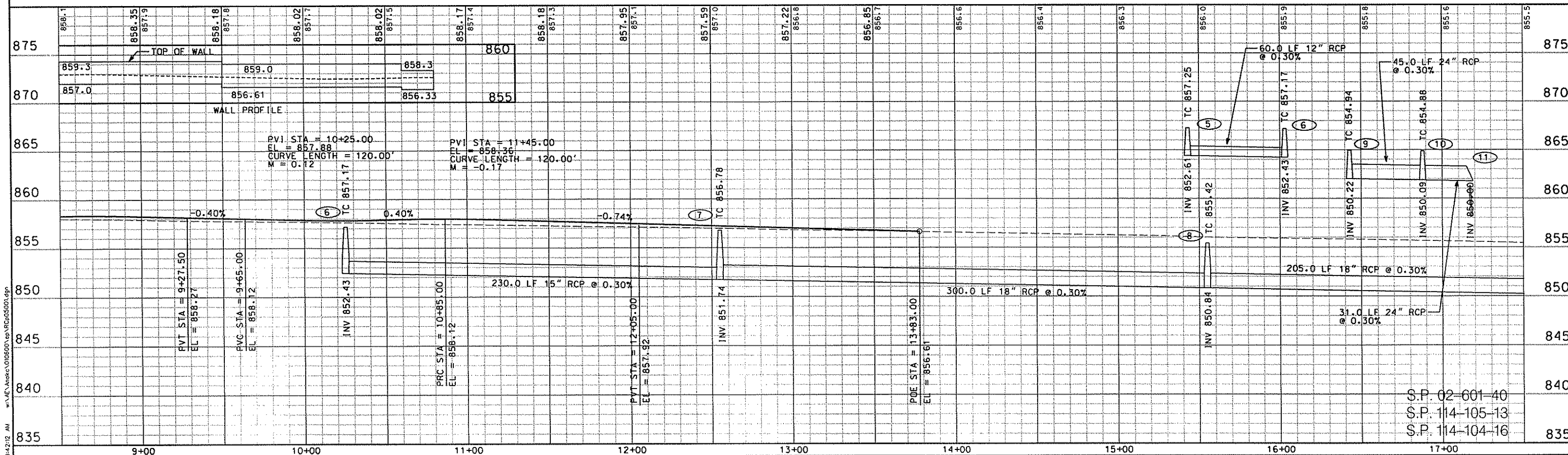
PLAN AND PROFILE

FILE NO.	ANOKC0106.00	20
DATE	8/15/02	45

S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16



- NOTES:**
- ① CONSTRUCT CONC. PED. RAMP SEE STD. PLATE 7036 PAID FOR AS 6" CONCRETE WALK
  - ② CONSTRUCT CONC. APPROACH NOSE SEE STD. PLATE 7113
  - ③ MATCH EXIST. S/W GRADE W/ PROPOSED S/W
  - ④ 4" CONC. MEDIAN
  - ⑤ CONSTRUCT CONC. CURB RETURN SEE STD. PLATE 7035
  - ⑥ CONSTRUCT DRWY. ENTRANCE SEE DRIVEWAY DETAIL
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED



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 DESIGNER: TGT  
 CHECKED BY: SMM  
 DESIGN TEAM

NO.	BY	DATE	REVISIONS

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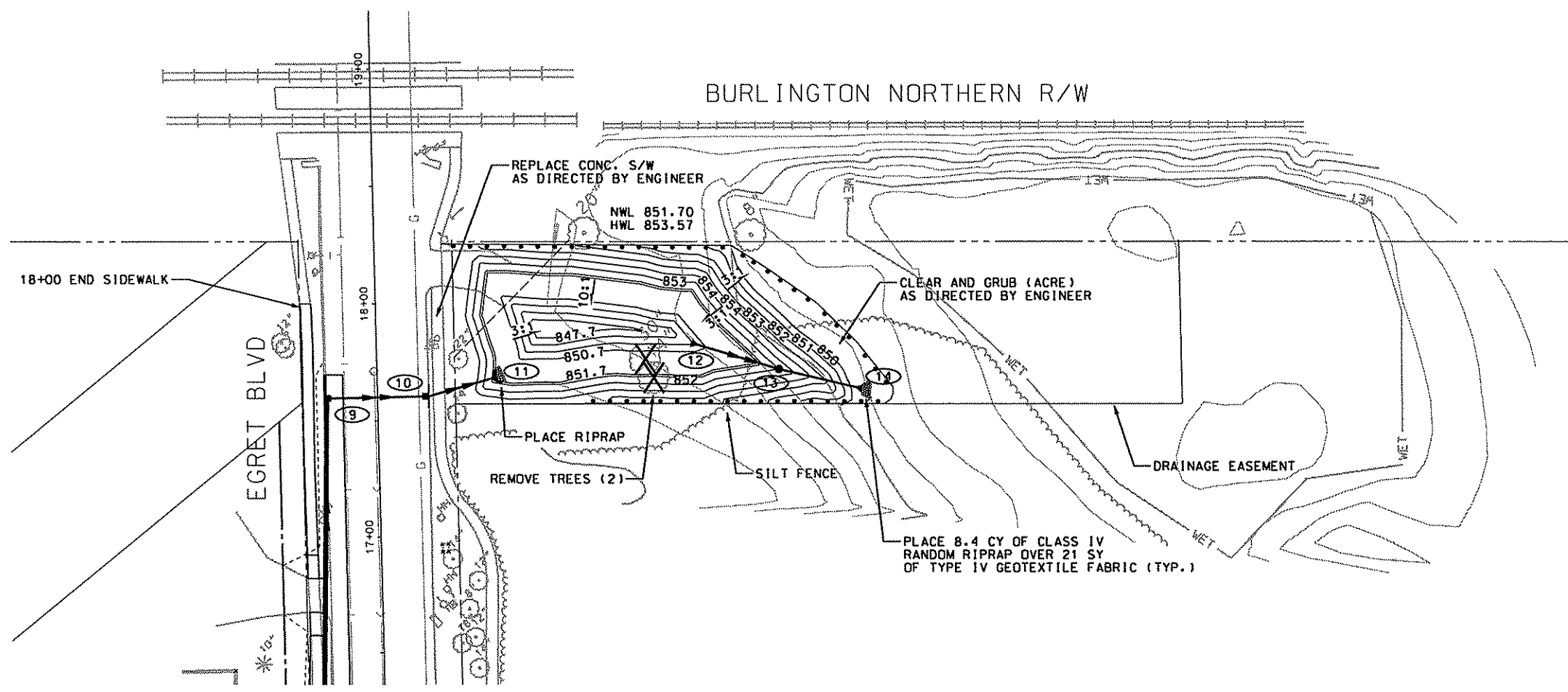
ANOKA COUNTY,  
 MINNESOTA

PLAN AND PROFILE

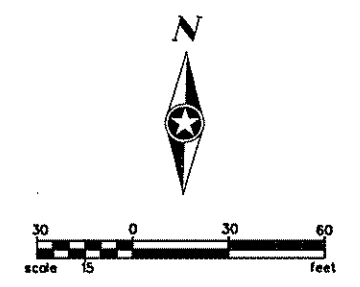
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S.P. 02-601-40  
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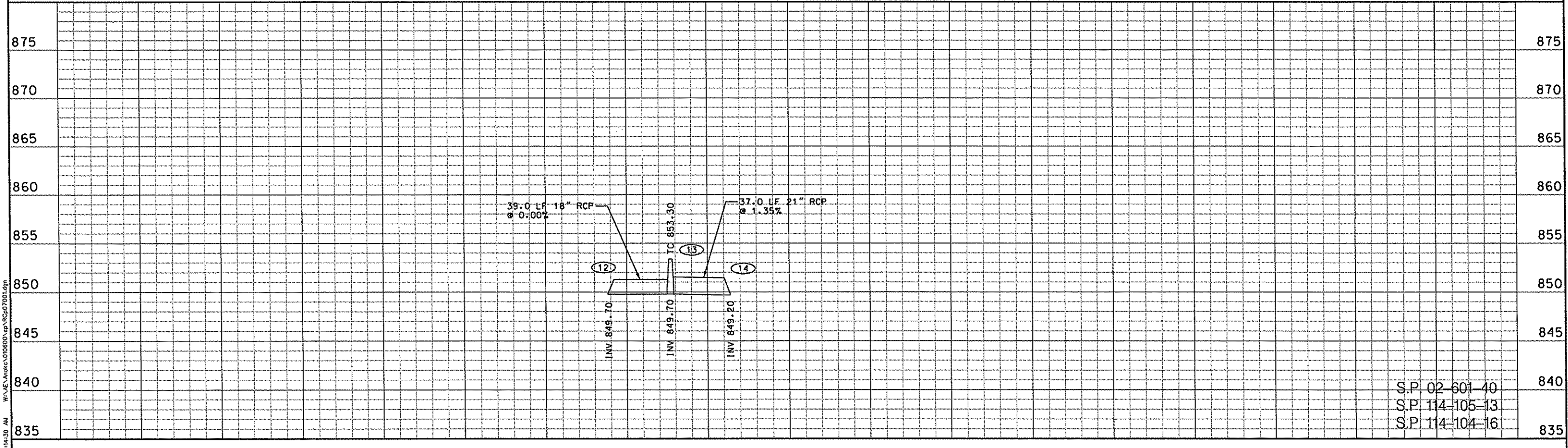
BURLINGTON NORTHERN R/W



- NOTES:
1. POND WILL BE SEEDED ABOVE NWL WITH THE BOARD OF WATER AND SOIL RESOURCES (BWSR) WETLAND FRINGE MIX NO. 1 (SEED TYPE SPECIAL) AT A RATE OF 30 LBS/ACRE OF PURE LIVE SEED (SEE SPECIFICATION).
  2. PLACE WOOD FIBER BLANKET ON ALL AREAS TO BE SEEDED.
  3. SEE DETAIL FOR SPECIAL OUTLET STRUCTURE
  4. ALL SILT FENCE SHALL BE INSTALLED APPROXIMATELY AS SHOWN, PRIOR TO ANY GRADING OR EXCAVATION.
  5. REVEGETATION SHOULD OCCUR WITHIN TWO WEEKS OF ROUGH GRADING.



BENCHMARK EL. 861.43  
 DESCRIPTION  
 TNH AT NW CORNER OF COON RAPIDS BLVD AND EGRET BLVD



S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

DRAWN BY: TGT			
DESIGNER: TGT			
CHECKED BY: SMM			
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 Name: TOM TABLER, PE  
 Date: 8/15/02 Reg. No. 26861

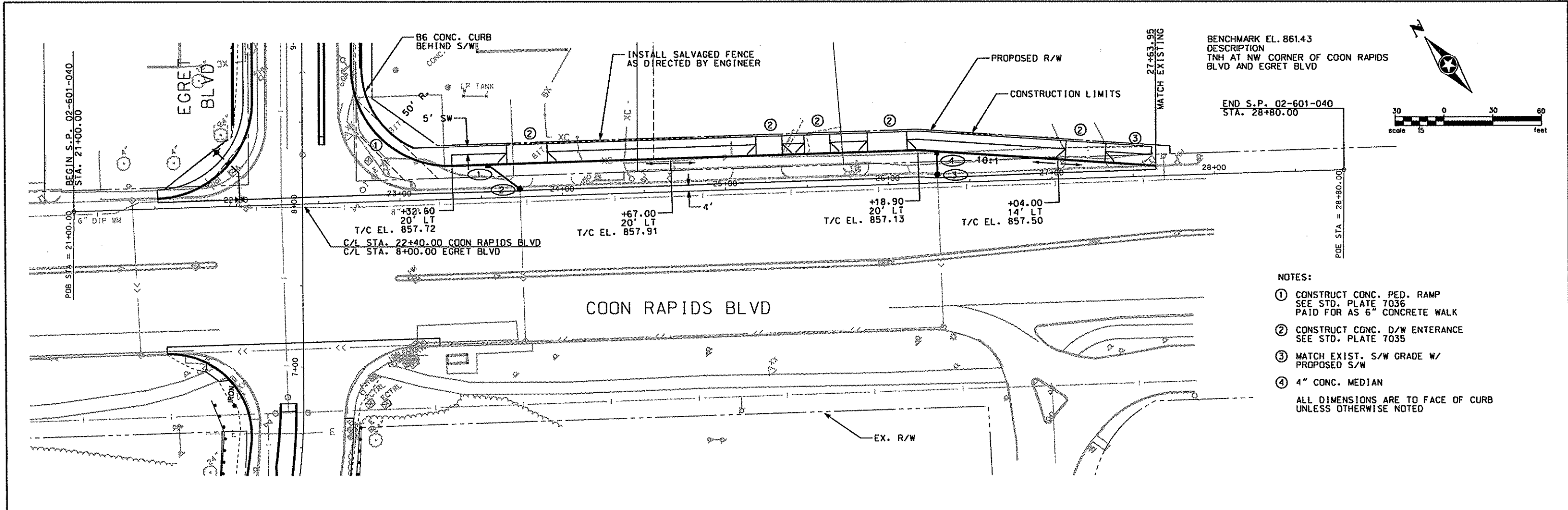


ANOKA COUNTY,  
 MINNESOTA

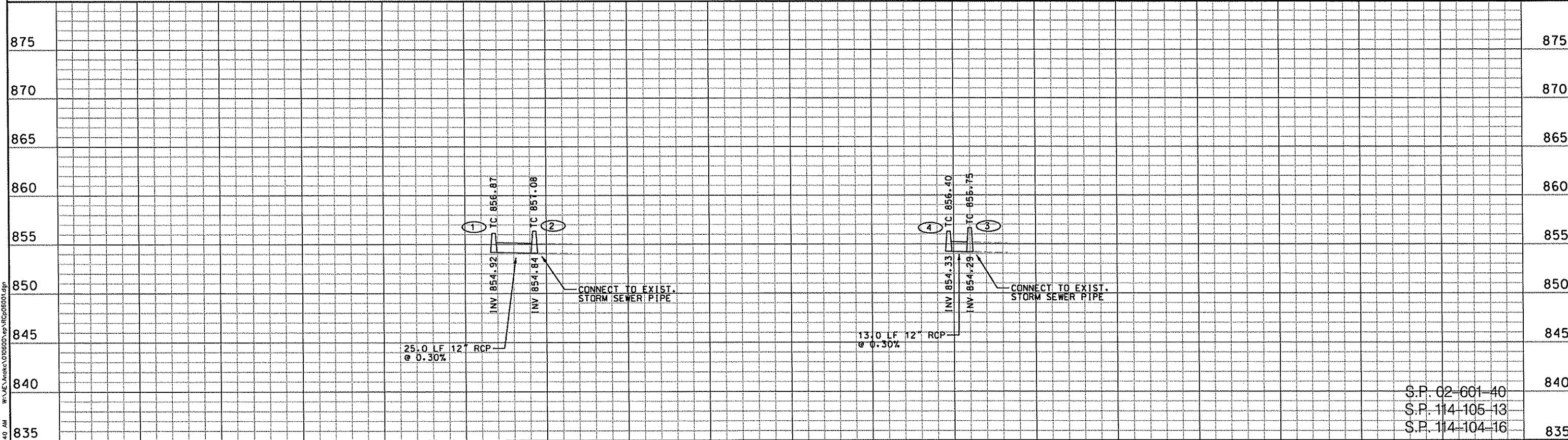
PLAN AND PROFILE

FILE NO.	21
AANOKC0106.00	
DATE	45
8/15/02	

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- NOTES:
- ① CONSTRUCT CONC. PED. RAMP  
SEE STD. PLATE 7036  
PAID FOR AS 6" CONCRETE WALK
  - ② CONSTRUCT CONC. D/W ENTRANCE  
SEE STD. PLATE 7035
  - ③ MATCH EXIST. S/W GRADE W/  
PROPOSED S/W
  - ④ 4" CONC. MEDIAN
- ALL DIMENSIONS ARE TO FACE OF CURB  
UNLESS OTHERWISE NOTED



08/15/02 AM  
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DRAWN BY: TGT  
DESIGNER: TGT  
CHECKED BY: SMM  
DESIGN TEAM

NO.	BY	DATE	REVISIONS

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

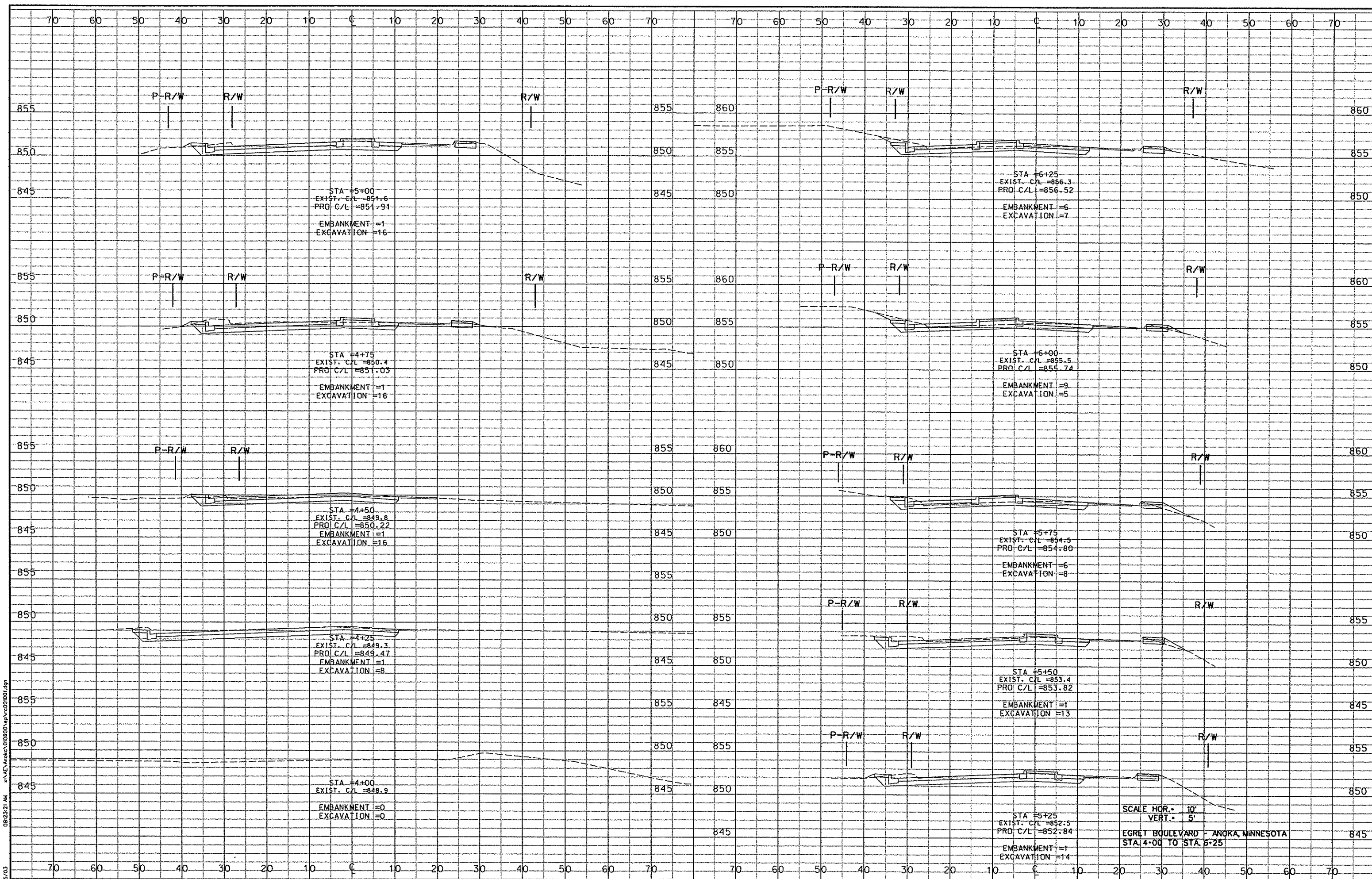
*Thomas G. Tabler*  
Name: Thomas G. Tabler, PE  
Date: 8/15/02 Reg. No. 26861

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

ANOKA COUNTY,  
MINNESOTA

PLAN AND PROFILE

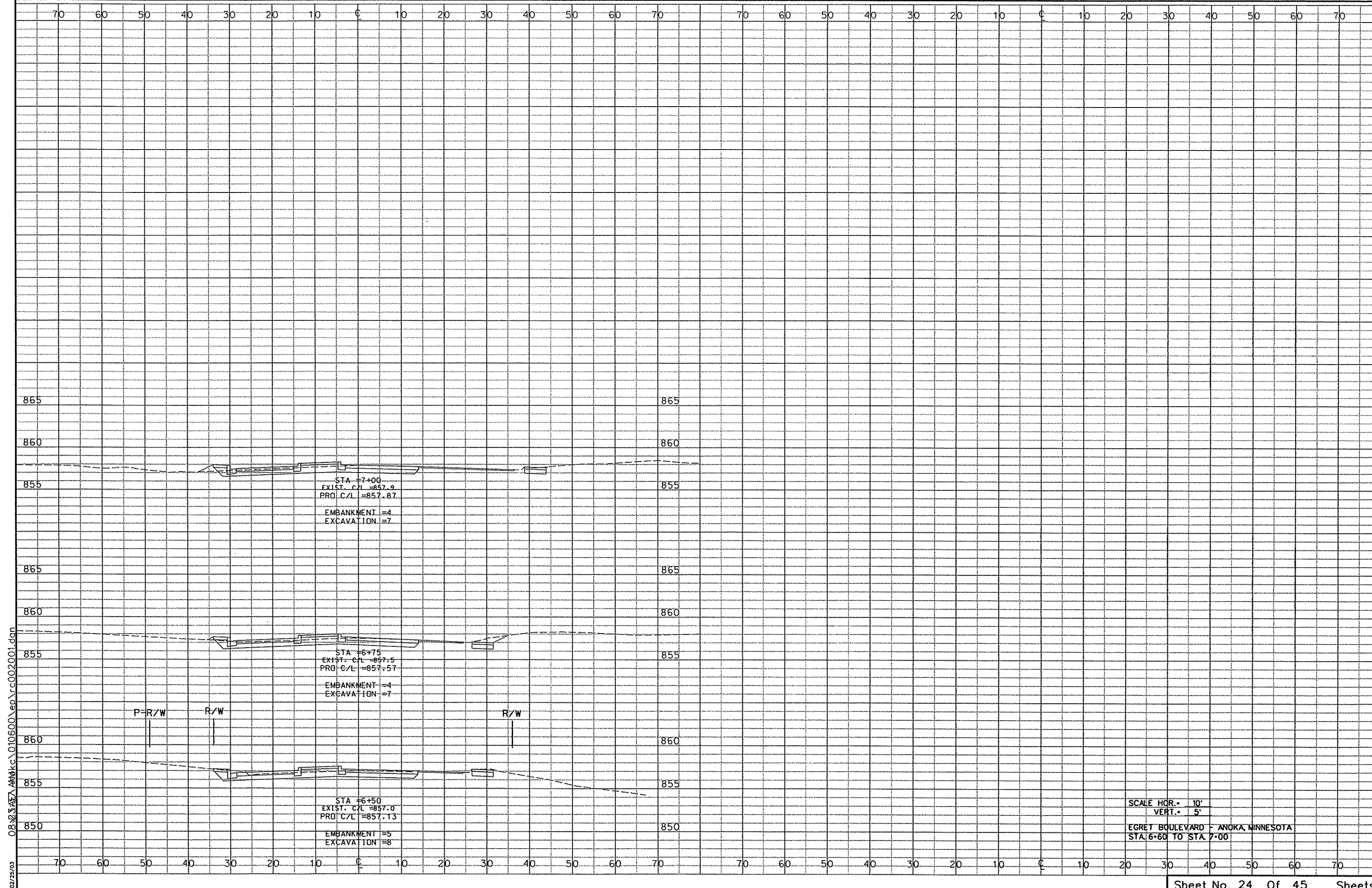
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AANOKC0106.00  
DATE 8/15/02  
45



SCALE HOR. = 10'  
 VERT. = 5'  
 EGRET BOULEVARD - ANOKA, MINNESOTA  
 STA. 4+00 TO STA. 6+25

02/25/03 8:23:21 AM p:\ME\Anoka\010600\vp\rc01001.dgn





STA = 7+00  
 EXIST. C/L = 857.9  
 PROJ. C/L = 857.87  
 EMBANKMENT = 4  
 EXCAVATION = 7

STA = 6+75  
 EXIST. C/L = 857.5  
 PROJ. C/L = 857.57  
 EMBANKMENT = 4  
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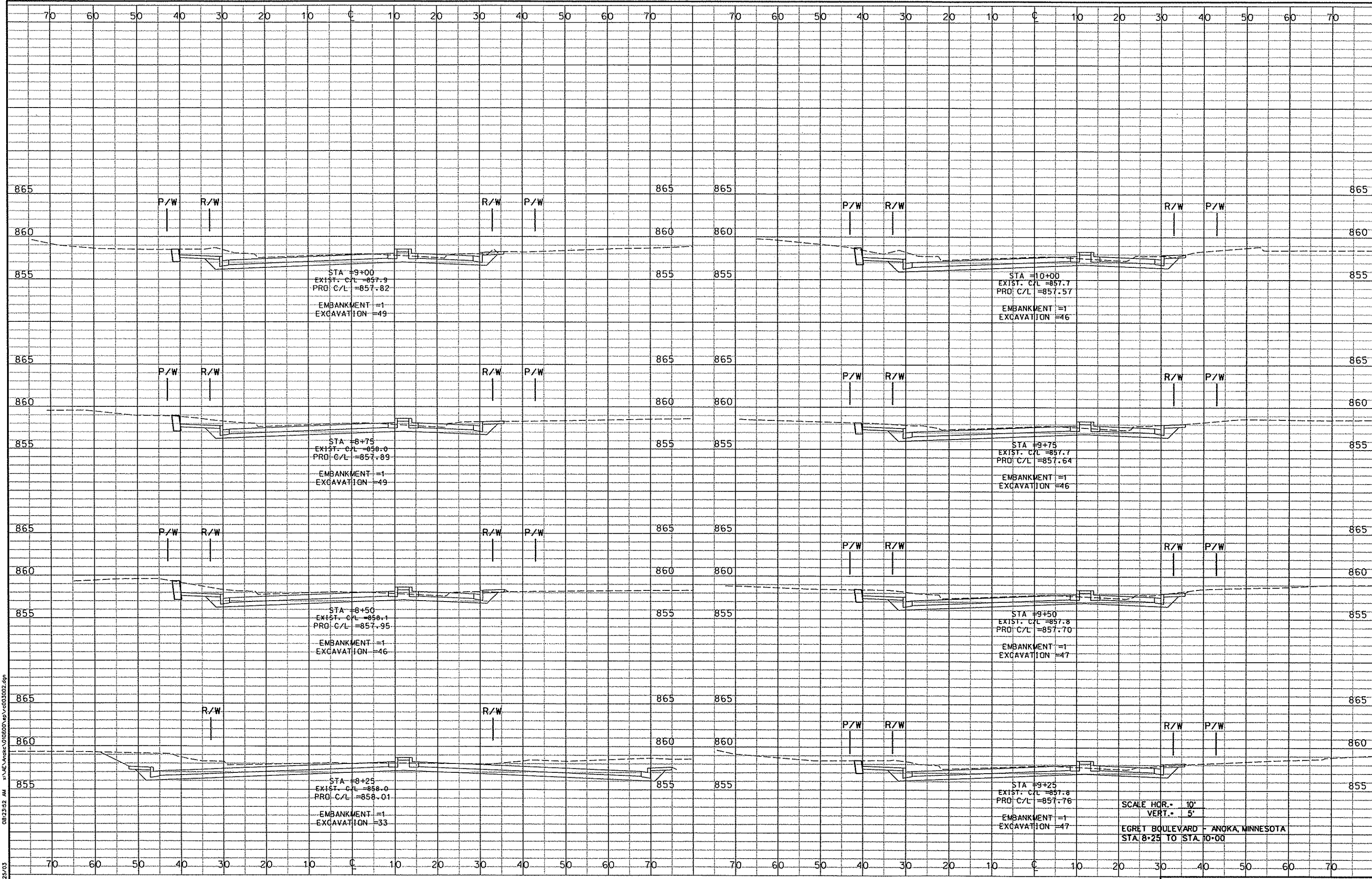
P=R/W

R/W

R/W

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 VERT. = 5'  
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 STA. 6+60 TO STA. 7+00

02/25/03 08:32:37 A:\01\010600\ep\rc002001.dgn



STA 8+00  
 EXIST. C/L = 857.9  
 PROJ. C/L = 857.82  
 EMBANKMENT = 1  
 EXCAVATION = 49

STA 8+75  
 EXIST. C/L = 858.0  
 PROJ. C/L = 857.89  
 EMBANKMENT = 1  
 EXCAVATION = 49

STA 8+50  
 EXIST. C/L = 858.1  
 PROJ. C/L = 857.95  
 EMBANKMENT = 1  
 EXCAVATION = 46

STA 8+25  
 EXIST. C/L = 858.0  
 PROJ. C/L = 858.01  
 EMBANKMENT = 1  
 EXCAVATION = 33

STA 10+00  
 EXIST. C/L = 857.7  
 PROJ. C/L = 857.57  
 EMBANKMENT = 1  
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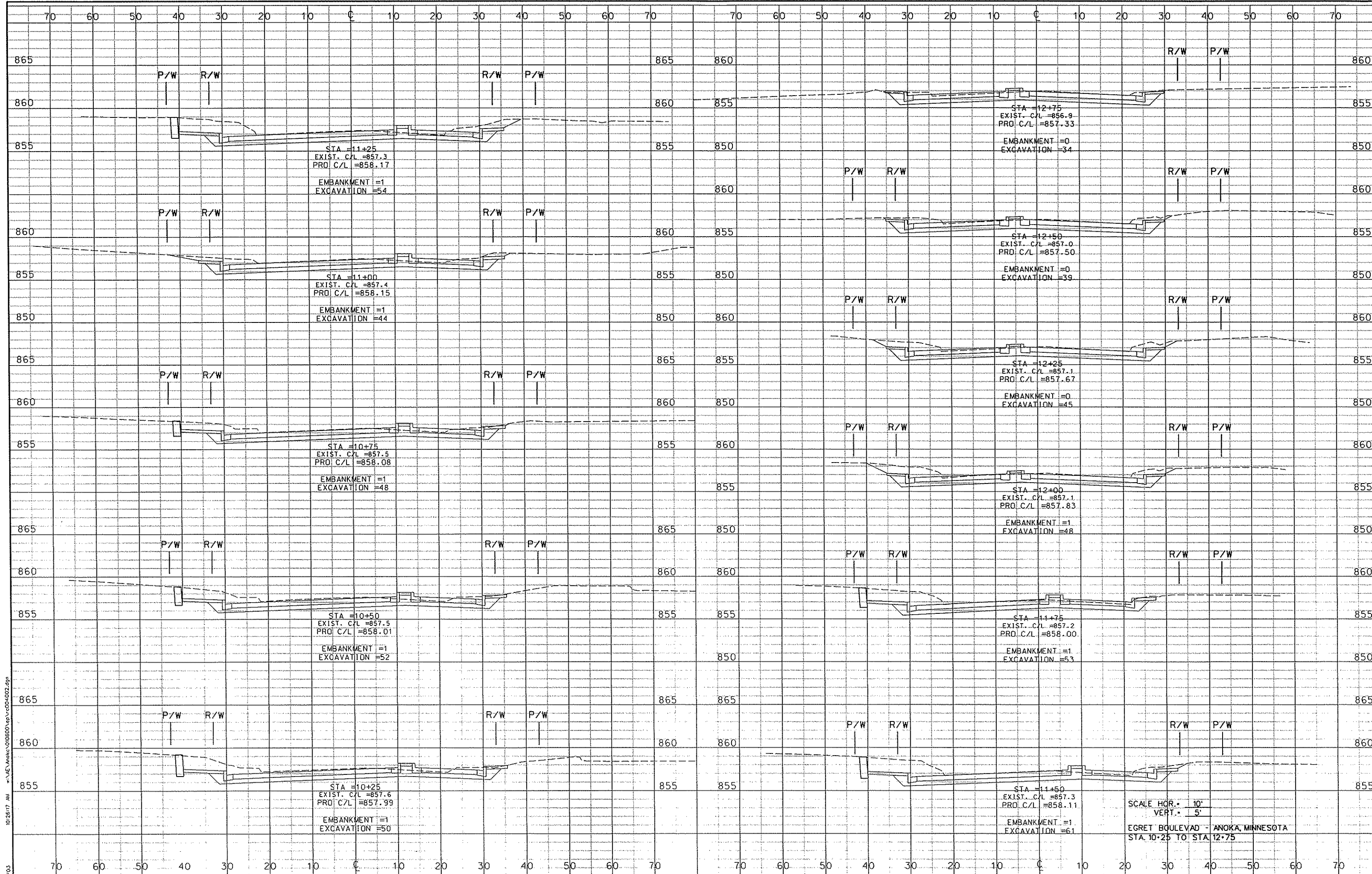
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 EMBANKMENT = 1  
 EXCAVATION = 46

STA 9+50  
 EXIST. C/L = 857.8  
 PROJ. C/L = 857.70  
 EMBANKMENT = 1  
 EXCAVATION = 47

STA 9+25  
 EXIST. C/L = 857.8  
 PROJ. C/L = 857.76  
 EMBANKMENT = 1  
 EXCAVATION = 47

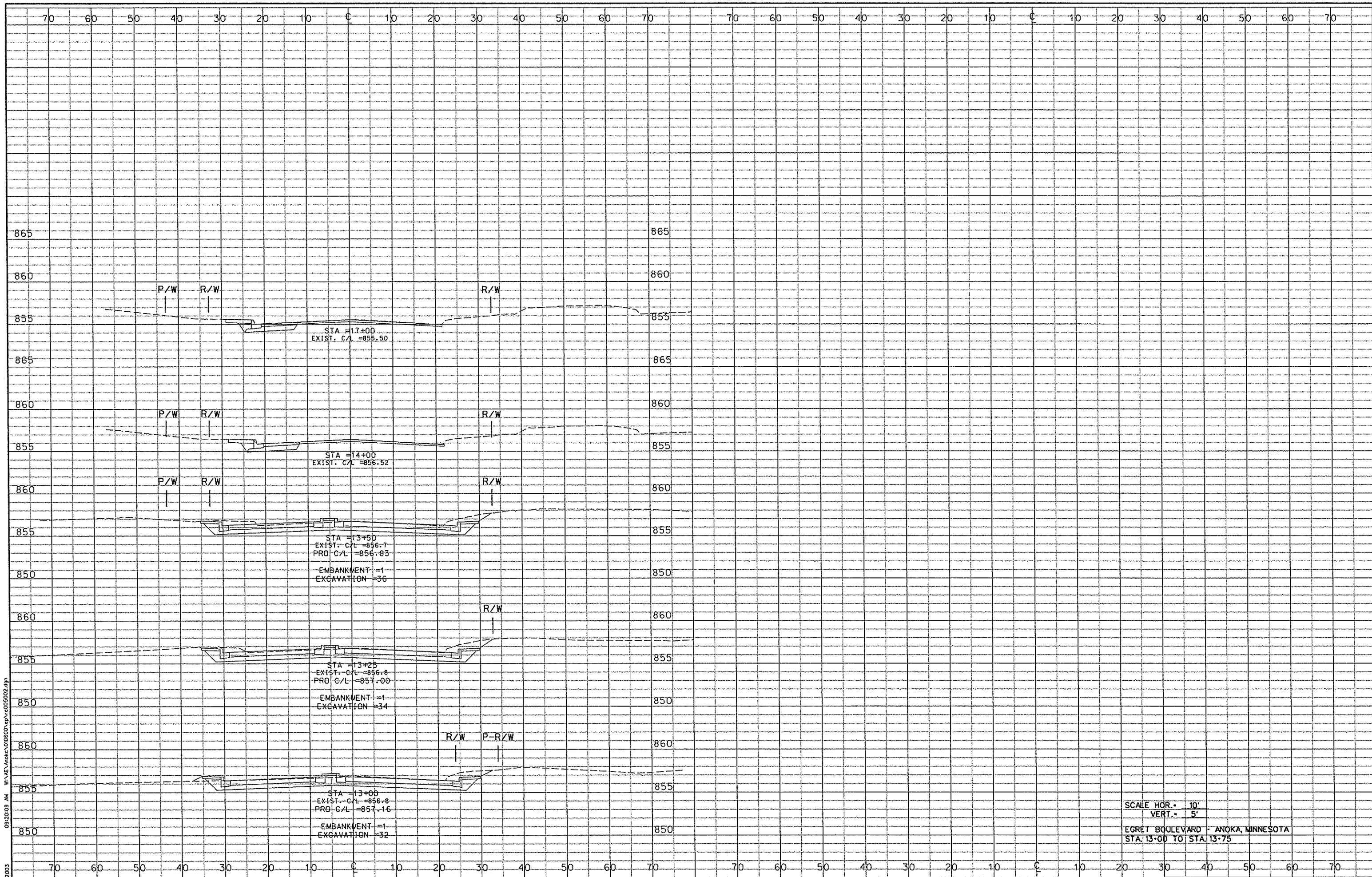
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 VERT. = 5'  
 EGRET BOULEVARD - ANOKA, MINNESOTA  
 STA. 8+25 TO STA. 10+00

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SCALE HOR. = 10'  
 VERT. = 5'  
 EGRET BOULEVAD - ANOKA, MINNESOTA  
 STA. 10+25 TO STA. 12+75

07/08/03 10:26:17 AM \\A:\Anoka\010800\ep\c004002.dgn

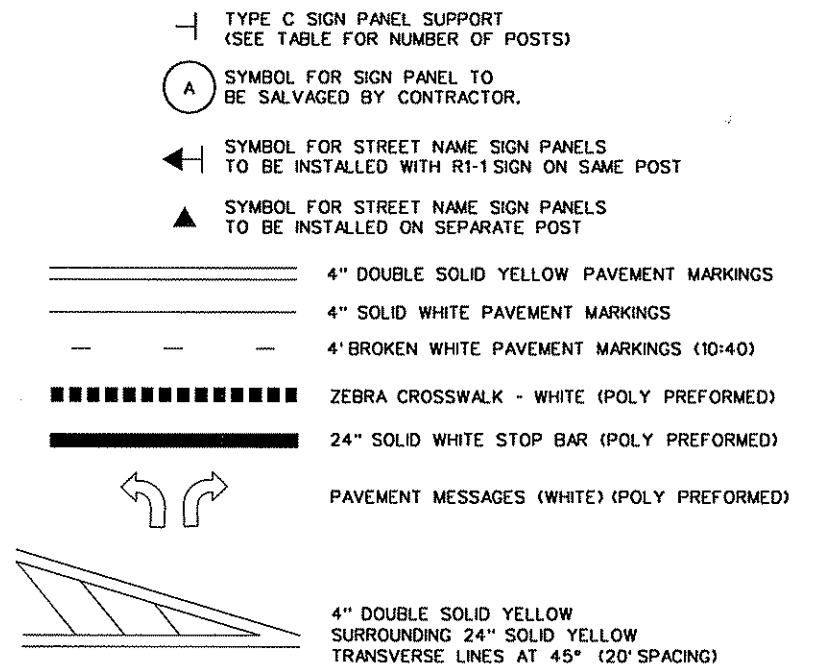


SIGN PANELS - TYPE C							
PLAN CODE	MMUTCD CODE	QUANT.	SIGN PANEL			NO. OF POSTS & TYPE	PANEL LEGEND
			SIZE (INCHES)	AREA (SQ.FT.)	TOTAL AREA (SQ.FT.)		
C-1	R1-1	7	30X30	6.25	43.75	1-U	STOP
C-2	R1-1	1	30X30	6.25	6.25	1-ROUND	STOP
C-3	R2-1	2	24X30	5.00	10.00	1-U	SPEED LIMIT (40)
C-4	R3-7L	1	30X30	6.25	6.25	①	LEFT LANE MUST TURN LEFT
C-5	R3-30AB	2	36X30	7.50	15.00	2-U	DOUBLE LEFT TURN
C-6	R3-X1	1	30X30	6.25	6.25	1-U	RIGHT TURN LANE
C-7	R3-X2	2	30X30	6.25	12.50	1-U	LEFT TURN LANE
C-8	R3-X2	1	30X30	6.25	6.25	①	LEFT TURN LANE
C-9	R4-7	6	24X30	5.00	30.00	1-U	KEEP RIGHT
C-10	R5-1	5	30X30	6.25	31.25	1-U	DO NOT ENTER
C-11	R6-1R	2	36X12	3.00	6.00	2-U	ONE WAY (RIGHT)
C-12	R6-1R	8	36X12	3.00	24.00	①	ONE WAY (RIGHT)
C-13	R8-3a	2	18X18	2.25	4.50	1-U	NO PARKING
C-14	R8-3a	8	18X18	2.25	18.00	①	NO PARKING
C-15	R8-3ap	1	18X12	1.50	1.50	①	BEGINS HERE
C-16	W3-3	2	36X36	9.00	18.00	2-U	SIGNAL AHEAD
C-17	W10-1	1	36" DIA.	7.07	7.07	2-U	RAILROAD ADVANCE
C-18	W11-2	4	36X36	9.00	36.00	2-U	PED XING
C-19	W11-8	1	36X36	9.00	9.00	2-U	FIRE STATION ADVANCE
C-20	S2-P2	2	24X18	3.00	6.00	①	DOWN ARROW (RIGHT)
C-21	R5-1	1	30X30	6.25	6.25	①	DO NOT ENTER
C-22	R6-1L	1	36X12	3.00	3.00	2-U	ONE WAY (LEFT)
C-23	R6-1L	2	36X12	3.00	6.00	①	ONE WAY (LEFT)
TOTALS		63			312.82 ft <sup>2</sup>		

GENERAL NOTES:

- 1) LOCATION OF ALL SIGNS AND PAVEMENT MARKINGS SHOWN ARE APPROXIMATE AND SHALL BE LOCATED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
- 2) SEE STANDARD SIGNS MANUAL FOR DETAILED DRAWINGS OF TYPE C SIGN PANELS.
- 3) PUNCHING CODES FOR TYPE C SIGN PANELS SHALL BE GOVERNED BY THE NUMBER OF SIGN POSTS SPECIFIED ON THE PLANS AT EACH LOCATION (NOT BY WHAT IS SHOWN ON THE DETAILED DRAWINGS IN THE STANDARD SIGNS MANUAL). DIMENSIONS SHALL BE AS SPECIFIED ON PAGES 108-111 OF THE STANDARD SIGNS MANUAL.
- 4) SEE SPECIAL PROVISIONS REGARDING STRUCTURAL DETAILS FOR TYPE C SIGN PANELS.
- 5) COORDINATE INSTALLATION OF ALL SIGN POSTS AND PAVEMENT MARKINGS WITH SIDEWALK AND ROAD CONSTRUCTION.
- 6) ① - MOUNTED ABOVE, BELOW, OR WITH OTHER SIGN PANEL ON SAME POST.
- 7) ALL NEW TYPE C SIGN PANELS, STREET NAME SIGN PANELS, AND X4-2 SIGN PANELS SHALL BE FABRICATED USING VIP SHEETING. SEE SPECIAL PROVISIONS.
- 8) NEW STREET NAME SIGNS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR (SEE SPECIAL PROVISIONS).
- 9) ISLAND SIGN MOUNTS WILL BE PROVIDED BY ANOKA COUNTY

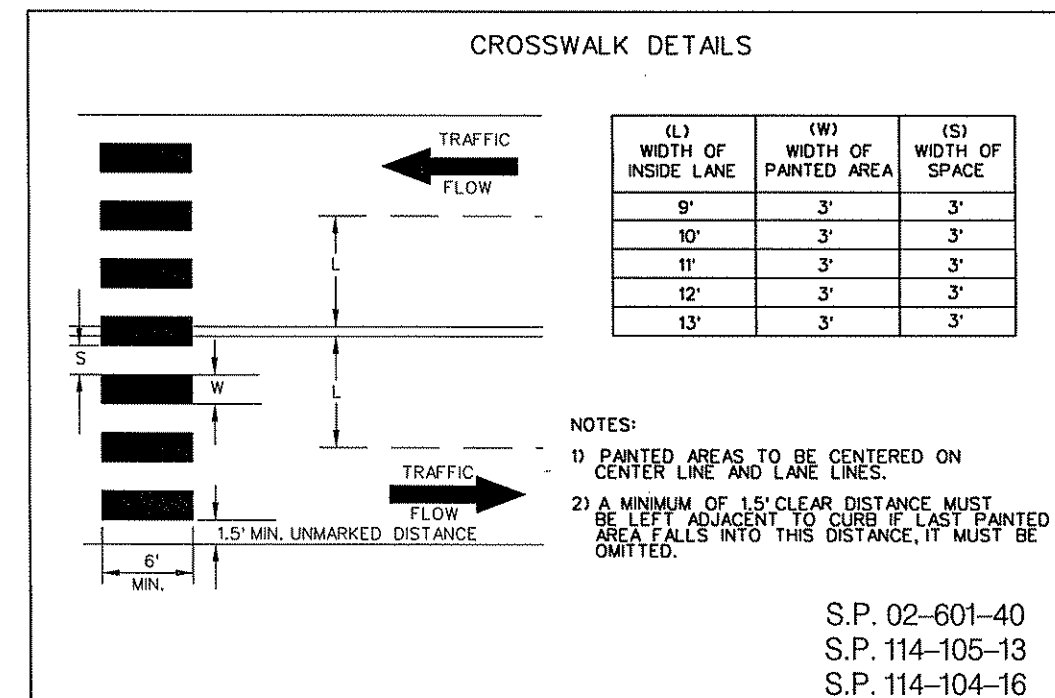
LEGEND OF SYMBOLS



SALVAGE SIGN / INSTALL SIGN (TYPE SPECIAL)				
PLAN CODE	QUANTITY	PANEL SIZE (INCHES)	NO. OF POSTS & TYPE	DESCRIPTION
AA	4	-	1-ROUND	SALVAGE STREET NAME SIGN AND POST
-	1	30X30	1-U	INSTALL SALVAGED R10-7(MOD) SIGN ON NEW POST
▲	1	-	1-ROUND	FURNISH & INSTALL STREET NAME SIGN PANELS AND POST
◀	1	-	①	FURNISH & INSTALL STREET NAME SIGN PANELS ON R1-1 POST

SALVAGE SIGN - TYPE C					
PLAN CODE	MMUTCD CODE	QUANTITY	PANEL SIZE (INCHES)	NO. OF POSTS & TYPE	PANEL LEGEND
A	R1-1	6	30X30	1-U	STOP
B	R2-1	1	24X30	1-U	SPEED LIMIT (40)
C	R3-30AD	2	36X30	1-U	LEFT AND THRU/RIGHT
D	R4-7	2	24X30	①	KEEP RIGHT
E	R6-1R	3	36X12	①	ONE WAY (RIGHT)
F	R7-1	12	12X18	1-U	NO PARKING ANY TIME
G	R7-1	3	12X18	①	NO PARKING ANY TIME
H	R7-22	1	12X18	1-U	NO PARKING HERE TO CORNER
J	R8-3a	1	18X18	1-U	NO PARKING
K	R8-3a	1	18X18	①	NO PARKING
L	R10-7(MOD)	1	30X30	1-U	DO NOT BLOCK FIRE STATION EXIT
M	W3-3	2	36X36	1-U	SIGNAL AHEAD
N	W3-3P	1	36X24	①	SIGNAL AHEAD (PLAQUE)
P	W9-2L	1	36X36	2-U	LANE ENDS MERGE LEFT
Q	W10-1	1	36" DIA.	1-U	RAILROAD ADVANCE
R	W11-2	1	36X36	2-U	PED ADVANCE
S	W11-2A	2	36X36	1-U	PED XING
T	W11-8	1	36X36	1-U	FIRE STATION ADVANCE
V	S2-P2	2	24X18	①	DOWN ARROW (RIGHT)
W	D11-1	1	24X18	1-U	BIKE ROUTE
X	-	1	18X18	①	MTC
TOTAL		46			

HAZARD MARKER (X4-2)				
PLAN CODE	QUANTITY	PANEL SIZE (INCHES)	NO. OF POSTS & TYPE	DESCRIPTION
X-1	6	18X18	①	HAZARD MARKER



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

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 Name: JOHN GRAY, PE  
 Date: 8/15/02 Reg. No. 22457

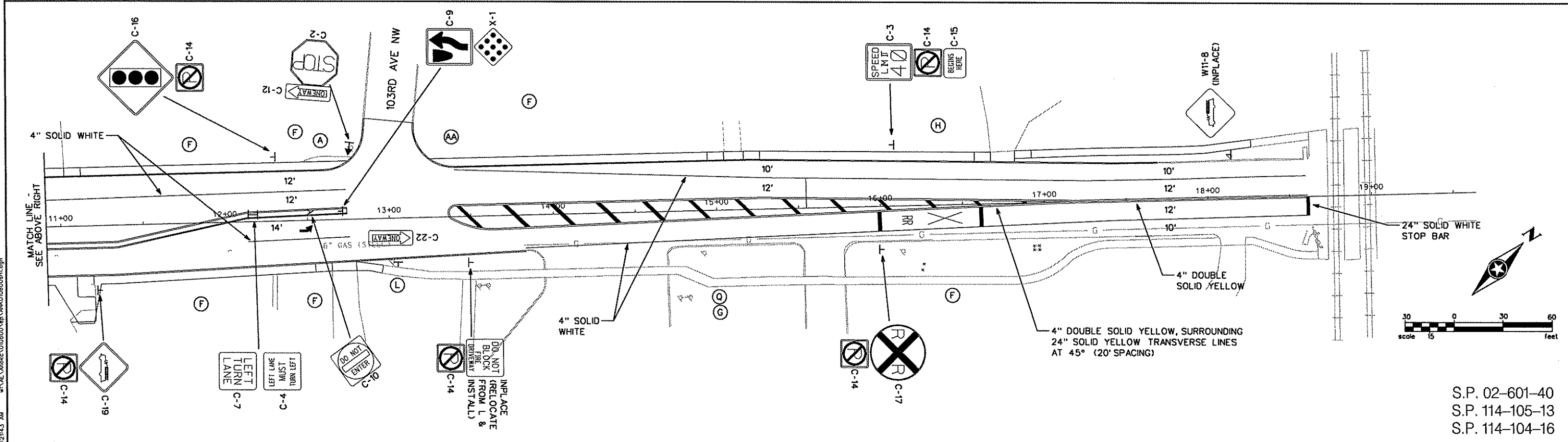
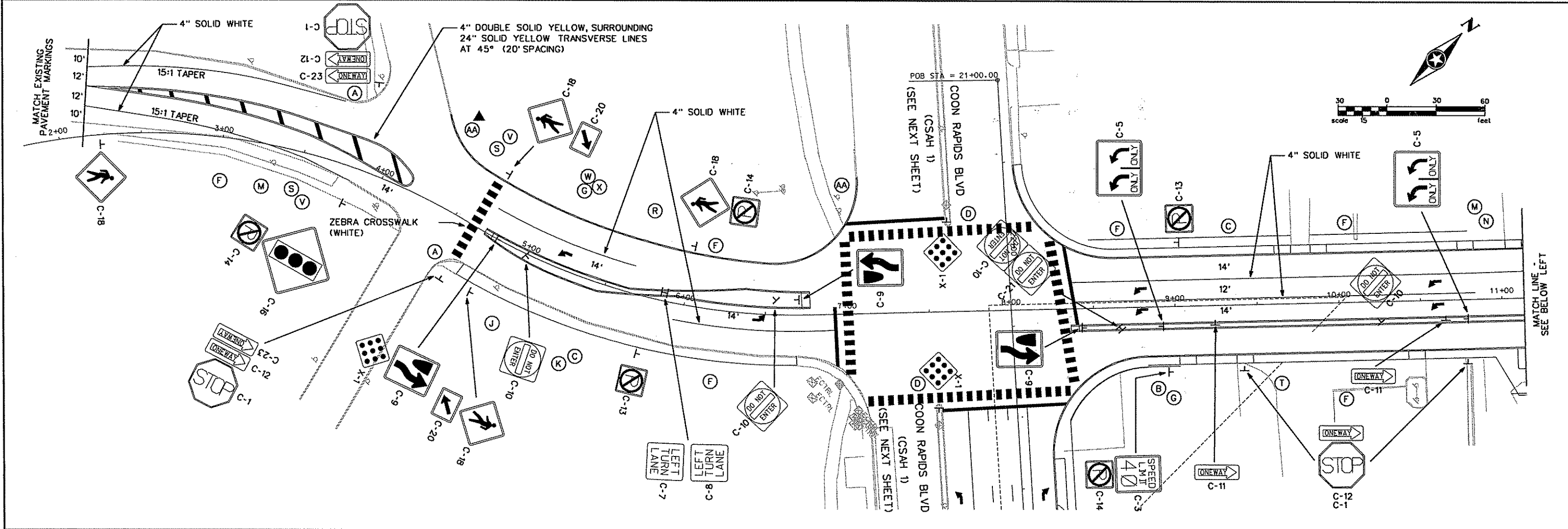


ANOKA COUNTY, MINNESOTA

SIGNING AND STRIPING TABULATIONS AND DETAILS

FILE NO. ANOKC0106.00	28
DATE 8/15/02	45

S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16



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 DESIGN TEAM

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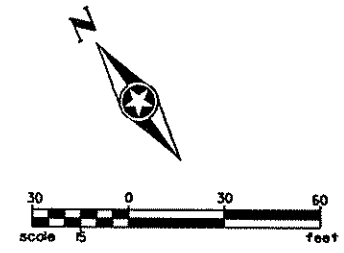
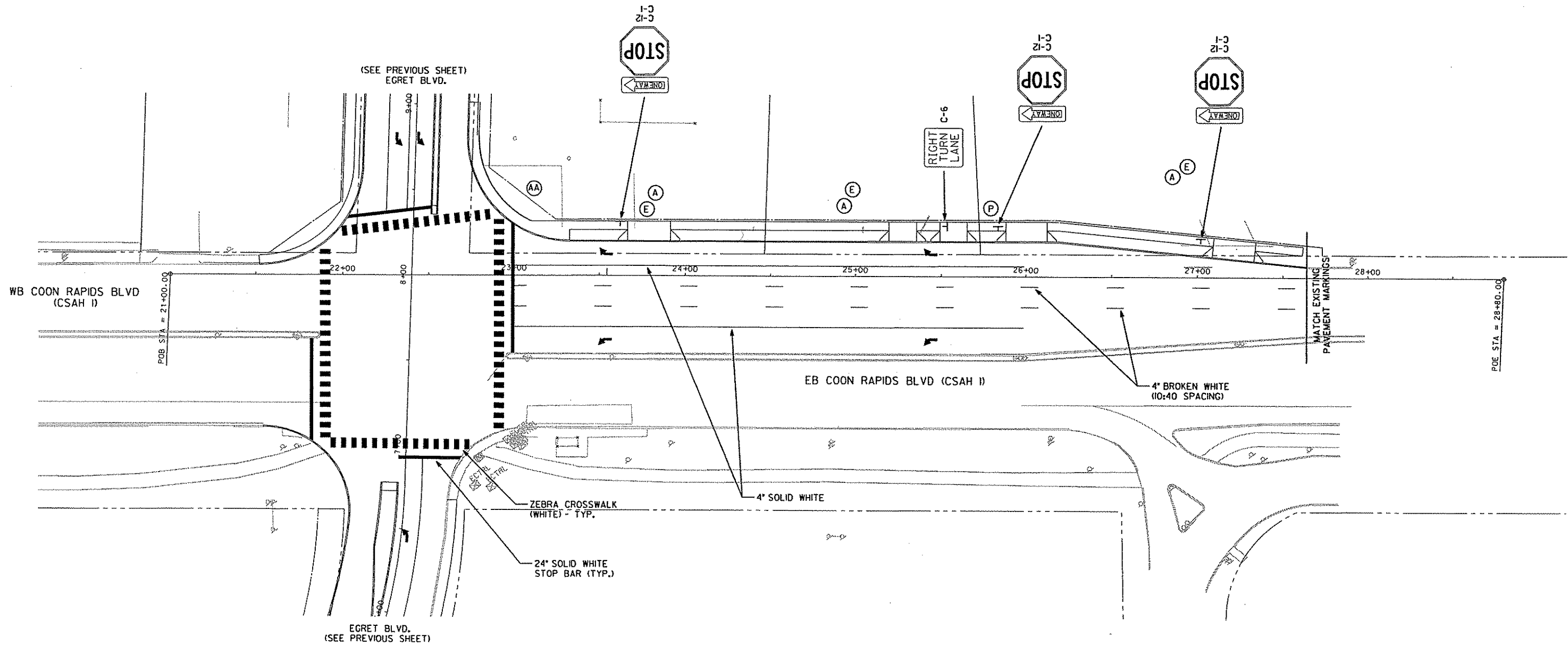
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 Name: JOHN GRAY, PE  
 Date: 8/15/02 Reg. No. 22457

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

ANOKA COUNTY,  
 MINNESOTA

SIGNING AND STRIPING PLAN

FILE NO. AANOKC0106.0C  
 DATE 8/15/02  
 29  
 45



S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

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CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

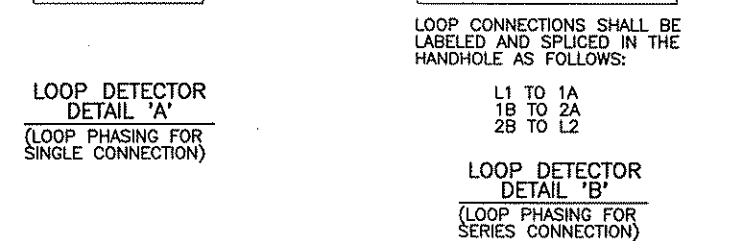
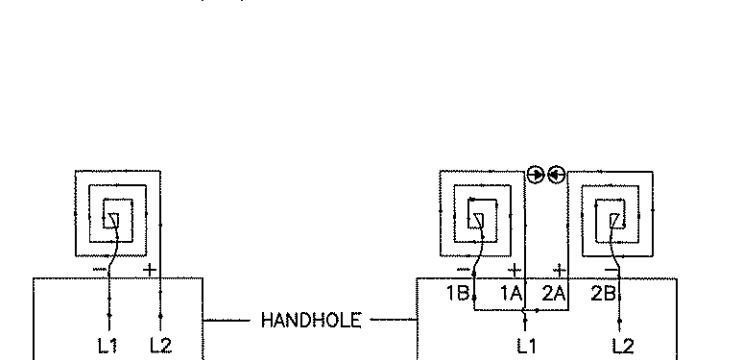
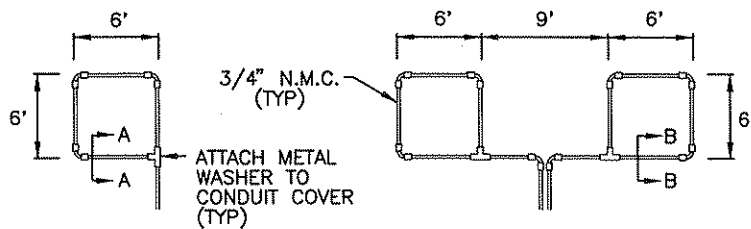
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 Date: 8/15/02 Reg. No. 22457  
 Name: JOHN GRAY, PE

**ESEH**<sup>®</sup>  
 PHONE: (651) 490-2000  
 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

ANOKA COUNTY,  
 MINNESOTA

SIGNING AND STRIPING PLAN

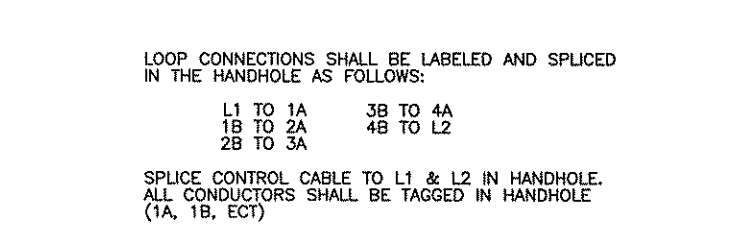
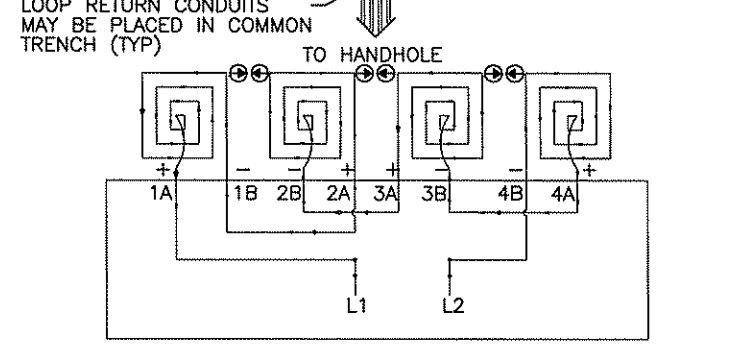
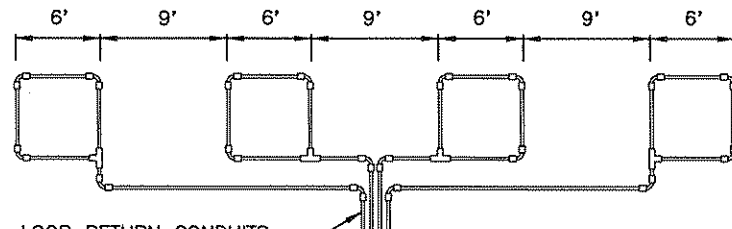
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DATE 8/15/02	45



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

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

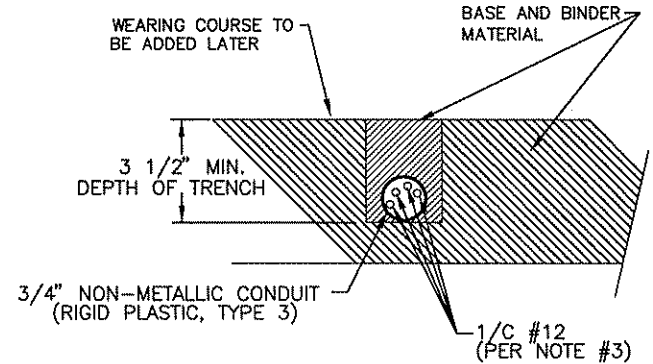
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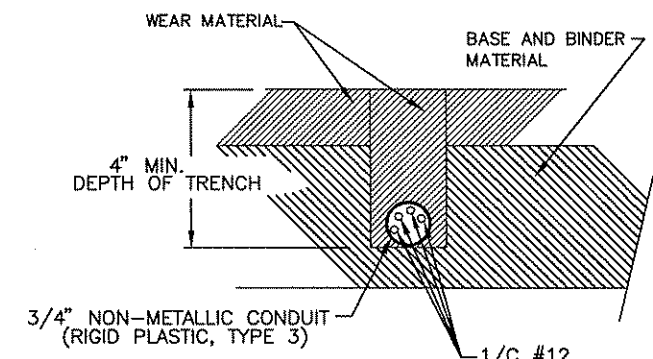
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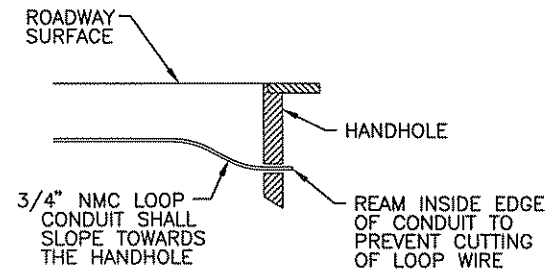
**LOOP DETECTOR DETAIL 'C'**  
(LOOP PHASING FOR SERIES CONNECTION)



**SECTION A-A**  
DETAIL FOR LOOP INSTALLATION IN NEW ROADWAY



**SECTION B-B**  
DETAIL FOR LOOP INSTALLATION IN EXISTING ROADWAY



**DRAINAGE DETAIL**

**LOOP DETECTOR WIRING**

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

**LEGEND OF SYMBOLS**

CONTROLLER AND SERVICE EQUIP. NO's	(Symbol)
SIGNAL BASE NO.	(Symbol)
SIGNAL FACE NO.	(Symbol)
LUMINAIRE NO.	(Symbol)
CONTROLLER AND CABINET	(Symbol)
CONTROLLER AND CABINET - IN PLACE	(Symbol)
HANDHOLE - IN PLACE	(Symbol)
RIGID STEEL CONDUIT (RSC)	(Symbol)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(Symbol)
SIGNAL FACE WITH BACKGROUND SHIELD	(Symbol)
SIGNAL FACE W/O BACKGROUND SHIELD	(Symbol)
SIGNAL FACE - IN PLACE	(Symbol)
PEDESTRIAN INDICATORS	(Symbol)
PEDESTRIAN INDICATORS - IN PLACE	(Symbol)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(Symbol)
PEDESTRIAN PUSH BUTTON STATION	(Symbol)
TRAFFIC SIGNAL PEDESTAL	(Symbol)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(Symbol)
TRAFFIC SIGNAL POLE AND MAST ARM	(Symbol)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(Symbol)
STREET LIGHT POLE AND LUMINAIRE	(Symbol)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(Symbol)
MAST ARM AND LUMINAIRE	(Symbol)
MAST ARM AND LUMINAIRE - INPLACE	(Symbol)
WOOD POLE	(Symbol)
WOOD POLE - IN PLACE	(Symbol)
SOURCE OF POWER	(Symbol)
RAILROAD SIGNAL - IN PLACE	(Symbol)
RIGHT OF WAY LINE	(Symbol)
CENTERLINE	(Symbol)
EDGE OF ROADWAY	(Symbol)
SHOULDERLINE	(Symbol)
CURB LINE	(Symbol)
STOP BAR	(Symbol)
EMERGENCY VEHICLE PREEMPTION DETECTOR	(Symbol)

**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

**STANDARD PLATES**  
THESE STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

PLATE NO.	DESCRIPTION
* 8110 D	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 D	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

G:\CLIENTS\A-F\ANOKA\01\0800\CRBDT1.DWG

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

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

*John M Gray*  
Name: John M Gray, P.E.  
Date: 8/15/02 Lic. No. 22457

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

**ANOKA COUNTY, MINNESOTA**

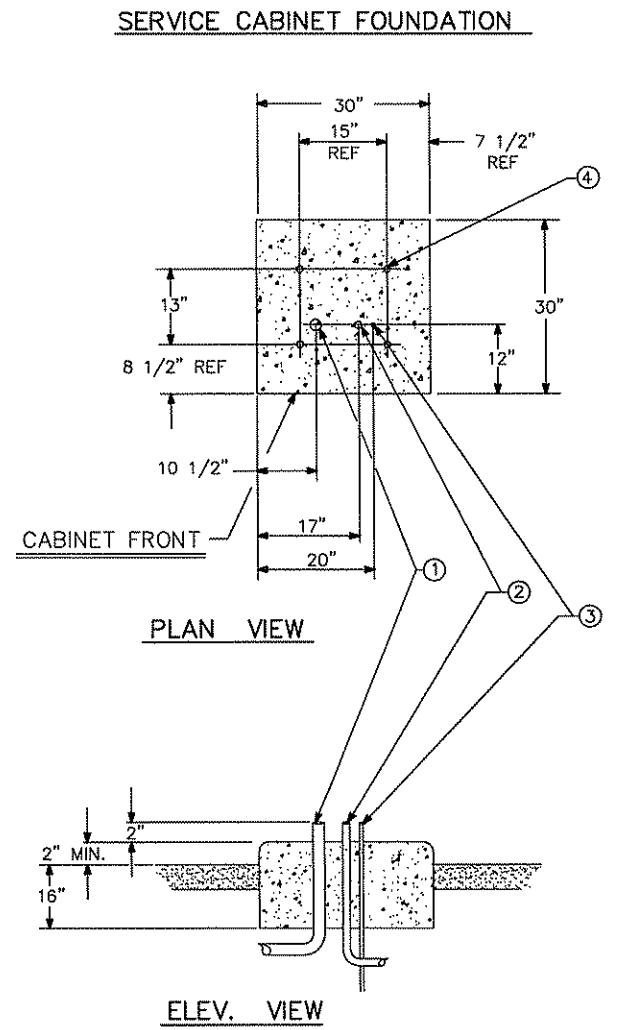
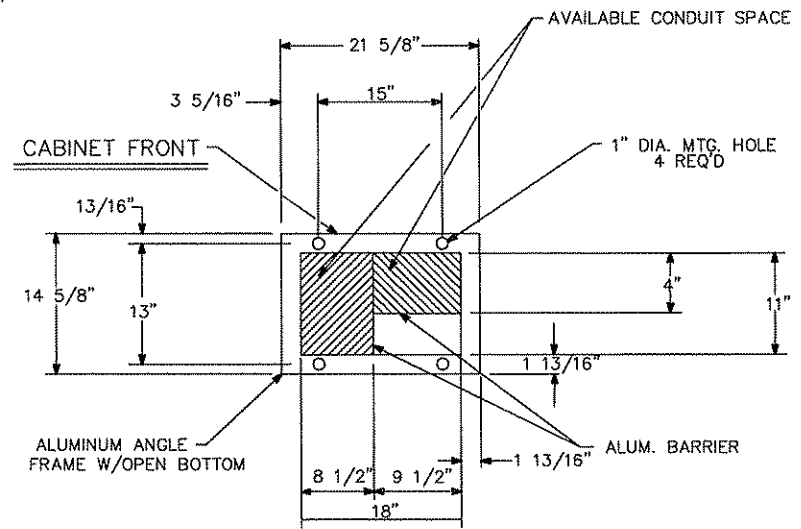
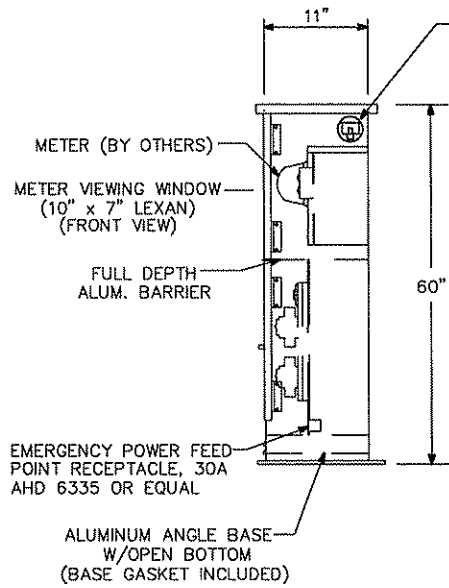
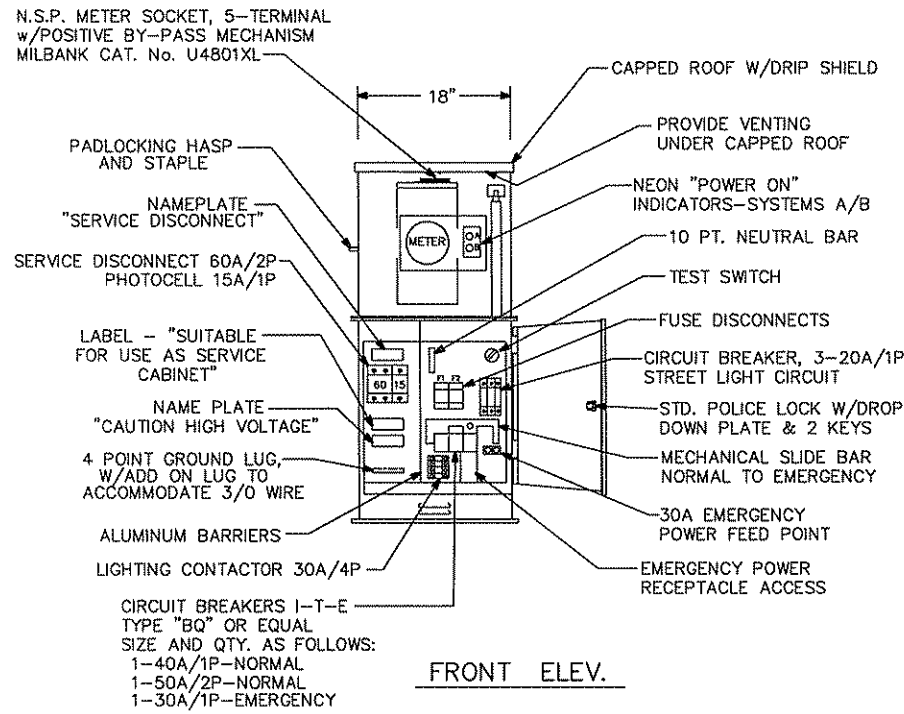
**TRAFFIC SIGNAL SYSTEM  
DETAILS & STANDARD PLATES  
COON RAPIDS BLVD (CSAH 1)  
AT EGRET BLVD**

FILE NO. AANOKC0106.00	<b>31</b>
DATE 8/15/02	<b>45</b>

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16



SIGNAL SERVICE CABINET

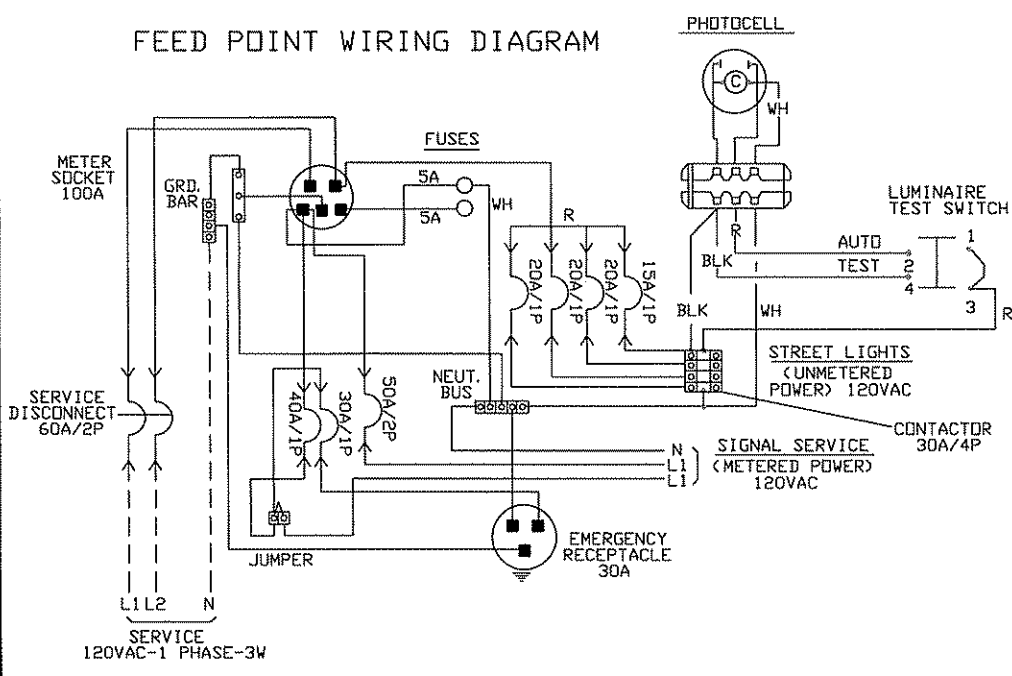


- ① 2" RSC TO H.H.17 (FOR POWER CABLES)
- ② 2" RSC TO H.H.16 (FOR CONTROLLER CABINET SERVICE AND STREET LIGHTING)
- ③ GROUNDING ROD
- ④ ANCHOR BOLT LOCATIONS (4 REQUIRED)

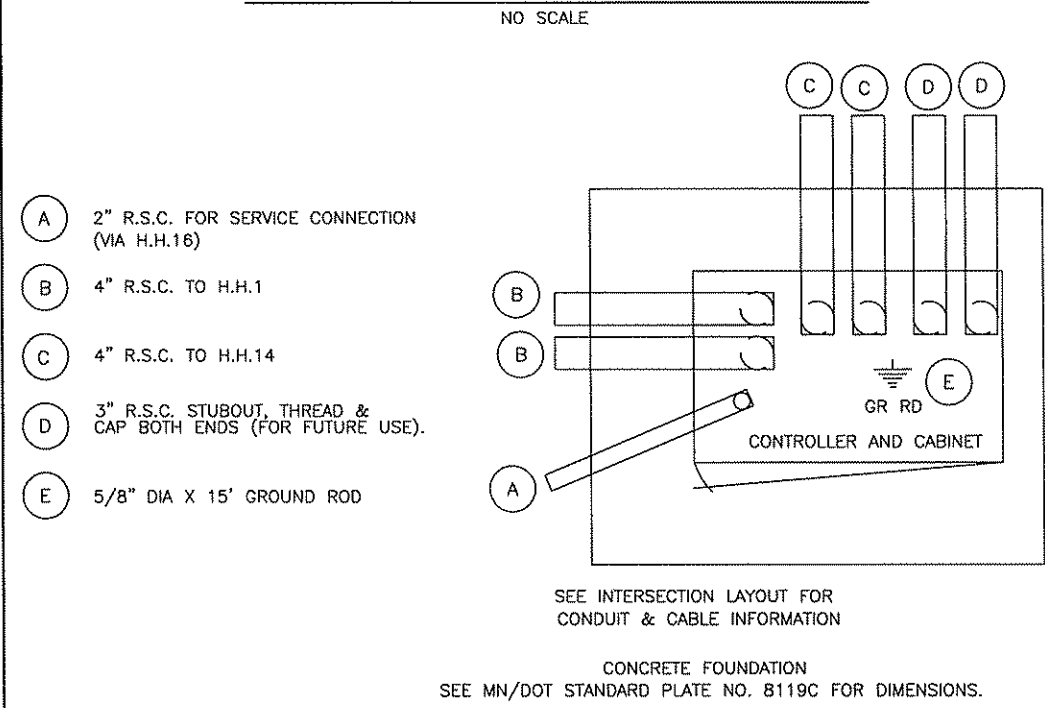
CONSTRUCTION NOTES

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

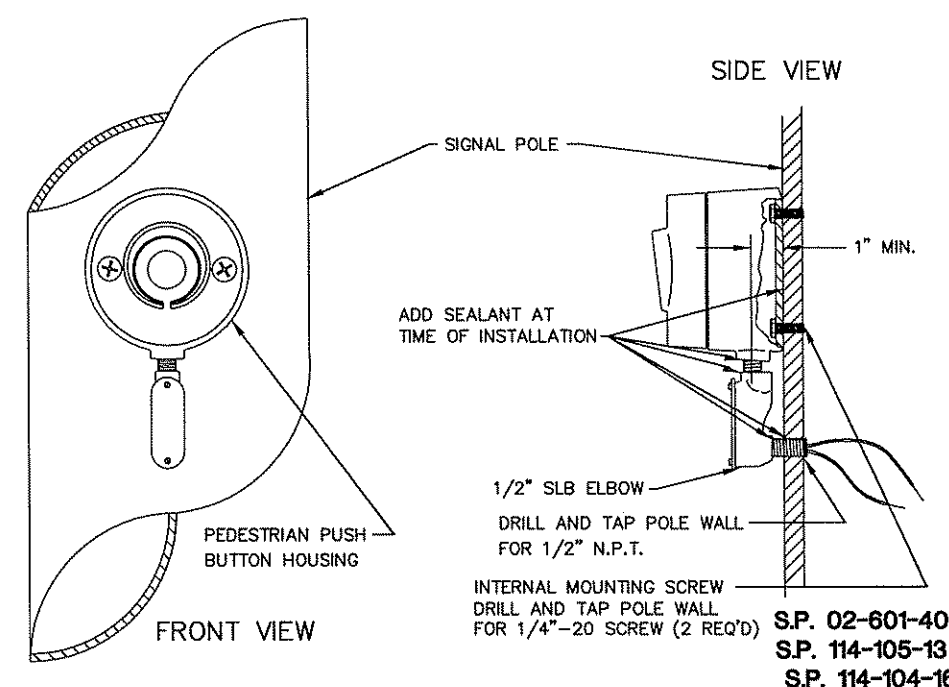


TYPICAL CONTROLLER CABINET PAD LAYOUT



- (A) 2" R.S.C. FOR SERVICE CONNECTION (VIA H.H.16)
- (B) 4" R.S.C. TO H.H.1
- (C) 4" R.S.C. TO H.H.14
- (D) 3" R.S.C. STUBOUT, THREAD & CAP BOTH ENDS (FOR FUTURE USE).
- (E) 5/8" DIA X 15' GROUND ROD

MAST ARM POLE PEDESTRIAN PUSH BUTTON DETAIL



S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

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

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*John M. Gray*  
 Name: John M. Gray, P.E.  
 Lic. No. 22457

Date: 8/15/02

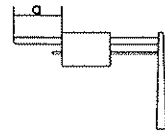
**SEH**  
 PHONE: (651) 490-2000  
 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

ANOKA COUNTY,  
 MINNESOTA

TRAFFIC SIGNAL SYSTEM  
 CABINET & PUSH BUTTON DETAILS  
 COON RAPIDS BLVD (CSAH 1)  
 AT EGRET BLVD

FILE NO. AANOKC0106.00	32
DATE 8/15/02	45

SIGN PANELS - TYPE D							
SIGN PANEL	SIZE (inches)	NO. REQ.	BRACKETS PER SIGN	BRACKET SPACING (**)	AREA (SQ.FT.) PER SIGN	POLE NO.	α
D-1	78x24	1	3	-	13.00	1	28'
D-2	126x24	1	5	-	21.00	2	24'
D-3	78x24	1	3	-	13.00	3	34'
D-4	126x24	1	5	-	21.00	5	18'
TOTAL QUANTITIES		4			68.00		

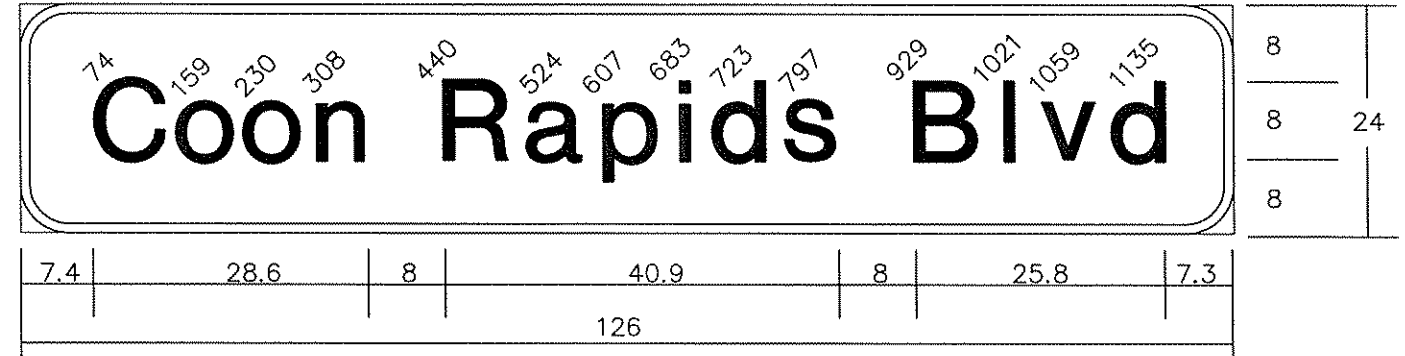


SIGN PANELS - TYPE C							
SIGN PANEL	SIZE (in.)	NO. REQ.	BRACKETS PER SIGN	BRACKET SPACING (**)	AREA (SQ.FT.) PER SIGN	POLE NO.	α
R6-1L	36x12	4	①	-	3.00	1,2,3,5	-
R6-1R	36x12	4	①	-	3.00	1,2,3,5	-
TOTAL QUANTITIES		8			24.00		

NOTES:

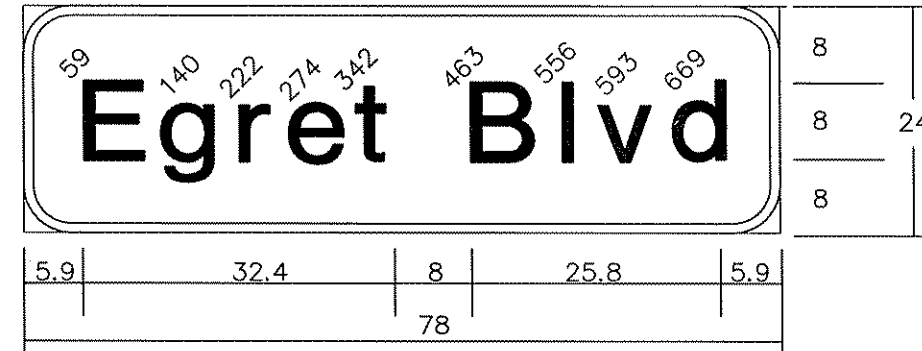
- COLOR-WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- FOR STRUCTURAL DETAILS, TYPE "D" SIGNS, SEE STANDARD SIGNS MANUAL, PAGE 105A (COPY IN SPECIAL PROVISIONS).
- SIGN PANELS TO BE FURNISHED AND INSTALLED INCIDENTAL TO ITEM NO. 2565.511 FOR THIS SIGNAL SYSTEM.
- ① = MOUNT ON TRAFFIC SIGNAL MAST ARM POLE AS NOTED IN PLANS & SPECIAL PROVISIONS.
- ALL NEW TYPE C AND D SIGNS SHALL BE FABRICATED USING VIP SHEETING. SEE SPECIAL PROVISIONS.
- (\*\*) = SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36" AND SHALL BE UNIFORMLY SPACED. SEE SPECIAL PROVISIONS FOR BRACKET SPACING REQUIREMENTS.

D-2, D-4



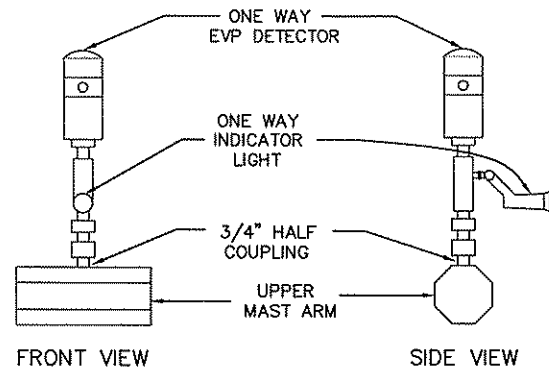
D-2, D-4; 126" x 24", 3.0" Radius, 1.0" Border, White on Green "Coon Rapids Blvd" E Mod.

D-1, D-3



D-1, D-3; 78" x 24", 3.0" Radius, 1.0" Border, White on Green "Egret Blvd" E Mod.

EVP DETECTOR AND LIGHT MOUNTING DETAIL ON MAST ARM



S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

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DRAWN BY: JMG	1	JMG	8/02	REVISED PER COUNTY COMMENTS
DESIGNER: JMG	2	JMG	3/03	REVISED TO BRING PLAN TO CURRENT STANDARDS
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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*John M. Gray*  
Name: John M. Gray, P.E.  
Date: 8/15/02 Lic. No. 22457



ANOKA COUNTY,  
MINNESOTA

TRAFFIC SIGNAL SYSTEM  
SIGNING & EVP DETAILS  
COON RAPIDS BLVD (CSAH 1)  
AT EGRET BLVD

FILE NO.  
AANOKC0106.00  
DATE  
8/15/02

33  
45

**NOTES:**

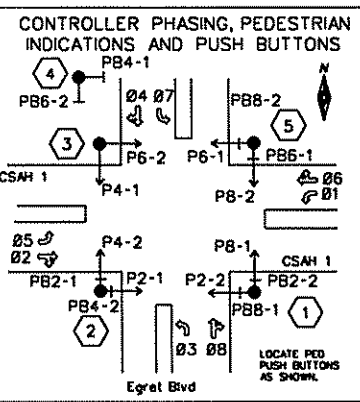
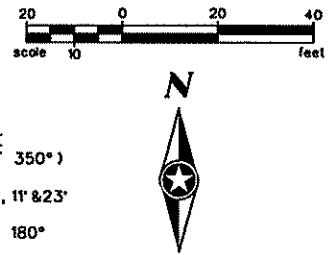
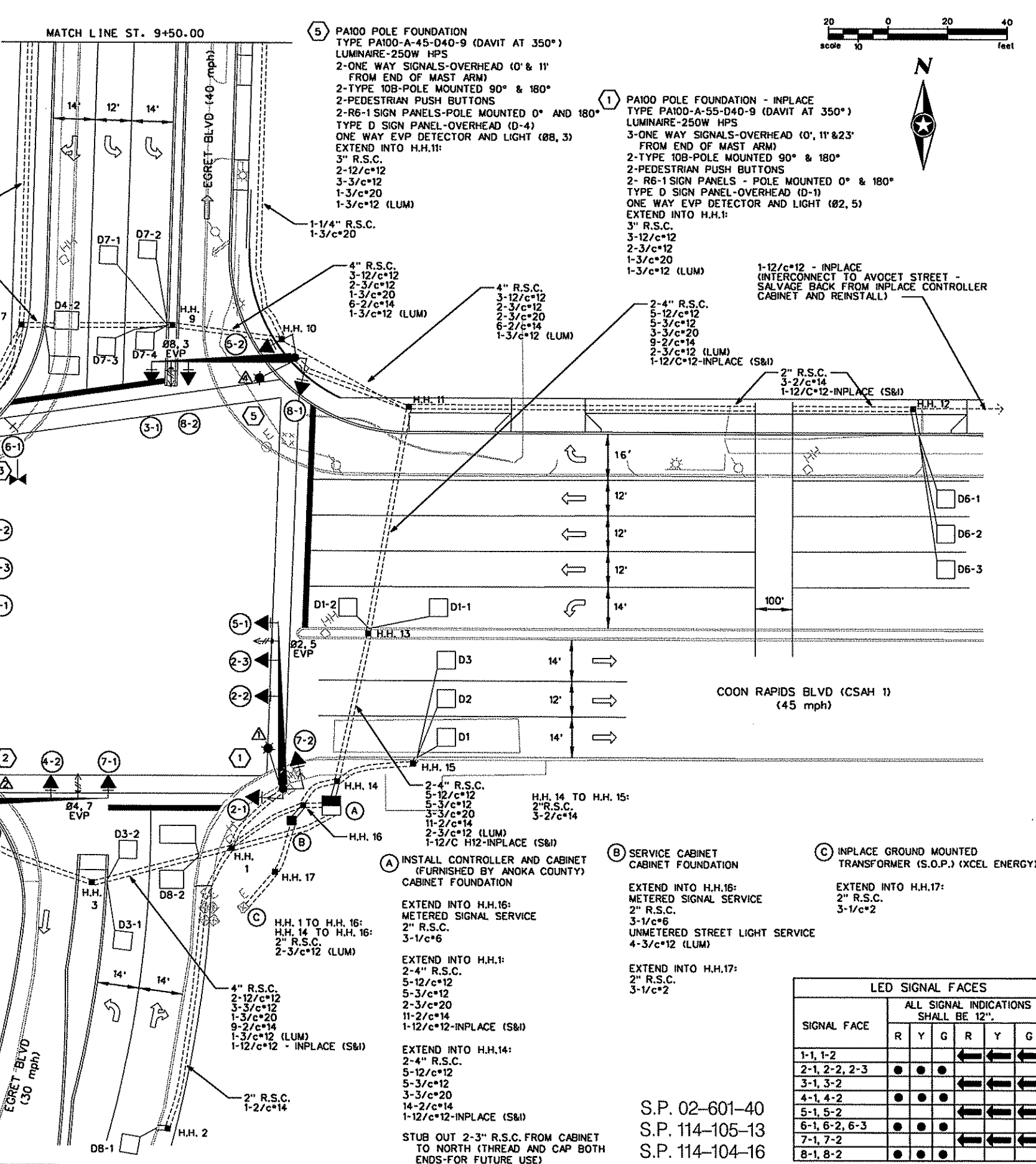
- LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- SEE SPECIAL PROVISIONS FOR ANOKA COUNTY FURNISHED MATERIALS.
- LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
- NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO. 8114A.
- EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
- EACH PEDESTRIAN INDICATION SHALL BE A ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
- ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
- CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL FACE.
- A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6" FROM END OF EACH MAST ARM (FOR EVP).
- SEE SPECIAL PROVISIONS, DETAILS AND REMAINDER OF PLANS FOR INFORMATION REGARDING SIGN PANELS, STRIPING AND CONCRETE WALKWAY TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL TRAFFIC SIGNAL MATERIALS WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS.
- SEE SPECIAL PROVISIONS REGARDING REMOVAL AND SALVAGING OF INPLACE SIGNAL SYSTEM (TO BE MEASURED AND PAID FOR SEPARATELY UNDER ITEM NO. 2565.601).
- S&I - SALVAGE AND INSTALL  
F&I - FURNISH AND INSTALL
- 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.

NMC LOOP DETECTORS			
NUMBER	SIZE (FT)	LOCATION	FUNCTION
D1-1	6X6	40'	1
D1-2	6X6	10'	1
D2-1	6X6	300'	1
D2-2	6X6	300'	1
D3-1	6X6	40'	1
D3-2	6X6	10'	1
D4-1	6X6	250'	3
D4-2	6X10&6X8	5' & 20'	7
D5-1	6X6	40'	1
D5-2	6X6	10'	1
D6-1	6X6	300'	1
D6-2	6X6	300'	1
D6-3	6X6	300'	1
D7-1	6X6	40'	1
D7-2	6X6	40'	1
D7-3	6X6	10'	1
D7-4	6X6	10'	1
D8-1	6X6	120'	3
D8-2	6X12&6X8	5' & 20'	7
D1,D2,D3	6X6	50'	11
D4,D5,D6	6X6	50'	11

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

**DETECTOR FUNCTIONS:**

- CALL AND EXTEND
- CALL ONLY
- EXTEND ONLY
- CALL ONLY DENSITY
- DELAYED CALL ONLY
- DELAYED CALL ONLY DENSITY
- DELAYED CALL - IMMEDIATE EXTEND
- CARRY OVER (STRETCH)
- ADVISORY DETECTOR
- SAMPLING DETECTOR
- COUNT DETECTOR



**SIGNAL SYSTEM OPERATIONS:**

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

SIGNAL FACE	ALL SIGNAL INDICATIONS SHALL BE 12"					
	R	Y	G	R	Y	G
1-1, 1-2						
2-1, 2-2, 2-3	●	●	●	●	●	●
3-1, 3-2						
4-1, 4-2	●	●	●	●	●	●
5-1, 5-2						
6-1, 6-2, 6-3	●	●	●	●	●	●
7-1, 7-2						
8-1, 8-2	●	●	●	●	●	●

DRAWN BY: BEM	1	JMG	3/03	REVISED PER COUNTY COMMENTS
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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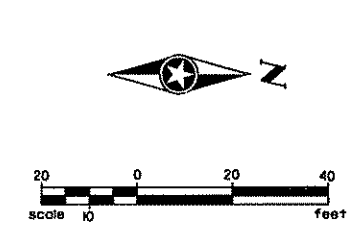
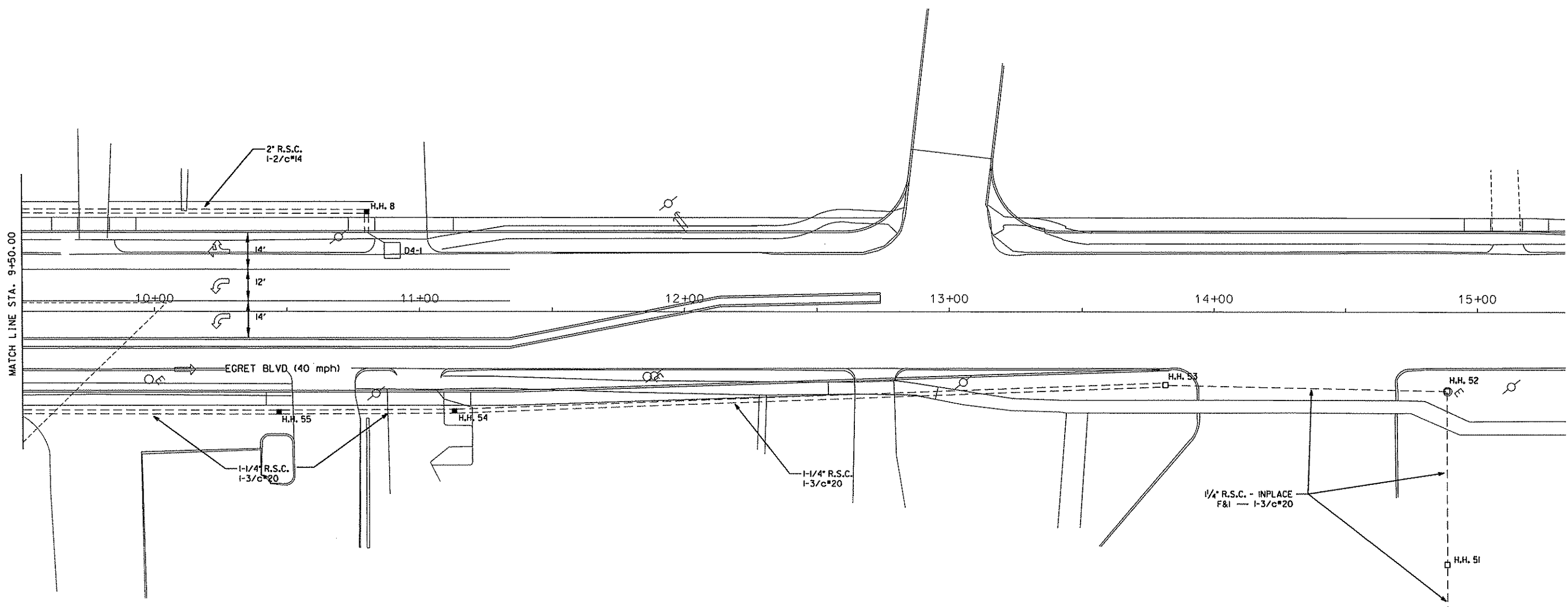
John M. Gray, PE  
Name: JOHN M. GRAY, PE  
Date: 8/15/02 Reg. No. 22457

**ANOKA COUNTY, MINNESOTA**

TRAFFIC SIGNAL SYSTEM  
INTERSECTION LAYOUT  
COON RAPIDS BLVD. (CSAH 1) AT  
EGRET BLVD.

FILE NO. AANDK0106.00  
DATE 8/15/02

34  
45



INPLACE EVP PUSH BUTTON (MOUNTED ON WALL OF FIRE STATION - APPROX. 4' ABOVE GROUND LINE) EXTENDED INTO H.H. 50: 1\"/>

1\"/>

S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

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

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 Name: JOHN GRAY, PE  
 Date: 8/15/02 Reg. No. 2245T

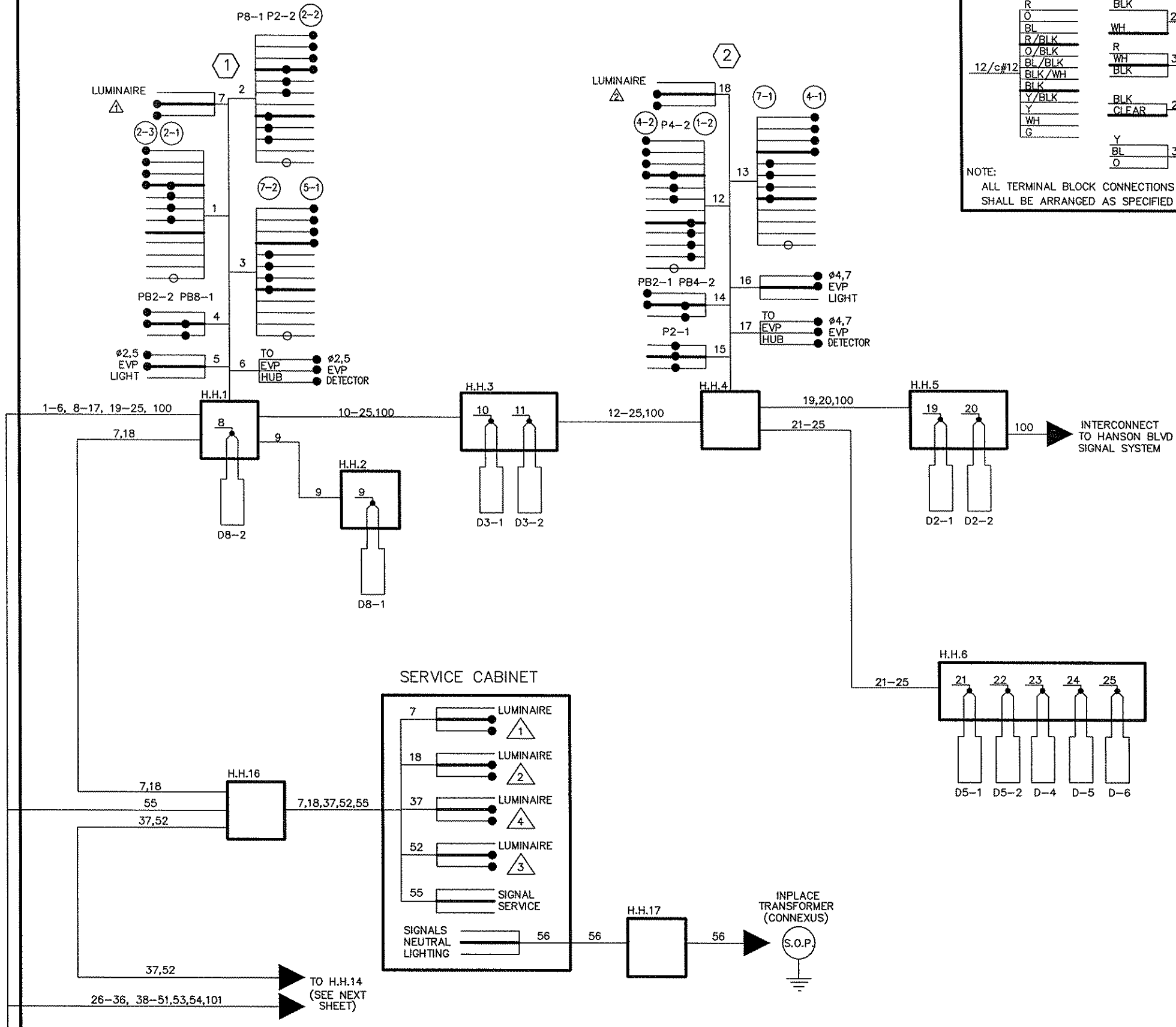
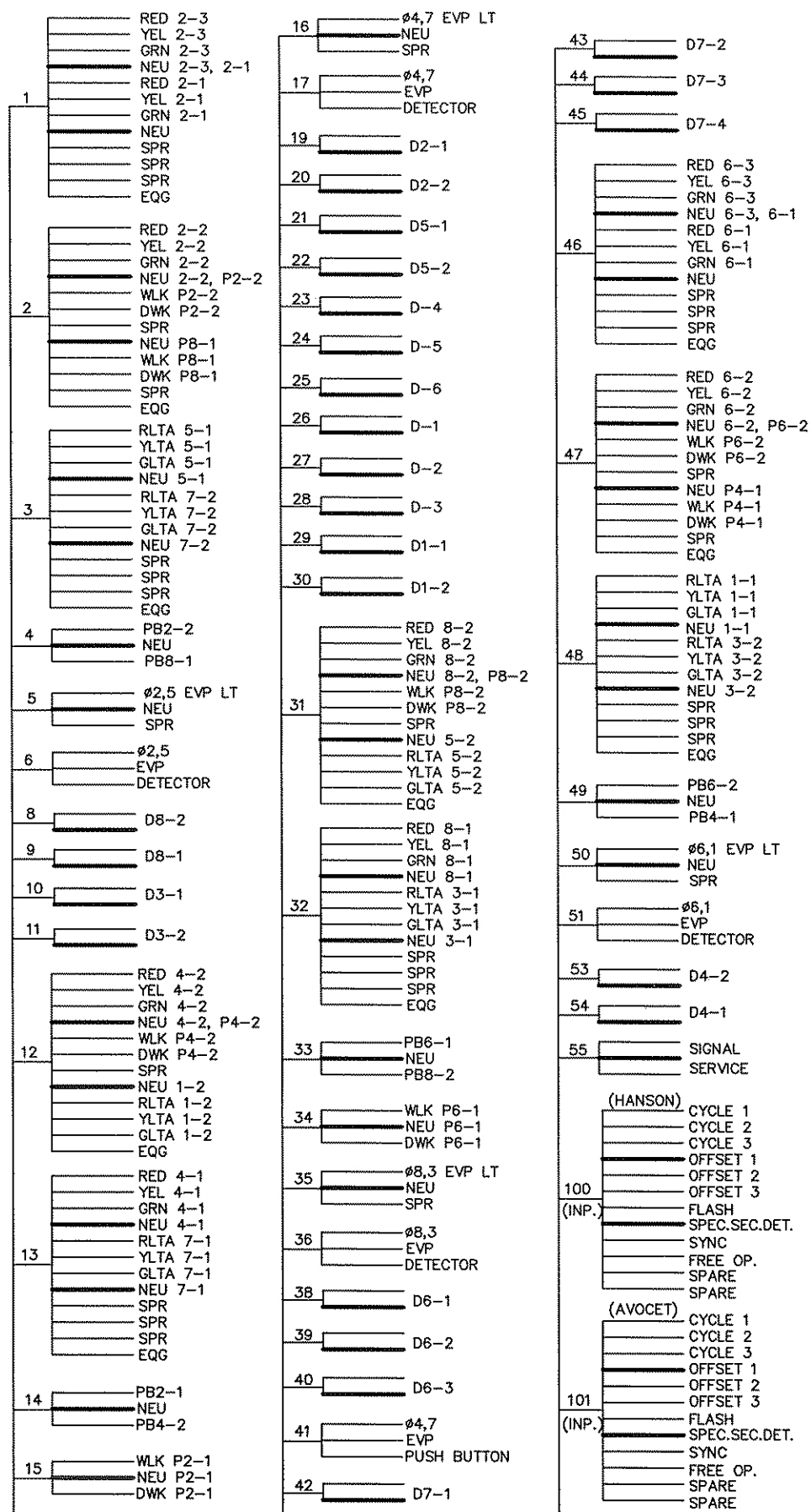
**ESEH**  
 PHONE: (651) 450-2000  
 3535 VADNAIS CENTER DR.  
 ST. PAUL, MN 55110

ANOKA COUNTY,  
 MINNESOTA

TRAFFIC SIGNAL SYSTEM  
 INTERSECTION LAYOUT  
 COON RAPIDS BLVD. (CSAH 1) AT  
 EGRET BLVD.

FILE NO.	AANOKC0106.00	35
DATE	8/15/02	45

CONTROLLER CABINET



CONDUCTOR COLOR CODING

R	BLK	2-1/c#6
O	WH	
BL	R	3/c#12
R/BLK	WH	
O/BLK	BLK	
BL/BLK	BLK	2/c#14
BLK/WH	CLEAR	
Y/BLK	Y	3/c#20
WH	O	
G		

NOTE:  
ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

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DESIGNER: JMG				
CHECKED BY: JMG				
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Date: 8/15/02 Lic. No. 22457



ANOKA COUNTY,  
MINNESOTA

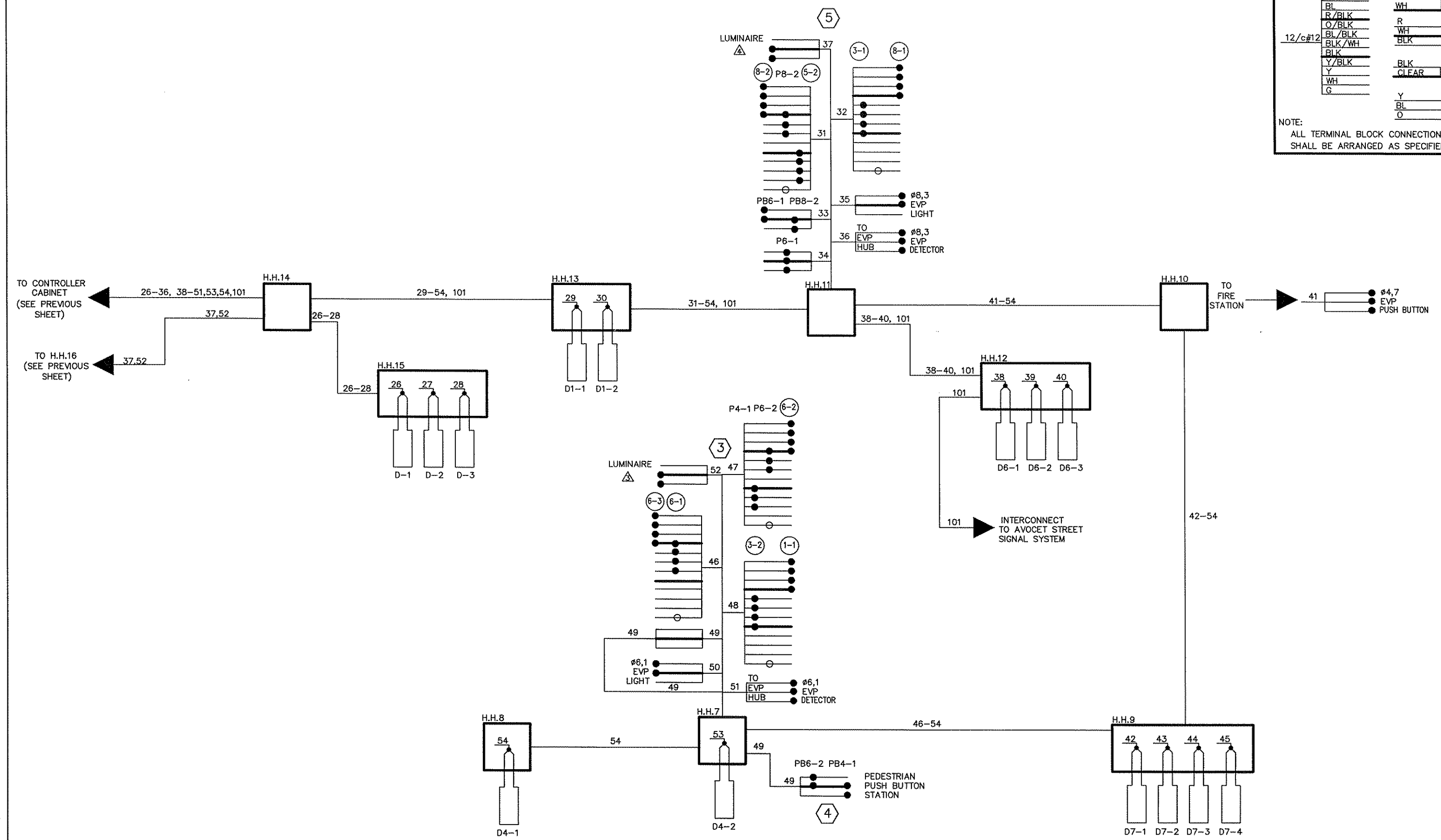
TRAFFIC SIGNAL SYSTEM  
FIELD WIRING DIAGRAM  
COON RAPIDS BLVD (CSAH 1)  
AT EGRET BLVD

FILE NO. AANOKC0106.00	36
DATE 8/15/02	45

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

CONDUCTOR COLOR CODING	
R	BLK
O	WH
BL	2-1/c#6
R/BLK	R
O/BLK	WH
BL/BLK	3/c#12
BLK/WH	BLK
BLK	
Y/BLK	BLK
Y	CLEAR
WH	2/c#14
G	
	Y
	BL
	3/c#20
	O

NOTE:  
ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.



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DRAWN BY: JMG	1	JMG	8/02	REVISED PER COUNTY COMMENTS
DESIGNER: JMG	2	JMG	3/03	REVISED PER COUNTY COMMENTS
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Date: 8/15/02 Lic. No. 22457



**ANOKA COUNTY, MINNESOTA**

**TRAFFIC SIGNAL SYSTEM  
FIELD WIRING DIAGRAM  
COON RAPIDS BLVD (CSAH 1)  
AT EGRET BLVD**

FILE NO. AANOKC0106.00	<b>37</b>
DATE 8/15/02	<b>45</b>

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

LEGEND	
	CONTROLLER CABINET
	PEDESTAL
	HANDHOLE (PULL BOX)
	CONDUIT
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	LUMINAIRE
	MAST ARM AND POLE
	SERVICE PEDESTAL
	SLAVE POINT

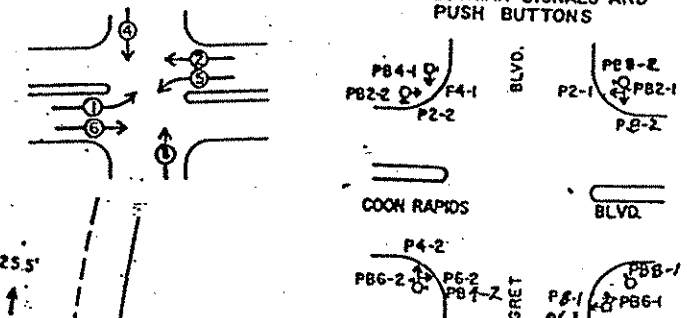
SIGNAL INDICATIONS						
FACE	PHASE	FLASH	INDICATION SIZE			
			R	Y	G	G←
2-1	2	R	12"	12"	12"	
2-2	2	R	12"	12"	12"	
4-1	4	R	12"	12"	12"	
4-2	4	R	12"	12"	12"	
4-3	4	R	12"	12"	12"	
1-1	1	R	12"	12"	12"	12"
6-1	6	R	12"	12"	12"	
6-2	6	R	12"	12"	12"	
8-1	8	R	12"	12"	12"	
8-2	8	R	12"	12"	12"	
8-3	8	R	12"	12"	12"	
5-1	5	R	12"	12"	12"	

\*SPECIAL SIGNAL (3M HEAD)



SIGNAL PHASING

PEDESTRIAN SIGNALS AND PUSH BUTTONS



EXACT LOCATION OF POLES, HANDHOLES, DETECTOR LOOPS, AND GUARD POSTS TO BE DETERMINED BY THE ENGINEER.

APPROXIMATE LOCATION OF UNDERGROUND UTILITIES ARE SHOWN ON SHEET NO. 33. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES.

ALL DETECTOR LOOPS SHALL BE INSTALLED IN 1" NMC. SEE SHEET 6 FOR DETAILS.

ALL SIGNAL POLES AND PEDESTAL BASES SHALL BE LOCATED BEHIND SIDEWALK LINE.

ALL MEDIAN SIGNALS SHALL BE SET 20' FROM NOSE TO CENTER OF FOUNDATION.

ALL LEFT TURN DETECTORS SHALL BE SPACED 10' BETWEEN LOOPS.

① TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE 10B POLE MTD 270°)  
1 SET PED INDICATIONS  
1 PED. PUSH BUTTON  
PEC FOR DOWNLIGHT  
LUMINAIRE -450w MID-SV; 350°  
EXTEND INTO HH-1; 3" RSC,  
2-12/C#12, 4-3/C#12, 4-1/C#10

ONE WAY EVP DETECTOR AND INDICATOR LIGHT (#2.5) - OVERHEAD  
1-3/c#12  
1-3/c#20

② ONE WAY SIGNAL (TYPE 1B)  
1 SET PED INDICATIONS  
1 PED. PUSH BUTTON  
EXTEND INTO HH-1; 3" RSC,  
1-12/C#12, 6-3/C#12

TO CONTROLLER AT AVOCET ST.  
HANDHOLES AT 180' MAX.  
PLACE 2" NMC, 1-12/C#12  
NEAR CURB

③ TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE 10C POLE MTD. 0°)  
2 PED. INDICATIONS  
2 PED. PUSH BUTTONS  
EXTEND INTO HH 10; 3" RSC,  
2-12/C#12, 4-3/C#12

ONE WAY EVP DETECTOR AND INDICATOR LIGHT (#8) - OVERHEAD  
1-3/c#12  
1-3/c#20

④ ONE WAY SIGNAL (TYPE 1A)  
SIGN DOWNLIGHT AND R-4-7 SIGN  
4 STEEL GUARD POSTS  
EXTEND INTO HH 7; 3" RSC,  
1-12/C#12, 2-3/C#12

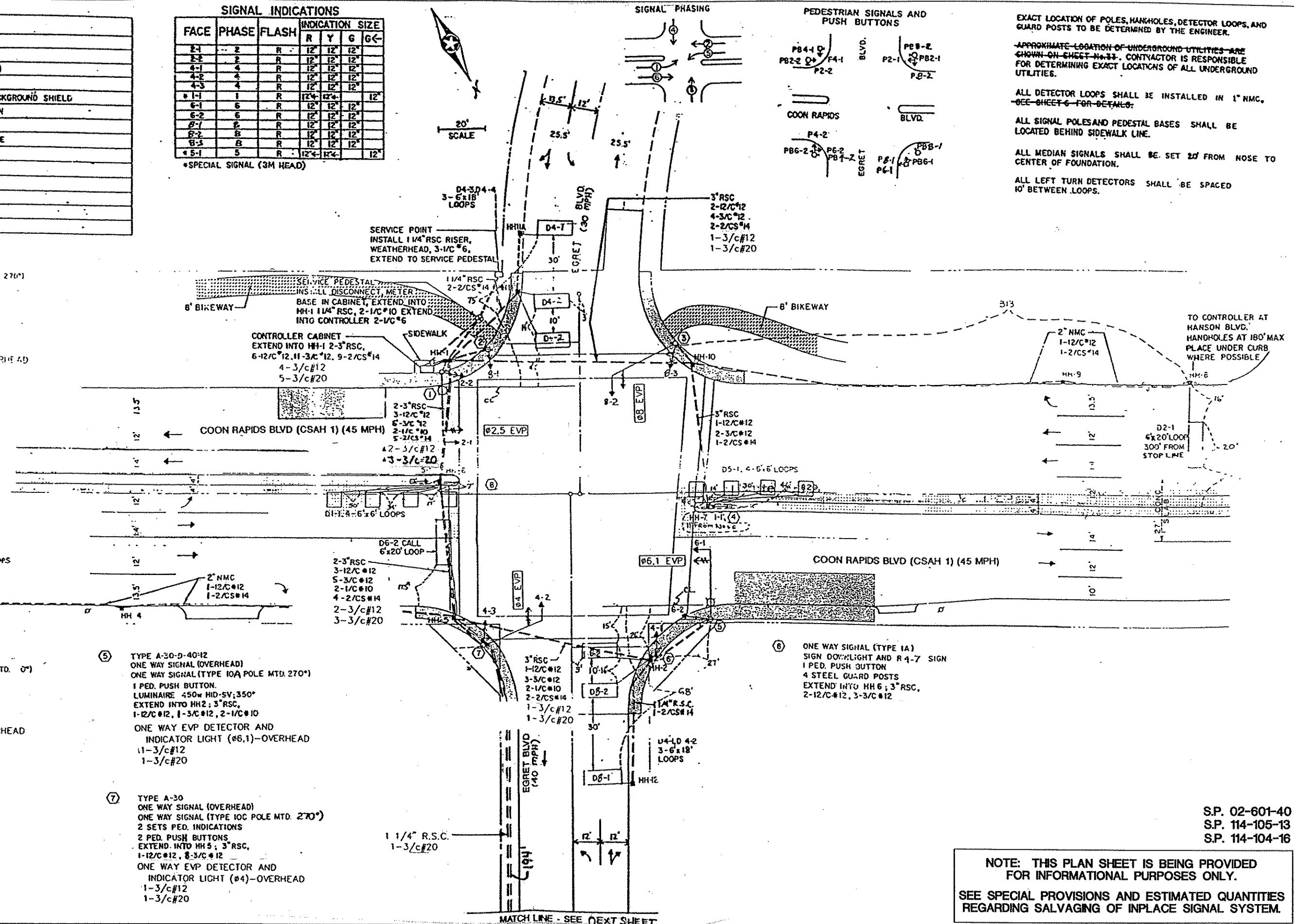
⑥ ONE WAY SIGNAL (TYPE 1C)  
2-SET PED. INDICATIONS  
1 PED. PUSH BUTTON  
EXTEND INTO HH 2; 3" RSC,  
2-12/C#12, 4-3/C#12

⑤ TYPE A-30-D-40-12  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE 10A POLE MTD. 270°)  
1 PED. PUSH BUTTON  
LUMINAIRE -450w MID-SV; 350°  
EXTEND INTO HH 2; 3" RSC,  
1-12/C#12, 1-3/C#12, 2-1/C#10

ONE WAY EVP DETECTOR AND INDICATOR LIGHT (#6.1) - OVERHEAD  
1-3/c#12  
1-3/c#20

⑦ TYPE A-30  
ONE WAY SIGNAL (OVERHEAD)  
ONE WAY SIGNAL (TYPE 10C POLE MTD. 270°)  
2 SETS PED. INDICATIONS  
2 PED. PUSH BUTTONS  
EXTEND INTO HH 5; 3" RSC,  
1-12/C#12, 8-3/C#12

ONE WAY EVP DETECTOR AND INDICATOR LIGHT (#4) - OVERHEAD  
1-3/c#12  
1-3/c#20



S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.  
SEE SPECIAL PROVISIONS AND ESTIMATED QUANTITIES REGARDING SALVAGING OF INPLACE SIGNAL SYSTEM.

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DRAWN BY: JMG  
DESIGNER: JMG  
CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE	REVISIONS

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

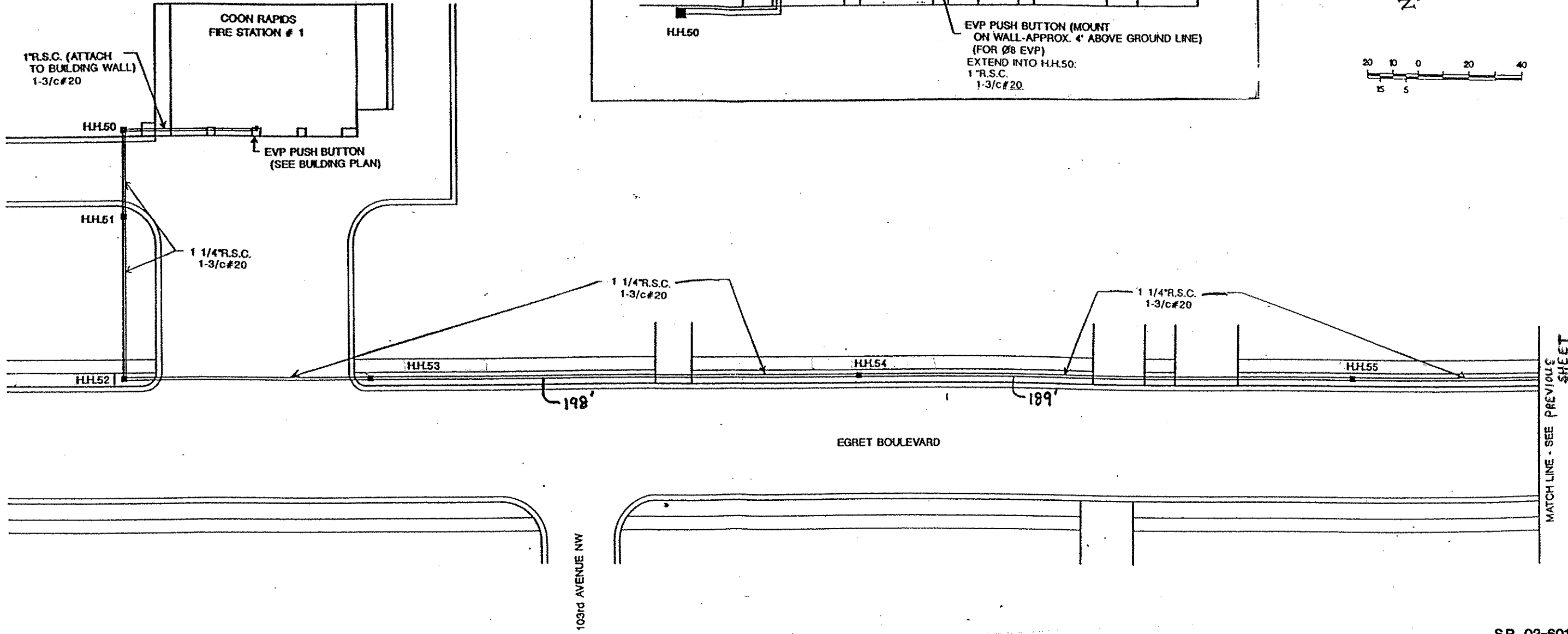
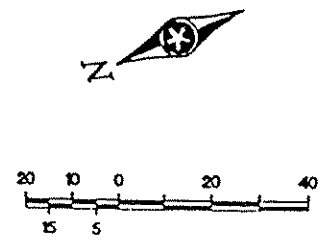
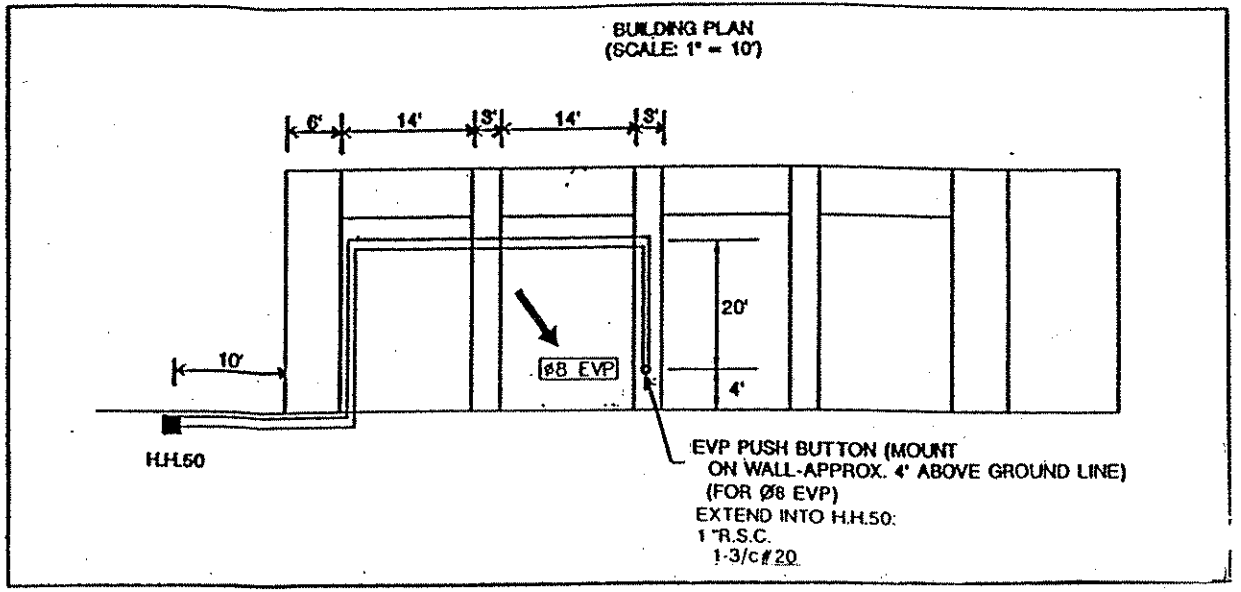
*John M Gray*  
Name: John M Gray, P.E.  
Lic. No. 22457  
Date: 8/15/02



ANOKA COUNTY,  
MINNESOTA

INPLACE SIGNAL SYSTEM  
FOR INFORMATION ONLY  
COON RAPIDS BLVD (CSAH 1)  
AT EGRET BLVD

FILE NO. AANOKC0106.00	38
DATE 8/15/02	45



S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.  
 SEE SPECIAL PROVISIONS AND ESTIMATED QUANTITIES REGARDING SALVAGING OF INPLACE SIGNAL SYSTEM.

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

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 Date: 8/15/02 Name: John M Gray, P.E. Lic. No. 22457



ANOKA COUNTY,  
 MINNESOTA

INPLACE SIGNAL SYSTEM FOR INFORMATION ONLY  
 COON RAPIDS BLVD (CSAH 1) AT EGRET BLVD

FILE NO.	AANOKC0106.00	39
DATE	8/15/02	45



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S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

09/11/03



ANOKA COUNTY,  
MINNESOTA

FILE NO.	40
AANOKC0106.00	
DATE	8/15/02

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S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

08/15/02



ANOKA COUNTY,  
MINNESOTA

FILE NO.	41
AANOKC0106.OC	
DATE	8/15/02
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S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

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ANOKA COUNTY,  
MINNESOTA

FILE NO. AANOKC0106.00	41A
DATE 8/15/02	45

**TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND**

NOTES:  
CONTRACTOR SHALL FURNISH AND INSTALL ALL DEVICES SHOWN UNLESS NOTED OTHERWISE.  
EXACT LOCATION OF TRAFFIC CONTROL DEVICES TO BE DETERMINED BY THE ENGINEER.

SYMBOL	DESCRIPTION
	TRAFFIC CONTROL SIGN
	TYPE III BARRICADE
	TYPE A FLASHING WARNING LIGHT
	DRUM-LIKE CHANNELIZER =
	AREA CLOSED TO TRAFFIC / WORK AREA
	DETOUR ROUTE

**NOTES & GUIDELINES**

**GENERAL INFORMATION:**

1. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
2. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
3. ALL DISTANCES ARE APPROXIMATE.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MNMUTCD.
5. AN ANNUAL FALL REVIEW OF ALL TRAFFIC CONTROLS WILL BE MADE TO PREPARE FOR WINTER MAINTENANCE OF THE PROJECT. THIS MAY INCLUDE ADJUSTMENTS OR EXCHANGE OF ONE TRAFFIC CONTROL DEVICE FOR ANOTHER. READJUSTMENTS MAY AGAIN BE REQUIRED IN THE SPRING.
6. CONTRACTOR SHALL PROVIDE CHANNELIZING DEVICES (AND SIGNING IF NECESSARY) AT ALL PRIVATE ENTRANCE LOCATIONS WHERE NEEDED TO SAFELY GUIDE TRAFFIC TO AND FROM THE TRAVEL CORRIDOR TO THE SATISFACTION OF THE ENGINEER.
7. ALL CUTS ADJACENT TO TRAVELED ROADWAY WHICH RESULT IN A DROP-OFF OF 4 INCHES OR MORE SHALL BE BACKFILLED AS SOON AS PRACTICABLE AND IN NO EVENT LATER THAN THE END OF THE DAY.
8. ALL BARRICADES, SIGNING, FLASHING WARNING LIGHTS, CHANNELIZING DEVICES OR FLAGMEN NECESSARY SHALL BE INCLUDED IN THE LUMP SUM UNIT PRICE BID FOR TRAFFIC CONTROL.

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

**SIGNING:**

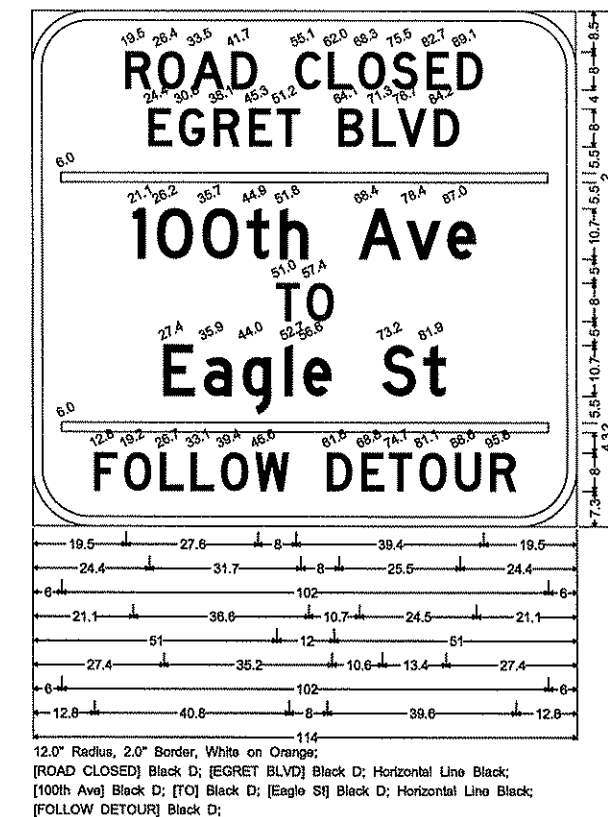
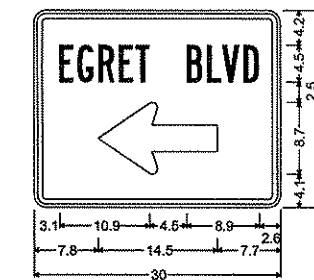
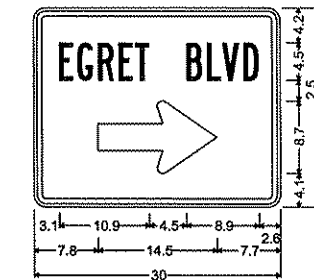
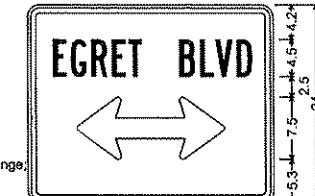
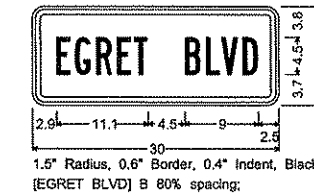
1. ALL TRAFFIC CONTROL DEVICES ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATIONS SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
2. WHEN SIGNS ARE INSTALLED, THEY SHALL BE MOUNTED ON POSTS DRIVEN INTO THE GROUND AT THE PROPER HEIGHT AND LATERAL OFFSET AS DETAILED IN THE MNMUTCD. IF THIS IS NOT POSSIBLE THEY WILL BE MOUNTED ON PORTABLE SUPPORTS AS APPROVED BY THE ENGINEER. WHEN THE SIGNS ARE REMOVED THE SIGN POSTS SHALL ALSO BE REMOVED AS SOON AS POSSIBLE.
3. ALL ORANGE SIGNS SHALL BE MADE OF DIAMOND GRADE ORANGE REFLECTIVE SHEETING OR AN APPROVED SUBSTITUTE.
4. LONGITUDINAL DROPOFFS SHALL BE SIGNED AS SHOWN ON PAGES 6K-111 AND 6K-112 OF THE "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" FIELD MANUAL UNLESS OTHERWISE SPECIFIED IN THESE PLANS.
5. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF THE TEMPORARY SIGNS AND INSTALLATION OF THE FINAL SIGNS TO ASSURE THAT THE FINAL SIGNS ARE INSTALLED AS NEEDED, OR PROVIDE TEMPORARY SIGNING AT HIS EXPENSE UNTIL THE FINAL SIGNING IS INSTALLED.
6. PERMANENT SIGNING AND PAVEMENT MARKINGS IN ACCORDANCE WITH THE SIGNING AND STRIPING 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.
8. AFTER CONSTRUCTION, THE CONTRACTOR SHALL REPLACE, TO THE SAME LOCATION, ANY PERMANENT SIGNS WHICH NEED TO BE MOVED FOR CONSTRUCTION.

**BARRIER & DRUM CHANNELIZERS**

1. REFLECTORIZED DRUM CHANNELIZERS SHALL BE INSTALLED AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE MNMUTCD. DRUM LOCATIONS AND SPACINGS SHOWN ON THE PLAN ARE APPROXIMATE AND ARE SUBJECT TO REVISION BY THE ENGINEER IN THE FIELD.

NOTE: SIGN PANELS ARE IN ENGLISH UNITS.

TRAFFIC CONTROL SIGNS / DEVICES				ESTIMATED QUANTITY		REMARKS
SIGN OR DEVICE	CODE NO.	COLOR	SIZE	DETOUR	COON RAPIDS BLVD	
	R11-2	BLACK ON WHITE	48 x 30	2		
	R11-4	BLACK ON WHITE	60 x 30	2		
	W20-1	BLACK ON ORANGE	48 x 48		4	
	W20-2	BLACK ON ORANGE	48 x 48	2		
	W20-3	BLACK ON ORANGE	48 x 48	3		
	W20-X1R	BLACK ON ORANGE	48 x 48		2	
	W20-X3L	BLACK ON ORANGE	48 x 48		1	
	M3-1	BLACK ON WHITE	24 x 12	8		
	M3-3	BLACK ON WHITE	24 x 12	3		
	M4-10L	BLACK ON ORANGE	48 x 18	1		
	M4-10R	BLACK ON ORANGE	48 x 18	1		
	M4-9ATL	BLACK ON ORANGE	30 x 24	3		
	M4-9ATR	BLACK ON ORANGE	30 x 24	2		
	M4-9L	BLACK ON ORANGE	30 x 24	5		
	M4-9R	BLACK ON ORANGE	30 x 24	4		
	M4-9T	BLACK ON ORANGE	30 x 24	8		
	W20-100P	BLACK ON ORANGE	36 x 24	2		
		BLACK ON ORANGE	30 x 12	22		
		BLACK ON ORANGE	30 x 24	1		
		BLACK ON ORANGE	30 x 24	1		
		BLACK ON ORANGE	30 x 24	1		
	R11-3a	BLACK ON WHITE	60 x 30	1		
	G20-X2 (MOD)	BLACK ON ORANGE	114 x 108	2		
	TYPE "A" FLASHER	--	--	11	8	
	TYPE III	WHITE ON ORANGE	8'	9	1	
	PLASTIC DRUM	BLACK ON ORANGE	16 x 38 (MIN)		21	



ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" -- JANUARY 2001.

S.P. 02-601-40  
S.P. 114-105-13  
S.P. 114-104-16

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DESIGN TEAM	NO.	BY	DATE	REVISIONS
DRAWN BY: MTT				
DESIGNER: TJD				
CHECKED BY: TJD				

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.  
Certified By: *Tiffany J. Dagon* Lic. No. 40535  
Printed Name: TIFFANY J. DAGON Date: 5/1/02



ANOKA COUNTY,  
MINNESOTA  
S.A.P. 02-601-040

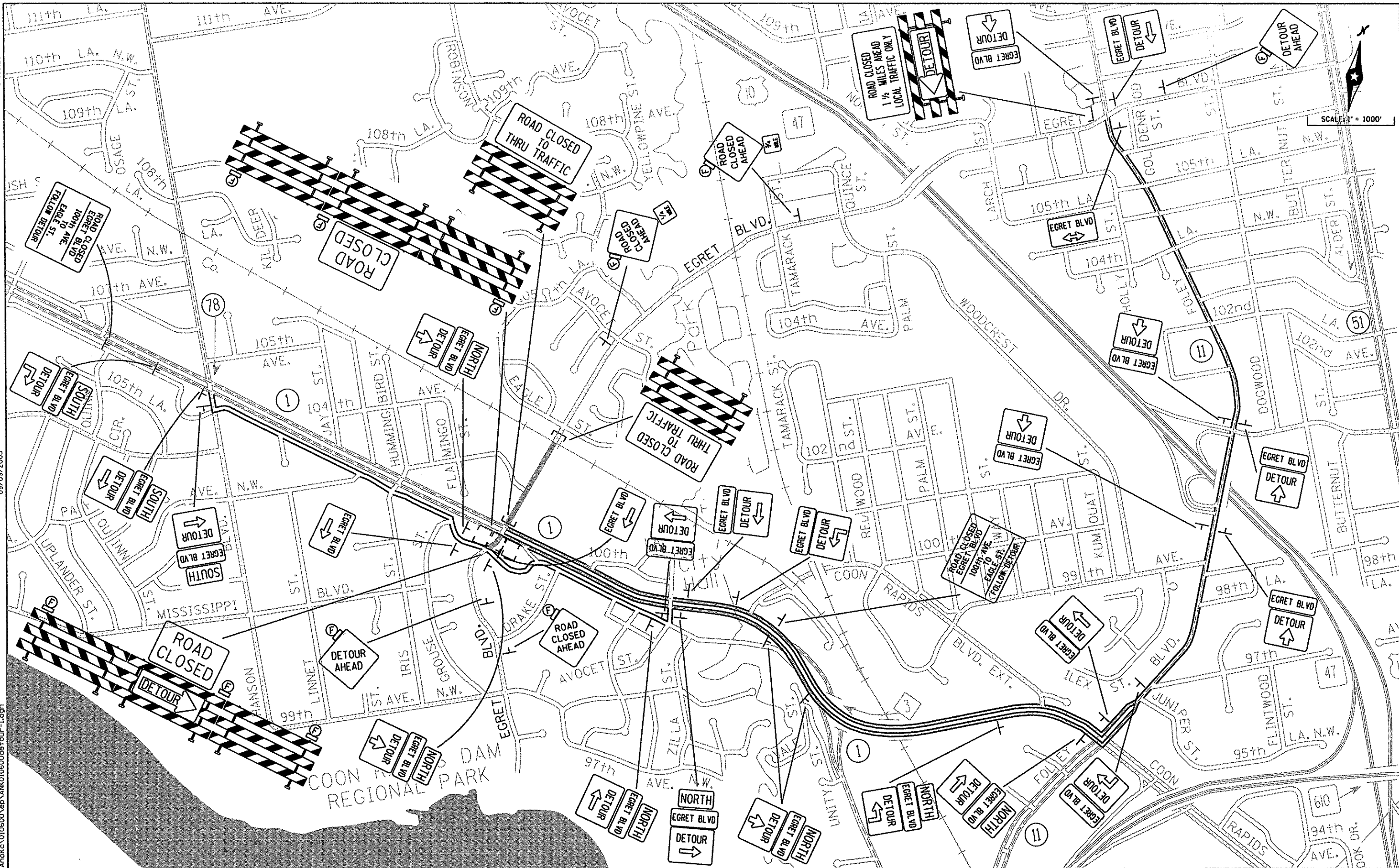
DETOUR PLAN  
TABULATIONS

FILE NO. 42  
AAOKC0106.00  
DATE 5/1/02  
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DESIGN TEAM			
DRAWN BY:	MTT		
DESIGNER:	TJD		
CHECKED BY:	TJD		
NO.	BY	DATE	REVISIONS

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Certified By: *Tiffany J. Dagon* Lic. No. 40535  
 Printed Name: TIFFANY J. DAGON Date: 5/1/02



**ANOKA COUNTY,  
MINNESOTA**  
S.A.P. 02-601-040

DETOUR PLAN

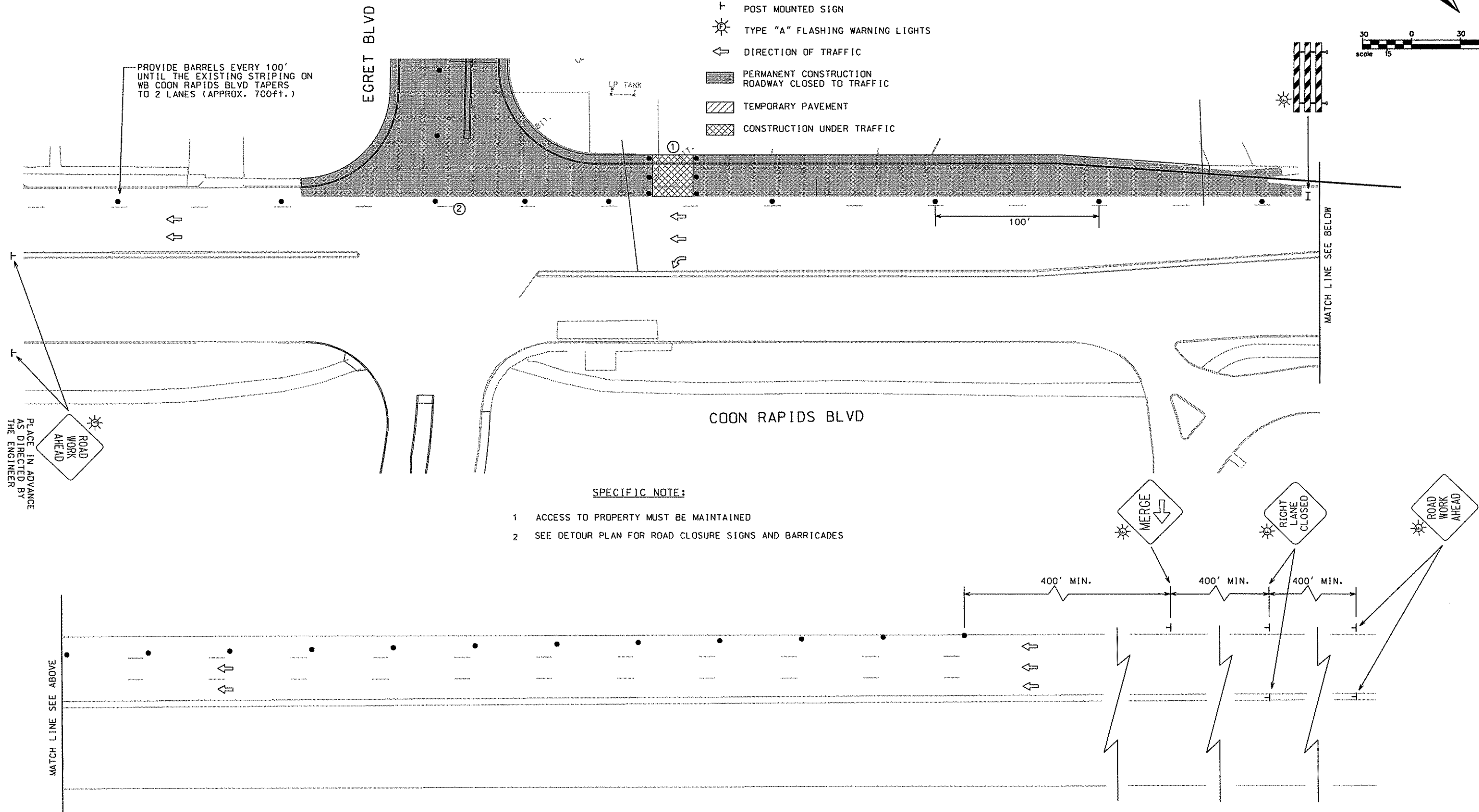
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DATE	5/1/02
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LEGEND

- REFLECTORIZED DRUM (50' SPACING UNLESS OTHERWISE NOTED)
- I TYPE III BARRICADE
- T POST MOUNTED SIGN
- ☀ TYPE "A" FLASHING WARNING LIGHTS
- ← DIRECTION OF TRAFFIC
- PERMANENT CONSTRUCTION ROADWAY CLOSED TO TRAFFIC
- ▨ TEMPORARY PAVEMENT
- ▩ CONSTRUCTION UNDER TRAFFIC

GENERAL NOTE

1. COVER ANY EXISTING LANE REDUCTION SIGNS THAT CONFLICT WITH TRAFFIC CONTROL IN THIS STAGE.



SPECIFIC NOTE:

- 1 ACCESS TO PROPERTY MUST BE MAINTAINED
- 2 SEE DETOUR PLAN FOR ROAD CLOSURE SIGNS AND BARRICADES

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DRAWN BY: BEM				
DESIGNER: TGT				
CHECKED BY: SMM				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 Name: Thomas G. Tabler, PE  
 Date: 8/15/02 Reg. No. 26861

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

ANOKA COUNTY,  
 MINNESOTA

TRAFFIC CONTROL  
 COON RAPIDS BLVD

FILE NO.	44
DATE	2/10/00
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S.P. 02-601-40  
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 S.P. 114-104-16

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S.P. 114-105-13  
S.P. 114-104-16

08/15/02



ANOKA COUNTY,  
MINNESOTA

FILE NO.	45A
AANDKCO106.00	
DATE	45
8/15/02	



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S.P. 114-105-13  
S.P. 114-104-16


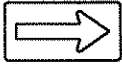








08/15/02



ANOKA COUNTY,  
MINNESOTA

FILE NO. AANDKCO106.00	45B
DATE 8/15/02	45

NOTE: SIGN PANELS ARE IN ENGLISH UNITS.

U TRAFFIC CONTROL SIGNS / DEVICES				ESTIMATED QUANTITY BY STAGE			REMARKS
SIGN OR DEVICE	CODE NO.	COLOR	SIZE	STAGE 1	STAGE 2 PHASE 1	STAGE 2 PHASE 2	
	R1-1	WHITE ON RED	30 x 30	1			
	W1-6	BLACK ON ORANGE	48 x 24				
	W1-4R	BLACK ON ORANGE	48 x 48	1	1		
	W1-4L	BLACK ON ORANGE	48 x 48	1	1		
	W20-1	BLACK ON ORANGE	48 x 48	7	7	2	
	W20-X1	BLACK ON ORANGE	48 x 48	2			
	W20-X3L	BLACK ON ORANGE	48 x 48	1			DEMOUNTABLE ARROW
	TYPE "A" FLASHER	--	--	10	13	2	
	TYPE III	WHITE ON ORANGE	8'	1	9		
	PLASTIC DRUM	WHITE ON ORANGE	18 x 36 MIN	60	75	15	

NOTE:  
 1. SIGN AND BARRICADE PLACEMENT TO BE PER THE MMUTCD AND THE MN/DOT TRAFFIC ENGINEERING MANUAL.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" -- JANUARY 2001.

S.P. 02-601-40  
 S.P. 114-105-13  
 S.P. 114-104-16

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DESIGN TEAM				
DRAWN BY: <u>MTI</u>				
DESIGNER: <u>TJD</u>				
CHECKED BY: <u>TJD</u>				
NO.	BY	DATE	REVISIONS	

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
 Certified By: Tiffany J. Dagon Lic. No. 40535  
 Printed Name: TIFFANY J. DAGON Date: 8/7/03



ANOKA COUNTY,  
 MINNESOTA

TRAFFIC CONTROL PLAN  
 TABULATIONS

FILE NO. AANOKC0106.00	45B
DATE 8/15/02	45