

PLAN SYMBOLS

- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- SLOPE EASEMENT
- EXISTING RIGHT OF WAY
- PROPERTY LINE
- CORPORATE OR CITY LIMITS
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY
- RIVER OR CREEK
- DRAINAGE DITCH
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOODEN WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- STONE WALL OR FENCE
- HEDGE

- LOWLAND
- TIMBER
- ORCHARD
- BRUSH
- NURSERY

- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE

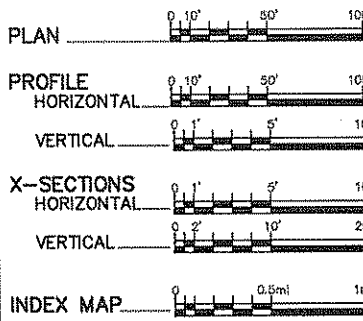
- BUILDING (One Story Frame)
- F-FRAME C-CONCRETE
- S-STONE T-TILE
- B-BRICK ST-STUCCO

- RAILROAD CROSSING BELL
- RAILROAD CROSSING GATE
- MANHOLE
- CATCH BASIN
- FIRE HYDRANT
- CAST IRON MONUMENT
- IRON PIN
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITY SYMBOLS

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

SCALES



MINNESOTA DEPARTMENT OF TRANSPORTATION

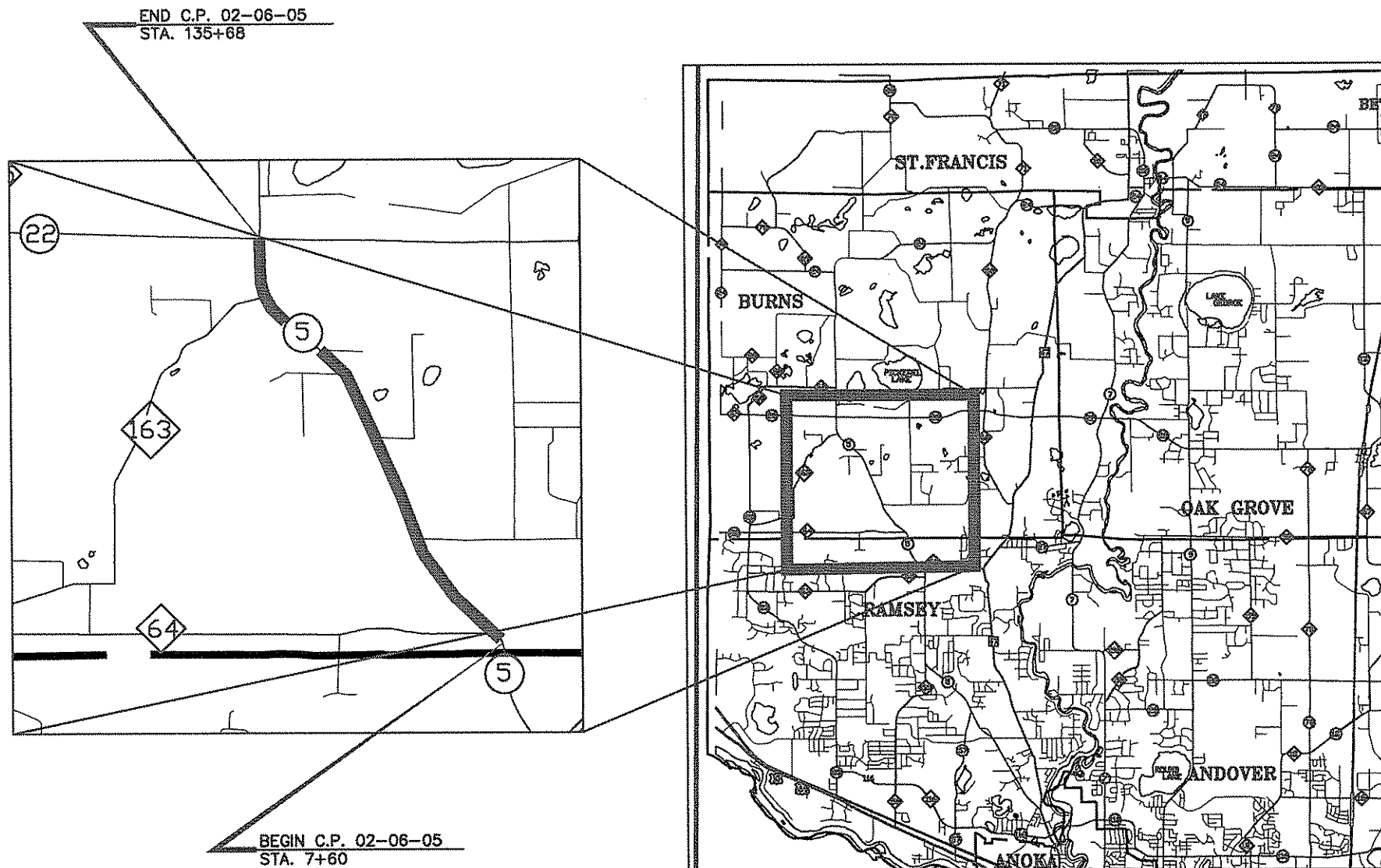
ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS MILLING, BITUMINOUS RECLAIMING, BITUMINOUS SURFACING

LOCATED ON C.S.A.H. 5 FROM COUNTY ROAD 64 TO C.S.A.H. 22 (Geographic Description)

COUNTY PROJECT NO. 02-06-05
C.S.A.H. 5

GROSS LENGTH	12,808 FEET	2.43 MILES
BRIDGES-LENGTH	0.000 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.000 FEET	0.000 MILES
NET LENGTH	12,808.0 FEET	2.43 MILES



MINN. PROJ. NO. _____
MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - JANUARY, 2001."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4 - 6	TABULATION CHARTS
7	MISCELLANEOUS DETAILS
8	BITUMINOUS MILLING HAUL LOCATIONS
9	DETAIL FOR RTL AT CSAH 5 AND 22
10	DETAIL FOR RTL & BYPASS AT CR 64 AND 163
11	CROSS SECTIONS
12 - 18	SIGNING PLANS

THIS PLAN CONTAINS 18 SHEETS

DESIGN DESIGNATION

ESAL ₂₀	447,133
R VALUE	20
ADT (2001) =	3002
Proj. ADT (2021) =	4803
Proj. HCADT (2021) =	283
Soil Factor	NA
<u>10</u> TON DESIGN	

Functional Classification MINOR
 No. of Traffic Lanes 2 No. of Parking Lanes 0
 Design Speed 55 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5' Height of object 0.5'
 Design Speed not achieved at:
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH

Approved 7/9, 2002
 ANOKA COUNTY ENGINEER

NO	DATE	BY	CHK	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: MARK A DALY
 SIGNATURE:
 DATE: 06/27/02 LICENSE NO. 21763

DRAWN BY BFL DATE 06/27/02
 DESIGN BY MFG DATE 06/27/02
 CHECKED BY MAD DATE 06/27/02



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

TITLE SHEET

Sheet 01 of 18 Sheets

STATEMENT OF ESTIMATED QUANTITIES

CHART	NOTES	ITEM NO.	ITEM	UNIT	ESTIMATED QUANTITY
C		2101.502	CLEARING	TREE	9
C		2101.507	GRUBBING	TREE	9
	1	2104.501	REMOVE METAL CULVERT	LIN FT	48
	2	2104.503	REMOVE BITUMINOUS PAVEMENT	SQ YD	106
	20	2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	480
	3	2104.523	SALVAGE SIGN TYPE C	EACH	62
		2105.501	COMMON EXCAVATION (P)	CU YD	812
		2105.525	TOPSOIL BORROW (LV)	CU YD	226
	4	2123.503	MOTOR GRADER	HOUR	10
	5	2123.509	DOZER	HOUR	10
	6	2123.525	8 TON STEEL-WHEELED ROLLER	HOUR	10
	18	2130.501	WATER	M-GAL	15
		2211.501	AGGREGATE BASE CLASS 5	TON	400
	9	2232.501	MILL BITUMINOUS SURFACE (2")	SQ YD	38596
F		2232.501	MILL BIT APPROACH	SQ YD	90
	10	2232.604	HAUL BITUMINOUS MILLINGS (LV)	CU YD	1950
G	8	2331.518	BITUMINOUS PATCHING MIXTURE	TON	120
E	7	2331.601	BITUMINOUS PAVEMENT RECLAMATION	SQ YD	26283
G		2350.501	TYPE LV4 WEARING COURSE MIXTURE	TON	6706
G		2350.502	TYPE LV3 NON-WEARING COURSE MIXTURE	TON	5411
J		2350.503	TYPE LV4 WEARING COURSE MIXTURE, 2" THICK	SQ YD	44
G		2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	7078
	12	2501.511	15" CS PIPE CULVERT	LIN FT	48
	12	2501.567	15" CS SAFETY APRON & GRATE, DESIGN 3128	EACH	2
H	13	2535.501	BITUMINOUS CURB	LIN FT	1420
		2540.602	INSTALL MAILBOX SUPPORT	EACH	38
		2563.601	TRAFFIC CONTROL	LS	1
		2564.531	SIGN PANELS TYPE C	SQ FT	518
	14	2564.602	TEMPORARY RELOCATE SIGN TYPE C	EACH	12
		2564.603	4" SOLID LINE WHITE - PAINT	LIN FT	27258
		2564.603	4" BROKEN LINE WHITE - PAINT	LIN FT	50
		2564.603	4" SOLID LINE YELLOW - PAINT	LIN FT	17196
		2564.603	4" BROKEN LINE YELLOW - PAINT	LIN FT	2050
	15	2564.603	4" SOLID LINE YELLOW - PAINT TEMPORARY	LIN FT	17196
	15	2564.603	4" BROKEN LINE YELLOW - PAINT TEMPORARY	LIN FT	2050
B		2575.501	SEEDING	ACRE	3
B		2575.502	SEED MIXTURE 50B	LB	155
B		2575.502	SEED MIXTURE 130B	LB	310
B	19	2575.505	SODDING TYPE LAWN	SQ YD	200
B		2575.519	DISK ANCHORING	ACRE	3
B	16	2575.525	EROSION STABILIZATION BLANKET, TYPE 2	SQ YD	2302
B		2575.531	COMMERCIAL FERT ANALYSIS 22-5-10 (SLOW RELEASE)	TON	0.50
	17	2580.502	TEMPORARY LANE MARKING	LIN FT	238

BASIS OF ESTIMATED QUANTITIES

SPEC NO.	RATE
2350	TYPE LV3 NONWEARING COURSE MIXTURE TYPE LV3 WEARING COURSE MIXTURE TYPE HV 4 WEARING COURSE MIXTURE 110 LBS / SQ YD / INCH
2357	BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL / SQ YD / PER LIFT APPLIED
2575	COMMERCIAL FERTILIZER - ANALYSIS 22-5-10 (SLOW RELEASE) 300 LBS / ACRE FOR SEED AND SOD AREAS

CONSTRUCTION NOTES

1	Remove in place culvert at CSAH 22 right turn lane station 12+25 Rt. Includes all sizes.
2	Includes all bituminous pavement, regardless of depth.
3	Salvage to Anoka County Highway Department.
4	To be used to cut out 2" of reclaimed bituminous material for right turn lane and bypass lane construction, as directed by the Engineer.
5	To be used in right turn lane and bypass lane construction, as directed by the Engineer.
6	To be used to compact the reclaimed bituminous material in right turn lane and by pass lane construction, as directed by the Engineer.
7	To be used as shouldering in high erosion areas along the bituminous shoulder, as directed by the Engineer. To be topped with topsoil borrow.
8	To be used to patch the milled bituminous surface prior to bituminous paving, as directed by the Engineer.
9	Payment at the Contract Price for depths 0 to 2 1/2". Depths from 2 5/8" to 3 1/2" shall be paid at 125% of the Contract Unit Price.
10	Bituminous milling to be hauled to designated Burns Township Streets. See plan sheet 08.
11	Includes 2049 gallon asphalt emulsion to be applied to seed areas along the shoulder. Application rate of 0.18 gallon per square yard for seed areas.
12	To be placed at entrance at CSAH 22 right turn lane station 12+50 Rt.
13	Payment for placing shoe-formed bituminous lip along the shoulder, as directed by the Engineer.
14	Temporarily relocate signs, type C, in right turn lane and bypass lane construction, as directed by the Engineer.
15	Traffic paint shall be placed at the end of each days bituminous milling work to mark the centerline of the roadway.
16	To be placed at high erosion areas along the shoulder, as directed by the Engineer.
17	For lane delineation on the paved Type LV3 NW and the Type LV4 Wear Courses.
18	Water to be used to moisten, to a depth of approximately two inches, the seed areas adjacent to the bituminous shoulder, prior to applying the emulsified asphalt.
19	To be used in berm areas as directed by the engineer.
20	Sawing bituminous pavement eastbound r/l on CSAH 22. See page 9.

TABULATION CHART LIST

CHART	SHEET NO	DESCRIPTION
A	4	DRIVEWAY CONSTRUCTION
B	4	TURF ESTABLISHMENT
C	4	CLEARING AND GRUBBING
D	5	MILL BITUMINOUS SURFACE (2")
E	5	BITUMINOUS PAVEMENT RECLAMATION
F	5	MILL BITUMINOUS SURFACE APPROACHES (BUTT JOINTS)
G	5	BITUMINOUS SUMMARY
H	7	BITUMINOUS CURB
J	7	BITUMINOUS FLUME

MN DOT STANDARD PLATE NO.

DESCRIPTION

3040 F	CORRUGATED METAL PIPE CULVERT
3128 H	METAL SAFETY APRON & GRATE
3134 C	RIPRAP AT CMP OUTLETS
4006 L	MANHOLE OR CATCH BASIN PRECAST - DESIGN G AND H
4026 A	CONCRETE ENCASED ADJUSTING RINGS
4101 D	RING CASTING FOR MANHOLE OR CATCH BASIN
4140 D	SPECIAL GRATE CASTING FOR CATCH BASIN
8000 I	STANDARD BARRICADE
8117 F	PRECAST CONCRETE HAND HOLE (OR PULLBOX)

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

PRINT NAME: MARK A DALY
SIGNATURE: *Mark A Daly*
DATE: 06/27/02 LICENSE NO. 21763

DRAWN BY: BEL DATE 06/27/02

DESIGN BY: MEG DATE 06/27/02

CHECKED BY: MAD DATE 06/27/02



**ANOKA COUNTY
HIGHWAY DEPT.**

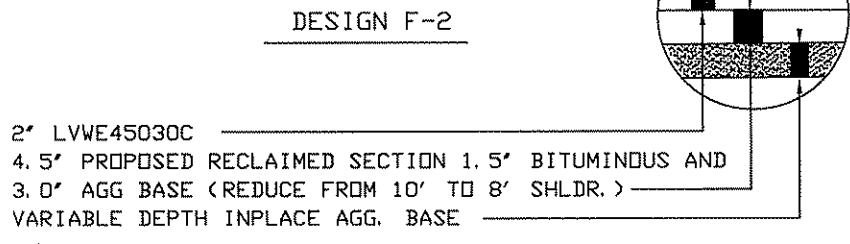
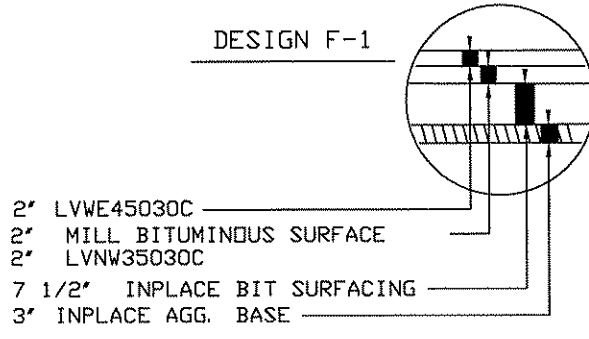
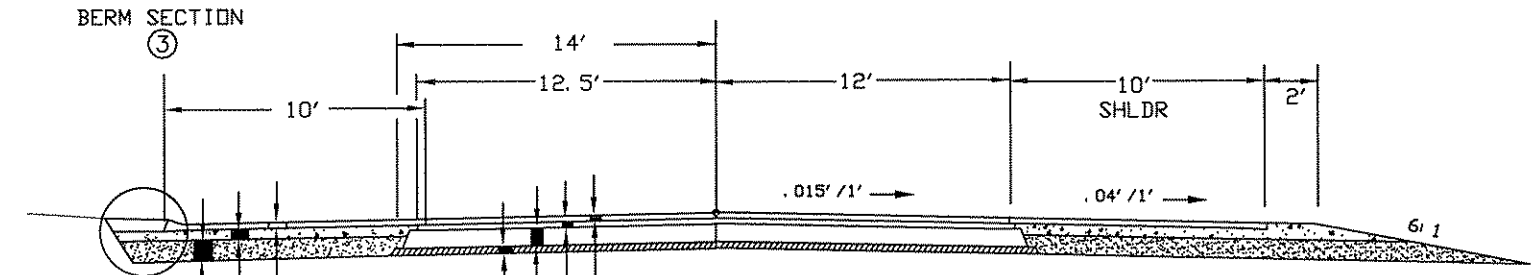
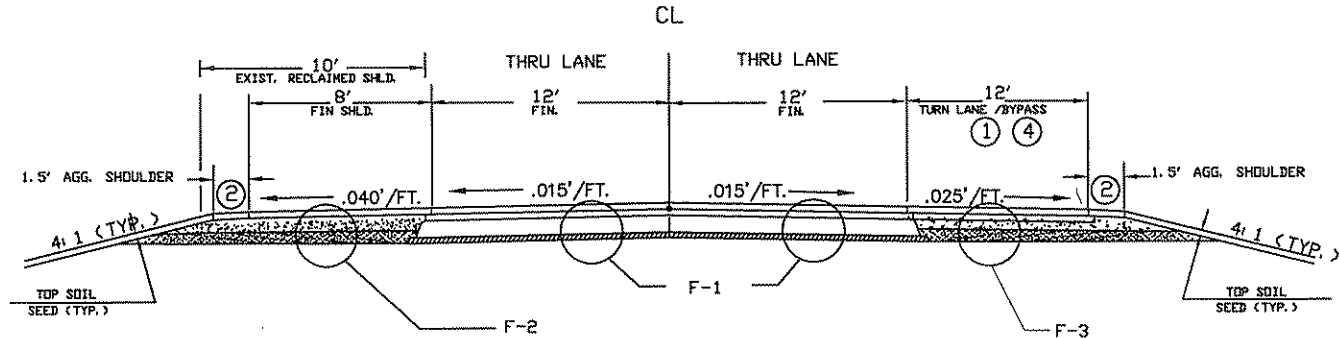
STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-06-05

ESTIMATED QUANTITIES
CONSTRUCTION NOTES,
AND TAB INDEX

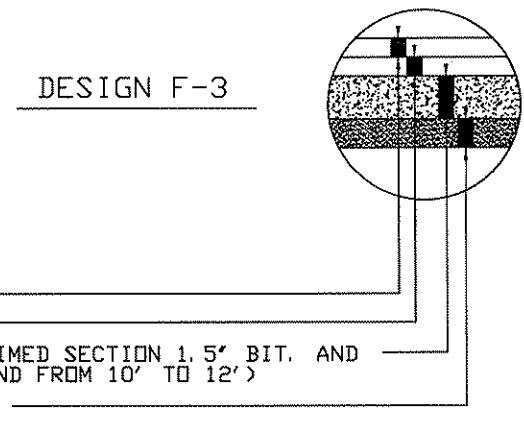
Sheet 02 of 18 Sheets

PROPOSED CONSTRUCTION
STA 7+40 TO STA 135+68

EXISTING ROADWAY
STA 7+60 TO 135+68
THRU LANE CL THRU LANE

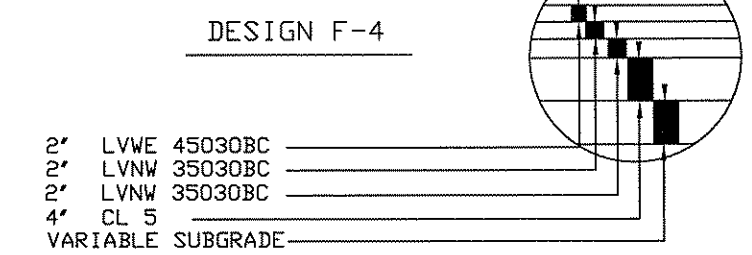
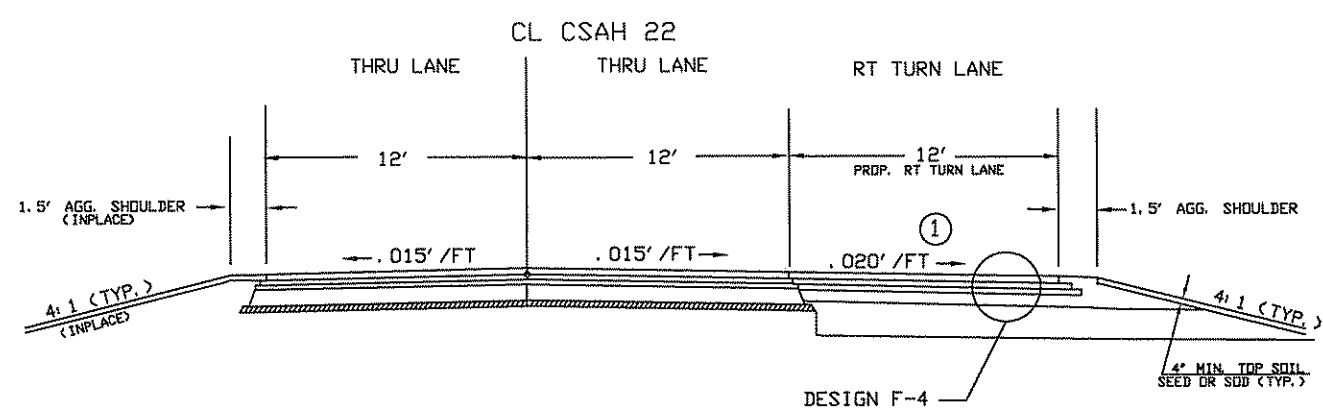


- 1 1/2" 2341 WEARING COURSE (EXISTING)
- 1 1/2" 2341 BINDER COURSE (EXISTING)
- 6" 2331 BASE COURSE (EXISTING)
- 3" CLASS 5 AGGREGATE BASE & SALVAGED BITUMINOUS MIXTURE (EXISTING)
- 1 1/2" 2331 PLANT-MIXED SHOULDER COURSE (EXISTING)
- 3" 2221 AGGREGATE SHOULDERING (CLASS 5) (EXISTING)
- VAR. DEPTH AGGREGATE SHOULDERING (CLASS 3) (EXISTING)



- PROPOSED RIGHT TURN LANE CONSTRUCTION
- LSB CSAH 5 @ CR 64 STA 11+00 - STA 15+65
 - LSB CSAH 5 @ CR 163 STA 119+45 - STA 124+05
 - LNB CSAH 5 @ CSAH 22 STA 127+89 - STA 133+75
 - LEB CSAH 22 @ CSAH 5 STA 11+00 - STA 15+25
- PROPOSED BY-PASS LANE CONSTRUCTION
- LNB CSAH 5 @ CR 64 STA 7+40 - STA 13+30
 - LNB CSAH 5 @ CR 163 STA 115+55 - STA 121+90

PROPOSED CONSTRUCTION
EB RTL CSAH 22 @ CSAH 5



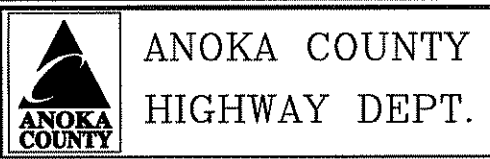
- (1) NEW FULL DEPTH CONSTRUCTION
- (2) RECYCLED BIT. MATERIAL TO BE USED AS AGG. SHLD.
- (3) 4" SHOE CURB TO BE PLACED IN BERM AREAS CONSECUTIVELY WITH 2" OVERLAY (SEE DETAIL)
- (4) ROLL OUT 2" OF RECLAIMED BITUMINOUS MATERIAL IN RIGHT TURN LANE AND BYPASS LANE AREAS TO CONSTRUCT ADDITIONAL WIDTH

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: MARK A. DAVY
SIGNATURE: [Signature]
DATE: 05/27/02 LICENSE NO. 21763

DRAWN BY: BEL DATE: 06/25/02
DESIGN BY: MEG DATE: 06/25/02
CHECKED BY: MAD DATE: 06/25/02



STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-06-05

TYPICAL SECTION
Sheet 03 of 18 Sheets

DRIVEWAY CONSTRUCTION			A
STATION	ADDRESS	REPLACEMENT BITUMINOUS	AGGREGATE BASE CLASS 5
		SQ YD	TON
12+14	HO# 18111	28.45	2
14+38	HO# 18165	19.07	
15+71	HO# 18156	19.83	
22+14	HO# 18233	18.38	
25+44	HO# 18265	17.16	
26+93	FIELD ENT.	3.33	2
27+50	HO# 18288	16.06	2
30+03	PIT. ENT.	22.10	2
34+86	FIELD ENT.	3.33	2
35+84	FIELD ENT.	3.33	2
38+50	HO# 18433	13.45	
42+25	HO# 18466	19.90	2
43+53	FIELD ENT.	3.33	2
47+00	HO# 18550	11.13	
51+23	HO# 18600	21.10	2
53+55	HO# 18650	21.16	2
55+38	HO#18675	16.15	2
61+25	HO# 18730	16.11	2
61+50		4.23	
62+15	HO# 18760	13.62	
65+34	HO# 18845	19.13	2
65+91	HO# 18830	18.31	2
69+00	HO# 18834	29.24	2
71+21	HO# 18874	17.84	2
75+20	FIELD ENT.	3.33	2
76+71	HO# 18960	19.37	
76+96	HO# 18959	23.83	
78+71	HO#18954/18964	28.06	2
79+35	HO# 18970	25.11	2
83+91	HO# 19047	29.73	
87+80	HO# 19155 S.	20.46	
89+34	HO# 19155 N.	22.43	2
99+00	HO# 19233	25.08	
102+11		22.50	2
103+35	HO# 19285	22.51	2
106+38	FIELD ENT.	3.33	2
118+15	HO# 19447	23.37	2
121+13	HO# 19454	25.42	2
122+06		32.63	2
122+87	HAPPY COR.	34.69	2
123+89		21.87	2
124+58	HO# 19550	35.33	
130+32	HO# 19620	19.67	2
130+89	CH# 19653 S.		
132+55	CH# 19653 N.		
133+23	HO# 19654	10.70	
TOTALS		825	58

TURF ESTABLISHMENT								B
STATION	STATION	LOCATION	SOD	EROSION STABILIZATION BLANKET	SEEDING	SEED MIXTURE TYPE 50A	SEED MIXTURE TYPE 130A	COM FERT ANALYSIS 22-5-10 (SLOW RELEASE)
			SQ YD	SQ YD	ACRE	POUND	POUND	TON
23+20	26+35	LT.		5.5				
26+70	27+65	LT.		5.5				
76+20	80+40	RT.		5.5				
99+75	102+05	RT		5.5				
121+60	122+60	RT		5.5				
130+45	131+45	LT		5.5				
131+60	132+10	LT		5.5				
132+30	133+40	LT		5.5				
133+85		30' LT TO 400' LT		1156				
7+60	135+68	RT & LT	200		3	155	310	0.5
121+90	115+70	RT		551				
41+00	34+80	RT		551				
TOTAL			200	2302	3	155	310	0.5

CLEARING & GRUBBING			C
STATION	LOCATION	CLEAR	GRUB
11+45	40' RT	1	1
11+46	52' RT	1	1
11+70	30' RT	1	1
12+06	49' RT	1	1
12+20	32' RT	1	1
12+30	45' RT	1	1
12+53	31' RT	1	1
12+65	32' RT	1	1
13+24	51' RT	1	1
TOTALS		9	9

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: MARK A DALY
 SIGNATURE: *Mark A Daly*
 DATE: 08/27/02 LICENSE NO. 21763

DRAWN BY: EML DATE 05/27/02
 DESIGN BY: EML DATE 08/27/02
 CHECKED BY: MAD DATE 08/27/02



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

TABULATION CHARTS
 Sheet 04 of 18 Sheets

MILL BITUMINOUS SURFACE (2")				D
LOCATION	LENGTH FEET	WIDTH FEET	AREA SQ YD	REMARKS
CSAH 5	12790	25	35528	MILL BITUMINOUS, 2" DEPTH
RT TURN LANE, SOUTHBOUND AT CR 64	480	11	587	MILL BITUMINOUS / CLASS 5, 2" DEPTH
RT TURN LANE, NORTHBOUND AT CSAH 22	480	11	587	MILL BITUMINOUS / CLASS 5, 2" DEPTH
BYPASS, NORTHBOUND AT CR 64	620	11	758	MILL BITUMINOUS / CLASS 5, 2" DEPTH
TOTAL			37459	

BITUMINOUS PAVEMENT RECLAMATION				E
LOCATION	LENGTH FEET	WIDTH FEET	AREA SQ YD	REMARKS
CSAH 5 NORTHBOUND SHOULDER	12660	9.5	13363	STA 8+10 TO 134+70
CSAH 5 SOUTHBOUND SHOULDER	12240	9.5	12920	STA 12+30 TO 134+70
TOTAL			26283	

MILL BIT DR. / STREET APPROACHES (BUTT JOINTS)				F
LOCATION	LENGTH FEET	MILL WIDTH FEET	MILL SQ YDS	
W. CR 64	28	2	6.22	
HO# 18165	17	2	3.78	
HO# 18156	22	2	4.89	
HO# 18233	15	2	3.33	
HO# 18265	22	2	4.89	
HO# 18433	14	2	3.11	
185TH AVE	23	2	5.11	
PERIDOT ST	33	2	7.33	
HO# 18760	12	2	2.67	
HO# 18960	26	2	5.78	
HO# 18959	14	2	3.11	
HO# 19047	15	2	3.33	
HO# 19155 S.	12	2	2.67	
HO# 19233	18	2	4.00	
CR 163	27	2	6.00	
HO# 19550	18	2	4.00	
HO# 19653 S.	29	2	6.44	
HO# 19653 N.	41	2	9.11	
HO# 8040 (CSAH 22)	18	2	4.00	
TOTAL			89.8	

BITUMINOUS SUMMARY												G
LOCATION	LENGTH FEET	LV3NW WIDTH FEET	LV3NW SQ YD	LV3NW TONS	LV3NW WIDTH FEET	LV3NW SQ YD	LV3NW TONS	LV4WE WIDTH FEET	LV4WE SQ YD	LV4WE TONS	TYPE 41 PATCHING TONS	TACK GALLON
CSAH 5 NB DRIVING LANE (1),(2)	12790				12.5	17764	2443	12.0	17053	1876	60	1741
CSAH 5 NB DRIVING LANE (1),(2)	12790				12.5	17764	2443	12.0	17053	1876	60	1741
CSAH 5 RTL, NB AT CSAH 22	480				11.5	613	67	12.0	640	70		63
CSAH 5 RTL, NB AT CR 64	480				11.5	613	67	12.0	640	70		63
CSAH 5 RTL, NB AT CR 163	480				11.5	613	67	12.0	640	70		63
CSAH 5 BYPASS LANE, NB AT CR 64	620				11.5	792	87	12.0	827	91		81
CSAH 5 BYPASS LANE, NB AT CR 163	620				11.5	792	87	12.0	827	91		81
CSAH 5 NB SHOULDER	11070							8.0	9840	1082		492
CSAH 5 NB SHOULDER	11830							8.0	10516	1157		526
CSAH 22 RTL, EB AT CSAH 5	480	13	693	76	12.5	667	73	12.0	640	70		65
BITUMINOUS STREETS AND ENTRANCES, 2" THICK									2288	252		114
TOTALS			76	95	39619	5335	112.0	60964	6706	120	5029	

CONSTRUCTION NOTES
(1) QUANTITY ESTIMATED AT 275#/SQUARE YARD FOR FIELD VARIATIONS
(2) TYPE 41 BITUMINOUS MIXTURE FOR PATCHING ESTIMATED AT 50 TONS PER MILE.

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: MARY A DARY
SIGNATURE: *MARY A DARY*
DATE: 06/27/02 LICENSE NO. 21763

DRAWN BY: P.M.L. DATE 06/27/02
DESIGN BY: P.M.L. DATE 06/27/02
CHECKED BY: MAD. DATE 06/27/02



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-06-05

TABULATION CHARTS
Sheet 05 of 18 Sheets

EARTHWORK

STATION	DRIVEWAY STREET ADDRESS	DRIVEWAY MATERIAL	BUMP OUT - 1.5'	BUMP OUT - 4'	BUMP OUT - END OF RADIUS	MILL BUTT JOINT	CLASS 5 -2 TON
11+61	W. CR 64	BIT			X	X	
12+14	HO# 18111	GRAVEL		X			X
14+38	HO# 18165	BIT		X		X	
15+71	HO# 18156	BIT		X		X	
22+14	HO# 18233	BIT		X		X	
25+44	HO# 18265	BIT		X		X	
26+93	FIELD ENT.	GRAVEL	X				X
27+50	HO# 18288	GRAVEL		X			X
30+03	PIT ENT.	GRAVEL		X			X
34+86	FIELD ENT.	GRAVEL	X				X
35+84	FIELD ENT.	GRAVEL	X				X
38+50	HO# 18433	BIT		X		X	
42+25	HO# 18466	GRAVEL		X			X
43+31	185TH AVE	BIT			X	X	
43+53	FIELD ENT.	GRAVEL	X				X
47+00	HO# 18550	CONCRETE		X			
50+04	PERIDOT ST	BIT			X	X	
51+23	HO# 18600	GRAVEL		X			X
53+55	HO# 18650	GRAVEL		X			X
55+38	HO# 18675	GRAVEL		X			X
61+25	HO# 18730	GRAVEL		X			X
61+50		CONCRETE		X			
62+15	HO# 18760	BIT		X		X	
65+34	HO# 18845	GRAVEL		X			X
65+91	HO# 18830	GRAVEL		X			X
69+00	HO# 18834	GRAVEL		X			X
71+21	HO# 18874	GRAVEL		X			X
71+85	189TH AVE	GRAVEL			X		X
75+20	FIELD ENT.	GRAVEL	X				X
76+71	HO# 18960	BIT		X		X	
76+96	HO# 18959	BIT		X		X	
78+71	HO# 18954/#18964	GRAVEL		X			X
79+35	HO# 18970	GRAVEL		X			X
83+91	HO# 19047	BIT		X		X	
87+80	HO# 19155 S.	BIT		X		X	
89+34	HO# 19155 N.	GRAVEL		X			X
91+23	191ST LA	GRAVEL			X		
99+00	HO# 19233	BIT		X		X	
102+11		GRAVEL		X			X
103+35	HO# 19285	GRAVEL		X			X
106+38	FIELD ENT.	GRAVEL	X				X
118+15	HO# 19447	GRAVEL		X			X
120+19	CR 163	BIT			X	X	
121+13	HO# 19454	GRAVEL		X			X
122+06		GRAVEL		X			X
122+87	HAPPY COR.	GRAVEL		X			X
123+89		GRAVEL		X			X
124+58	HO# 19550	BIT		X		X	
130+32	HO# 19620	GRAVEL		X			X
130+89	CH# 19653 S.	BIT		X		X	
132+55	CH# 19653 N.	BIT		X		X	
133+23	HO# 19654	CONCRETE		X			
134+95	E. CSAH 22	BIT			X		
135+57	N. CSAH 5	BIT			X		
12+50	HO# 8040	BIT				X	

STATION	DISTANCE	REG.		BAL. TOTALS	
		CUT	FILL	CU.YD.	CU.YD.
11+00.00	25.00	182	49	182	49
11+25.00	25.00	7	47	189	96
11+50.00	25.00	7	45	196	141
11+75.00	25.00	21	31	217	172
12+00.00	25.00	17	9	234	181
12+25.00	25.00	10	19	243	200
12+50.00	25.00	13	35	257	235
12+75.00	25.00	19	28	276	263
13+00.00	25.00	36	20	312	283
13+25.00	25.00	48	15	360	298
13+50.00	25.00	61	13	421	311
13+75.00	25.00	69	12	490	322
14+00.00	25.00	67	9	556	331
14+25.00	50.00	131	8	687	339
14+50.00	25.00	53	1	740	341
14+75.00	50.00	61	1	801	341
15+00.00	25.00	11	0	812	341
15+25.00	25.00	0	0	812	341
15+46.44	3.56	0	0	812	341
15+50.00				812	341
				812	341

EARTHWORK NOTES

COMMON EXCAVATION - 812 C.Y.(E.V.) @ X 0.80% = 650 C.Y.(C.V.).
 SALV. T.S. AVAIL= 232 C.Y.(E.V.) X 0.80% = 186 C.Y.(C.V.).AVAIL
 COMMON EXC.- 650 C.Y.(C.V.) - 175 C.Y.(C.V.) TOPSOIL REQ'D. =
 475 C.Y.(C.V.) AVAIL. COMMON EXCAVATION.
 REG. EMB. = 341 C.Y.(C.V.) - 475 C.Y.(C.V.) COMMON EXC. =
 134 C.Y.(C.V.) X 130% = 174 C.Y.(L.V.) EXCESS

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: MARK A. DADY
 SIGNATURE: *Mark A. Dady*
 DATE: 6/27/02 LICENSE NO. 21763

DRAWN BY: KGU DATE 07/08/02
 DESIGN BY: MFG DATE 07/08/02
 CHECKED BY: MAD DATE 07/08/02



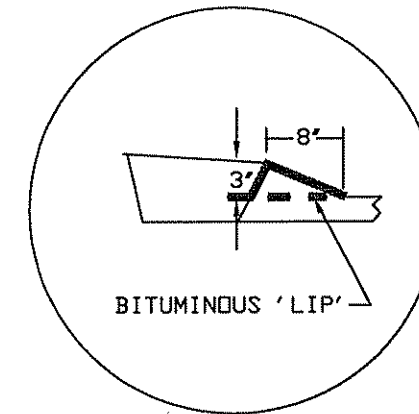
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. **02-06-05**

TABULATION CHARTS

Sheet 06 of 18 Sheets

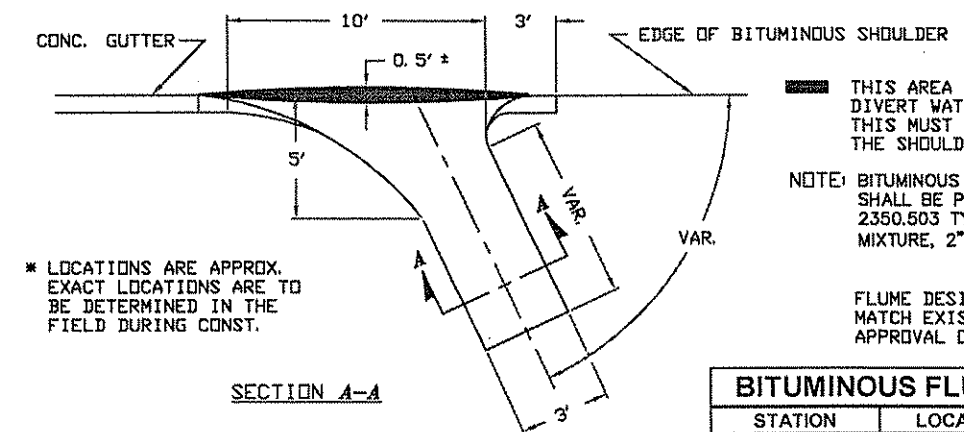
BERM SECTION



- ① EXISTING BITUMINOUS LIP TO BE RECLAIMED WITH SHOULDER
- ② PROPOSED BITUMINOUS LIP TO BE PAID AS BITUMINOUS CURB, ITEM NO. 2535.501

BITUMINOUS CURB			H
STATION	STATION	LOCATION	LENGTH FEET
23+20	26+35	LT	315
26+70	27+65	LT	95
76+20	80+40	RT	420
99+75	102+05	RT	230
121+60	122+60	RT	100
130+45	131+45	LT	100
131+60	132+10	LT	50
132+30	133+40	LT	110
TOTAL			1420

TYPICAL BITUMINOUS FLUME



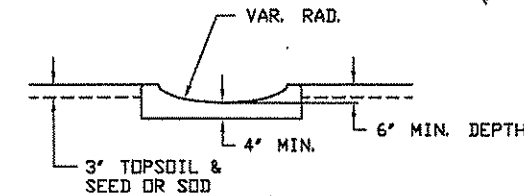
THIS AREA OF INCREASED SLOPE TO DIVERT WATER FLOW INTO FLUME. THIS MUST BE ACCOMPLISHED DURING THE SHOULDER PAVING OPERATION.

NOTE: BITUMINOUS FLUME CONSTRUCTION SHALL BE PAID BY THE SQ YD AS 2350.503 TYPE LV4 WEARING COURSE MIXTURE, 2" THICK.

FLUME DESIGN MAY BE MODIFIED TO MATCH EXISTING CONDITIONS UPON APPROVAL OF THE ENGINEER.

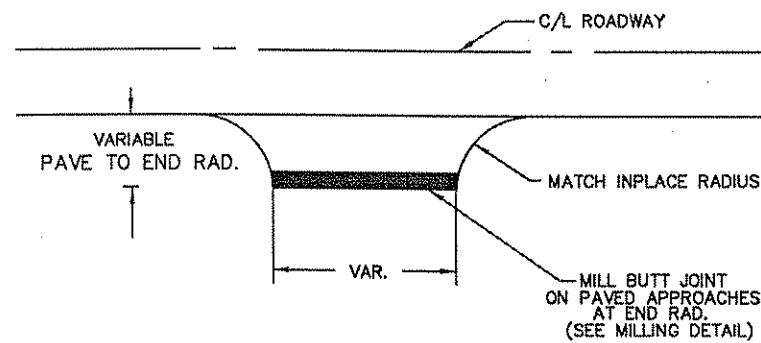
* LOCATIONS ARE APPROX. EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD DURING CONST.

SECTION A-A



BITUMINOUS FLUME			J
STATION	LOCATION	VOLUME	SQ YD
23+20	LT	5.5	
27+65	LT	5.5	
76+20	RT	5.5	
99+75	RT	5.5	
122+60	RT	5.5	
131+45	LT	5.5	
132+10	LT	5.5	
133+40	LT	5.5	
TOTAL			44

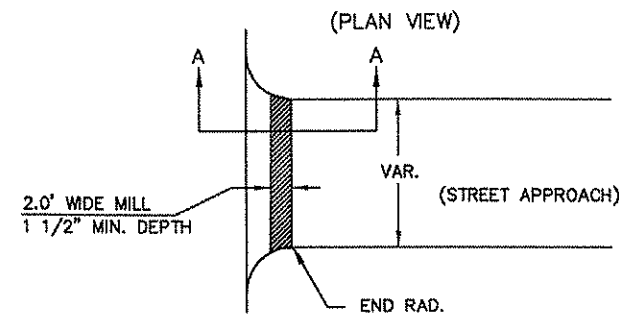
PAVED & UNPAVED STREET APPROACHES



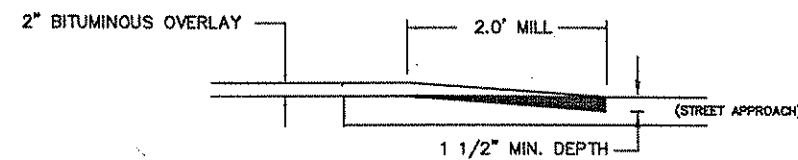
NOTE: PAID FOR AS ITEM NO. 2350.604 (2" THICK BITUMINOUS WEARING COURSE)
* APPROACHES TO BE PAID BY THE SQ YD

MILLING DETAILS

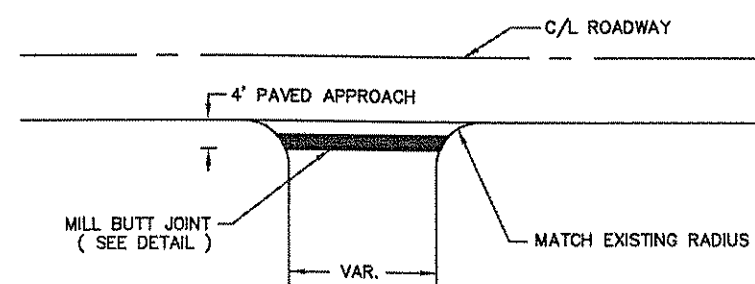
BUTT JOINTS



(SECTION A-A)

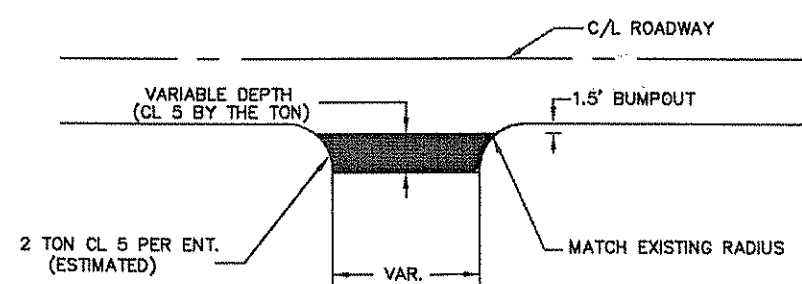


PAVED ENTRANCES



NOTE: PAID FOR AS ITEM NO. 2350.604 (2" THICK BITUMINOUS WEARING COURSE)
* APPROACHES TO BE PAID BY THE TON IF PAVED AS PART OF MAINLINE PAVING
* APPROACHES TO BE PAID BY THE SQ YD IF PAVED AS A SEPARATE OPERATION.

FIELD AND UNPAVED ENTRANCES



NOTE: PAID FOR AS ITEM NO. 2211.501 (AGGREGATE BASE CL 5 (TON))

(NOT TO SCALE)

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

PRINT NAME: MARK A DAL...
SIGNATURE: MR ADG
DATE: 6/27/02 REG. NO. 21783

DRAWN BY: BFL DATE: 06/27/02
DESIGN BY: MFG DATE: 06/27/02
CHECKED BY: MAD DATE: 06/27/02



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-06-05

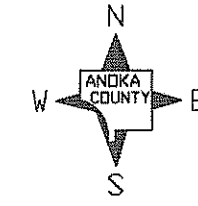
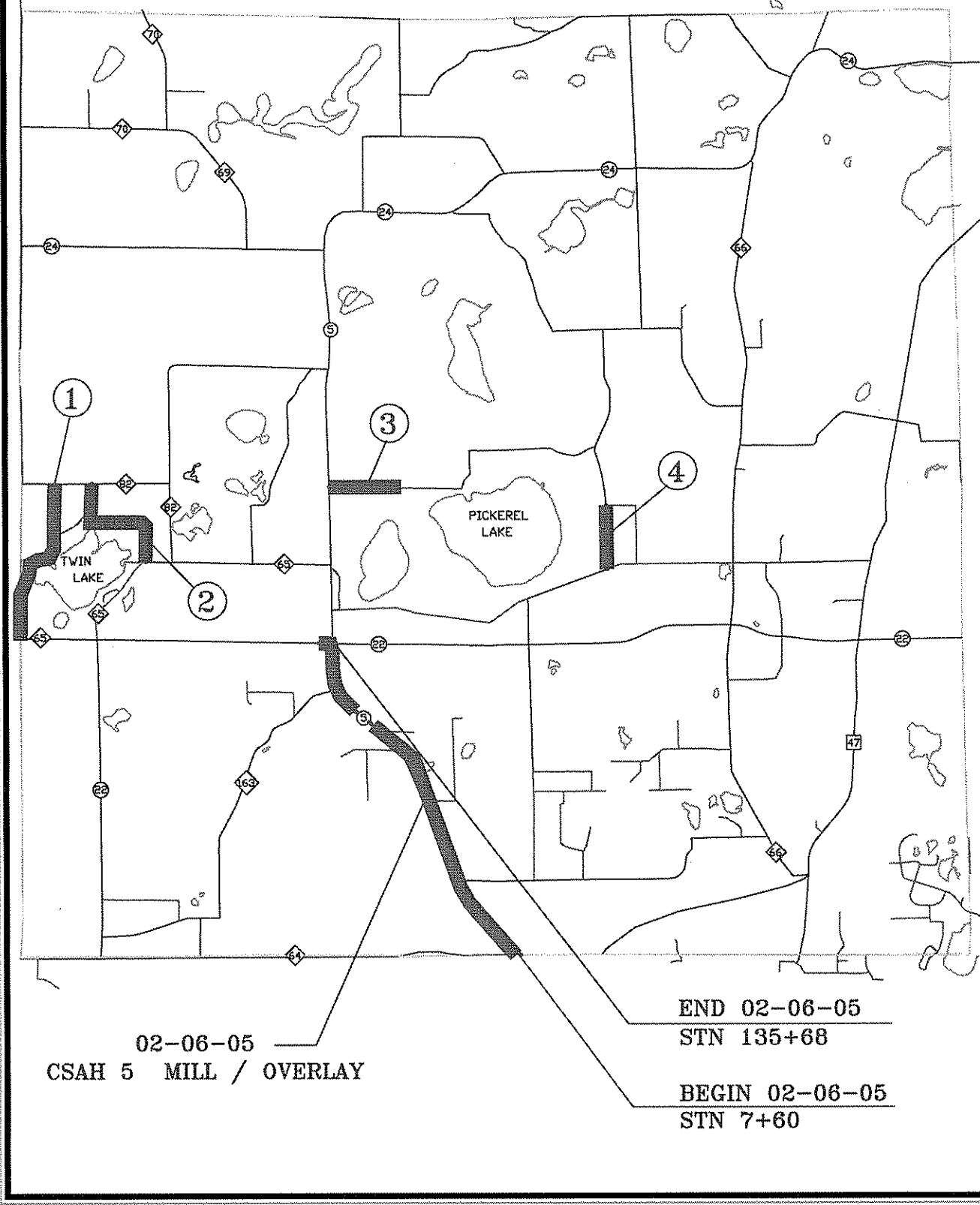
DETAILS

Sheet 07 of 18 Sheets

NO	DATE	BY	CHKD	APPR	REVISION
1	6/7/01	TA			LVNW35030B

NAME: P:\02-01-00\02-06-05\plan\04-Typical.dwg 06/25/02 06:51:14 PM CDT

CITY OF
BURNS



ROADS FOR BITUMINOUS MILLINGS TO BE
HAULED TO, AS DIRECTED BY ENGINEER.
PLACED BY BURNS TOWNSHIP
(1.5" - 2" IN DEPTH, 22' - 24' WIDE)

LISTED IN ORDER OF HAUL ROAD PLACEMENT

1. TWIN PARKWAY N.W.
(FROM CR 65 TO CR 82)
2. BAUGH ST N.W.
WOLVERINE ST N.W.
203 RD AVE N.W.
(FROM CR 65 TO CR 82)
3. 205 TH AVE N.W.
(FROM CSAH 5 TO 1640' EAST OF CSAH 5)
4. BASALT STREET N.W.
(FROM OLD VIKING BLVD N.W. TO 204 TH AVE N.W.)

02-06-05
CSAH 5 MILL / OVERLAY

END 02-06-05
STN 135+68

BEGIN 02-06-05
STN 7+60

NO	DATE	BY	CKD	APPR	REVISION

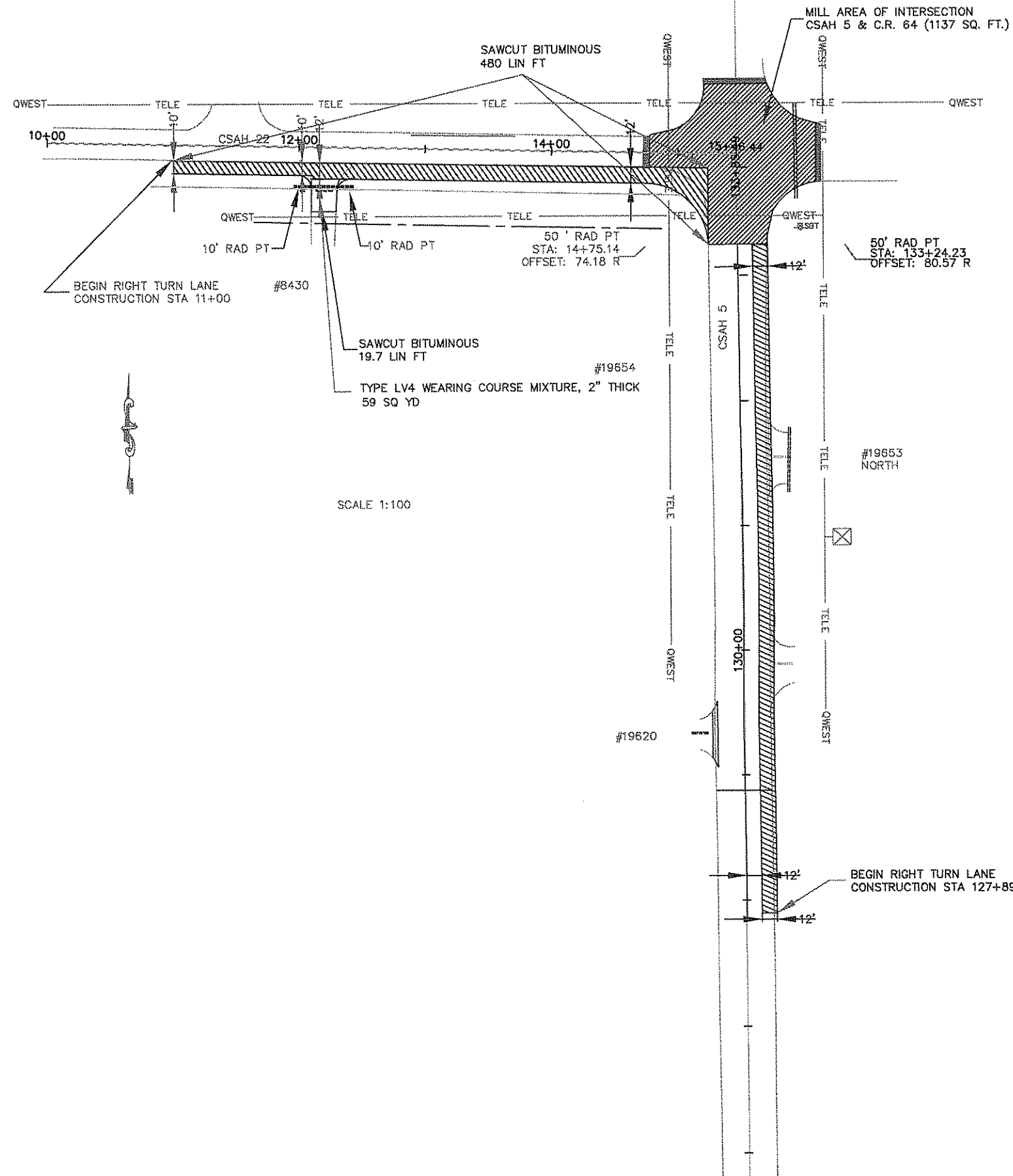
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: MARK A DALY
SIGNATURE: *M A DALY*
DATE: 06/27/02 LICENSE NO. 21763

DRAWN BY: BFL DATE: 06/27/02
DESIGN BY: MFG DATE: 06/27/02
CHECKED BY: MAD DATE: 06/27/02

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-06-05

MILLING PLACEMENT
MAP
Sheet 08 of 18 Sheets

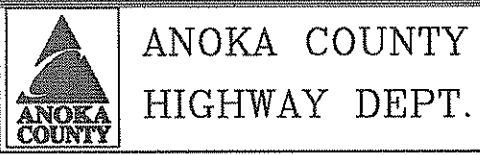


NO	DATE	BY	CHKD	APPR	REVISION

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

PRINT NAME: MARK A DALY
 SIGNATURE: *Mark A Daly*
 DATE: 06/27/02 LICENSE NO. 21763

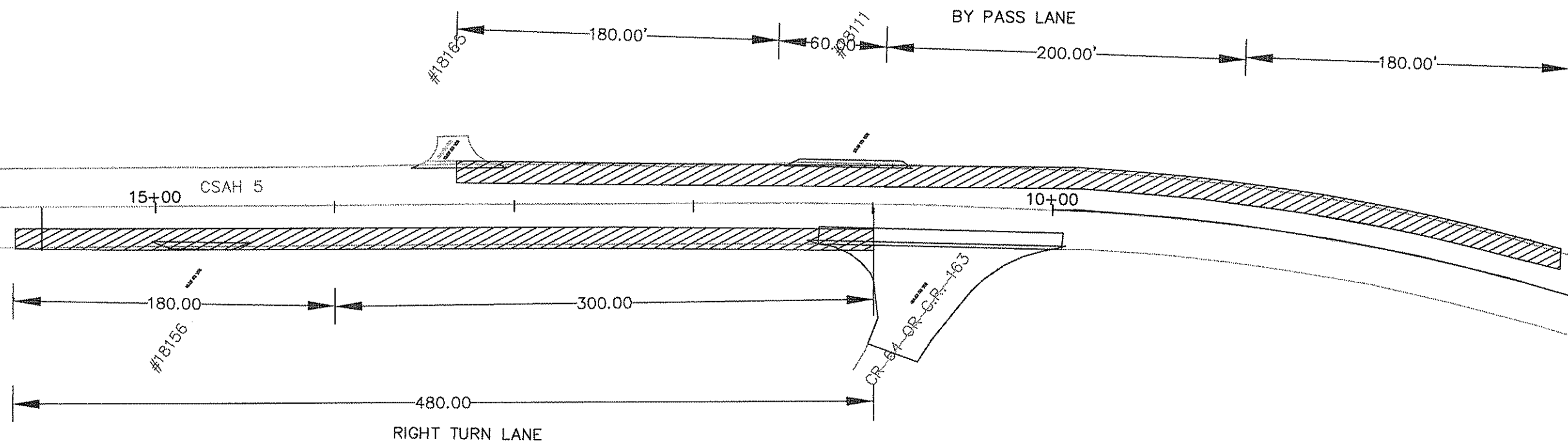
DRAWN BY BFL DATE 06/27/02
 DESIGN BY MFG DATE 06/27/02
 CHECKED BY MAD DATE 06/27/02



STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-01-00
 COUNTY PROJECT NO. 02-06-05

RIGHT TURN LANE
 CSAH 22 & CSAH 5
 DETAIL

Sheet 09 of 18 Sheets



NOTE: NOT TO SCALE

TYPICAL RIGHT TURN LANE & BY PASS LANE CONSTRUCTION
 CONSTRUCT 12' BY 480' RTL SB CSAH 5 AT CR 64 NB CSAH 5 AT CR 163 ,NB CSAH 5 AT CSAH 22
 CONSTRUCT 12' BY 620' BYPASS NB CSAH 5 AT CR 64 AND NB CSAH 5 AT CR 163

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: MARK A DALY
 SIGNATURE: *MAD*
 DATE: 06/27/02 LICENSE NO. 21763

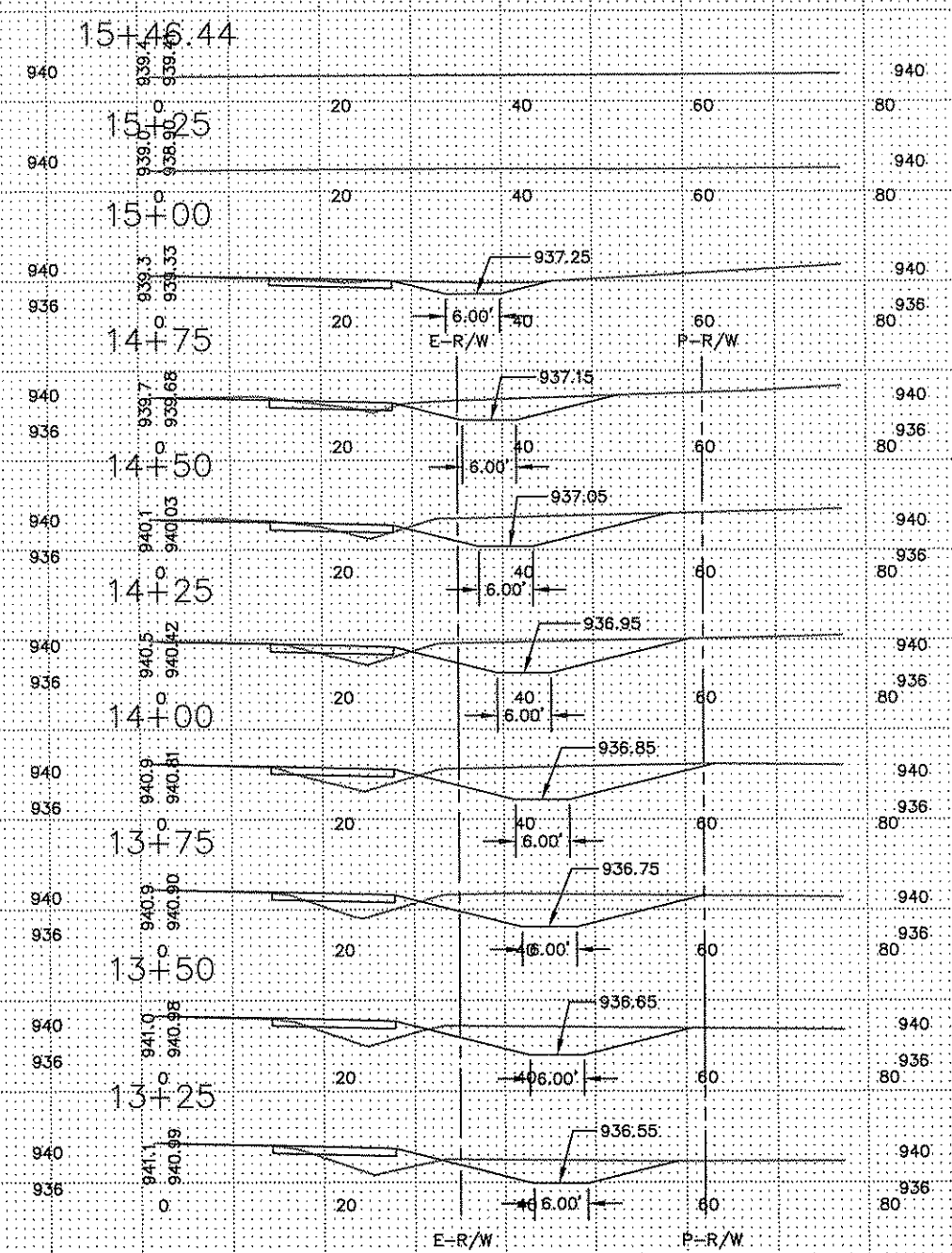
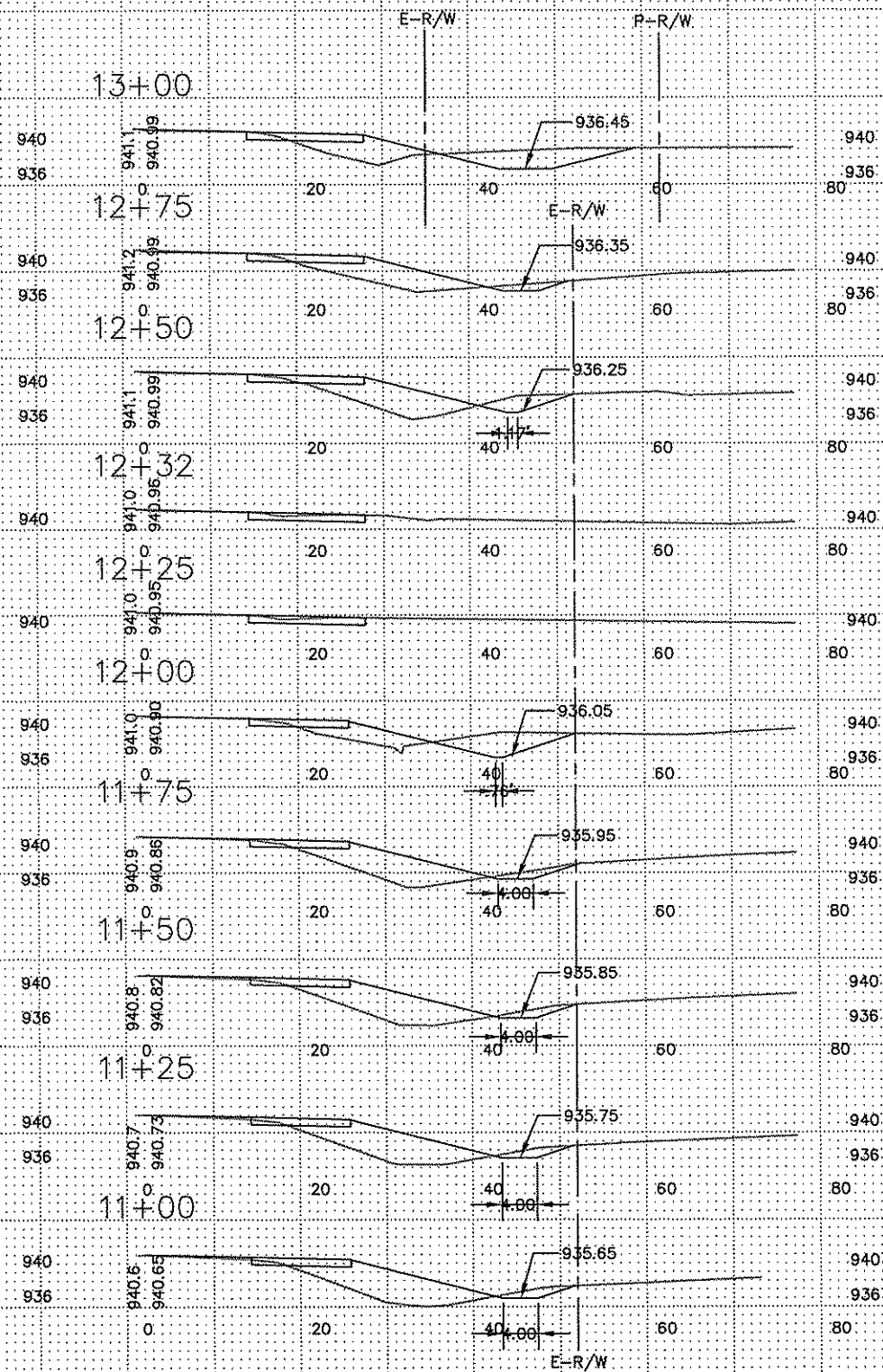
DRAWN BY: BFL DATE 06/27/02
 DESIGN BY: MFG DATE 06/27/02
 CHECKED BY: MAD DATE 06/27/02



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

RTL & BYPASS DETAIL
 C.R. 64 & C.R. 163
 Sheet 10 of 18 Sheets



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: MARK DALY
 SIGNATURE: *MDALY*
 DATE: 06/27/02 LICENSE NO. 21763

DRAWN BY: BFL DATE 06/27/02
 DESIGN BY: MFG DATE 06/27/02
 CHECKED BY: MAD DATE 06/27/02

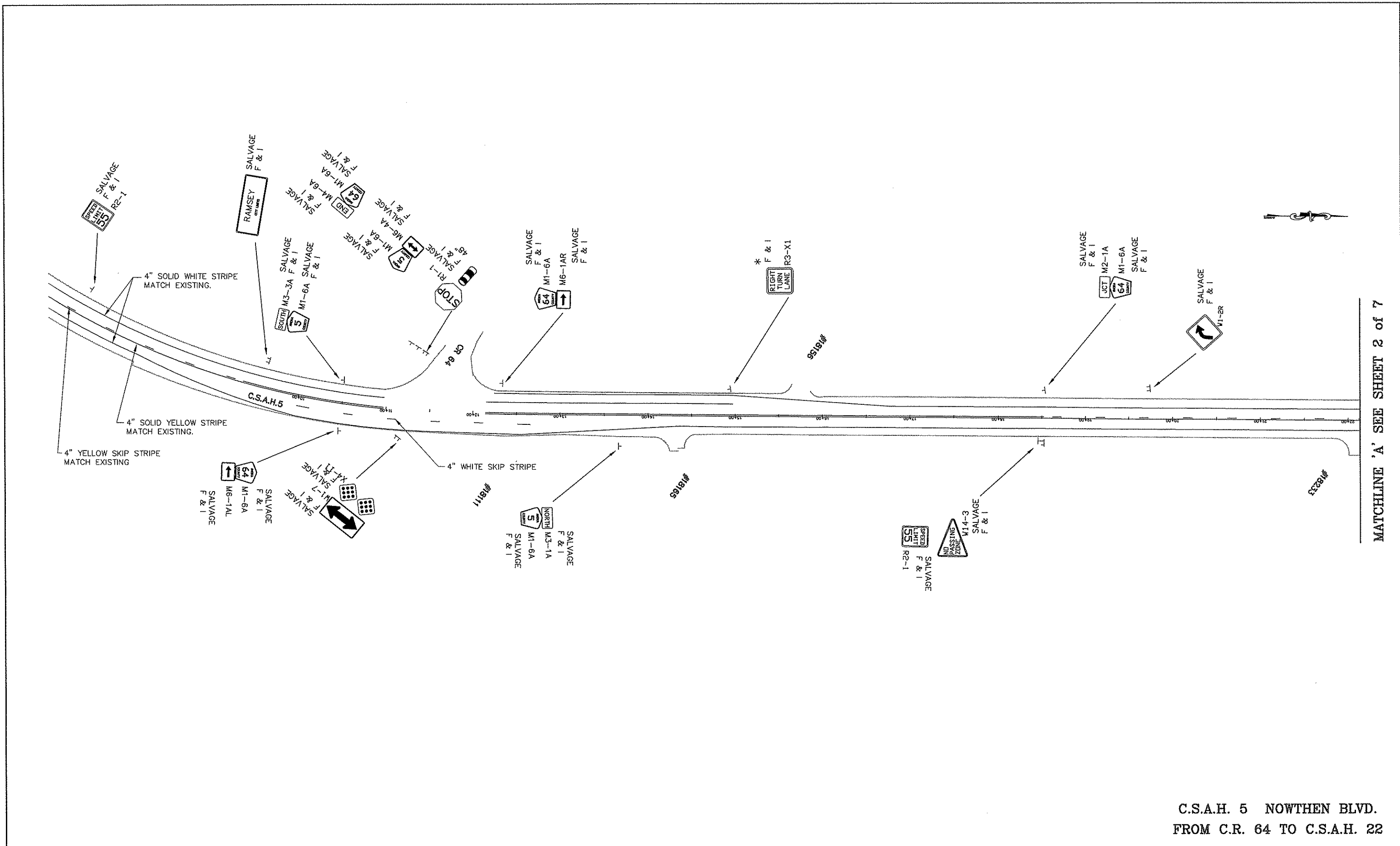


ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

CROSS SECTIONS
 STA 10+00 TO 15+46.44
 Sheet 11 of 18 Sheets

NO	DATE	BY	CKD	APPR	REVISION



MATCHLINE 'A' SEE SHEET 2 OF 7

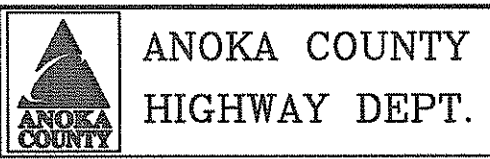
C.S.A.H. 5 NOWTHEN BLVD.
FROM C.R. 64 TO C.S.A.H. 22

NO	DATE	BY	CHKD	APPR	REVISION

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

PRINT NAME: *MARIS A Daly*
SIGNATURE: *[Signature]*
DATE: *6/27/02* REG. NO. *21763*

DRAWN BY: *DM* DATE: *07/3/02*
DESIGN BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____



STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. *02-06-05*

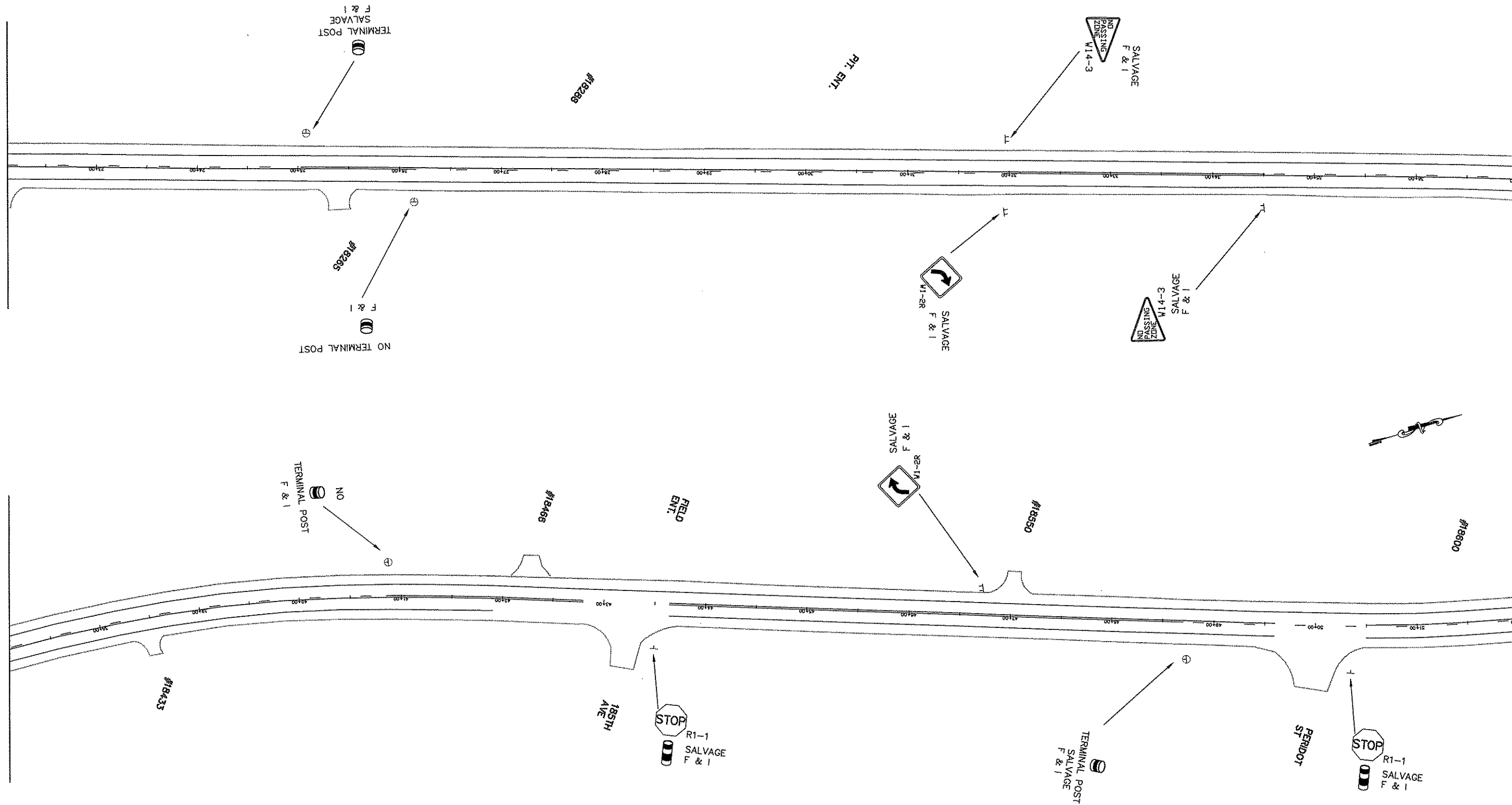
PERMANENT SIGN / STRIPE
Sheet *12* of *18* Sheets

MATCHLINE 'A' SEE SHEET 1 of 7

MATCHLINE 'B' SEE ABOVE RIGHT

MATCHLINE 'B' SEE BELOW LEFT

MATCHLINE 'C' SEE SHEET 3 of 7



C.S.A.H. 5 NOWTHEN BLVD.
FROM C.R. 64 TO C.S.A.H. 22

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

PRINT NAME: *Adg*
 SIGNATURE: *Adg*
 DATE: *6/17/02* REG. NO. *21763*

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE:
 CHECKED BY: DATE:



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

PERMANENT
SIGN / STRIPE

Sheet 13 of 18 Sheets

NO	DATE	BY	CKD	APPR	REVISION

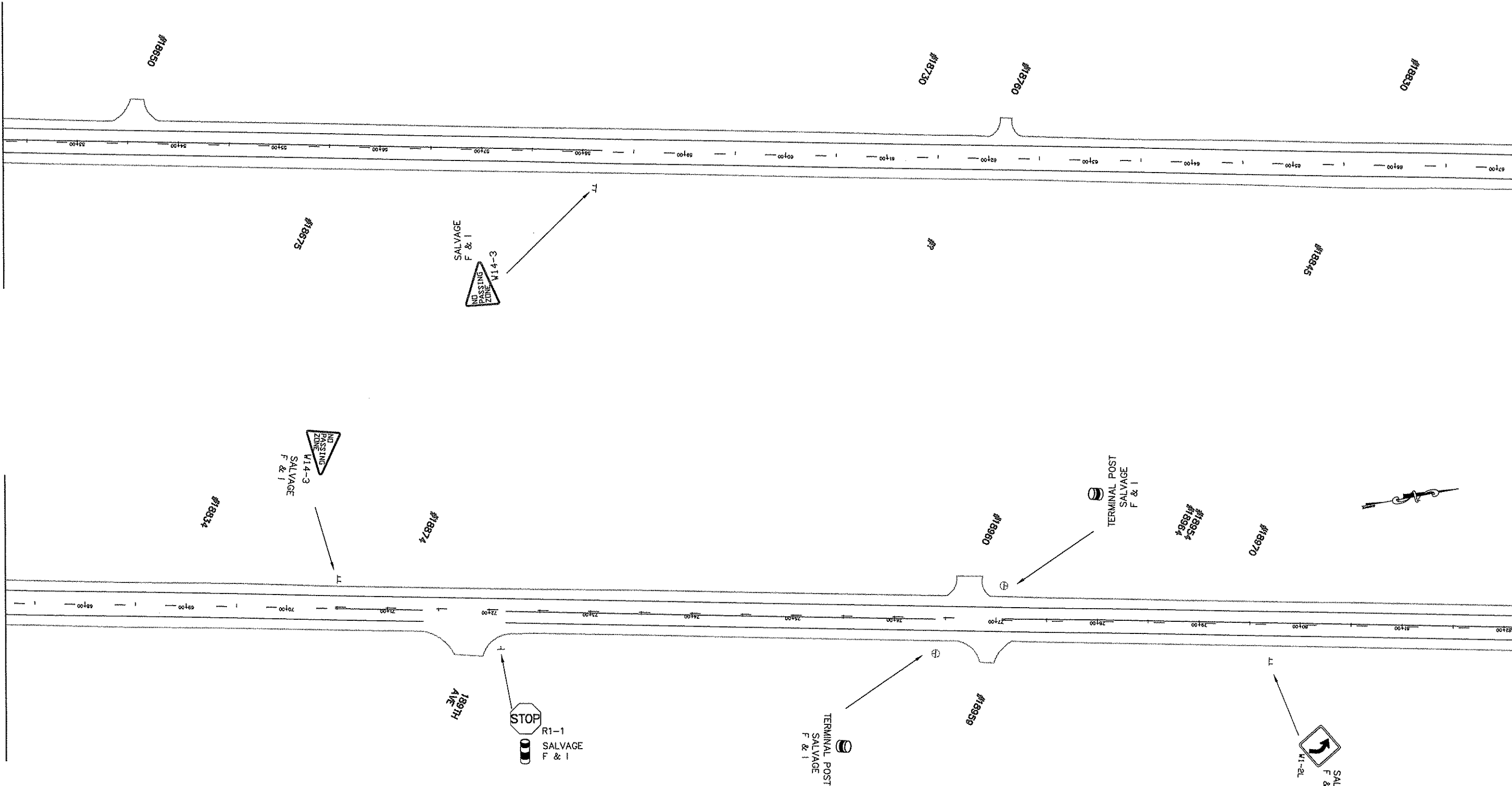
NAME: S:\SDSKPROJ\000000\000000\026000.DWG

MATCHLINE 'C' SEE SHEET 1 OF X

MATCHLINE 'D' SEE ABOVE RIGHT

MATCHLINE 'D' SEE BELOW LEFT

MATCHLINE 'E' SEE SHEET 4 OF 7



C.S.A.H. 5 NOWTHEN BLVD.
 FROM C.R. 64 TO C.S.A.H. 22

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: *MR ADH*
 SIGNATURE: *[Signature]*
 DATE: *6/27/02* REG. NO. *21763*

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE:
 CHECKED BY: DATE:
 ANOKA COUNTY

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. **02-06-05**

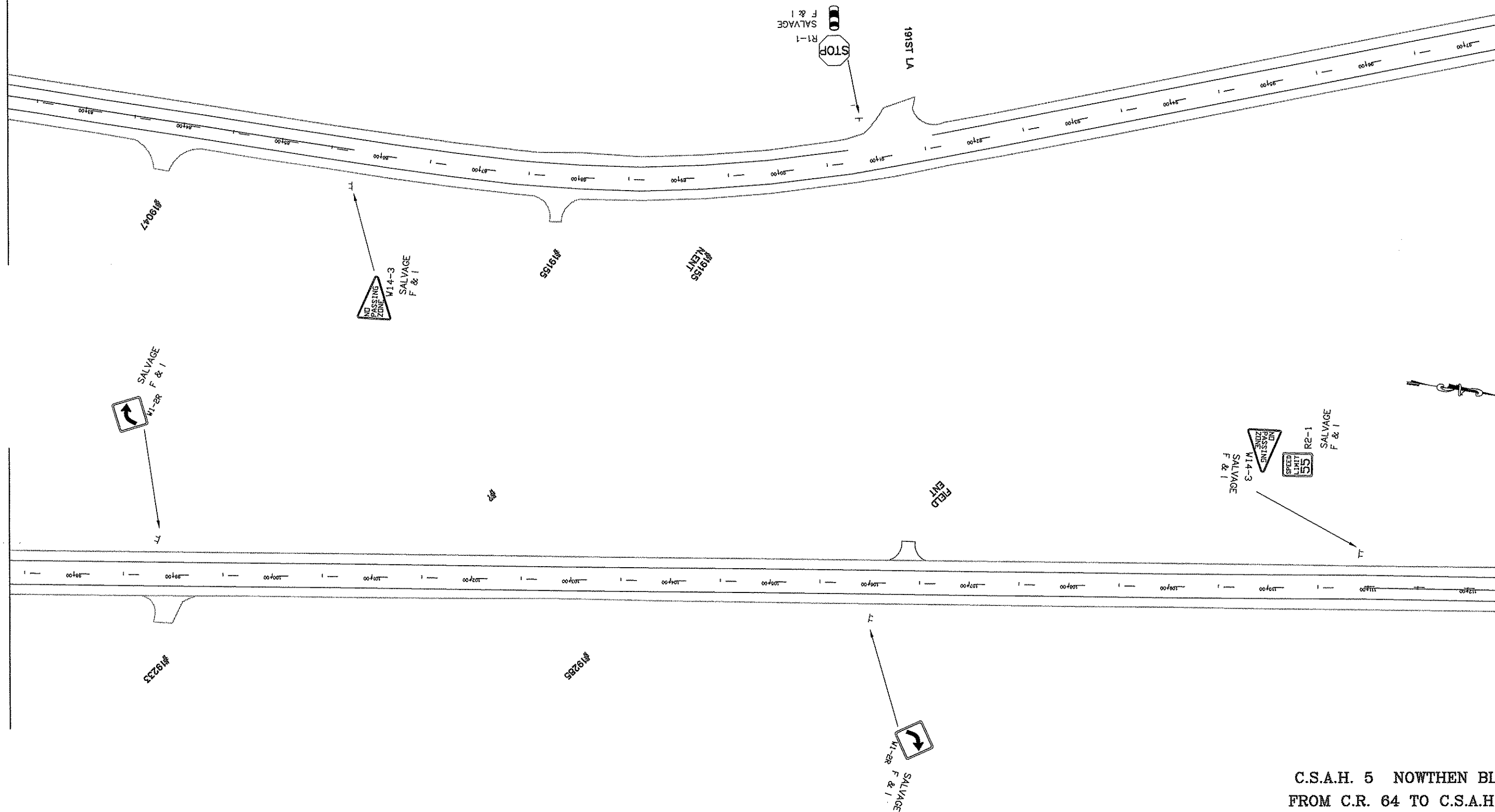
PERMANENT SIGN / STRIPE
 Sheet 14 of 18 Sheets

MATCHLINE 'E' SEE SHEET 5 of 7

MATCHLINE 'F' SEE ABOVE RIGHT

MATCHLINE 'F' SEE BELOW LEFT

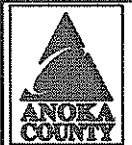
MATCHLINE 'G' SEE SHEET 5 of 7



C.S.A.H. 5 NOWTHEN BLVD.
 FROM C.R. 64 TO C.S.A.H. 22

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: MARK ADY
 SIGNATURE: [Signature]
 DATE: 6/27/02 REG. NO. 21763

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE:
 CHECKED BY: DATE:



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

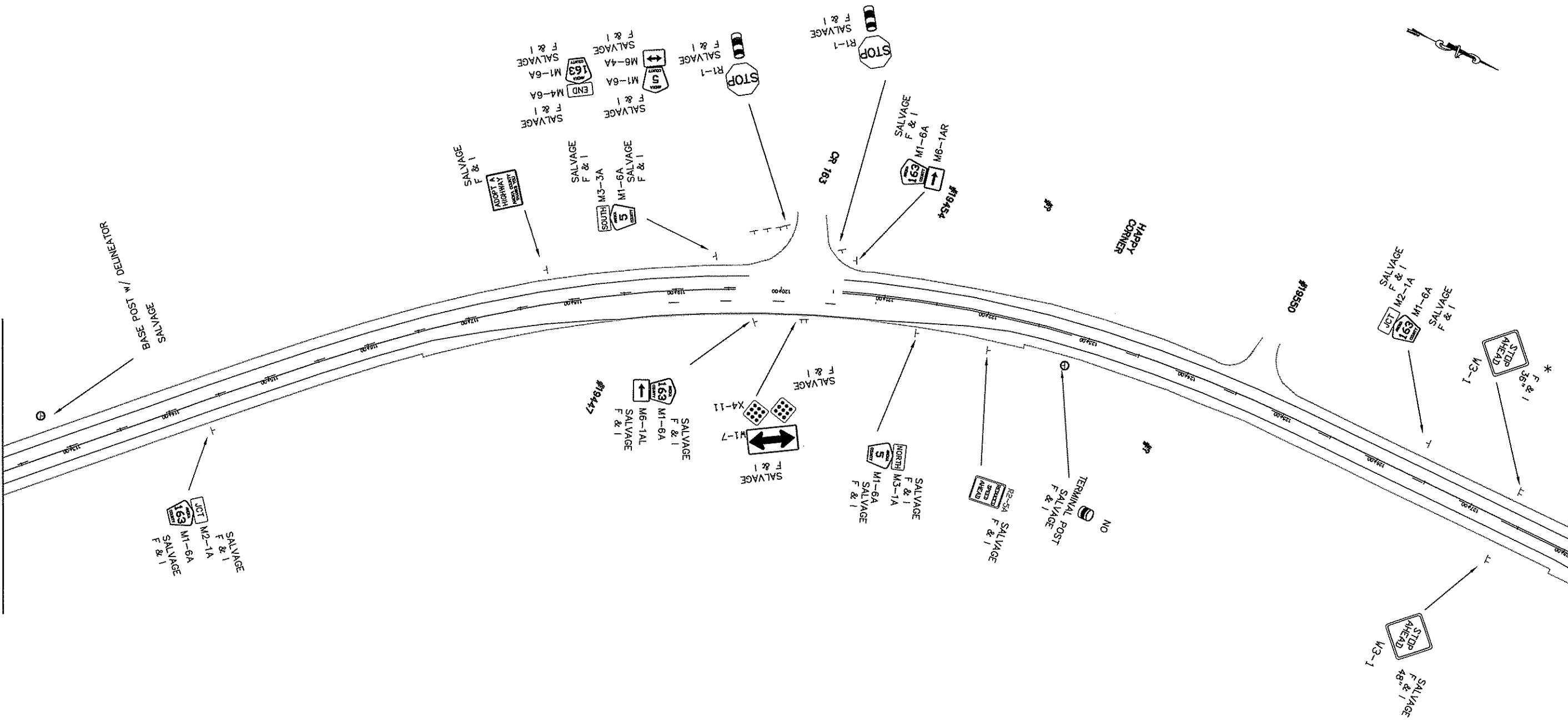
PERMANENT
 SIGN / STRIPE
 Sheet 15 of 18 Sheets

NO	DATE	BY	CHKD	APPR	REVISION

NAME: S:\SDSKPRO\000000\000000\020000.DWG

MATCHLINE 'H' SEE SHEET 4 of 7

MATCHLINE 'J' SEE SHEET 6 of 7



C.S.A.H. 5 NOWTHEN BLVD.
FROM C.R. 64 TO C.S.A.H. 22

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: *M. LADY*
 SIGNATURE: *[Signature]*
 DATE: *6/27/02* REG. NO. *21763*

DRAWN BY: *DM* DATE: *07/3/02*
 DESIGN BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____

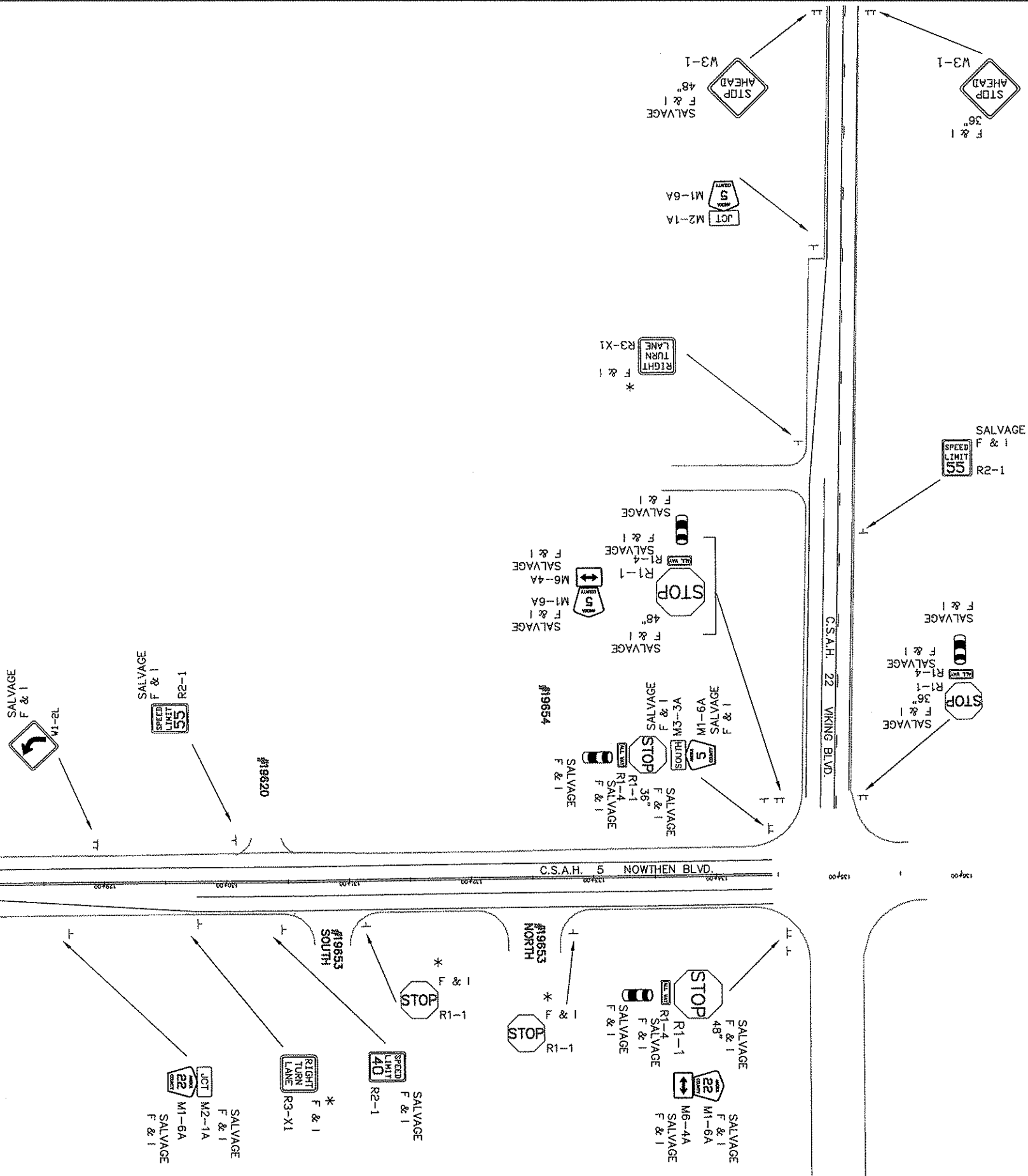


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. *02-06-05*

PERMANENT
SIGN / STRIPE
 Sheet *16* of *18* Sheets

MATCHLINE 'J' SEE SHEET 5 OF 7

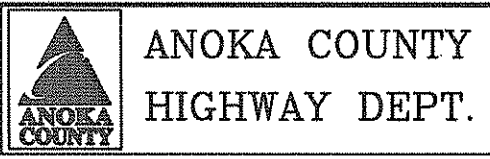


C.S.A.H. 5 NOWTHEN BLVD.
FROM C.R. 64 TO C.S.A.H. 22

NO	DATE	BY	CHK	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: *MOAD*
 SIGNATURE: *[Signature]*
 DATE: *6/27/02* REG. NO. *21763*

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE:
 CHECKED BY: DATE:
 ANOKA COUNTY HIGHWAY DEPT.



STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-06-05

PERMANENT SIGN / STRIPE
 Sheet 17 of 18 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QTY	SQ. FT.	TOTAL SQ. FT.	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R1-1	30" x 30"		8	6.25	86.25	1	7.0
R1-1	36" x 36"		2	9.00	18.00	2	7.0
R1-1	48" x 48"		3	16.00	48.00	2	7.0
R1-4	18" x 6"		4	.75	3.00	①	
DELINEATOR	4"DIA x 15"		13	0.87	11.31	②	
R2-1	30" x 24"		4	5.00	20.00	③	7.0
R2-1	30" x 24"		1	5.00	5.00	1	7.0
R3-X1	30" x 30"		3	6.25	18.75	1	7.0
W1-2R	36" x 36"		5	9.00	45.00	2	7.0
W1-2L	36" x 36"		2	9.00	18.00	1	7.0
W3-1	36" x 36"		2	9.00	18.00	2	7.0
W3-1	48" x 48"		2	16.00	32.00	2	7.0
W14-3	36"x48"x48"		7	6.00	35.00	2	7.0
W1-7	48" x 24"		2	8.00	16.00	2	7.0
X4-11	18" x 18"		4	2.25	9.00		
SUB-TOTAL					383.31		

M. U. T. C. D. CODE	SIZE	INSERT	QTY	SQ. FT.	TOTAL SQ. FT.	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
ADOPT	30" x 24"		2	5.00	10.00	1	7.0
CITY	60" x 24"		1	10.00	10.00	2	7.0
TERMINAL	4"DIA x 4"		8	0.35	2.80	1	5.0
JCT	21" x 15"		1	2.20	2.20		
	24" x 12"		2	2.00	4.00		
	24" x 12"		3	2.00	6.00	④	
M1-6A	24" x 24"		9	4.00	36.00	1	7.0
	21" x 15"		3	2.20	6.60		
JCT	21" x 15"		1	2.20	2.20		
	24" x 12"		1	2.00	2.00		
M1-6A	24" x 24"		4	4.00	16.00	1	7.0
	21" x 15"		1	2.20	2.20		
			1	2.20	2.20		
JCT	21" x 15"		2	2.20	4.40		
	24" x 12"		1	2.00	4.00		
M1-6A	24" x 24"		5	4.00	20.00	1	7.0
	21" x 15"		1	2.20	2.20		
			1	2.20	2.20		

SUB-TOTAL (COLUMN 2)	135.00
SUB-TOTAL (COLUMN 1)	383.31
TOTAL	518.31

THE KRUSCHKE FAMILY

- ① MOUNTED BELOW R1-1
- ② MOUNTED BELOW R1-1
- ③ 2 MOUNTED BACK/BACK w/ W14-3
- ④ MOUNTED BACK/BACK w/ R1-1

- 1> LOCATIONS OF NO PASSING ZONES ARE APPROXIMATE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD.
- 2> ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY, 2001

C.S.A.H. 5 NOWTHEN BLVD.
FROM C.R. 64 TO C.S.A.H. 22

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: *M. J. Adh*
SIGNATURE: *[Signature]*
DATE: *6/27/02* REG. NO. *21763*

DRAWN BY: DM DATE: 02/24/02
DESIGN BY: DATE:
CHECKED BY: DATE:
DATE: 02/24/02



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. **02-06-05**

PERMANENT
SIGN QUANTITIES

Sheet 18 of 18 Sheets

PLAN SYMBOLS	
COUNTY LINE	.....
TOWNSHIP OR RANGE LINE	.....
SECTION LINE	.....
QUARTER LINE	.....
SIXTEENTH LINE	.....
RIGHT OF WAY LINE	.....
SLOPE EASEMENT	.....
EXISTING RIGHT OF WAY	.....
PROPERTY LINE	.....
CORPORATE OR CITY LIMITS	.....
RETAINING WALL	.....
RAILROAD	.....
RAILROAD RIGHT OF WAY	.....
RIVER OR CREEK	.....
DRAINAGE DITCH	.....
CULVERT	.....
DROP INLET	.....
GUARD RAIL	.....
BARBED WIRE FENCE	.....
WOVEN WIRE FENCE	.....
CHAIN LINK FENCE	.....
WOOD FENCE	.....
STONE WALL OR FENCE	.....
HEDGE	.....
LOWLAND	.....
TIMBER ORCHARD	.....
BRUSH	.....
NURSERY	.....
CATTLE GUARD	.....
OVERPASS (Highway Over)	.....
UNDERPASS (Highway Under)	.....
BRIDGE	.....
BUILDING (One Story Frame)	.....
F-FRAME C-CONCRETE	.....
S-STONE T-TILE	.....
B-BRICK ST-STUCCO	.....
RAILROAD CROSSING BELL	.....
RAILROAD CROSSING GATE	.....
MANHOLE	.....
CATCH BASIN	.....
FIRE HYDRANT	.....
CAST IRON MONUMENT	.....
IRON PIN	.....
GRAVEL PIT	.....
SAND PIT	.....
BORROW PIT	.....
ROCK QUARRY	.....
UTILITY SYMBOLS	
POWER POLE LINE	.....
TELEPHONE OR TELEGRAPH POLE LINE	.....
JOINT TELEPHONE & POWER ON POWER POLES	.....
ON TELEPHONE POLES	.....
ANCHOR	.....
STEEL TOWER	.....
STREET LIGHT	.....
PEDESTAL (Cable Terminal)	.....
GAS MAIN	.....
WATER MAIN	.....
TELEPHONE CABLE IN CONDUIT	.....
ELECTRIC CABLE IN CONDUIT	.....
TELEPHONE MANHOLE	.....
ELECTRIC MANHOLE	.....
BURIED TELEPHONE CABLE	.....
BURIED ELECTRIC CABLE	.....
AERIAL TELEPHONE CABLE	.....
SEWER (Sanitary or Storm)	.....
SEWER MANHOLE	.....
SCALES	
PLAN	0 10' 50' 100'
PROFILE HORIZONTAL	0 10' 20' 100'
PROFILE VERTICAL	0 1' 5' 10'
X-SECTIONS HORIZONTAL	0 1' 5' 10'
X-SECTIONS VERTICAL	0 2' 10' 20'
INDEX MAP	0 0.5mi 1mi

MINNESOTA DEPARTMENT OF TRANSPORTATION

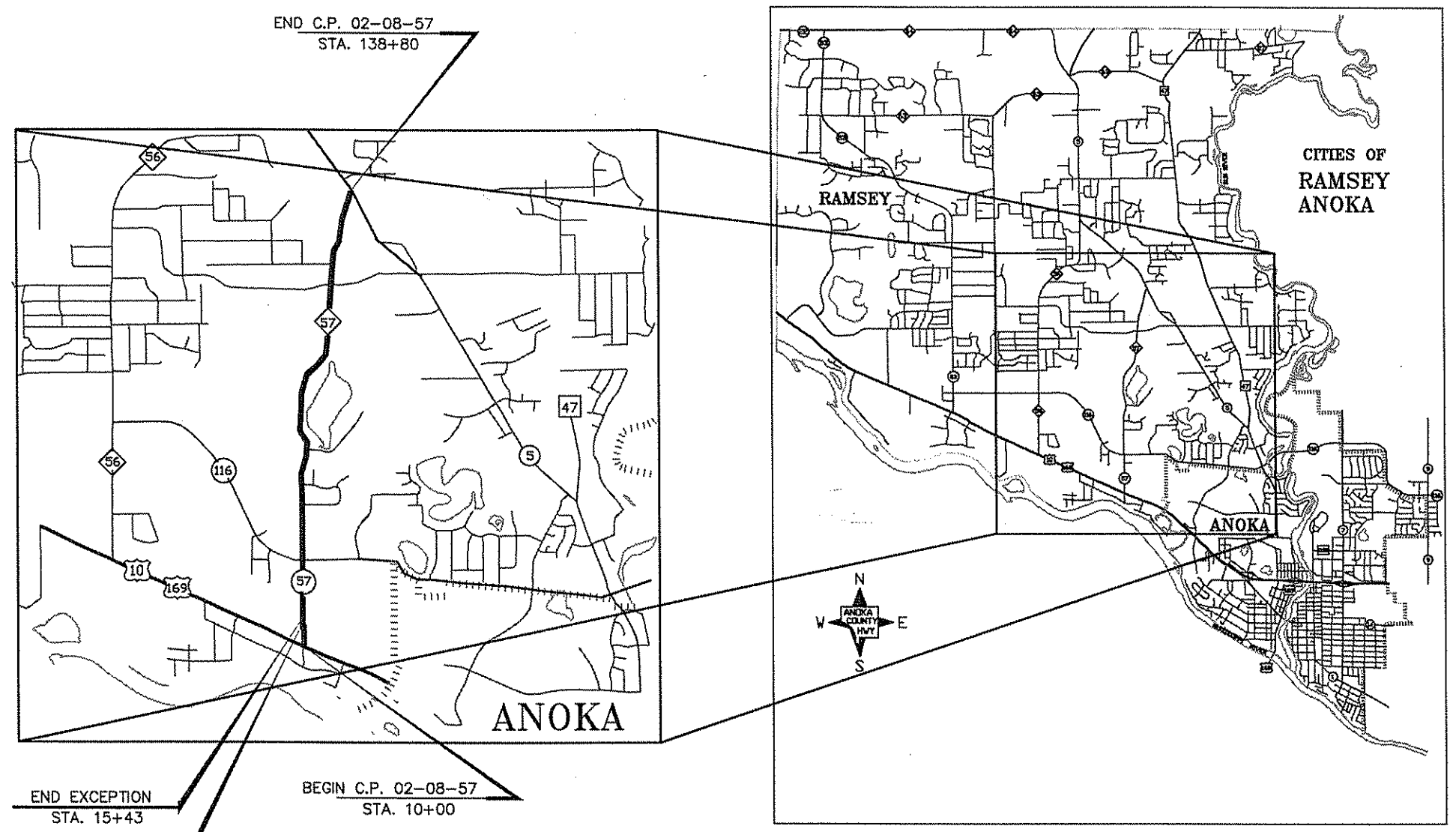
ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS MILLING, BITUMINOUS RECLAIMING, BITUMINOUS SURFACING

LOCATED ON CR 57 FROM TH 10 TO C.S.A.H. 5 (Geographic Description)

COUNTY PROJECT NO. 02-08-57
CR 57

GROSS LENGTH	<u>12,880</u> FEET	<u>2.44</u> MILES
BRIDGES-LENGTH	<u>0,000</u> FEET	<u>0.000</u> MILES
EXCEPTIONS-LENGTH	<u>30</u> FEET	<u>0.005</u> MILES
NET LENGTH	<u>12,850</u> FEET	<u>2.44</u> MILES



MINN. PROJ. NO. _____
 MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 2000 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - JANUARY, 2001."

INDEX

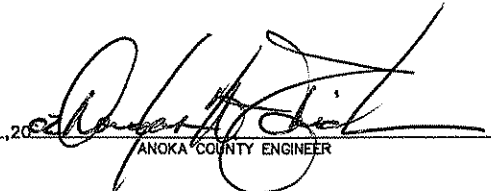
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3 - 4	TYPICAL SECTIONS
5 - 7	TABULATION CHARTS
8	DETAILS
9	EARTHWORK / SUPER CHART
10 - 13	PLAN AND PROFILE
14 - 18	CROSS-SECTIONS
19 - 24	SIGNING AND STRIPING


THIS PLAN CONTAINS 24 SHEETS

DESIGN DESIGNATION

ESAL ₂₀	<u>1,383,749</u>
R VALUE	<u>50</u>
ADT (2002)	<u>6438</u>
Proj. ADT (2021)	<u>10,301</u>
Proj. HCADT (2021)	<u>608</u>
Soil Factor	<u>NA</u>
<u>10</u> TON DESIGN	

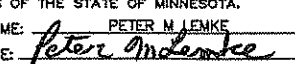
Functional Classification MINOR
 No. of Traffic Lanes 2 No. of Parking Lanes 0
 Design Speed 55 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5' Height of object 0.5'
 Design Speed not achieved at:
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH

Approved 7/9, 2002 
 ANOKA COUNTY ENGINEER

Approved 7/9, 2002 
 CITY OF RAMSEY

NO.	DATE	BY	CHKD	APPR	REVISION
1	7/23/02	KGT	MAD		REVISED SHEET NOS. 14-18
NAME: S:\SDSKPROJ\02-000-00\PLAN\01-TITLE.DWG					

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

PRINT NAME: PETER M. LENKE
 SIGNATURE: 
 DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: BFL DATE 08/27/02
 DESIGN BY: MEG DATE 08/27/02
 CHECKED BY: BML DATE 07/03/02

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

TITLE SHEET

Sheet 01 of 24 Sheets

STATEMENT OF ESTIMATED QUANTITIES

TAB/NOTE NO.	ITEM NUMBER	ITEM	UNIT	TOTAL CONTRACT QUANTITY
	2021.601	RR PROTECTIVE LIABILITY INSURANCE	LUMP SUM	1
	2021.610	RAILROAD PROTECTIVE SERVICES	HOURL	12
Q	2101.502	CLEARING	TREE	6
Q	2101.507	GRUBBING	TREE	15
1	2104.501	REMOVE CM PIPE	LIN FT	36
2, 24	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	138
3	2104.505	REMOVE CONCRETE PAVEMENT	SQ YD	83
2 G	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	172
3 J	2104.513	SAWING CONCRETE, FULL DEPTH	LIN FT	75
4	2104.523	SALVAGE SIGN, TYPE C	EACH	89
25	2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	1
	2105.501	COMMON EXCAVATION (EV) (P)	CU YD	645
26	2105.525	TOPSOIL BORROW (LV)	CU YD	386
	2105.521	SELECT GRANULAR BORROW (LV)	CU YD	1880
6, 7	2105.601	SALVAGE, STOCKPILE & PLACE RECLAIMED BIT. MATERIAL (LV)	CU YD	79
8	2123.503	MOTOR GRADER	HOURL	10
9	2123.509	DOZER	HOURL	10
11	2123.525	8 TON STEEL-WHEELED ROLLER	HOURL	10
13	2130.501	WATER	MGAL	220
14 F, K	2211.501	AGGREGATE BASE CL-5	TON	2516
L	2221.501	AGGREGATE SHOULDERING CLASS 1	TON	890
E	2332.501	MILL BITUMINOUS SURFACE (2")	SQ YD	520
	2331.601	BITUMINOUS PAVEMENT RECLAMATION	SQ YD	64788
A	2350.501	TYPE MV 4 WEARING COURSE MIXTURE (C)	TON	6935
A	2350.502	TYPE MV 3 NON WEARING COURSE MIXTURE (C)	TON	5447
A	2350.502	TYPE LV 3 NON WEARING COURSE MIXTURE (C)	TON	1269
B 27	2350.503	TYPE LV4 WEARING COURSE MIXTURE, 2" THICK	SQ YD	135
16 A, D	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	8257
22 R	2501.511	18" CS PIPE CULVERT	LIN FT	380
22 R	2501.567	18" CS SAFETY APRON & GRATE DESIGN 3128	EACH	4
22	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	LIN FT	2.4
22	2506.516	CASTING ASSEMBLY	EACH	1
22	2511.501	RANDOM RIPRAP, CLASS II	CU YD	4
H	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	83
17 M	2535.501	BITUMINOUS CURB	LIN FT	713
P	2540.602	INSTALL MAILBOX/ SUPPORT	EACH	24
	2563.601	TRAFFIC CONTROL	LS	1
	2563.610	POLICE OFFICER	EACH	8
23	2564.531	F & I SIGN PANEL TYPE C	SQ FT	647
25	2564.537	INSTALL SIGN TYPE SPECIAL	EACH	1
18	2564.602	TEMPORARY RELOCATE SIGN TYPE C	EACH	20
23	2564.603	4" SOLID LINE WHITE - PAINT	LIN FT	26931
23	2564.603	4" SOLID LINE YELLOW - PAINT	LIN FT	2500
23	2564.603	4" DOUBLE SOLID LINE YELLOW - PAINT	LIN FT	19682
23	2564.603	4" BROKEN LINE YELLOW - PAINT	LIN FT	728
23	2564.603	24" SOLID LINE YELLOW - PAINT	LIN FT	260
23	2564.603	24" SOLID LINE WHITE - POLY PREFORM	LIN FT	39
23	2564.604	PAVEMENT MESSAGE WHITE - POLY PREFORM	SQ FT	31
D	2575.501	SEEDING	ACRE	3
D	2575.502	SEED MIXTURE 50B	LB	150
D	2575.502	SEED MIXTURE 130B	LB	300
21 D	2575.505	SODDING, TYPE LAWN	SQ YD	200
D	2575.519	DISK ANCHORING	ACRE	3
19 D	2575.525	EROSION STABILIZATION BLANKET, TYPE 2	SQ YD	833
D	2575.532	COMMERCIAL FERTILIZER ANALYSIS 22-5-10 (SLOW RELEASE)	LB	900
20 C	2580.501	TEMPORARY LANE MARKING	LIN FT	2553

CONSTRUCTION NOTES

- REMOVE CMP CULVERT AT STATION 66+50 RT
- INCLUDES ALL BITUMINOUS PAVEMENT REGARDLESS OF DEPTH
- INCLUDES ALL CONCRETE PAVEMENT REGARDLESS OF DEPTH
- SALVAGE TO ANOKA COUNTY HIGHWAY DEPARTMENT
- RELOCATE STREET SIGN AT SUNWOOD, AS DIRECTED BY THE ENGINEER.
- SALVAGE & STOCKPILE RECLAIMED BITUMINOUS AT GRADE MATCH POINTS, AS DIRECTED BY THE ENGINEER
- STOCKPILED RECLAIMED BITUMINOUS MATERIAL TO BE REUSED AS AGGREGATE BASE, AS DIRECTED BY THE ENGINEER.
- TO BE USED TO RESHAPE THE RECLAIMED BITUMINOUS MATERIAL, STA 55+54 TO 72+06, AS DIRECTED BY THE ENGINEER.
- TO BE USED TO "BENCH" THE INSLOPE (0.0' TO 6.0') AT THE BEGINNING (55+54 TO 58+84) AND END (68+76 TO 72+06) OF THE WIDENING AREA, AS DIRECTED BY THE ENGINEER.
- TO BE USED TO COMPACT THE "BENCHED" AREAS, AS DIRECTED BY THE ENGINEER.
- 200 M GALLON FOR DUST CONTROL, 20 M GALLON FOR MOISTENING THE SEED AREAS ALONG THE SHOULDER PRIOR TO APPLYING THE EMULSIFIED ASPHALT.
- 850 TON TO BE USED FOR THE WIDENING AREA, STA 55+54 TO 72+06.
- TO BE TOPPED WITH 2" TOPSOIL BORROW.
- INCLUDES 2,056 GALLON ASPHALT EMULSION TO BE APPLIED TO SEED AREAS ALONG THE SHOULDERS. APPLICATION RATE OF 0.18 GALLON PER SQUARE YARD FOR SEED AREAS.
- PAYMENT FOR PLACING THE BITUMINOUS SHOE-FORMED LIP IN BERM AREAS, AS DIRECTED BY THE ENGINEER.
- TEMPORARILY RELOCATE SIGNS, TYPE C, IN CONSTRUCTION WIDENING AREAS, AS DIRECTED BY THE ENGINEER.
- TO BE PLACED AT HIGH EROSION AREAS ALONG THE SHOULDER, AS DIRECTED BY THE ENGINEER.
- FOR LANE DELINEATION ON ALL BITUMINOUS COURSES.
- TO BE PLACED AS DIRECTED BY THE ENGINEER.
- SEE PLAN SHEETS #11 FOR LOCATION
- SEE PLAN SHEETS #19-24 FOR LOCATIONS
- FOR 6" BITUMINOUS/AGGREGATE REMOVAL AT SOUTHBOUND RIGHT TURN LANE CONSTRUCTION AT TH 10
- STREET SIGN AT SUNWOOD AVE. N.W.
- FOR TOPSOIL SHOULDERING.
- INCLUDES 33 SQ. YDS. FOR BITUMINOUS FLUME CONSTRUCTION.

MN DOT STANDARD PLATE NO.	DESCRIPTION
3040 F	CORRUGATED METAL PIPE CULVERT
3128 H	METAL SAFETY APRON & GRATE
3134 C	RIPRAP AT CMP OUTLETS
4006 L	MANHOLE OR CATCH BASIN PRECAST - DESIGN G AND H
4026 A	CONCRETE ENCASED ADJUSTING RINGS
4101 D	RING CASTING FOR MANHOLE OR CATCH BASIN
4140 D	SPECIAL GRATE CASTING FOR CATCH BASIN
8000 I	STANDARD BARRICADE
8117 F	PRECAST CONCRETE HAND HOLE (OR PULLBOX)

TABULATION CHART LIST

CHART	SHEET NO	DESCRIPTION
A	5	BITUMINOUS SUMMARY
B	6	BITUMINOUS DRIVEWAY
C	6	TEMPORARY LANE MARKING
D	6	TURF ESTABLISHMENT
E	6	MILL BITUMINOUS SURFACE (BUTT JOINTS)
F	7	AGGREGATE BASE CLASS 5
G	7	REMOVE CONCRETE PAVEMENT
H	7	6" CONCRETE DRIVEWAY PAVEMENT
J	7	SAWING CONCRETE PAVEMENT
K	7	AGGREGATE BASE CLASS 5 (ENTRANCES)
L	7	AGGREGATE SHOULDER CLASS 1
M	8	BITUMINOUS CURB
N	8	BITUMINOUS FLUME
P	7	INSTALL MAILBOX SUPPORT
Q	7	CLEAR AND GRUB
R	7	PROPOSED CULVERT

BASIS OF ESTIMATED QUANTITIES

SPEC NO.	RATE
2350	TYPE LV3 NONWEAR TYPE MV3 NONWEAR TYPE MV3 WEAR 110 LBS / SQ YD / INCH
2350	TYPE HV 4 WEARING COURSE MIXTURE 110 LBS / SQ YD / INCH
2357	BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL / SQ YD / PER LIFT APPLIED
2575	COMMERCIAL FERTILIZER - ANALYSIS 22-5-10 (SLOW RELEASE) 300 LBS / ACRE FOR SOD AREAS

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-01-00\02-08-57\Plan\02-SEG1.dwg 07/09/02 01:57:14 PM CDT

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

PRINT NAME: PETER M LEMKE
SIGNATURE: *Peter M Lemke*
DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: PML DATE 06/26/02
DESIGN BY: PML DATE 06/26/02
CHECKED BY: PML DATE 07/03/02

**ANOKA COUNTY
HIGHWAY DEPT.**

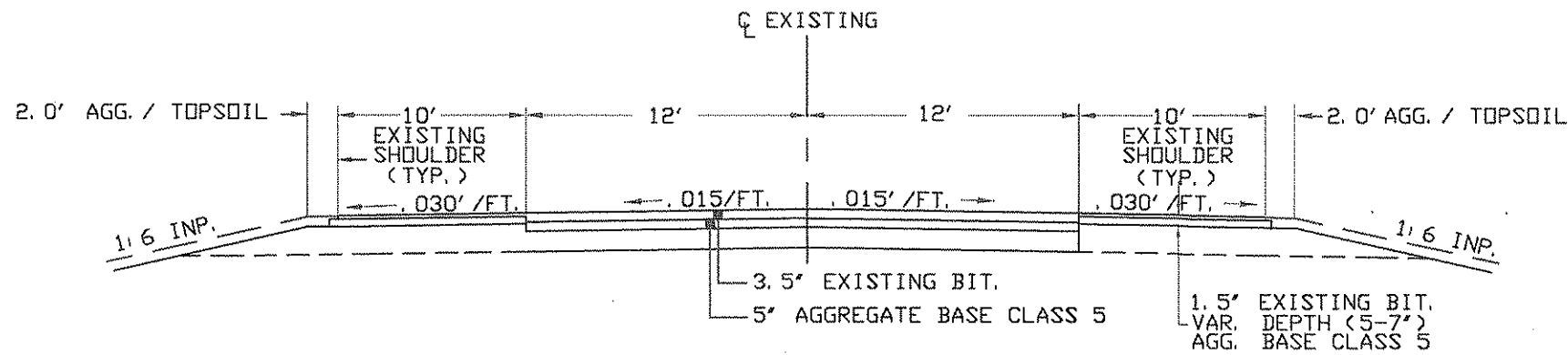
STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. **02-08-57**

TABULATION CHARTS

Sheet 02 of 24 Sheets

INPLACE C.R. 57 SECTION

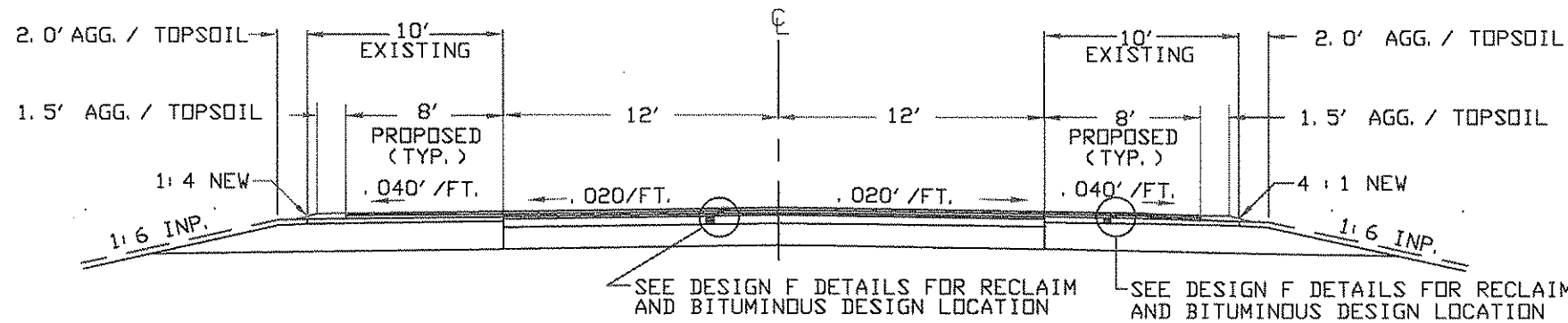
STA. 10+00 TO STA. 139+09.10
EXCEPTION STA 15+13 TO 15+43 RR CROSSING



NOTE: INPLACE BITUMINOUS DEPTH SECTION STA 61+50 TO STA 64+80 VARIES FROM 3.5" TO 9.5". THE ENGINEER MAY DIRECT ADDITIONAL BLENDING OF MATERIALS IN THIS AREA TO REDUCE THE BITUMEN CONTENT BELOW 3%. THIS ADDITIONAL BLENDING WORK SHALL BE PAID AS EXTRA WORK ON A FORCE ACCOUNT BASIS UNDER THE PROVISIONS OF MnDOT 1904.

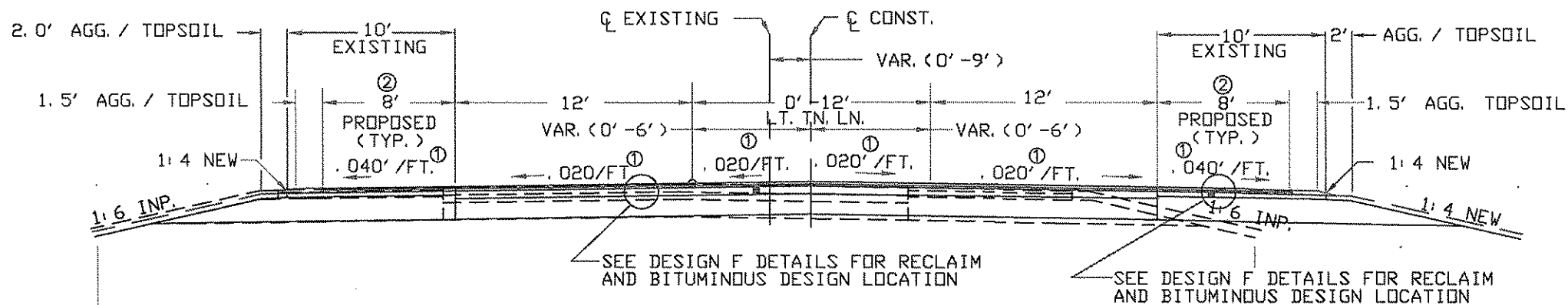
C.S.A.H. 57 RECLAMATION & SHOULDER CONSTRUCTION TYPICAL

STA. 15+43 TO STA. 53+35.50
STA. 75+26.98 TO STA. 139+09.10



PROPOSED C.R. 57 SECTION

STA. 53+35.50 TO STA. 75+26.98

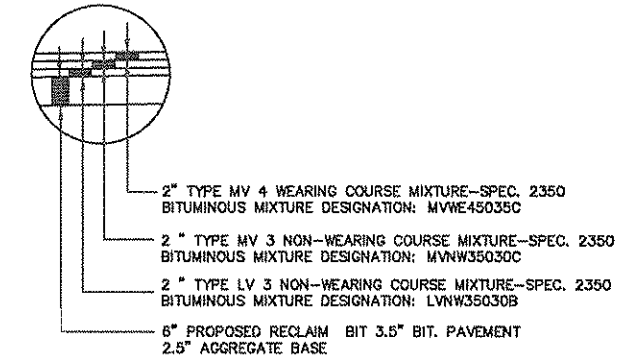


EXISTING ROADWAY MOVES FROM 0' - 9' LEFT OF CONST. C/L
SEE CONST. C/L ON PLAN & PROFILE SHEETS FOR LOCATION

- ① SLOPES VARIABLE IN SUPERELEVATION GRADES TO BE STAKED BY THE ENGINEER.
- ② SEE RT. TN. LN. DETAIL FOR TURN LN. CONST.

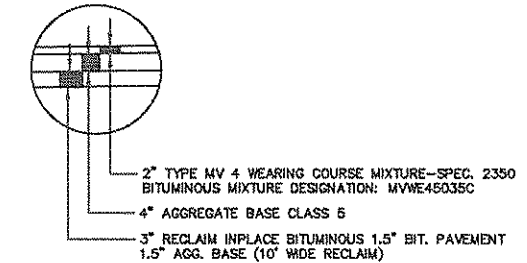
DESIGN F-1

STA. 15+43 TO STA. 37+77



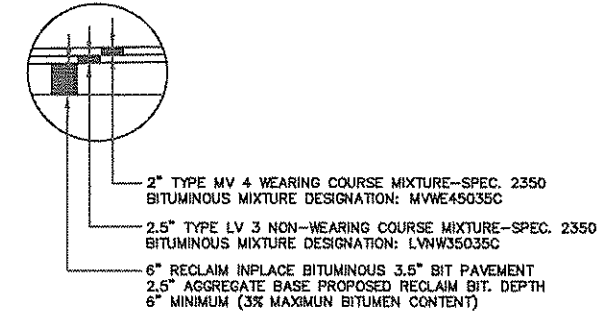
DESIGN F-2

STA. 15+43 TO STA. 37+77



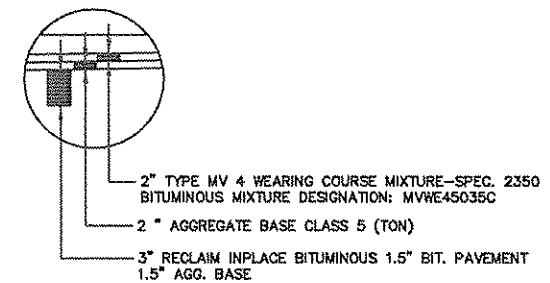
DESIGN F-3

STA. 37+77 TO STA. 139+09.10



DESIGN F-4

STA. 37+77 TO STA. 139+09.10



NOTE: NOT TO SCALE

NO	DATE	BY	CKD	APPR	REVISION
1	6/7/01	TA			LVNW35030B
NAME: P:\02-01-00\02-08-57\Plan\03-04\TYPICAL SECTION.dwg 07/09/2002 01:29:06 PM CDT					

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

PRINT NAME: PETER M LEWKE
SIGNATURE: *Peter M Lewke*
DATE: 07/03/02 LICENSE NO. 40116

DRAWN BY: KGL DATE 07/09/02
DESIGN BY: MEG DATE 07/09/02
CHECKED BY: LAR DATE 06/26/02

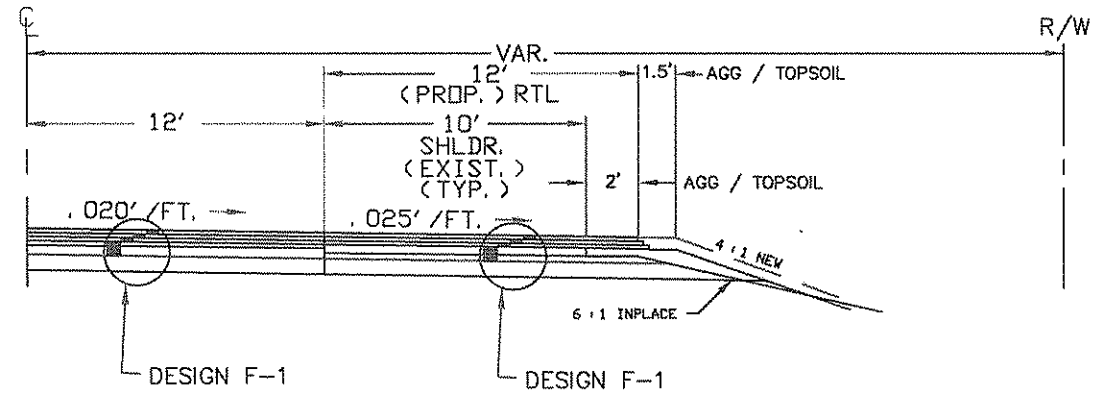
ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
SUBPROJECT NO. 02-08-57
COUNTY PROJECT NO. 02-01-00

TYPICAL SECTIONS
STA 10+00 - 138+80
Sheet 3 of 23 Sheets

TYPICAL RIGHT TURN LANE SECTION (N.B. 57 @ CSAH 116)

STA. 32+97 - STA. 37+77 (LNB)



PROPOSED RIGHT TURN LANE CONSTRUCTION		
STA. TO STA.	LOCATION (FROM LNB)	REMARKS
32+97 - 37+77	RT.	CSAH #116
37+77 - 42+57	LT.	CSAH #116
58+77 - 63+57	RT.	SUNWOOD DRIVE N.W.
64+00 - 68+80	LT.	SUNWOOD DRIVE N.W.
134+14 - 138+94	RT.	CSAH #5

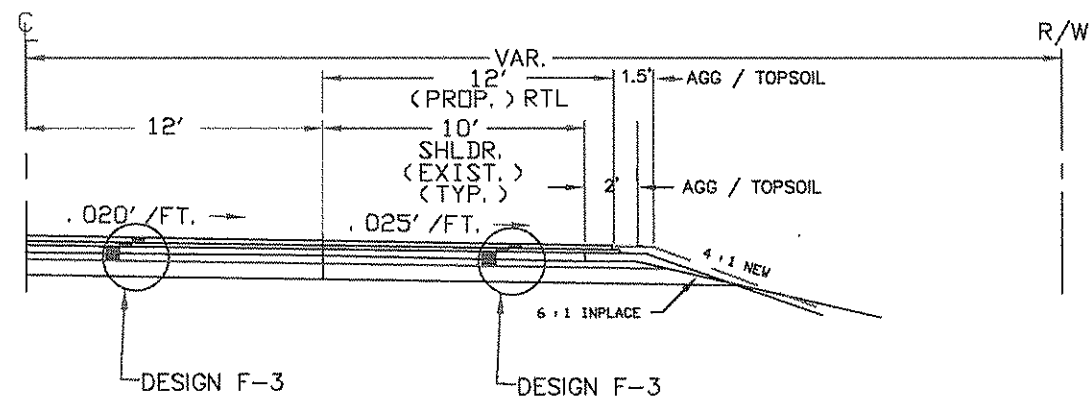
TYPICAL RIGHT TURN LANE SECTION (CSAH 116 - CSAH 5)

STA. 37+77 - STA. 42+57 (LSB)

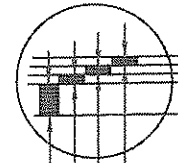
STA. 58+77 - STA. 63+57 (LNB)

STA. 64+00 - STA. 68+80 (LSB)

STA. 133+14 - STA. 138+94 (LNB)

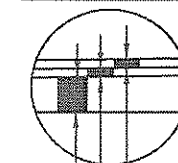


DESIGN F-1



- 2" TYPE MV 4 WEARING COURSE MIXTURE-SPEC. 2350 BITUMINOUS MIXTURE DESIGNATION: MVWE45035C
- 2" TYPE MV 3 NON-WEARING COURSE MIXTURE-SPEC. 2350 BITUMINOUS MIXTURE DESIGNATION: MVNW35030C
- 2" TYPE LV 3 NON-WEARING COURSE MIXTURE-SPEC. 2350 BITUMINOUS MIXTURE DESIGNATION: LVNW35030B
- 6" PROPOSED RECLAIM INPLACED BID 3.5" BIT. PAVEMENT 2.5" AGGREGATE BASE (SEE F-1)

DESIGN F-3



- 2" TYPE MV 4 WEARING COURSE MIXTURE-SPEC. 2350 BITUMINOUS MIXTURE DESIGNATION: MVWE45035C
- 2" TYPE LV 3 NON-WEARING COURSE MIXTURE-SPEC. 2350 BITUMINOUS MIXTURE DESIGNATION: LVNW35035C
- 6" RECLAIM INPLACE BITUMINOUS 3.5" BIT PAVEMENT 2.5" AGGREGATE BASE PROPOSED RECLAIM BIT. DEPTH 6" MINIMUM (3% MAXIMUM BITUMEN CONTENT)

NOTE: NOT TO SCALE

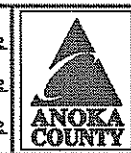
NO	DATE	BY	CKD	APPR	REVISION
1	6/7/01	TA			LVNW35030B

NAME: P:\02-01-08\02-08-57\Plan\03-04\TYPICAL SECTION.dwg 07/09/2002 08:40:05 AM CDT

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

PRINT NAME: PETER M LEMKE
 SIGNATURE: *Peter M Lemke*
 DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: BEL DATE: 06/26/02
 DESIGN BY: MFG DATE: 06/26/02
 CHECKED BY: LAR DATE: 06/26/02



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 SUBPROJECT NO. 02-08-57
 COUNTY PROJECT NO. 02-01-00

TYPICAL SECTIONS
 STA 10+00 - 138+80
 Sheet 4 of 24 Sheets

BITUMINOUS SUMMARY

A

STATION	TO STATION	LOCATION	REMARKS	TYPE MV 4 WEARING COURSE MIXTURE 2" THICK	TYPE MV 3 NON WEARING COURSE MIXTURE 2" THICK	TYPE LV 3 NON WEARING COURSE MIXTURE 2" THICK	BITUMINOUS MATERIAL FOR TACK COAT (APPLICATION RATE = 0.05 GALLONS PER SQUARE YARD)
				TON	TON	TON	GALLON
10+00	11+10	SHLD./TURN LN. RT.		15	30		13
15+51	37+78	MAINLINE		653	681	708	928
15+51	18+93	SHLD./TURN LN. LT.		33			15
15+51	19+95	SHLD./TURN LN. RT.	McKINLEY ST.	65	65	65	89
18+93	24+58	SHLD./TURN LN. LT.	McKINLEY ST.	83	83	83	113
19+95	22+41	SHLD./TURN LN. RT.		24			11
22+41	33+41	SHLD./TURN LN. RT.	SUNFISH LK. CT./CSAH 116	161	161	161	220
24+58	27+00	SHLD./TURN LN. LT.		24			11
27+00	37+78	SHLD./TURN LN. LT.	SUNFISH LK. CT./CSAH 116	158	158	158	216
33+41	37+48	SHLD./TURN LN. RT.		40			18
37+48	54+28	SHLD./TURN LN. RT.	142nd/143rd/144th	226	226		205
37+78	55+54	MAINLINE		521	542		483
37+78	63+07	SHLD./TURN LN. LT.		247			112
54+28	58+77	SHLD./TURN LN. RT.		44			20
55+54	72+06	MAINLINE		665	686		614
58+77	64+46	SHLD./TURN LN. RT.	SUNWOOD DR.	84	83		76
63+07	68+80	SHLD./TURN LN. LT.	SUNWOOD DR.	84	84		76
64+46	100+25	SHLD./TURN LN. RT.		350			159
68+80	110+17	SHLD./TURN LN. LT.		405			184
72+06	139+08	MAINLINE		1966	2048		1824
100+25	105+65	SHLD./TURN LN. RT.	152nd AVE.	73	73		66
105+65	106+98	SHLD./TURN LN. RT.		13			6
106+98	112+71	SHLD./TURN LN. RT.	ALPINE DR.	77	77		70
110+17	122+43	SHLD./TURN LN. LT.	ALPINE DR./153rd LN.	165	165		150
112+71	134+17	SHLD./TURN LN. RT.		210			95
122+43	139+08	SHLD./TURN LN. LT.		163			74
134+17	138+97	SHLD./TURN LN. RT.	NOWTHEN BLVD.	65	65		59
142nd LANE		STREET APPR. RT.		17	11		13
143rd LANE		STREET APPR. RT.		17	11		13
144th AVE.		STREET APPR. RT.		17	11		13
152nd AVE.		STREET APPR. RT.		17	11		13
153rd LANE		STREET APPR. LT.		18	12		13
ADDR. #13745 (N. ENT)		1.5' KICK OUTS RT.	DRIVEWAY	1		1	2
ADDR. #13745 (S. ENT)		1.5' KICK OUTS RT.	DRIVEWAY	1		1	2
ADDR. #14501		1.5' KICK OUTS RT.	DRIVEWAY	1			1
ADDR. #14605		1.5' KICK OUTS RT.	DRIVEWAY	1			1
ADDR. #14851		1.5' KICK OUTS RT.	DRIVEWAY	1			1
ADDR. #14942		1.5' KICK OUTS LT.	DRIVEWAY	1			1
ADDR. #14963		1.5' KICK OUTS RT.	DRIVEWAY	1			1
ADDR. #15308 (N. ENT)		1.5' KICK OUTS LT.	DRIVEWAY	1			1
ADDR. #15315		1.5' KICK OUTS RT.	DRIVEWAY	1			1
ADDR. #15408		1.5' KICK OUTS LT.	DRIVEWAY	1			1
ADDR. #15430		1.5' KICK OUTS LT.	DRIVEWAY	1			1
ADDR. #15558		1.5' KICK OUTS LT.	DRIVEWAY	1			1
ALPINE DR.		STREET APPR. LT.		25	16		19
ALPINE DR.		STREET APPR. RT.		23	16		18
CSAH 116		STREET APPR. LT.		24	16		25
CSAH 116		STREET APPR. RT.		24	16	16	25
McKINLEY ST.		STREET APPR. LT.		24	16	16	25
McKINLEY ST.		STREET APPR. RT.		23	16	16	25
SUNFISH LAKE CT.		STREET APPR. LT.		22	15	15	23
SUNFISH LAKE CT.		STREET APPR. RT.		21	14	14	23
SUNWOOD DR.		STREET APPR. LT.	FUTURE STREET	21	14		16
SUNWOOD DR.		STREET APPR. RT.		21	14		16
TOTALS:				6935	5447	1269	6201

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M LEMKE
 SIGNATURE: *Peter M Lemke*
 DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: PML DATE 06/26/02
 DESIGN BY: PML DATE 08/28/02
 CHECKED BY: PML DATE 07/03/02



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

TABULATION CHARTS
 Sheet 05 of 24 Sheets

2"THICK LV4WE ENTRANCE CONSTR.			B
LOCATION	OFFSET	REMARKS	TYPE LV 4 WEAR COURSE MIXTURE 2.0" THICK
			SQ YD
11+46	LT.		7.1
14+17	LT.		12.2
111+87	LT.		7
6400 INDUSTRY AVENUE	LT.		3.9
ADDRESS #14059	RT.		4.2
ADDRESS #14150(N)	LT.		3.9
ADDRESS #14150(S)	LT.		4.6
ADDRESS #14280	LT.		3.4
ADDRESS #14310	LT.		3.7
ADDRESS #14351	RT.		3.1
ADDRESS #14730	LT.		4.5
ADDRESS #14920	LT.		3.4
ADDRESS #15001	RT.		3.2
ADDRESS #15308	LT.		3.4
ADDRESS #15324	LT.		3.1
ADDRESS #15345	RT.		2.4
ADDRESS #15360	LT.		3.1
ADDRESS #15403	RT.		2.6
ADDRESS #15429	RT.		3.1
ADDRESS #15450	LT.		3.1
ADDRESS #15500	LT.		2.7
ADDRESS #15558	LT.		3.1
ADDRESS #15620	LT.		3.1
ADDRESS #15650	LT.		3.7
ADDRESS. #14100	LT.		5.1
TOTAL			102

MILL BITUMINOUS SURFACE (BUTT JOINTS)					E
LOCATION	OFFSET	REMARKS	LENGTH	WIDTH	AREA
			FEET	FEET	SQ YD
McKINLEY ST.	LT	STREET APPR.	64.0	4.0	28
SUNFISH LAKE CT.	LT	STREET APPR.	60.0	4.0	27
CSAH 116	LT	STREET APPR.	65.0	4.0	29
SUNWOOD DR.	LT	STREET APPR.	58.0	4.0	26
ALPINE DR.	LT	STREET APPR.	67.0	4.0	30
153rd LANE	LT	STREET APPR.	48.0	4.0	21
McKINLEY ST.	RT	STREET APPR.	64.0	4.0	28
SUNFISH LAKE CT.	RT	STREET APPR.	58.0	4.0	26
CSAH 116	RT	STREET APPR.	65.0	4.0	29
142nd LANE	RT	STREET APPR.	46.0	4.0	20
143rd LANE	RT	STREET APPR.	46.0	4.0	20
144th AVE.	RT	STREET APPR.	46.0	4.0	20
SUNWOOD DR.	RT	STREET APPR.	58.0	4.0	26
152nd AVE.	RT	STREET APPR.	46.0	4.0	20
ALPINE DR.	RT	STREET APPR.	64.0	4.0	28
11+46	LT	BIT. DRIVES	58.0	1.5	10
14+17	LT	BIT. DRIVES	100.0	1.5	17
6400 IND. AVE.	LT	BIT. DRIVES	32.0	1.5	5
ADDR. #14100	LT	BIT. DRIVES	42.0	1.5	7
ADDR. #14150(S)	LT	BIT. DRIVES	38.0	1.5	6
ADDR. #14150(N)	LT	BIT. DRIVES	32.0	1.5	5
ADDR. #14280	LT	BIT. DRIVES	28.0	1.5	5
ADDR. #14310	LT	BIT. DRIVES	30.0	1.5	5
ADDR. #14730	LT	BIT. DRIVES	37.0	1.5	6
ADDR. #14920	LT	BIT. DRIVES	28.0	1.5	5
111+87	LT	BIT. DRIVES	57.0	1.5	10
ADDR. #15308	LT	BIT. DRIVES	28.0	1.5	5
ADDR. #15324	LT	BIT. DRIVES	25.0	1.5	4
ADDR. #15360	LT	BIT. DRIVES	25.0	1.5	4
ADDR. #15450	LT	BIT. DRIVES	25.0	1.5	4
ADDR. #15500	LT	BIT. DRIVES	22.0	1.5	4
ADDR. #15558	LT	BIT. DRIVES	25.0	1.5	4
ADDR. #15620	LT	BIT. DRIVES	25.0	1.5	4
ADDR. #15650	LT	BIT. DRIVES	30.0	1.5	5
ADDR. #14059	RT	BIT. DRIVES	34.0	1.5	6
ADDR. #14351	RT	BIT. DRIVES	25.0	1.5	4
ADDR. #15001	RT	BIT. DRIVES	26.0	1.5	4
ADDR. #15345	RT	BIT. DRIVES	20.0	1.5	3
ADDR. #15403	RT	BIT. DRIVES	21.0	1.5	4
ADDR. #15429	RT	BIT. DRIVES	25.0	1.5	4
TOTAL					520

TEMPORARY LANE MARKING						C
STATION	STATION	LOCATION	LENGTH	TAPE LENGTH	# PAVING LIFTS	LENGTH x LIFTS
			LIN FT	LIN FT	EACH	LIN FT
9+91	37+78	C/L	2787	223	3	669
37+78	55+54	C/L	1776	142	2	284
55+54	72+06	LSB	1652	132	2	264
55+54	72+06	LNB	1652	132	2	264
72+06	139+08	C/L	6702	536	2	1072
TOTAL						2553

TURF ESTABLISHMENT								D
STATION	STATION	LOCATION	SOD	EROSION BLANKET	SEEDING	SEED	FERT.	MULCH
			SQ.YD.	SQ.YD.	ACRE	POUND	TON	GAL
48+40	48+70	RT		5.5				
49+25	51+25	RT		5.5				
121+15	122+68	LT		5.5				
121+20	121+87	RT		5.5				
122+15	123+65	RT		5.5				
123+00	124+13	LT		5.5				
10+00	138+34	RT & LT	200	800	3.00	450	900	2056
TOTAL			200	833	3	450	900	2056

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M. LEMKE
 SIGNATURE: *Peter M. Lemke*
 DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: PML DATE 05/26/02
 DESIGN BY: PML DATE 08/28/02
 CHECKED BY: PML DATE 07/03/02



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

TABULATION CHARTS

Sheet 06 of 24 Sheets

AGGREGATE BASE CLASS 5								F
STATION	STATION	LOC.	REMARKS	LENGTH	WIDTH	DEPTH	VOLUME	WEIGHT*
				FEET	FEET	FEET	CU YD	TON
15+51	18+93	LT	8' SHOULDER	342.0	10.0	0.333	42.2	76
24+58	27+00	LT	8' SHOULDER	242.0	10.0	0.333	29.8	54
37+78	63+17	LT	8' SHOULDER	2539.0	10.0	0.208	195.6	352
68+80	110+17	LT	8' SHOULDER	4137.0	10.0	0.208	318.7	574
122+43	139+08	LT	8' SHOULDER	1665.0	10.0	0.208	128.3	231
9+69	15+04	RT	8' SHOULDER	535.0	10.0	0.333	66.0	119
19+95	22+41	RT	8' SHOULDER	246.0	10.0	0.333	30.3	55
33+41	37+48	RT	8' SHOULDER	407.0	10.0	0.333	50.2	90
54+28	58+77	RT	8' SHOULDER	449.0	10.0	0.208	34.6	62
64+46	100+25	RT	8' SHOULDER	3579.0	10.0	0.208	275.7	496
105+65	106+98	RT	8' SHOULDER	133.0	10.0	0.208	10.2	18
112+71	134+17	RT	8' SHOULDER	2146.0	10.0	0.208	165.3	298
*BASED ON MN/DOT CONVERSION CV -TON OF 1.8							1347.0	2425

AGGREGATE BASE CLASS 5		K
ENTRANCE	LOCATION	WEIGHT
		TON
14+43	RT.	7.0
ADDR. #13745 (N. ENT)	RT.	7.0
ADDR. #13745 (S. ENT)	RT.	7.0
ADDR. #14501	RT.	7.0
ADDR. #14605	RT.	7.0
ADDR. #14851	RT.	7.0
ADDR. #14942	LT.	7.0
ADDR. #14963	RT.	7.0
ADDR. #15308 (N. ENT)	LT.	7.0
ADDR. #15315	RT.	7.0
ADDR. #15408	LT.	7.0
ADDR. #15430	LT.	7.0
ADDR. #15558	LT.	7.0
TOTAL		91.0

INSTALL MAIL BOX SUPPORT		P
ADDRESS	LOCATION	EACH
14059	RT	1
14351	RT	1
14501	RT	1
14605	RT	1
14851	RT	1
14963	RT	1
15001	RT	1
15315	RT	1
15325	RT	1
15403	RT	1
15429	RT	1
14280	LT	1
14300	LT	1
14310	LT	1
14920	LT	1
14942	LT	1
15308	LT	1
15324	LT	1
15360	LT	1
15408	LT	1
15430	LT	1
15450	LT	1
15500	LT	1
15558	LT	1
TOTAL		24

REMOVE CONCRETE DRIVEWAY PAVEMENT					G
STATION	LOC.	LENGTH	WIDTH	AREA	
		FEET	FEET	SQ YD	
ADDRESS #14300	LT	30	10	33.3	
ADDRESS #14131	RT	31	10	34.4	
ADDRESS #15325	RT	14	10	15.6	
TOTAL				83.3	

AGGREGATE SHOUDERING CLASS 1								L	
STATION	STATION	LOC.		LENGTH	DEPTH	CU.YDS./STA	VOLUME	WEIGHT*	
				STATION	IN	CU YD	CU YD	TON	
1551	1893	LT		3.4	2.0	1.15	3.9	7	
1893	2458	LT	RT. TURN LANE	5.7	6.0	4.63	26.2	47	
2458	2700	LT		2.4	2.0	1.15	2.8	5	
2700	3778	LT	RT. TURN LANE	10.8	6.0	4.63	49.9	90	
3778	6317	LT		25.4	2.0	1.15	29.2	53	
6317	6880	LT	RT. TURN LANE	5.6	4.5	3.11	17.5	32	
6880	11017	LT		41.4	2.0	1.15	47.6	86	
11017	12243	LT	RT. TURN LANE	12.3	4.5	3.11	38.1	69	
12243	13908	LT		16.7	2.0	1.15	19.1	34	
969	1504	RT		5.4	2.0	1.15	6.2	11	
1551	1995	RT	RT. TURN LANE	4.4	6.0	4.63	20.6	37	
1995	2241	RT		2.5	2.0	1.15	2.8	5	
2241	3341	RT	RT. TURN LANE	11.0	6.0	4.63	50.9	92	
3341	3748	RT		4.1	2.0	1.15	4.7	8	
3748	5428	RT	RT. TURN LANE	16.8	4.5	3.11	52.2	94	
5428	5877	RT		4.5	2.0	1.15	5.2	9	
5877	6446	RT	RT. TURN LANE	5.7	4.5	3.11	17.7	32	
6446	10025	RT		35.8	2.0	1.15	41.2	74	
10565	10698	RT		1.3	2.0	1.15	1.5	3	
10698	11271	RT	RT. TURN LANE	5.7	4.5	3.11	17.8	32	
11271	13417	RT		21.5	2.0	1.15	24.7	44	
13417	13897	RT	RT. TURN LANE	4.8	4.5	3.11	14.9	27	
* BASED ON MN/DOT CONVERSION CV -TON OF 1.8							TOTALS	494.7	890

6" CONCRETE DRIVEWAY PAVEMENT					H
STATION	LOC.	LENGTH	WIDTH	AREA	
		FEET	FEET	SQ YD	
ADDRESS #14300	LT	30	10	33.3	
ADDRESS #14131	RT	31	10	34.4	
ADDRESS #15325	RT	14	10	15.6	
TOTAL				83.3	

SAWING CONCRETE PAVEMENT (FULL DEPTH)			J
STATION	LOC.	LENGTH	
		FEET	
ADDRESS #14300	LT	30	
ADDRESS #14131	RT	31	
ADDRESS #15325	RT	14	
TOTAL		75.0	

CLEAR AND GRUB CHART				Q
STATION	LOC		CLEAR	GRUB
5803	34' Rt	6" Stump	0	1
5900	42' Rt	6" Stump	0	1
5912	43' Rt	6" Stump	0	1
5975	40' Rt	6" Stump	0	1
6028	44' Rt	6" Stump	0	1
6030	38' Rt	6" Stump	0	1
6035	39' Rt	6" Stump	0	1
6038	40' Rt	6" Stump	0	1
6044	41' Rt	6" Stump	0	1
6050	41' Rt	6" Stump	0	1
6064	42' Rt	6" Stump	0	1
6065	42' Rt	6" Stump	0	1
6080	41' Rt	12" Stump	0	1
6195	38' Rt	4" Elm	1	1
6645	40' Rt	Quad 5" Elm	5	1
TOTALS:			6	15

(1.5' SHLD. 2" DEPTH = 1.15 CU.YDS.(CV)/STATION)
(1.5' SHLD. 6" DEPTH = 4.63 CU.YDS.(CV)/STATION)
(1.5' SHLD. 4.5" DEPTH = 3.11 CU.YDS.(CV)/STATION)

PROPOSED CULVERT TABULATION					R
STATION	LOCATION	INPLACE	REMARKS	FEET	APRON
58+00-59+80	32' RT	18" CMP		180	1
59+80-61+30	32'RT-42'RT	18" CMP		150	1
66+44-66+76	44' RT	18" CMP		50	2
TOTALS				380	4

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: PETER M LEMKE
SIGNATURE: *Peter M Lemke*
DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: PML DATE 06/26/02
DESIGN BY: PML DATE 06/26/02
CHECKED BY: PML DATE 07/03/02



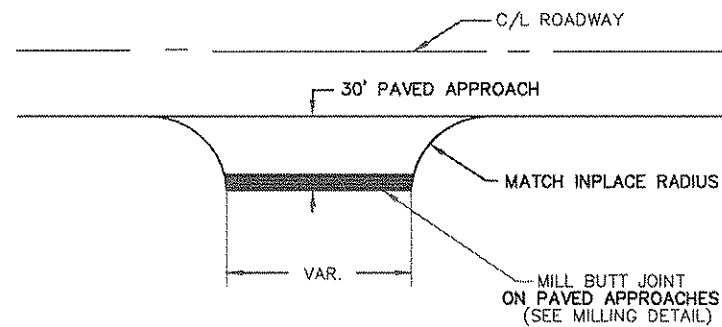
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-08-57

TABULATION CHARTS

Sheet 07 of 24 Sheets

PAVED & UNPAVED STREET APPROACHES



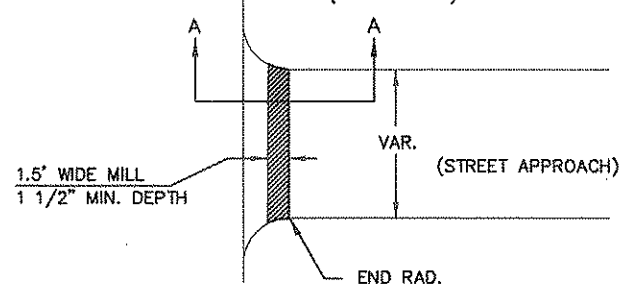
NOTE: PAID FOR AS ITEM NO. 2350.604
(2" THICK BITUMINOUS WEARING COURSE)

* APPROACHES TO BE PAID BY THE SQ YD

MILLING DETAILS

BUTT JOINTS

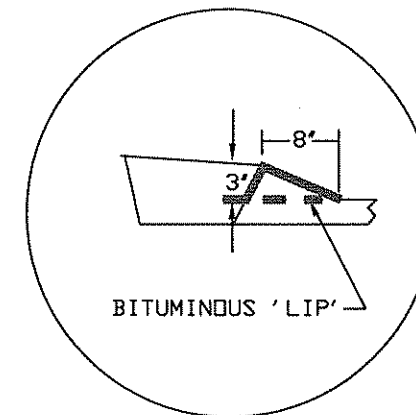
(PLAN VIEW)



(SECTION A-A)



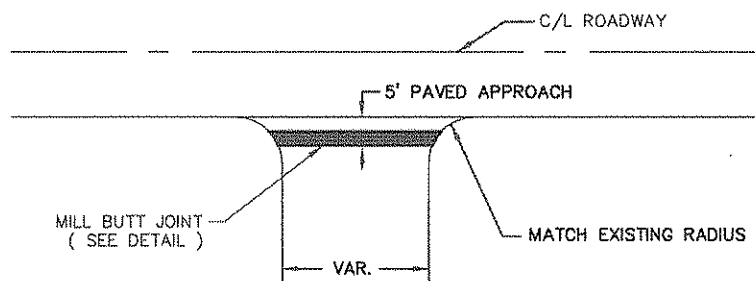
BERM SECTION



- ① EXISTING BITUMINOUS LIP TO BE RECLAIMED WITH SHOULDER
- ② PROPOSED BITUMINOUS LIP TO BE PAID AS BITUMINOUS CURB, ITEM NO. 2535.501

BITUMINOUS CURB			M
STATION	STATION	LOCATION	LENGTH FEET
48+40	48+70	RT	30
49+25	51+25	RT	200
121+15	122+68	LT	153
121+20	121+87	RT	67
122+15	123+65	RT	150
123+00	124+13	LT	113
TOTAL			713

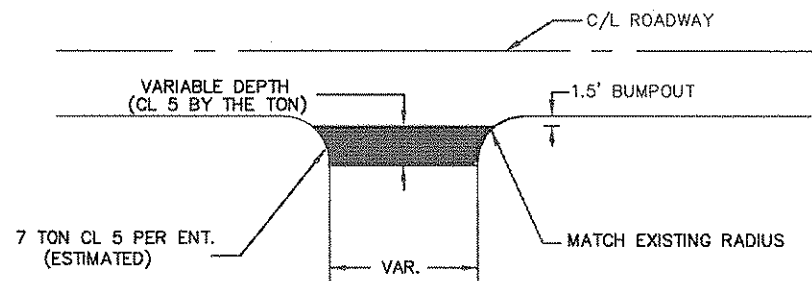
PAVED ENTRANCES



NOTE: PAID FOR AS ITEM NO. 2350.604
(2" THICK BITUMINOUS WEARING COURSE)

- * APPROACHES TO BE PAID BY THE TON IF PAVED AS PART OF MAINLINE PAVING
- * APPROACHES TO BE PAID BY THE SQ YD IF PAVED AS A SEPARATE OPERATION.

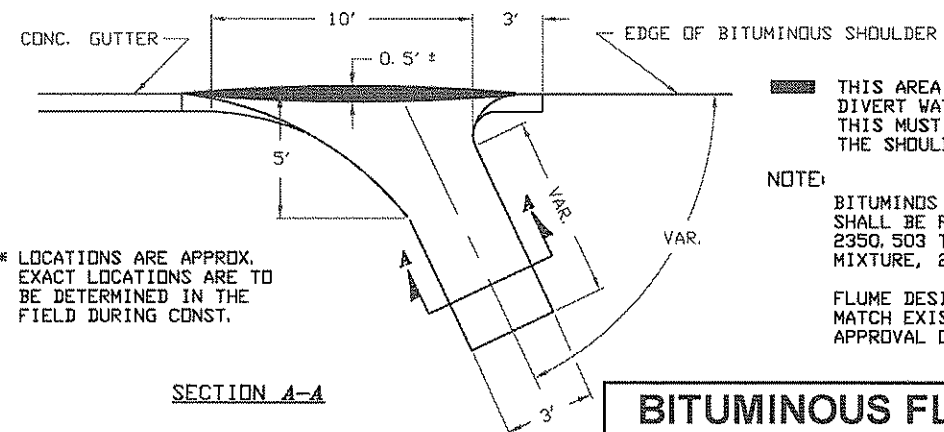
FIELD AND UNPAVED ENTRANCES



NOTE: PAID FOR AS ITEM NO. 2211.501
(AGGREGATE BASE CL 5 (TON))

(NOT TO SCALE)

TYPICAL BITUMINOUS FLUME



* LOCATIONS ARE APPROX. EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD DURING CONST.

THIS AREA OF INCREASED SLOPE TO DIVERT WATER FLOW INTO FLUME. THIS MUST BE ACCOMPLISHED DURING THE SHOULDER PAVING OPERATION.

NOTE: BITUMINOUS FLUME CONSTRUCTION SHALL BE PAID BY THE SQ. YD. AS 2350.503 TYPE LV4 WEARING COURSE MIXTURE, 2" THICK.

FLUME DESIGN MAY BE MODIFIED TO MATCH EXISTING CONDITIONS UPON APPROVAL OF THE ENGINEER.

BITUMINOUS FLUME		N
STATION	LOCATION	AREA SQ YD
48+40	LT	5.5
49+25	LT	5.5
121+15	RT	5.5
121+20	RT	5.5
122+15	RT	5.5
124+13	LT	5.5
TOTAL		33

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: PETER M. LEMKE
SIGNATURE: *Peter M. Lemke*
DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: BEL DATE 06/26/02
DESIGN BY: MEG DATE 06/26/02
CHECKED BY: PML DATE 07/03/02



**ANOKA COUNTY
HIGHWAY DEPT.**

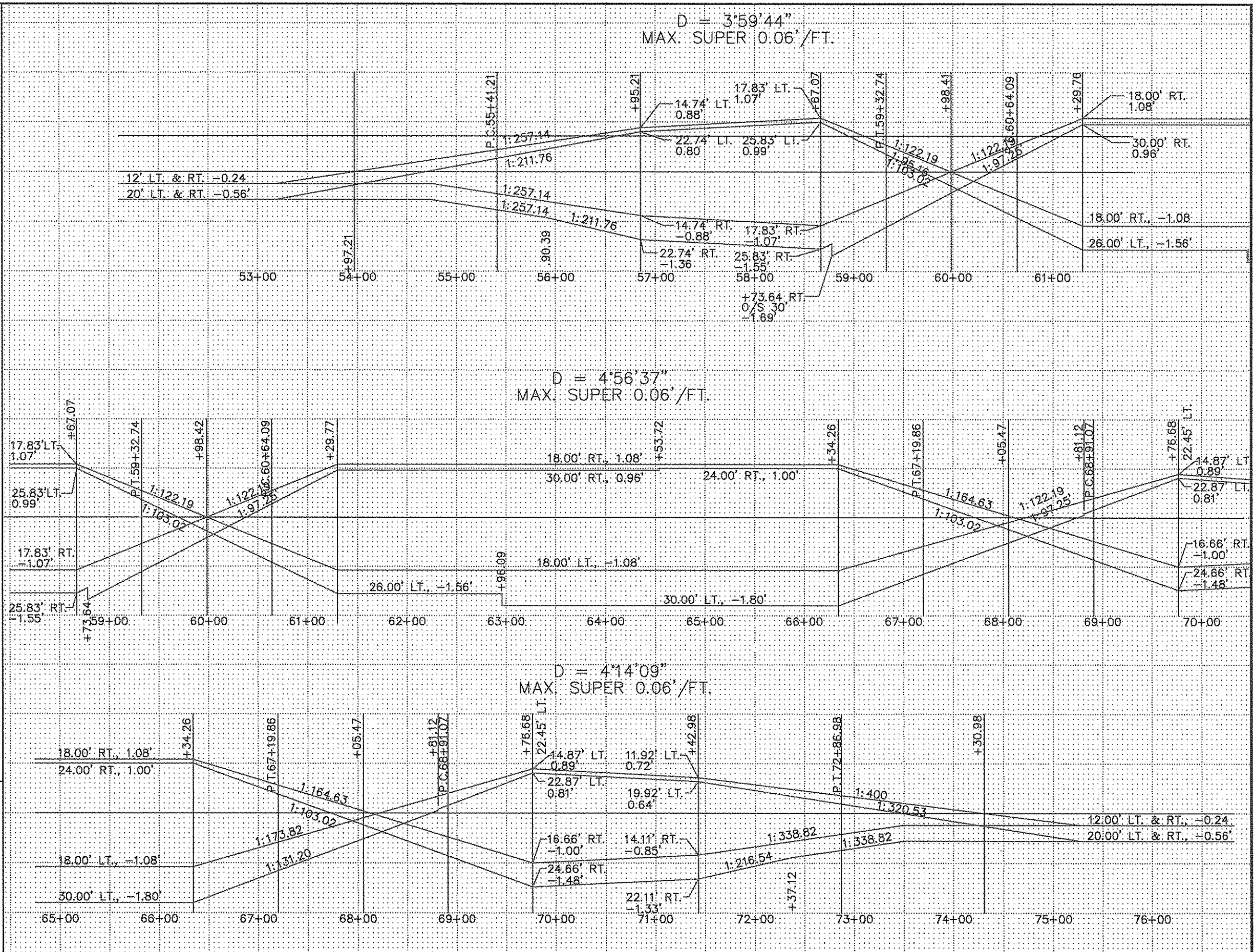
STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-01-00
COUNTY SUB-PROJECT NO. 02-08-57

TYPICAL SECTIONS

Sheet 08 of 24 Sheets

EARTHWORK

STATION	DISTANCE	REG.		BALANCE TOTALS	
		CUT	FILL	CU.YD.	CU.YD.
57+75.00	25.00	0	0	68	6
58+00.00	25.00	5	13	73	20
58+25.00	25.00	6	17	80	37
58+50.00	25.00	7	21	86	56
58+75.00	25.00	7	21	93	78
59+00.00	6.24	8	26	95	84
59+06.24	18.76	8	26	101	103
59+25.00	7.74	8	29	104	112
59+32.74	17.26	8	30	109	131
59+50.00	25.00	8	31	117	155
59+75.00	25.00	8	21	124	166
60+00.00	23.92	7	2	135	167
60+23.92	1.08	17	0	136	167
60+25.00	25.00	23	0	150	175
60+50.00	14.09	8	19	154	192
60+64.09	7.17	9	23	157	200
60+71.26	3.74	9	44	158	207
60+75.00	25.00	9	44	166	248
61+00.00	25.00	10	48	175	290
61+25.00	50.00	9	44	192	369
61+50.00	25.00	9	42	200	409
61+75.00	25.00	9	44	209	451
62+00.00	25.00	10	46	220	497
62+25.00	25.00	12	52	232	543
62+50.00	25.00	13	48	243	591
62+75.00	25.00	13	54	255	645
63+00.00	14.94	13	63	263	675
63+14.94	10.06	18	46	271	690
63+25.00	25.00	25	34	290	715
63+40.66	9.34	41	17	299	718
63+50.00	25.00	15	19	303	725
63+75.00	10.95	14	3	308	727
63+85.95	3.12	13	4	310	727
63+89.07	10.93	12	5	315	731
64+00.00	11.87	16	14	324	745
64+11.87	13.13	25	49	335	780
64+25.00	8.66	20	96	341	805
64+33.66	14.22	28	79	351	842
64+47.88	2.12	15	60	342	810
64+50.00	25.00	14	61	354	859
64+75.00	25.00	12	46	373	906
65+00.00	25.00	29	55	392	957
65+25.00	25.00	13	55	405	1008
65+50.00	25.00	14	55	420	1060
65+75.00	25.00	18	56	436	1111
66+00.00	25.00	16	55	449	1159
66+25.00	25.00	13	49	461	1186
66+50.00	16.76	13	9	468	1192
66+66.76	8.24	8	9	471	1199
66+75.00	25.00	12	39	482	1238
67+00.00	19.86	12	45	491	1273
67+19.86	5.14	12	49	493	1280
67+25.00	6.26	14	33	496	1288
67+31.26	18.74	14	35	506	1312
67+50.00	25.00	14	35	518	1347
67+75.00	25.00	13	40	530	1384
68+00.00	25.00	13	40	541	1422
68+25.00	25.00	12	42	553	1462
68+50.00	25.00	13	45	564	1503
68+75.00	10.85	13	43	569	1520
68+85.85	5.22	13	41	572	1527
68+91.07	8.93	13	40	576	1539
69+00.00	25.00	13	37	584	1560
69+25.00	1.77	13	35	585	1562
69+26.77	23.23	13	35	596	1590
69+50.00	25.00	14	31	609	1616
69+75.00	25.00	16	26	624	1638
70+00.00	25.00	16	21	638	1657
70+25.00	25.00	15	19	645	1665
70+50.00		0	0	645	1665
		TOTALS =		645	1665



EARTHWORK NOTES

COMMON EXCAVATION - 645 C.Y.(E.V.) @ X 0.80% = 516 C.Y.(C.V.),
 SALV. T.S. AVAIL. = 506 C.Y.(E.V.) X 0.80% = 405 C.Y.(C.V.), AVAIL.
 COMMON EXC. - 516 C.Y.(C.V.) - 297 C.Y.(C.V.) TOPSOIL REQ'D. =
 219 C.Y.(C.V.) AVAIL. COMMON EXCAVATION.

REG. EMB. = 1665 C.Y.(C.V.) - 219 C.Y.(C.V.) COMMON EXC. =
 1446 C.Y.(C.V.) X 130% = 1880 C.Y.(L.V.) SELECT GRAN. BORROW

① QUANTITY INCLUDES SALVAGE TOPSOIL

NO	DATE	BY	CKD	APPR	REVISION

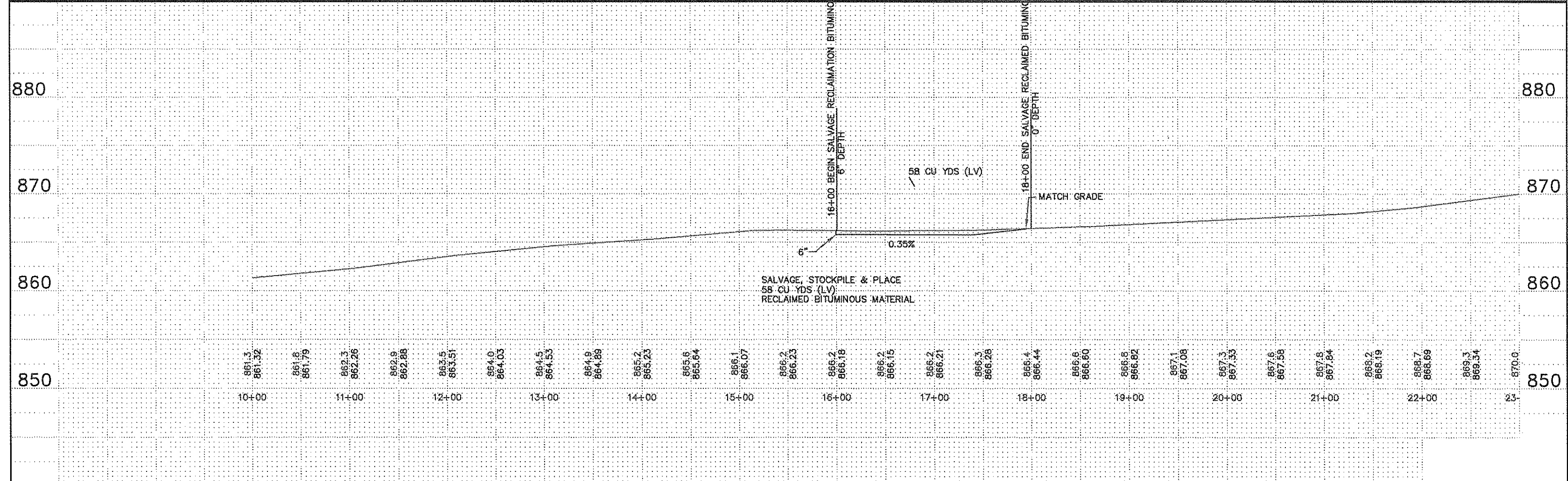
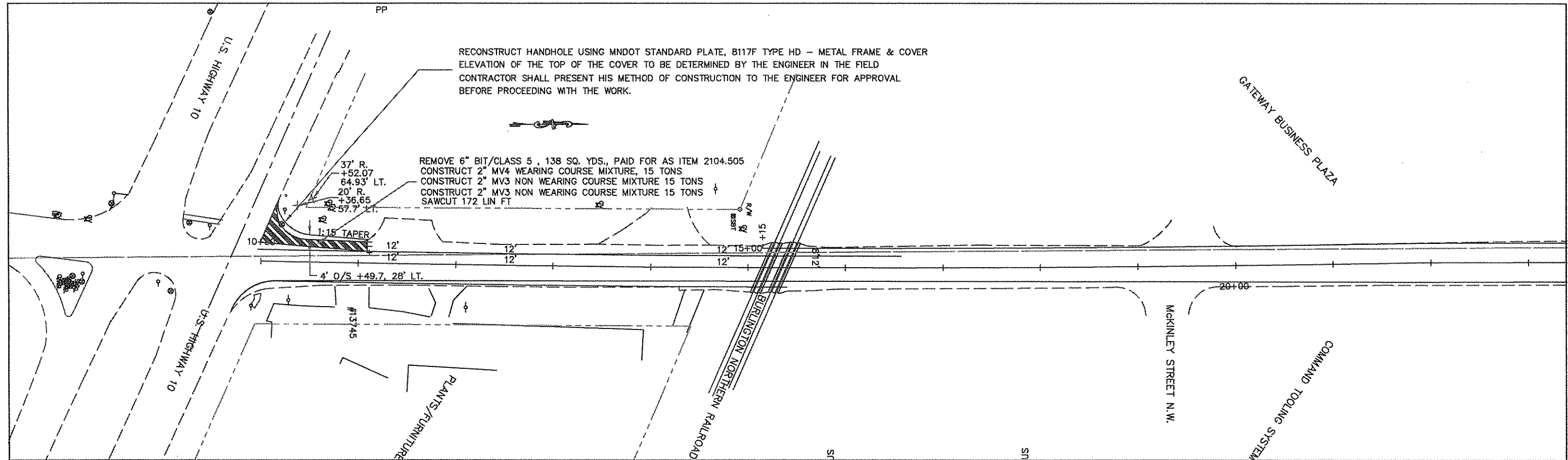
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: **PETER M LEMKE**
 SIGNATURE: *Peter M Lemke*
 DATE: **07-09-02** LICENSE NO. **40118**

DRAWN BY: **KGJ** DATE **07/08/02**
 DESIGN BY: **KGJ** DATE **07/08/02**
 CHECKED BY: _____ DATE _____

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. **02-08-57**

SUPERELEVATION
 Sheet **9** of **24** Sheets



NO	DATE	BY	CHK	APPR	REVISION

NAME: P:\02-01-00\02-08-57\base\020857.dwg 07/03/02 11:26:56 AM CDT

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

PRINT NAME: PETER M LEMKE

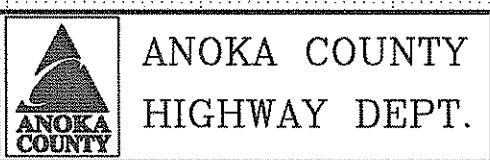
SIGNATURE: *Peter M Lemke*

DATE: 07/03/02 REG. NO. 40118

DRAWN BY: KGL DATE 06/27/02

DESIGN BY: KGL DATE 06/27/02

CHECKED BY: PML DATE 07/03/02



STATE PROJECT NO. _____

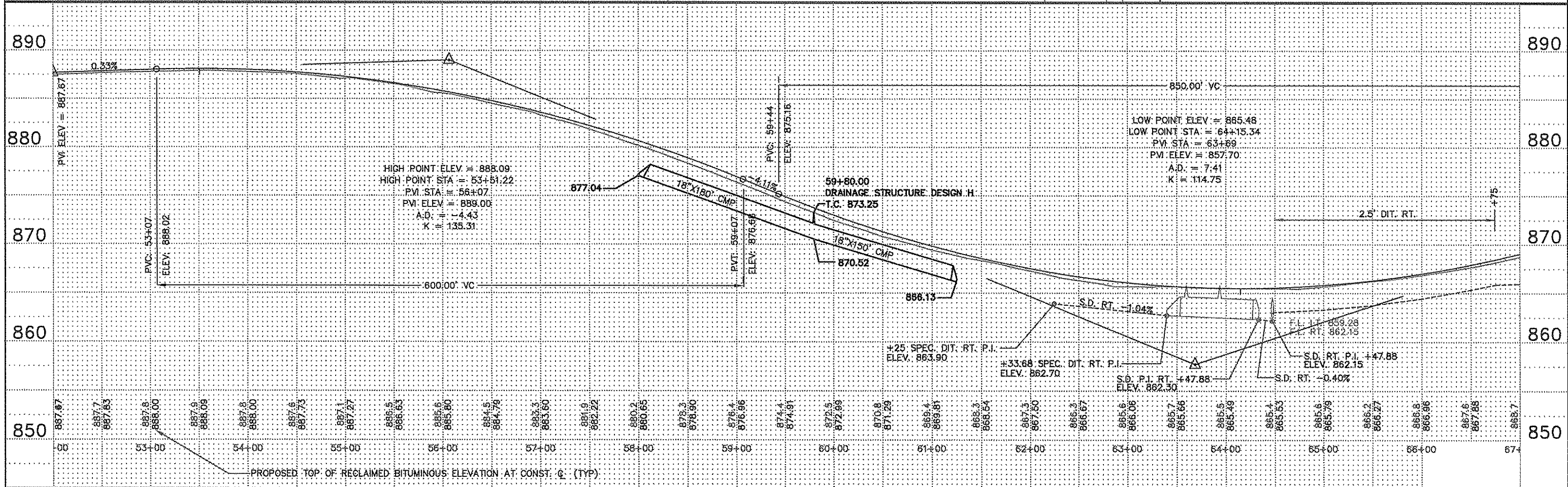
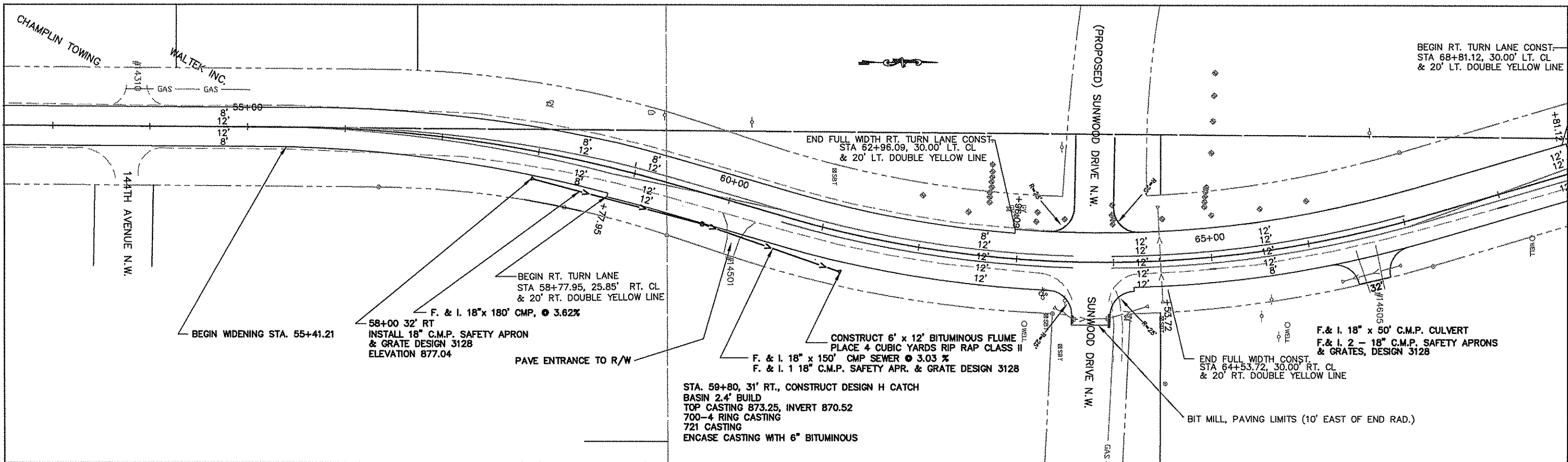
STATE AID PROJECT NO. _____

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 02-08-57

PLAN AND PROFILE
 STA10+00 TO 23+00

Sheet 10 of 24 Sheets



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-01-00\02-08-57\base\020857.dwg 07/09/02 11:42:27 AM CDT

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

PRINT NAME: PETER M LEMKE

SIGNATURE: *Peter M Lemke*

DATE: 07/03/02 REG. NO. 40118

DRAWN BY: KGL DATE 06/27/02

DESIGN BY: KGL DATE 06/27/02

CHECKED BY: PML DATE 07/03/02

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

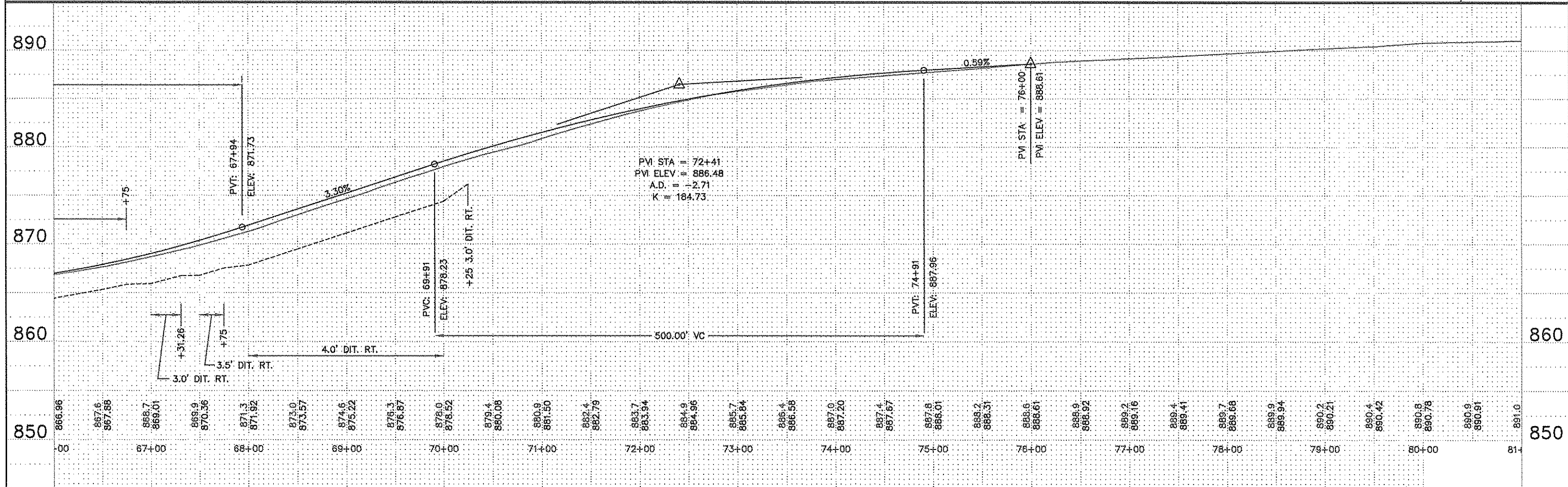
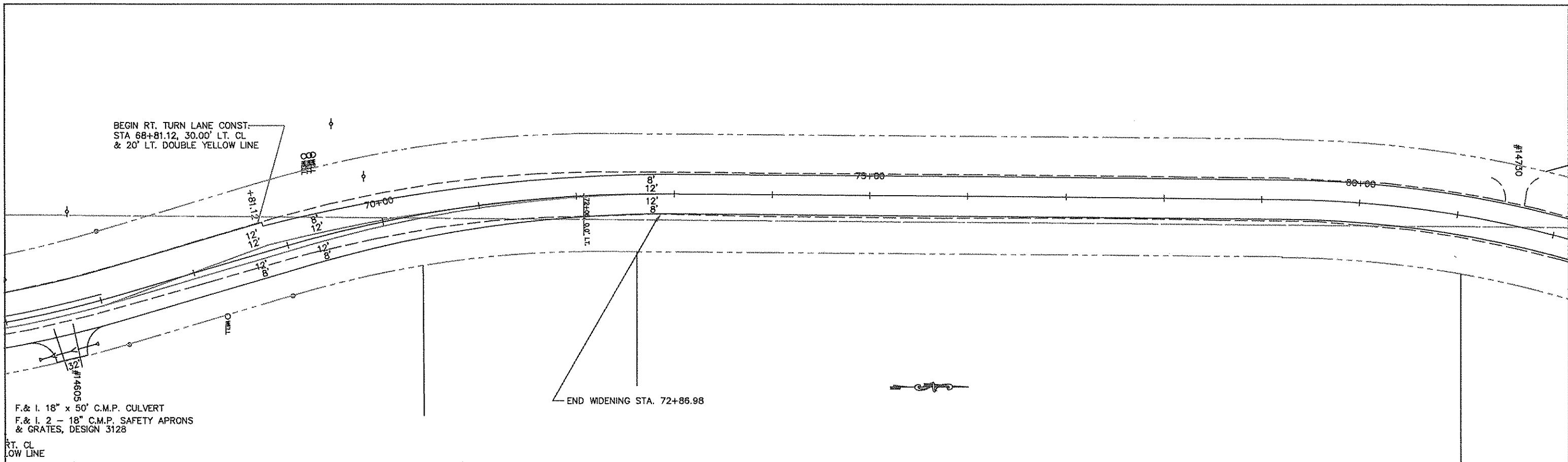
STATE AID PROJECT NO. _____

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 02-08-57

PLAN AND PROFILE
STA 52+00.00 TO 66+00.00

Sheet 11 of 24 Sheets



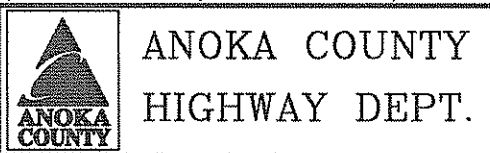
NO	DATE	BY	CHK	APPR	REVISION

NAME: P:\02-01-00\02-08-57\base\020857.dwg 07/03/02 12:06:25 PM CDT

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

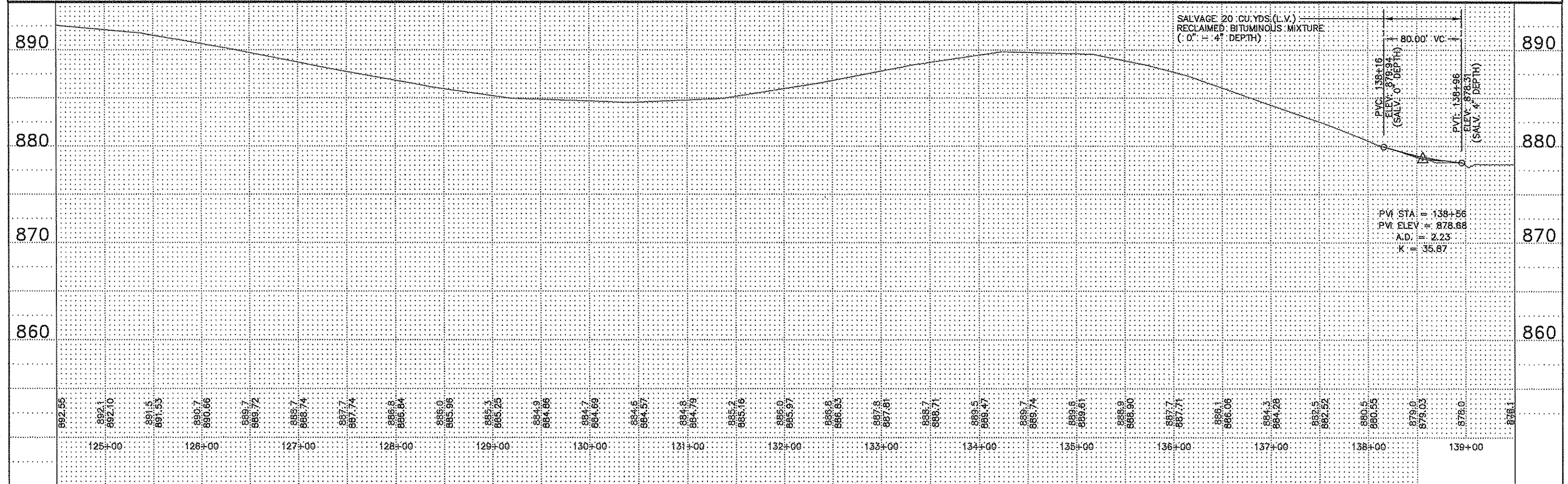
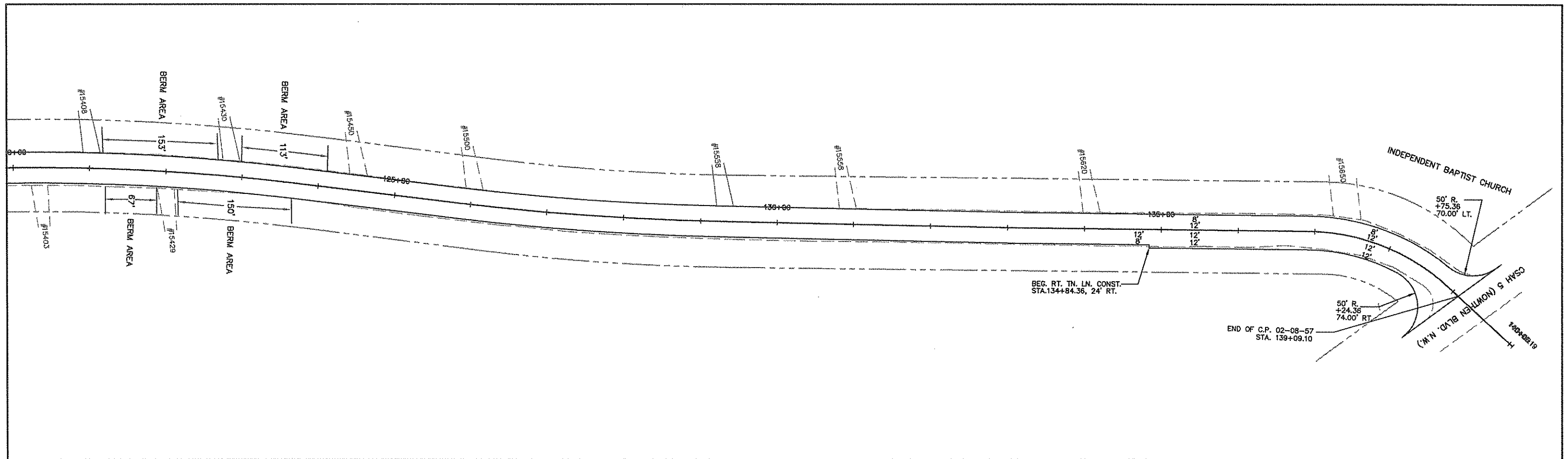
PRINT NAME: PETER M LEMKE
 SIGNATURE: *Peter M Lemke*
 DATE: 07/03/02 REG. NO. 40118

DRAWN BY: KGL DATE 06/27/02
 DESIGN BY: KGL DATE 06/27/02
 CHECKED BY: PML DATE 07/03/02



STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

PLAN AND PROFILE
 STA 66+00 TO 81+00
 Sheet 12 of 24 Sheets



NO	DATE	BY	CKD	APPR	REVISION
1	07/08/2002				04:55:08 PM CDT

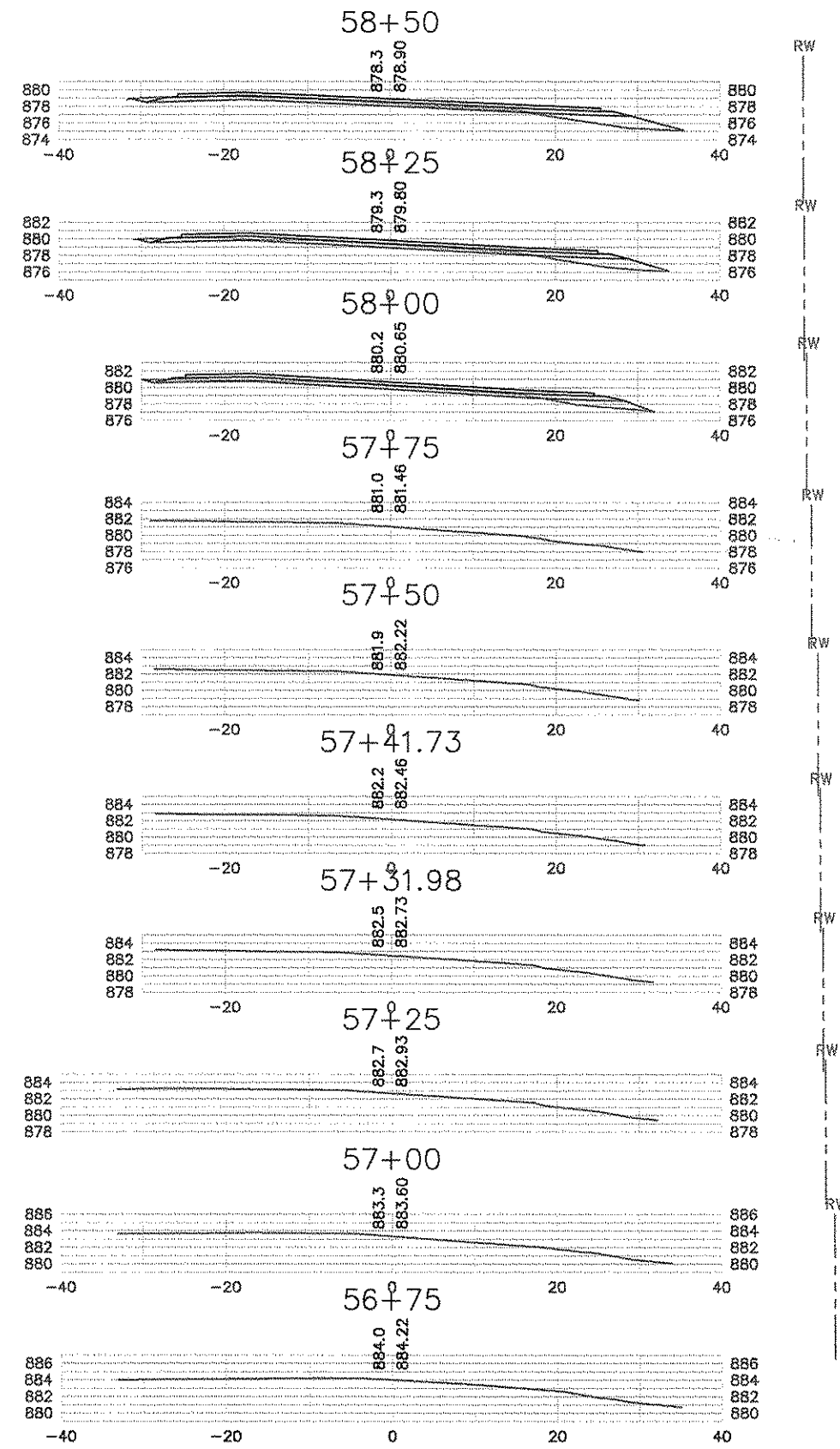
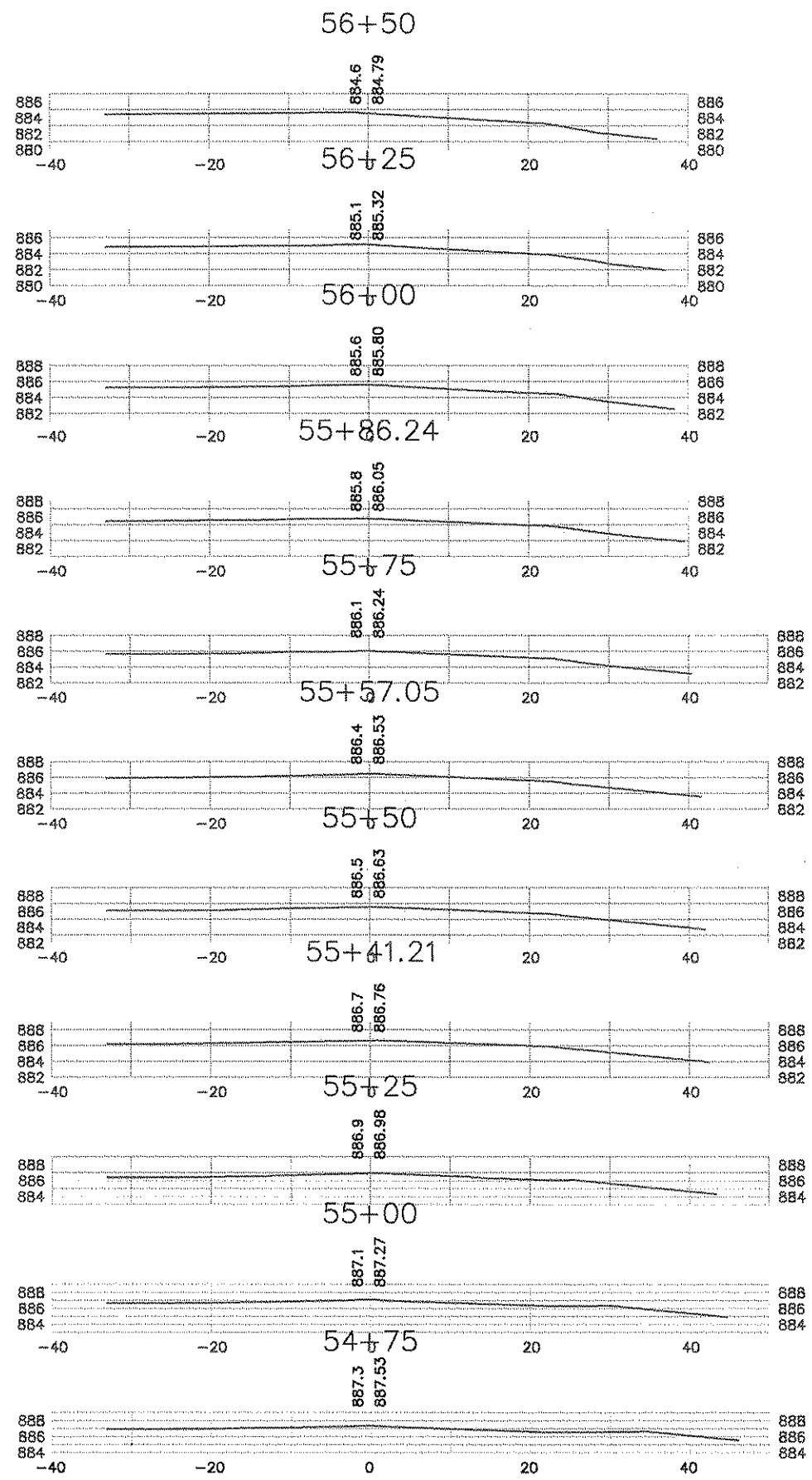
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M LEMKE
 SIGNATURE: *Peter M Lemke*
 DATE: 07/03/02 REG. NO. 40118

DRAWN BY: KGI DATE 06/27/02
 DESIGN BY: KGI DATE 06/27/02
 CHECKED BY: PML DATE 07/03/02

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

PLAN AND PROFILE
 STA 120+00 TO 139+00
 Sheet 13 of 24 Sheets



DIT. ELEV. REPRESENT FINISHED GRADE

NO	DATE	BY	CKD	APPR	REVISION
1	7/23/02	KGJ	MAD	MAD	ADJUSTED X-SECTIONS TO MATCH GRID

NAME: P:\02-01-00\02-08-57\Plan\X-Section.dwg 07/25/2002 11:45:23 AM CBT

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

PRINT NAME: PETER M LEMKE
SIGNATURE: _____
DATE: 07/03/02 LICENSE NO. 40118

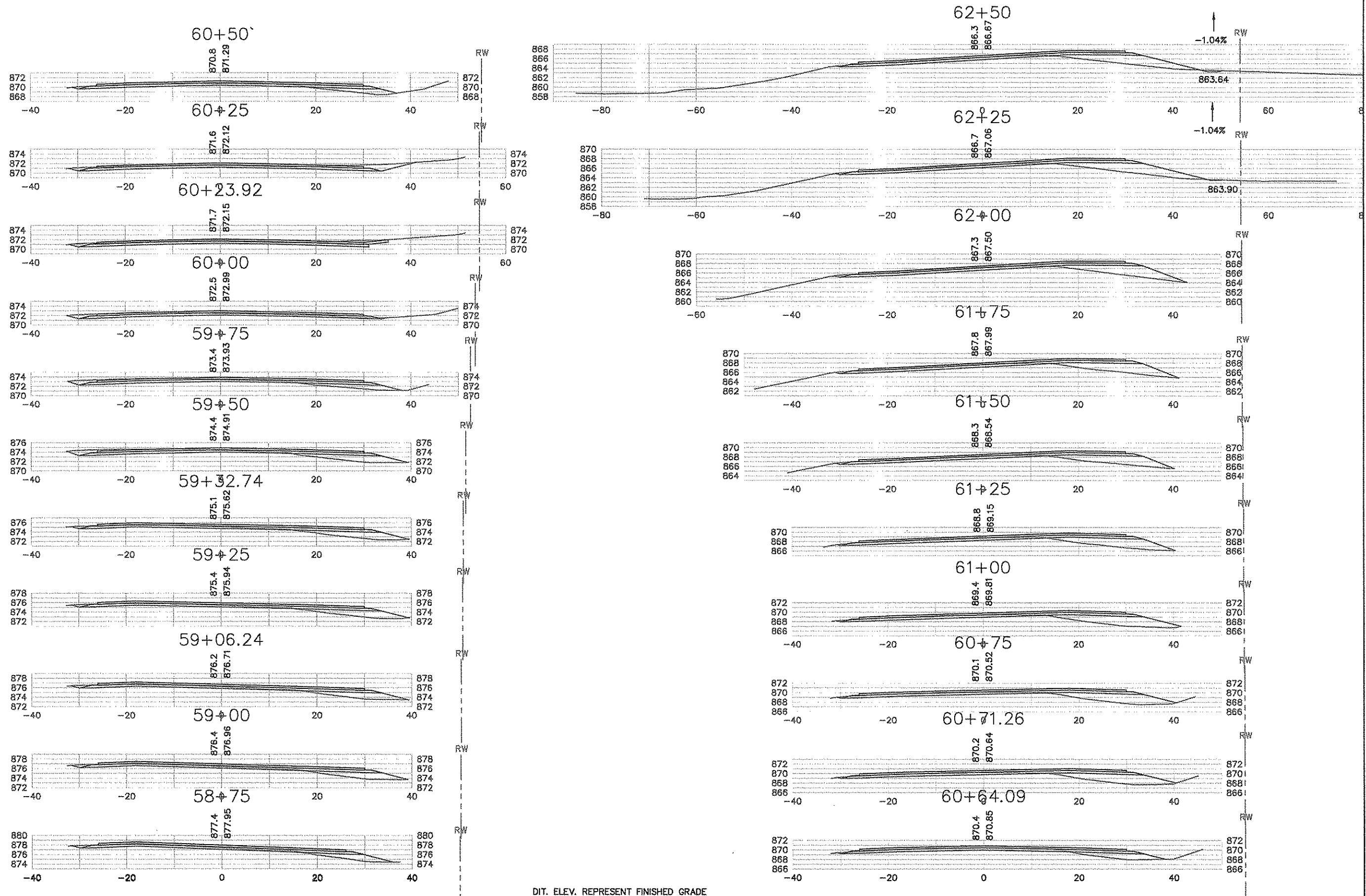
DRAWN BY: KGJ DATE 08/27/02
DESIGN BY: KGJ DATE 08/27/02
CHECKED BY: PML DATE 07/03/02



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-08-57

CROSS SECTIONS
STA 54+75 TO 58+50
Sheet 14 of 24 Sheets



DIT. ELEV. REPRESENT FINISHED GRADE

NO	DATE	BY	CHKD	APPR	REVISION
1	7/23/02	KGJ	MAD	MAD	ADJUSTED X-SECTIONS TO MATCH GRID

NAME: P:\02-01-00\02-08-57\Plan\X-Section.dwg 07/25/2002 11:43:23 AM CDT

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M LEMKE
 SIGNATURE: _____
 DATE: 07/03/02 LICENSE NO. 40118

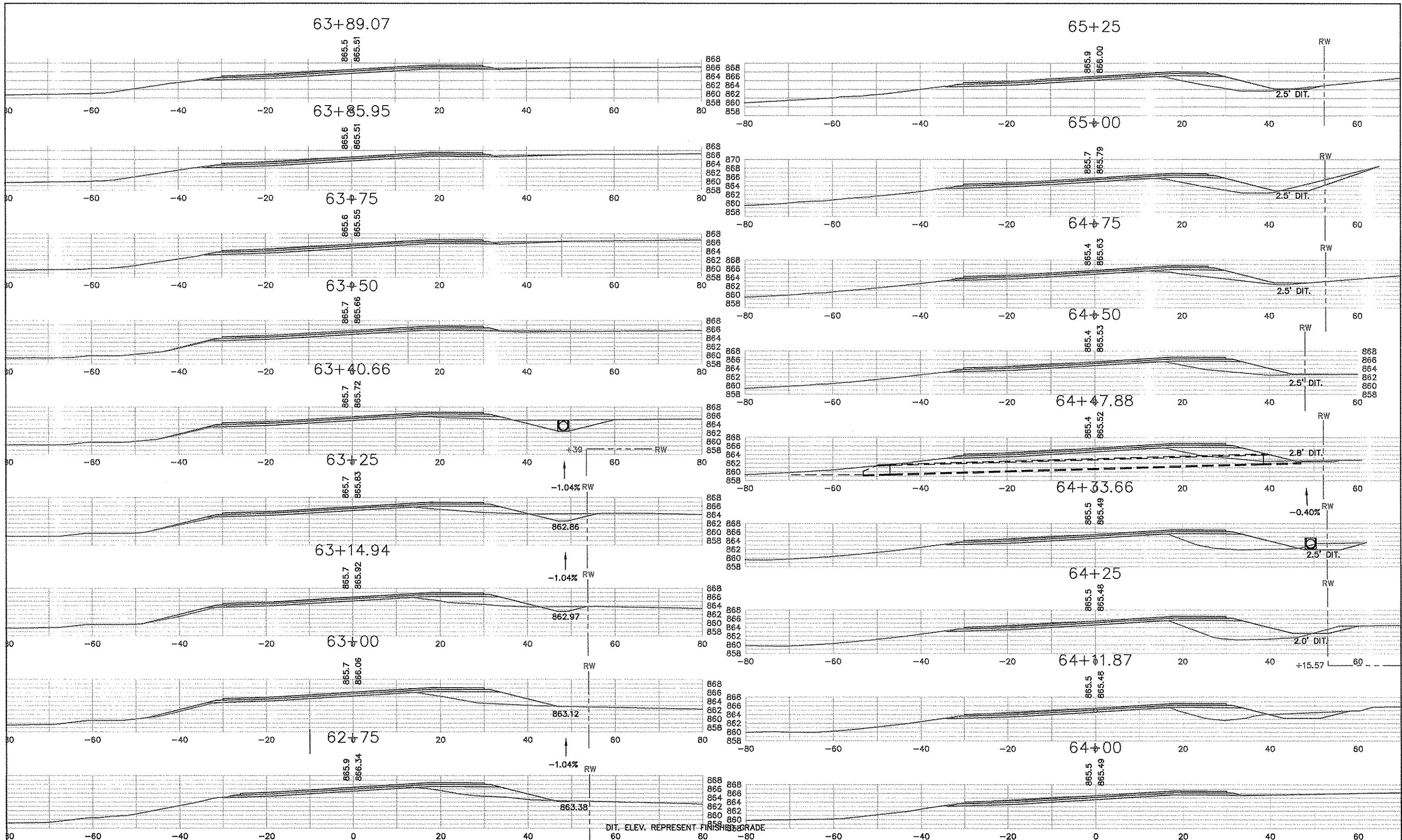
DRAWN BY: KGJ DATE 06/27/02
 DESIGN BY: KGL DATE 06/27/02
 CHECKED BY: PML DATE 07/03/02



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

CROSS SECTIONS
 STA 58+75 TO 62+50
 Sheet 15 of 24 Sheets



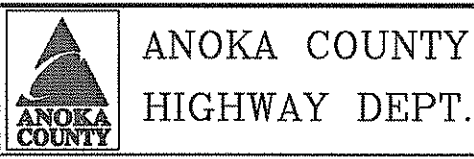
NO	DATE	BY	CKD	APPR	REVISION
1	7/23/02	KGJ	MAD	MAD	ADJUSTED X-SECTIONS TO MATCH GRID

NAME: P:\02-01-00\02-08-57\Plan\X-Sections.dwg 07/25/2002 11:43:23 AM EDT

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

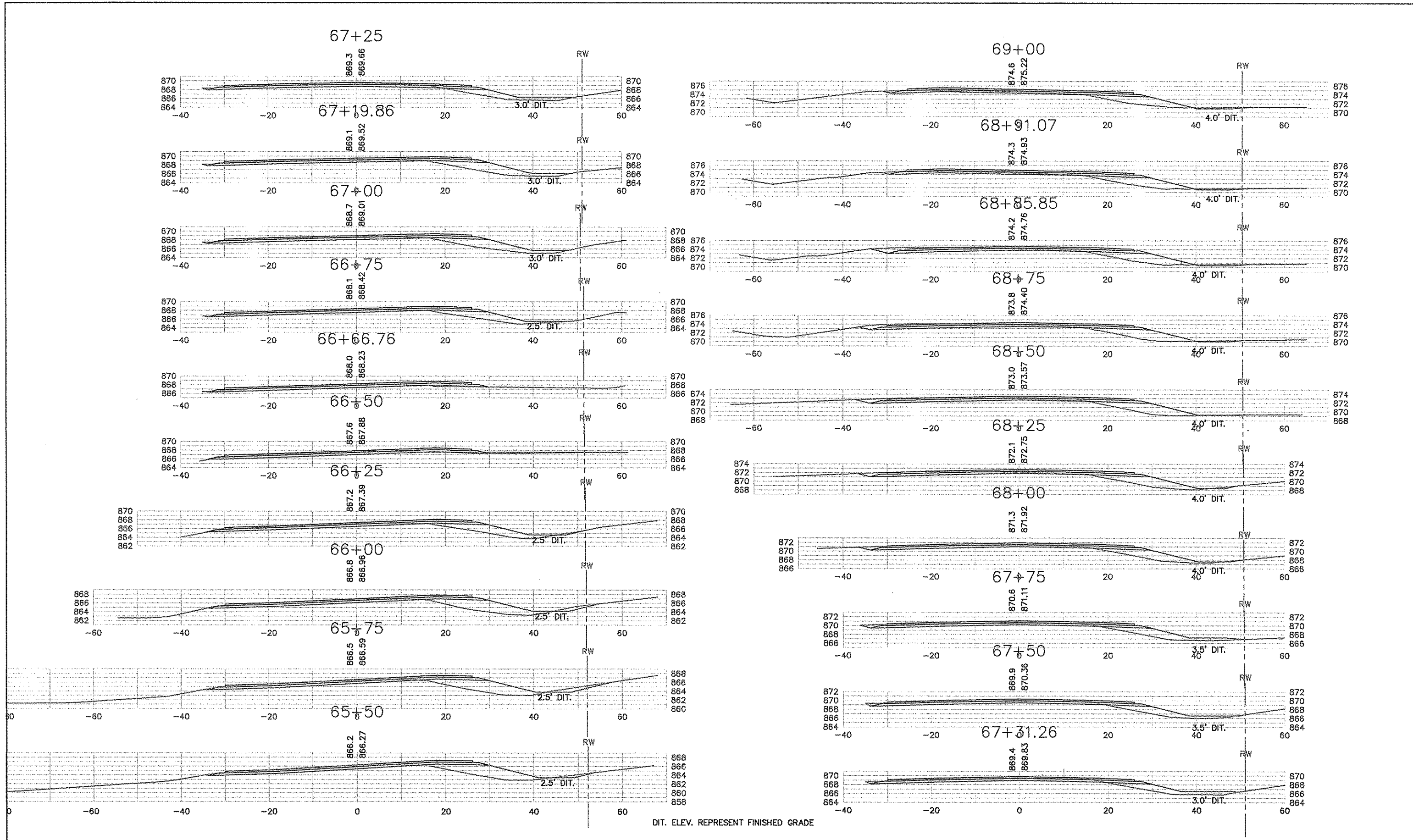
PRINT NAME: PETER M LEMKE
 SIGNATURE: _____
 DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: KGJ DATE: 06/27/02
 DESIGN BY: KGJ DATE: 06/27/02
 CHECKED BY: FMI DATE: 07/03/02



STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

CROSS SECTIONS
 STA 62+75 TO 65+25
 Sheet 16 of 24 Sheets



NO	DATE	BY	CKD	APPR	REVISION
1	7/23/02	KGJ	MAD	MAD	ADJUSTED X-SECTIONS TO MATCH GRID

NAME: P:\02-01-08\02-08-57\Plan\X-Section.dwg 07/25/2002 11:45:23 AM CDT

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

PRINT NAME: PETER M LEMKE
 SIGNATURE: _____
 DATE: 07/03/02 LICENSE NO. 40118

DRAWN BY: KGJ DATE 06/27/02
 DESIGN BY: KGJ DATE 06/27/02
 CHECKED BY: PML DATE 07/03/02



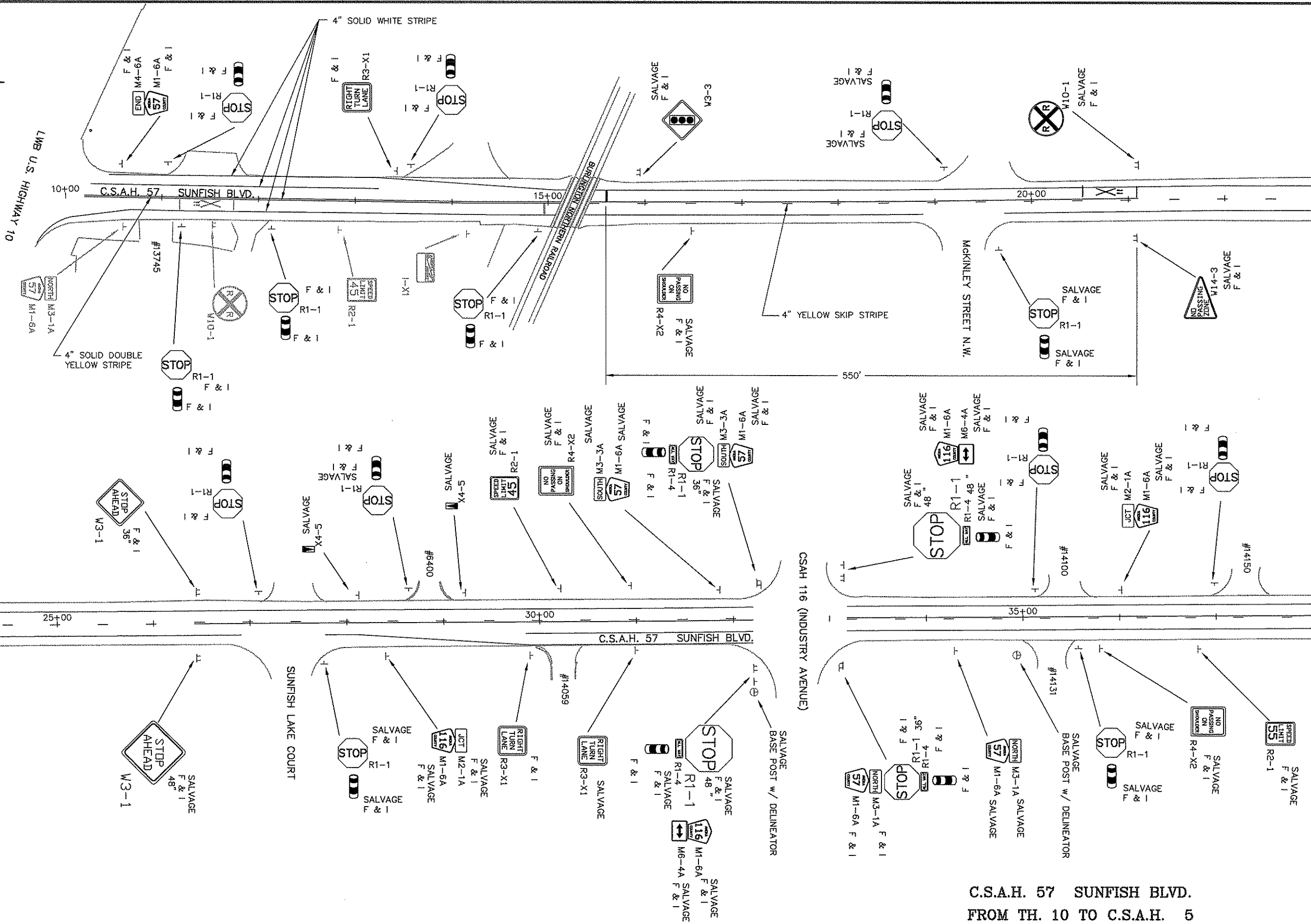
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

CROSS SECTIONS
 STA 65+50 TO 69+00
 Sheet 17 of 24 Sheets

MATCHLINE 'A' SEE BELOW LEFT

MATCHLINE 'B' SEE SHEET 2 OF 6



MATCHLINE 'A' SEE ABOVE RIGHT

C.S.A.H. 57 SUNFISH BLVD.
FROM TH. 10 TO C.S.A.H. 5

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M. LEMKE
 SIGNATURE: *Peter M. Lemke*
 DATE: 07-09-02 REG. NO. 40118

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE:
 CHECKED BY: DATE:
 ANOKA COUNTY

ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

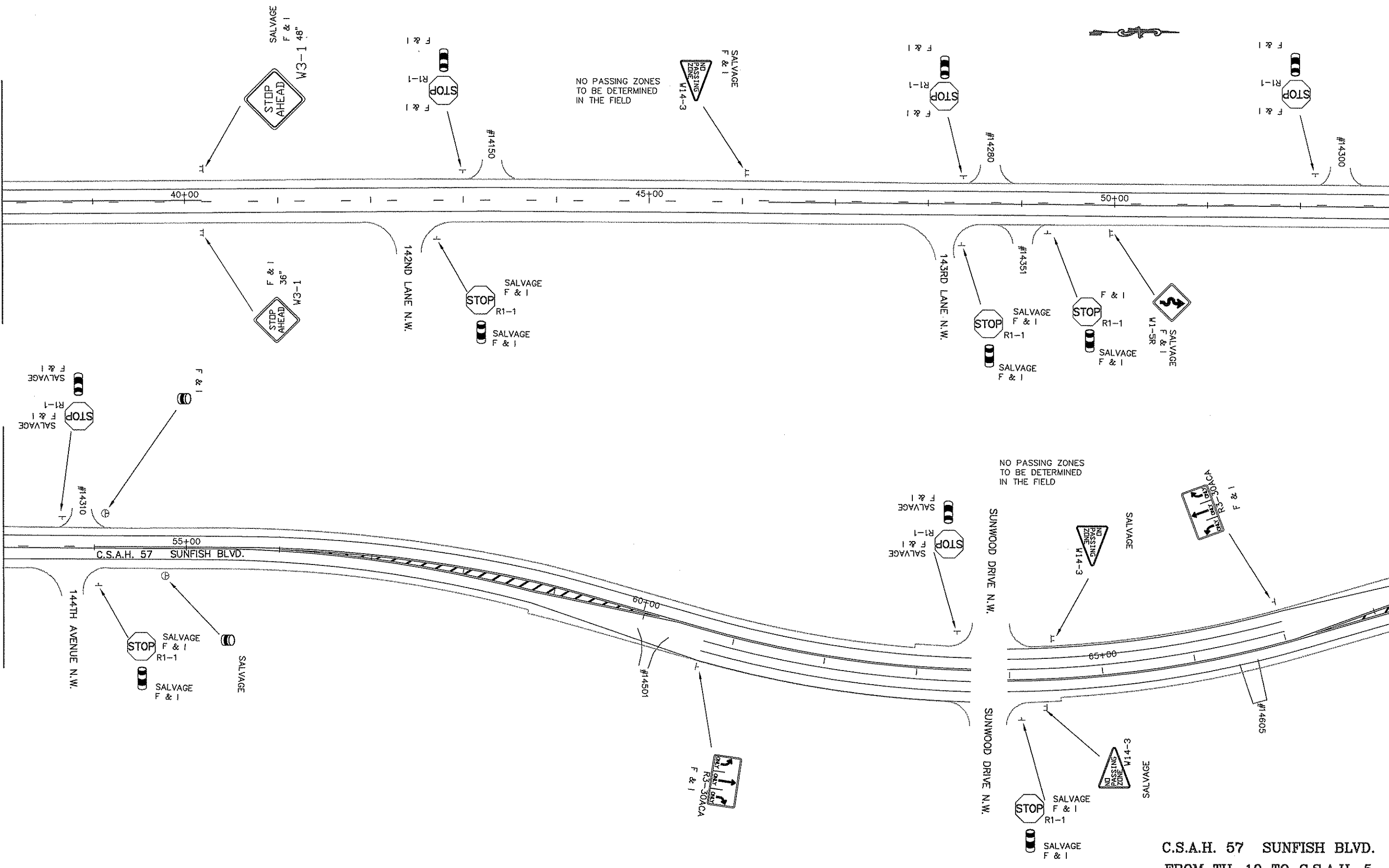
PERMANENT
 SIGN / STRIPING
 Sheet 19 of 24 Sheets

MATCHLINE 'B' SEE SHEET 1 of 6

MATCHLINE 'C' SEE ABOVE RIGHT

MATCHLINE 'C' SEE BELOW LEFT

MATCHLINE 'D' SEE SHEET 3 of 6

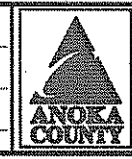


C.S.A.H. 57 SUNFISH BLVD.
FROM TH. 10 TO C.S.A.H. 5

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: **PETER M. LEMKE**
 SIGNATURE: *Peter M. Lemke*
 DATE: **07-09-02** REG. NO. **40118**

DRAWN BY: **DM** DATE: **07/3/02**
 DESIGN BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. **02-08-57**

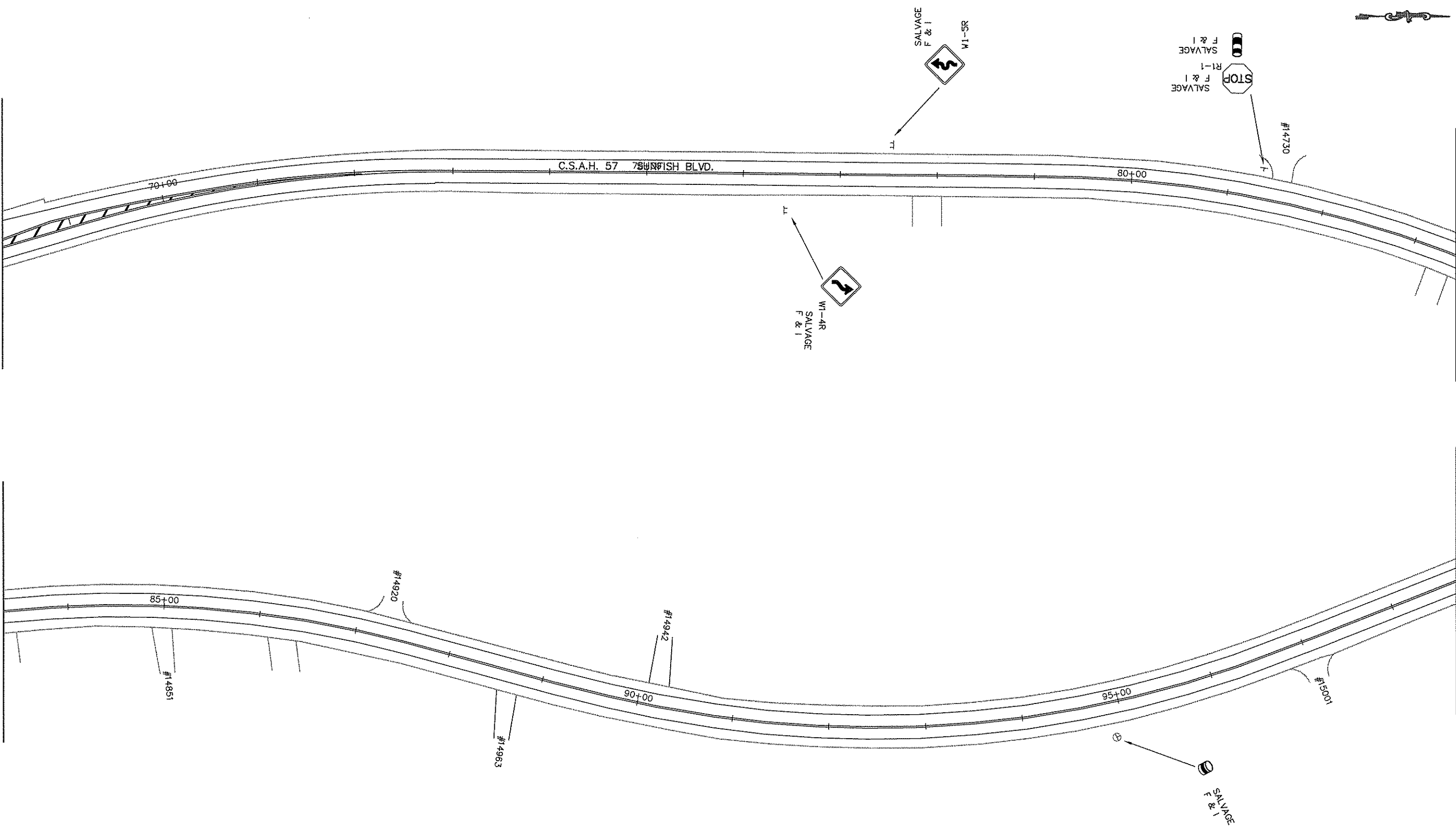
PERMANENT
SIGN / STRIPING
 Sheet **20** of **24** Sheets

MATCHLINE 'D' SEE SHEET 2 of 6

MATCHLINE 'E' SEE ABOVE RIGHT

MATCHLINE 'E' SEE BELOW LEFT

MATCHLINE 'F' SEE SHEET 4 of 6



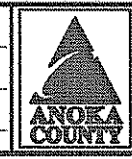
C.S.A.H. 57 SUNFISH BLVD.
FROM TH. 10 TO C.S.A.H. 5

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: PETER M. LEMKE
 SIGNATURE: *Peter M. Lemke*
 DATE: 07-09-02 REG. NO. 40118

DRAIN BY: DM DATE 07/3/02
 DESIGN BY: DATE
 CHECKED BY: DATE



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

PERMANENT
SIGN / STRIPING

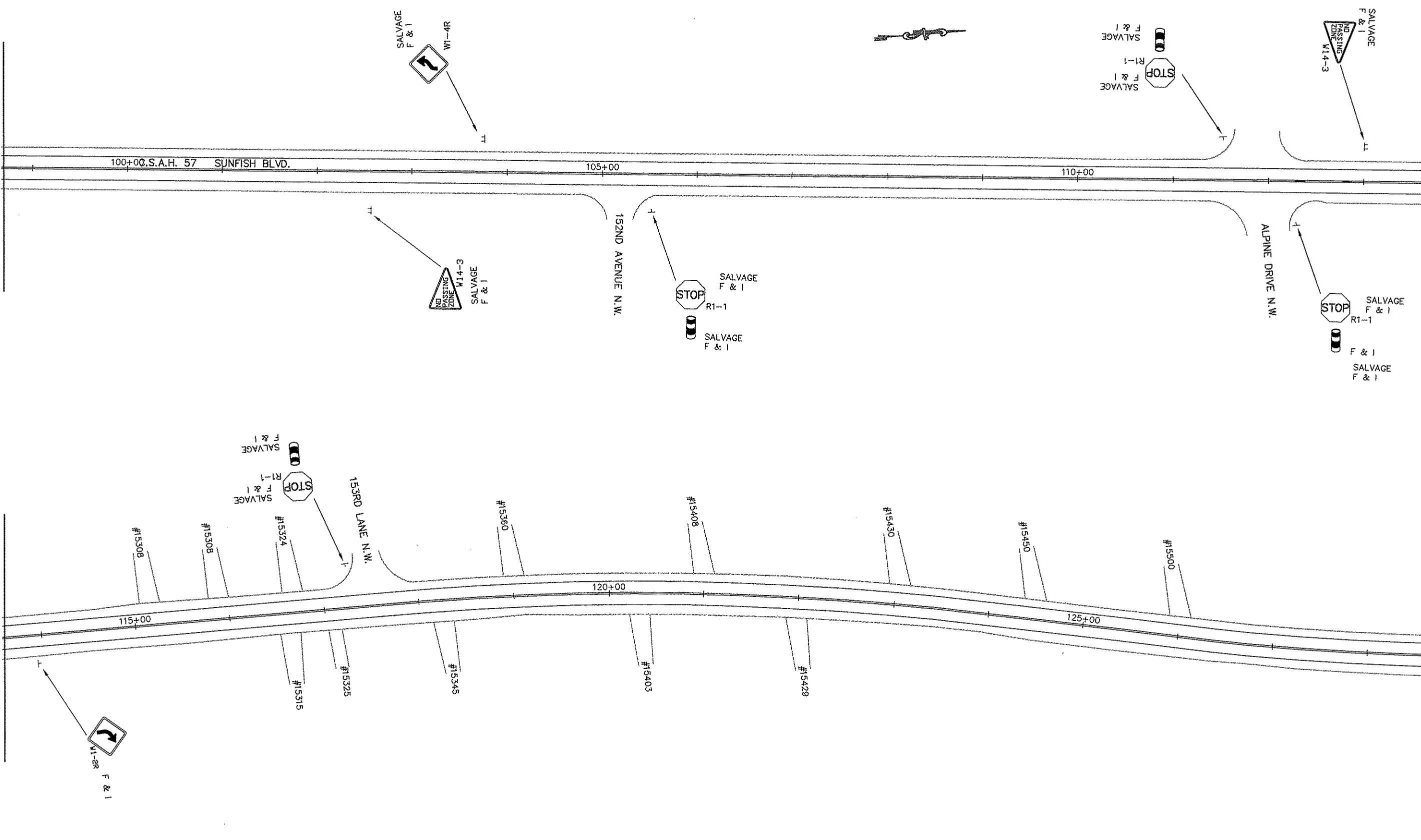
Sheet 21 of 24 Sheets

MATCHLINE 'F' SEE SHEET 3 of 6

MATCHLINE 'G' SEE ABOVE RIGHT

MATCHLINE 'G' SEE BELOW LEFT

MATCHLINE 'H' SEE SHEET 5 of 6



C.S.A.H. 57 SUNFISH BLVD.
FROM TH. 10 TO C.S.A.H. 5

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M. LEMKE
 SIGNATURE: *Peter M. Lemke*
 DATE: 07-09-02 REG. NO. 40118

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____

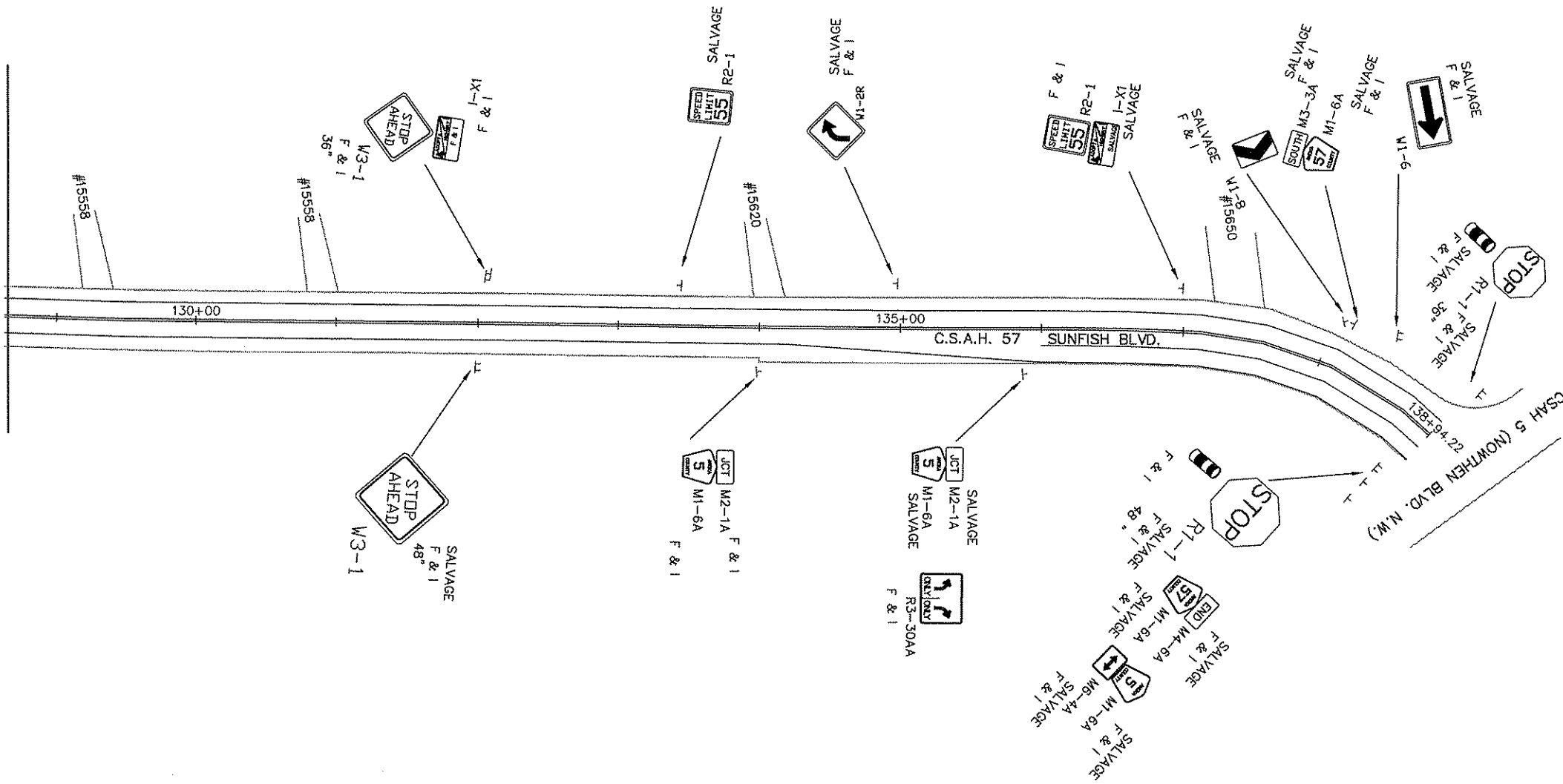


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

PERMANENT
SIGN / STRIPING
 Sheet 22 of 24 Sheets

MATCHLINE 'H' SEE SHEET 4 OF 6

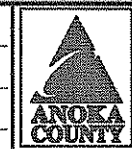


C.S.A.H. 57 SUNFISH BLVD.
FROM TH. 10 TO C.S.A.H. 5

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M. LEMKE
 SIGNATURE: *Peter M. Lemke*
 DATE: 07-09-02 REG. NO. 40118

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

PERMANENT
SIGN / STRIPING
 Sheet 23 of 24 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QTY	SQ. FT.	TOTAL SQ. FT.	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R1-1	30" x 30"		27	6.25	168.75	1	7.0
R1-1	36" x 36"		3	9.00	27.00	2	7.0
R1-1	48" x 48"		3	16.00	48.00	2	7.0
R1-4	18" x 6"			4	.75	3.00	
R2-1	24" x 30"		1	5.00	5.00	1	7.0
R2-1	24" x 30"		2	5.00	10.00	1	7.0
R3-X1	30" x 30"		3	6.25	18.75	1	7.0
R3-30AA	36" x 30"		1	7.50	7.50	1	7.0
R30-ACA	54" x 30"		2	11.25	22.50	2	7.0
R4-X2	30" x 36"		3	7.50	22.50	1	7.0
W1-2R	30" x 30"		2	6.25	12.50	1	7.0
W1-4R	30" x 30"		2	6.25	12.50	1	7.0
W1-5R	30" x 30"		2	6.25	12.50	1	7.0
W1-6	48" x 24"		1	8.00	8.00	2	7.0
W3-1	36" x 36"		3	9.00	27.00	2	7.0
W3-1	48" x 48"		3	16.00	48.00	2	7.0
			SUB-TOTAL		450.30		

M. U. T. C. D. CODE	SIZE	INSERT	QTY	SQ. FT.	TOTAL SQ. FT.	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
W1-8	18" x 24"		1	3.00	3.00	1	5.0
W3-3	36" x 36"		1	9.00	9.00	2	7.0
W10-1	36" x 36"		1	7.00	7.00	2	7.0
W14-3	36"x48"x48"		4	12.00	48.00	2	7.0
I-X1	30" x 24"		1	5.00	5.00	1	7.0
	24" x 15"	JCT M2-1A	1	2.50	2.50		
M1-6A	24" x 24"		2	4.00	8.00	1	7.0
	21" x 15"	M6-4A	1	2.20	2.20		
	24" x 15"	JCT M2-1A	2	2.50	5.00		
M1-6A	24" x 24"		4	4.00	16.00	1	7.0
	21" x 15"	M6-4A	2	2.20	4.40		
		END M4-6A	2	2.00	4.00		
		NORTH M3-1A	1	2.00	2.00		
		SOUTH M3-3A	2	2.00	2.00		
M1-6A	24" x 24"		6	4.00	24.00		
DELINEATOR	4"DIA x 15"		33	0.87	28.70		
TERMINAL POST	4"DIA x 4"		4	0.35	1.40	1	5.0
					SUB-TOTAL (COLUMN 2)	196.20	
					SUB-TOTAL (COLUMN 1)	455.30	
					TOTAL	646.50	

- ① MOUNTED BACK TO BACK w/ W3-1
- ② 1 MOUNTED BACK TO BACK WITH R1-1 (36"x36")
- ③ MOUNTED BELOW ALL R1-1

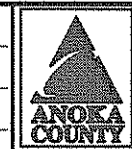
NOTE:
 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD
 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL

C.S.A.H. 57 SUNFISH BLVD.
 FROM TH. 10 TO C.S.A.H. 5

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: PETER M. LEMKE
 SIGNATURE: *Peter M. Lemke*
 DATE: 07-09-02 REG. NO. 40118

DRAWN BY: DM DATE: 07/3/02
 DESIGN BY: DATE:
 CHECKED BY: DATE:
 ANOKA COUNTY



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-08-57

PERMANENT
 SIGN / STRIPING
 Sheet 24 of 24 Sheets

PLAN SYMBOLS

- COUNTY LINE.....
- TOWNSHIP OR RANGE LINE.....
- SECTION LINE.....
- QUARTER LINE.....
- SIXTEENTH LINE.....
- RIGHT OF WAY LINE.....
- SLOPE EASEMENT.....
- EXISTING RIGHT OF WAY.....
- PROPERTY LINE.....
- CORPORATE OR CITY LIMITS.....
- RETAINING WALL.....
- RAILROAD.....
- RAILROAD RIGHT OF WAY.....
- RIVER OR CREEK.....
- DRAINAGE DITCH.....
- CULVERT.....
- DROP INLET.....
- GUARD RAIL.....
- BARBED WIRE FENCE.....
- WOVEN WIRE FENCE.....
- CHAIN LINK FENCE.....
- WOOD FENCE.....
- STONE WALL OR FENCE.....
- HEDGE.....

- LOWLAND.....
- TIMBER.....
- ORCHARD.....
- BRUSH.....
- NURSERY.....

- CATTLE GUARD.....
- OVERPASS (Highway Over).....
- UNDERPASS (Highway Under).....
- BRIDGE.....

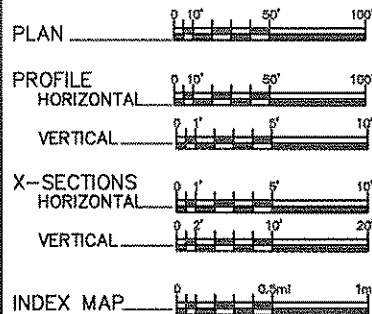
- BUILDING (One Story Frame).....
- F-FRAME C-CONCRETE.....
- S-STONE T-TILE.....
- B-BRICK ST-STUCCO.....

- RAILROAD CROSSING BELL.....
- RAILROAD CROSSING GATE.....
- MANHOLE.....
- CATCH BASIN.....
- FIRE HYDRANT.....
- CAST IRON MONUMENT.....
- IRON PIPE.....
- GRAVEL PIT.....
- SAND PIT.....
- BORROW PIT.....
- ROCK QUARRY.....

UTILITY SYMBOLS

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

SCALES

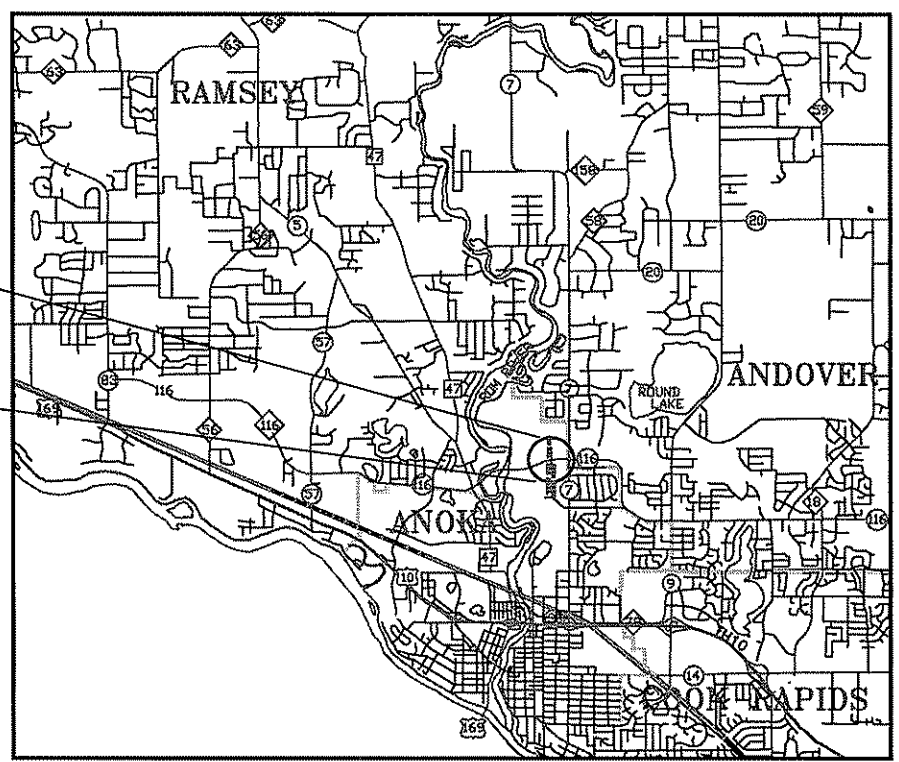
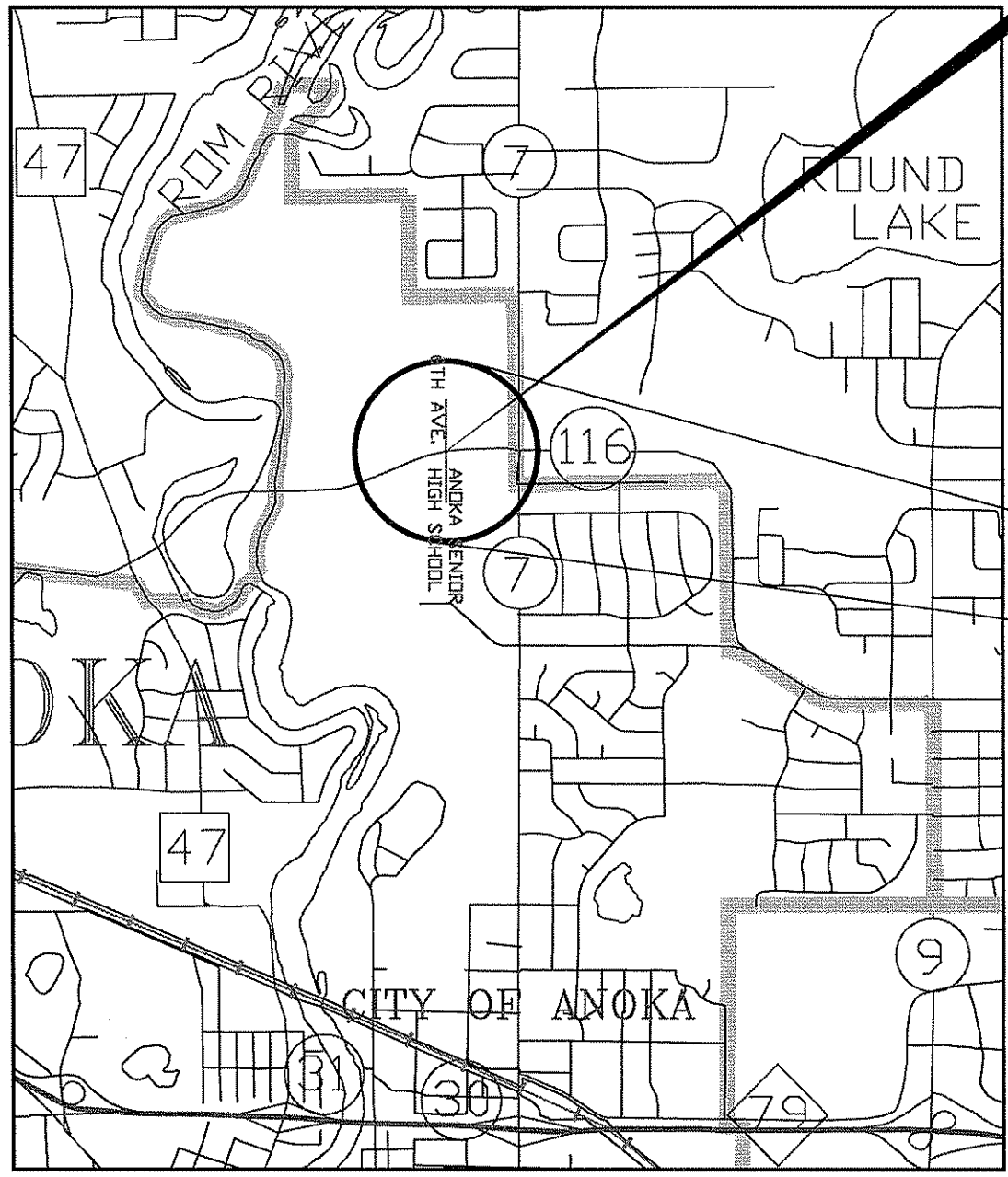


MINNESOTA DEPARTMENT OF TRANSPORTATION
ANOKA COUNTY

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

LOCATED ON CSAH 116 AT INTERSECTION WITH ANOKA COUNTY LIBRARY (Geographic Description)
AND ENTRANCE TO ANOKA SENIOR HIGH SCHOOL.

STA. 144+18.70 TO STA. 149+06.60
AT INTERSECTION
CSAH 116 AND 6TH AVE. AND
ANOKA SENIOR HIGH SCHOOL ENTRANCE



MINN. PROJ. NO. _____
MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 1995 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - JANUARY, 2001."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES AND TABULATION CHARTS
3	EXISTING CONDITIONS AND NEW CONSTRUCTION PLAN
4	SIGNING PLAN AND TABULATION CHARTS

THIS PLAN CONTAINS 4 SHEETS

DESIGN DESIGNATION

ESAL ₂₀	00000000
R VALUE	00
ADT (2001) =	00000
Proj. ADT (2021) =	00000
Proj. HCADT (2021) =	0000
Soil Factor	NA
TON DESIGN	

Functional Classification XXXXXXXXXX
 No. of Traffic Lanes 1 No. of Parking Lanes 0
 Design Speed 25 MPH
 Based on Stopping Sight Distance
 Height of eye 3.5' Height of object 0.5'
 Design Speed not achieved at:
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH

Approved 7/10/2002 *[Signature]*
ANOKA COUNTY ENGINEER

Recommended for Approval _____, 20
METRO-ASSISTANT DIVISION ENGINEER-STATE AID

Approved for State Aid Division _____, 20
STATE AID ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: LYNDON ROBERT
 SIGNATURE: *[Signature]*
 DATE: 07/08/02 LICENSE NO. 25066

DRAWN BY: MN DATE 07/03/02
 DESIGN BY: MN DATE 07/03/02
 CHECKED BY: JAR DATE 07/03/02



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 02-01-00
 COUNTY PROJECT NO. 02-28-116

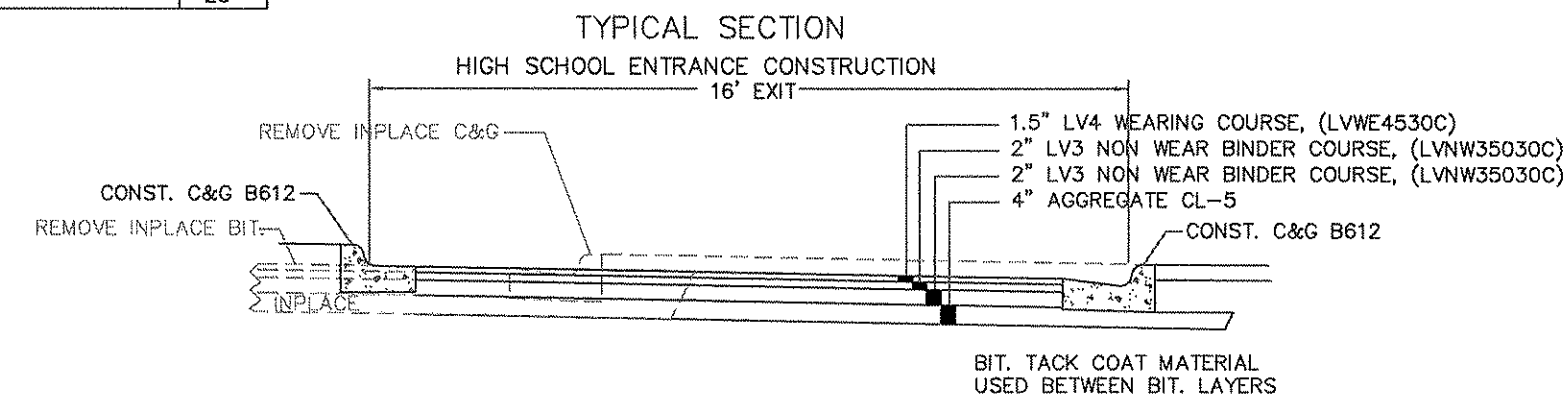
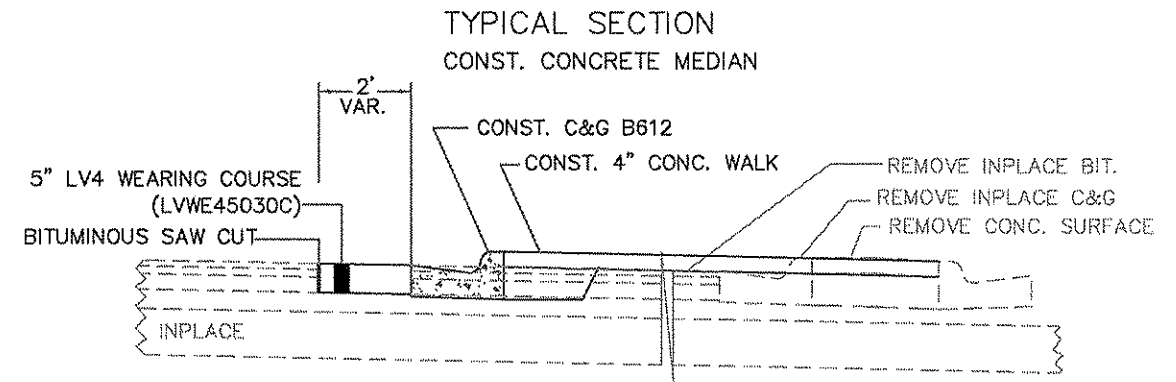
TITLE SHEET

Sheet 01 of 04 Sheets

STORM SEWER TABULATION

NO.	STA.	LOC.	REMARKS	MH. OR CB.	TOP CASTING ELEV.	OUTLET ELEV.	DSGN	PAY HT. LN.FT.	DRAINS TO	GRADE IN%	CAST ASSM	F&I 12" RCP LN.FT.	
1	146+10.45	31.10 LT. LEB	NEW CB. STRUCTURE	CB	872.69	867.70	F	5.1	12	1.0	A		
2	144+94.81	31.10 LT. LEB	NEW CB. STRUCTURE	CB	872.15	869.15	H	2.9	13	1.0	A	23	
3	145+13.20	26.30 RT. LEB	NEW CB. STRUCTURE	CB	871.14	868.14	H	2.9	15	5.0	A	5	
10	146+10.45	67.96 LT. LEB	NO CONST. REQD	CB	872.18				1				
11	146+10.45	18.97 LT. LEB	RECONSTRUCT TO MH.	MH	873.02			1.5	12		B		
12	146+10.45	21.00 RT. LEB	NO CONST. REQD	CB	871.89				15				
13	145+14.36	19.20 LT. LEB	RECONSTRUCT TO MH.	MH	872.67			1.5	14		B		
14	145+14.43	13.10 LT. LEB	RECONSTRUCT AND ADJUST	CB	872.14			1.0	15		A		
15	145+15.03	21.12 RT. LEB	RECONSTRUCT TO MH.	MH	871.38	866.15		2.0	NEXT	1.0	B		
TOTAL								17.9				28	
SUBTOTAL								DESIGN-- F	5.1				
								DESIGN-- H	5.8				
								RECONSTRUCT	6.0				

STATEMENT OF ESTIMATED QUANTITIES				STORM		
ITEM NO.	ITEM	UNIT	ESTIMATE	FINAL	ESTIMATE	FINAL
2104.501	REMOVE CURB AND GUTTER	LIN.FT.	514			
2104.501	REMOVE SEWER PIPE (STORM)	LIN.FT.	4			
2104.505	REMOVE CONCRETE PAVEMENT	SQ.YD.	122			
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ.YD.	756			
2104.509	REMOVE CASTING	EACH	4			
2104.509	REMOVE HANDHOLE	EACH	2			
2104.511	SAWING CONCRETE PAVEMENT	LIN.FT.	4			
2104.513	SAWING BITUMINOUS PAVEMENT	LIN.FT.	710			
(A)	2105.501	COMMON EXCAVATION	CU.YD.	19		
(B)	2105.521	GRANULAR BORROW (LV)	CU.YD.	170		
(C)	2211.503	AGGREGATE BASE CLASS 5	TON	110		
	2232.501	MILL BITUMINOUS SURFACE, 1.5"	SQ.YD.	76		
	2350.501	TYPE LV 4 WEARING COURSE MIXTURE	TON	7		
	2350.502	TYPE LV 3 NON WEARING COURSE MIXTURE	TON	26		
	2350.604	TYPE LV 4 WEARING COURSE MIXTURE, 5" THICK	SQ.YD.	137		
	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	TON	12		
	2503.541	12" RC PIPE SEWER DESIGN 3006	LIN.FT.		28	
	2503.602	CONNECT TO EXISTING STORM SEWER	EACH		3	
	2506.501	CONST DRAINAGE STRUCTURE DESIGN F	LIN.FT.		5.1	
	2506.501	CONST DRAINAGE STRUCTURE DESIGN H	EACH		5.8	
	2506.503	RECONSTRUCT DRAINAGE STRUCTURE	LIN.FT.		6.0	
	2506.516	CASTING ASSEMBLY	EACH		7	
	2531.501	CONCRETE CURB AND GUTTER DESIGN B612	LIN.FT.	599		
	2531.501	CONCRETE CURB AND GUTTER DESIGN B618	LIN.FT.	80		
(B)	2521.501	4" CONCRETE WALK	SQ.FT.	5811		
(D)	2521.501	6" CONCRETE WALK	SQ.FT.	174		
	2545.521	4" RIGID STEEL CONDUIT	LIN.FT.	12		
(E)	2550.512	HANDHOLE TYPE-PVC METAL FRAME & COVER	EACH	2		
(F)	2563.601	TRAFFIC CONTROL	LS	1		
	2564.531	F&I SIGN PANEL, TYPE C	SQ.FT.	59		
	2564.602	TEMPORARY RELOCATE SIGN TYPE C	EACH	6		
	2564.603	4" SOLID LINE WHITE-PAINT	LIN.FT.	65		
	2564.603	4" SOLID LINE YELLOW-PAINT	LIN.FT.	100		
	2564.603	4" DOUBLE SOLID LINE YELLOW-PAINT	LIN.FT.	205		
	2564.603	24" SOLID LINE YELLOW-PAINT	LIN.FT.	37		
(G)	2575.523	EROSION CONTROL BLANKETS CATEGORY 2	SQ.YD.	40		

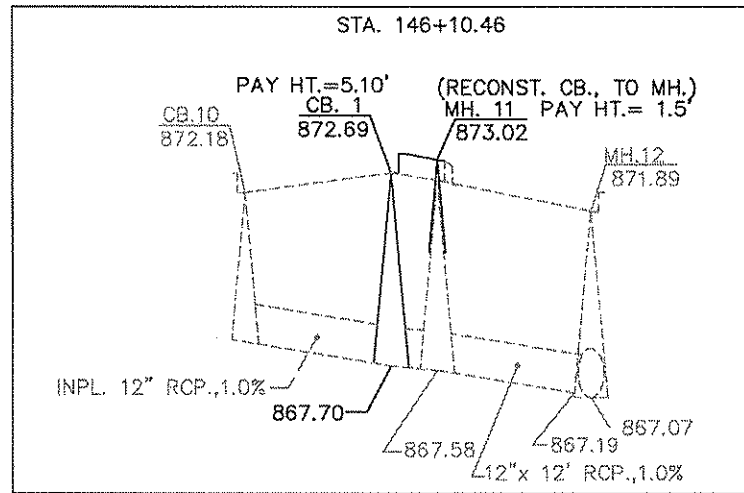


STANDARD PLATES	
THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY.	
PLATE NO.	DESCRIPTION
3000 L	REINFORCED CONCRETE PIPE
3006 G	GASKET JOINT FOR R.C. PIPE
4005 L	MANHOLE OR CATCH BASIN (DESIGN F)
4006 L	MANHOLE OR CATCH BASIN (DESIGN G OR H)
4101 D	RING CASTING FOR MANHOLE
4110 F	RING CASTING FOR MANHOLE
4126 F	CATCH BASIN FRAME CASTING
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
7100 G	CONCRETE CURB AND GUTTER (DESIGN B)
7113 A	CONCRETE APPROACH NOSE DETAIL
7111 J	INSTALLATION OF CATCH BASIN CASTINGS
8114 A	PVC HANHOLE/PULLBOX

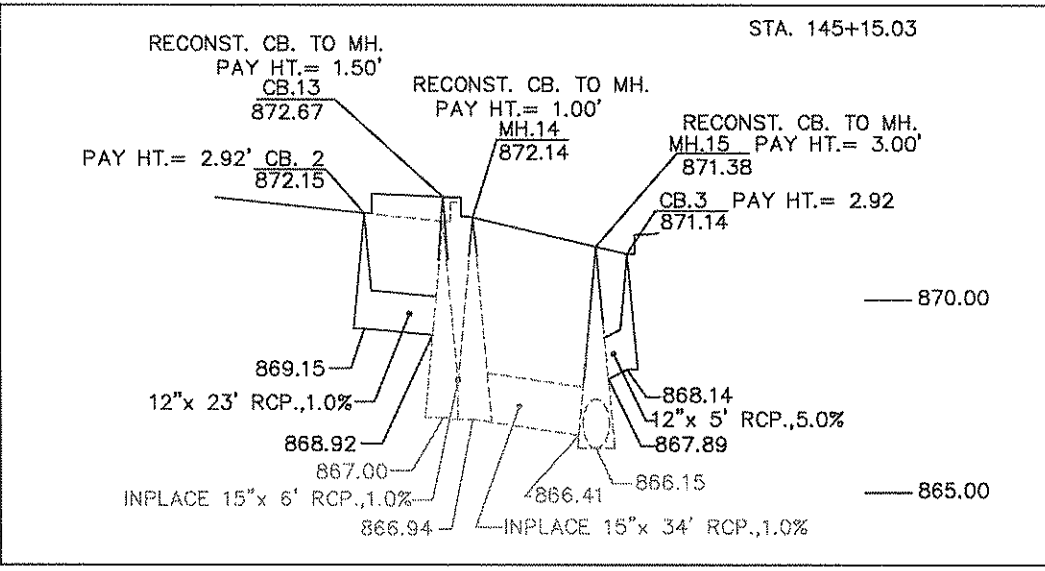
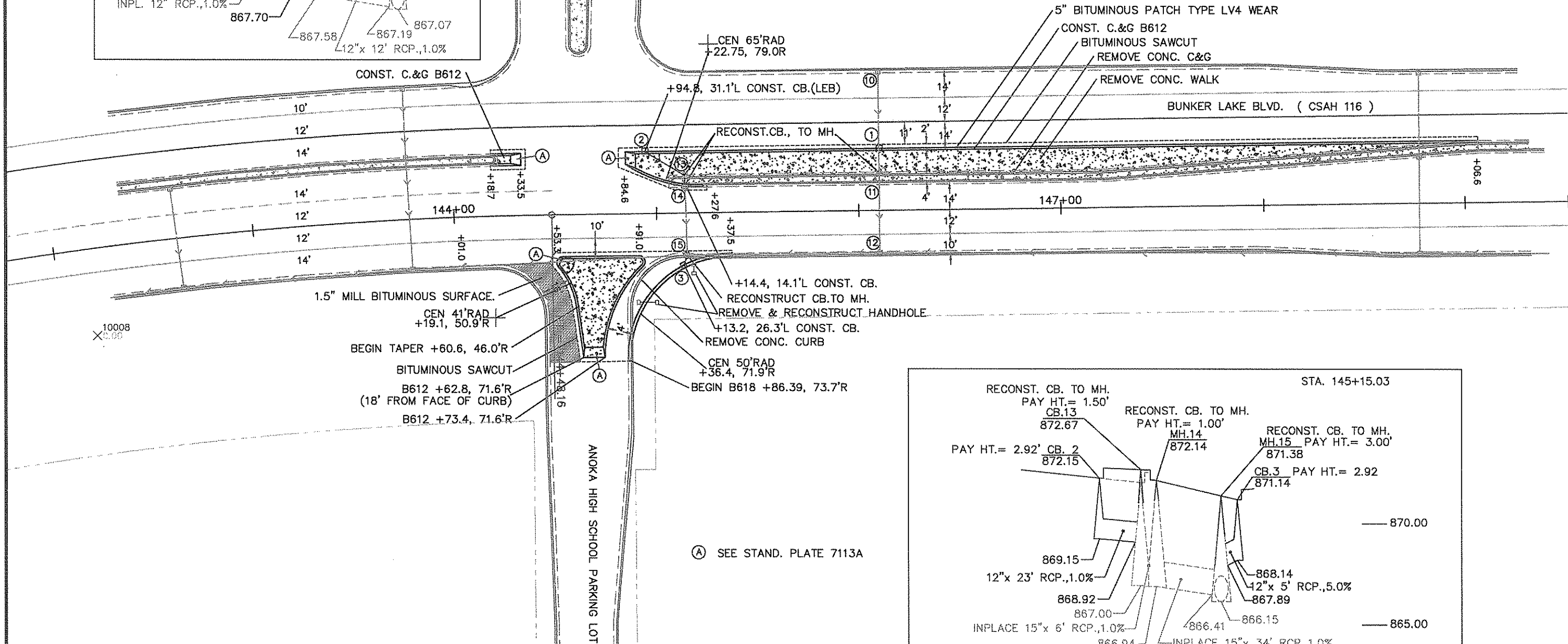
SEE TRAFFIC SIGNAL PLAN SHEETS FOR ADDITIONAL STANDARD PLATES

- (A) CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL AND ALL RELATED COSTS SHALL BE INCIDENTAL TO CONSTRUCTION AS A WHOLE.
- (B) FOR CONC. MEDIAN CONSTRUCTIN.
- (C) FOR NEW HIGH SCHOOL EXIT RADIUS ADDITION.
- (D) FOR CONC. MEDIAN NOSE (SEE STAND. PLATE NO. 7113A)
- (E) NEW LOCATION IS 4' BACK OF NEW CURB.
- (F) BY FIELD MANUAL.
- (G) FOR RESTORATION OF DISTURBED AREAS BEHIND THE NEW CURB. (BID PRICE PER SQ. YD. SHALL INCLUDE 0.10 POUND SEED MIXTURE 50B AND 0.10 POUND/SQ.YD. FERTILIZER ANALYSIS 22-5-10, -SLOW RELEASE)

CASTING ASSEMBLY SUMMERY				
ASSE.	RING OR FRAME CAST.	COVER OR GRATE CASTING	CURB BOX CASTING	QUANT.
A	801	810	721B	4
B	700-7	716		3



ANOKA COUNTY LIBRARY 6TH AVE.



NO	DATE	BY	CHKD	APPR	REVISION

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

PRINT NAME: LONDON ROBEY

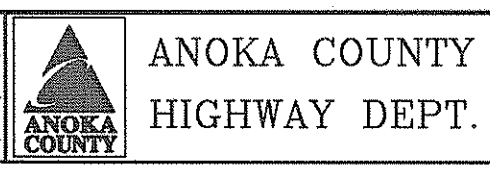
SIGNATURE: [Signature]

DATE: 07/02/02 LICENSE NO. 25066

DRAWN BY: MM DATE: 00/00/00

DESIGN BY: LAR DATE: 00/00/00

CHECKED BY: LAR DATE: 00/00/00



STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 02-01-00

COUNTY PROJECT NO. 02-28-116

PLAN & CHART SHEET

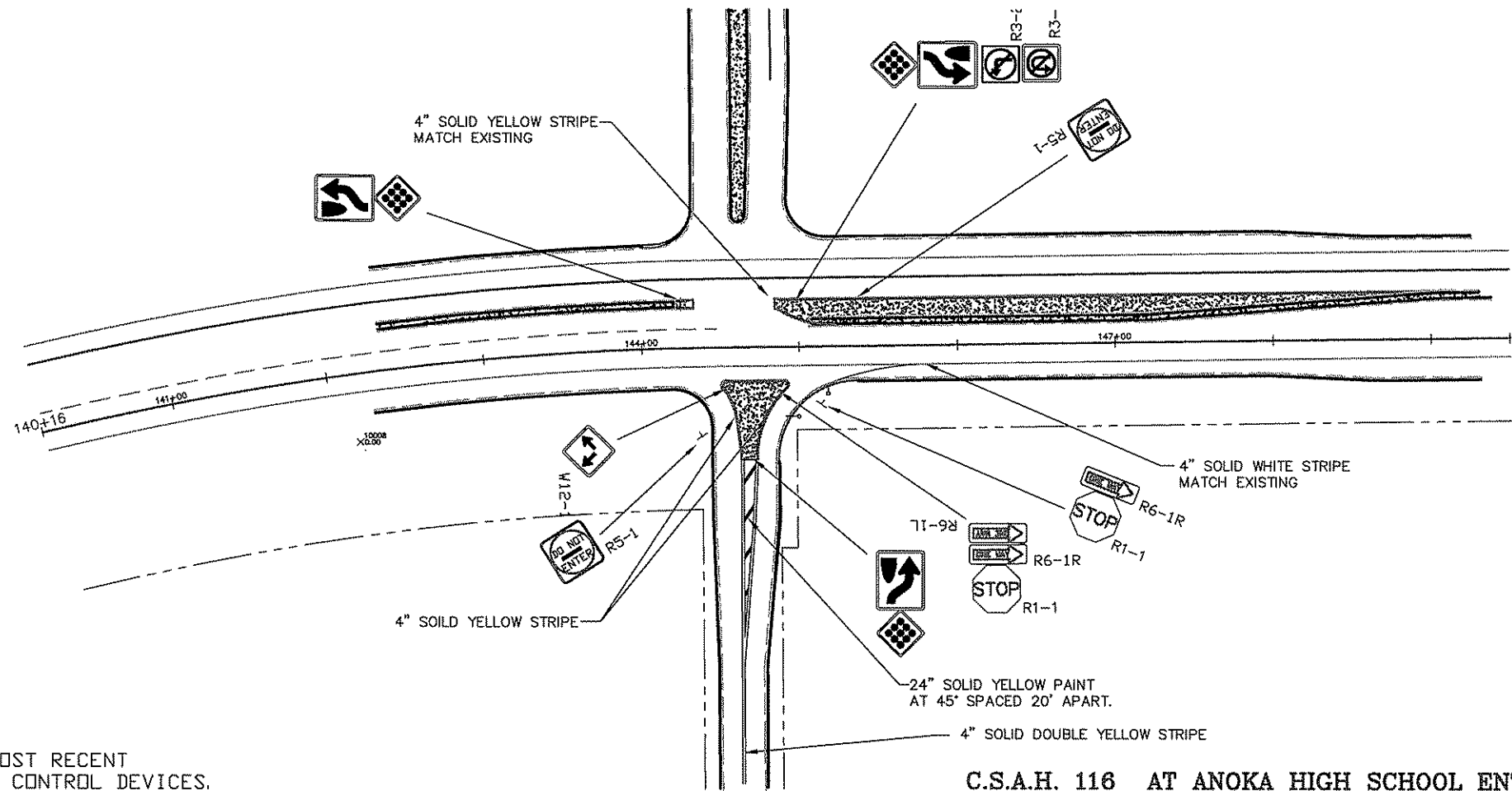
STA 143+00 TO 149+50.00

Sheet 3 of 4 Sheets

M. U. T. C. D. CODE	SIZE	INSERT	QTY	SQ. FT.	TOTAL SQ. FT.	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R1-1	30" x 30"	STOP	2	6.25	12.50	1	7.0
R3-2	24" x 24"	NO PASSING ZONE	1	4.00	4.00	①	
R3-4	24" x 24"	NO U-TURN	1	4.00	4.00	①	
R4-7	24" x 30"	RIGHT TURN	3	5.00	15.00	1	7.0
X4-2	18" x 18"	DIAMOND	3	1.00	6.00		
R5-1	30" x 30"	DO NOT ENTER	2	6.25	12.50	1	7.0
R6-1R	36" x 12"	ONE WAY	1	3.00	3.00	②	
R6-1L	36" x 12"	ONE WAY	1	3.00	3.00	②	
W12-1	18" x 18"	DIAMOND	1	1.00	1.00	1	5.0
TOTAL					59.00		

- ① MOUNTED BACK TO BACK w/ R4-7
- ② MOUNTED ABOVE R1-1

4" SOLID WHITE PAINT 65'
4" SOLID YELLOW PAINT 100'
4" DOUBLE YELLOW PAINT 205'
24" SOLID YELLOW 37'



C.S.A.H. 116 AT ANOKA HIGH SCHOOL ENTRANCE

NOTE:

- 1.) LOCATIONS OF 'NO PASSING ZONES' ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD
- 2.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: LYNN ROBERT
SIGNATURE: *[Signature]*
DATE: 07/02/02 REG. NO. 25066

DRAWN BY: DM DATE 09/27/02
DESIGN BY: DATE
CHECKED BY: DATE



ANOKA COUNTY
HIGHWAY DEPT.

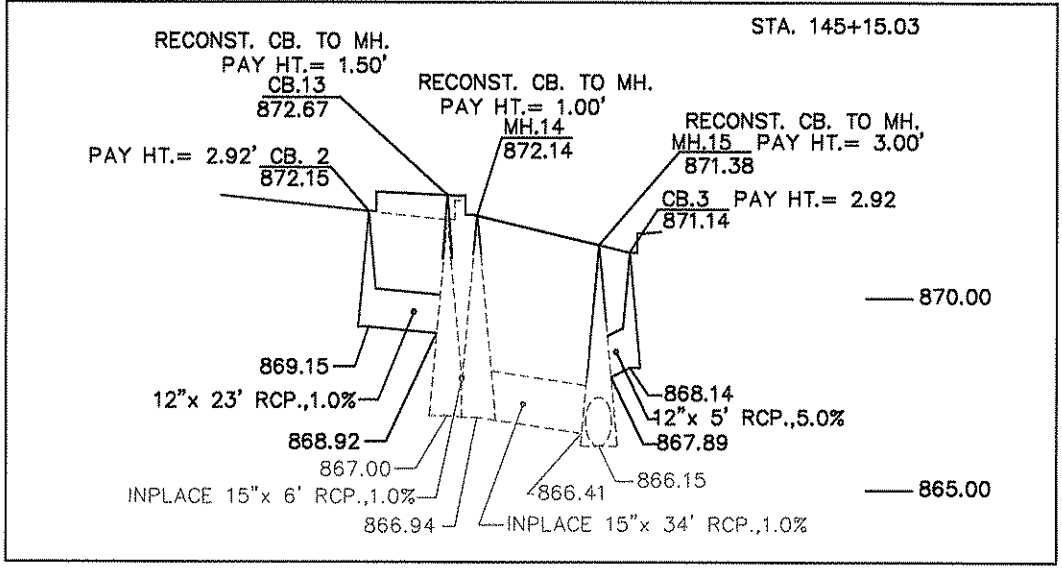
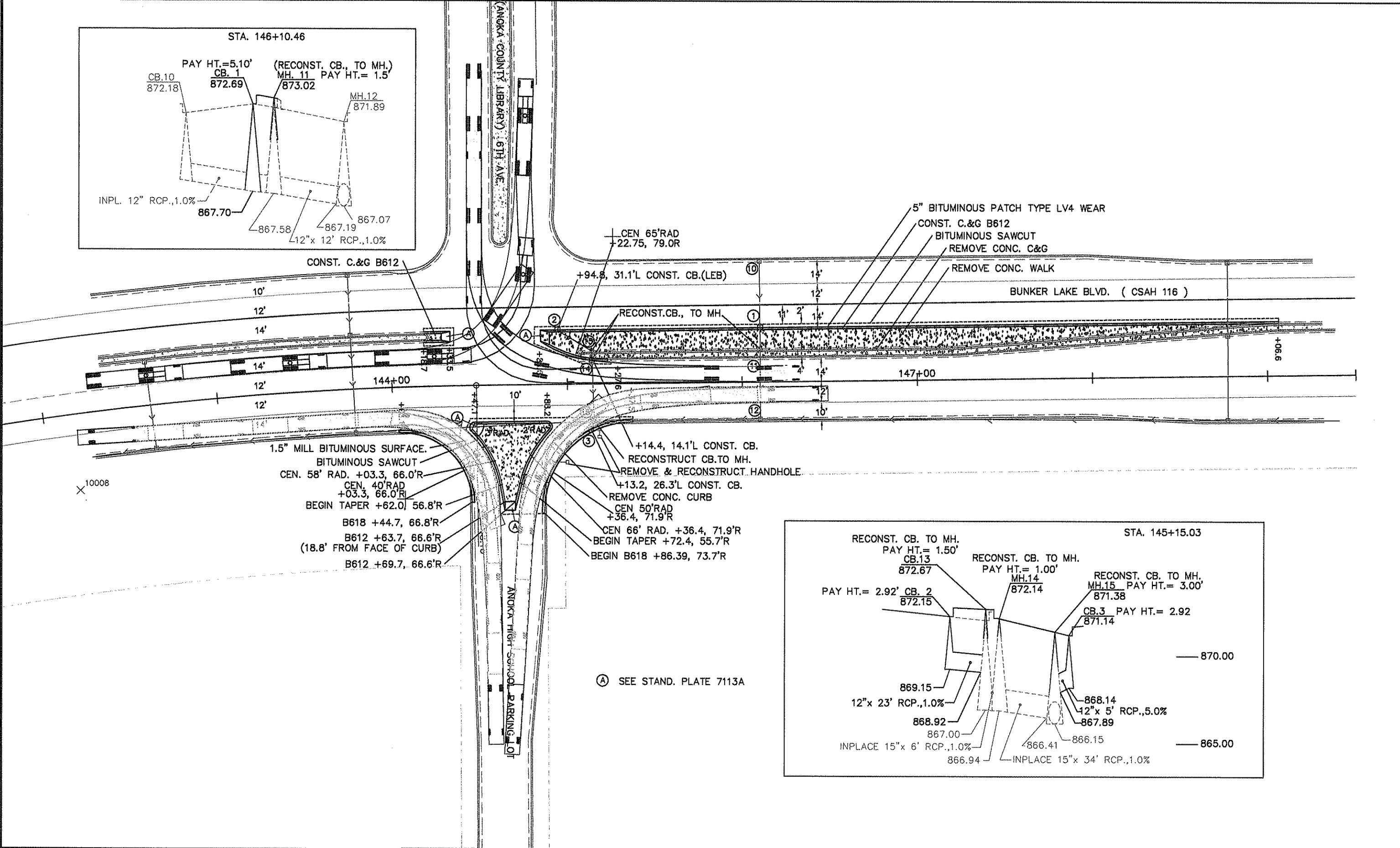
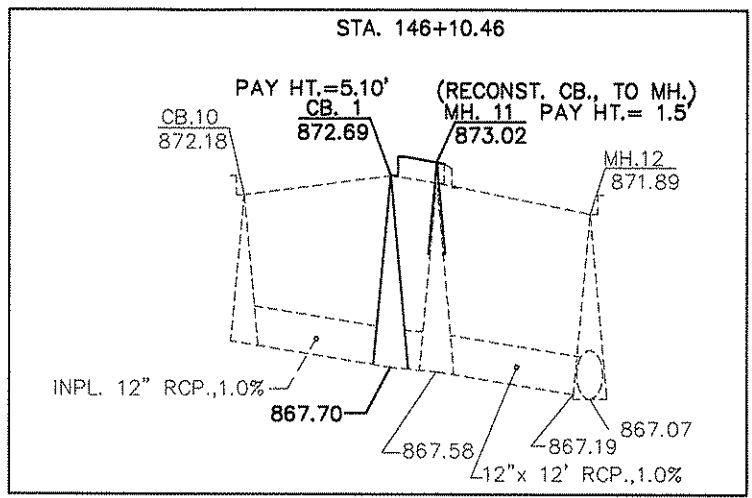
STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 02-01-00
COUNTY PROJECT NO. 02-28-116

PERMANENT
SIGN / STRIPING

Sheet 4 of 4 Sheets

NO	DATE	BY	CHKD	APPR	REVISION

NAME: S:\SP\KPRO\000050\000050\025000.DWG



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-01-00\02-28-116\02-28-116.dwg 07/03/2002 05:10:15 PM CDT					

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

PRINT NAME: DAVID ROBERT

SIGNATURE: [Signature]

DATE: 07/02/02 LICENSE NO. 25066

DRAWN BY: MN DATE 00/00/00

DESIGN BY: LAR DATE 00/00/00

CHECKED BY: LAR DATE 00/00/00

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 02-01-00

COUNTY PROJECT NO. 02-28-116

PLAN & CHART SHEET
STA 143+00 TO 149+50.00

Sheet 3 of 4 Sheets