

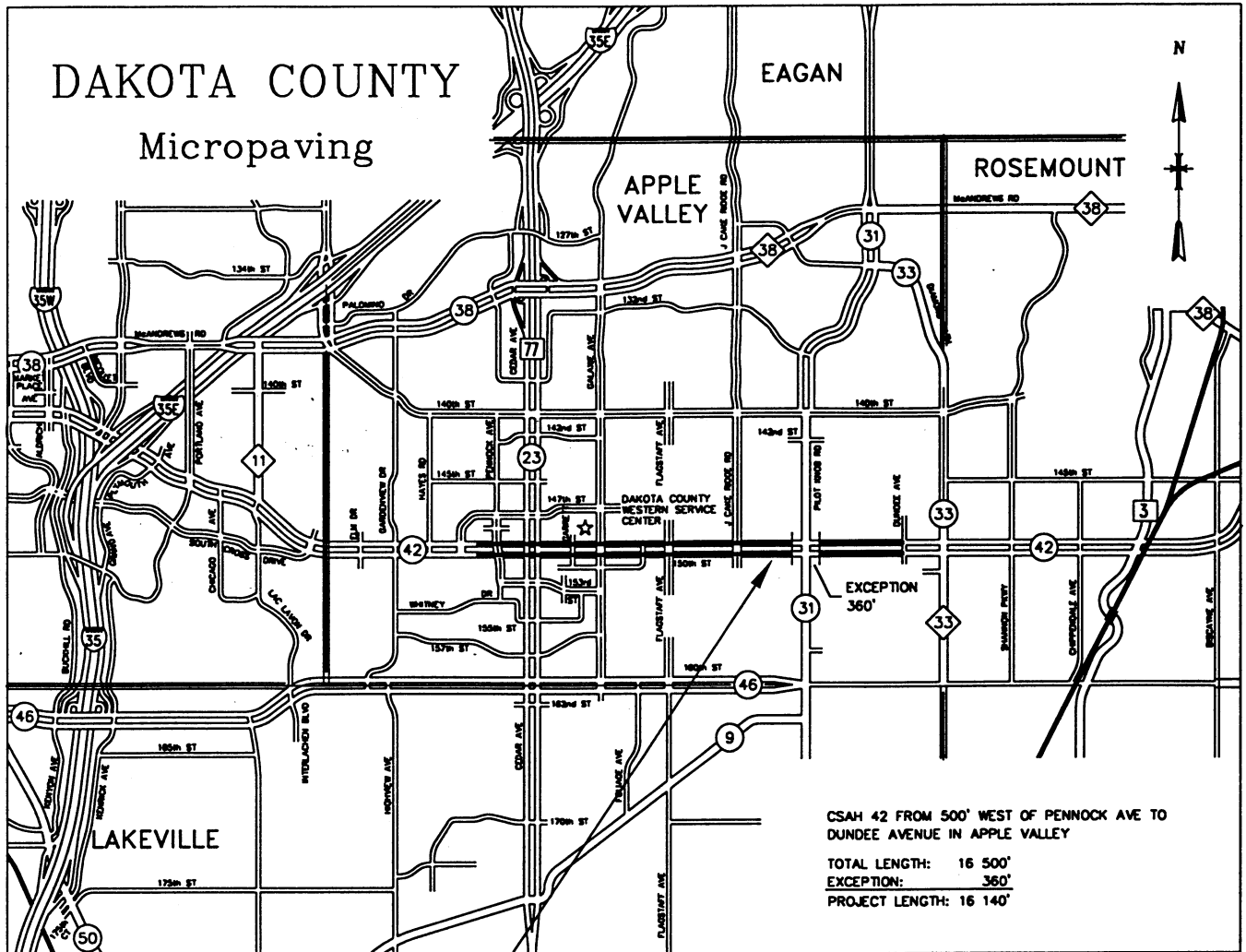
SUMMARY OF ESTIMATE QUANTITIES

ITEM NO.	ITEMS	UNITS	DAKOTA COUNTY 19-642-38		RAMSEY COUNTY 62-030-07			WASHINGTON COUNTY 82-030-04			CITY OF HASTINGS 130-090-02		CITY OF ROSEVILLE 160-090-06		TOTAL QUANTITY
			CSAH 42 QUANTITY	CSAH 47 QUANTITY	CSAH 27 QUANTITY	CSAH 28 QUANTITY	CSAH 23 QUANTITY	CSAH 5 QUANTITY	CSAH 19 QUANTITY	CSAH 16 QUANTITY	CSAH 7 QUANTITY	TRAIL SYS QUANTITY	TRAIL SYS QUANTITY	TRAIL SYS QUANTITY	
5	MICRO-SURFACING	TON		170.0	325.0									495.0	
1,5	MICRO-SURFACING - SPECIAL (SURFACE & WARRANTY)	TON	985.0			95.0			905.0	830.0				2 910.0	
1,4,5	MICRO-SURFACING - SPECIAL (SCRATCH & WARRANTY)	TON	915.0			90.0				780.0				1 875.0	
4,5	MICRO-SURFACING - SPECIAL (SCRATCH COURSE)	TON		155.0	305.0									460.0	
2,5	MICRO-SURFACING - SPECIAL (TRAIL & WARRANTY)	TON									21.0	22.0	24.0	157.0	
3	TRAFFIC CONTROL	LS	0.12	0.12	0.12	0.12	0.12	0.12	0.01	0.18	0.01	0.01	0.01	1.0	
2564.602	PAVEMENT MESSAGE (RIGHT ARROW) EPOXY	EACH	38.0				2.0	2.0		6.0				59.0	
2564.602	PAVEMENT MESSAGE (LEFT ARROW) EPOXY	EACH	44.0				2.0	2.0		11.0				59.0	
2564.602	PAVEMENT MESSAGE (RT ARROW) POLY PREFORM	EACH		1.0										1.0	
2564.602	PAVEMENT MESSAGE (LT ARROW) POLY PREFORM	EACH		2.0										2.0	
2564.602	PAVEMENT MESSAGE (STOP AHEAD) EPOXY	EACH											2.0	2.0	
2564.602	PAVEMENT MESSAGE (RR CROSSING) EPOXY	EACH											2.0	2.0	
2564.603	4" SOLID LINE WHITE - EPOXY	LF	33 900.0	1 035.0	7 300.0	135.0	135.0	135.0		18 900.0	62 500.0			123 905.0	
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	21 000.0	9 595.0		8 340.0	8 100.0	8 100.0		16 700.0	15 500.0			79 235.0	
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	6 270.0	1 480.0	520.0	840.0	135.0	135.0		3 340.0	100.0			12 685.0	
2564.603	4" BROKEN LINE YELLOW - EPOXY	LF			750.0									24 750.0	
2564.603	4" DOUBLE SOLID LINE YELLOW - EPOXY	LF			1 740.0									7 740.0	
2564.603	24" SOLID STOP LINE WHITE - EPOXY	LF	650.0							24.0	72.0			746.0	
2564.603	12" CROSSWALK LINE WHITE - EPOXY	LF	1 800.0											1 800.0	
2564.604	ZEBRA CROSSWALK WHITE - POLY PREFORMED	SF		540.0				410.0						950.0	
2564.604	ZEBRA CROSSWALK WHITE - EPOXY	SF			1 035.0	280.0				384.0				1 699.0	

BASIS FOR QUANTITIES (5)	
PLATE	DESCRIPTION
80001	Standard Barricades

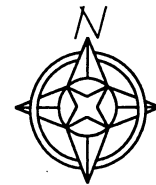
- The following standard plates approved by the Federal Highway Administration shall apply on this project
- NOTES:**
- (1) THIS INCLUDES WARRANTY.
 - (2) SMOOTH SURFACING FOR TRAIL USE.
 - (3) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS - JANUARY 1998".
 - (4) SCRATCH COURSE: A RUTFILL COURSE MAY BE USED IN LEU OF SCRATCH COURSE IF THE CONTRACTOR CAN DEMONSTRATE THAT A RUTFILL COURSE IS NEEDED TO REESTABLISH THE ROADWAY CROSS SECTION.
 - (5) QUANTITY BASED ON DRY AGGREGATE WEIGHT.

CERTIFIED BY PROFESSIONAL ENGINEER REG. NO. 21714 DATE: DECEMBER 15, 1999



PROJECT LOCATION

CSAH 42 FROM 500' WEST OF PENNOCK AVE TO DUNDEE AVE
BOTH DIRECTIONS



NO SCALE

Brian Gage

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

SP 19-642-38 - DAKOTA COUNTY CSAH 42
500' WEST OF PENNOCK AVE TO DUNDEE AVE

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	985.0		SURFACE COURSE
2356.609	MICRO-SURFACING - SPECIAL	TON	915.0		SCRATCH COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.602	PAVEMENT MESSAGE (RIGHT ARROW)-EPOXY	EACH	38.0		
2564.602	PAVEMENT MESSAGE (LEFT ARROW)-EPOXY	EACH	44.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	33 900.0		
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	21 000.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	6 270.0		
2564.603	24" STOP LINE WHITE - EPOXY	LF	650.0		
2564.603	12" CROSSWALK LINE WHITE - EPOXY	LF	1 800.0		

NOTES:

DAKOTA COUNTY CSAH 42 (FROM 500' WEST OF PENNOCK AVE TO DUNDEE AVENUE

SKIP 360 FEET OF ROADWAY AT CSAH 31

THIS IS A 4-LANE DIVIDED ROADWAY WITH RAISED MEDIAN AND CONCRETE CURB AND GUTTER

MICROSURFACE THE DRIVING LANES AND SHOULDERS WITH SCRATCH COURSE AND SURFACE COURSE

MICROSURFACE INCLUDES WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714



ENGINEER

**SP 19-642-38 DAKOTA COUNTY CSAH 42
FROM 500' WEST OF PENNOCK AVE TO DUNDEE AVE**

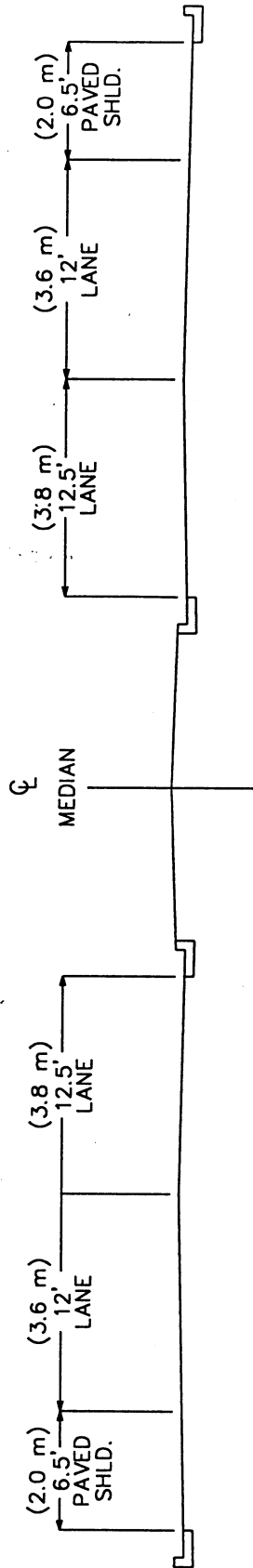
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 4 OF 40 SHEETS

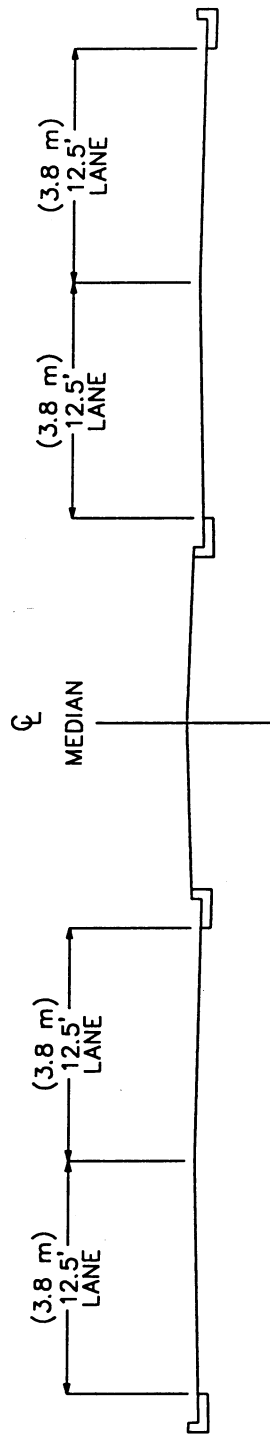
TYPICAL SECTION w/o TURN LANES

CSAH 42
Garrett Ave To Flagstaff Ave



TYPICAL SECTION w/o TURN LANES

CSAH 42
500' west of Pennock Ave to Garrett Ave
Flagstaff Ave to Dundee Ave



NO 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.

DATE: DECEMBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

SP 19-642-38 - DAKOTA COUNTY CSAH 42
FROM 500' WEST OF PENNOCK AVE TO DUNDEE AVE

TYPICAL SECTION

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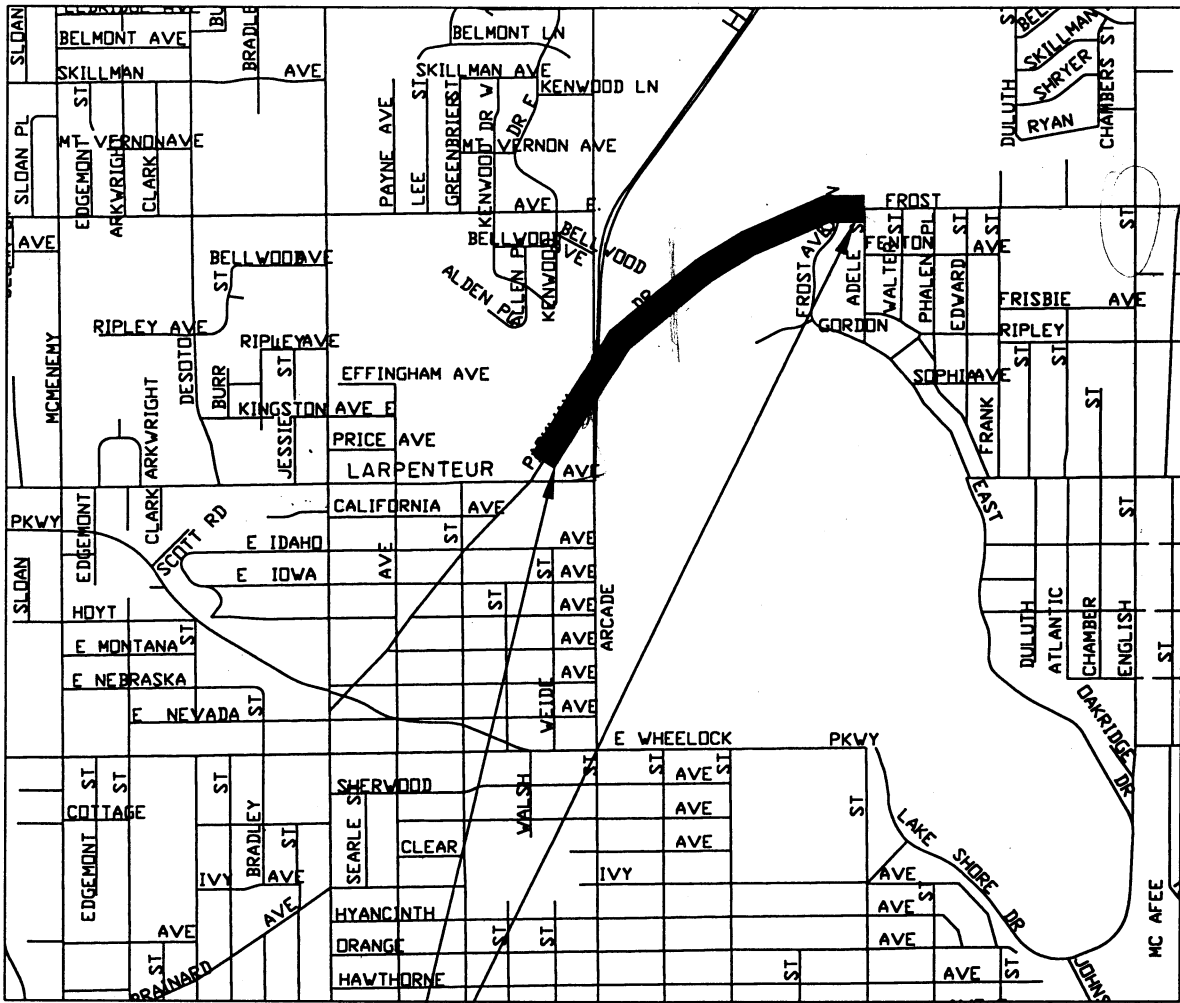
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**SP 19-642-38 - DAKOTA COUNTY CSAH 42
FROM 500' WEST OF PENNOCK AVE TO DUNDEE AVE**

TYPICAL SECTION

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 7 OF 40 SHEETS



PROJECT LOCATION

PARKWAY DR FROM 600' NE OF LARPEN TEUR AVE TO ADELE ST



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Handwritten Signature]
ENGINEER

**SP 62-030-07 - RAMSEY COUNTY CSAH 27 & CSAH 28
PARKWAY DR FROM 600' SE OF LARPEN TEUR AVE TO ADELE ST**

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING	TON	170.0		SURFACE COURSE
2356.609	MICRO-SURFACING - SPECIAL	TON	155.0		SCRATCH COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.602	PVMT MESSAGE (RT ARROW)-POLY PREFORM	EACH	1.0		
2564.602	PVMT MESSAGE (LT ARROW)-POLY PREFORM	EACH	2.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	1 035.0		
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	9 595.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	1 480.0		
2564.604	ZEBRA CROSSWALK - WHITE POLY PREFORMED	SF	540.0		

NOTES:

RAMSEY COUNTY CSAH 27 & CSAH 28 (PARKWAY DRIVE FROM 600' NE OF LARPEN TEUR AVE TO ADELE ST)

THIS IS A 4-LANE DIVIDED ROADWAY WITH TURN LANES AND CONCRETE CURB AND GUTTER

MICROSURFACE THE ROADWAY WITH SCRATCH COURSE AND SURFACING COURSE

NO WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY

STRIPE CROSSWALKS AND PAVEMENT MESSAGES WITH POLY PREFORMED

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

SP 62-030-07 RAMSEY COUNTY CSAH 27 & CSAH 28
PARKWAY DRIVE - 600' SE OF LARPEN TEUR AVE TO ADELE ST

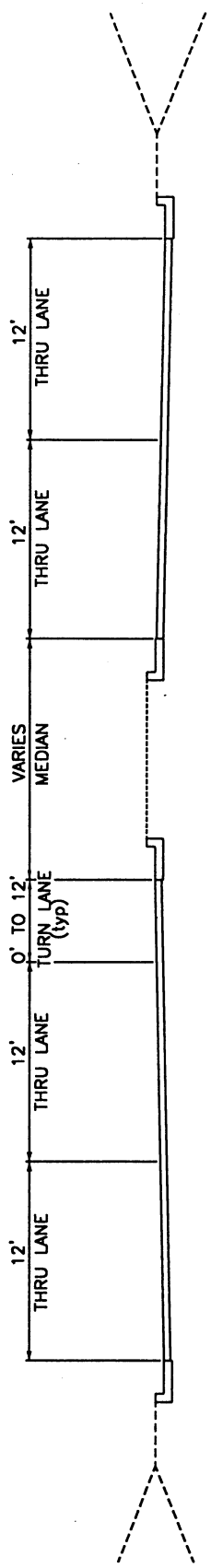
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06


SHEET NO. 9 OF 40 SHEETS

TYPICAL SECTION

CSAH 27 & CSAH 28
600' NE OF LARPEN TEUR AVE TO ADELE ST



NO SCALE

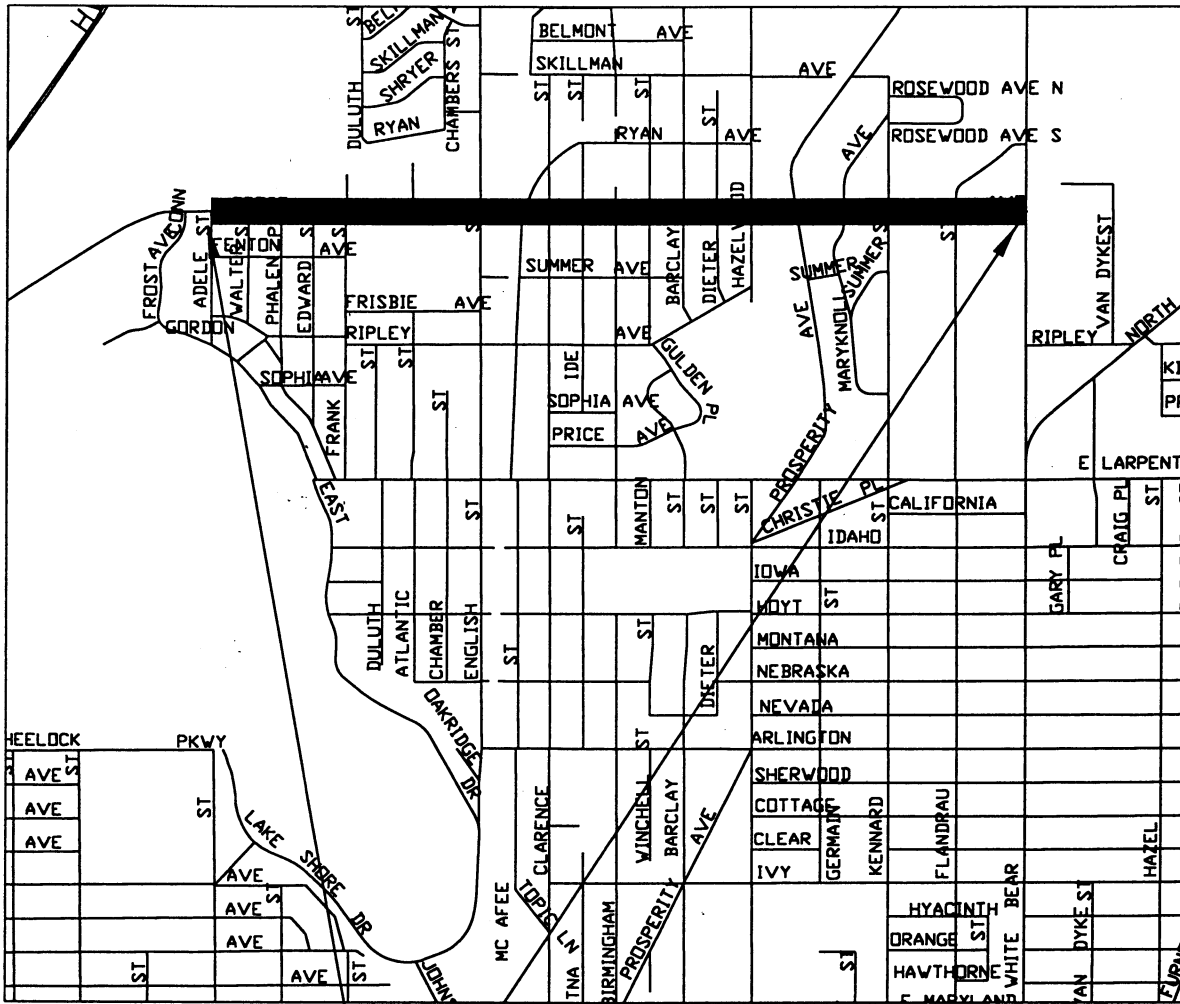
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.
DATE: OCTOBER 8, 1999 REG. NO. 21714

ENGINEER

SP 62-030-07 - RAMSEY COUNTY CSAH 27 & CSAH 28
PARKWAY DRIVE - 600' SE OF LARPEN TEUR AVE TO ADELE ST

TYPICAL SECTION

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 10 OF 40 SHEETS



PROJECT LOCATION

FROST AVE FROM ADELE ST TO WHITE BEAR AVE



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

**SP 62-030-07 - RAMSEY COUNTY CSAH 28
FROST AVE FROM ADELE ST TO WHITE BEAR AVE**

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING	TON	325.0		SURFACE COURSE
2356.609	MICRO-SURFACING - SPECIAL	TON	305.0		SCRATCH COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	7 300.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	520.0		
2564.603	4" BROKEN LINE YELLOW - EPOXY	LF	750.0		
2564.603	4" DOUBLE SOLID LINE YELLOW - EPOXY	LF	1 740.0		
2564.604	ZEBRA CROSSWALK - WHITE EPOXY	SF	1 035.0		

NOTES:

RAMSEY COUNTY CSAH 28 (FROST AVENUE FROM ADELE ST TO WHITE BEAR AVE)

THIS IS A 4-LANE ROADWAY WITH CONCRETE CURB AND GUTTER

MICROSURFACE THE ROADWAY WITH SCRATCH COURSE AND SURFACING COURSE

NO WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY.

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714



ENGINEER

SP 62-030-07 RAMSEY COUNTY CSAH 28

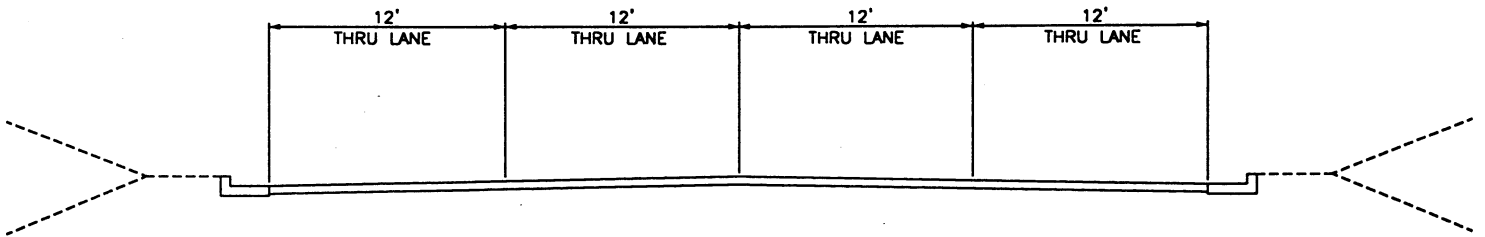
FROST AVENUE - ADELE ST TO WHITE BEAR AVE

SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 12 OF 40 SHEETS

TYPICAL SECTION
CSAH 28
ADELE ST TO WHITE BEAR AVE



NO SCALE

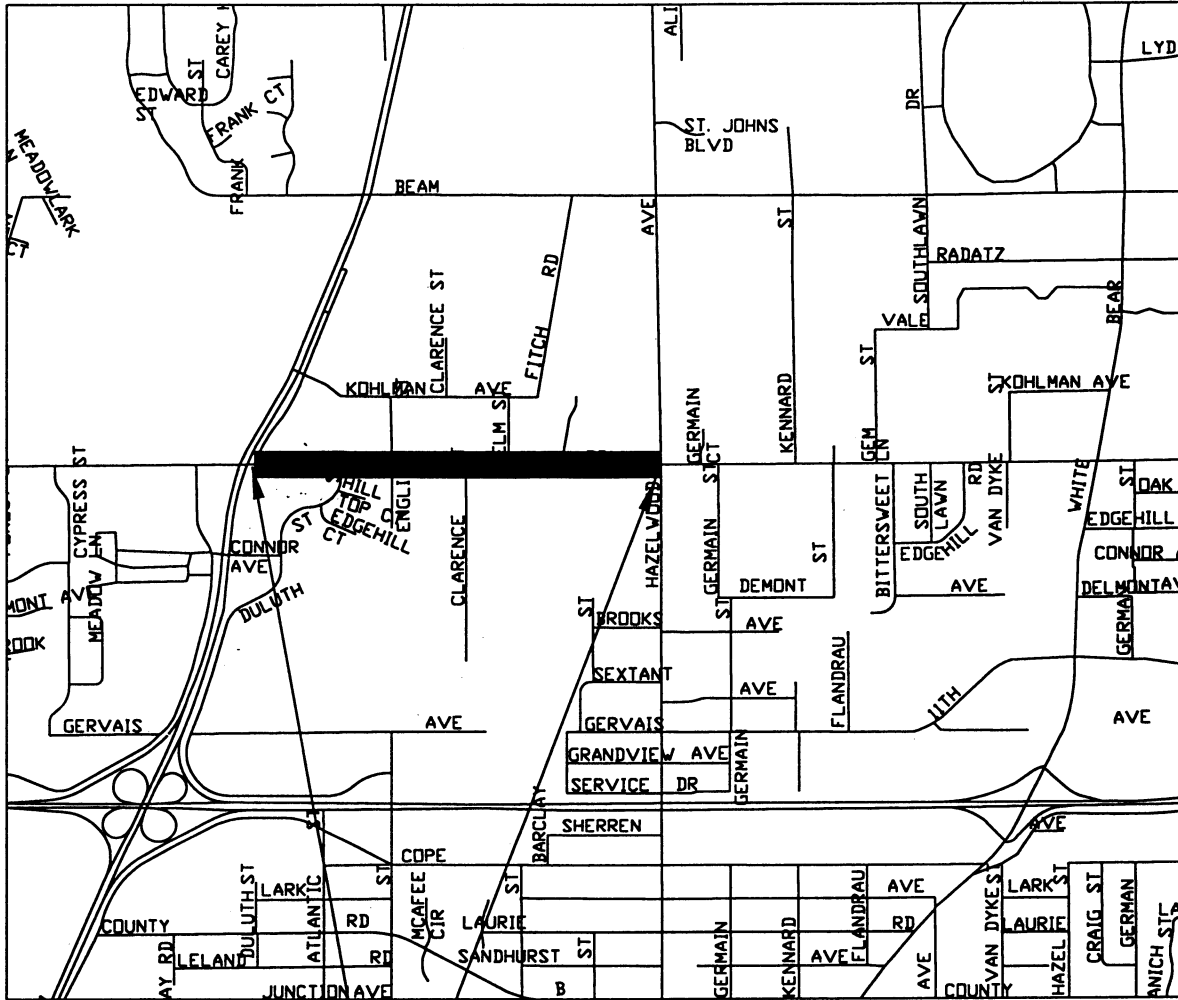
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.

DATE: OCTOBER 8, 1999 REG. NO. 21714


ENGINEER

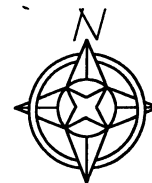
SP 62-030-07 - RAMSEY COUNTY CSAH 28
ADELE ST TO WHITE BEAR AVE

TYPICAL SECTION



PROJECT LOCATION

COUNTY ROAD C FROM STATE HIGHWAY 61 TO HAZELWOOD ST



NO 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.

DATE: OCTOBER 8, 1999 - REG. NO. 21714

[Handwritten Signature]
ENGINEER

**SP 62-030-07 - RAMSEY COUNTY CSAH 23
COUNTY ROAD C FROM STATE HIGHWAY 61 TO HAZELWOOD ST**

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	95.0		SURFACING COURSE
2356.609	MICRO-SURFACING - SPECIAL	TON	90.0		SCRATCH COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.602	PAVEMENT MESSAGE (RIGHT ARROW)-EPOXY	EACH	2.0		
2564.602	PAVEMENT MESSAGE (LEFT ARROW) - EPOXY	EACH	2.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	135.0		
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	8 340.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	840.0		
2564.604	ZEBRA CROSSWALK - WHITE EPOXY	SF	280.0		

NOTES:

RAMSEY COUNTY CSAH 23 (COUNTY ROAD C FROM TH 61 TO HAZELWOOD ST)

THIS IS A 2 LANE ROADWAY WITH 6' TO 12' PAVED SHOULDERS AND CONCRETE CURB AND GUTTER

MICROSURFACE THE ROADWAY WITH A SINGLE COURSE

MICROSURFACE INCLUDES WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY .

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.

DATE: DECEMBER 8, 1990 REG. NO. 21714


ENGINEER

**SP 62-030-07 RAMSEY COUNTY CSAH 23
COUNTY ROAD C - TH 61 TO HAZELWOOD ST**

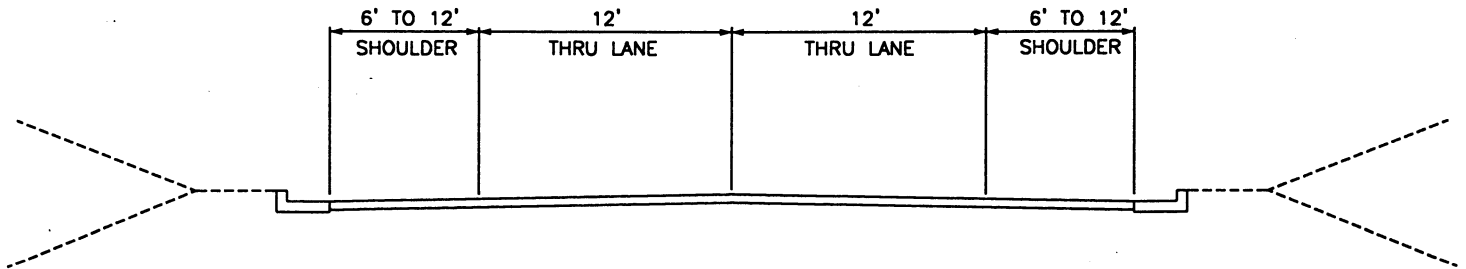
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 15 OF 40 SHEETS

TYPICAL SECTION

CSAH 23
TH 61 TO HAZELWOOD ST



NO SCALE

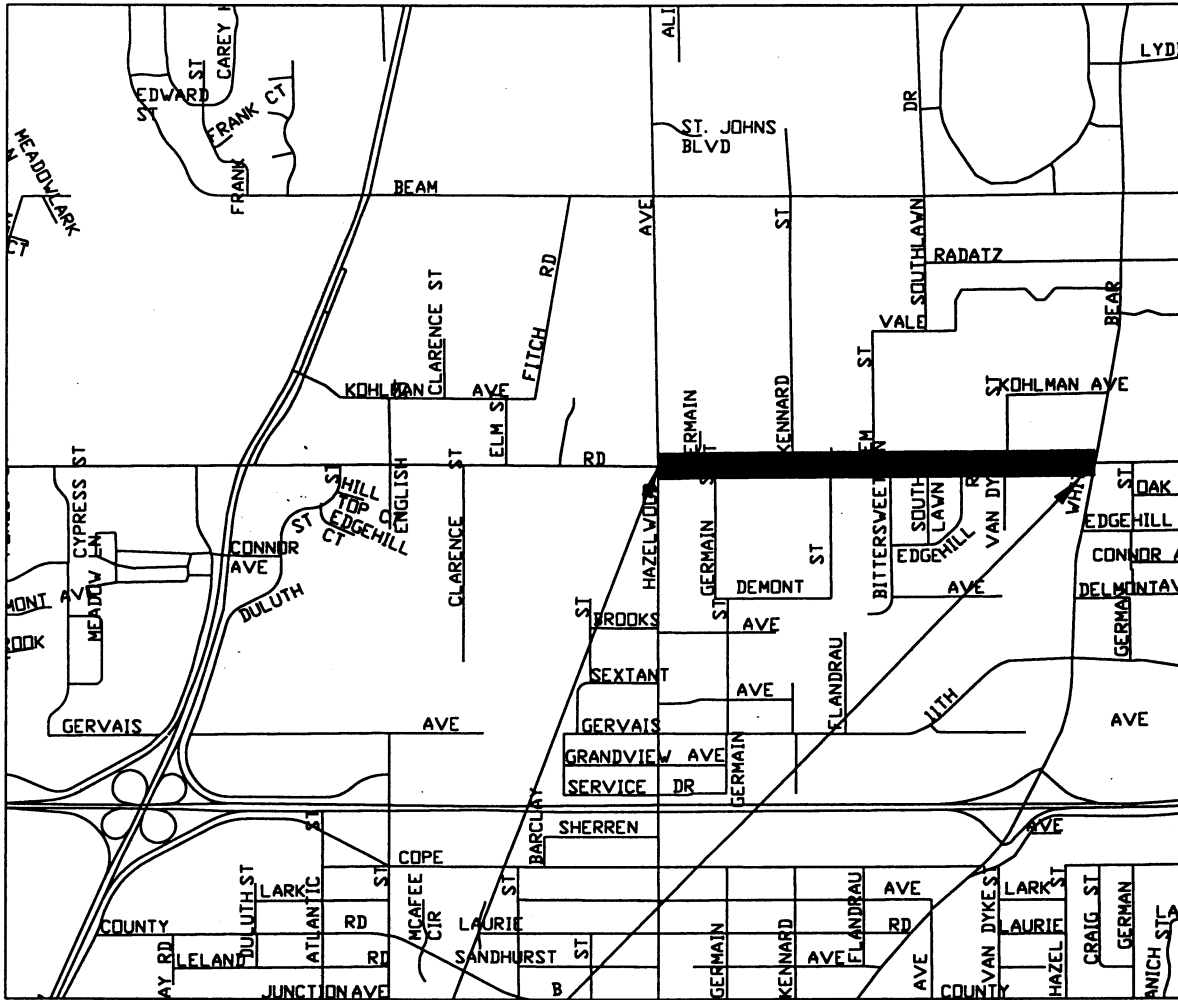
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.

DATE: OCTOBER 8, 1999 REG. NO. 21714


ENGINEER

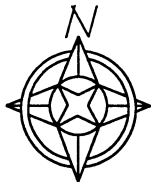
SP 62-030-07 - RAMSEY COUNTY CSAH 23
TH 61 TO HAZELWOOD ST

TYPICAL SECTION



PROJECT LOCATION

COUNTY ROAD C FROM HAZELWOOD ST TO 80 FEET WEST OF WHITE BEAR AVE



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

SP 62-000-00 RAMSEY COUNTY CSAH 23

COUNTY ROAD C FROM HAZELWOOD ST TO 80' WEST OF WHITE BEAR AVE

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	95.0		SURFACE COURSE
2356.609	MICRO-SURFACING - SPECIAL	TON	90.0		SCRATCH COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.602	PAVEMENT MESSAGE (RIGHT ARROW)-EPOXY	EACH	2.0		
2564.602	PAVEMENT MESSAGE (LEFT ARROW) - EPOXY	EACH	2.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	135.0		
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	8 100.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	135.0		
2564.604	ZEBRA CROSSWALK - WHITE POLY PREFORMED	SF	410.0		

NOTES:

RAMSEY COUNTY CSAH 23 (COUNTY ROAD C FROM HAZELWOOD ST TO 80' WEST OF WHITE BEAR AVE)

THIS IS A 2 LANE ROADWAY WITH 4' TO 12' PAVED SHOULDERS AND CONCRETE CURB AND GUTTER

MICROSURFACE THE DRIVING LANES AND SHOULDERS WITH A SINGLE COURSE

MICROSURFACE INCLUDES WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY

STRIPE THE CROSSWALKS SHALL BE POLY PREFORMED

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

SP 62-030-07 RAMSEY COUNTY CSAH 23

CTY RD C - HAZELWOOD ST TO 80' WEST OF WHITE BEAR AVE

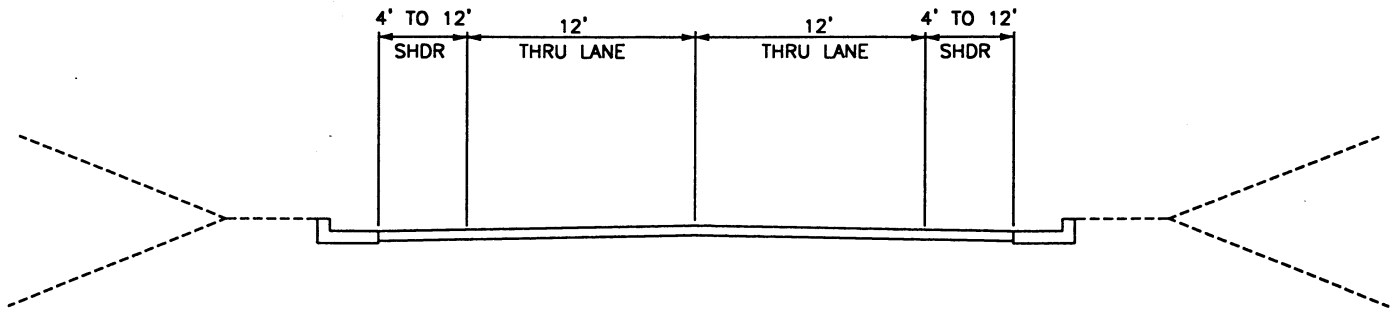
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 18 OF 40 SHEETS

TYPICAL SECTION

CSAH 23
HAZELWOOD ST TO 80 FEET WEST OF WHITE BEAR AVE



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

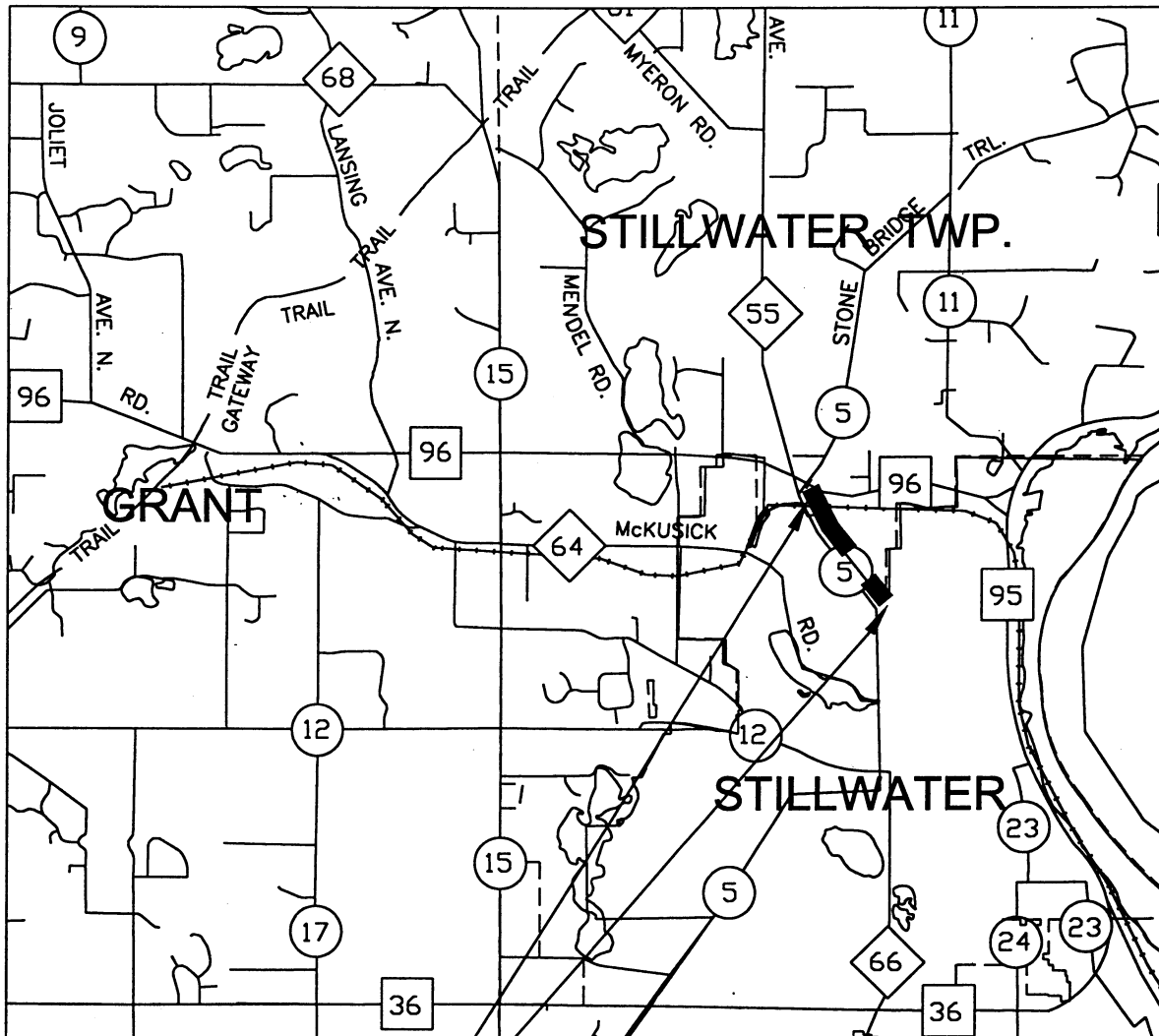

ENGINEER

SP 62-030-07 RAMSEY COUNTY CSAH 23
HAZELWOOD ST TO 80' WEST OF WHITE BEAR AVE

TYPICAL SECTION

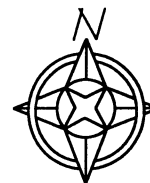
SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 19 OF 40 SHEETS



PROJECT LOCATION

CSAH 5 TRAIL - OWENS ST N TO TH 96



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

**SP 82-030-04 WASHINGTON COUNTY CSAH 5
STONEBRIDGE TRAIL - OWENS ST N TO TH 96**

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	21.0		TRAIL
2563.601	TRAFFIC CONTROL	LS	1.0		

NOTES:

WASHINGTON COUNTY CSAH 5 TRAIL (STONEBRIDGE TRAIL FROM OWEN AVENUE TO STATE TRUNK HIGHWAY 96)

THIS IS AN 8-FOOT WIDE TRAIL.

MICROSURFACE THE TRAIL WITH A SINGLE COURSE

USE TYPE A AGGREGATE

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

**SP 82-030-04 WASHINGTON COUNTY CSAH 5
STONEBRIDGE TRAIL - OWENS ST N TO TH 96**

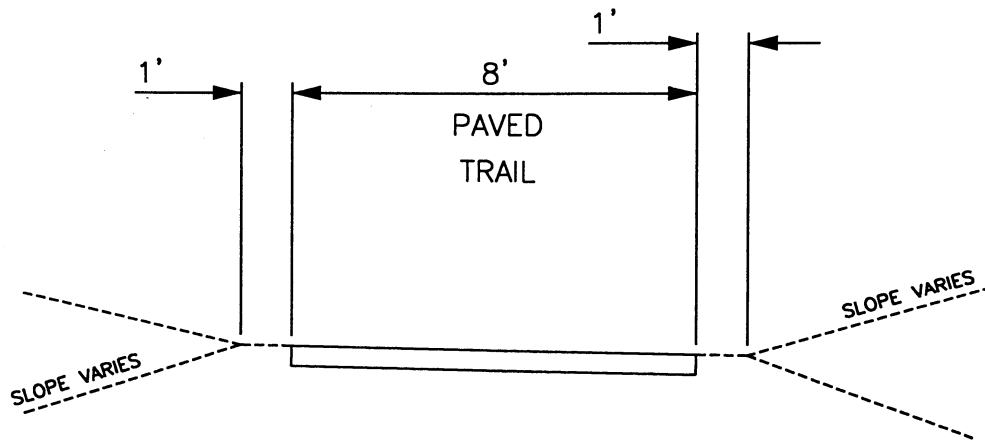
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 21 OF 40 SHEETS

TYPICAL SECTION

CSAH 5 - OWENS ST TO TH 96



NO SCALE

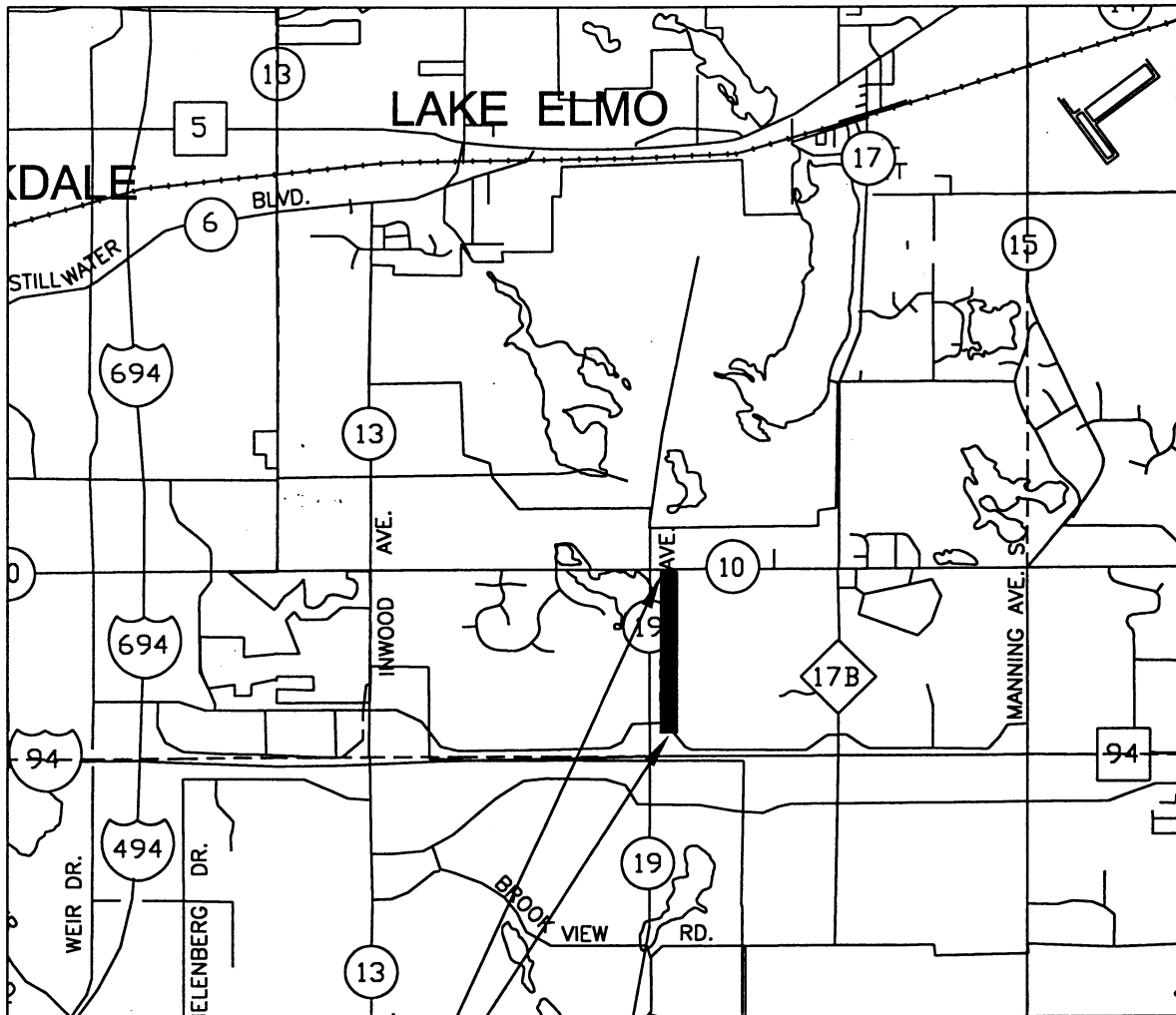
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.

DATE: OCTOBER 8, 1999 REG. NO. 21714


ENGINEER

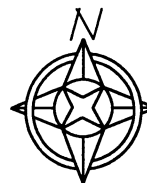
SP 82-030-04 WASHINGTON COUNTY CSAH 5
STONEBRIDGE TRAIL - OWENS ST N TO TH 96

TYPICAL SECTION



PROJECT LOCATION

KEATS AVENUE TRAIL - HUDSON BLVD TO 10TH STREET NORTH



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Handwritten Signature]
ENGINEER

**SP 82-030-04 WASHINGTON COUNTY CSAH 19
KEATS AVENUE - HUDSON BLVD TO 10TH STREET NORTH**

LOCATION MAP

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 23 OF 40 SHEETS

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	22.0		TRAIL
2563.601	TRAFFIC CONTROL	LS	1.0		

NOTES:

WASHINGTON COUNTY CSAH 19 TRAIL (KEATS AVENUE FROM HUDSON BLVD TO 10TH STREET NORTH)

THIS IS AN 8-FOOT WIDE TRAIL.

MICROSURFACE THE TRAIL WITH A SINGLE COURSE

USE TYPE A AGGREGATE

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.

DATE: DECEMBER 8, 1998 REG. NO. 21714


ENGINEER

SP 82-030-04 WASHINGTON COUNTY CSAH 19

KEATS AVENUE - HUDSON BLVD TO 10TH STREET NORTH

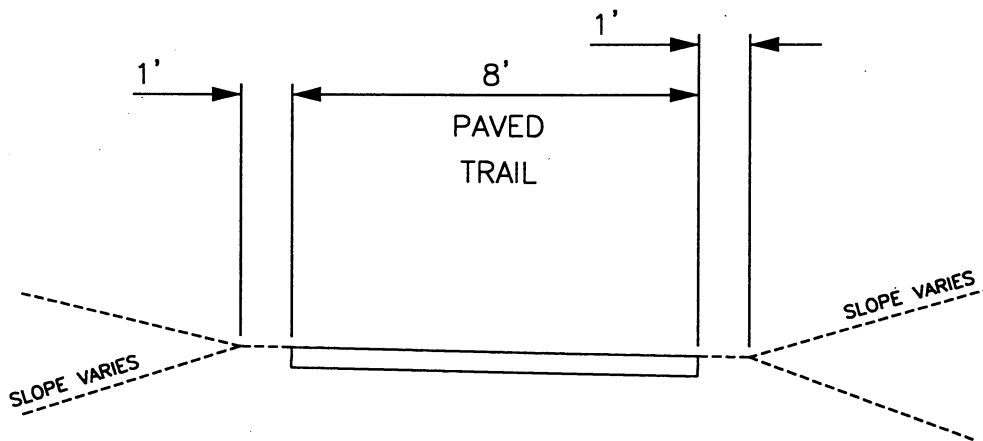
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 24 OF 40 SHEETS

TYPICAL SECTION

CSAH 19 – HUDSON BLVD TO 10TH STREET NORTH



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

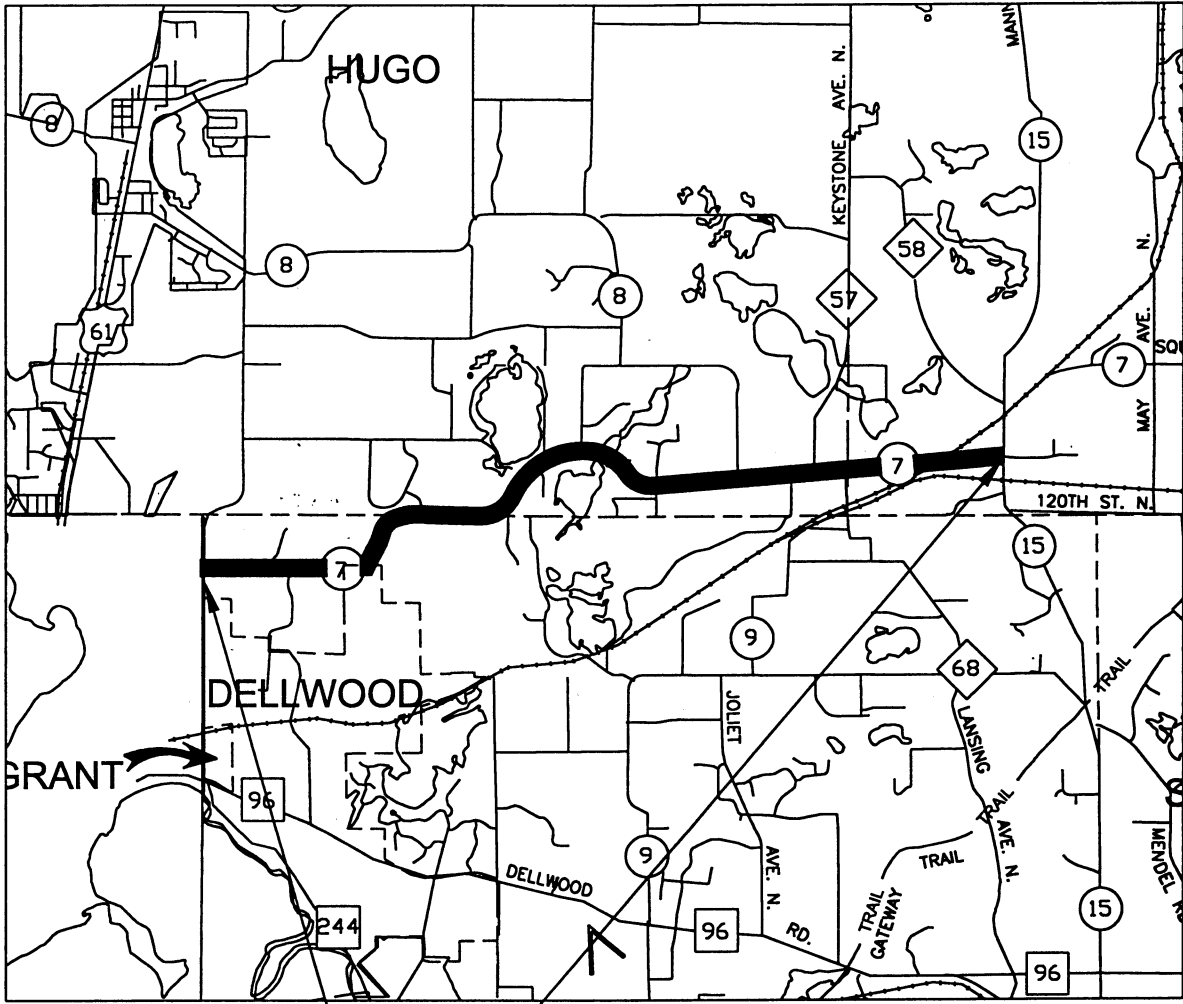

ENGINEER

SP 82-030-04 WASHINGTON COUNTY CSAH 19
KEATS AVENUE - HUDSON BLVD TO 10TH STREET NORTH

TYPICAL SECTION

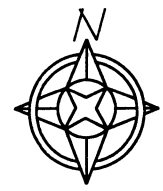
SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 25 OF 40 SHEETS



PROJECT LOCATION

FROM WEST COUNTY LINE TO MANNING TRAIL NORTH



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

**SP 82-030-04 WASHINGTON COUNTY CSAH 7
FROM WEST COUNTY LINE TO MANNING TRAIL NORTH**

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	830.0		SURFACE COURSE
2356.609	MICRO-SURFACING - SPECIAL	TON	780.0		SCRATCH COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.602	PAVEMENT MESSAGE (RIGHT ARROW)-EPOXY	EACH	6.0		
2564.602	PAVEMENT MESSAGE (RR CROSSING) - EPOXY	EACH	2.0		
2564.602	PAVEMENT MESSAGE (STOP AHEAD)-EPOXY	EACH	2.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	62 500.0		
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	15 500.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	100.0		
2564.603	4" BROKEN LINE YELLOW - EPOXY	LF	24 000.0		
2564.603	4" DOUBLE SOLID LINE YELLOW - EPOXY	LF	6 000.0		
2564.603	24" SOLID STOP LINE WHITE - EPOXY	LF	72.0		

NOTES:

WASHINGTON COUNTY CSAH 7 (FROM WEST COUNTY LINE TO MANNING TRAIL NORTH)

THIS IS AN 2-LANE ROADWAY WITH INTERMIDT SHOULDERS VARYING FROM 0 - 8 FEET AND BYPASS LANES

MICROSURFACE THE ROADWAY AND SHOULDERS WITH SCRATCH COUSE AND SURFACING COURSE

MICROSURFACE INCLUDES WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

**SP 82-030-04 WASHINGTON COUNTY CSAH 7
FROM WEST COUNTY LINE TO MANNING TRAIL NORTH**

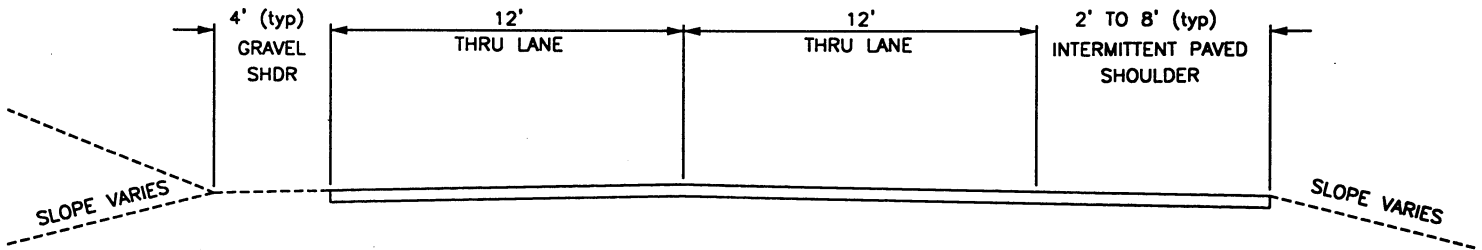
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 27 OF 40 SHEETS

TYPICAL SECTION


CSAH 7
WEST COUNTY LINE TO MANNING TRAIL



NO SCALE

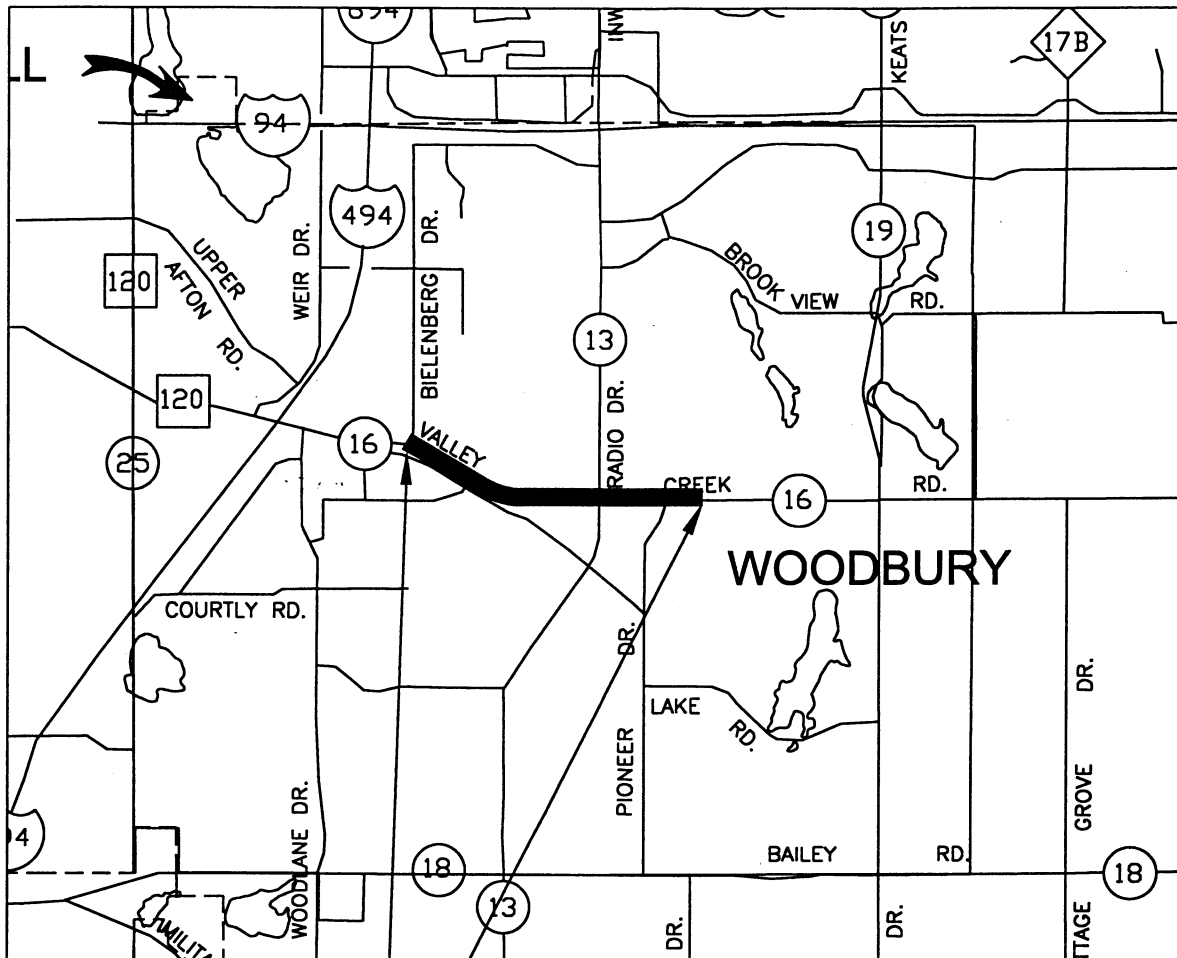
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.

DATE: OCTOBER 8, 1999 REG. NO. 21714


ENGINEER

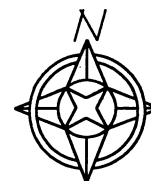
SP 82-030-04 WASHINGTON COUNTY CSAH 7
FROM WEST COUNTY LINE TO MANNING TRAIL NORTH

TYPICAL SECTION



PROJECT LOCATION

VALLEY CREEK RD FROM BIELENBERG DR TO INTERLACHEN PWY



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Handwritten Signature]
ENGINEER

SP 82-030-04 WASHINGTON COUNTY CSAH 16

VALLEY CREEK RD FROM BIELENBERG DR TO INTERLACHEN PWY

LOCATION MAP

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 29 OF 40 SHEETS

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	905.0		SURFACE COURSE
2563.601	TRAFFIC CONTROL	LS	1.0		
2564.602	PAVEMENT MESSAGE (LEFT ARROW)-EPOXY	EACH	11.0		
2564.602	PAVEMENT MESSAGE (RIGHT ARROW) - EPOXY	EACH	11.0		
2564.603	4" SOLID LINE WHITE - EPOXY	LF	18 900.0		
2564.603	4" SOLID LINE YELLOW - EPOXY	LF	16 700.0		
2564.603	4" BROKEN LINE WHITE - EPOXY	LF	3 340.0		
2564.603	24" SOLID STOP LINE WHITE - EPOXY	LF	24.0		
2564.604	ZEBRA CROSSWALK WHITE - EPOXY	SF	384.0		

NOTES:

WASHINGTON COUNTY CSAH 16 (VALLEY CREEK ROAD FROM BIELENBERG DR TO INTERLACHEN PWY)

THIS IS AN 4-LANE DIVIDED ROADWAY WITH TURN LANES, SHOULDERS VARYING FROM 8 TO 10 FEET AND CONCRETE CURB AND GUTTER

MICROSURFACE THE ROADWAY WITH A SINGLE COURSE

MICROSURFACE INCLUDES WARRANTY

USE TYPE B AGGREGATE

STRIPE THE ROADWAY WITH EPOXY

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

SP 82-030-04 WASHINGTON COUNTY CSAH 16

VALLEY CREEK RD FROM BIELENBERG DR TO INTERLACHEN PWY

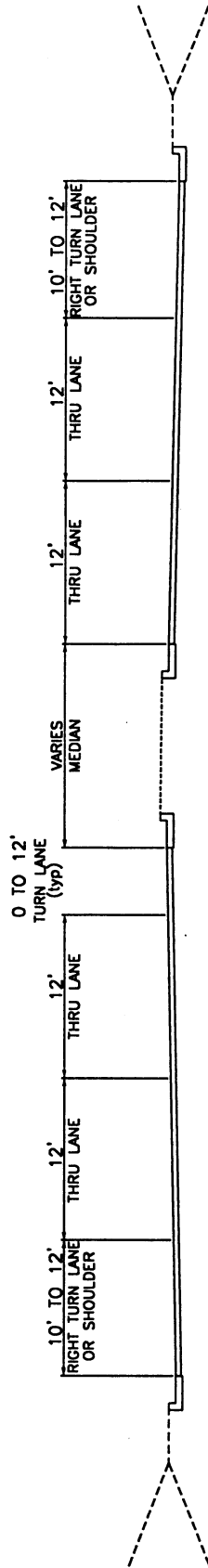
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 30 OF 40 SHEETS

TYPICAL SECTION

CSAH 16
BIELBERG AVE TO INTERLACHEN PARKWAY



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

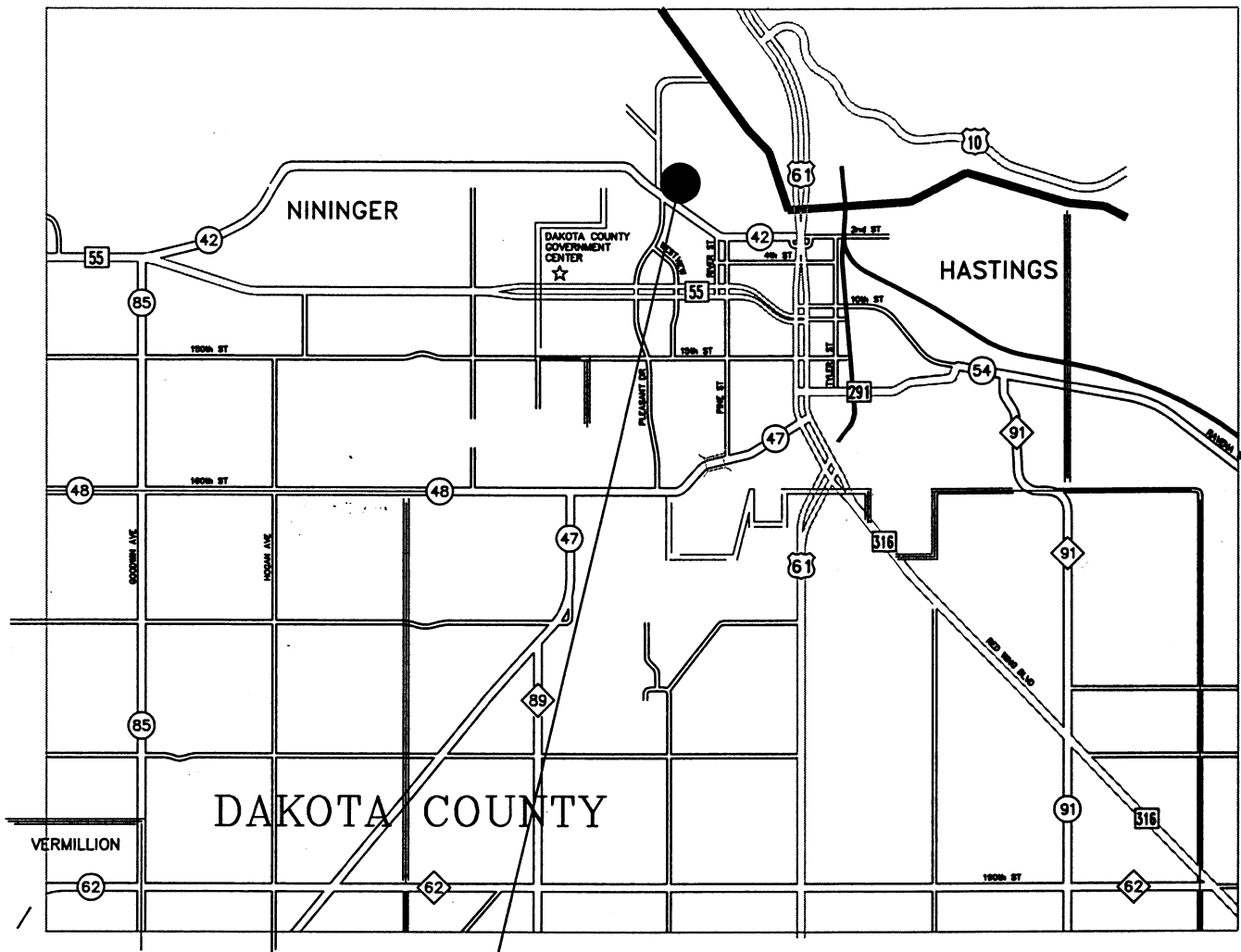

ENGINEER

SP 82-030-04 WASHINGTON COUNTY CSAH 16
VALLEY CREEK RD FROM BIELENBERG DR TO INTERLACHEN PWY

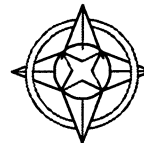
TYPICAL SECTION

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 31 OF 40 SHEETS



**PROJECT LOCATION
WOODLAND SCENIC TRAIL**



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

**SP 130-090-02 CITY OF HASTINGS TRAIL SYSTEM
WOODLAND SCENIC TRAIL**

LOCATION MAP

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 32 OF 40 SHEETS

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	24.0		TRAIL
2563.601	TRAFFIC CONTROL	LS	1.0		

NOTES:

CITY OF HASTINGS TRAIL (WOODLAND SCENIC TRAIL)

THIS IS AN 10-FOOT WIDE TRAIL.

MICROSURFACE THE TRAIL WITH A SINGLE COURSE

USE TYPE A AGGREGATE

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

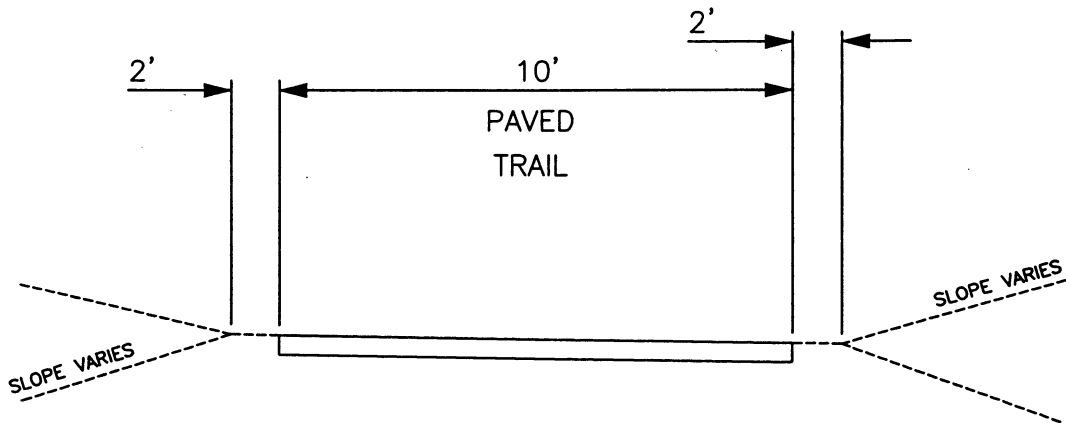
**SP 130-090-02 CITY OF HASTINGS TRAIL
WOODLAND SCENIC TRAIL**

SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 33 OF 40 SHEETS

TYPICAL SECTION
WOODLAND SCENIC TRAIL



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

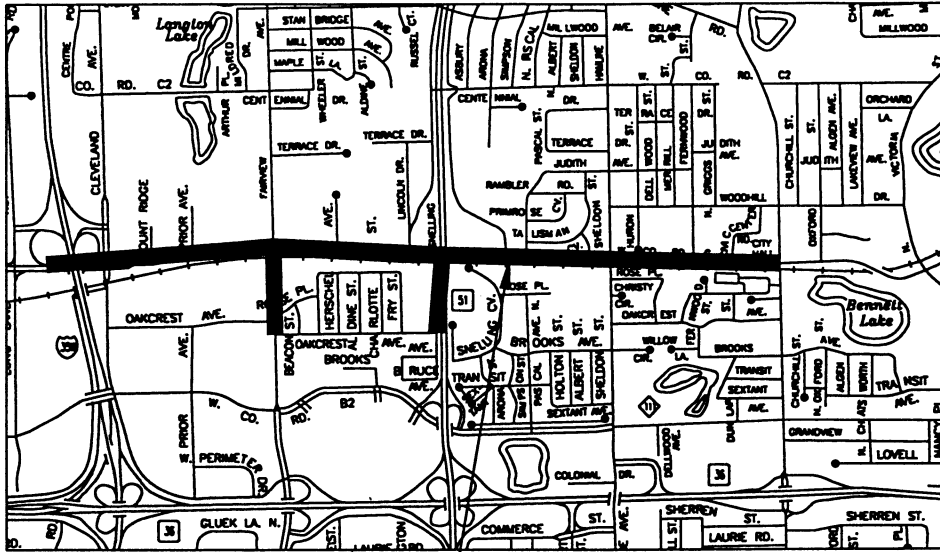

ENGINEER

SP 130-090-02 CITY OF HASTINGS TRAIL SYSTEM
WOODLAND SCENIC TRAIL

TYPICAL SECTION

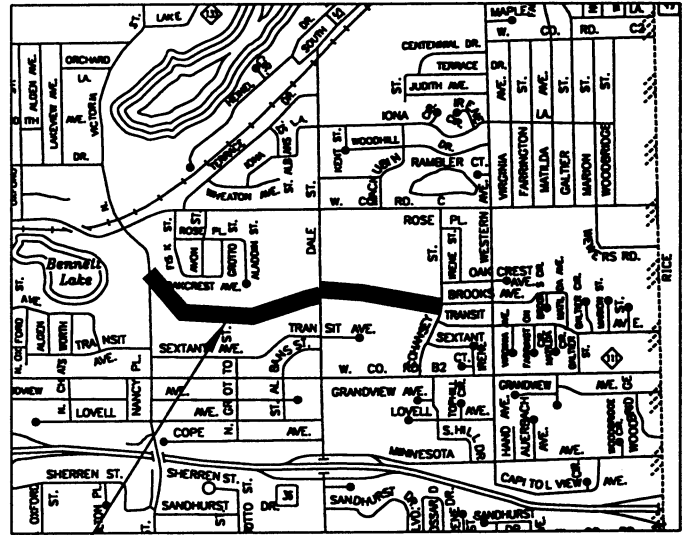
SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 34 OF 40 SHEETS



PROJECT LOCATIONS

CTY RD C TRAIL FROM CLEVELAND AVE
TO LEXINGTON AVE
FAIRVIEW AVE TRAIL FROM CTY RD C TO
OAKCREST AVE
SNELLING AVE TRAIL FROM CTY RD C TO
OAKCREST AVE



PROJECT LOCATIONS

CENTRAL PARK TRAIL FROM VICTORIA ST
TO DALE ST
NATURE CENTER TRAIL FROM DALE ST TO
COHANSEY ST



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

ENGINEER

**SP 160-090-06 CITY OF ROSEVILLE TRAIL SYSTEM
CTY RD C, FAIRVIEW AVE, SNELLING AVE, CENTRAL PARK, NATURE CENTER**

LOCATION MAP

ITEM NUMBER	ITEM	UNITS	ESTIMATED QUANTITY	FINAL QUANTITY	COMMENTS
2356.609	MICRO-SURFACING - SPECIAL	TON	90.0		TRAIL
2563.601	TRAFFIC CONTROL	LS	1.0		

NOTES:

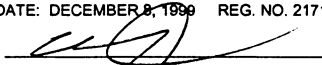
CITY OF ROSEVILLE COUNTY ROAD C TRAIL (FROM CLEVELAND AVENUE TO LEXINGTON AVENUE)	10 FT WIDE TRAIL
CITY OF ROSEVILLE FAIRVIEW AVENUE TRAIL (FROM COUNTY ROAD C TO OAKCREST AVENUE)	8 FT WIDE TRAIL
CITY OF ROSEVILLE SNELLING AVENUE TRAIL (FROM COUNTY ROAD C TO OAKCREST AVENUE)	10 FT WIDE TRAIL
CITY OF ROSEVILLE CENTRAL PARK TRAIL (FROM VICTORIA STREET TO DALE STREET)	8 FT WIDE TRAIL
CITY OF ROSEVILLE NATURE CENTER TRAIL (FROM DALE STREET TO COHANSEY STREET)	8 FT WIDE TRAIL

MICROSURFACE THE TRAIL WITH A SINGLE COURSE

USE TYPE A AGGREGATE

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.

DATE: DECEMBER 8, 1999 REG. NO. 21714


ENGINEER

SP 160-090-06 CITY OF ROSEVILLE TRAIL SYSTEM

CTY ROAD C, FAIRVIEW AVE, SNELLING AVE, CENTRAL PARK, NATURE CTR

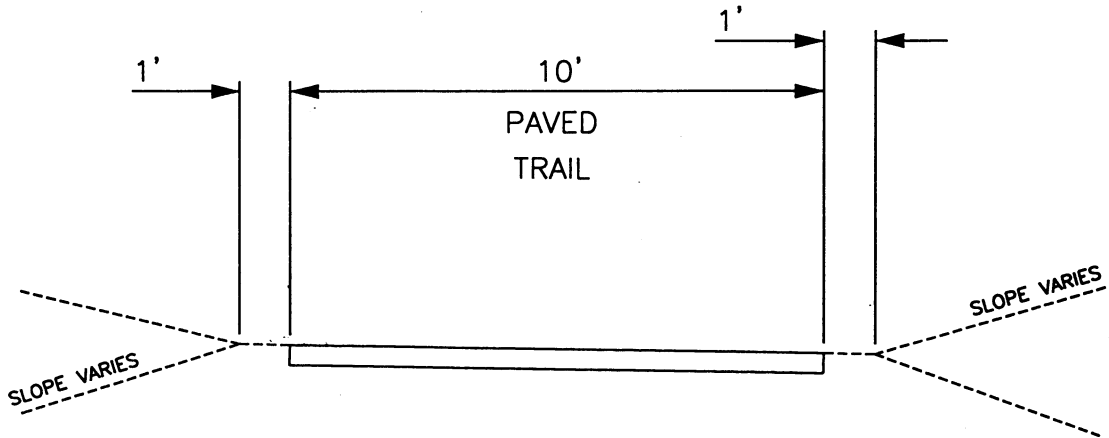
SUMMARY OF QUANTITIES

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

SHEET NO. 36 OF 40 SHEETS

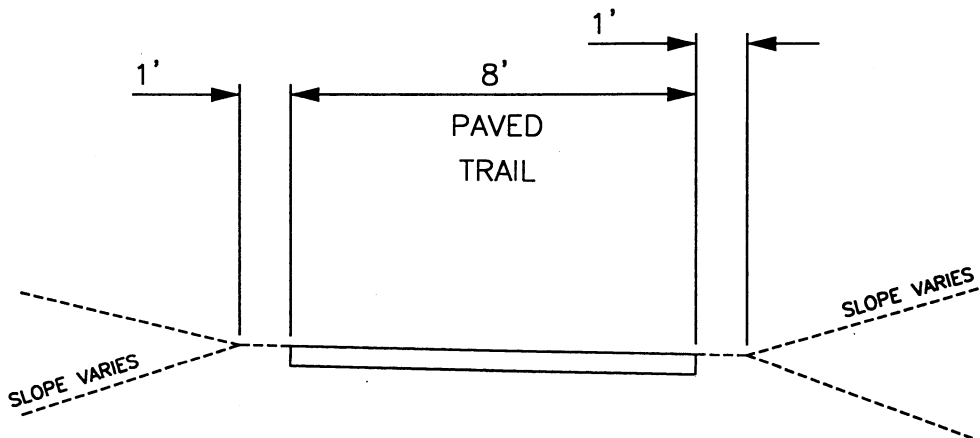
TYPICAL SECTION

COUNTY ROAD C – CLEVELAND AVE TO LEXINGTON AVE
SNELLING AVE – COUNTY ROAD C TO OAKCREST AVE



TYPICAL SECTION

FAIRVIEW AVE – COUNTY ROAD C TO OAKCREST AVE
CENTRAL PARK TRAIL – VICTORIA ST TO DALE ST
NATURE CENTER TRAIL – DALE ST TO COHANSEY ST



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

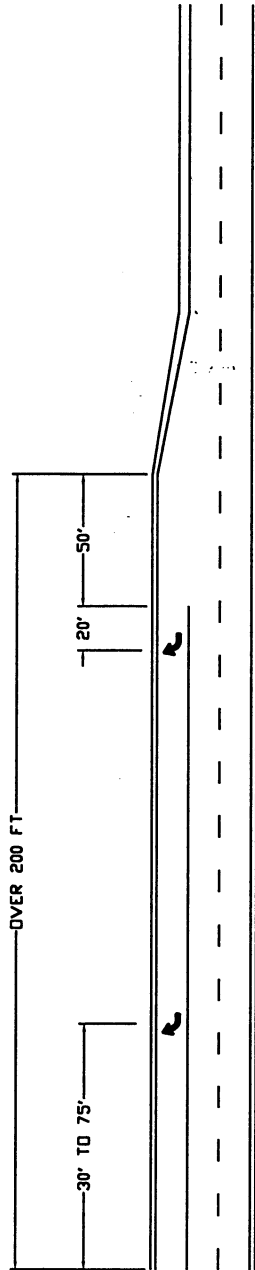

ENGINEER

SP 160-090-06 CITY OF ROSEVILLE TRAIL SYSTEM

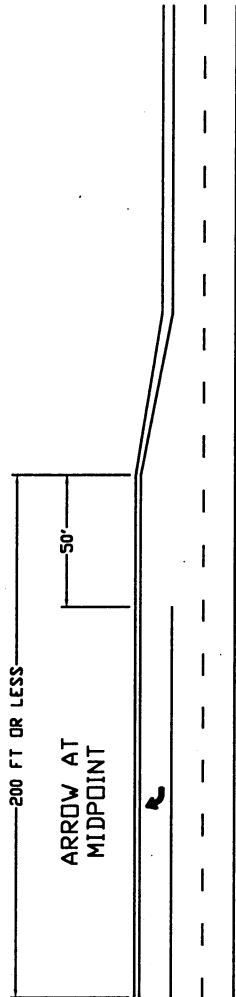
TYPICAL SECTION

CTY RD C, FAIRVIEW AVE, SNELLING AVE, CENTRAL PARK, NATURE CENTER

NO SCALE



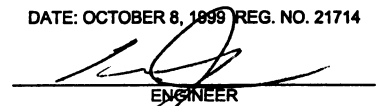
ARROWS = 8 FT



TYPICAL MESSAGE PLACEMENT
FOR TURN LANES

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.

DATE: OCTOBER 8, 1999 REG. NO. 21714



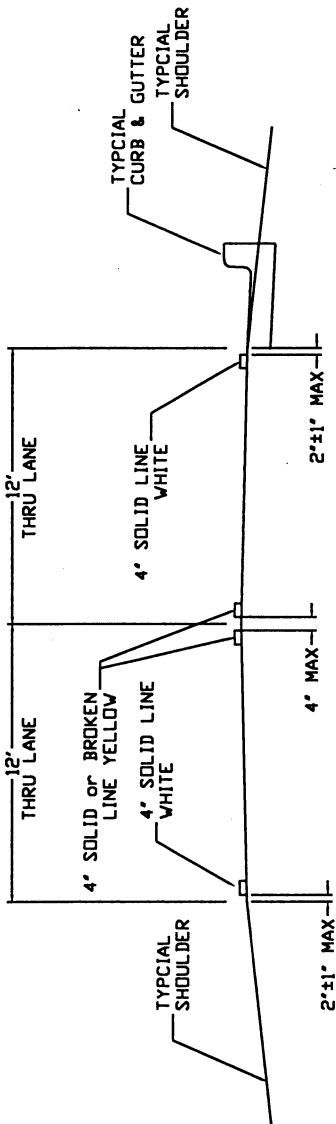
ENGINEER

MICROSURFACING

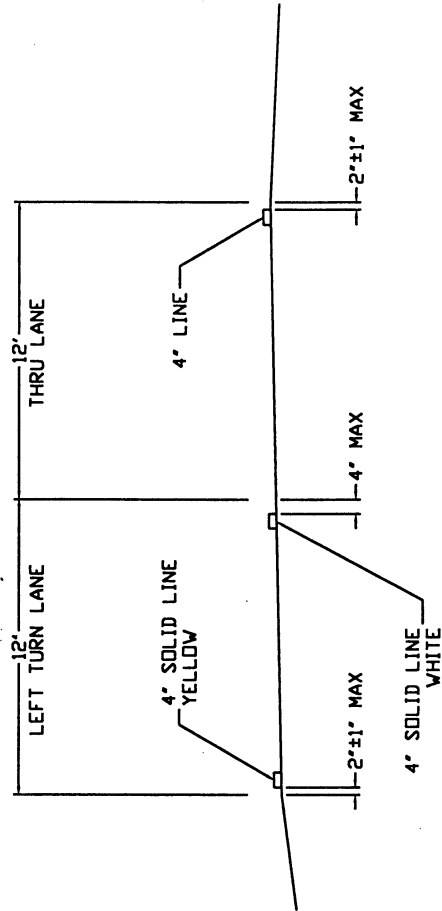
PAVEMENT MARKING DETAILS

SP 19-642-38, SP 62-030-07, SP 82-030-04, SP 130-090-02, SP 160-090-06

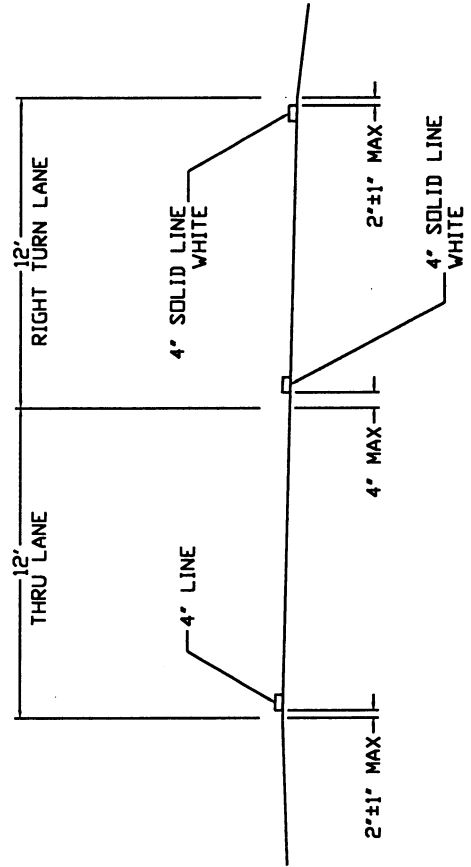
SHEET 38 OF 40 SHEETS



TYPICAL TWO-LANE TWO-WAY ROAD



TYPICAL LEFT TURN LANE



TYPICAL RIGHT TURN LANE

NO SCALE

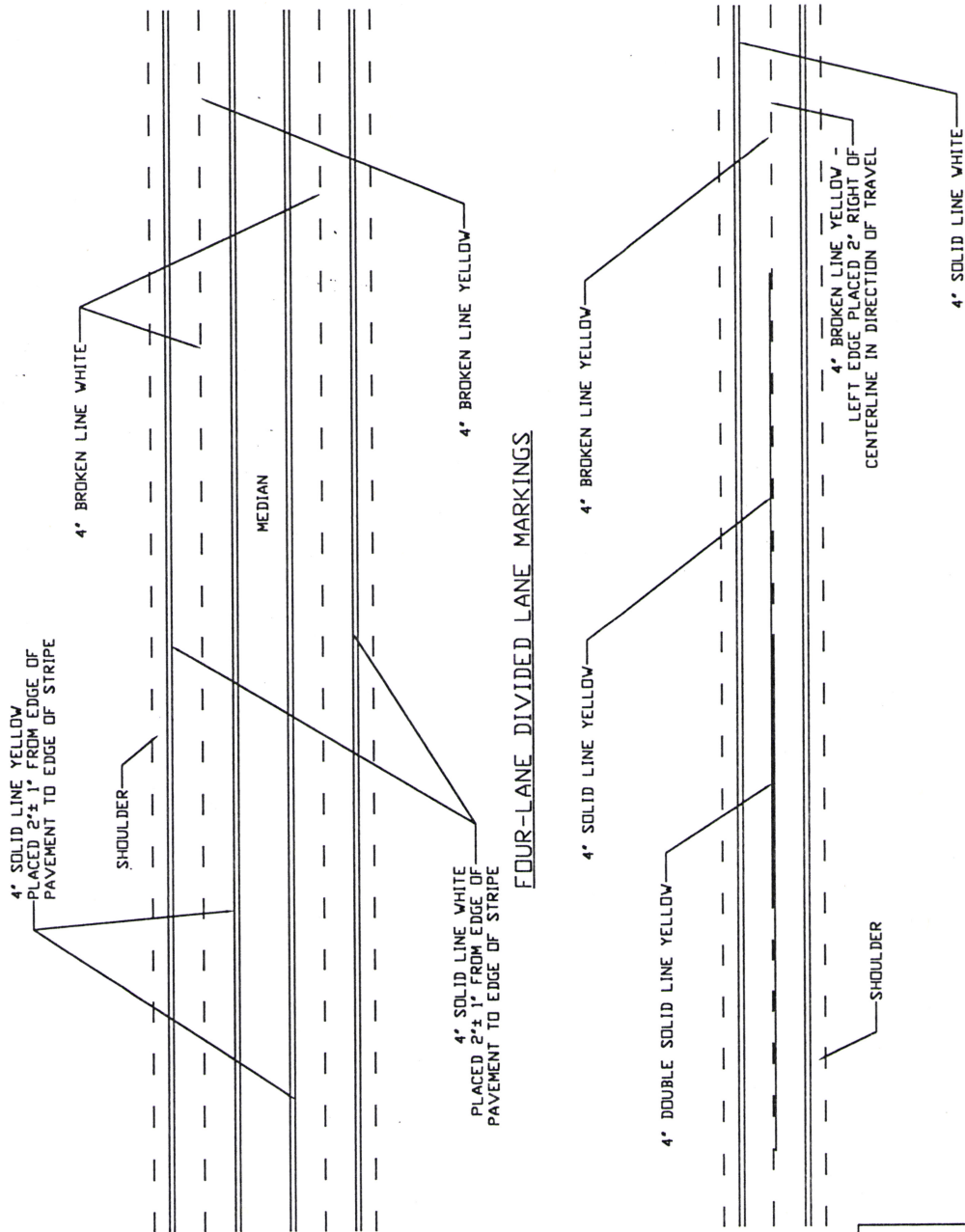
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

MICROSURFACING

PAVEMENT MARKING DETAILS



NO 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.

DATE: OCTOBER 8, 1999 REG. NO. 21714

[Signature]
ENGINEER

3-02-00

J.A. LOP

Drive thru

Sunny weather

Co. Rd. "C"

cm. culvris loc betw Southland
Vandike Sts

Vic. A and Ryan is worst surface
(patched) in E.B. Rdwy [E. of A.].

No ^{actual} "Alligatoring" observed -- distress
areas tho

East Terminal 80' W. of W.B. Av.
Doesn't make sense.