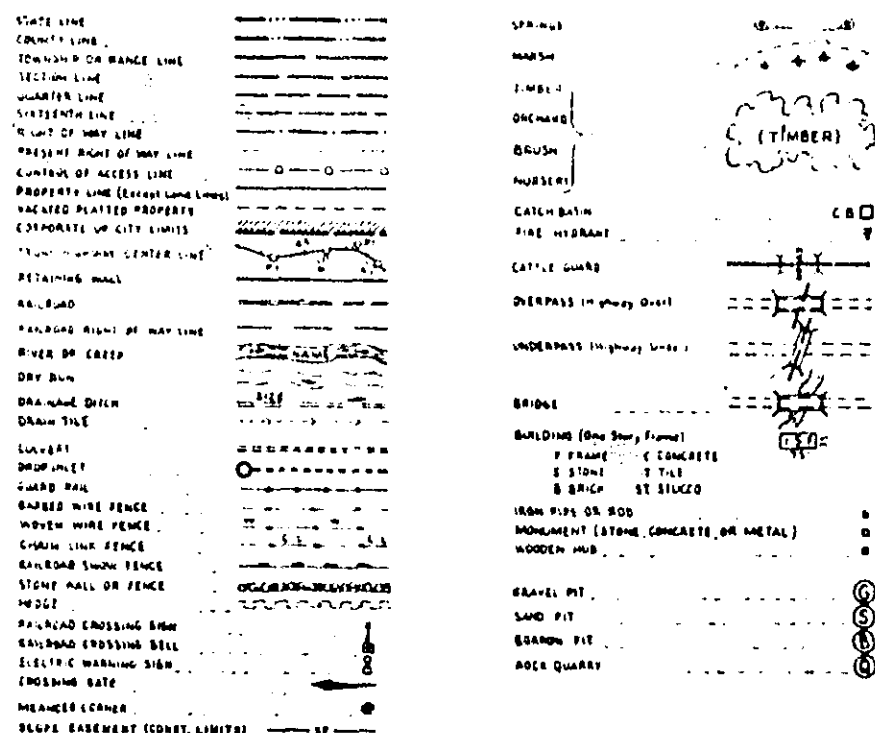
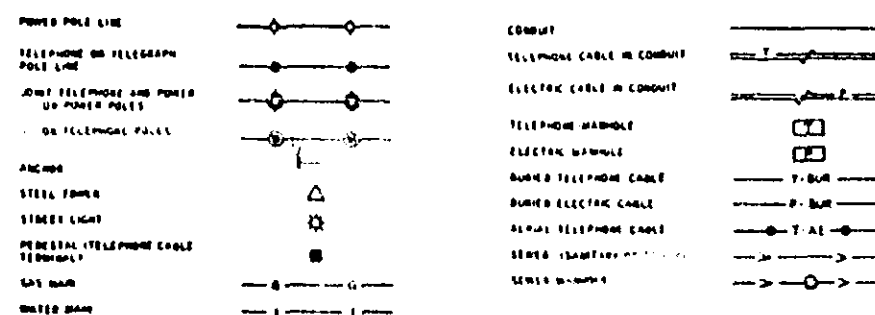


PLANS SYMBOLS

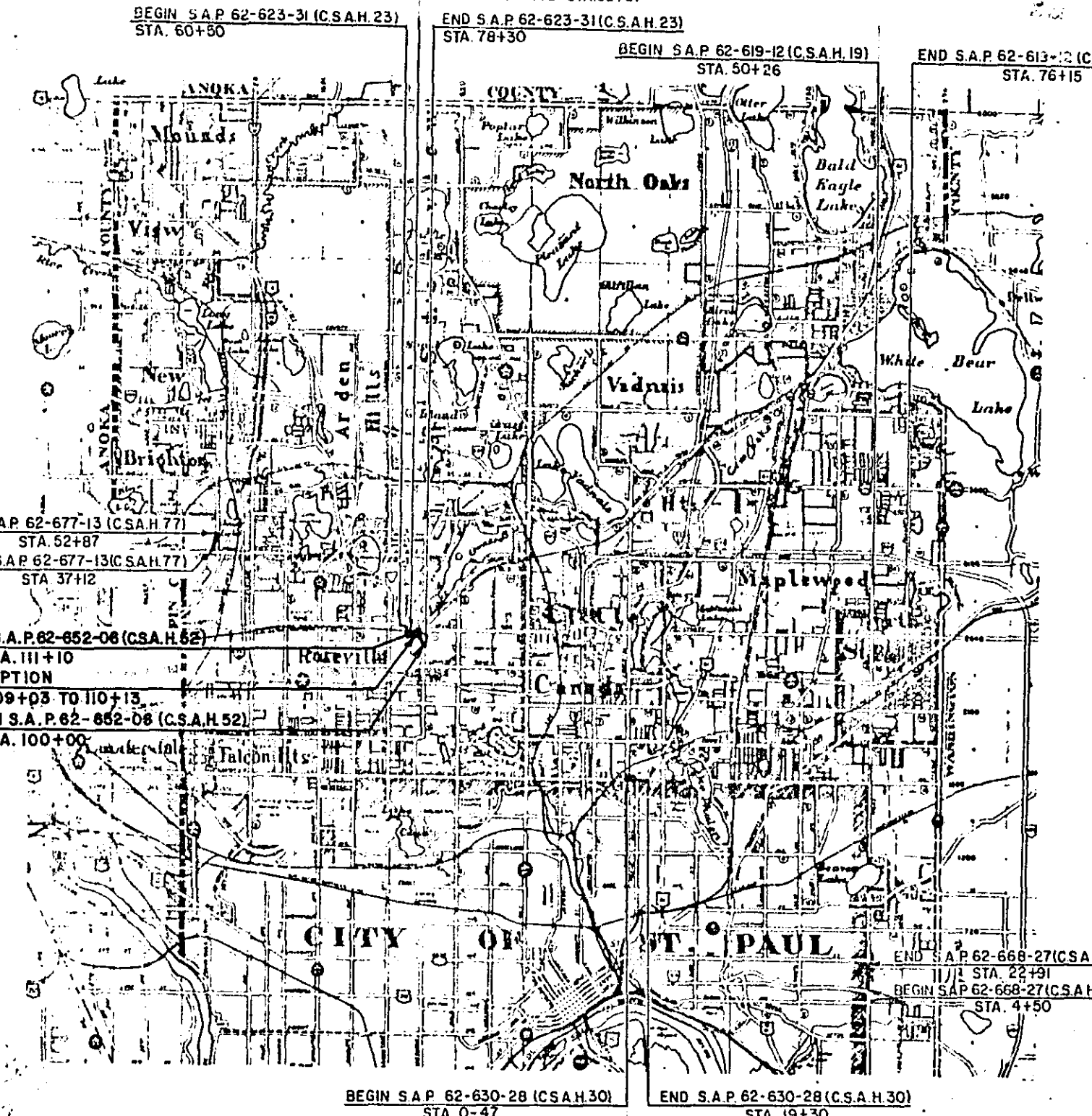


UTILITIES SYMBOLS



PLAN REVISIONS		
DATE	SHEET NO.	BY

	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES
LYDIA AVENUE	2,589	0.490	1,780	0.337	1,977	0.374	1,110	0.210	1,841	0.349	1,500	0.298
GROSS LENGTH	2,589	0.490	1,780	0.337	1,977	0.374	1,110	0.210	1,841	0.349	1,500	0.298
BRIDGE LENGTH	0	0	0	0	0	0	0	0	0	0	0	0
EXCEPTIONS	0	0	225.00	0.043	0	0	110.00	0.021	0	0	0	0
NET LENGTH	2,589	0.490	1,555	0.294	1,977	0.374	1,000	0.189	1,841	0.349	1,500	0.298



RAMSEY COUNTY DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLAN FOR MILLING, BITUMINOUS RESURFACING, PAVEMENT MARKING, AND RELATED IMPROVEMENTS

- LYDIA AVENUE (CSAH 19) BETWEEN BELLATRE AVENUE AND MCKNIGHT ROAD, S.A.P. NO. 62-619-12
- COUNTY ROAD C (CSAH NO. 23) BETWEEN OXFORD ST AND VICTORIA ST, S.A.P. NO. 62-623-31
- LARPELLEUR AVE (CSAH NO. 30) BETWEEN EDGERTON ST AND PARWAY DR, S.A.P. NO. 62-630-28
- VICTORIA AVENUE (CSAH NO. 52) BETWEEN OAKCREST AVE AND CO RD C, S.A.P. NO. 62-652-06
- MCKNIGHT ROAD (CSAH NO. 68) BETWEEN 194 AND FIRST THIRD STREET, S.A.P. NO. 62-668-27
- OLD HIGHWAY 8 (CSAH NO. 77) BETWEEN CO RD D AND SIXTH ST SW, S.A.P. NO. 62-677-13

ACCOUNT NO 47376

COUNTY ROAD C (CSAH NO. 23) BETWEEN LEXINGTON AVENUE AND
OXFORD STREET AND BETWEEN VICTORIA STREET AND DALE STREET

COUNTY PROJECT NO. 47379

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4	NOTES, CHARTS AND DETAILS
5	STRUCTURE CONCRETE SPECIAL CONST. NOTES
6-13	CONSTRUCTION PLAN SHEETS

APPROVED *[Signature]*
CHAIRMAN OF COUNTY BOARD

DESIGN SQUAD *LKF* DATE *2-29-87*
DRAWN BY *HH* DATE *2-25-87*
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

CHECKED BY *[Signature]* DATE *2-24-87* REG NO *13501* ENGR *Darryl F. Johnson*

RECOMMENDED FOR APPROVAL *[Signature]* DATE *3/2/87*
CITY OF ST. PAUL

RECOMMENDED FOR APPROVAL *[Signature]* DATE *4/16/87*
CITY OF MARLBOROUGH

RECOMMENDED FOR APPROVAL *[Signature]* DATE *4-16-87*
CITY OF NEW BRIGHTON

RECOMMENDED FOR APPROVAL *[Signature]* DATE *4/16/87*
CITY OF ROSEVILLE

RECOMMENDED FOR APPROVAL *[Signature]* DATE *4/21/87*
MINNESOTA DEPARTMENT OF TRANSPORTATION

APPROVED *[Signature]* DATE *2-27-87*
REGISTERED PROFESSIONAL ENGINEER

DESIGN DESIGNATION

	LYDIA AVENUE	COUNTY ROAD C	LARPELLEUR AV	VICTORIA AV	MCKNIGHT ROAD	OLD HIGHWAY B
ADT CURRENT YEAR	1,800	8,700	6,800	5,500	10,660	11,950
ADT FUTURE YEAR	3,600	10,440	8,160	7,700	12,720	14,340
EXISTING DESIGN STRENGTH	9 TON	9 TON	9 TON	9 TON	9 TON	10 TON
HCAFT	180	480	408	385	636	717
SOIL FACTOR %	100	100	100	100	75	100
DESIGN SPEED - MPH	35	35	40	35	40	40
URBAN CLASSIFICATION	HIGH DENSITY COLLECTOR	HIGH DENSITY ARTERIAL	LOW DENSITY ARTERIAL	LOW DENSITY ARTERIAL	HIGH DENSITY ART/W MEDIAN	HIGH DENSITY ART/W MEDIAN

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

* COUNTY ROAD C 30 MPH BETWEEN STA 65+65 AND STA 70+20
* LARPELLEUR AVE 35 MPH BETWEEN STA 13+35 AND 15+85

S.A.P. NO. 62-619-12, 62-623-31, 62-630-28, 62-652-06
62-668-27, 62-677-13 CO. PROJ. 47379

Sheet No. 1 of 13 Sheets

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

27-125

TRACE LINE		SPRING	
COUNTY LINE		RAILROAD	
TOWNSHIP OR RANGE LINE		IRON PIPE OR ROD	
SECTION LINE		MONUMENT (STONE, CONCRETE, OR METAL)	
WATER LINE		WOODEN POST	
SIXTEENTH LINE			
EIGHT OF QUART LINE			
PRESENT RIGHT OF WAY LINE			
CONTROL OF ACCESS LINE			
PROPERTY LINE (Escape Land Lines)			
VACATED PLATTED PROPERTY			
CORPORATE OR CITY LIMITS			
"TOWN" OR "CITY CENTER LINE"			
RETAINING WALL			
RAILROAD			
PAVED RIGHT OF WAY LINE			
RIVER OR CREEK			
DRY RUN			
DRAINAGE DITCH			
DRAIN TIE			
LUNNET			
WATERWHEEL			
GUARD RAIL			
GARDED WIRE FENCE			
WOVEN WIRE FENCE			
CHAIN LINK FENCE			
RAILROAD TOW FENCE			
STONE WALL OR FENCE			
WEDGE			
RAILROAD CROSSING SIGN			
RAILROAD CROSSING BELL			
ELECTRIC WARNING SIGN			
CROSSING RATE			
MEASURE CORNER			
SLOPE EASEMENT (CONV. LIMITS)			

POWER POLE LINE		CONDUIT	
TELEPHONE OR TELEGRAPH POLE LINE		TELEPHONE CABLE IN CONDUIT	
JUNK TELEPHONE AND POWER ON POWER POLES		ELECTRIC CABLE IN CONDUIT	
ON TELEPHONE POLES		TELEPHONE WAREHOUSE	
ARCHWAY		ELECTRIC WAREHOUSE	
STEEL TOWER		BURNED TELEPHONE CABLE	
STREET LIGHT		BURNED ELECTRIC CABLE	
PENETRATION TELEPHONE CABLE TERMINAL		REPAIR TELEPHONE CABLE	
GAS MAIN		REPAIR CABLES IN CONDUIT	
WATER MAIN		REPAIR TELEPHONE	

PLAN REVISIONS		
DATE	SHEET NO.	BY

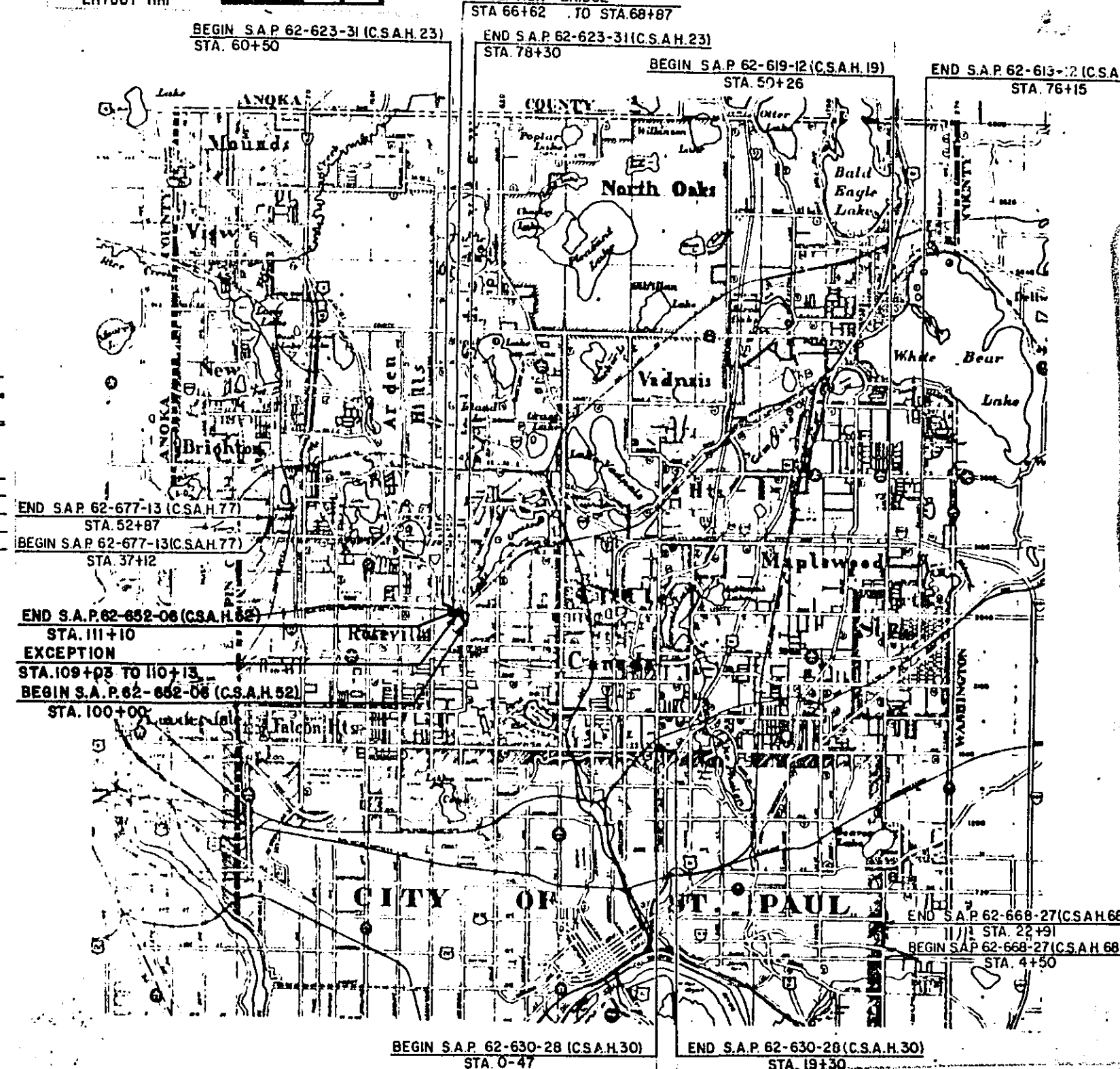
THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES
	LYDIA AVENUE		COUNTY ROAD C		LARPEUR AV		VICTORIA AVE		MCKNIGHT ROAD		OLD HIGHWAY B	
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BRIDGE LENGTH	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-	-0-	-0-
EXCEPTIONS	-0-	-0	225.00	0.043	-0-	-0-	110.00	0.021	-0-	-	-0-	-0-
NET LENGTH	2,589	0.490	1,555	0.294	1,977	0.374	1,000	0.189	1,841	0.349	1,500	0.298

COMBINED LENGTH OF STATE AID PROJECTS:		10,537 FEET;	1.805 MILES
COMBINED LENGTH OF COUNTY PROJECTS:		3,588 FEET;	0.680 MILES
0	1	2 MI.	TOTAL: 14,125 FEET; 2.485 MILES

PLAN SCALES
LAYOUT MAP

EXCEPTION BRIDGE



DESIGN DESIGNATION

	LYDIA AVENUE	COUNTY ROAD C	LARPEUR AV	VICTORIA AV	MCKNIGHT ROAD	OLD HIGHWAY B
ADT CURRENT YEAR	1,800	8,700	6,800	5,500	10,660	11,950
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SOIL FACTOR %	100	100	100	100	75	100
DESIGN SPEED - MPH	35	35	40	35	40	40
URBAN CLASSIFICATION	HIGH DENSITY COLLECTOR	HIGH DENSITY ARTERIAL	LOW DENSITY ARTERIAL	LOW DENSITY ARTERIAL	HIGH DENSITY ART/W MEDIAN	HIGH DENSITY ART/W MEDIAN

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

* COUNTY ROAD C 30 MPH BETWEEN STA 65+65 AND STA 70+20
 ** LARPEUR AVE 35 MPH BETWEEN STA 13+35 AND 15+85

CONSTRUCTION PLAN FOR MILLING, BITUMINOUS RESURFACING, PAVEMENT MARKING, AND RELATED IMPROVEMENTS

LYDIA AVENUE (CSAH 19) BETWEEN BELLAIRE AVENUE AND MCKNIGHT ROAD, SAP NO 62-619-12

19) COUNTY ROAD C (CSAH NO 23) BETWEEN OXFORD ST AND VICTORIA ST, SAP NO 62-623-31

LARPEUR AVE (CSAH NO 30) BETWEEN EDGERTON ST AND PARWAY DR, SAP NO 62-630-28

VICTORIA AVENUE (CSAH NO 52) BETWEEN OAKCREST AVE AND CO RD C, SAP NO 62-652-06

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APPROVED W. L. C.
CHAIRMAN OF COUNTY BOARD

DESIGN SQUAD LKF DATE 2-29-87 I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT
DRAWN BY HH DATE 2-25-87 SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF MISSISSIPPI.

8) CHECKED BY _____ DATE _____ DATE 02-24-07 REG NO 13501 ENGR Larry Feldman

RECOMMENDED FOR APPROVAL Kenneth G. White DATE 3/25/81
CHIEF ENGINEER

RECOMMENDED FOR APPROVAL DES DATE 2/26/87 APPROVED [Signature] DATE 4/5/88

RECOMMENDED FOR APPROVAL [Signature] DATE 2/26/87 APPROVED [Signature] DATE 4/16/87

RECOMMENDED FOR APPROVAL Yegor DATE 2-26-87 APPROVED Leslie Prosen DATE 4-16-87

RECOMMENDED FOR APPROVAL *RHP* DATE *2-26-87* *Charles V. Howell* *4/11/87*

RECOMMENDED FOR APPROVAL DLR DATE 2-26-87 CITY OF ROSEVILLE
MINNESOTA DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL _____ DATE _____
RECOMMENDED FOR APPROVAL Julie Skallman DATE 4/2/8

APPROVED: [Signature] DATE: 2-27-87 RECOMMENDED FOR APPROVAL: [Signature] DATE: 5/26/88

APPROVAL [Signature] DATE 2/27/01

11/11/11

S.A.P. NO. 62-619-12, 62-623-31, 62-630-28, 62-652-06
62-668-27, 62-677-13 CO. PROJ. 47379

Sheet No. 1 of 13 Sheets

27-125

PROJECT: MILLING, BITUMINOUS RESURFACING, PAVEMENT
MARKING, AND RELATED IMPROVEMENTS
STATEMENT OF ESTIMATED QUANTITIES

LYDIA AVENUE
SAP 62-619-12

COUNTY ROAD C
SAP 62-623-31

LARPEUR AVE
SAP 62-630-28

VICTORIA AVE
SAP 62-652-06

MCKNIGHT ROAD
SAP 62-668-27

OLD HIGHWAY 8
SAP 62-677-13

CSAH PARTICIPATING
SUBTOTAL

COUNTY ROAD C
CP 47379
NONPARTICIPATING

GRAND TOTAL

ITEM NBR	ITEM	UNIT	EST	FINAL	EST	FINAL	EST	FINAL	EST	FINAL	EST	FINAL	EST	FINAL	EST	FINAL	EST	FINAL
2021.501	MOBILIZATION	L SUM	0.13		0.09		0.14		0.04		0.28		0.16		0.84		0.16	1.00
(1) 2104.501	REMOVE CURB AND GUTTER	LIN FT	170.00		20.00		170.00		30.00		20.00		100.00		510.00		240.00	750.00
2104.503	REMOVE SIDEWALK	SQ FT	10.00		0.00		60.00		0.00		0.00		4062.00		4132.00		0.00	4132.00
(2,3,4) 0104.604	MILL BITUMINOUS SURFACE TYPE 1	SQ YD	3449.00		1205.00		2780.00		1567.00		0.00		0.00		9001.00		4784.00	13785.00
(2,3,4) 0104.604	MILL BITUMINOUS SURFACE TYPE 2	SQ YD	0.00		0.00		171.00		0.00		0.00		0.00		171.00		0.00	171.00
(2,3,4,5) 0104.604	MILL BITUMINOUS SURFACE TYPE 3	SQ YD	206.00		6425.00		169.00		391.00		12212.00		9406.00		28809.00		273.00	29082.00
(2,3,4) 0104.604	MILL BITUMINOUS SURFACE TYPE 4	SQ YD	0.00		0.00		0.00		0.00		1221.00		0.00		1221.00		0.00	1221.00
2105.501	COMMON EXCAVATION	CU YD	0.00		0.00		0.00		0.00		483.00		0.00		483.00		0.00	483.00
(6) 2211.501	AGGREGATE BASE, CLASS 6	TON	0.00		0.00		2.00		0.00		498.00		103.00		603.00		0.00	603.00
(7,8) 2231.501	BITUMINOUS PATCHING MIXTURE	TON	25.00		25.00		37.00		16.00		35.00		30.00		168.00		57.00	225.00
(9) 0301.608	STRUCTURE CONCRETE SPECIAL	CU FT	2.00		1.00		0.00		1.00		1.00		0.00		5.00		1.00	6.00
(10) 2331.504	BIT. MATERIAL FOR MIXTURE	TON	0.00		0.00		0.00		0.00		5.20		0.00		5.20		0.00	5.20
2331.512	LEVELING COURSE MIXTURE (MOD)	TON	0.00		0.00		0.00		0.00		101.00		0.00		101.00		0.00	101.00
2331.531	TEMPORARY LANE MARKING	RD STA	26.00		15.00		18.00		0.00		0.00		0.00		59.00		27.00	86.00
2357.502	BIT. MATERIAL FOR TACK COAT	GAL	797.00		610.00		829.00		392.00		1047.00		730.00		4405.00		1194.00	5599.00
(10) 2361.504	ASPHALT CEMENT	TON	44.00		33.00		45.00		22.00		57.00		40.00		241.00		65.00	306.00
2361.508	WEARING COURSE MIXTURE (MOD)	TON	642.00		491.00		668.00		316.00		844.00		585.00		3546.00		963.00	4509.00
(11) 0504.602	ADJUST VALVE BOX	EACH	0.00		0.00		5.00		0.00		2.00		9.00		16.00		0.00	16.00
2506.512	RECONSTRUCT CATCH BASIN	LIN FT	0.00		0.00		2.00		0.00		0.00		0.00		2.00		0.00	2.00
(12,15) 2506.522	ADJUST FRAME AND RING CASTINGS	EACH	21.00		0.00		5.00		4.00		16.00		10.00		56.00		5.00	61.00
2521.501	4" CONCRETE WALK	SQ FT	10.00		0.00		60.00		0.00		19579.00		4062.00		23711.00		0.00	23711.00
2531.501	CONCRETE C & G DES B618	LIN FT	0.00		20.00		10.00		30.00		0.00		0.00		60.00		240.00	300.00
2531.501	CONCRETE C & G DES B624	LIN FT	170.00		0.00		0.00		0.00		20.00		100.00		290.00		0.00	290.00
2531.501	CONCRETE C & G DES B648	LIN FT	0.00		0.00		160.00		0.00		0.00		0.00		160.00		0.00	160.00
0564.602	PAVEMENT MESSAGE (LEFT ARROW) EPOXY	EACH	0.00		0.00		4.00		0.00		7.00		5.00		16.00		0.00	16.00
0564.602	PAVEMENT MESSAGE (RIGHT ARROW) EPOXY	EACH	0.00		0.00		0.00		0.00		2.00		0.00		2.00		0.00	2.00
0564.602	PAVEMENT MESSAGE (THRU ARROW) EPOXY	EACH	0.00		0.00		3.00		0.00		0.00		0.00		3.00		0.00	3.00
0564.603	4" SOLID LINE, WHITE EPOXY	LIN FT	0.00		0.00		115.00		0.00		900.00		650.00		1665.00		0.00	1665.00
0564.603	4" BROKEN LINE, WHITE EPOXY	LIN FT	1100.00		0.00		900.00		0.00		1000.00		770.00		3770.00		0.00	3770.00
0564.603	4" SOLID LINE, YELLOW EPOXY	LIN FT	4400.00		0.00		3500.00		0.00		0.00		0.00		7900.00		0.00	7900.00
(13) 0565.602	LOOP DETECTOR 6'X6'	EACH	0.00		0.00		6.00		0.00		11.00		2.00		19.00		4.00	23.00
(13) 0565.602	LOOP DETECTOR 6'X25'	EACH	0.00		0.00		0.00		0.00		0.00		1.00		1.00		0.00	1.00
(13) 0565.602	LOOP DETECTOR 6'X40'	EACH	0.00		0.00		0.00		0.00		2.00		1.00		3.00		0.00	3.00

SEE SHEET NO 4 FOR NOTES ()

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

DATE 3-25-87 REG NO 13501 ENG Barry Feldman

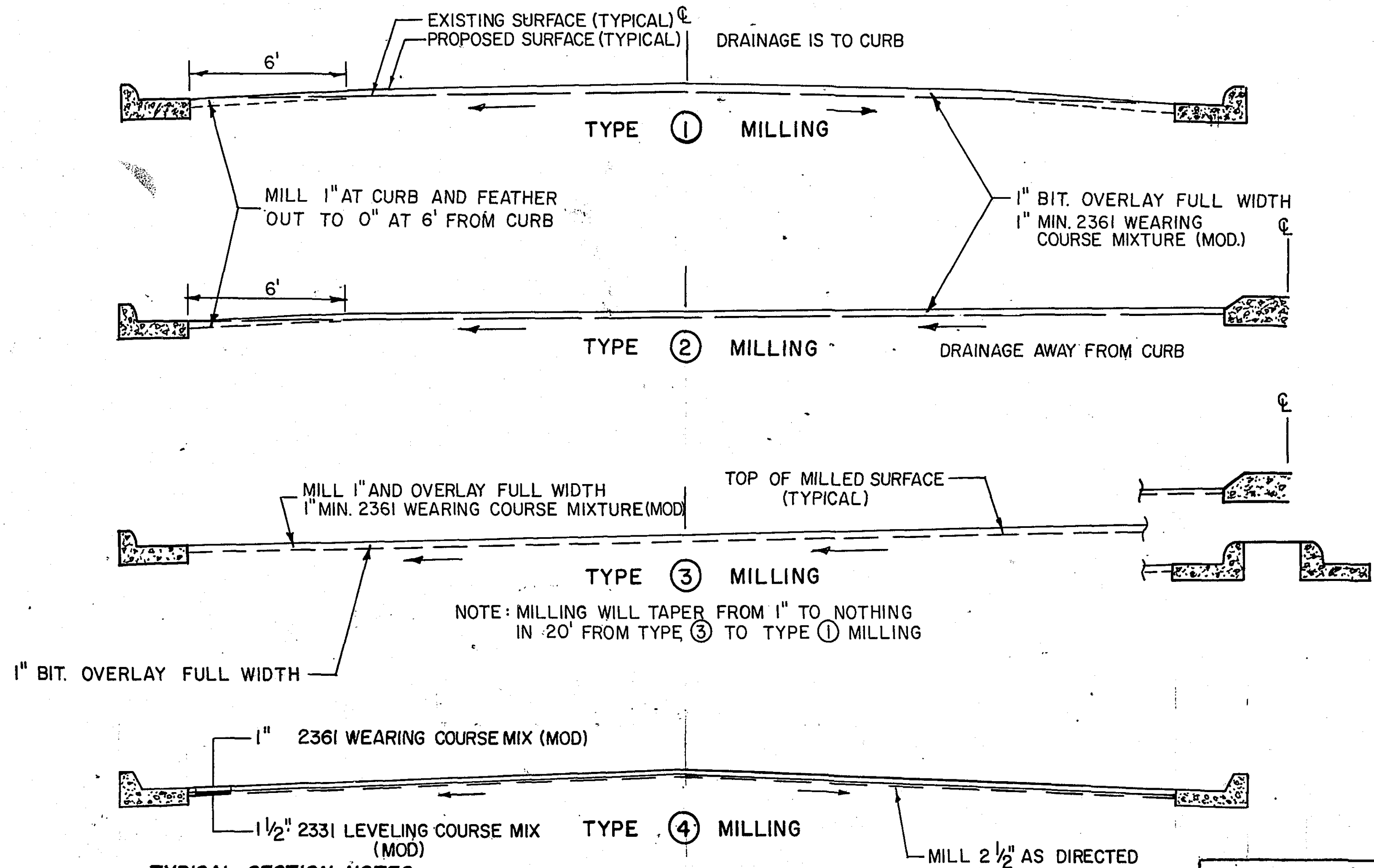
STATEMENT OF ESTIMATED QUANTITIES

STATE AID PROJECT 62-619-12 ETC

SHEET NO 2 OF 13 SHEETS

27-125

MILLING AND OVERLAY DETAILS (4-TYPES)



TYPICAL SECTION NOTES

THE EXACT TYPE AND LOCATION OF MILLING WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

NO EXTRA COMPENSATION FOR INCREASED OR DECREASED QUANTITIES OF MILLING.

THE FIRST AND LAST 20 FEET OF EACH ROAD WILL BE TYPE 3 MILLED TO PROVIDE A SMOOTH TRANSITION AT THE BEGINNING AND END OF EACH PROJECT.

TYPICAL SECTIONS

S.A.P. 62-619-12 ETC.

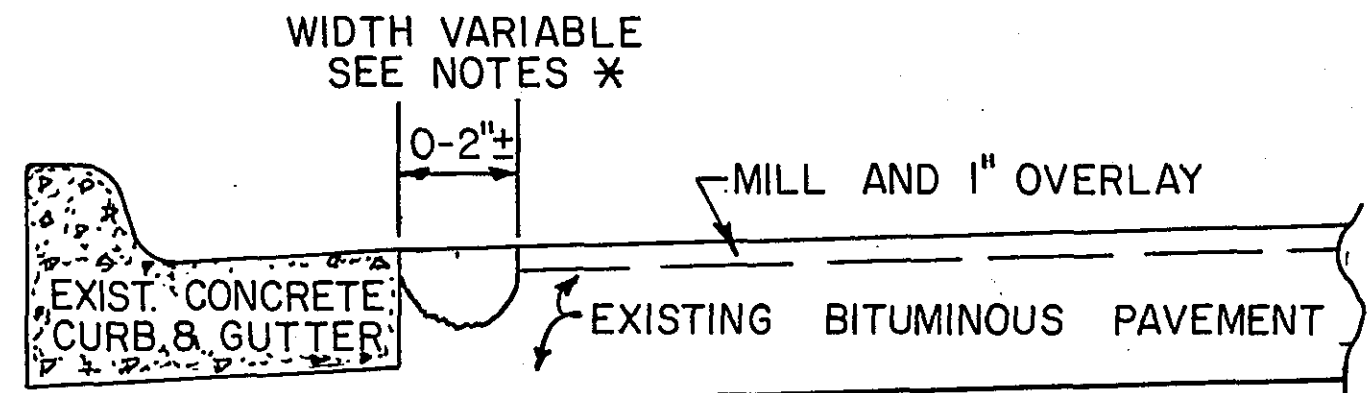
SHEET NO. 3 OF 13 SHEETS

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.

Larry Feldman
DATE 02-24-87 REG. NO. 13501

27-125

DETAIL FOR SEALING OF CONCRETE CURB AND BITUMINOUS JOINTS



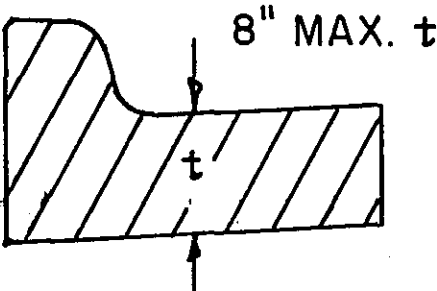
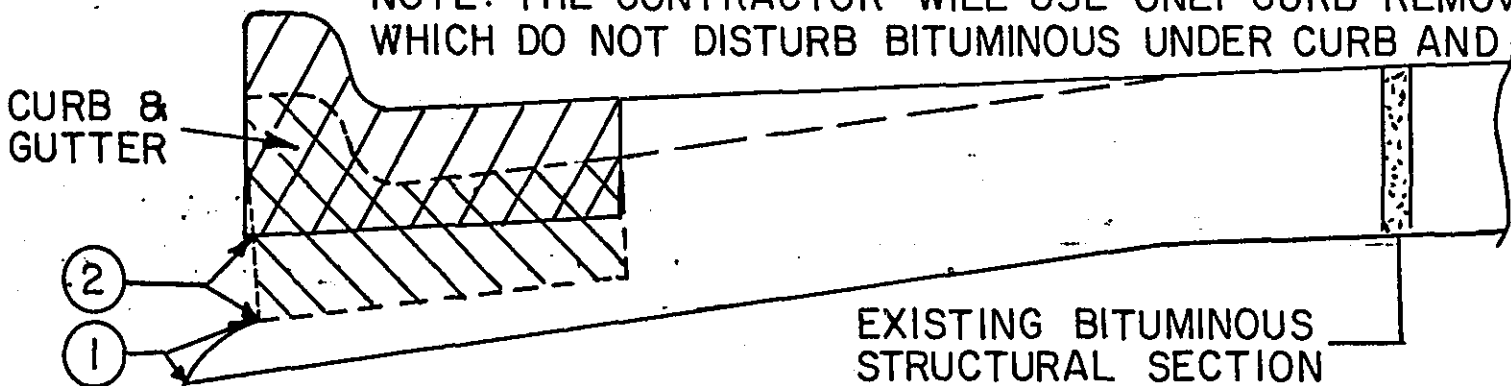
NOTES *

0" TO 3/4" - JOINT REPAIR SHALL BE PAID FOR AS 2357 TACK COAT

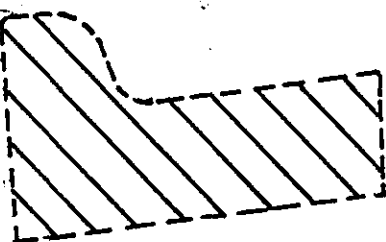
3/4" TO 2"+ JOINT REPAIR SHALL BE PAID FOR AS 2231 PATCHING MIXTURE

CURB AND GUTTER TREATMENT DETAIL

NOTE: THE CONTRACTOR WILL USE ONLY CURB REMOVAL METHODS WHICH DO NOT DISTURB BITUMINOUS UNDER CURB AND GUTTER



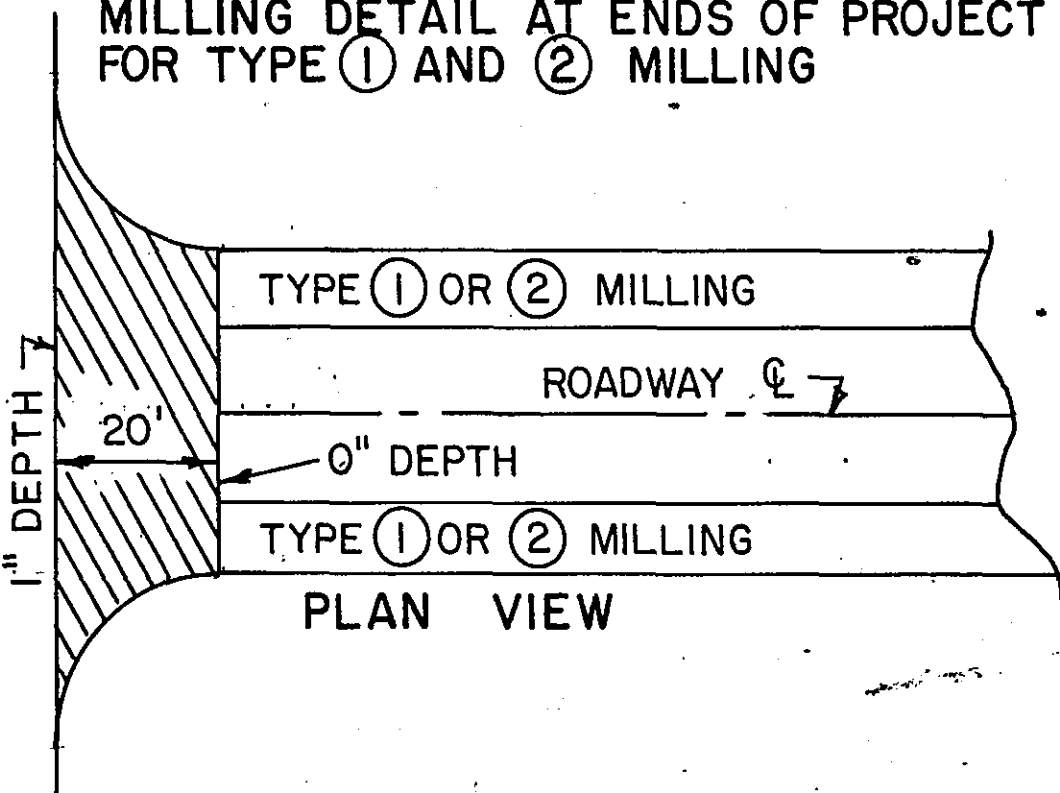
NEWLY CONSTRUCTED CURB AND GUTTER



SETTLED CURB AND GUTTER

- ① DO NOT REMOVE BIT. BASE UNDER CURB AND GUTTER
- ② THE CONTRACTOR SHALL PLACE AND COMPACT BIT. PATCHING MIXTURE IN THIS AREA AS REQUIRED FOR AN 8" MAXIMUM THICKNESS OF GUTTER

MILLING DETAIL AT ENDS OF PROJECT FOR TYPE ① AND ② MILLING



- MILLING LEGEND
- TYPE ① AND ②
 - TYPE ③

CONSTRUCTION NOTES, CHARTS AND DETAILS

S.A.P. 62-619-12 ETC.

SHEET NO. 4 OF 13 SHEETS

STANDARD PLATES	
PLATE NO.	DESCRIPTION
0004A	SPECIFICATION REFERENCE TO STANDARD PLATES
1140 S	LONGITUDINAL JOINTS
4010 G	CONCRETE SHORT CONE AND ADJUSTING RING
4021 C	PRECAST CURB OPENING CATCH BASIN
4108 E	MANHOLE ADJUSTING RINGS
7100 F	CONCRETE CURB AND GUTTER
8000 I	STANDARD BARRICADES
8130 D	SAWCUT LOOP DETECTORS

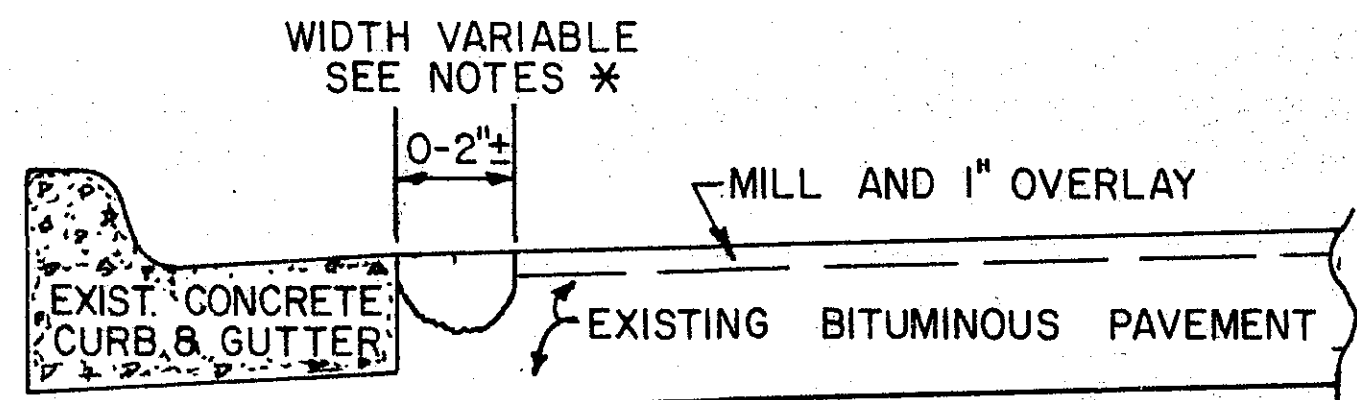
NOTES

- (1) FINAL LOCATIONS FOR CURB AND GUTTER REPLACEMENT WILL BE DETERMINED IN THE FIELD BY THE ENGINEER; REPLACEMENT OF DAMAGED BOULEVARD AREAS WILL BE CONSIDERED INCIDENTAL TO THE WORK.
- (2) PROVIDE WATER FOR MILLING OPERATIONS; INCLUDE IN PRICE OF OTHER ITEMS.
- (3) THE CONTRACTOR WILL NOTIFY THE COUNTY BEFORE MILLING OVER ANY LOOP DETECTORS.
- (4) DELIVER THE MILLED BITUMINOUS SURFACING TO THE RAMSEY COUNTY DETENTION PIT STORAGE AREA AT KENT STREET AND LARPEUR AVENUE; INCLUDE DELIVERY IN PRICE OF OTHER ITEMS.
- (5) THE FIRST AND LAST 20 FEET OF EACH ROAD WILL BE TYPE 3 MILLED TO PROVIDE SMOOTH TRANSITIONS AT BEGINNING AND END OF EACH OVERLAY.
- (6) TO BE USED UNDER CONCRETE SIDEWALK; PLACE 4" IN COMPACTED THICKNESS.
- (7) THE ROADWAY ADJACENT TO AREAS OF CURB AND GUTTER REPLACEMENT SHALL BE PATCHED WITH BITUMINOUS PATCHING MIXTURE TO WITHIN 1" OF FINISHED GRADE IMMEDIATELY AFTER THE CURB AND GUTTER CONSTRUCTION.
- (8) CRACKS IN ROADWAY WILL BE CLEANED OF FOREIGN MATTER, TACKED, AND FILLED WITH ITEM NO 2231 BITUMINOUS PATCHING MIXTURE.
- (9) TO BE USED FOR PATCHING EXPOSED CONCRETE SURFACES; THE PROVISIONS OF 1903 SHALL NOT APPLY TO THIS ITEM.
- (10) WEAR COURSE COMPUTED AT 6.8%; LEVELING COURSE COMPUTED AT 5.2%.
- (11) VALVE BOXES LOCATED IN THE PAVEMENT WILL BE RAISED TO 1/2" BELOW FINISHED SURFACE.
- (12) STEEL MANHOLE ADJUSTING RINGS SHALL BE USED AS REQUIRED FOR MANHOLES LOCATED IN THE PAVEMENT; ADJUSTMENT HEIGHT SHALL BE TO 1/2" BELOW FINISHED GRADE AS DETERMINED BY USING A 10' STRAIGHT EDGE; THE CONTRACTOR AND COUNTY WILL TOGETHER DETERMINE THIS HEIGHT.
- (13) THE CONTRACTOR SHALL PROTECT OR REPLACE EXISTING LOOP DETECTORS DURING PAVEMENT REPAIR OPERATIONS AS DIRECTED BY THE ENGINEER; ALL LOOP DETECTORS WILL BE LOCATED BY THE COUNTY AND REPLACED IF DAMAGED BY MILLING WITHIN 5 WORKING DAYS.
- (14) METHOD OF ATTACHMENT OF STEEL OR CAST IRON INSIDE ADJUSTING RING SHALL BE AGREEABLE TO THE OWNER OF THAT STRUCTURE.

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.

Larry Feldman
DATE 02-24-87 REG. NO. 13501

DETAIL FOR SEALING OF CONCRETE CURB AND BITUMINOUS JOINTS

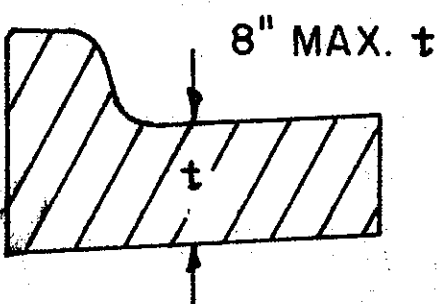
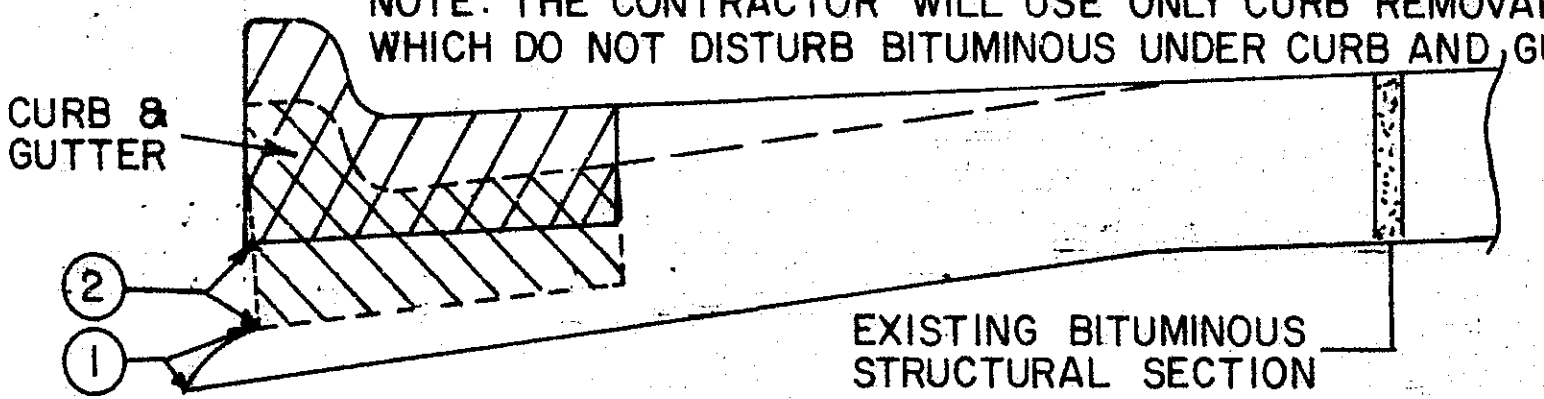


NOTES *

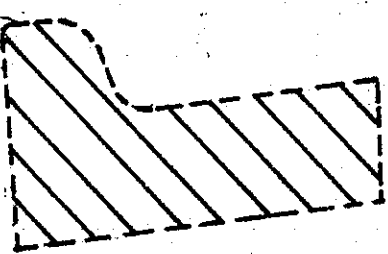
0" TO 3/4" - JOINT REPAIR SHALL BE PAID FOR AS 2357 TACK COAT
3/4" TO 2"+ JOINT REPAIR SHALL BE PAID FOR AS 2231 PATCHING MIXTURE

CURB AND GUTTER TREATMENT DETAIL

NOTE: THE CONTRACTOR WILL USE ONLY CURB REMOVAL METHODS WHICH DO NOT DISTURB BITUMINOUS UNDER CURB AND GUTTER



NEWLY CONSTRUCTED CURB AND GUTTER



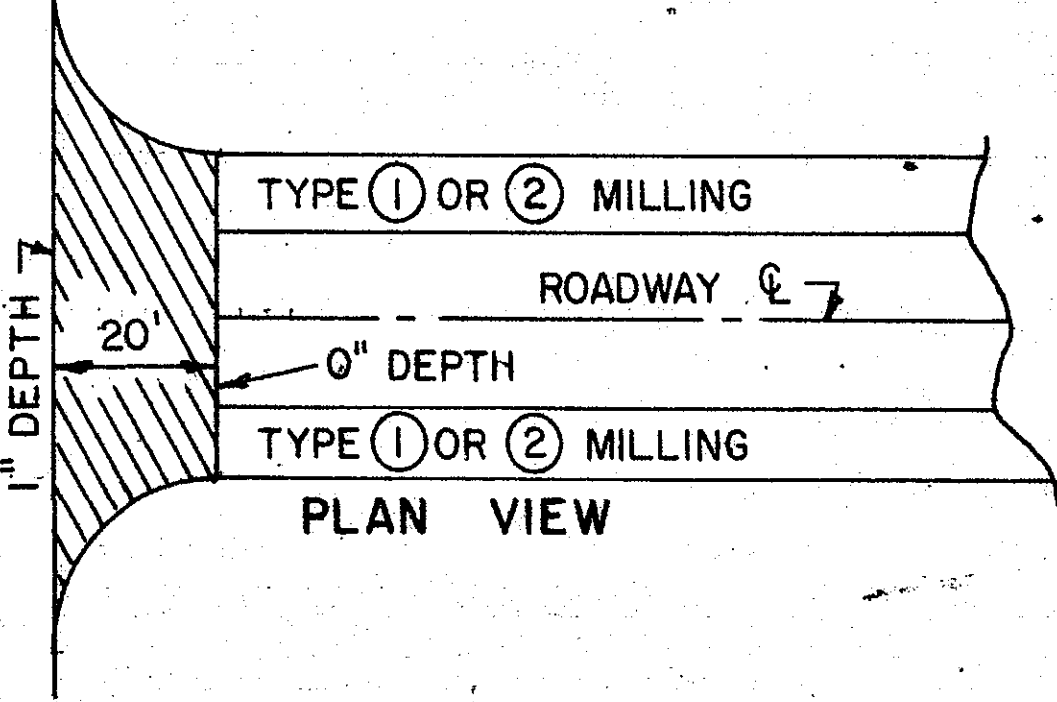
- ① DO NOT REMOVE BIT. BASE UNDER CURB AND GUTTER
- ② THE CONTRACTOR SHALL PLACE AND COMPACT BIT. PATCHING MIXTURE IN THIS AREA AS REQUIRED FOR AN 8" MAXIMUM THICKNESS OF GUTTER

STANDARD PLATES	
PLATE NO.	DESCRIPTION
0004A	SPECIFICATION REFERENCE TO STANDARD PLATES
1140 S	LONGITUDINAL JOINTS
4010 G	CONCRETE SHORT CONE AND ADJUSTING RING
4021 C	PRECAST CURB OPENING CATCH BASIN
4108 E	MANHOLE ADJUSTING RINGS
7100 F	CONCRETE CURB AND GUTTER
8000 I	STANDARD BARRICADES
8130 D	SAWCUT LOOP DETECTORS

NOTES

- (1) FINAL LOCATIONS FOR CURB AND GUTTER REPLACEMENT WILL BE DETERMINED IN THE FIELD BY THE ENGINEER; REPLACEMENT OF DAMAGED BOULEVARD AREAS WILL BE CONSIDERED INCIDENTAL TO THE WORK.
- (2) PROVIDE WATER FOR MILLING OPERATIONS; INCLUDE IN PRICE OF OTHER ITEMS.
- (3) THE CONTRACTOR WILL NOTIFY THE COUNTY BEFORE MILLING OVER ANY LOOP DETECTORS.
- (4) DELIVER THE MILLED BITUMINOUS SURFACING TO THE RAMSEY COUNTY DETENTION PIT STORAGE AREA AT KENT STREET AND LARPEUR AVENUE; INCLUDE DELIVERY IN PRICE OF OTHER ITEMS.
- (5) THE FIRST AND LAST 20 FEET OF EACH ROAD WILL BE TYPE 3 MILLED TO PROVIDE SMOOTH TRANSITIONS AT BEGINNING AND END OF EACH OVERLAY.
- (6) TO BE USED UNDER CONCRETE SIDEWALK; PLACE 4" IN COMPACTED THICKNESS.
- (7) THE ROADWAY ADJACENT TO AREAS OF CURB AND GUTTER REPLACEMENT SHALL BE PATCHED WITH BITUMINOUS PATCHING MIXTURE TO WITHIN 1" OF FINISHED GRADE IMMEDIATELY AFTER THE CURB AND GUTTER CONSTRUCTION.
- (8) CRACKS IN ROADWAY WILL BE CLEANED OF FOREIGN MATTER, TACKED, AND FILLED WITH ITEM NO 2231 BITUMINOUS PATCHING MIXTURE.
- (9) TO BE USED FOR PATCHING EXPOSED CONCRETE SURFACES; THE PROVISIONS OF 1903 SHALL NOT APPLY TO THIS ITEM.
- (10) WEAR COURSE COMPUTED AT 6.8%; LEVELING COURSE COMPUTED AT 5.2%.
- (11) VALVE BOXES LOCATED IN THE PAVEMENT WILL BE RAISED TO 1/2" BELOW FINISHED SURFACE.
- (12) STEEL MANHOLE ADJUSTING RINGS SHALL BE USED AS REQUIRED FOR MANHOLES LOCATED IN THE PAVEMENT; ADJUSTMENT HEIGHT SHALL BE TO 1/2" BELOW FINISHED GRADE AS DETERMINED BY USING A 10' STRAIGHT EDGE; THE CONTRACTOR AND COUNTY WILL TOGETHER DETERMINE THIS HEIGHT.
- (13) THE CONTRACTOR SHALL PROTECT OR REPLACE EXISTING LOOP DETECTORS DURING PAVEMENT REPAIR OPERATIONS AS DIRECTED BY THE ENGINEER; ALL LOOP DETECTORS WILL BE LOCATED BY THE COUNTY AND REPLACED IF DAMAGED BY MILLING WITHIN 5 WORKING DAYS.
- (14) METHOD OF ATTACHMENT OF STEEL OR CAST IRON INSIDE ADJUSTING RING SHALL BE AGREEABLE TO THE OWNER OF THAT STRUCTURE.

MILLING DETAIL AT ENDS OF PROJECT FOR TYPE ① AND ② MILLING



- MILLING LEGEND
- TYPE ① AND ②
 - TYPE ③

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.

Larry Feldhaber
DATE 02-24-87 REG. NO. 13501

CONSTRUCTION NOTES, CHARTS AND DETAILS

STRUCTURE CONCRETE SPECIAL CONSTRUCTION NOTES

WORK TO BE DONE

- A. DEFINE REMOVAL AREA; REMOVAL SHALL BE TO SOUND CONCRETE
- B. REMOVE ALL DETERIORATED CONCRETE TO LIMITS; TAPER EDGES BY CHIPPING
- C. CLEAN EXPOSED SURFACE BY SANDBLASTING AND AIRBLASTING, APPLY BONDING GROUT IMMEDIATELY PRIOR TO CONCRETE PLACEMENT.
- D. FURNISH AND PLACE CONCRETE MIX NO. 3U18. RESTORE JOINTS AND CRACKS TO THE CONFIGURATION APPROVED BY THE ENGINEER. FINISH TO GRADE, SLOPE AND TEXTURE. SEAL EDGES WITH GROUT AND APPLY CURE.

METHOD OF MEASUREMENT

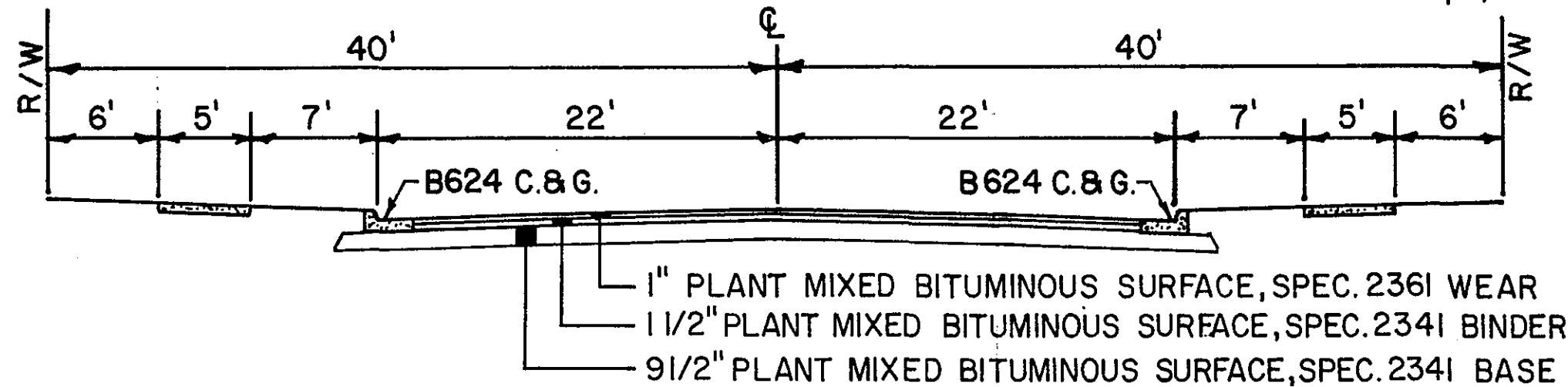
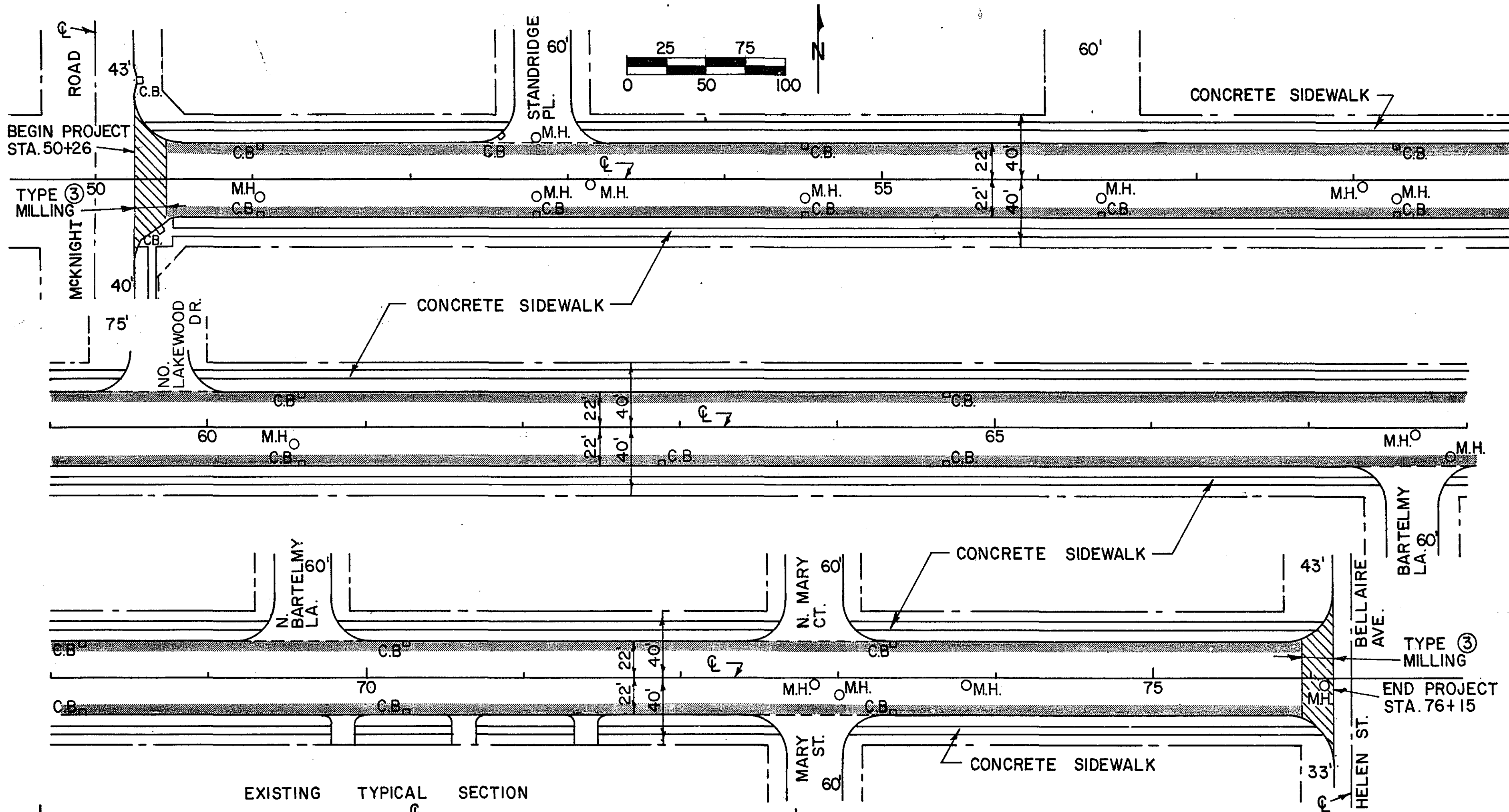
PAY QUANTITY WILL BE MEASURED BY THE BATCH TICKET FOR READY MIX OR BAG FOR DRY DRY PREMIX CONCRETE

BASIS OF PAYMENT

0301.608 STRUCTURE CONCRETE SPECIAL, CU FT

1. BONDING GROUT SHALL CONSIST OF EQUAL PARTS, BY WEIGHT, OF PORTLAND CEMENT AND SAND, MIXED WITH SUFFICIENT WATER TO FORM A SLURRY WITH THE CONSISTENCY OF THICK CREAM. THE GROUT WILL REQUIRE BRUSHING OR SCRUBBING (WITH A STIFF BRISTLE BROOM) INTO THE INPLACE CONCRETE. GROUT SHALL BE MIXED BY MECHANICAL MEANS. CONCRETE SHALL BE PLACED IMMEDIATELY AFTER GROUTING. IF THE GROUT WHITENS, SANDBLAST AND REGROUT.
2. FOR PARTIAL DEPTH REMOVALS, NO "JACKHAMMERS" SHALL BE ALLOWED. REMOVAL HAMMERS SHALL BE LIMITED TO A MAXIMUM WEIGHT OF 30 POUNDS.
3. CONCRETE SHALL HAVE THE MAXIMUM ALLOWED DOSAGE RATE OF APPROVED WATER REDUCER (TYPE A) ADDED TO GRADE 3U18 CONCRETE.
4. CONCRETE FOR TYPE B PARTIAL DEPTH REPAIRS SHALL NOT BE PLACED AT AIR TEMPERATURES BELOW 50 DEGREES F.
5. THE CONCRETE SURFACE TEXTURE SHALL CONSIST OF BROOMING IN THE LONG DIMENSION DIRECTION OF THE REPAIR.
6. ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH SPEC. 2531.362 "MEMBRANE CURING METHOD". THE MATERIAL SHALL MEET SPECIFICATION 3254 EXCEPT AS NOTED IN SPECIFICATION 2301.3M REGARDING EXTREME SURFACE CURE.
7. COLD APPLIED SILICONE JOINT AND CRACK SEALER (DOW 888 OR EQUAL; WEIGHT = 123.4 LBS./GAL.) SHALL BE TOOLED INTO THE TRANSVERSE JOINTS AND CRACKS BY AN APPROPRIATE DEVICE APPROVED BY THE ENGINEER.
8. ANY DAMAGE TO ANY INPLACE ROADWAY STRUCTURE OR APPURTENANCE BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT NO COST TO THE STATE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS THAT FAIL WITHIN ONE MONTH FOLLOWING COMPLETION OF THAT REPAIR.
10. THE AIR CONTENT FOR GRADE 3U17, 3U18, 3U27 AND 3U28 CONCRETE SHALL BE 6.5 PLUS OR MINUS 1.5 PERCENT. SPECIFICATION 2461.4A4B SHALL BE ADJUSTED ACCORDINGLY BASED ON THE 6.5 PERCENT TARGET VALUE.
11. THE CA-8 GRADATION IN TABLE 3137-1 OF THE SPECIFICATIONS SHALL BE MODIFIED TO READ 70 TO 100% PASSING THE #4 SIEVE.

STRUCTURE CONCRETE SPECIAL CONSTRUCTION NOTES



LYDIA CONSTRUCTION NOTES

PROJECT TERMINI
 BEGIN STA. 50+26
 END STA. 76+15
 MILLING
 STA. 50+26 TO STA. 50+46 TYPE 3
 STA. 50+46 TO STA. 75+95 TYPE 1
 STA. 75+95 TO STA. 76+15 TYPE 3
 LYDIA AVENUE

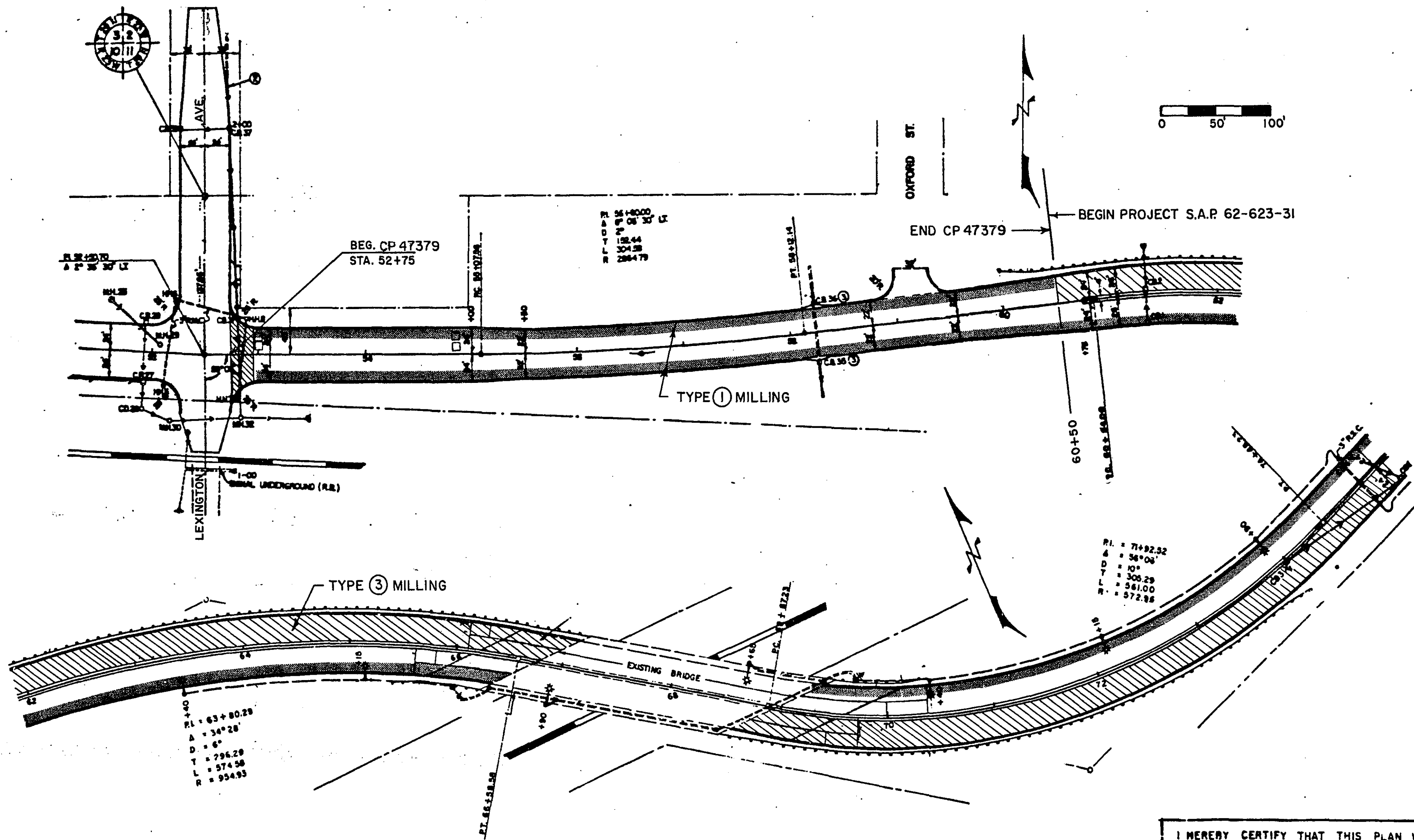
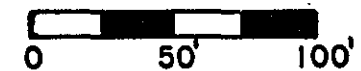
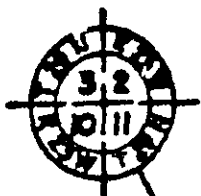
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Harry Feldman
 DATE 02-24-87 REG. NO. 13501

S.A.P. 62-619-12

SHEET NO. 6 OF 13 SHEETS

27-125



SEE SHEET 10 FOR NOTES

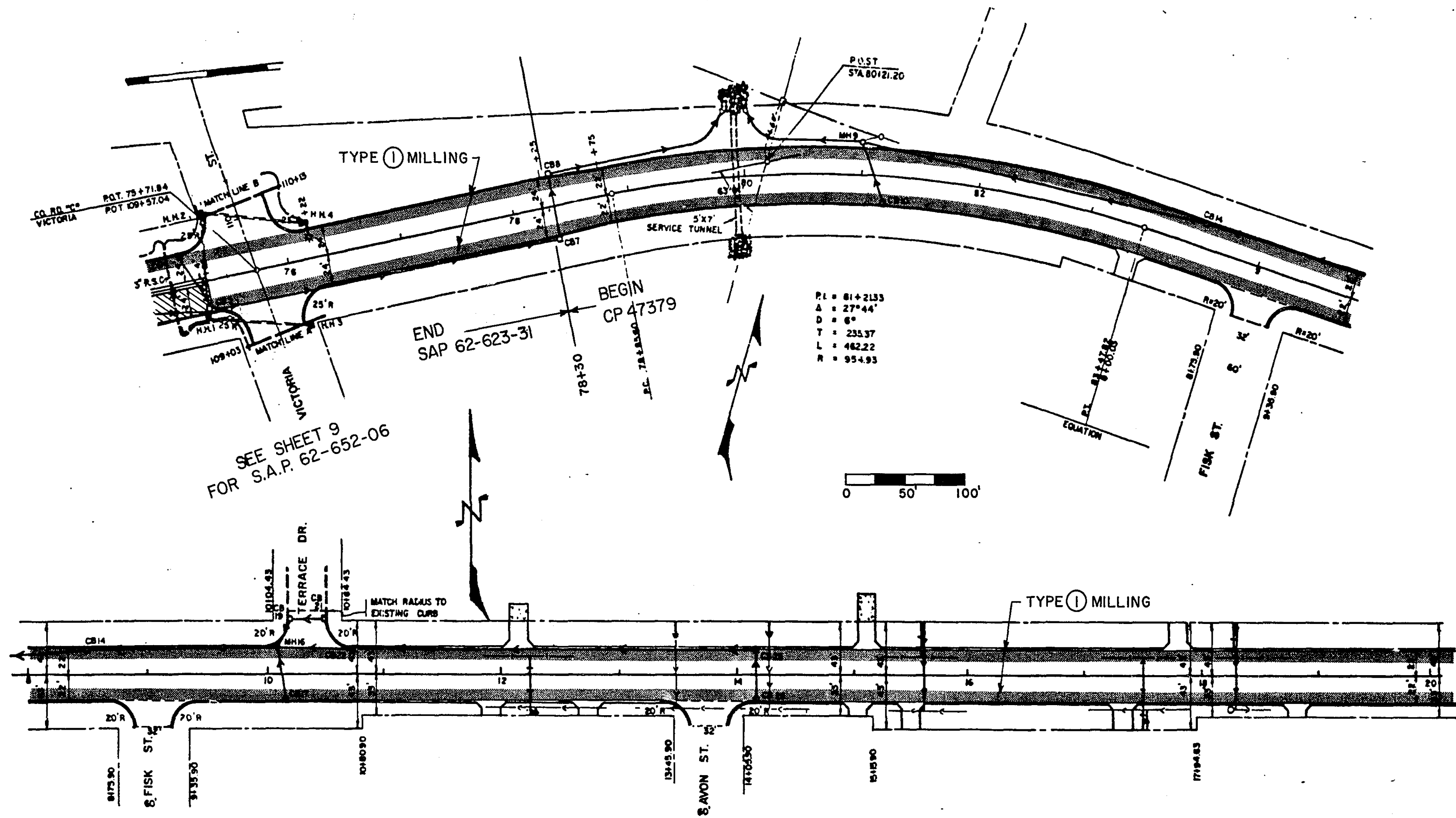
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Harry Feldman

DATE 02-24-87 REG. NO. 13501

COUNTY ROAD C

S.A.P. 62-623-31, C.P. 47379 SHEET NO. 7 OF 13 SHEETS



SEE SHEET 10 FOR NOTES

COUNTY ROAD C, VICTORIA ST.

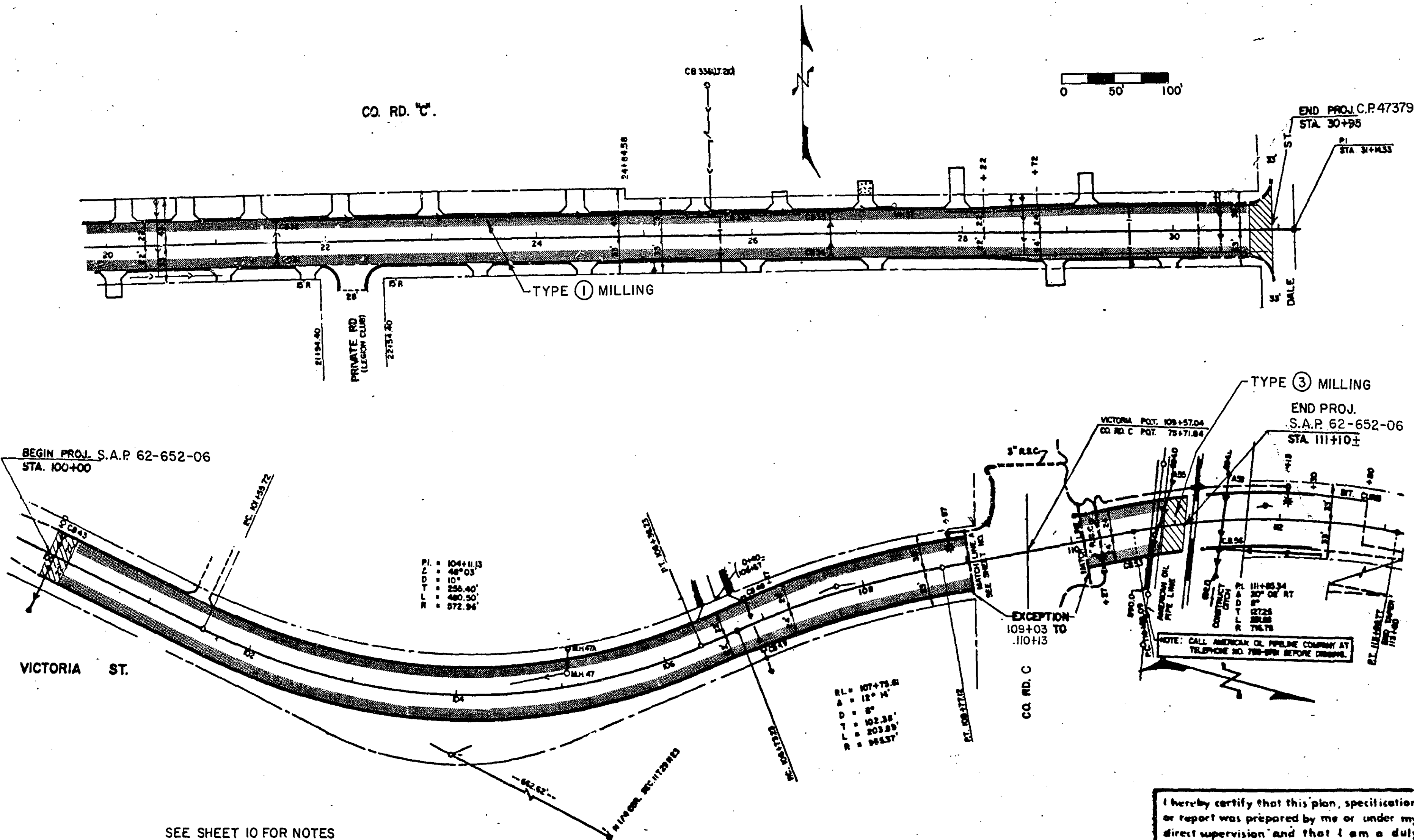
S.A.P. 62-623-31, S.A.P. 62-652-06, C.P. 47379

SHEET NO. 8 OF 13 SHEETS

I hereby certify that this plan, specification, or report 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.

Harry Feldbahn

Date 02-24-87 Reg. No. 13501



COUNTY ROAD C, VICTORIA ST.

S.A.P. 62-623-31, S.A.P. 62-652-06, C.P. 47379

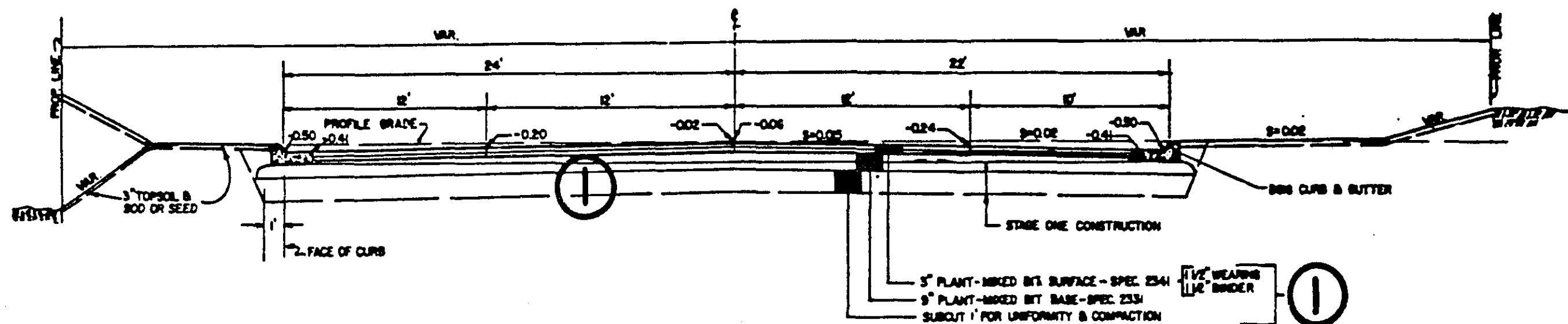
SHEET NO. 9 OF 13 SHEETS

I hereby certify that this plan, specification, or report 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.

Harry Feldman

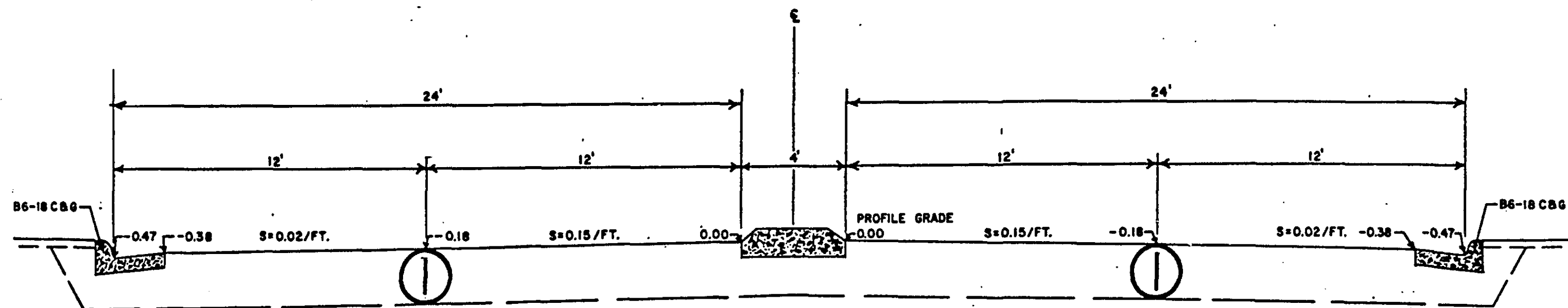
Date 02-24-87 Reg. No. 13501

EXISTING TYPICAL SECTIONS



HALF SECTION
COUNTY ROAD 'C' STA 28+72 TO STA 50+24
VICTORIA ST. STA. 107+17 TO STA. 109+03
VICTORIA ST. STA. 110+30 TO STA. 112+30

HALF SECTION
COUNTY ROAD 'C' STA 82+00 TO STA 28+22
VICTORIA ST. 100+00 TO STA. 106+87



STA. 60+75 TO STA. 75+29

COUNTY ROAD C CONSTRUCTION NOTES

PROJECT TERMINI
COUNTY ROAD C: COUNTY PROJECT 47379 BETWEEN STA 52+75 AND STA 60+50, AND BETWEEN STA 78+30 AND STA 30+95
S.A.P. 62-623-31 BEGIN STA 60+50, END STA 78+30
VICTORIA STREET: S.A.P. 62-623-31 BEGIN STA 100+00, END STA 111+10+

□ DENOTES LOOP DETECTOR 6'X6'

MILLING

COUNTY ROAD C: STA 52+75 TO STA 52+95 TYPE 3	STA 52+95 TO STA 60+50 TYPE 1	VICTORIA STREET: STA 100+00 TO STA 100+20 TYPE 3
60+50 LT 66+95 LT TYPE 3	60+50 RT 66+60 RT TYPE 1	100+20 110+90 TYPE 1
68+60 RT 75+30 RT TYPE 3	69+30 LT 75+30 LT TYPE 1	110+90 111+10 TYPE 3
30+75 30+95 TYPE 3	78+30 30+75 TYPE 1	

NOTE: COUNTY ROAD C EQUATION STA 83+47.82 = STA 8+00.03

COUNTY ROAD C, VICTORIA ST.

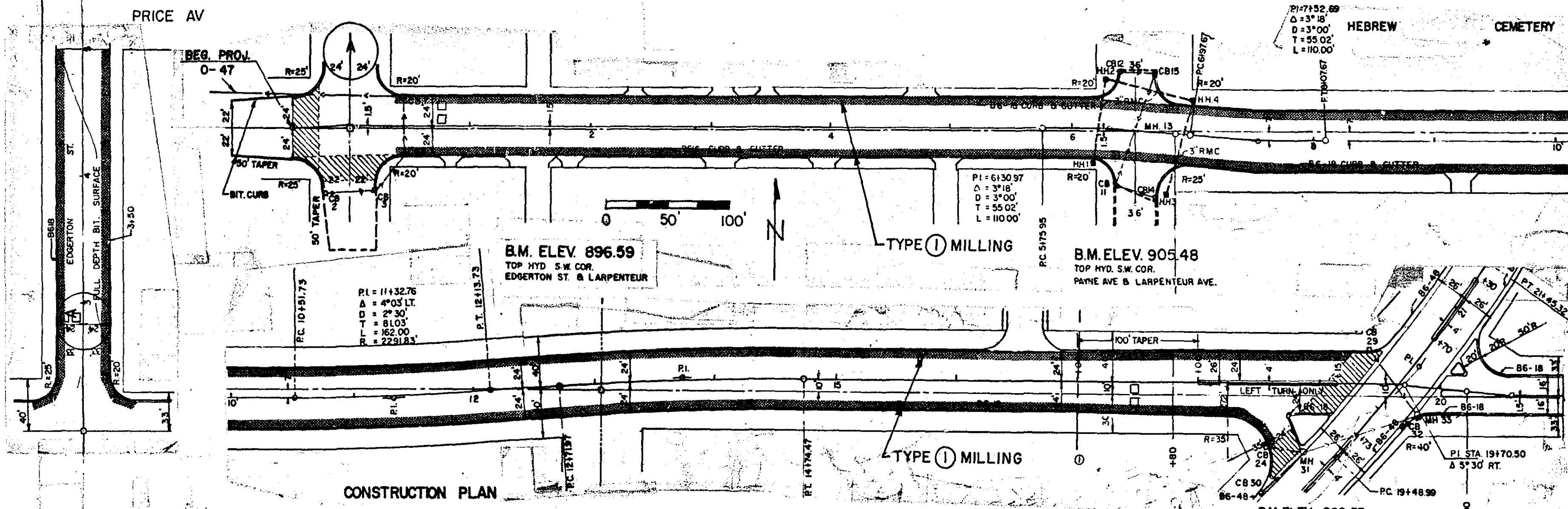
S.A.P. 62-623-31, S.A.P. 62-652-06, C.P. 47379

SHEET NO. 10 OF 13 SHEETS

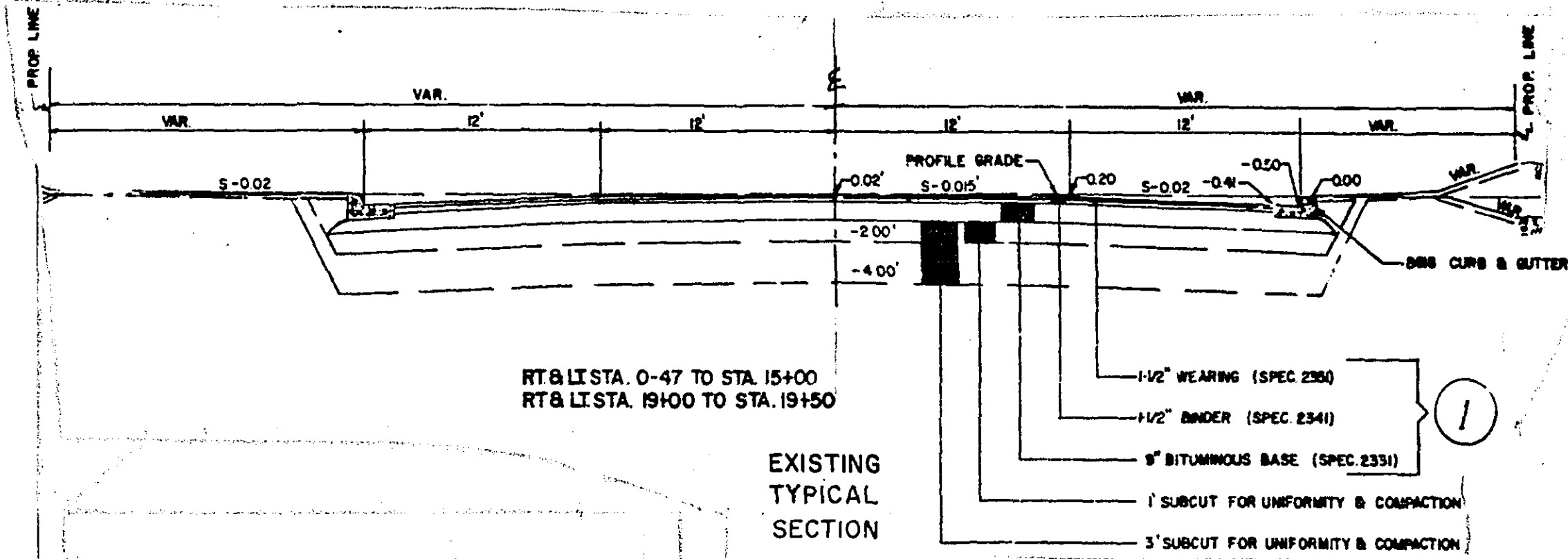
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Harry Feldman
Date 02-24-87 Reg. No. 13501

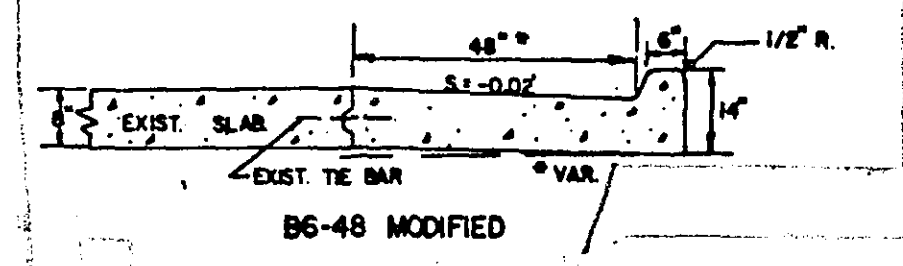
27-125



CONSTRUCTION PLAN



EXISTING
TYPICAL
SECTION



B6-48 MODIFIED

LARPENTEUR AVENUE CONSTRUCTION NOTES

PROJECT TERMINI
 LARPENTEUR AVE: BEGIN STA 0+47, END STA 19+28 (W EDGE PARKWAY DRIVE)
 EDGERTON STREET: BEGIN STA 1+56, END STA 5+00 +

☐ DENOTES LOOP DETECTOR 6' X 6'

MILLING
 LARPENTEUR AVE: STA 0+47 TO STA 0+27 TYPE 3
 STA 0+27 TO STA 17+80 TYPE 1
 STA 17+80 TO STA 19+08 TYPE 2
 STA 19+08 TO STA 19+28 TYPE 3
 EDGERTON STREET: TYPE 1

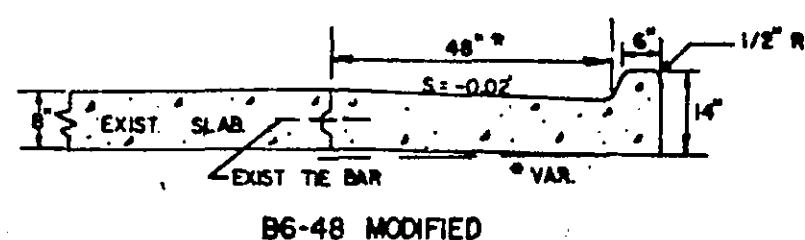
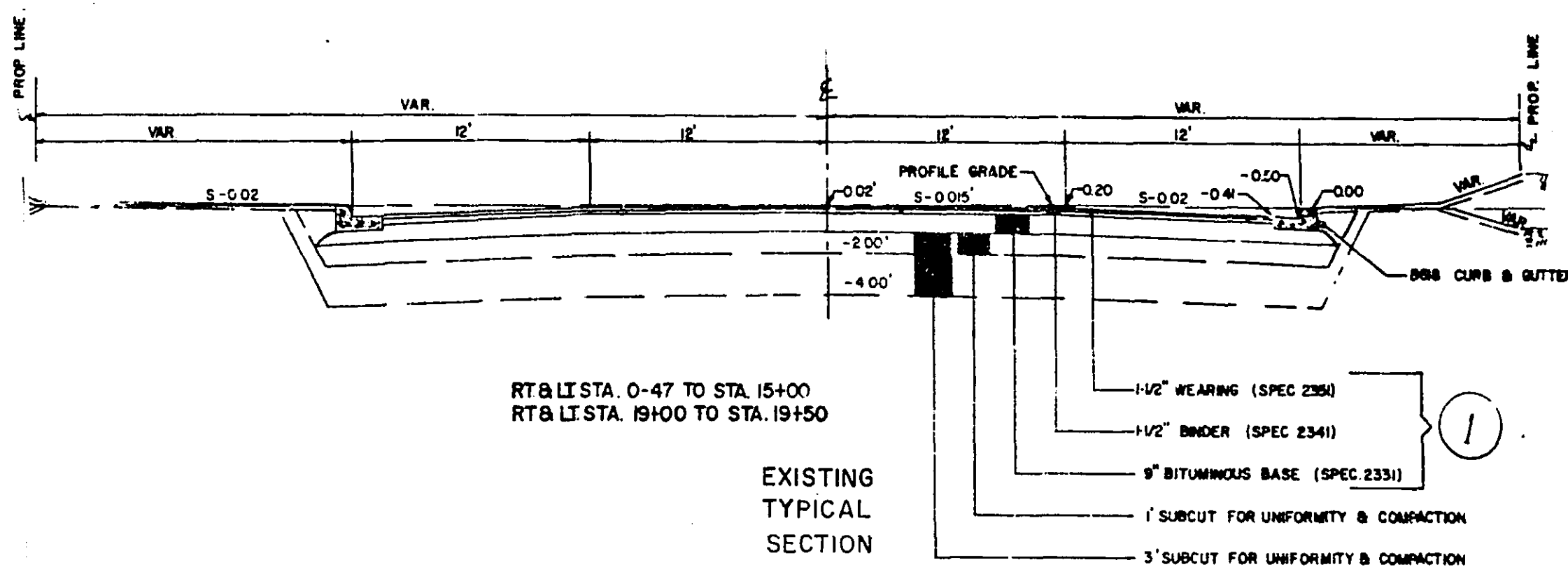
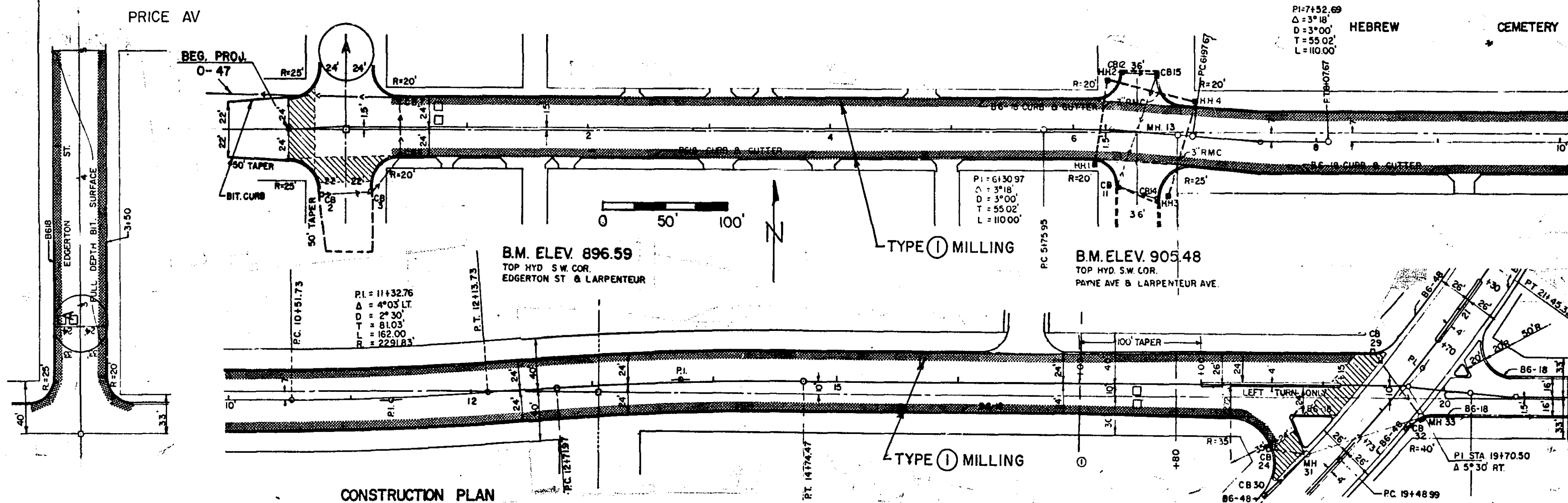
EDGERTON STREET SHALL BE MILLED ADJACENT TO BIT CURB

AT INTERSECTION WITH PARKWAY DRIVE, B648 CURB AND GUTTER (MOD) CONSTRUCTION SHALL INCLUDE SAWING OFF EXISTING TIE BARS, DRILLING HOLES FOR AND INSTALLING L2KT TIE BARS; ALL WITH NO EXTRA COMPENSATION. NOTE THAT GUTTER SHALL MATCH EXISTING CONCRETE PAVEMENT THICKNESS WHICH IS 8" NOMINAL

RECONSTRUCT CB 24 AT PARKWAY DRIVE INTERSECTION

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 02-24-87 REG NO 13501 ENG *Larry Feldman*



LARPENTEUR AVENUE CONSTRUCTION NOTES

PROJECT TERMINI
 LARPENTEUR AVE: BEGIN STA 0+47, END STA 19+28 (W EDGE PARKWAY DRIVE)
 EDGERTON STREET: BEGIN STA 1+56, END STA 5+00 +

□ DENOTES LOOP DETECTOR 6'X6'

MILLING
 LARPENTEUR AVE: STA 0+47 TO STA 0+27 TYPE 3
 STA 0+27 TO STA 17+80 TYPE 1
 STA 17+80 TO STA 19+08 TYPE 2
 STA 19+08 TO STA 19+28 TYPE 3
 EDGERTON STREET: TYPE 1

EDGERTON STREET SHALL BE MILLED ADJACENT TO BIT CURB

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RECONSTRUCT CB 24 AT PARKWAY DRIVE INTERSECTION

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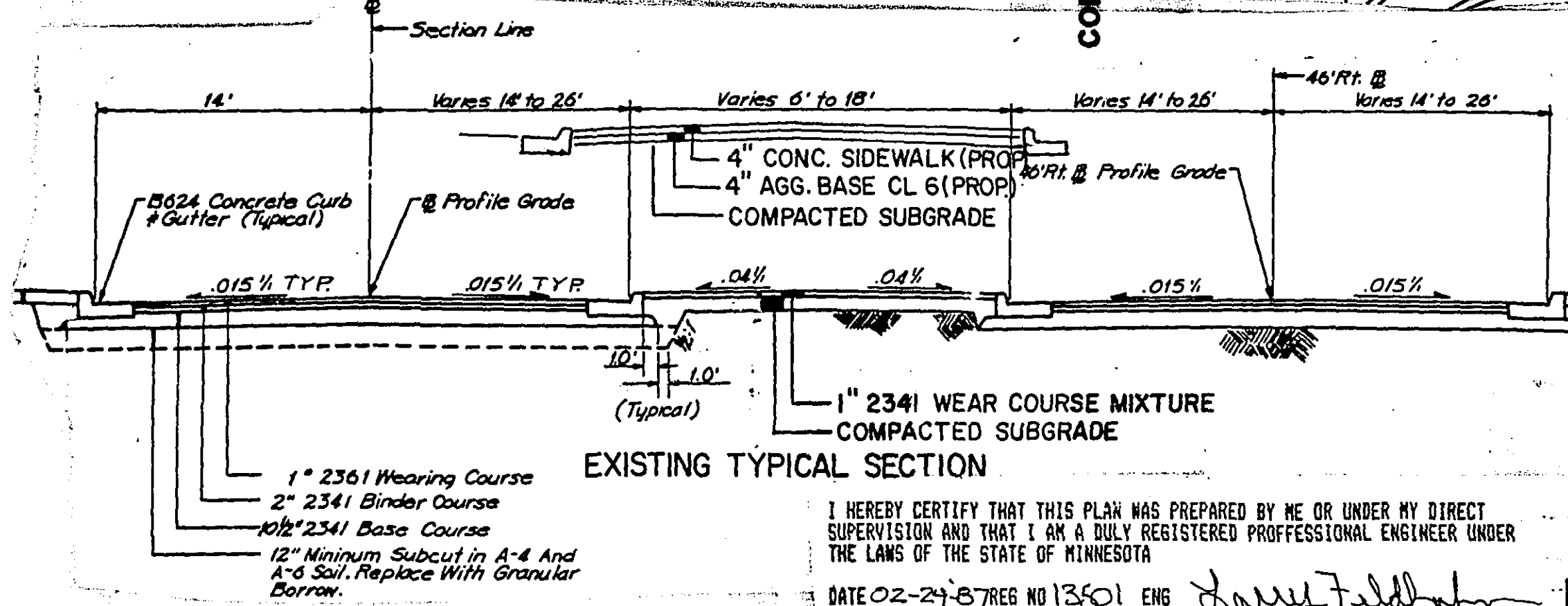
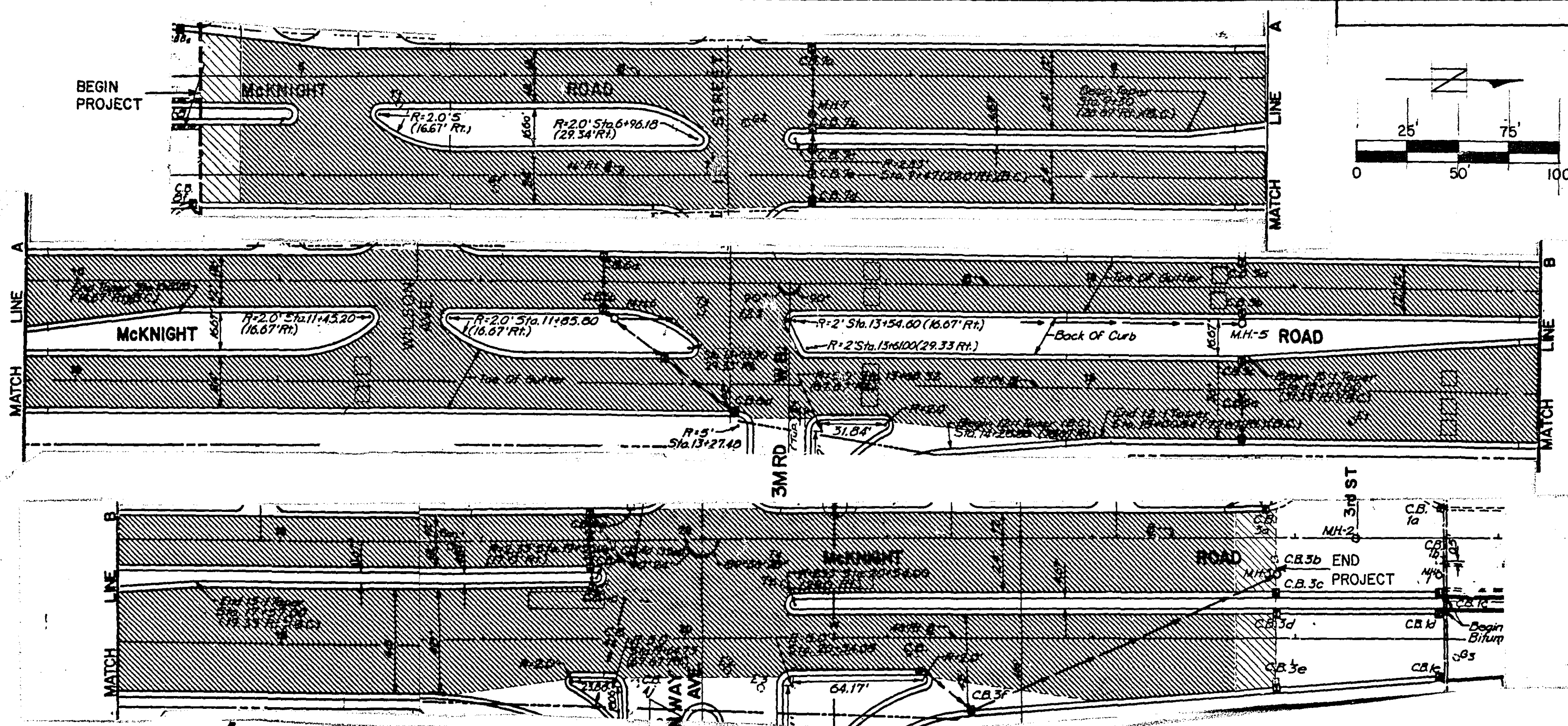
DATE 02-24-87 REG NO 13501 ENG *Larry Feldman*

LARPENTEUR AVENUE

STATE AID PROJECT NO 62-630-28

SHEET NO 11 OF 13 SHEETS

27-125



McKNIGHT ROAD CONSTRUCTION NOTES

PROJECT TERMINI
BEGIN STA 4+50, END STA 22+91

□ DENOTES LOOP DETECTOR 6'X6', 6'X40'

MILLING
STA 4+50 TO STA 22+91 TYPE 3

LOCATIONS AS DIRECTED TYPE 4

MEDIAN RECONSTRUCTION NOTES

REMOVE EXISTING 1" BIT SURFACING AND EXISTING BASE TO A DEPTH OF 8" IN MEDIANS. ALL OF THE ABOVE WORK SHALL BE PAID FOR AS COMMON EXCAVATION.

PLACE AGGREGATE BASE CLASS 6 4" IN COMPACTED THICKNESS.

SIDEWALK JOINT SPACING

CONTRACTION: 8" MAXIMUM
EXPANSION LONGITUDINAL: NOT REQUIRED
EXPANSION TRANSVERSE: MATCH EXPANSION JOINTS IN CURB AND BUTTER, 60' MAXIMUM

McKNIGHT ROAD

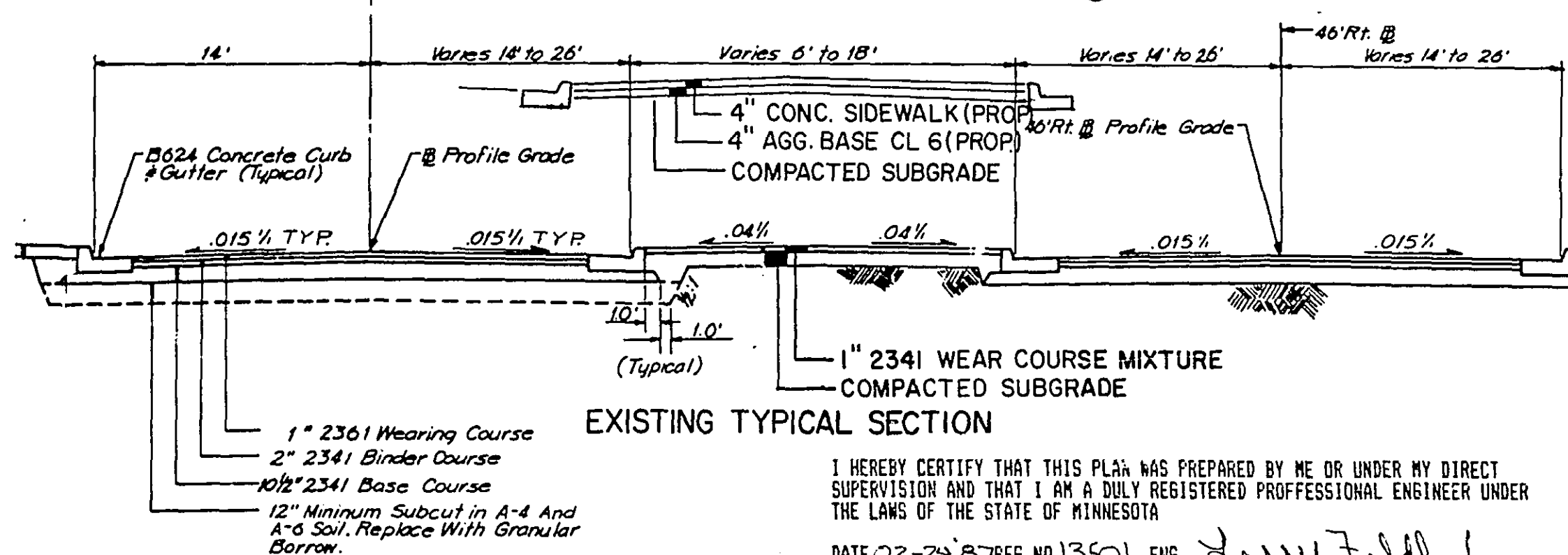
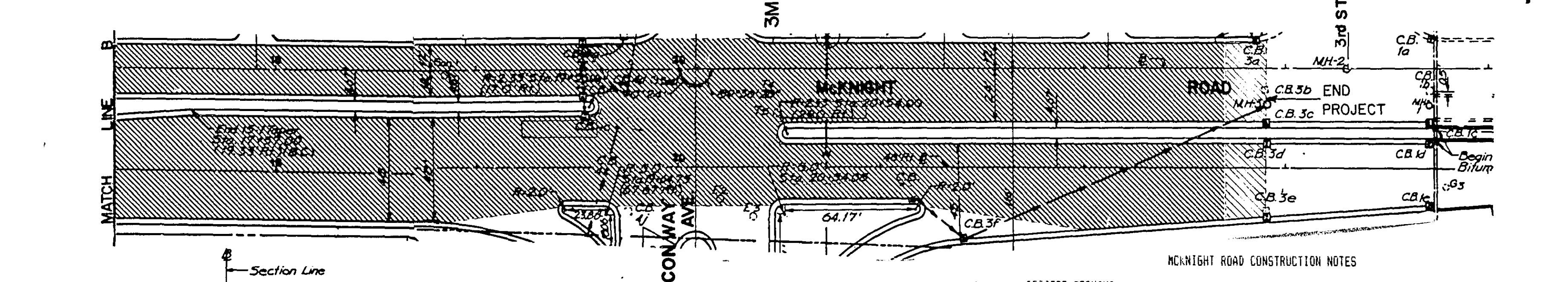
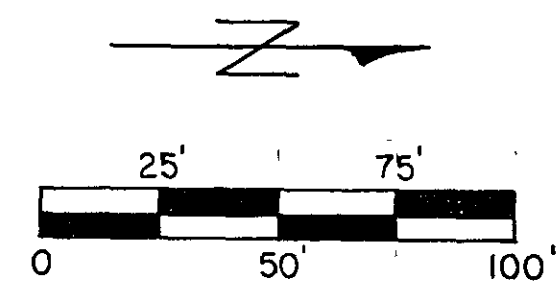
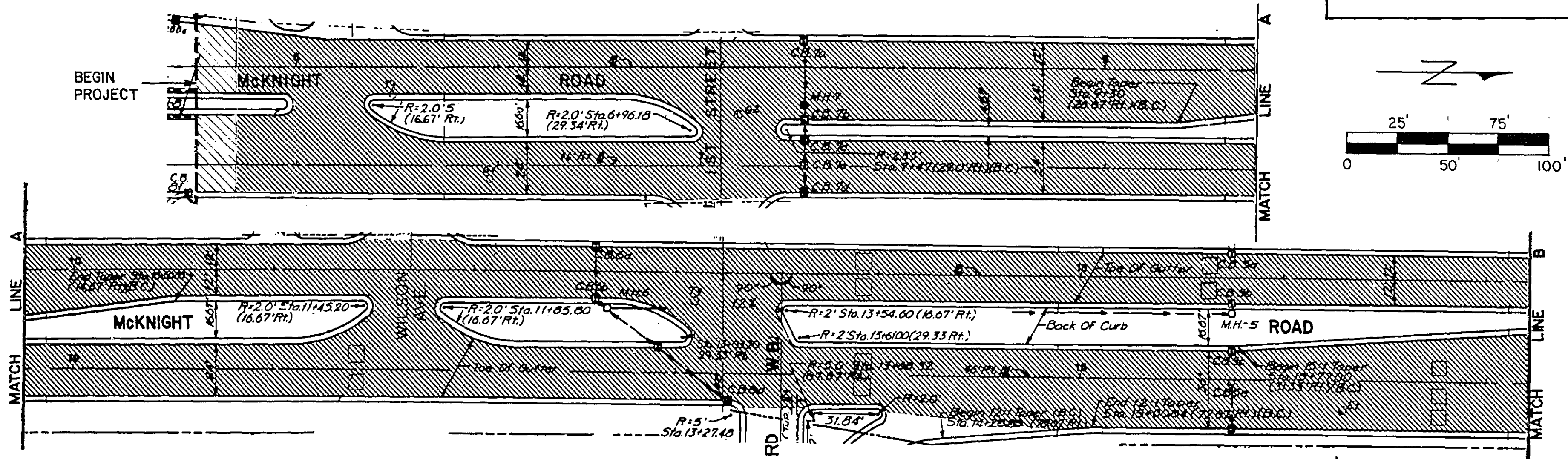
STATE AID PROJECT NO 62-668-27

SHEET NO 12 OF 13 SHEETS

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 02-21-87 REG NO 13501 ENG *Larry Feldman*

27-125



MCKNIGHT ROAD CONSTRUCTION NOTES

PROJECT TERMINI
BEGIN STA 4+50, END STA 22+91

□ DENOTES LOOP DETECTOR 6'X6', 6'X40'

MILLING
STA 4+50 TO STA 22+91 TYPE 3

LOCATIONS AS DIRECTED TYPE 4

MEDIAN RECONSTRUCTION NOTES

REMOVE EXISTING 1" BIT SURFACING AND EXISTING BASE TO A DEPTH OF 8" IN MEDIANS. ALL OF THE ABOVE WORK SHALL BE PAID FOR AS COMMON EXCAVATION.

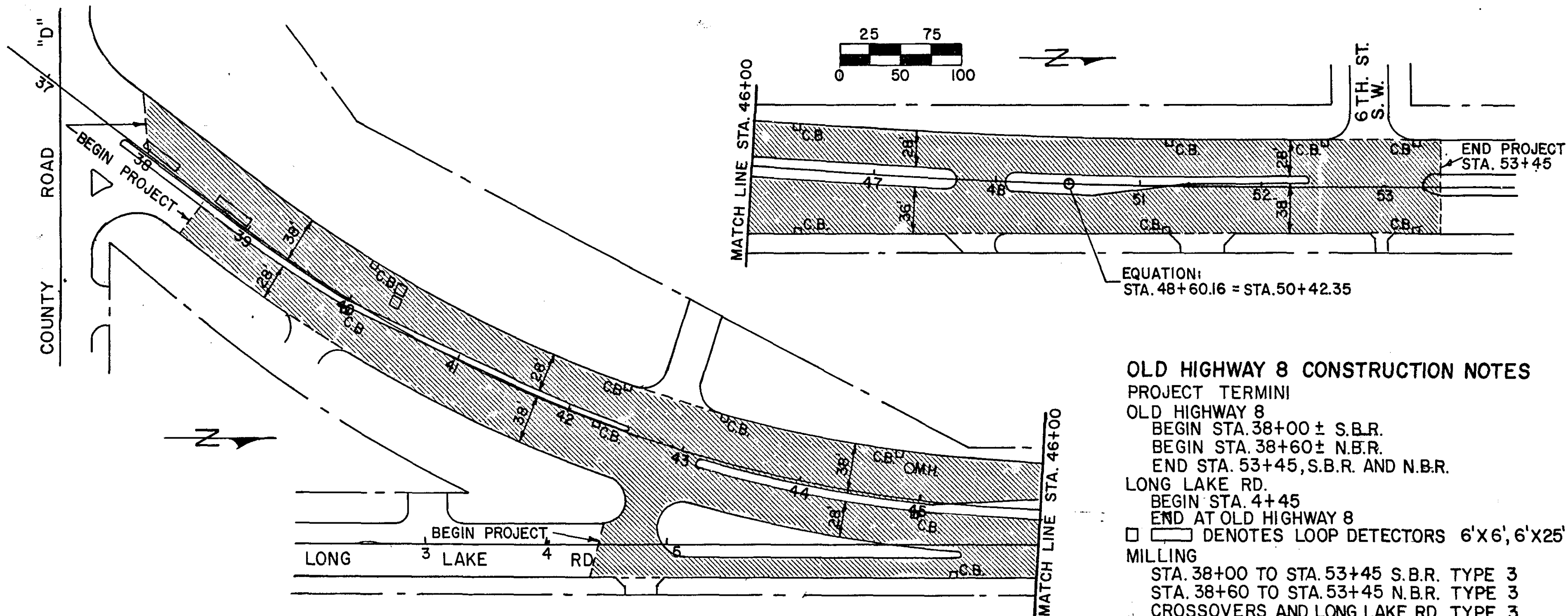
PLACE AGGREGATE BASE CLASS 6 4" IN COMPACTED THICKNESS.

SIDEWALK JOINT SPACING
CONTRACTION: 8" MAXIMUM
EXPANSION LONGITUDINAL: NOT REQUIRED
EXPANSION TRANSVERSE: MATCH EXPANSION JOINTS IN CURB AND GUTTER, 60' MAXIMUM

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 02-21-87 REG NO 13501 ENG *Larry Feldman*

27-125



OLD HIGHWAY 8 CONSTRUCTION NOTES

PROJECT TERMINI

OLD HIGHWAY 8

BEGIN STA. 38+00 ± S.B.R.

BEGIN STA. 38+60 ± N.B.R.

END STA. 53+45, S.B.R. AND N.B.R.

LONG LAKE RD.

BEGIN STA. 4+45

END AT OLD HIGHWAY 8

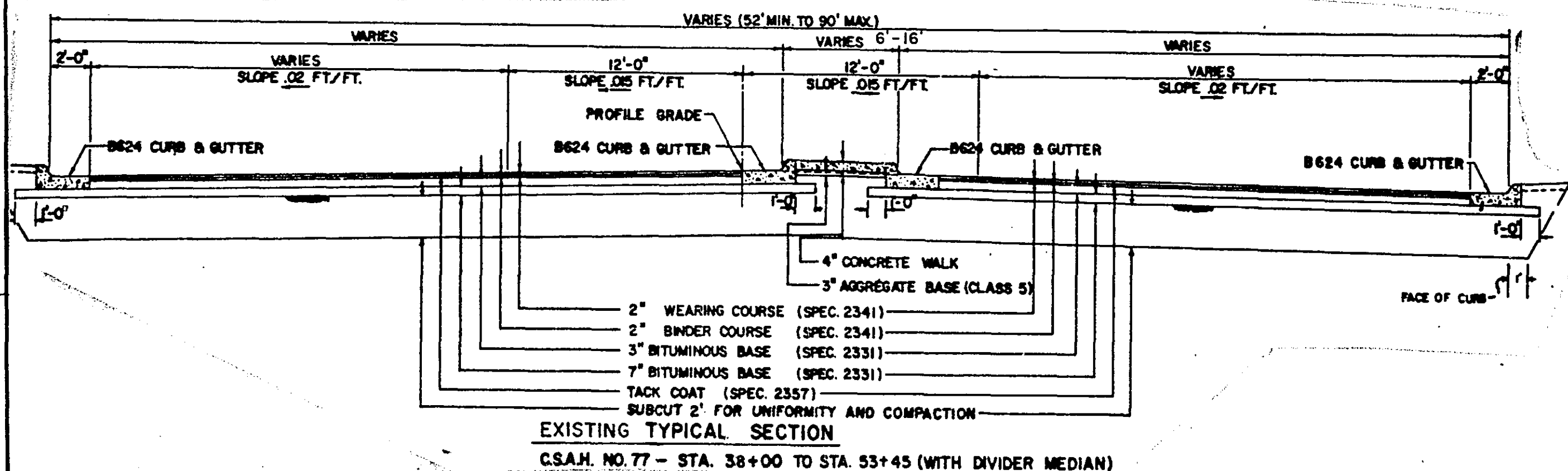
□ DENOTES LOOP DETECTORS 6'X6', 6'X25'

MILLING

STA. 38+00 TO STA. 53+45 S.B.R. TYPE 3

STA. 38+60 TO STA. 53+45 N.B.R. TYPE 3

CROSSOVERS AND LONG LAKE RD. TYPE 3



OLD HIGHWAY 8

S.A.P. 62-677-13

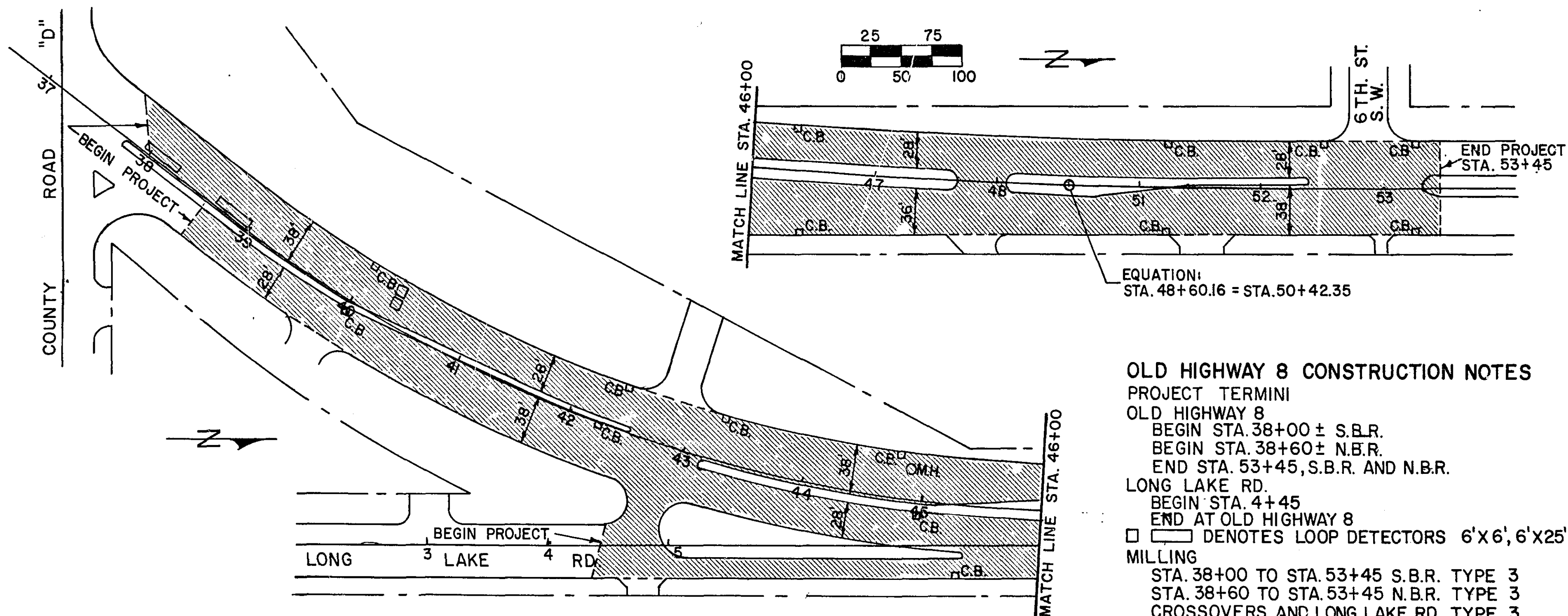
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Larry Feldman

DATE 02-24-87 REG. NO. 13501

SHEET NO. 13 OF 13 SHEETS

27-125



OLD HIGHWAY 8 CONSTRUCTION NOTES

PROJECT TERMINI

OLD HIGHWAY 8

BEGIN STA. 38+00 ± S.B.R.

BEGIN STA. 38+60 ± N.B.R.

END STA. 53+45, S.B.R. AND N.B.R.

LONG LAKE RD.

BEGIN STA. 4+45

END AT OLD HIGHWAY 8

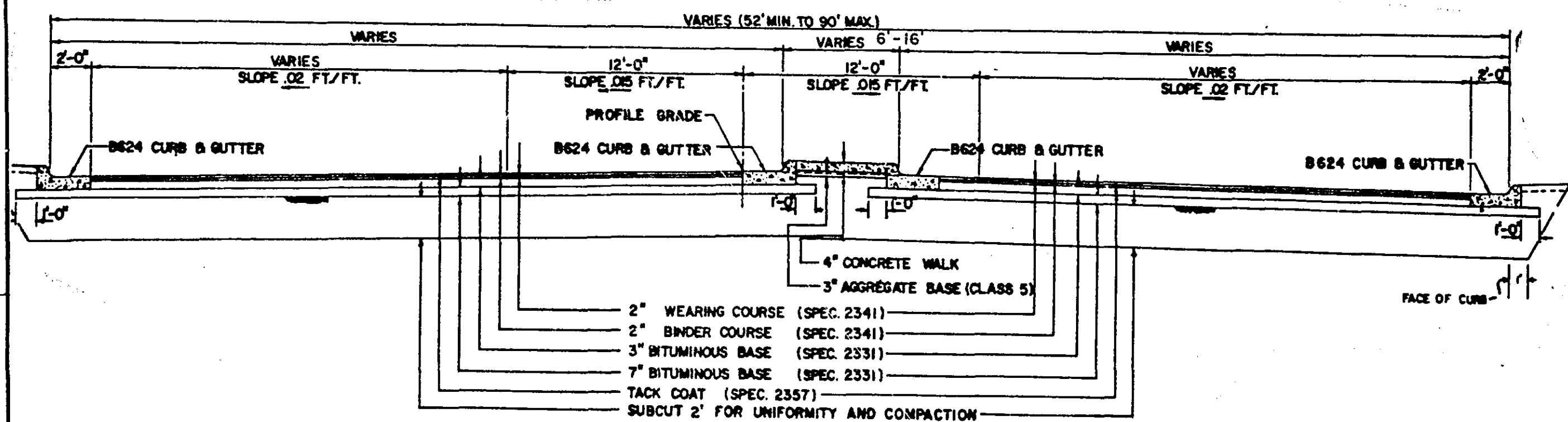
□ DENOTES LOOP DETECTORS 6'X6', 6'X25'

MILLING

STA. 38+00 TO STA. 53+45 S.B.R. TYPE 3

STA. 38+60 TO STA. 53+45 N.B.R. TYPE 3

CROSSOVERS AND LONG LAKE RD. TYPE 3



EXISTING TYPICAL SECTION

G.S.A.H. NO. 77 - STA. 38+00 TO STA. 53+45 (WITH DIVIDER MEDIAN)

OLD HIGHWAY 8

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