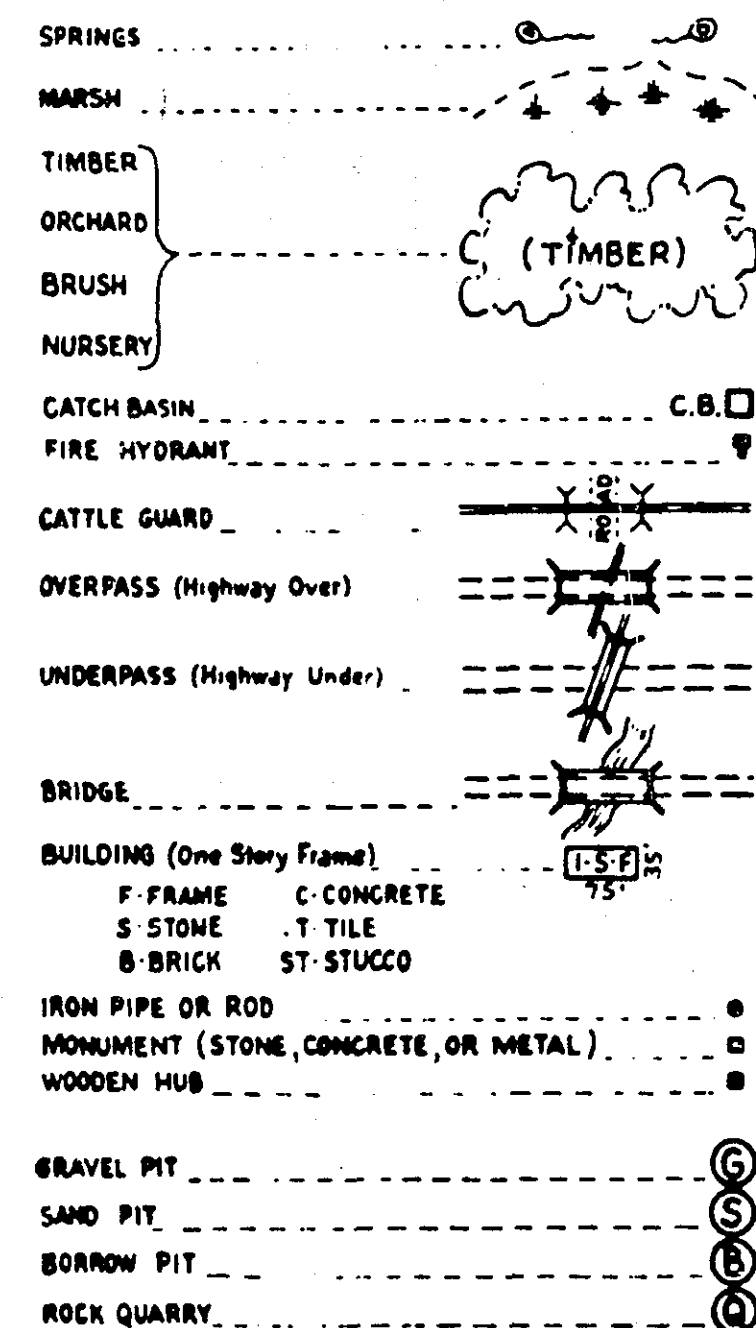
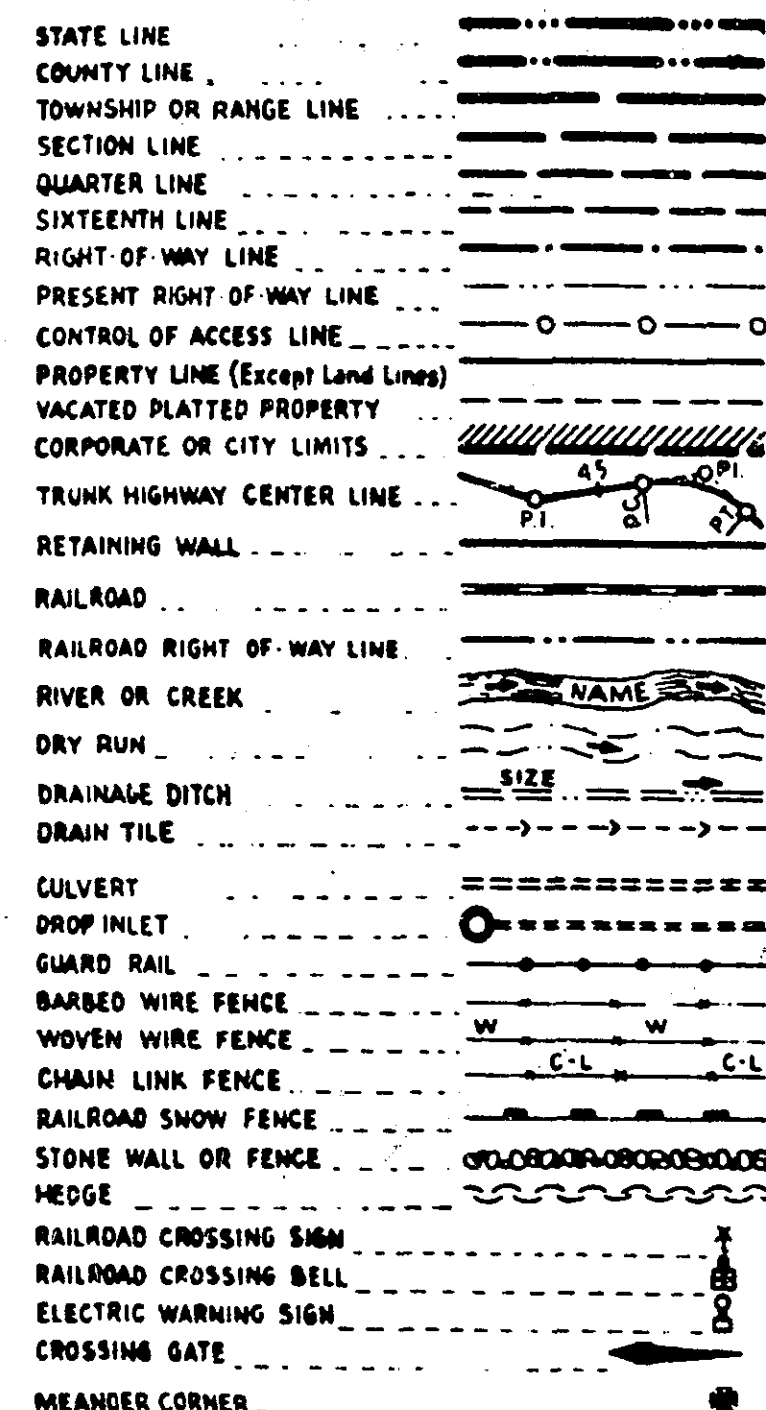


BID TABULATIONS TAKEN APRIL 23, 1975

STATEMENT OF ESTIMATED QUANTITIES						AVERAGE		HARDEN INC.		C.S. McCROSSAN		ALEXANDER CONST		ARCON CONST		MINN. KOTA		SHAFFER CONTRACT.		PALDA & SONS	
ITEM NO.	ITEM	UNIT	62-644-06 ESTIMATED QUANTITIES	NON-PARTICIPATING ESTIMATED QUANTITIES	TOTAL ESTIMATED QUANTITIES	ENGINEER ESTIMATE	LOW BIDDER	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	1		1	11,000.00	9,833.33	9,000.00	9,000.00	8,000.00	8,000.00	12,500.00	12,500.00	8,530.00	8,530.00	19,500.00	19,500.00	15,000.00	15,000.00	29,000.00	29,000.00
2104.501	REMOVE CONCRETE CURB	L.F.	3,858	690	4,548	0.80	0.87	0.75	3,411.00	1.00	4,548.00	0.85	3,865.80	1.25	5,685.00	1.00	4,548.00	1.25	5,685.00	1.10	5,002.80
2104.501	REMOVE CONCRETE CURB & GUTTER	L.F.	842		842	0.95	1.17	1.25	1,052.50	1.00	842.00	1.25	1,052.50	1.25	1,052.50	1.50	1,263.00	1.25	1,052.50	1.25	1,052.50
2104.501	REMOVE CONCRETE PIPE	L.F.	77		77	4.70	4.17	4.00	308.00	5.00	385.00	3.50	269.50	5.70	438.90	4.00	308.00	3.50	269.50	1.25	96.25
2104.503	REMOVE SIDEWALK	S.F.	66		66	1.25	0.97	2.00	132.00	0.40	26.40	0.50	33.00	0.50	33.00	1.50	99.00	0.60	39.60	1.00	66.00
2104.505	REMOVE CONCRETE PAVEMENT	S.Y.	160		160	1.50	2.67	3.00	480.00	2.00	320.00	3.00	480.00	3.00	480.00	3.50	560.00	3.50	560.00	2.00	320.00
2104.509	REMOVE CATCH BASINS	EACH	15		15	75.00	133.33	75.00	1,125.00	250.00	3,750.00	75.00	1,125.00	65.00	975.00	250.00	3,750.00	125.00	1,875.00	80.00	1,200.00
2104.523	SALVAGE ELECTRICAL SIGNS	EACH	3		3	300.00	483.33	550.00	1,650.00	450.00	1,350.00	450.00	1,350.00	430.00	1,290.00	473.00	1,419.00	450.00	1,350.00	200.00	600.00
2105.501	COMMON EXCAVATION	C.Y.	7,200		7,200	1.50	2.88	2.75	19,800.00	2.88	20,736.00	3.00	21,600.00	3.20	23,040.00	1.00	7,200.00	3.75	27,000.00	3.80	27,360.00
2130.501	WATER	(M)GAL.	50		50	6.35	6.50	6.00	300.00	7.00	350.00	6.50	325.00	8.00	400.00	10.00	500.00	7.50	375.00	8.00	400.00
2211.501	AGGREGATE BASE, CLASS 6	TON	4,200	69	4,269	3.75	3.39	3.38	14,429.22	3.25	13,814.25	3.55	15,154.95	3.75	16,008.75	3.25	13,814.25	3.50	14,941.50	3.00	12,801.00
2211.501	AGGREGATE BASE, CLASS 4	TON	4,148		4,148	3.25	3.10	3.21	13,315.08	3.00	12,444.00	2.10	12,858.00	3.50	14,518.00	3.25	13,481.00	3.25	13,481.00	3.00	12,440.00
2301.503	CONCRETE PAVEMENT, IRR. WIDTH	S.Y.	552		552	9.00	5.57	4.40	2,428.80	8.00	4,416.00	4.30	2,373.60	7.50	4,140.00	4.20	2,318.40	4.00	2,208.00	6.00	3,312.00
2301.511	STRUCTURAL CONCRETE	C.Y.	97		97	30.00	31.50	38.50	3,734.50	26.00	2,522.00	30.00	2,910.00	26.00	2,522.00	36.75	3,564.75	35.00	3,395.00	30.10	2,919.70
2301.551	BRIDGE APPROACH PANELS, RECTANGULAR	EACH	2		2	4,300.00	6,283.30	4,950.00	9,900.00	4,000.00	8,000.00	5,100.00	10,000.00	4,830.00	9,660.00	4,725.00	9,450.00	4,500.00	9,000.00	6,000.00	12,000.00
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	166		166	93.50	89.33	90.00	14,940.00	90.00	14,940.00	88.00	14,608.00	90.00	14,940.00	101.00	16,766.00	94.00	15,604.00	94.00	15,604.00
2331.512	LEVELING COURSE MIXTURE	TON	2,773		2,773	6.50	7.14	6.41	17,774.93	7.65	21,213.45	7.35	20,381.55	6.41	17,774.93	6.90	19,133.70	6.45	17,885.85	6.45	17,885.85
2331.514	BASE COURSE MIXTURE	TON	910		910	6.50	7.27	6.65	6,051.50	7.40	6,734.00	7.15	7,052.80	6.65	6,051.50	6.90	6,279.00	6.45	5,869.50	6.45	5,869.50
2331.531	TEMPORARY LANE MARKINGS	RD. STA.	120		120	6.00	5.17	5.00	600.00	6.00	720.00	4.50	540.00	5.00	600.00	2.25	270.00	2.10	252.00	2.10	252.00
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	158	2	160	93.50	89.33	90.00	14,400.00	90.00	14,400.00	88.00	14,080.00	90.00	14,400.00	101.00	16,160.00	94.00	15,040.00	94.00	15,040.00
2341.508	WEARING COURSE MIXTURE	TON	2,050	33	2,083	7.15	7.22	6.41	13,352.03	7.40	16,455.70	7.35	15,310.55	6.41	13,352.03	7.12	14,830.96	6.25	13,851.95	6.65	13,851.95
2341.510	BINDER COURSE MIXTURE	TON	623		623	7.15	8.70	8.70	5,420.10	7.40	4,621.70	9.50	5,918.50	8.70	5,420.10	8.56	5,332.88	8.00	4,984.00	8.00	4,984.00
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	2,270		2,270	0.55	0.62	0.70	1,589.00	0.60	1,362.00	0.55	1,248.50	0.70	1,589.00	0.52	1,180.40	0.49	1,112.30	0.49	1,112.30
2358.501	BITUMINOUS MATERIAL FOR PRIME COAT	GAL.	1,832		1,832	0.55	0.58	0.60	1,099.20	0.60	1,099.20	0.55	1,007.60	0.60	1,099.20	0.49	897.68	0.46	842.70	0.46	842.70
2501.511	15" PIPE SEWER, CLASS IV	L.F.	279		279	10.60	13.17	16.50	4,603.50	11.00	3,069.00	12.00	3,348.00	15.40	4,296.60	15.40	4,296.60	20.00	5,580.00	19.00	5,301.00
2501.511	18" PIPE SEWER, CLASS IV	L.F.	74		74	11.00	15.60	19.80	1,465.20	12.00	888.00	15.00	1,110.00	15.90	1,176.60	17.40	1,287.60	21.00	1,554.00	20.00	1,480.00
2506.509	CONSTRUCT CATCH BASINS, DESIGN A or F	EACH	1		1	500.00	460.67	357.00	357.00	500.00	500.00	525.00	525.00	355.00	355.00	340.00	340.00	450.00	450.00	400.00	400.00
2506.509	CONSTRUCT CATCH BASINS, DESIGN RC-2	EACH	1		1	400.00	400.00	275.00	275.00	500.00	500.00	425.00	425.00	340.00	340.00	340.00	340.00	400.00	400.00	500.00	500.00
2506.509	CONSTRUCT CATCH BASINS, DESIGN LP-4	EACH	12		12	550.00	784.67	429.00	5,148.00	1,250.00	15,000.00	675.00	8,100.00	843.00	10,716.00	720.00	8,640.00	600.00	7,200.00	700.00	8,400.00
2506.509	CONSTRUCT CATCH BASINS, DESIGN LP-4M	EACH	4		4	650.00	886.67	440.00	1,760.00	1,500.00	6,000.00	720.00	2,880.00	1,034.00	4,136.00	720.00	2,880.00	750.00	3,000.00	800.00	3,200.00
2506.512	RECONSTRUCT CATCH BASINS	L.F.	1.5		1.5	65.00	90.50	71.50	107.25	100.00	150.00	100.00	150.00	75.00	112.50	70.00	105.00	95.00	142.50	150.00	225.00
2506.516	CASTING ASSEMBLIES	EACH	10		10	150.00	161.17	181.50	1,815.00	150.00	1,500.00	132.00	1,520.00	132.10	1,321.00	125.00	1,250.00	150.00	1,500.00	150.00	1,500.00
2506.522	ADJUST FRAME & RING CASTING	EACH	30		30	65.00	75.00	75.00	2,250.00	80.00	2,400.00	70.00	2,100.00	90.00	2,700.00	55.00	1,650.00	75.00	2,250.00	90.00	2,700.00
2521.501	4" CONCRETE WALK	S.F.	50		50	1.15	1.30	1.65	82.50	1.25	75.00	1.00	50.00	0.95	47.50	1.58	79.00	1.50	75.00	2.25	112.50
2531.501	CONCRETE CURB & GUTTER, DESIGN B618	L.F.	11,452		11,452	3.00	3.22	3.40	38,936.80	3.30	37,791.60	2.95	33,783.40	3.05	34,928.60	3.26	37,333.52	3.10	35,501.25	3.15	36,073.80
2531.502	CONCRETE CURB, DESIGN V6	L.F.	142	543	685	2.85	4.07	4.65	3,185.25	4.00	2,740.00	3.55	2,433.75	3.60	2,466.00	4.46	3,055				

PLANS SYMBOLS



SILVER LAKE

GROSS LENGTH 2927 FEET = 0.5544 MILES
 BRIDGES-LENGTH FEET = MILES
 EXCEPTIONS-LENGTH FEET = MILES
 NET LENGTH 2927 FEET = 0.5544 MILES

SCALES PLAN, 1 INCH=30 FEET
 PROFILE, HORIZ. 1 INCH=30 FEET VERT. 1 INCH=5 FEET
 CROSS-SECTIONS, 1 INCH= 5 FEET
 LAYOUT, 0.75 INCH=5280 FEET

OFFICE OF COUNTY ENGINEER RAMSEY COUNTY

CONSTRUCTION PLAN FOR: BITUMINOUS RESURFACING, WIDENING,
 AND CHANNELIZATION

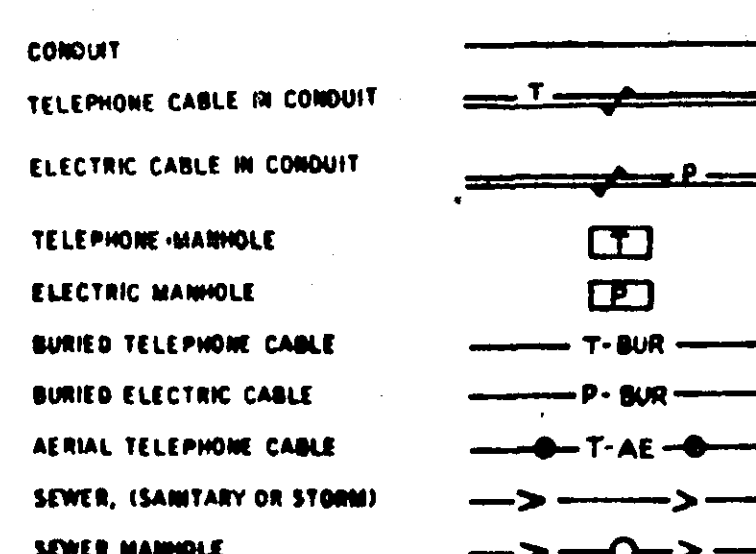
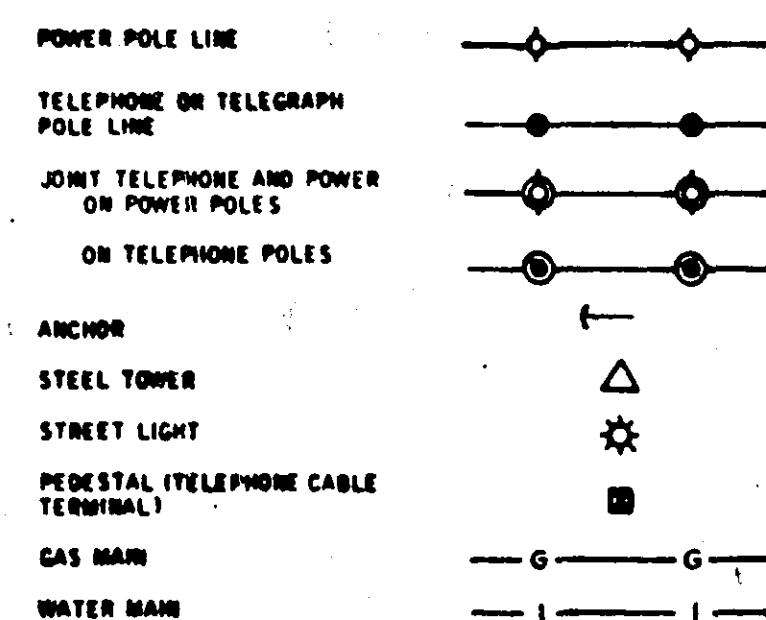
SILVER LAKE RD. S.A.P 62-644-06

BETWEEN: A POINT 326' NORTH OF COUNTY ROAD "D"
 AND: A POINT 638' NORTH OF SILVER LAKE

FROM A POINT: 326' NORTH OF THE SOUTH TO A POINT: 638' NORTH OF THE CENTER
 1/4 CORNER OF SECTION 31, SECTION 31, T.30 N., R.23 W.
 T. 30 N., R. 23 W.

DESIGN	DESIGNATION
ADT 1973	= 18,000
ADT 1985	= 24,000
T (HEAVY COMMERCIAL)	= 7%
DESIGN LOAD	= 9 TON
SOIL FACTOR	= 100%
DESIGN SPEED	= 45 M.P.H.

UTILITIES SYMBOLS

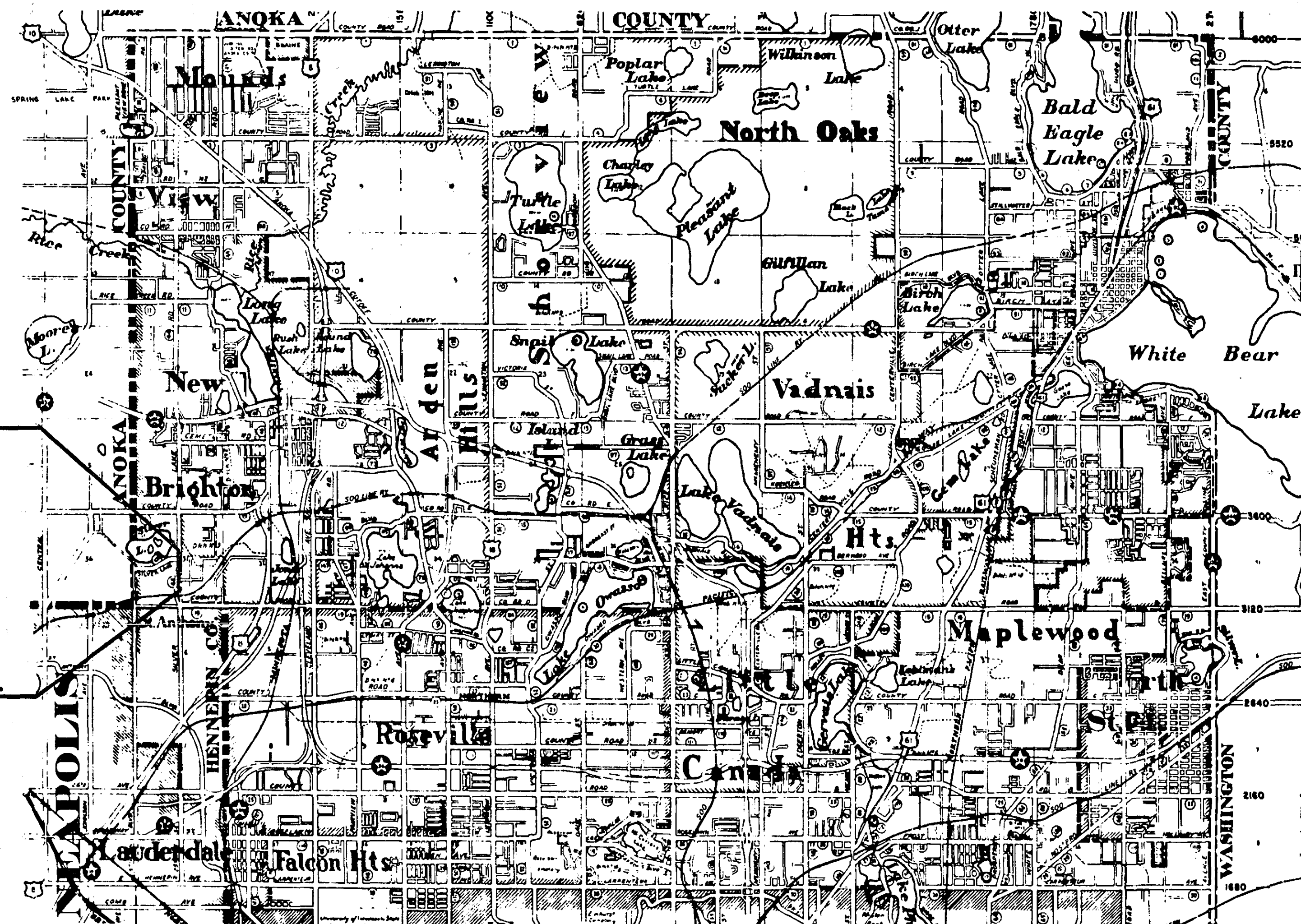


PIT DATA

PIT NO.	Located in
PIT NO.	Located in

END PROJ.
 STA. 32+53

BEGIN PROJ.
 STA. 3+26



CITY OF ST. PAUL

SHEET NO.	INDEX
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	TYPICAL SECTION
4-5	DRAINAGE CHART & DETAILS
6	BRIDGE APPROACH PANEL SEAT
7	BRIDGE APPROACH PANEL
8	BRIDGE APPROACH TREATMENT
9-10	BRIDGE SLOPE PAVING
11-17	PLAN & PROFILES
18-31	CROSS SECTIONS
32-33	SIGNALS (FOR INFORMATIONAL PURPOSES ONLY)

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.
 Date Nov. 8, 1974 Reg. No. 5782

RECOMMENDED FOR APPROVAL <u>RLK</u> DATE <u>11-6-74</u>	TRAFFIC ENGINEER	RECOMMENDED FOR APPROVAL <u>Dean R. Goble</u> DATE <u>12-19-74</u>	COUNTY ENGINEER
RECOMMENDED FOR APPROVAL <u>MLK</u> DATE <u>11-6-74</u>	MAINTENANCE ENGINEER	APPROVED <u>John T. Finley</u> DATE <u>1/3/75</u>	CHAIRMAN OF THE RAMSEY COUNTY BOARD
RECOMMENDED FOR APPROVAL <u>KEW</u> DATE <u>11-18-74</u>	CONSTRUCTION ENGINEER	APPROVED <u>D. J. Kellman</u> DATE <u>1-9-75</u>	SOO LINE R.Y.
RECOMMENDED FOR APPROVAL <u>MLK</u> DATE <u>11-12-74</u>	R.O.W. ENGINEER	APPROVED <u>Laurel C. Brumond</u> DATE <u>1-27-75</u>	MAYOR OF THE CITY OF NEW BRIGHTON
RECOMMENDED FOR APPROVAL <u>MLK</u> DATE <u>11-12-74</u>	ASST. COUNTY ENGINEER	APPROVED <u>Duane R. Mieske</u> DATE <u>1-27-75</u>	MAYOR OF THE CITY OF ST. ANTHONY
APPROVED <u>MLK</u> DATE <u>12-17-74</u>	COUNTY ENGINEER	MINNESOTA STATE HIGHWAY DEPARTMENT	
		RECOMMENDED FOR APPROVAL <u>John J. Kellman</u> DATE <u>3-14-75</u>	
		RECOMMENDED FOR APPROVAL <u>DRM</u> DATE <u>3-10-75</u>	DISTRICT STATE AID ENGINEER
		APPROVAL <u>John J. Kellman</u> DATE <u>3/14/75</u>	STATE AID ENGINEER

S.A.P. No. 62-644-06

Sheet No. 1 of 33 Sheets

MICROFILMED
 RAMSEY CO. ENGR.

22-108

THE "MINNESOTA HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JANUARY 1, 1972 AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED JANUARY 1, 1974 SHALL GOVERN.

STATEMENT OF ESTIMATED QUANTITIES						
ITEM NO	ITEM	UNIT	62-644-06 ESTIMATED QUANTITIES	NON-PARTICIPATING ESTIMATED QUANTITIES	TOTAL ESTIMATED QUANTITIES	FINAL ESTIMATED QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	1		1	1
2104.501	REMOVE CONCRETE CURB	L.F.	3,858	690	4,548	4603
2104.501	REMOVE CONCRETE CURB & GUTTER	L.F.	842		842	1466
2104.501	REMOVE CONCRETE PIPE	L.F.	77		77	18
2104.503	REMOVE SIDEWALK	S.F.	66		66	1198
2104.505	REMOVE CONCRETE PAVEMENT	S.Y.	160		160	193
2104.509	REMOVE CATCH BASINS	EACH	15		15	15
2104.523	SALVAGE ELECTRICAL SIGNS	EACH	3		3	2
2105.501	COMMON EXCAVATION	C.Y.	7,200		7,200	7358
2130.501	WATER	(M)GAL.	50		50	12
2211.501	AGGREGATE BASE, CLASS 6	TON	4,200	69	4,269	6832
2211.501	AGGREGATE BASE, CLASS 4	TON	4,148		4,148	4037
2301.503	CONCRETE PAVEMENT, IRR. WIDTH	S.Y.	552		552	530
2301.511	STRUCTURAL CONCRETE	C.Y.	97		97	928
2301.551	BRIDGE APPROACH PANELS, RECTANGULAR	EACH	2		2	2
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	166		166	134.4
2331.512	LEVELING COURSE MIXTURE	TON	2,773			1978
2331.514	BASE COURSE MIXTURE	TON	910			1006
2331.531	TEMPORARY LANE MARKINGS	RD. STA.	120		120	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	158	2	160	1809
2341.508	WEARING COURSE MIXTURE	TON	2,050	33	2,083	2338
2341.510	BINDER COURSE MIXTURE	TON	623		623	799
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	2,270		2,270	2250
2358.501	BITUMINOUS MATERIAL FOR PRIME COAT	GAL.	1,832		1,832	
2501.511	15" PIPE SEWER, CLASS IV	L.F.	268		268	270
2501.511	18" PIPE SEWER, CLASS IV	L.F.	74		74	72
2506.509	CONSTRUCT CATCH BASINS, DESIGN A or F	EACH	1		1	1
2506.509	CONSTRUCT CATCH BASINS, DESIGN RC-2	EACH	2		2	2
2506.509	CONSTRUCT CATCH BASINS, DESIGN LP-4	EACH	11		11	11
2506.509	CONSTRUCT CATCH BASINS, DESIGN LP-4M	EACH	4		4	4
2506.512	RECONSTRUCT CATCH BASINS	L.F.	1.5		1.5	108
2506.516	CASTING ASSEMBLIES	EACH	10		10	11
2506.522	ADJUST FRAME & RING CASTING	EACH	30		30	31
2521.501	4" CONCRETE WALK	S.F.	50		50	966
2531.501	CONCRETE CURB & GUTTER, DESIGN B618	L.F.	11,452		11,452	11783
2531.502	CONCRETE CURB, DESIGN V6	L.F.	142	543	685	677
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	S.Y.	225		225	348
2535.501	BITUMINOUS CURB	L.F.	30		30	30
2554.501	TRAFFIC BARRIER, DESIGN END APPROACH	L.F.	25		25	25
2554.521	ANCHORAGE ASSEMBLIES	EACH	1		1	1
2571.541	TRANSPLANT TREES (6" CATALPA)	EACH	1		1	1
2571.541	TRANSPLANT TREES (3" MAPLE)	EACH	1		1	
2571.541	TRANSPLANT TREES (3" 6" ASH)	EACH		4	4	3
2575.505	SODDING	S.Y.	6,000		6,000	8881
2575.531	COMMERICAL FERTILIZER, ANALYSIS 12-12-12	TON	0.4		0.4	0.59
2575.551	TOPSOIL BORROW	C.Y.	500		500	912
105.614	BRIDGE APPROACH TREATMENT	LUMP SUM	2		2	2
401.601	SLOPE PAVING	S.Y.	602		602	596
401.616	BRIDGE APPROACH PANEL SEAT	LUMP SUM	2		2	2
504.679	ADJUST VALVE BOX	EACH	15		15	16
	RELOCATE HYDRANT	EACH				2
	REMOVE TREE	EACH				2
	RELOCATE TYPE A GUARDRAIL	L.F.				79

STANDARD DETAIL PLATES	
0002A	SPECIFICATION REFERENCE TO STANDARD PLATES
1120 N	CONTRACTION JOINT
1140 N	LONGITUDINAL JOINT
1141 B	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
3000 F	REINFORCED CONCRETE PIPE
3006 A	GASKET JOINT FOR R.C. PIPE
4000 G	MANHOLE OR CATCH BASIN
4005 I	MANHOLE OR CATCH BASIN
4010 D	CONC. SHORT CONE & ADJUSTING RING
4011 C	PRECAST CONCRETE BASE
4021 C	PRECAST CURB OPENING CATCH BASIN
4101 B	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 D	COVER CASTING FOR MANHOLE
7020 G	CONCRETE CURBS
7035 H	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7036 A	PEDESTRIAN CURB RAMP
7065 C	BITUMINOUS CURB
7100 D	CONCRETE CURB AND GUTTERS
7102 F	CONCRETE CURB AND GUTTERS
8000 F	STANDARD BARRICADES
8307 K	STRUCTURAL PLATE BEAM GUARDRAIL
8314 B	3-CABLE GUARDRAIL DETAILS
8319 C	TWISTED END TREATMENT

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: L. FELDHAHN

DATE: 1 6 76

MICROFILMED
RAMSEY CO. ENG.

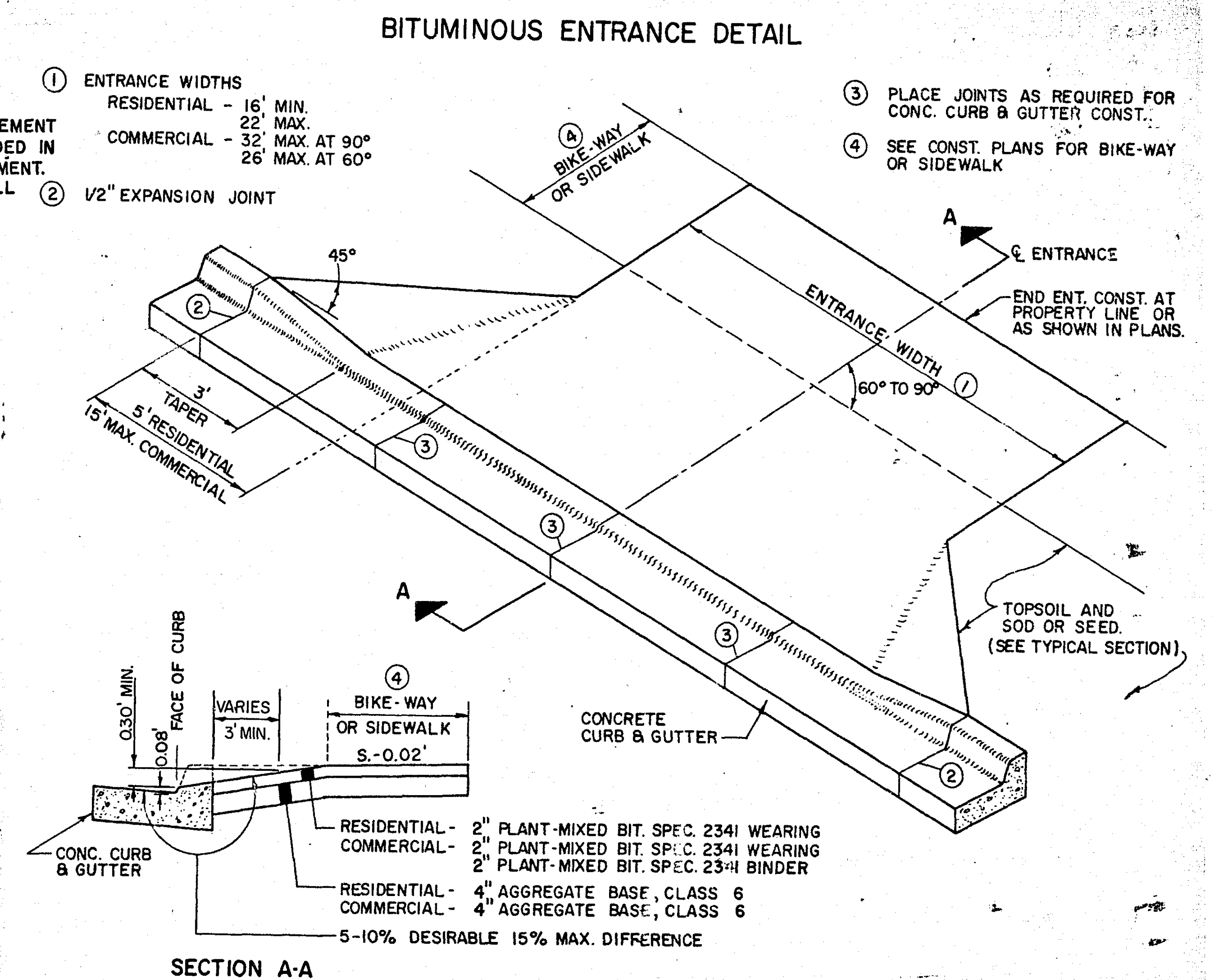
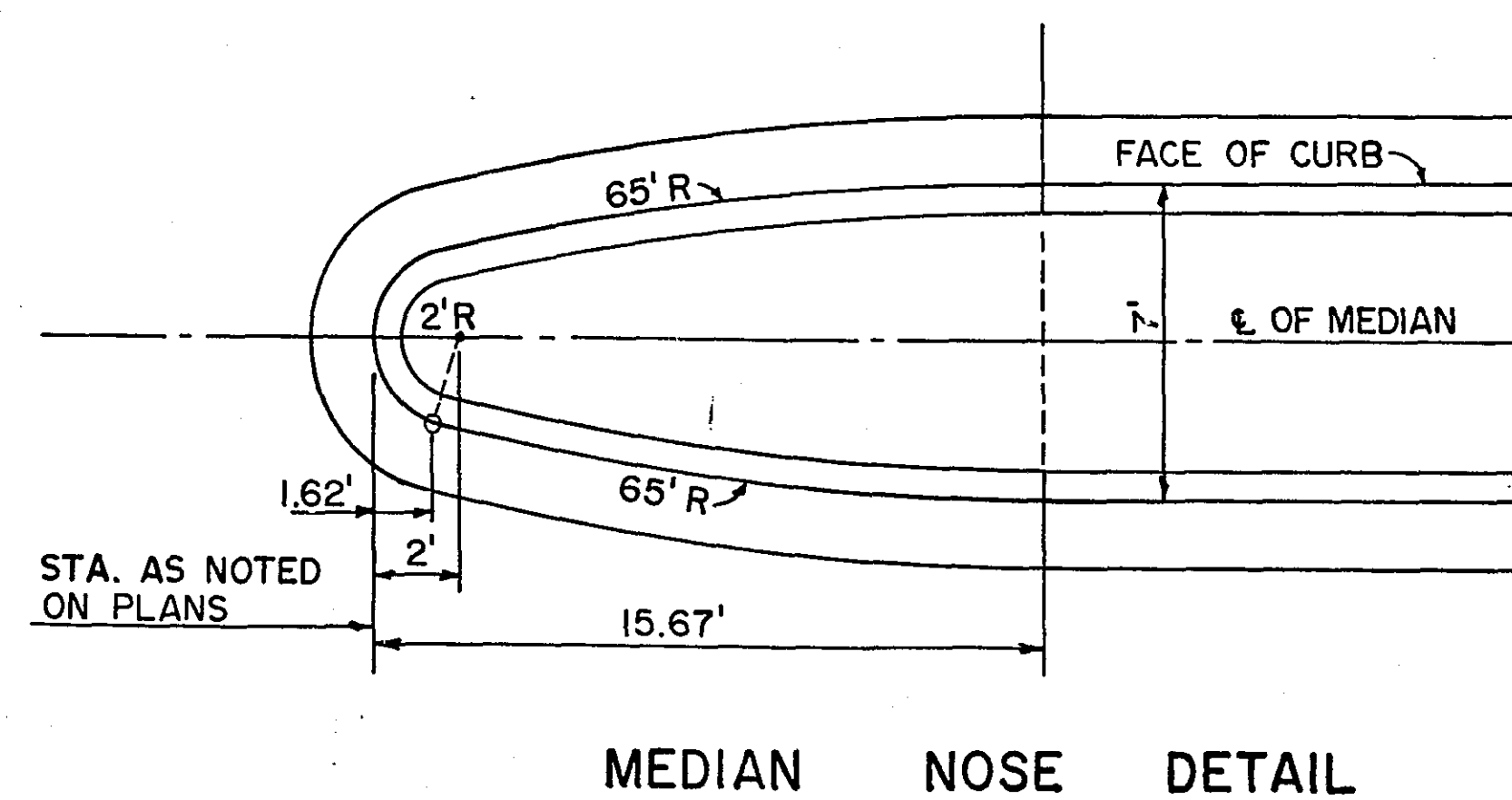
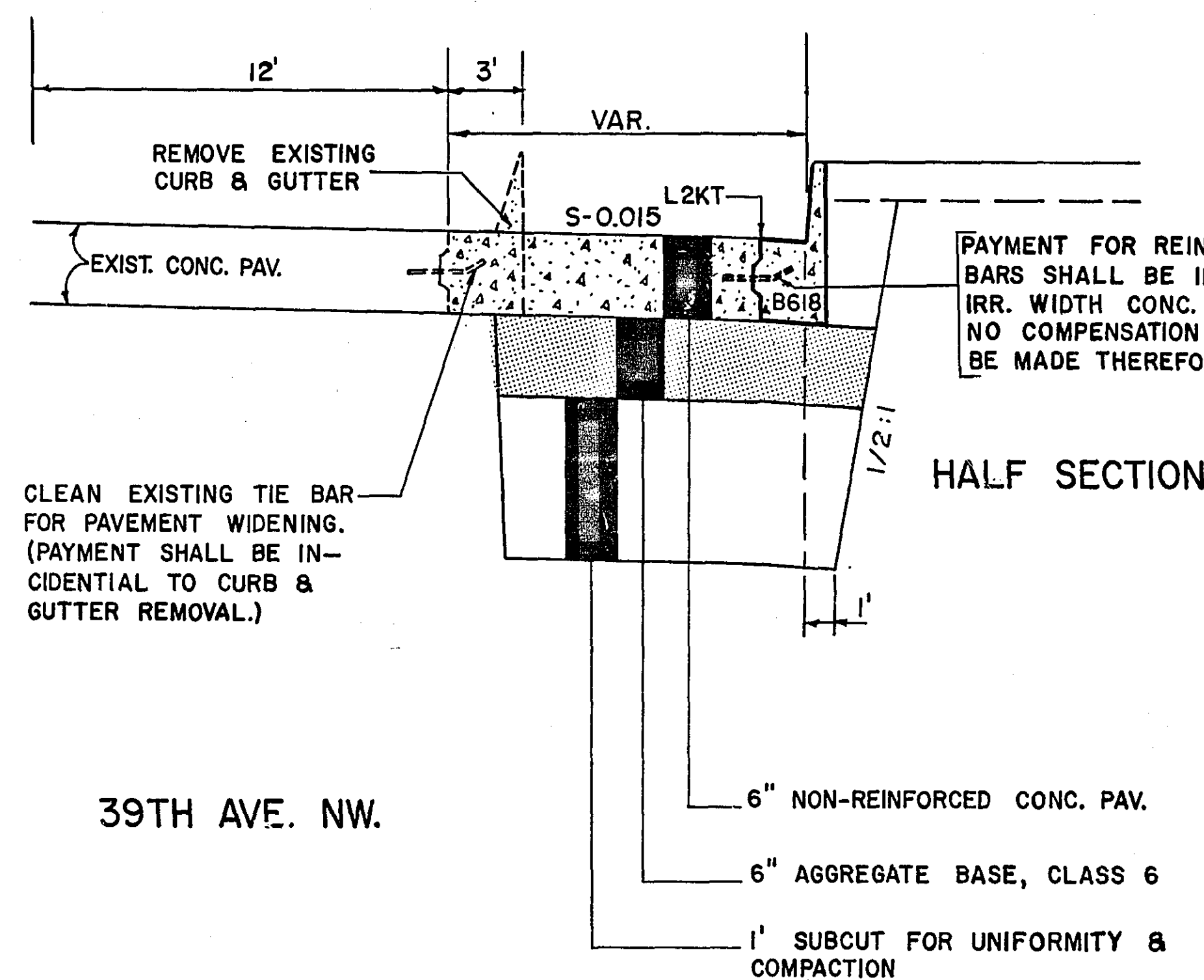
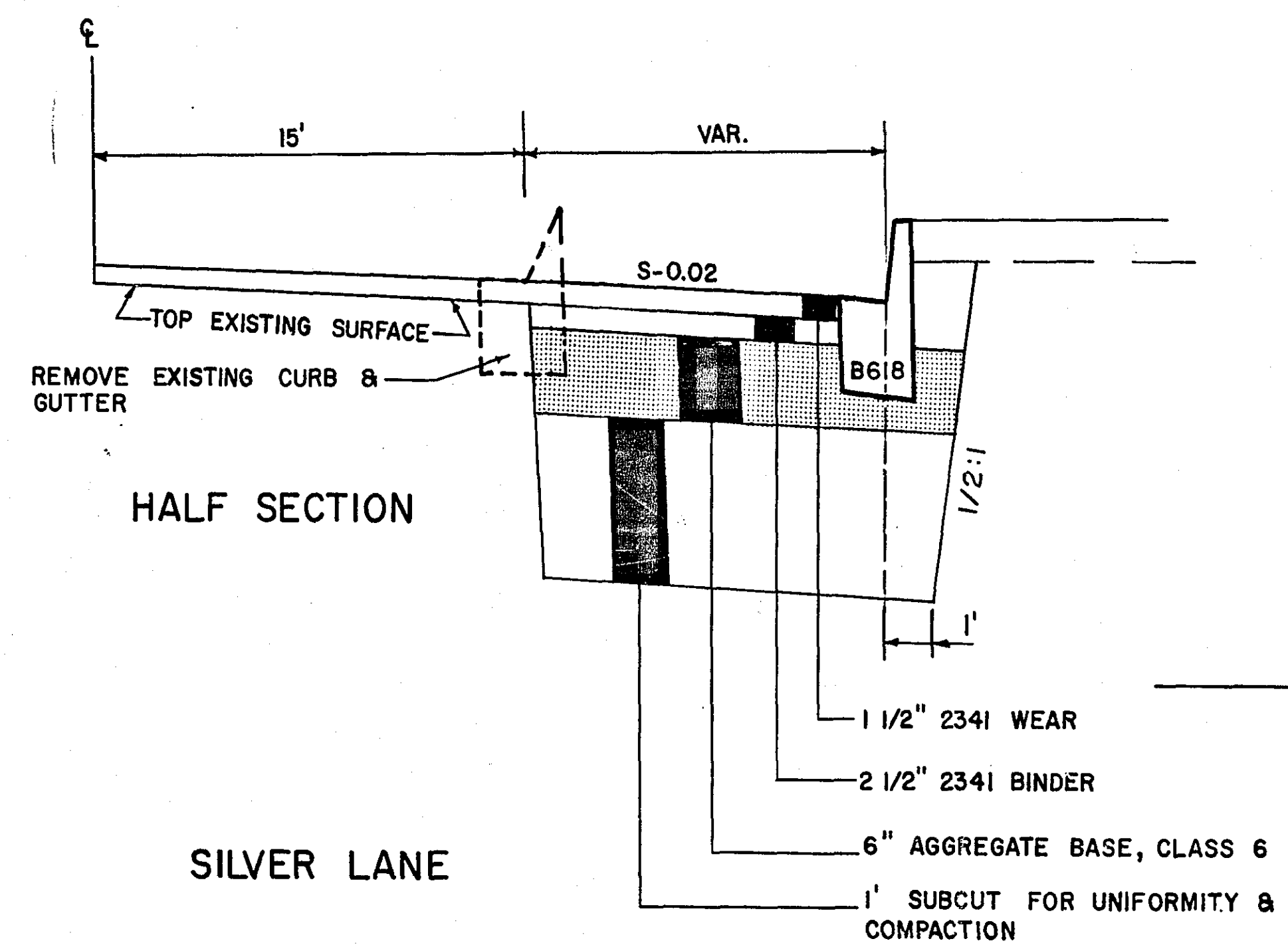
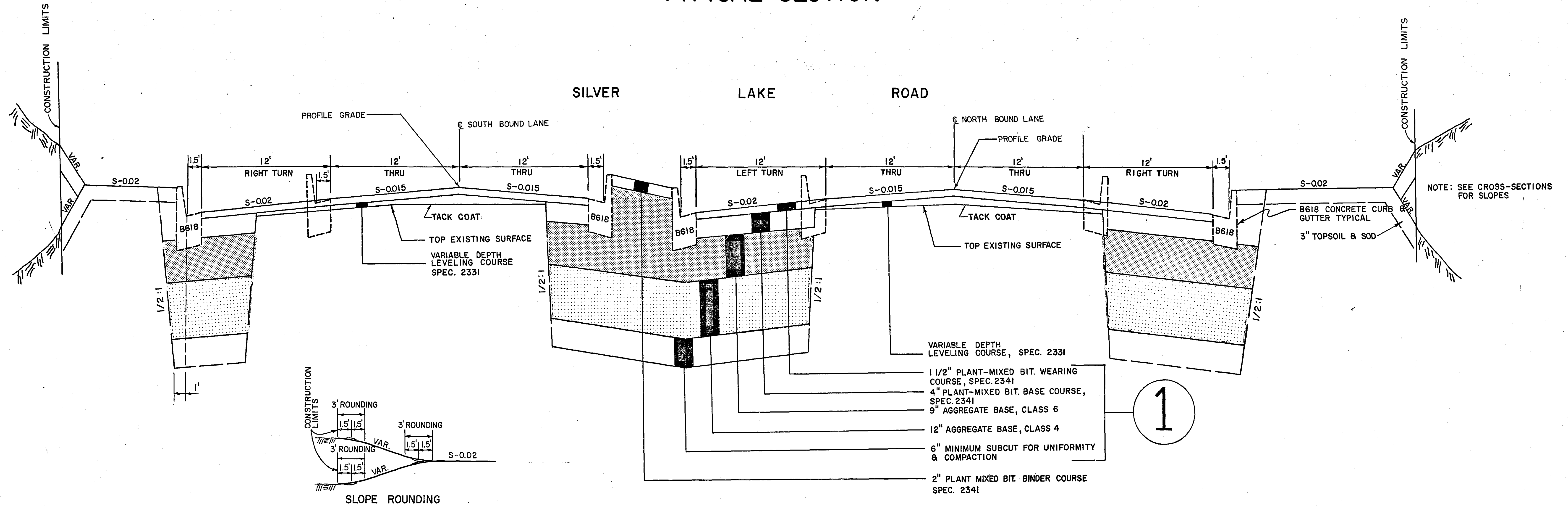
REVISED: 6/25/75

C.M.
K.E.W.

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.

Date _____ Reg. No. _____

TYPICAL SECTION



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.

Wayne R. Leonard

Date Nov. 8, 1974 Reg. No. 5792

S.A.P. NO. 62-644-06

Sheet No. 3 of 33 Sheets

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22-108

DRAINAGE

CHART

STATION	LOCATION	NO.	TYPE	DESIGN	CONST. HEIGHT LIN. FT.	CASTING ASSEMBLY	ELEVATION				ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MAN HOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER							RE- MOVE PIPE	CLASS	DRAINS TO		REMARKS				
							PROFILE	ORIGINAL GRATE OR RING	NEW GRATE OR RING	CB. OR M.H. INVERT				REINFORCED CONCRETE PIPE									CORRUGATED STEEL PIPE			STRUCTURE NO.	INVERT EL.		
3+40	RT. 14'	1A	CB.	STORM							0.50 ±																	ADJ. FOR BRIDGE PANEL	
5+53	RT. 8'	1	MH.	ELECT.			970.26	969.92			0.22																	ADJUST BY OTHERS	
5+66	LT. 21'	2	MH.	T.C.A.			969.90	969.59																				ADJUST BY OTHERS	
6+03	LT. 75'	3	MH.	WATER			968.87	968.91	969.0±		0.13																	12 ADJ. RINGS	
6+11	LT. 29'	4	CB.	LP4M	5.2	C	968.65		968.7	964.2														6	963.90				
6+37±	LT. 91±	5	CB.	LP4	5.2	C	967.83		968.3±	963.80															8	963.30			
6+37	LT. 30'	6	CB.			A	967.83	966.01	967.50	962.12		1.5	1												8			BLOCK CONST.	
6+37	RT. 13'	7	CB.				967.83	967.29	967.65		0.36														6			BLOCK CONST.	
6+46	LT. 67'	8	CB.			A	967.53			961.67			1													9		BLOCK CONST.	
6+93	LT. 64'	9	MH.	STORM			965.97	965.86		934.86	0.11														14			5 ADJ. RINGS	
7+97	RT. 8'	10	MH.	ELECT.			962.79	962.34																				NO RINGS ADJ. BY OTHERS	
8+08	RT. 20'	11	MH.	SAN.			962.47	962.27	962.82		0.55																	NO RINGS	
9+71	RT. 13'	12	CB.				957.75	957.16	957.57	952.25	0.41														14			BLOCK CONST.	
9+79	LT. 68'	13	CB.				957.54	957.63		954.40										4'								REMOVE	
9+79	LT. 64'	14	MH.	ST.			957.54	956.90	957.24	953.50	0.34														24			ONE RING	
9+79	LT. 73'	15	CB.	LP4	5.2	C	957.54		957.54	953.04															14	952.90			
10+58	RT. 20'	16	MH.	SAN.			955.72	955.66	955.38		0.28																	1 ADJ. RING	
12+03	LT. 16'	17	MH.	T.C.A.			953.72	953.19																				ADJ. BY OTHERS	
12+48	LT. 29'	18	CB.	LP4M	5.2	C	953.22		952.92	948.42															21	948.32			
12+54	RT. 13'	19	CB.				953.14	952.54	952.96	948.63	0.42														21			BLOCK CONST. (3.5' DEEP	
12+55	LT. 29'	21	S.D.			A	953.13	951.64		948.20															24			BLOCK CONST. (3.5' DEEP	
12+61	LT. 119'	22	CB.				953.07																		26			O.K. LEAVE	
12+65	LT. 93±	23	CB.	LP4	5.2	C	953.02		953.07	948.57															24	948.27			
12+68	LT. 63'	24	MH.	ST.			952.99	952.45	953.20	933.40	0.75														35			3 ADJ. RINGS	
12+68	LT. 65'	25	CB.				952.99	952.33		949.31																		REMOVE	
12+86	LT. 92'	26	CB.			A	952.71	952.85												2'					24			NO ADJ. RINGS	
13+05	LT. 157'	27	S.D.				952.53																		26			O.K. LEAVE	
13+07	LT. 41'	28	MH.	SAN.			952.50	952.00	952.42		0.42																	1 LAYER OF BRICK, 1 ADJ. RING	
13+07	RT. 21'	29	MH.	SAN.			952.50	952.03	952.14		0.11																	NO ADJ. RINGS	
13+28	LT. 93'	30	CB.			A	952.13	952.50		947.24															26			1 ADJ. RING	
13+49	LT. 118'	31	CB.				951.75																		30			O.K. LEAVE	
14+12	RT. 20'	32	MH.	SAN.			950.64	951.42	950.99	938.21	0.43																	18 ADJ. RINGS	
15+41	RT. 13'	33	CB.				948.36	947.89	948.18	943.06	0.29														34			BLOCK CONST.	
15+46±	LT. 20±	34	CB.	LP4M	7.2	C	948.27		948.30±	942.90±															35			BUILD OVER EXIST. R.C.P.	
15+50	LT. 64'	35	MH.	ST.			948.20	947.61	947.90		0.29														44			BLOCK ADJ. RINGS	
15+50	LT. 67'	36	CB.				948.20	948.20		944.38										3'								REMOVE	
15+50	LT. 73'	37	CB.	LP4	5.2	C	948.20		948.19	943.69															35				
18+01	LT. 122'	38	S.D.				943.78																		47			REMOVE	
18+07	LT. 145'	39	CB.				943.66																		38			O.K. LEAVE	
18+11	RT. 20'	40	MH.	SAN.			943.59	943.95	943.94		0.01																	10 ADJ. RINGS	
18+20	LT. 29'	41	CB.	LP4M	4.7	C	943.44		943.13	939.13															43	939.00			
18+25	RT. 13'	42	CB.				943.36	942.81	943.18		0.37														43			BLOCK CONST.	
18+26	LT. 29'	43	CB.			A	943.35	941.63		938.45															44			BLOCK CONST.	
18+31	LT. 63'	44	MH.	ST.			943.28	942.86	943.50	932.80	0.64														49			3 ADJ. RINGS	
18+31	LT. 67'	45	CB.				943.28	943.26		940.92															44			REMOVE	
18+38	LT. 98±	46	CB.	LP4	5.2	C	943.16		942.92	938.42															44	938.00			
18+58	LT. 89'	47	CB.			A	942.88	943.01																				BLOCK & RINGS	
19+01	LT. 89'	48	CB.			A	942.38	942.50																					
19+05	LT. 64'	49	MH.	ST.			942.34	942.00±	942.57		0.57														56				
20+33	LT. 83'	50	MH.	SAN.			942.08	941.07			0.10±																	4 ADJ. RINGS	
22+11	RT. 20'	51	MH.	SAN.			940.19	940.33	940.54		0.21																	6 ADJ. RINGS	
22+70	LT. 78'	52	MH.	SAN.			939.76	939.71	939.90		0.19																	3 ADJ. RINGS	
23+51	LT. 55'	53	CB.				939.25	939.45																				REMOVE, PLUG PIPE	
23+61±	LT. 68±	54	CB.	LP4	5.2	C	939.25		939.40	938.90															EXISTING 66"				
23+56	LT. 24±	55	CB.	LP4	6.3	C	939.25		939.64	933.98															EXISTING 66"				
23+56	LT. 64'	56	MH.	ST.			939.24	939.65	938.82	933.50	0.83														56	933.55			
23+59	LT. 52'	57	CB.				939.23	938.97																		72			4 ADJ. RINGS
23+66	LT. 55'	58	CB.				939.22	939.42																	EXISTING 66"				REMOVE, PLUG PIPE
18+06±	LT. 122±	38A	CB.	LP4	4.0	C																			EXISTING 66"				REMOVE, PLUG PIPE
																									47				DETERMINE ELEV. IN FIELD

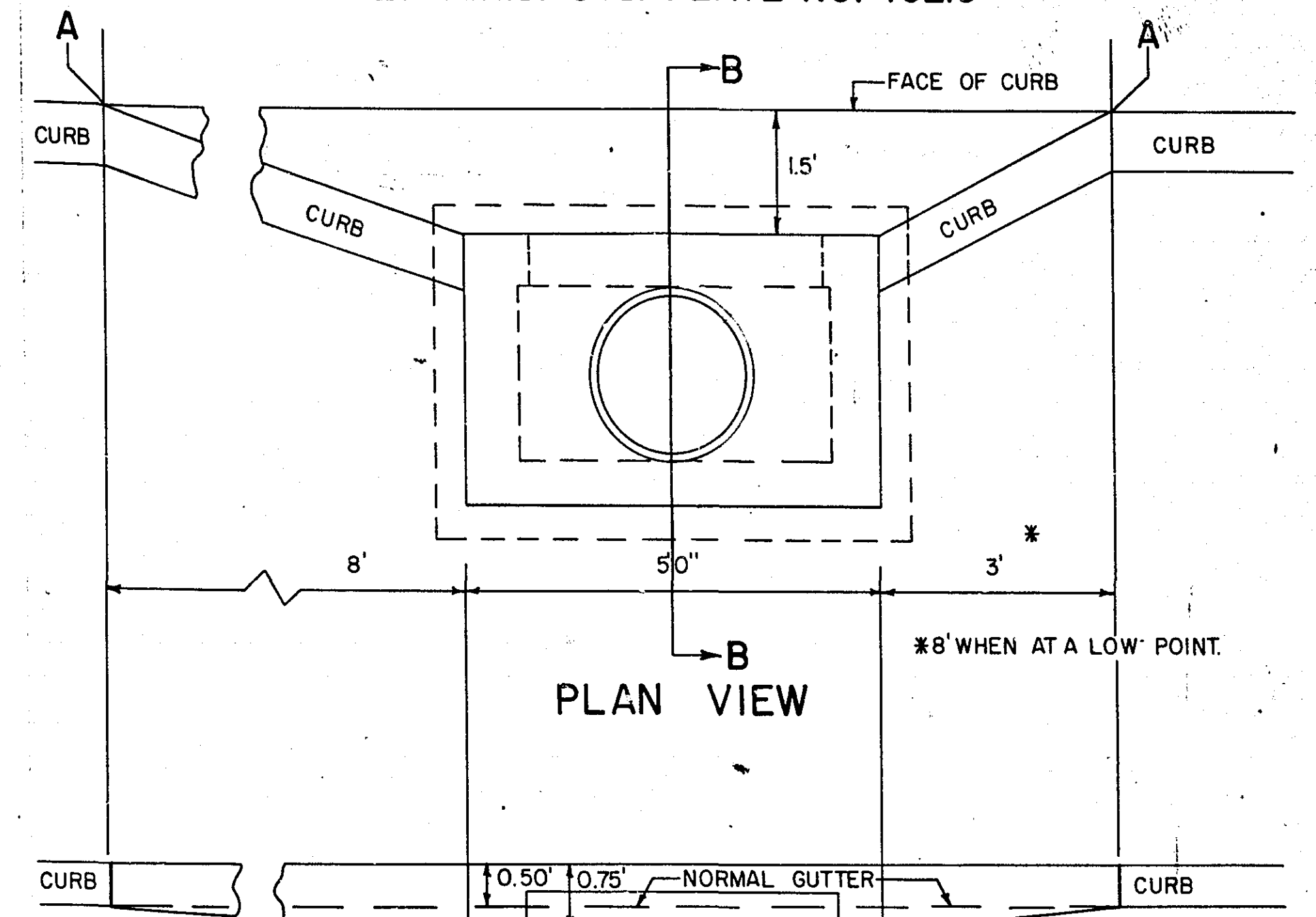
CASTINGS

A = RING CASTING M.H.D. NO. 700-7, COVER CASTING NO. 712
 B = NEENAH INLET FRAME, GRATE, & CURB BOX NO. R-3067 OR EQUAL (INCLUDE WITH STRUCTURE, NOT SEPARATE PAY ITEM).
 C = RING CASTING NO. 790-2, COVER CASTING NO. 712 (INCLUDE WITH STRUCTURE NOT SEPARATE PAY ITEM).

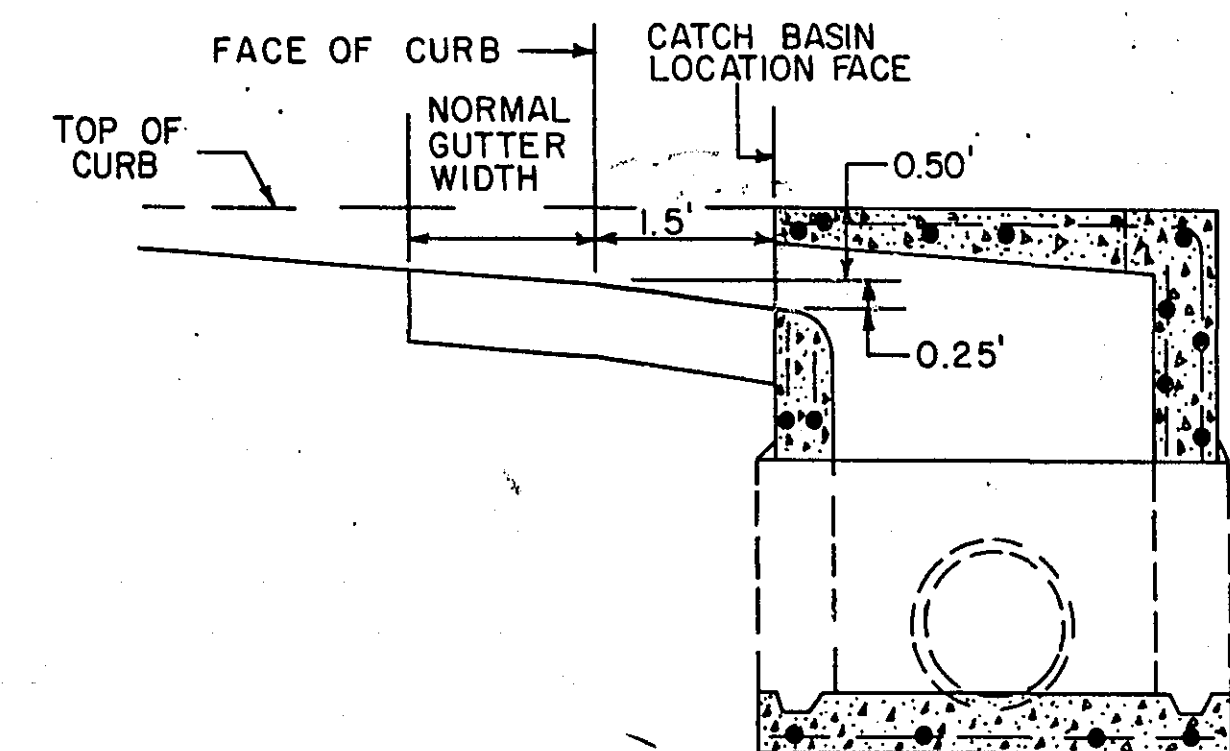
MANHOLES &
 CATCH BASINS

A OR F M.H.D. STD. PLATE 4000G OR 4005I
 R.C.-2, DETAIL ON SHEET NO. 4
 L.P.-4, DETAIL ON SHEET NO. M.H.D. STD. PLATE NO. 4021C
 L.P.-4M, DETAIL ON SHEET NO. 5

S.A.P. NO. 62-644-06

CURB OPENING CATCH BASIN INSTALLATION DETAIL
DESIGN LP M.H.D. STD. PLATE NO. 4021C

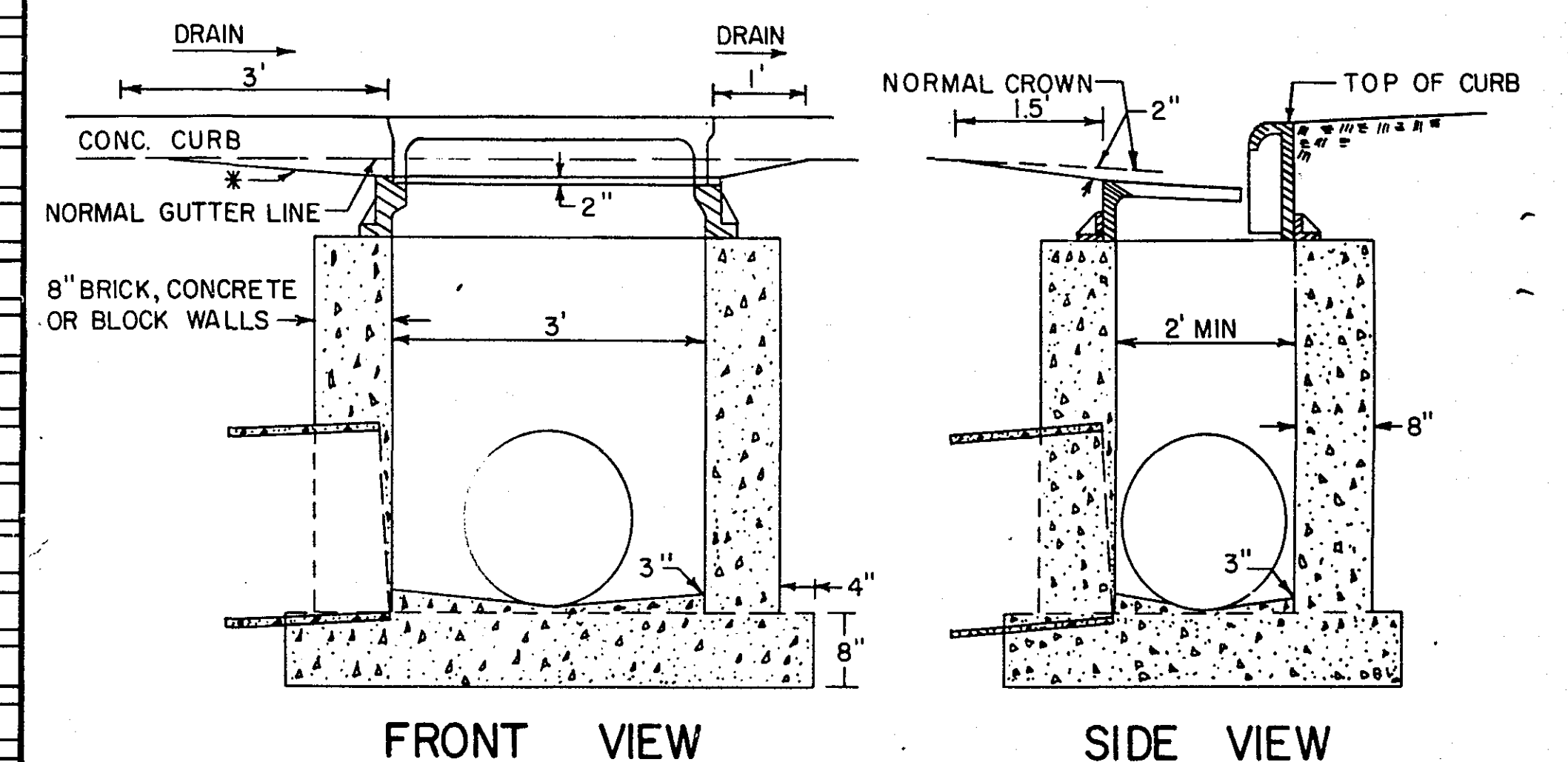
SEC. A-A



SEC. B-B

NOTE: UNITS TO BE PRECAST ONLY ON THE
 PROJECT UNDER PROJECT INSPECTION.

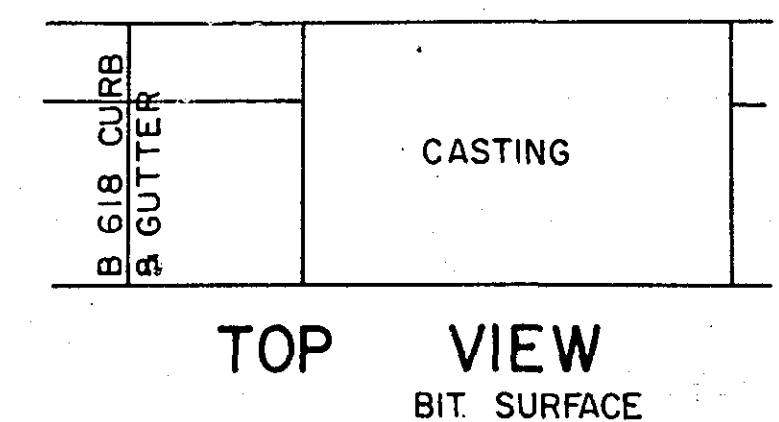
CATCH BASIN DESIGN NO. R.C.-2



FRONT VIEW

SIDE VIEW

WARRANTY TO THIS LINE.
 CONFORMING TO
 CONST. RECORDS
 DONE BY: L. FELDHAHN
 DATE: 5-14-76
 NO TAPER REQUIRED



TOP VIEW

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.
 Date: 5/14/76 Reg. No. 5702

Sheet No. 4 of 33 Sheets

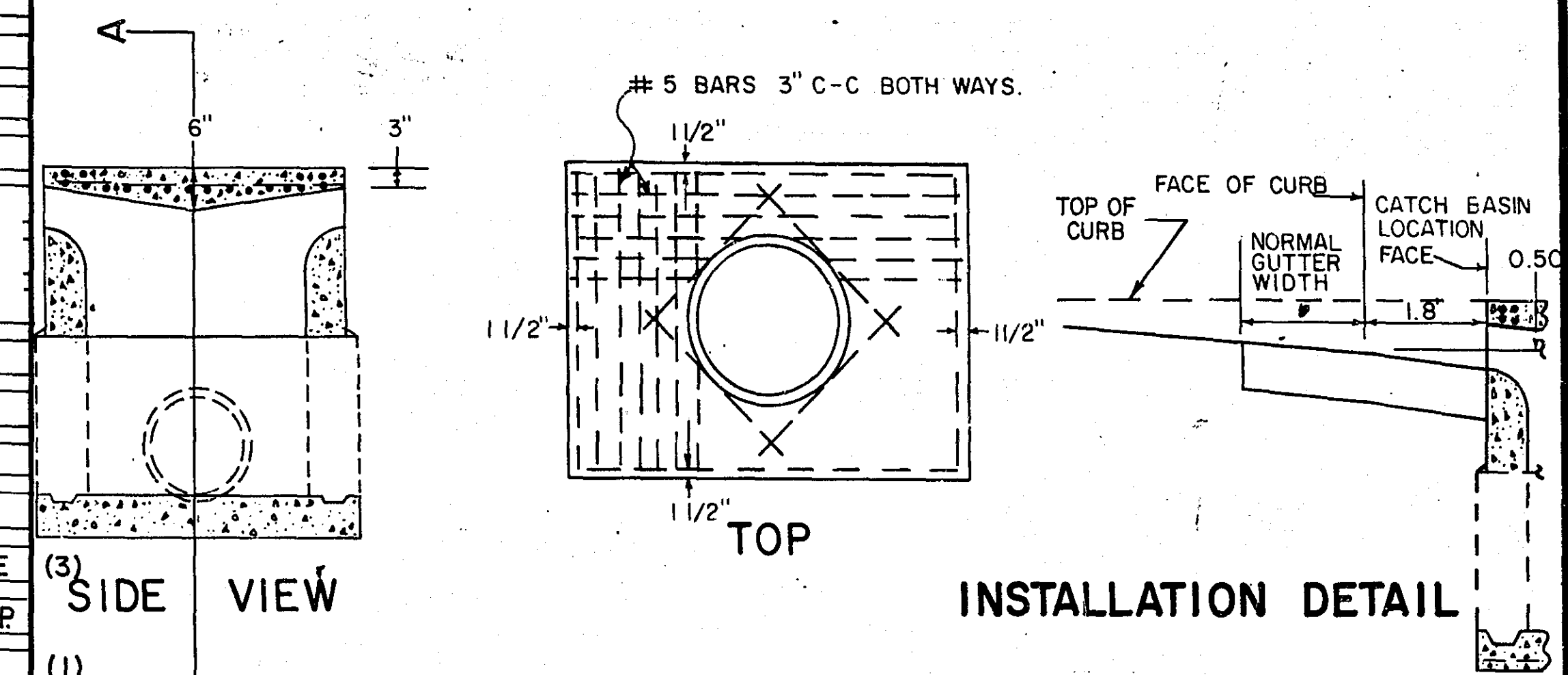
22-108

DRAINAGE

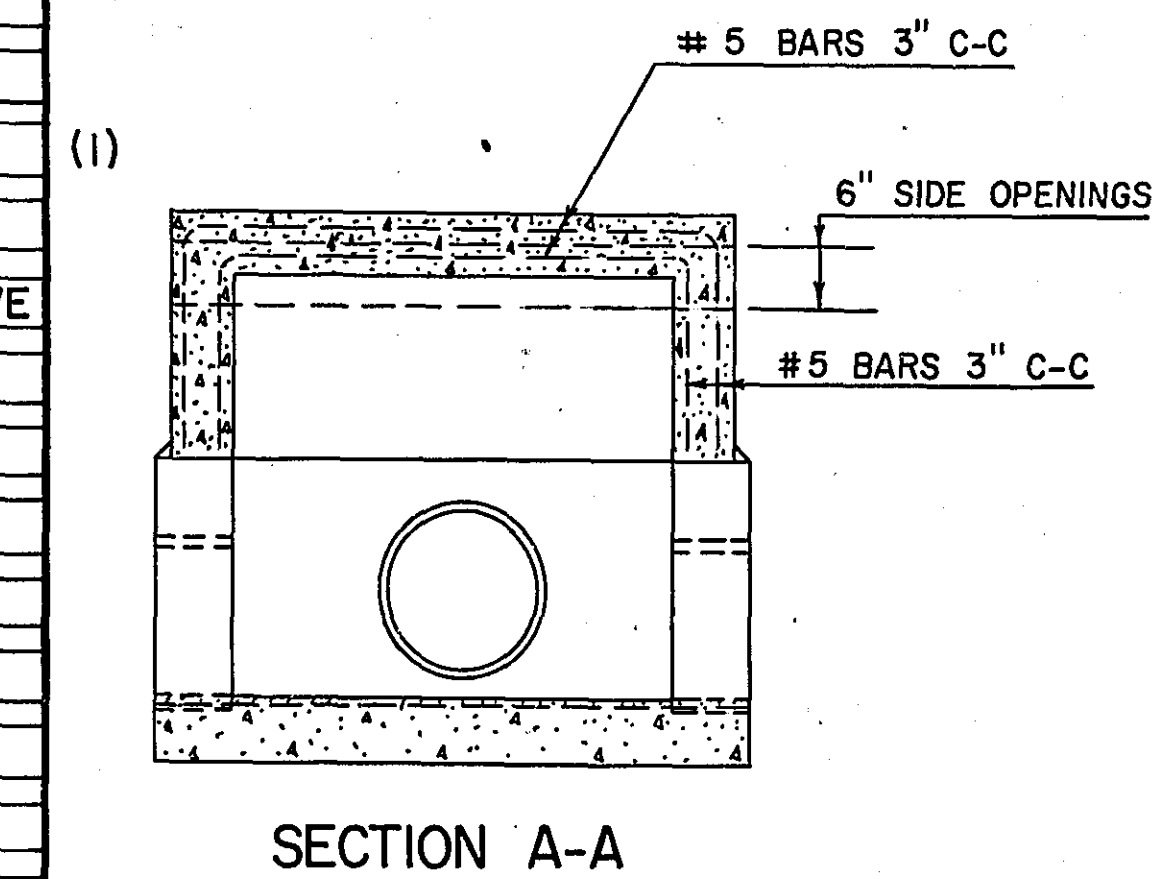
STATION	LOCATION	NO.	TYPE	DESIGN	CONST HEIGHT LIN. FT.	CASTING ASSEMBLY	ELEVATION				ADJUST CASTING ASSEMBLY	RECONSTRUCT CATCH BASIN OR MAN HOLE LIN. FT.	INSTALL CASTING ASSEMBLY	FURNISH AND INSTALL PIPE SEWER										DRAINS TO		REMARKS	
							PROFILE	ORIGINAL GRATE OR RING	NEW GRATE OR RING	C.B. or M.H. INVERT				REINFORCED CONCRETE PIPE						CORRUGATED STEEL PIPE				RE- MOVE PIPE	CLASS		STRUCTURE NO.
23+80	RT.21'	59	CB.				939.22	938.55															2'		60		REMOVE
23+80	RT.23'	60	S.D.				939.22	938.82															62'		64		REMOVE
23+87	LT.20±	61	C.B.	L.P.4	5.4	C	939.22		939.06	934.29																	
23+90	RT.29±	62	C.B.	L.P.4	5.2	C	939.23		939.29	934.79																	
24+42	LT.10'	63	S.D.				939.44	937.57																			
24+42	RT.22'	64	C.B.				939.44	939.01																			REMOVE
24+45	LT.43'	65	C.B.				939.45	939.52																			REMOVE PLUG & ABANDON EXISTING LINE
24+58	LT.16'	66	M.H.	T.C.A.			939.51	939.51																			REMOVE
25+00	LT.95'	67	M.H.				939.89																				ADJUST BY OTHERS
25+15	LT.74'	68	M.H.	SAN.			940.27																				O.K. LEAVE
25+51	LT.43'	69	M.H.	SAN.			940.64	940.70	940.46	0.24																	7 RINGS O.K. LEAVE
26+51	LT.42±	70	S.D.	A OR F	4.3	(2)	941.87		941.39	936.60±		I															3 ADJ. RINGS
26+70±	LT.68±	71	C.B.	L.P.4	5.2	C	940.99		941.60	937.10																	CONST OVER EXIST. 15" PIPE
25+93	LT.51'	72	C.B.				941.26	940.63																			TEE TO EXISTING 66" R.C.P.
25+94	RT.44'	73	M.H.	N.S.P (E)			941.27	940.42																			REMOVE
26+02	RT.20'	74	M.H.	SAN.			941.36	940.96	941.32																		ADJ. BY OTHERS
26+15	LT.42'	75	M.H.	SAN.			941.49	941.01	941.27	0.26																	2 LAYER BLOCK
26+20	LT.24'	76	M.H.	ST.			941.54	941.04	941.51	0.47																	NO RINGS
26+33	LT.49'	77	C.B.				941.67	941.90																			3 ADJ. RINGS
26+41	RT.26'	78	M.H.	SAN.			941.75	941.18	941.61	0.43																	REMOVE
26+48	LT.49'	79	M.H.	ST.			941.82	941.88		931.20±																	2 ADJ. RINGS
26+40±	RT.45±	80	C.B.	R.C.2	3.8	B	941.85		941.09	937.50																	9 ADJ. RINGS O.K. LEAVE
26+53	RT.24'	81	C.B.			A	941.88	941.22		937.25		I															
26+55	LT.24'	82	C.B.			A	941.90	941.28				I															81 937.25
26+68	LT.34'	83	M.H.	SAN.			942.03	941.95	941.87	0.08																	82
29+46	RT.39'	84	M.H.	NSP (E)			943.66	944.47																			70
29+55	LT.16'	85	M.H.	T.C.A.			943.61	943.33																			3 ADJ. RINGS
29+79	LT.35'	86	M.H.	SAN.			943.47	943.26																			3 ADJ. RINGS
31+96	LT.35'	87	M.H.	SAN.			940.80	940.38																			O.K. LEAVE
19+04.7	LT.98'	48A	C.B.	R.C.2	4.0±	B																					ADJ. BY OTHER
																											3 ADJ. RINGS O.K. LEAVE
																											4 ADJ. RINGS O.K. LEAVE

CATCH BASIN DESIGN NO. LP-4M

(TO BE CONSTRUCTED THE SAME AS THE LP M.H.D.
STD. PLATE NO. 4021C, EXCEPT AS MODIFIED BELOW).



NOTE: UNITS TO BE PRECAST ONLY ON THE
PROJECT UNDER PROJECT INSPECTION.



NOTE: ALL EXISTING CASTING NOT INCORPORATED
INTO THE COMPLETED PROJECT SHALL BE-
COME THE PROPERTY OF RAMSEY COUNTY.

ASSULT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: *L. FELDHAMM*

DATE: *5-14-76*

REVISED: 6/25/75
C.M.
K.E.W.

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.

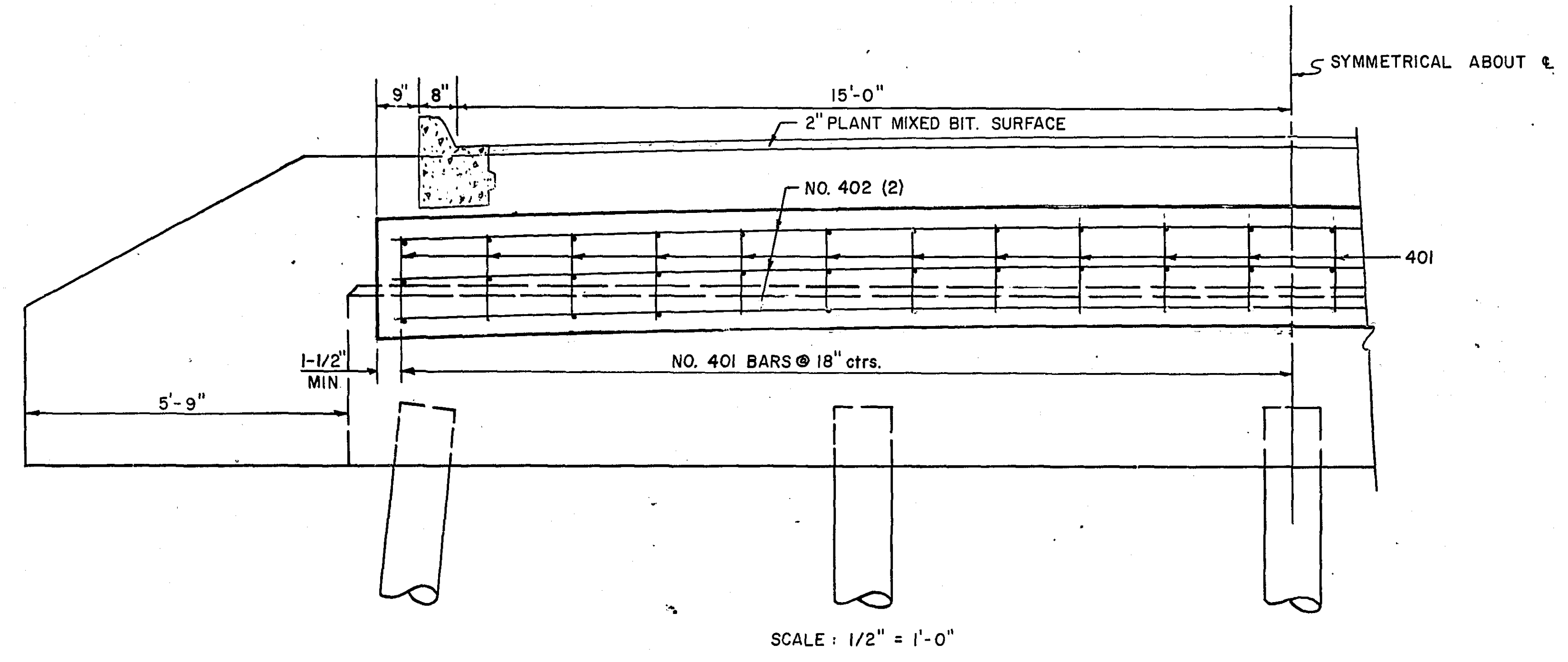
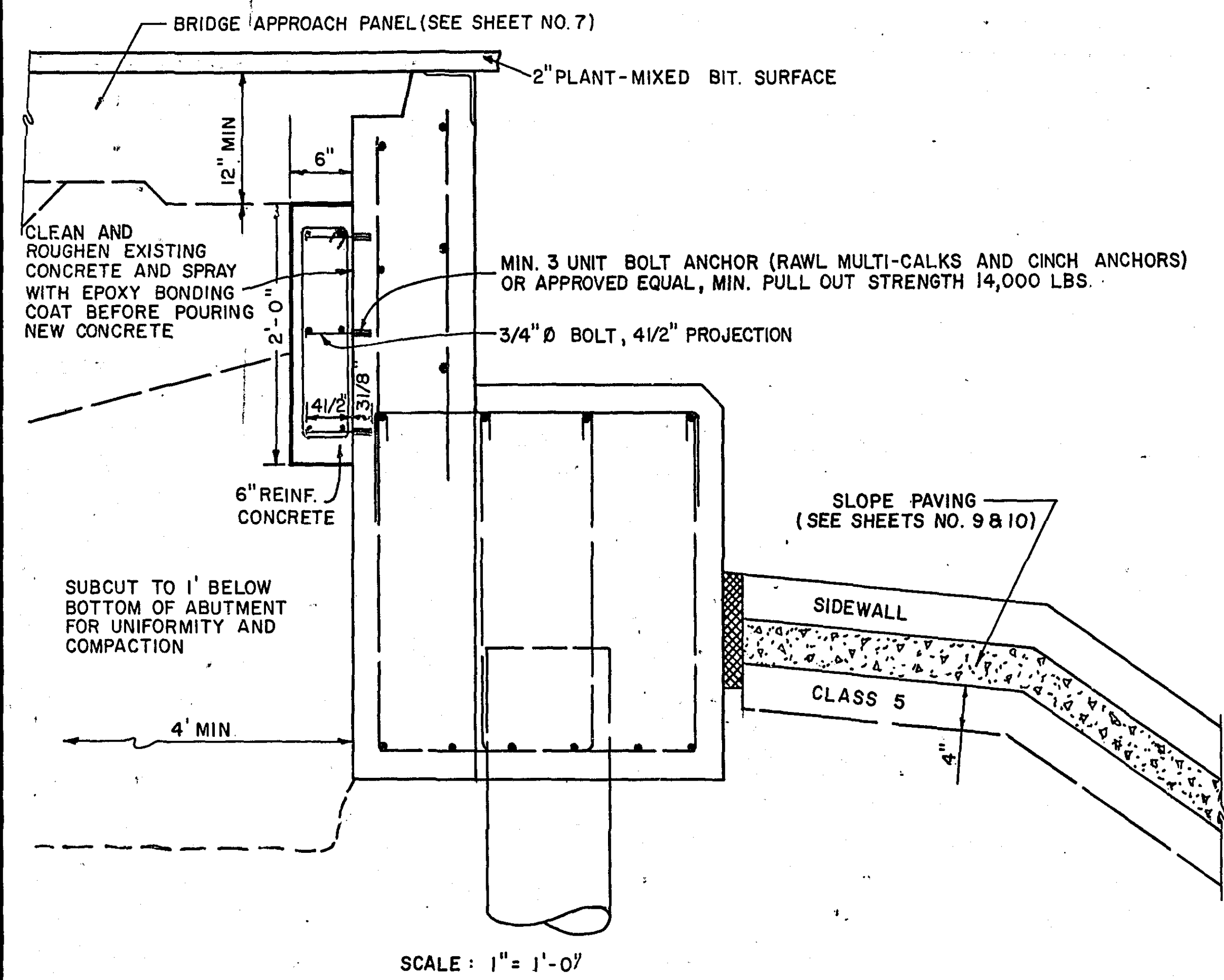
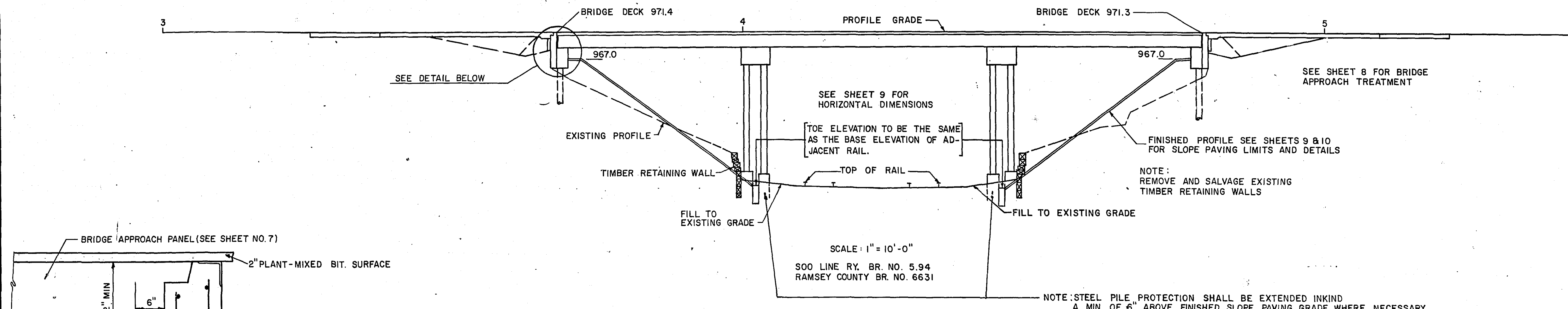
Wayne R. Leonard

Date Nov 9, 1974 Reg. No. 5782

(1) REMOVE C.B. AND PATCH HOLE IN TOP OF EXISTING 66" R.C.P. (PATCH TO BE INCIDENTAL). (2) USE CASTING & SURF DRAIN COVER FROM C.B.72	(3) CONSTRUCT IN LOCATION FOR FUTURE 66" CURB & GUTTER S.A.P. NO. 62-644-06
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Sheet No. 5 of 33 Sheets



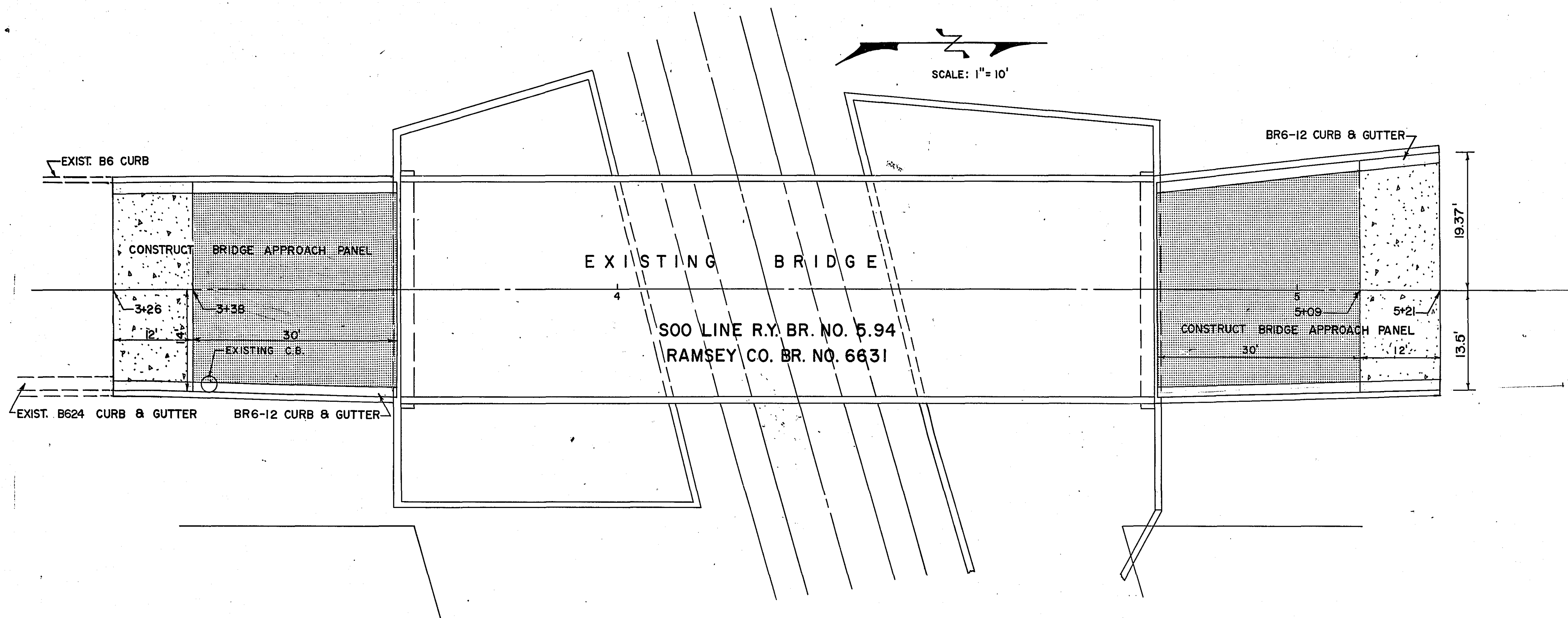
NORTH BOUND ROADWAY ONLY

REINFORCEMENT SCHEDULE FOR 2 ABUTMENTS				
NO.	QUANTITY	SHAPE	SIZE	LENGTH
401	44		NO. 4	4'-3"
402	12		NO. 4	32'-3"

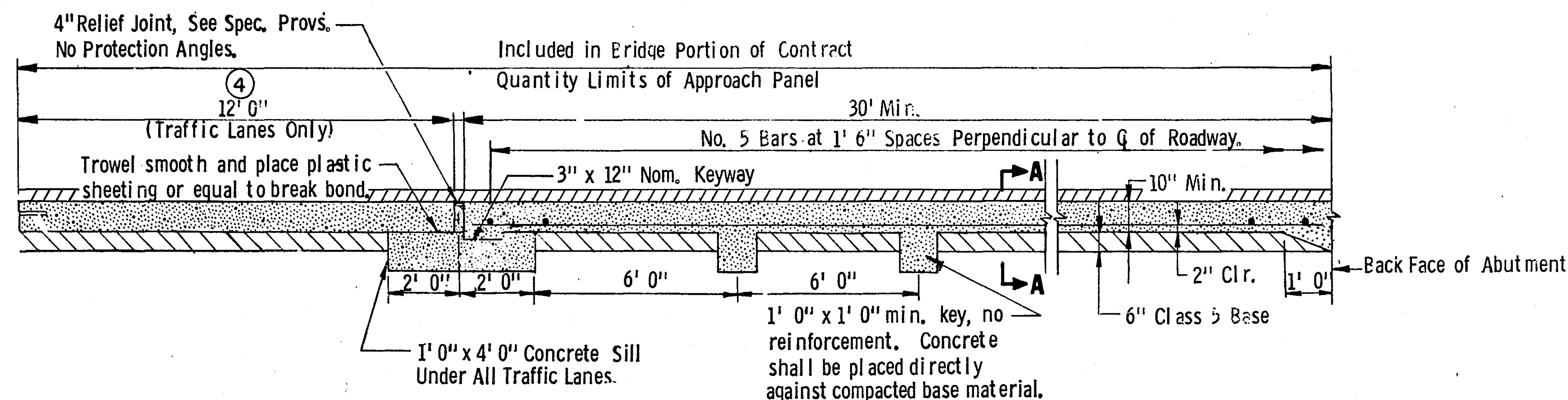
SUMMARY OF QUANTITIES FOR BRIDGE APPROACH PANEL SEAT		
CONCRETE MIX NO. 3Y36	3	CU. YD.
REINFORCEMENT BARS	130	LBS.
THE SUMMARY OF QUANTITIES FOR PANEL SEAT IS FOR CONTRACTORS CONVENIENCE ONLY. ANY ADDITIONAL ITEMS REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COST. PAYMENT WILL BE INCLUDED IN THE SINGLE LUMP SUM PRICE FOR ITEM NO. 401.616.		

REVISED: 6/25/75
C.M.
K.E.W.

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.
Signature
Date: 11/19/77 Reg. No. 5722



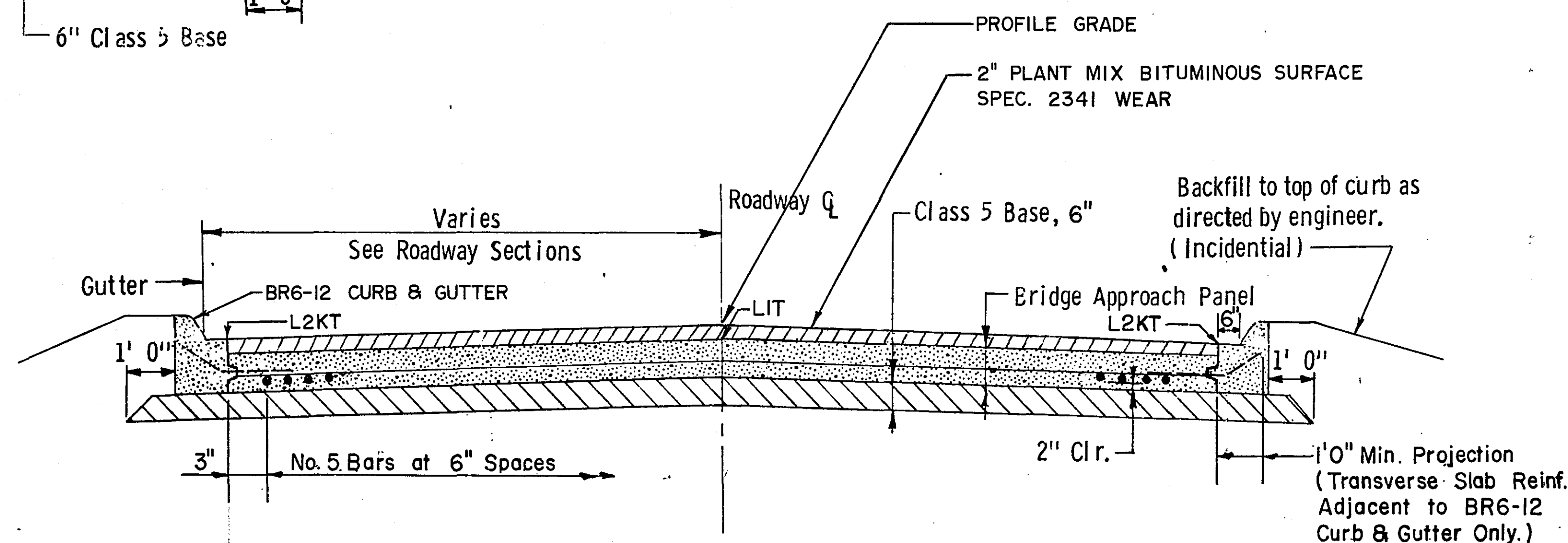
The summary of quantities for approach panel is for contractor's convenience only. Any additional items required shall be furnished by the contractor with no additional compensation.



LONGITUDINAL ROADWAY SECTION

NORTH BOUND ROADWAY ONLY

NOTE: SUBGRADE EXCAVATION UNDER BRIDGE APPROACH PANELS SHALL BE INCIDENTAL TO ITEM NO. 105.614 BRIDGE APPROACH TREATMENT



SECTION A-A

(See Roadway Cross Section)

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.

Date: *Nov 9, 1974* Reg. No. *5732*

REVISED 4/3/75

TITLE:	DES:	DR:	APPROVED:	Bridge No.
BRIDGE APPROACH PANEL	CHK:	CHK:		6631
			Sheet No. 7 of 33 Sheets	

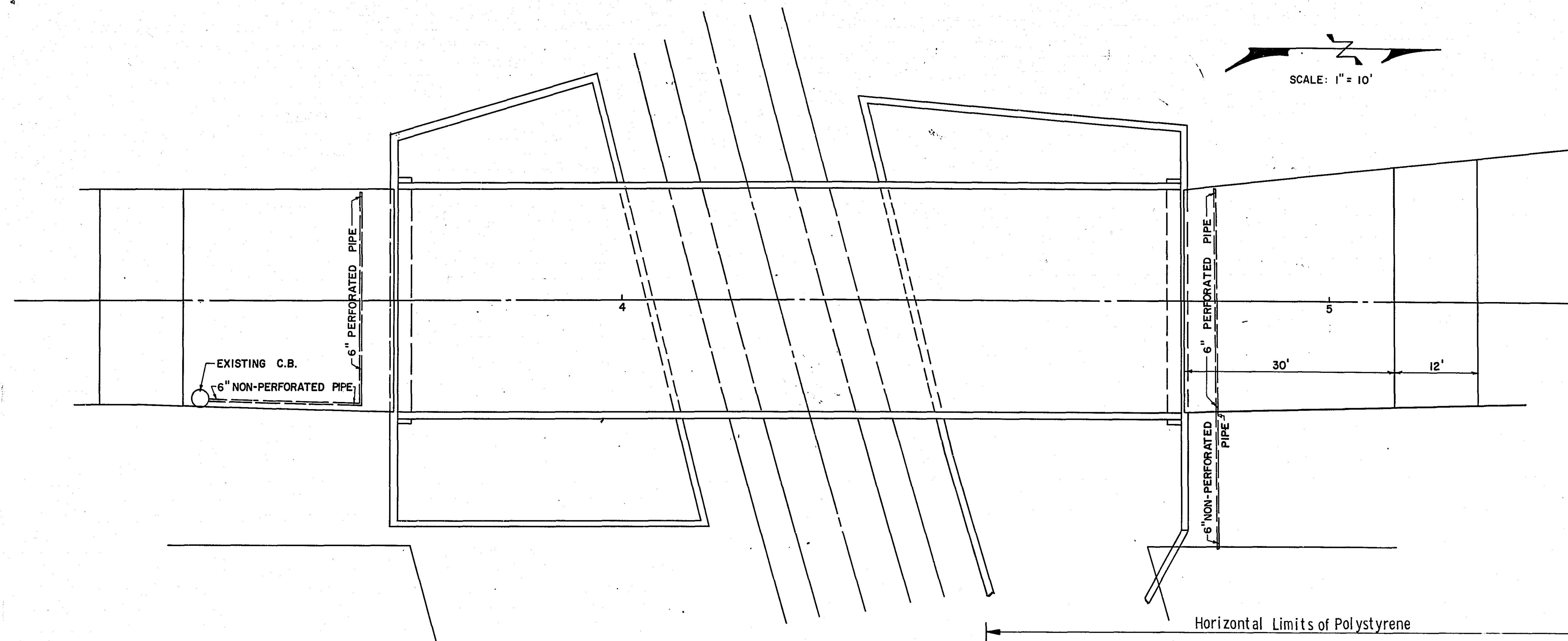
② SUMMARY OF QUANTITIES FOR BRIDGE APPROACH PANELS	
Concrete Mix No. 3Y31	84 Cu. Yd.
Reinforcement Bars	4300 Lbs.
Concrete Curb & Gutter Design Br6-12, 168	L.F.
Aggregate Base, Class 5 (CV)	43 Cu. Yd.

- ② Quantities listed are for approach panels at both ends of bridge. Payment will be included in the single lump sum price for "Item 2301.551 Bridge Approach Panels."
- ③ The volume of concrete shown is based on an average slab depth of 10" plus the volume of keys and sills as dimensioned. (Concrete for Curb & Gutter Design Br6-12 is Not Included in This Quantity.)
- ④ Payment Will Be Included in Bridge Approach Panels.

Fig. 5-397.303

April 8, 1974

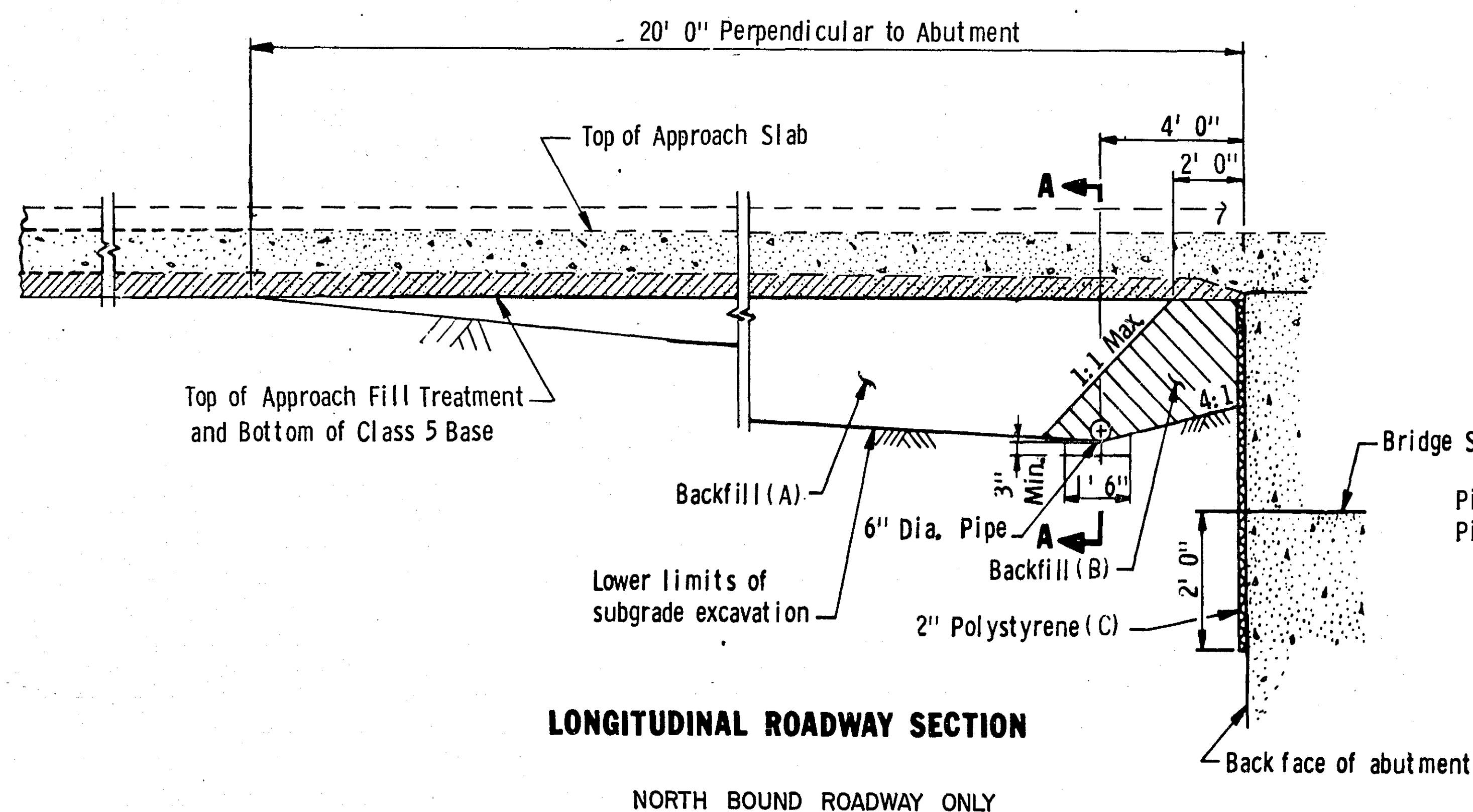
MICROFILMED
RAMSEY CO. ENGR.



SUMMARY OF QUANTITIES FOR APPROACH TREATMENT	
Subgrade Excavation	110 Cu. Yd.
Aggregate Backfill (CV)	70 Cu. Yd.
Coarse Filter Aggregate (CV)	20 Cu. Yd.
Pipe End Cap	2 Req'd.
6" Perforated Pipe	60 Lin. Ft.
6" Non-Perforated Pipe	54 Lin. Ft.
Outlet Screen	1 Each
Elbows	1 Req'd.
Polystyrene	280 Sq. Ft.

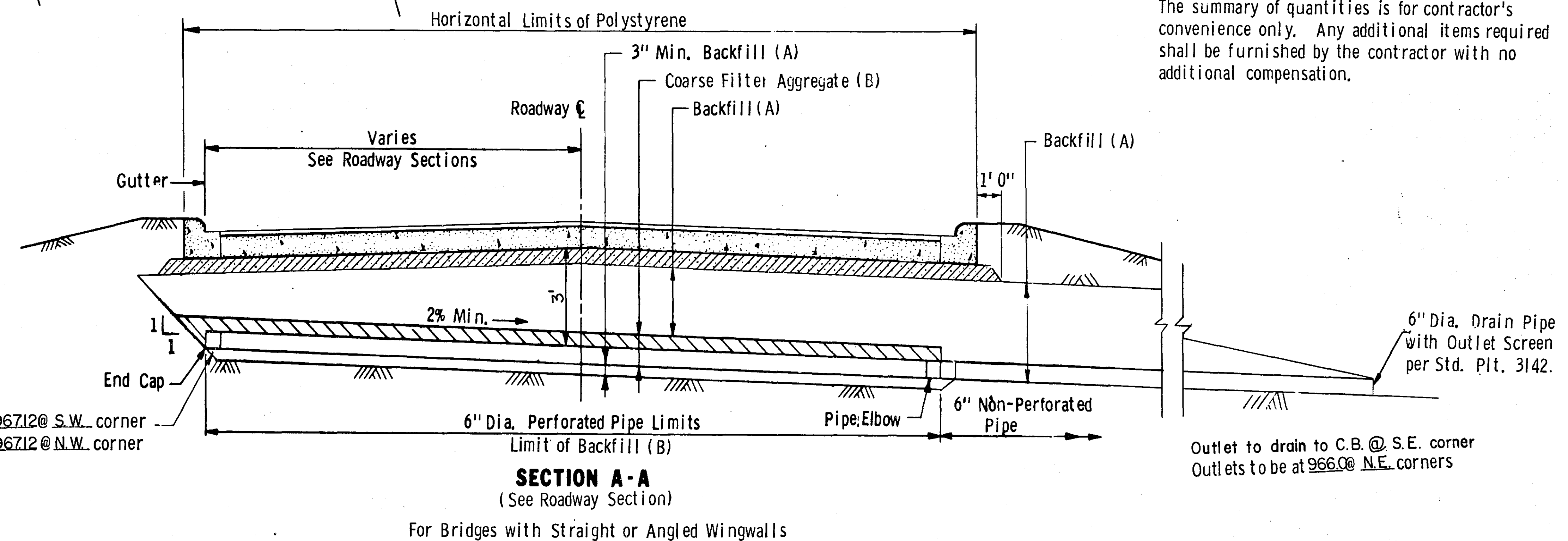
Quantities listed are for both ends of bridge. Lump sum payment for panel "Item 105.614 Bridge Approach Treatment" to include everything on detail sheet except Bituminous overlay.

The summary of quantities is for contractor's convenience only. Any additional items required shall be furnished by the contractor with no additional compensation.



LONGITUDINAL ROADWAY SECTION

NORTH BOUND ROADWAY ONLY



- A. Material shall comply with MHD 3149.2 E Aggregate Backfill.
- B. Material shall comply with MHD 3149.2H, Coarse Filter Aggregate
- C. Polystyrene shall comply with MHD 3760. On parallel wings, polystyrene shall be placed on inside face of wings for an area of 6' high x 8' horizontal. (When wall size is less than the above dimensions, cover entire surface of wall.)
- D. Pipe drain, perforated and non-perforated, shall conform to the requirements of M. H. D. 3226, 3290, 3293, or 3285 as the Contractor may elect except that all pipe at any one location shall be of the same material.
- E. Placement of drain pipe and backfill, shall comply with MHD 2502.3

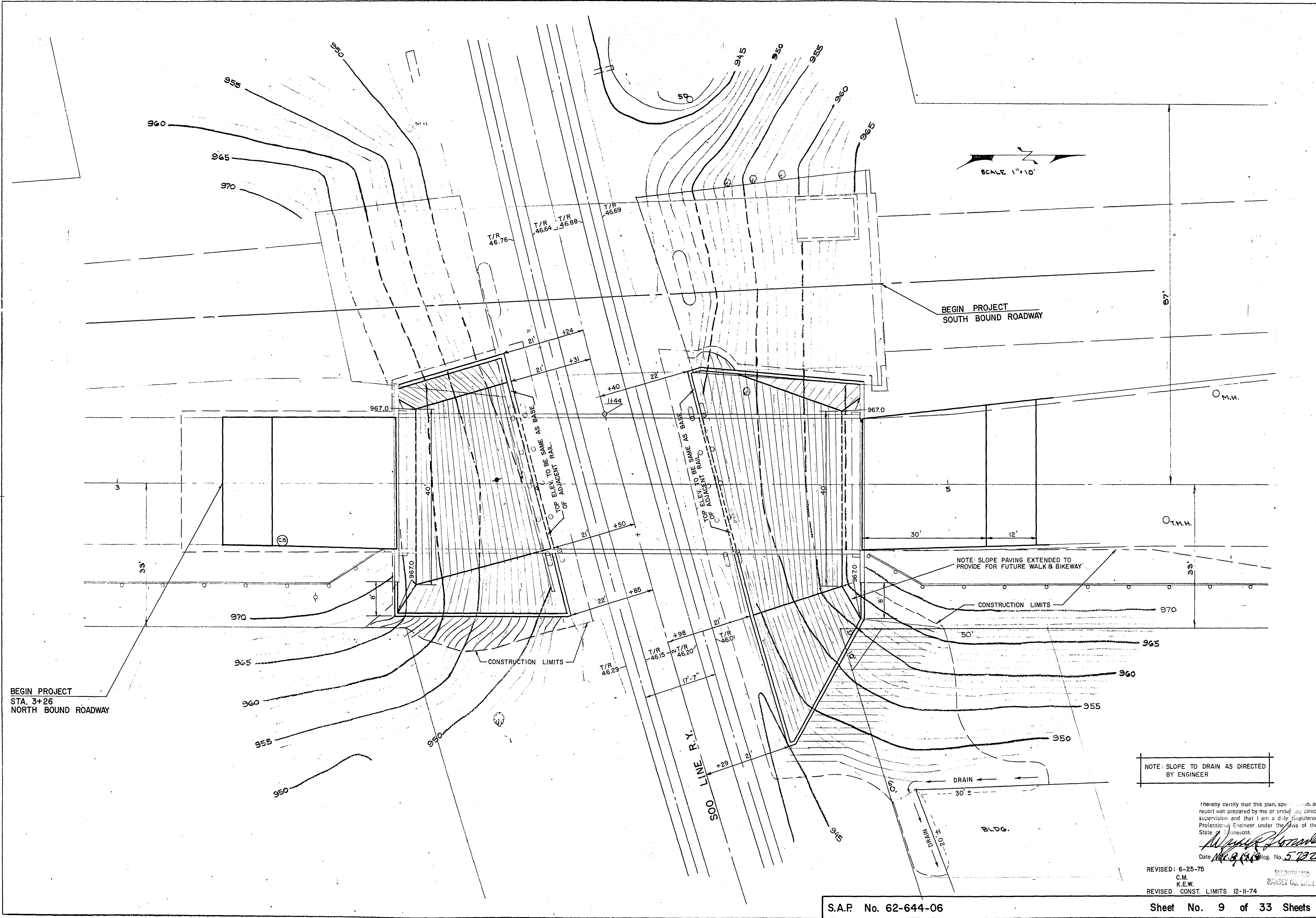
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Wayne J. Harn
Date Nov. 8, 1974 Reg. No. 5722

MICROFILMED
RAMSEY CO. ENGR.

Fig. 5-397.305
April 8, 1974

TITLE: BRIDGE APPROACH TREATMENT (Low Abutments)	DES:	DR:	APPROVED:	Bridge No. 6631
	CHK:	CHK:		
	Sheet No. 8 of 33 Sheets			



BEGIN PROJECT
STA. 3+26
NORTH BOUND ROADWAY

BEGIN PROJECT
SOUTH BOUND ROADWAY

NOTE: SLOPE PAVING EXTENDED TO
PROVIDE FOR FUTURE WALK & BIKEWAY

CONSTRUCTION LIMITS

NOTE: SLOPE TO DRAIN AS DIRECTED
BY ENGINEER

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.
Walter J. Brown
Date *11/9/10* Reg. No. *5732*

REVISED: 6-25-75
C.M.
K.E.W.
REVISED CONST. LIMITS 12-11-74

S.A.P. No. 62-644-06

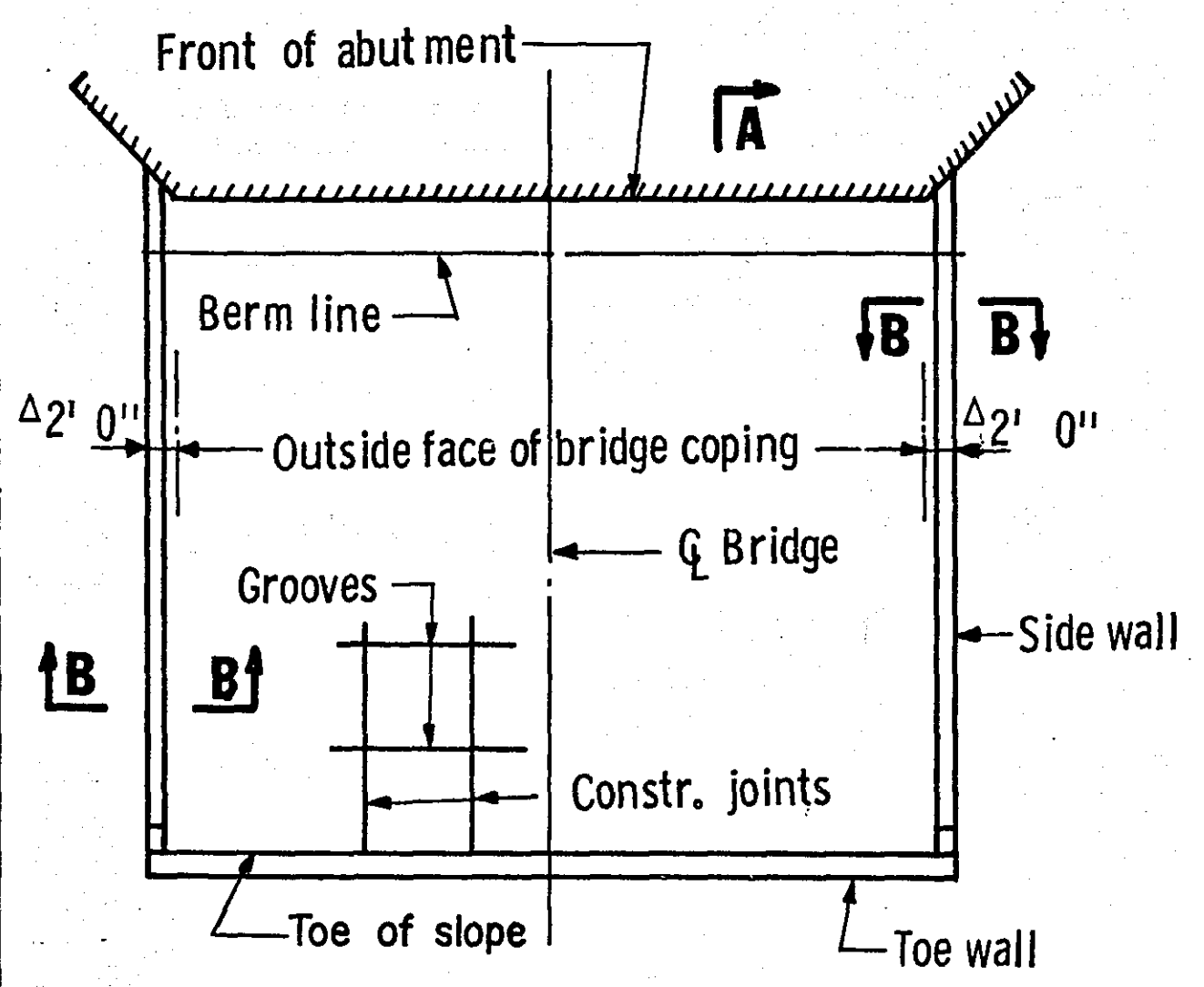
Sheet No. 9 of 33 Sheets

22-10-8

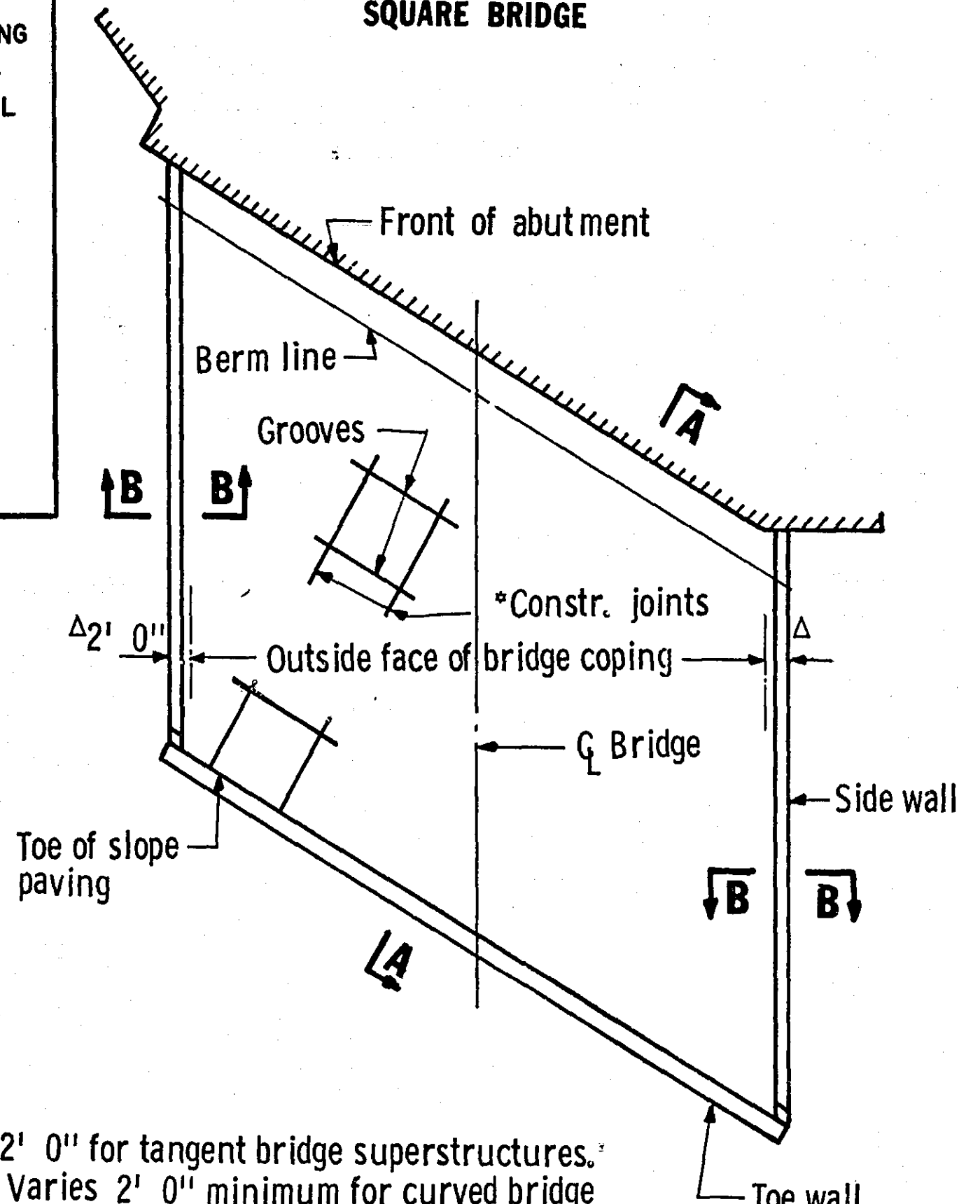
SUMMARY OF QUANTITIES FOR SLOPE PAVING	
SALVAGE TIMBERS	8,500 Board Ft.
BACKFILL (L.V.)	60 Cu. Yds.
AGGREGATE BASE, CLASS 5	66 Cu. Yds.
CONCRETE MIX No. 3A32	66 Cu. Yds.
REINFORCEMENT BARS	4,650 Lbs.
POLYSTYRENE	50 S.F.
BITUMINOUS FELT	50 S.F.
EXCAVATION	79 Cu. Yds.
SLOPE PAVING	602 Sq. Yds.

NOTE: THE SUMMARY OF MAJOR QUANTITIES FOR SLOPE PAVING IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. ANY ADDITIONAL ITEMS REQUIRED SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION.

NOTE: SQUARE YARD PAYMENT FOR SLOPE PAVING "ITEM 401.601 SLOPE PAVING" SHALL BE PAYMENT IN FULL FOR ALL NECESSARY MATERIAL & LABOR TO COMPLETE PAVING.

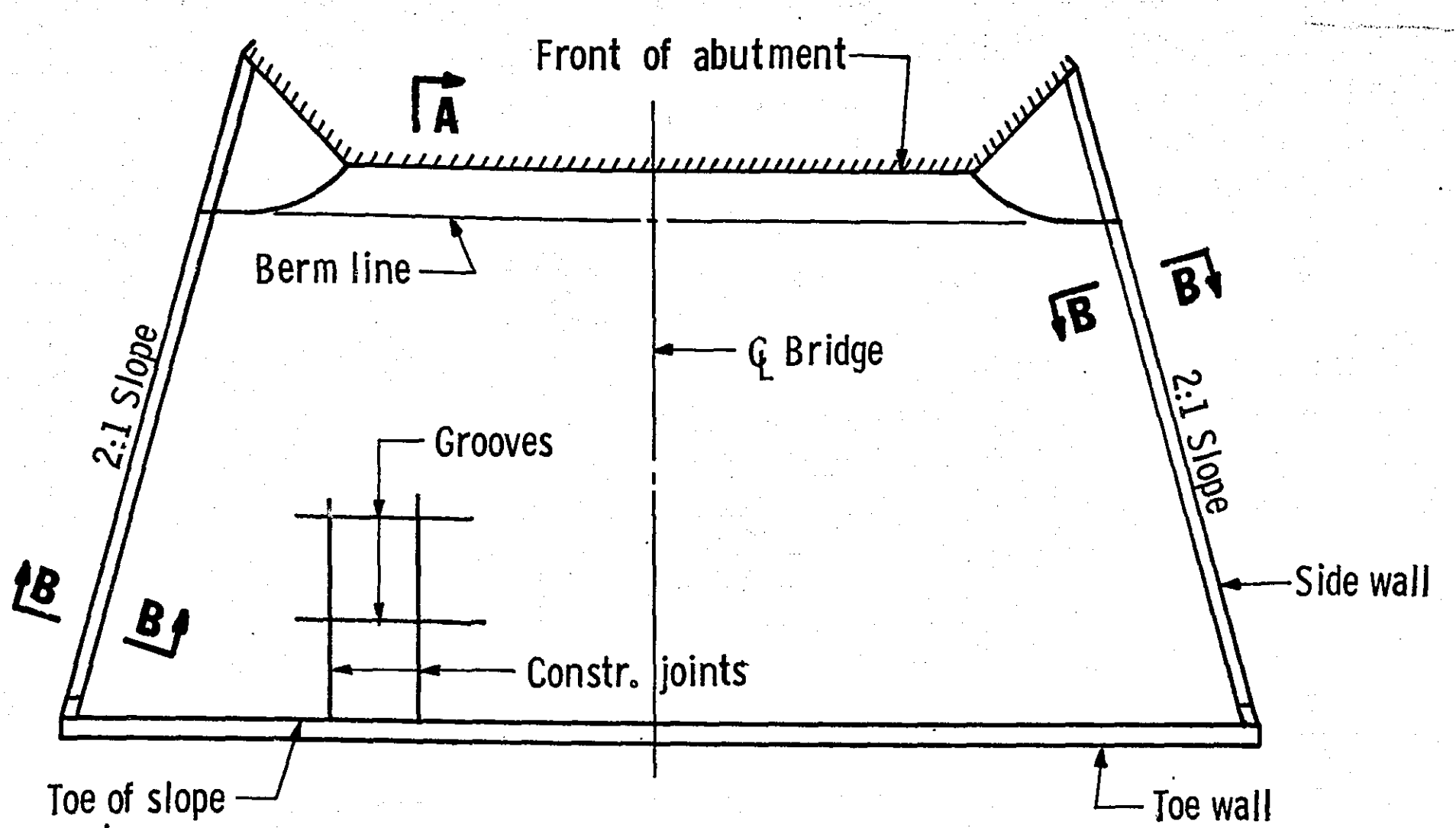


SQUARE BRIDGE

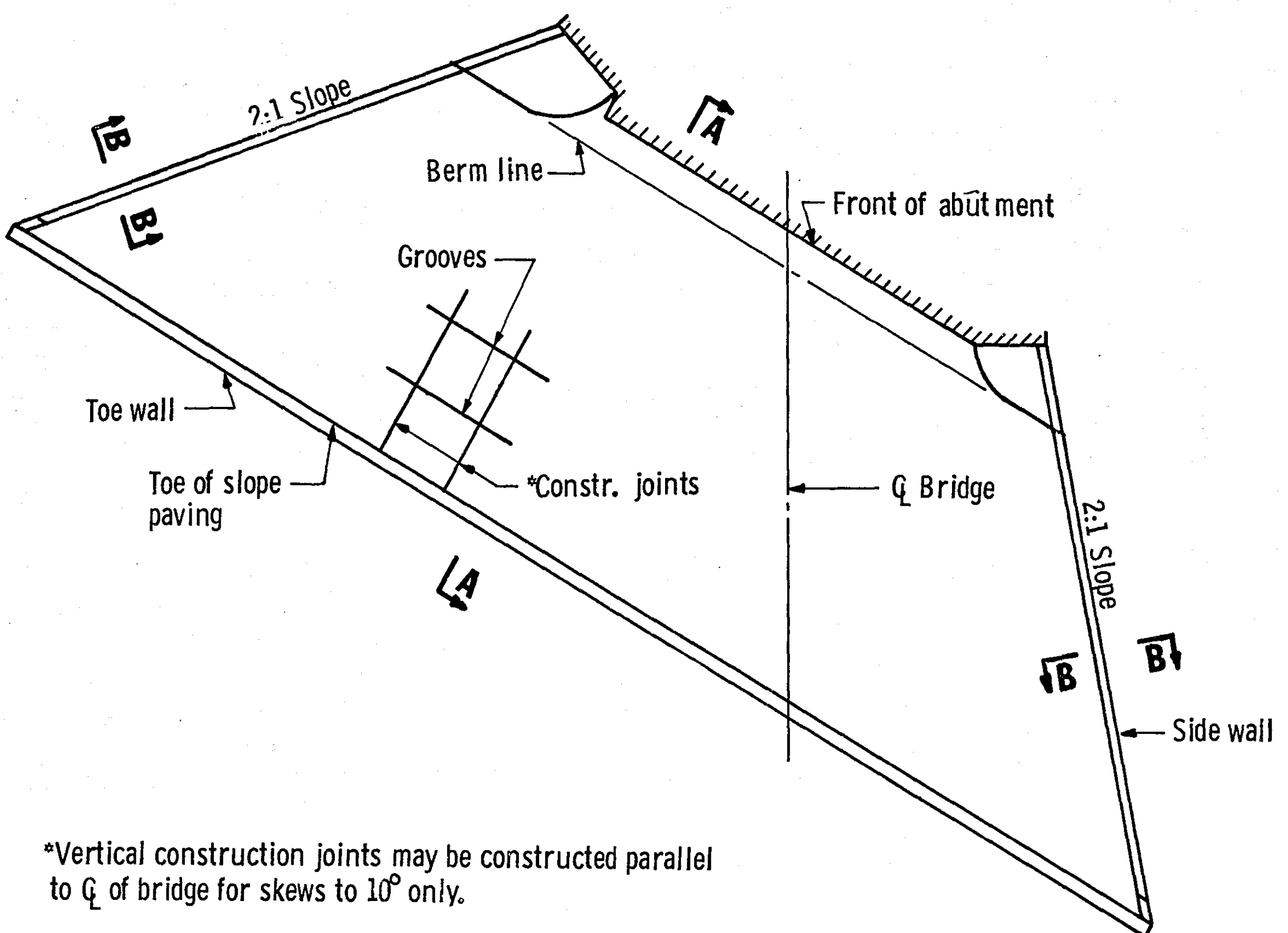


$\Delta 2' 0''$ for tangent bridge superstructures. Varies $2' 0''$ minimum for curved bridge superstructures.
*Vertical construction joints may be constructed parallel to Q_c of bridge for skews to 10° only.

SKewed BRIDGE
LAYOUTS FOR SLOPES 2:1 OR FLATTER

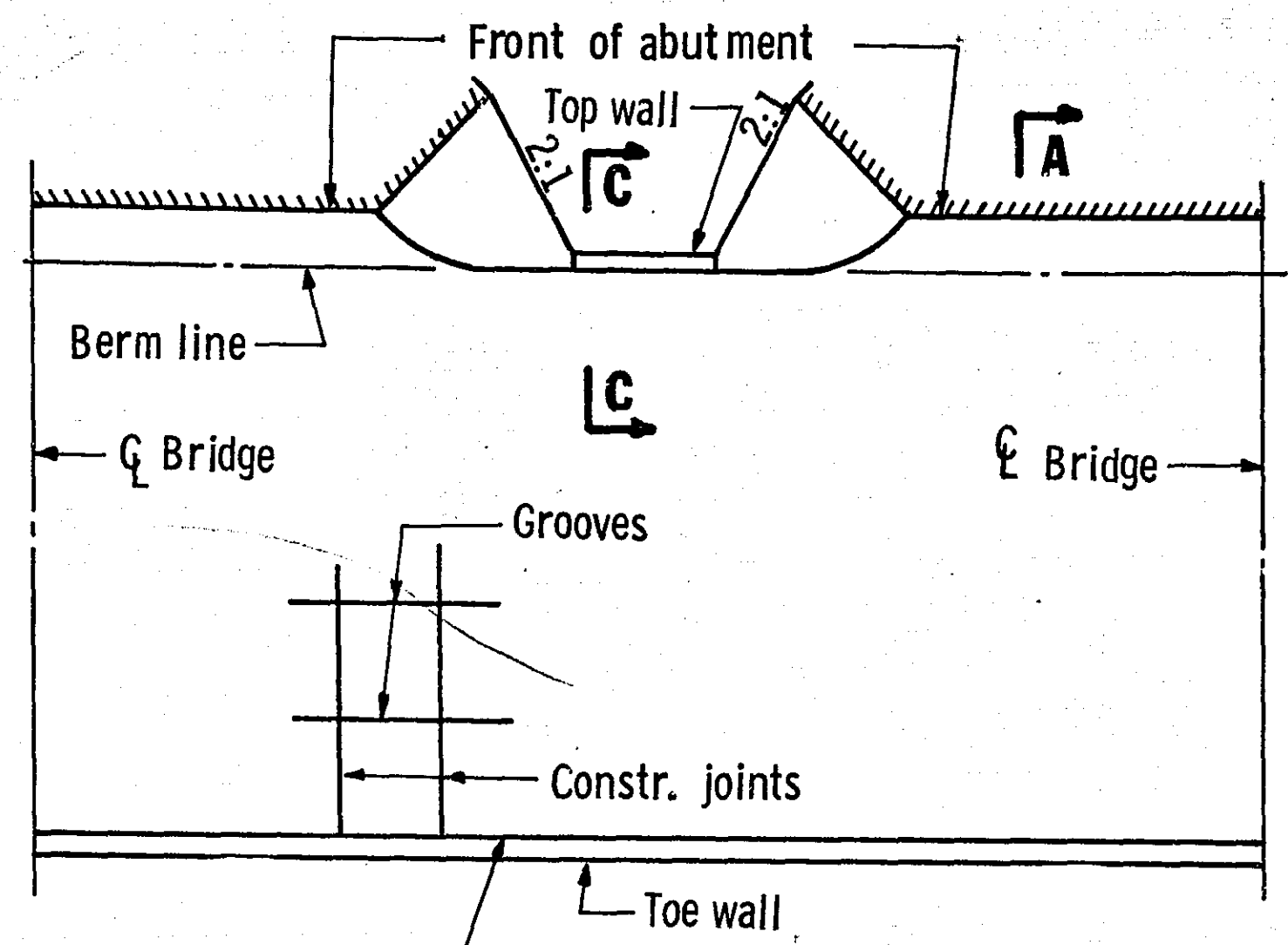


SQUARE BRIDGE

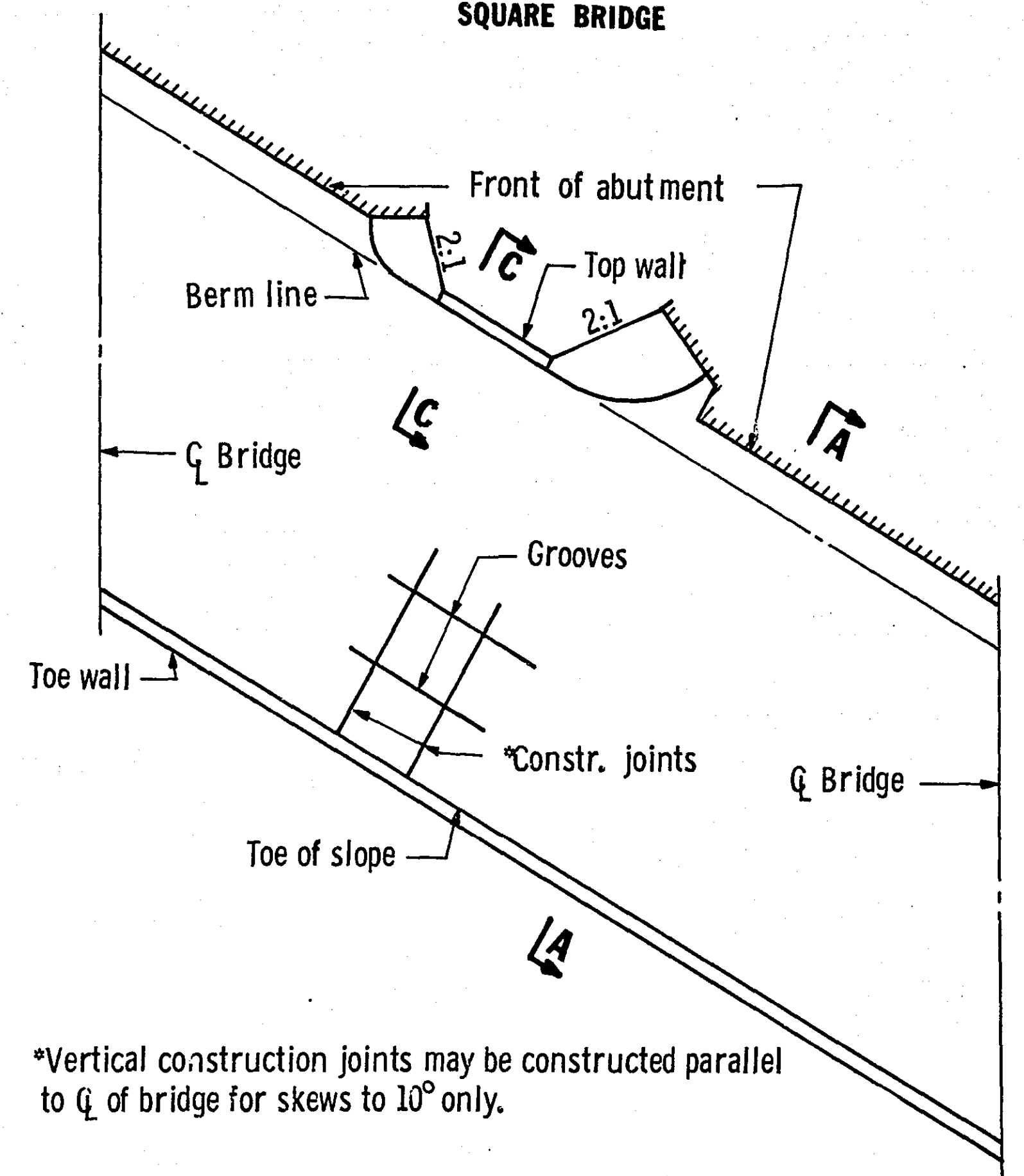


*Vertical construction joints may be constructed parallel to Q_c of bridge for skews to 10° only.

SKewed BRIDGE
LAYOUTS FOR SLOPES STEEPER THAN 2:1



SQUARE BRIDGE

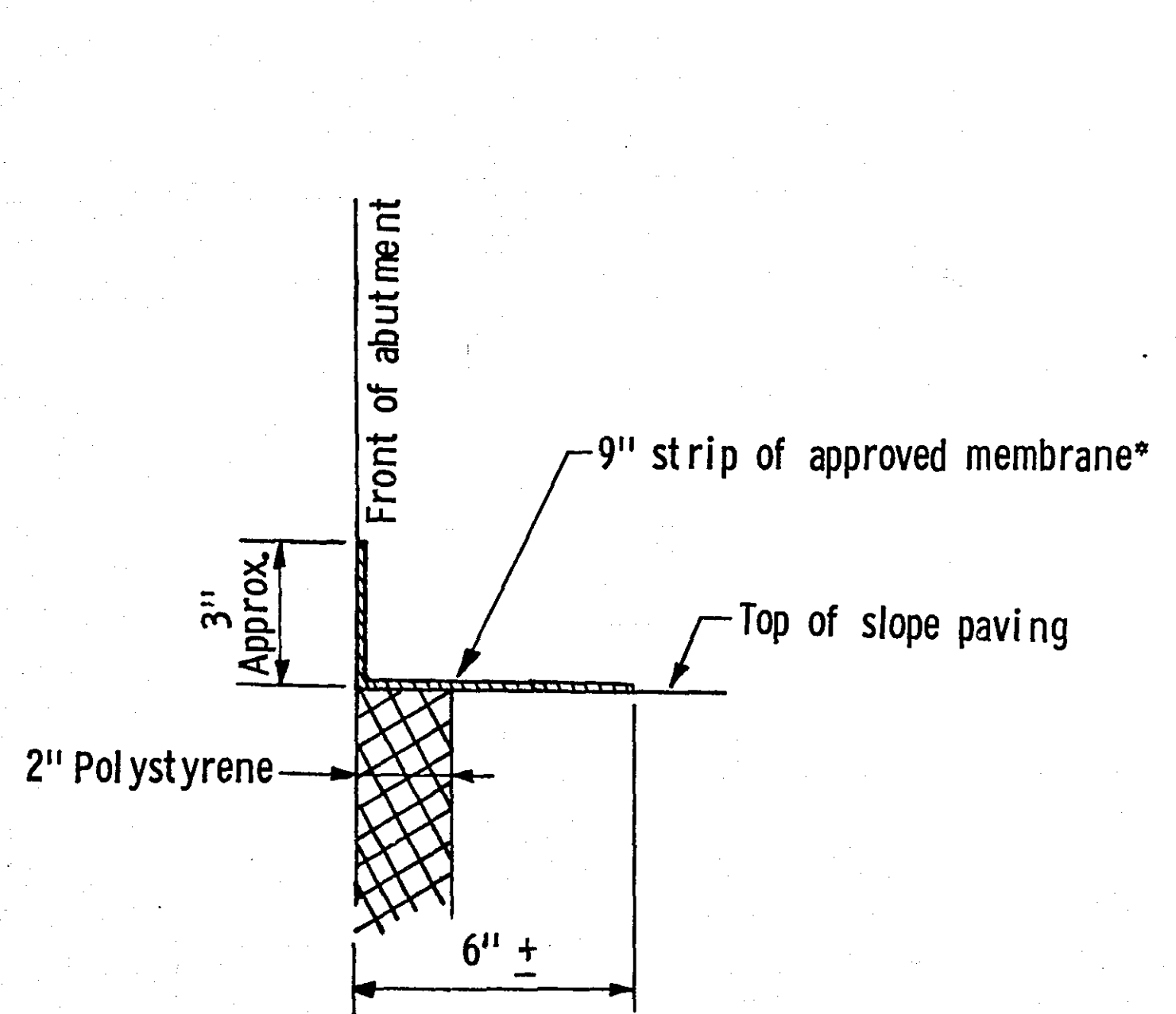


*Vertical construction joints may be constructed parallel to Q_c of bridge for skews to 10° only.

SKewed BRIDGE
LAYOUTS FOR SLOPES STEEPER THAN 2:1
BETWEEN BRIDGES

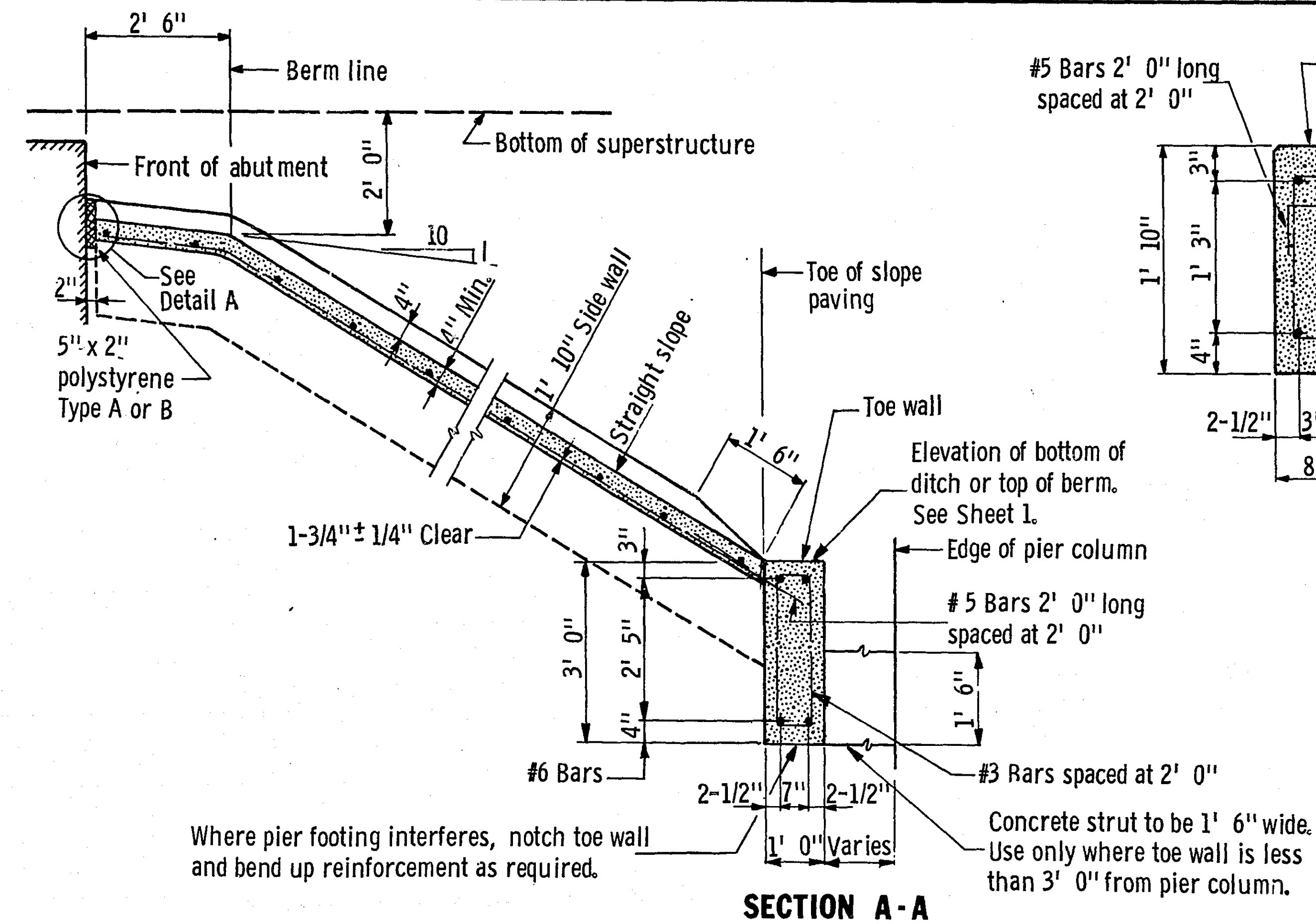
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date _____ Reg. No. _____



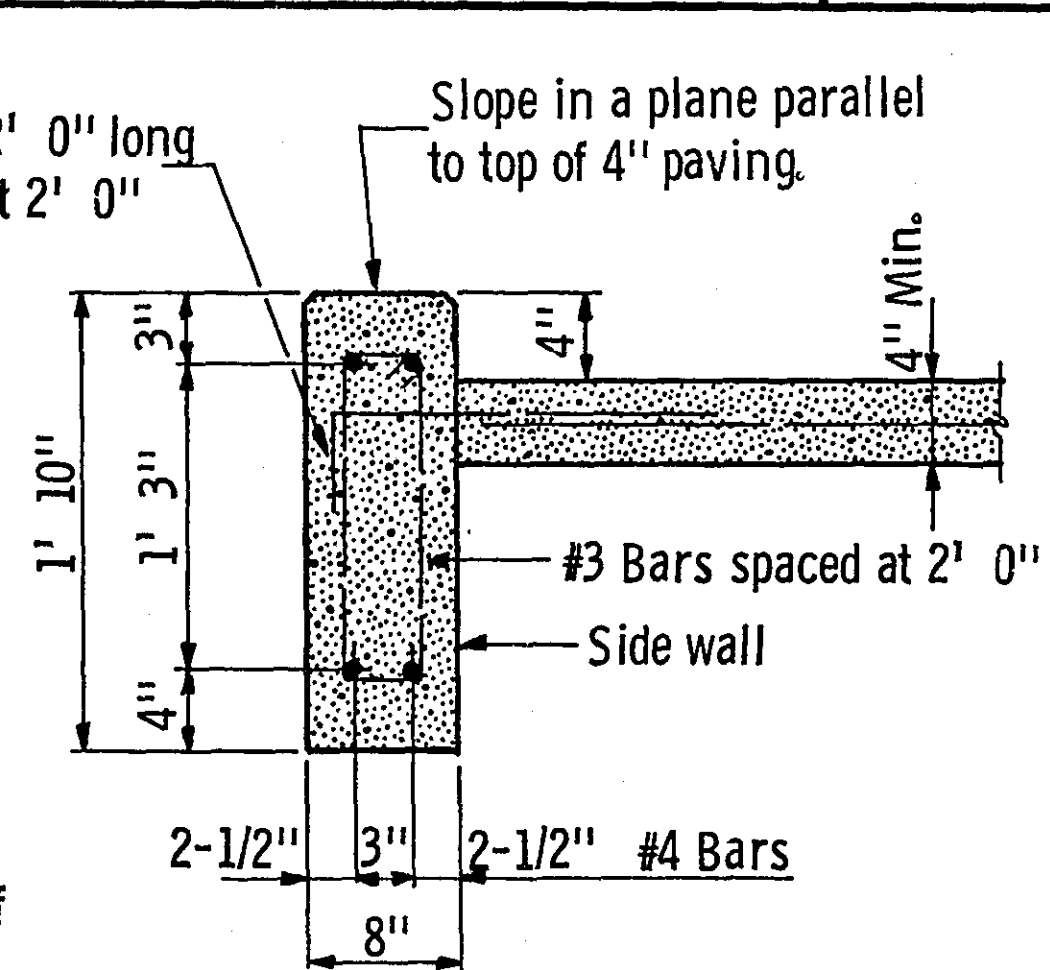
DETAIL A

*Membrane shall be a rubberized asphalt integrally bonded to polyethylene sheeting or approved equal. Material shall be placed in accordance with manufacturers recommendations.

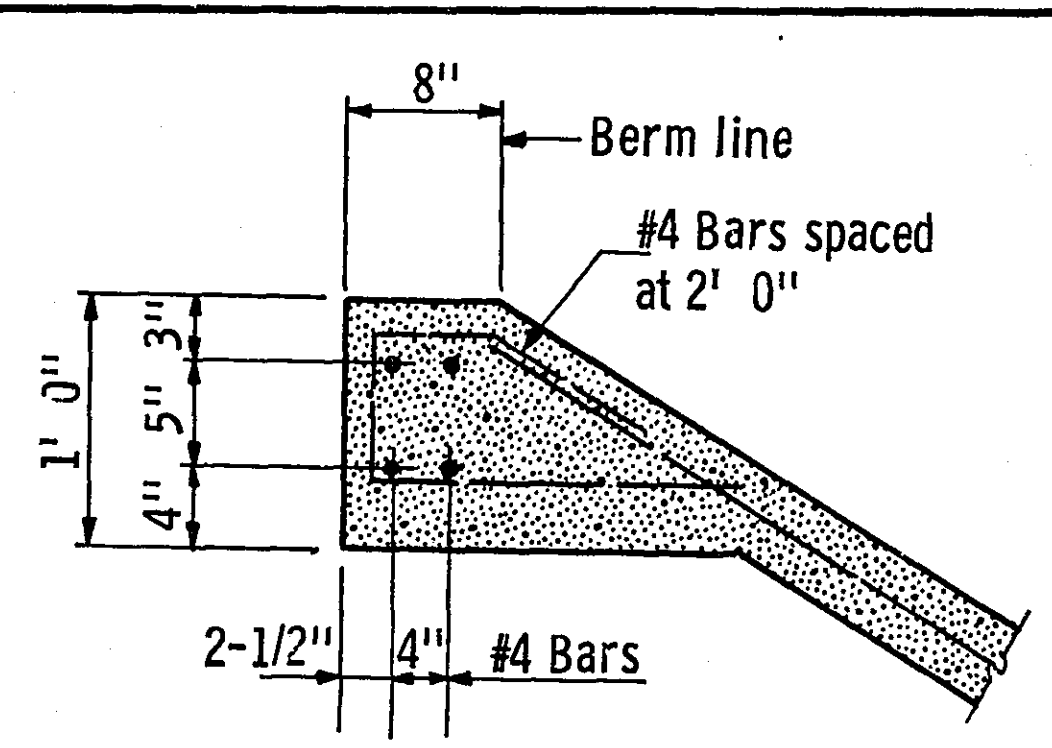


SECTION A-A

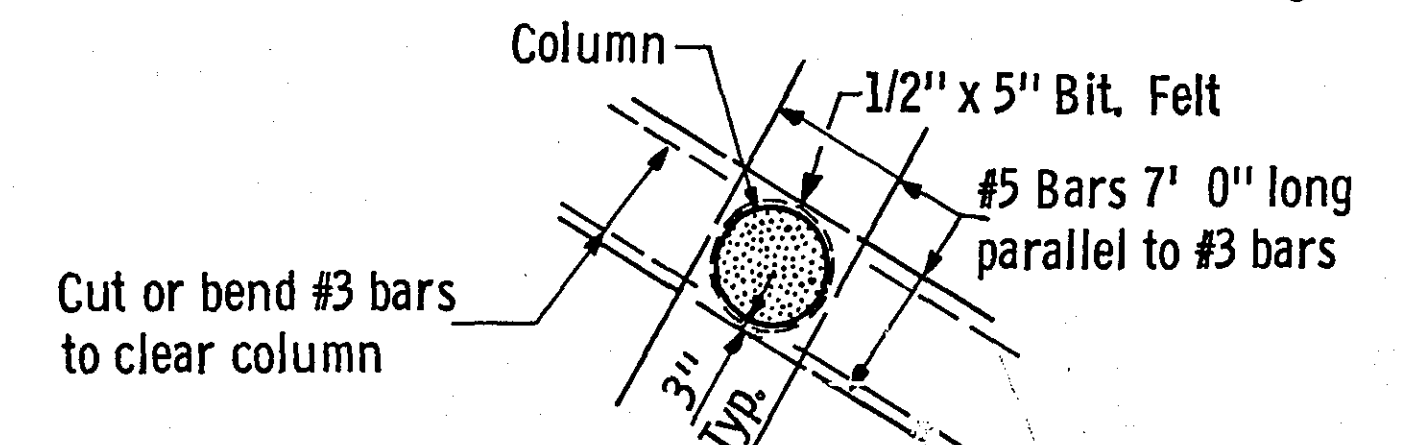
Where pier footing interferes, notch toe wall and bend up reinforcement as required.



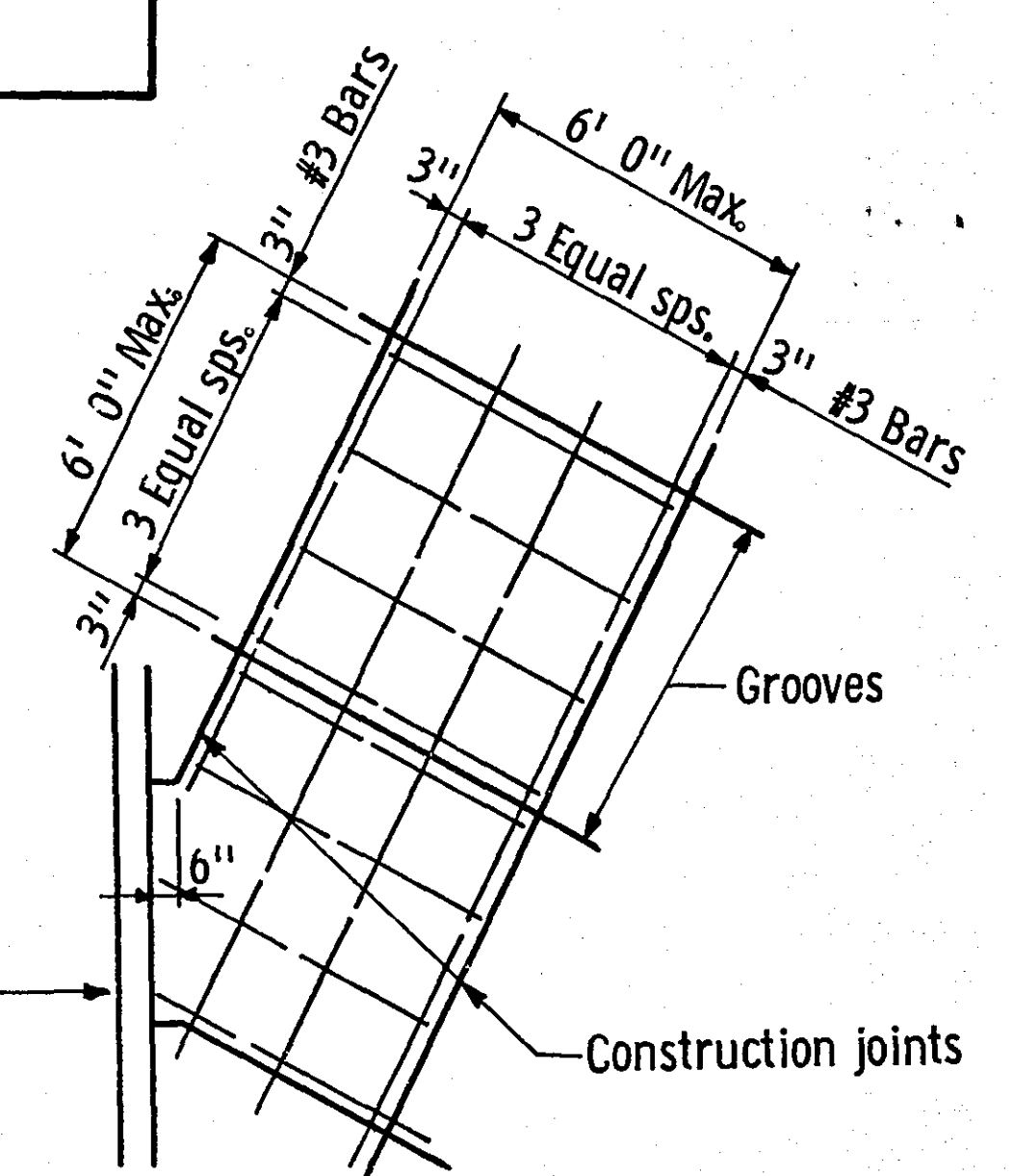
SECTION B-B
(SIDE WALL)
Normal to slope



SECTION C-C
(TOP WALL)



DETAIL WHERE PIER COLUMN
EXTENDS THRU SLOPE PAVING



PAVING DETAIL

MICROFILMED
RAMSEY CO. ENGR.

Fig. 5-397.301
Feb. 25, 1974

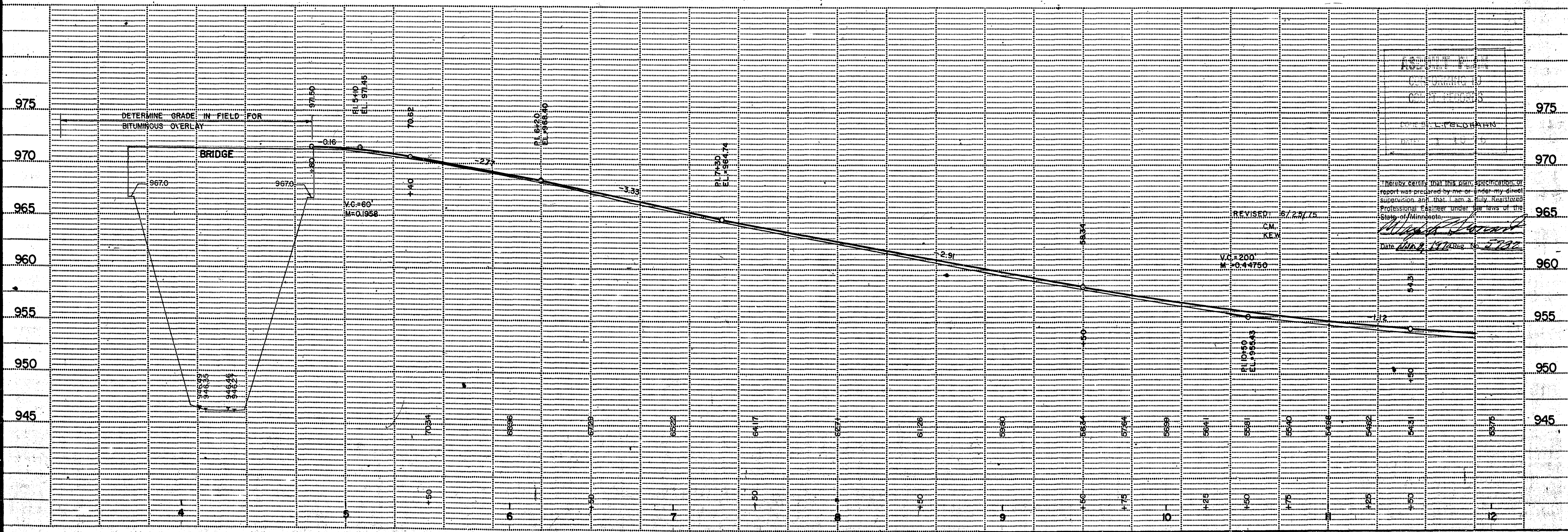
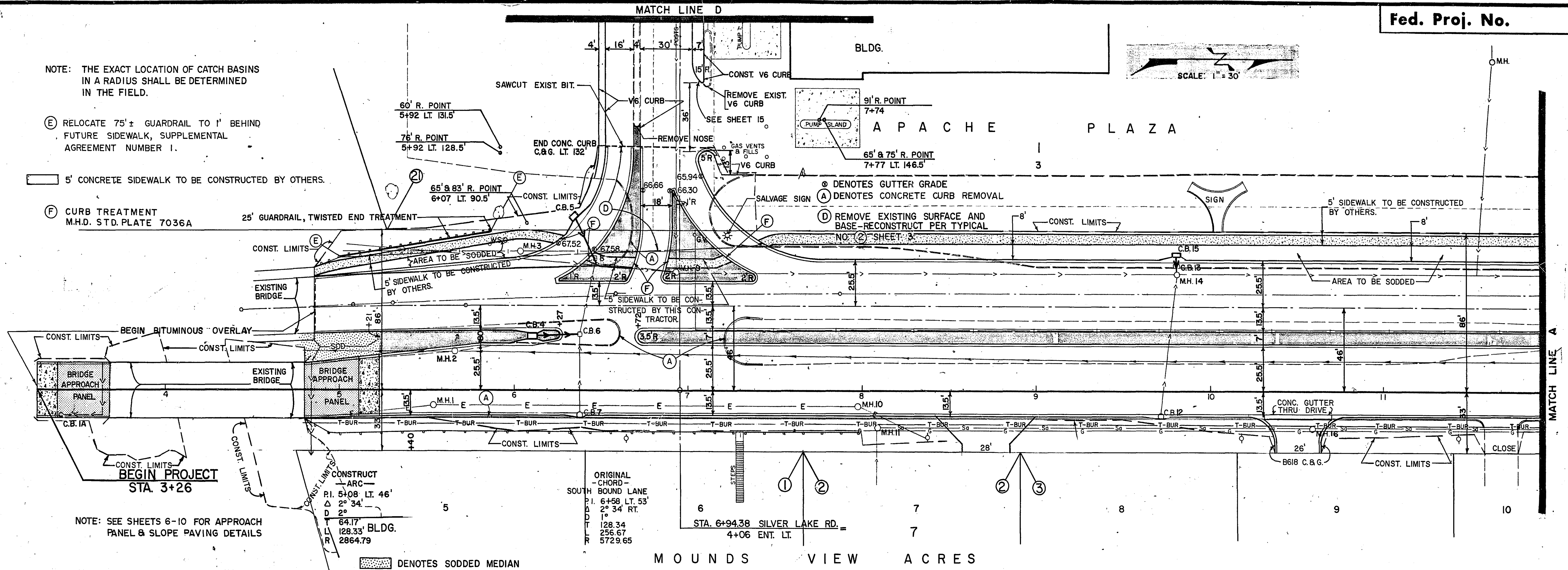
TITLE: CLASS B SLOPE PAVING UNDER BRIDGES	DES:	DR:	APPROVED:	Bridge No. 6631
	CHK:	CHK:		
	Sheet No. 10 of 33 Sheets			

NOTE: THE EXACT LOCATION OF CATCH BASINS IN A RADIUS SHALL BE DETERMINED IN THE FIELD.

(E) RELOCATE 75'± GUARDRAIL TO 1' BEHIND FUTURE SIDEWALK, SUPPLEMENTAL AGREEMENT NUMBER 1.

5' CONCRETE SIDEWALK TO BE CONSTRUCTED BY OTHERS.

(F) CURB TREATMENT M.H.D. STD. PLATE 7036A



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.
Date Aug 2, 1972 5:22

REVISED: 8/23/75
C.M.
K.E.W.

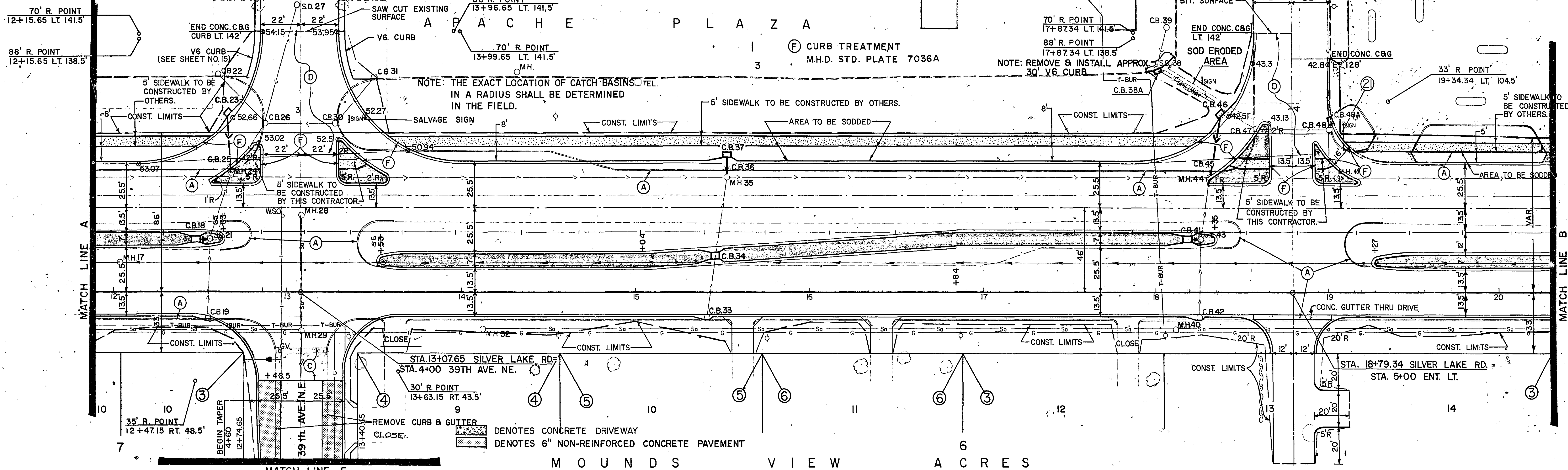
V.C. 200'
P.I. 6+47.50
L.T. 100'

MATCH LINE E

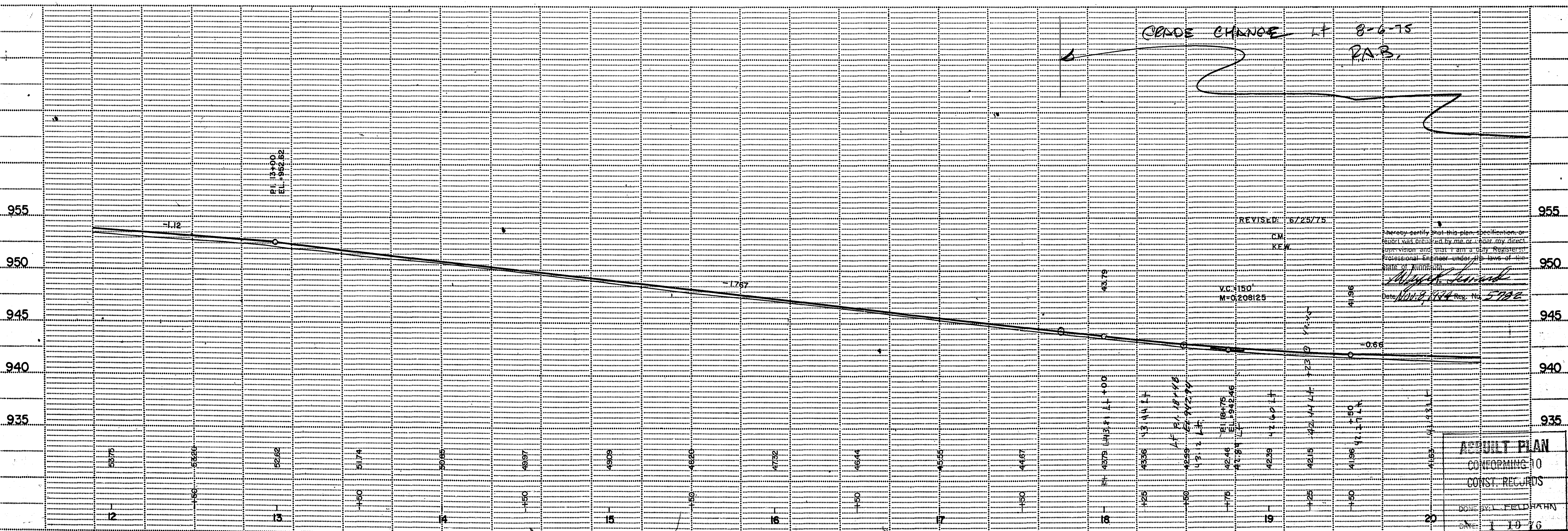
MATCH LINE G

- (A) DENOTES CONCRETE CURB REMOVAL
- (C) DENOTES CONCRETE PAVEMENT REMOVAL
- (G) DENOTES GUTTER GUTTER
- (D) REMOVE EXISTING SURFACE AND BASE. RECONSTRUCT PER TYPICAL NO. 2 SHEET 3

SCALE: 1" = 30'



M O U N D S V I E W A C R E S



GRADE CHANGE LT 8-6-75
P.A.B.

REVISED: 6/25/75

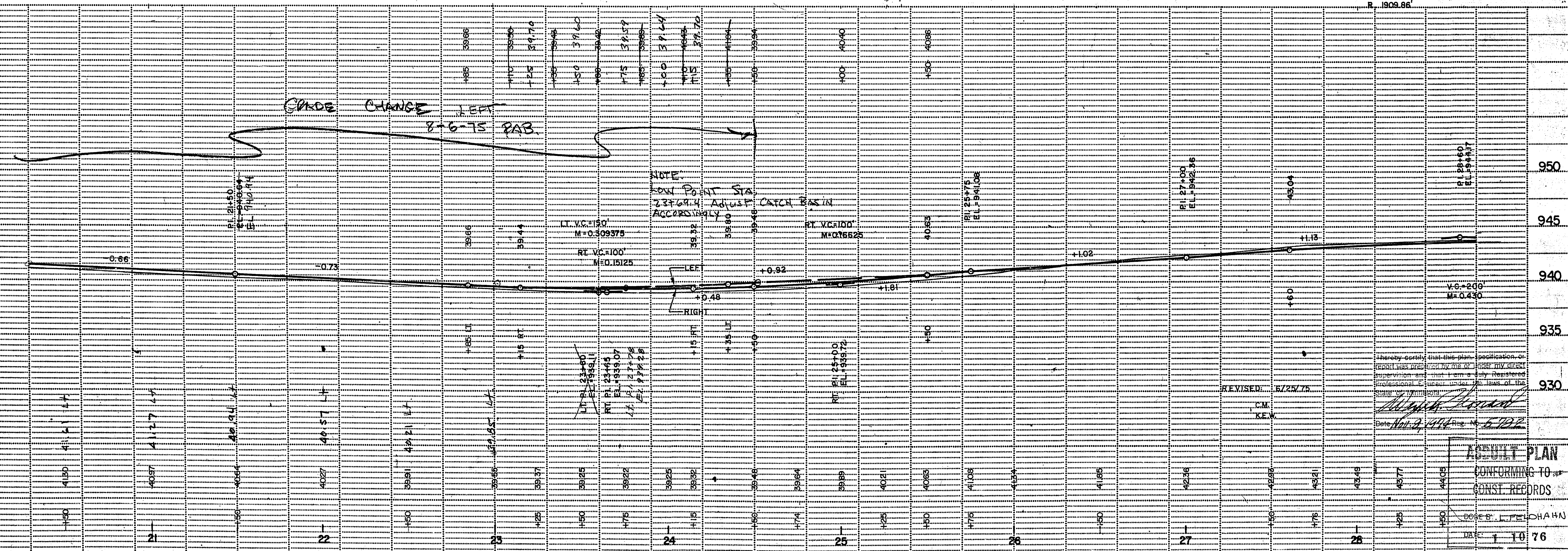
CM
KEW

VC: 150'
M: 0.208125

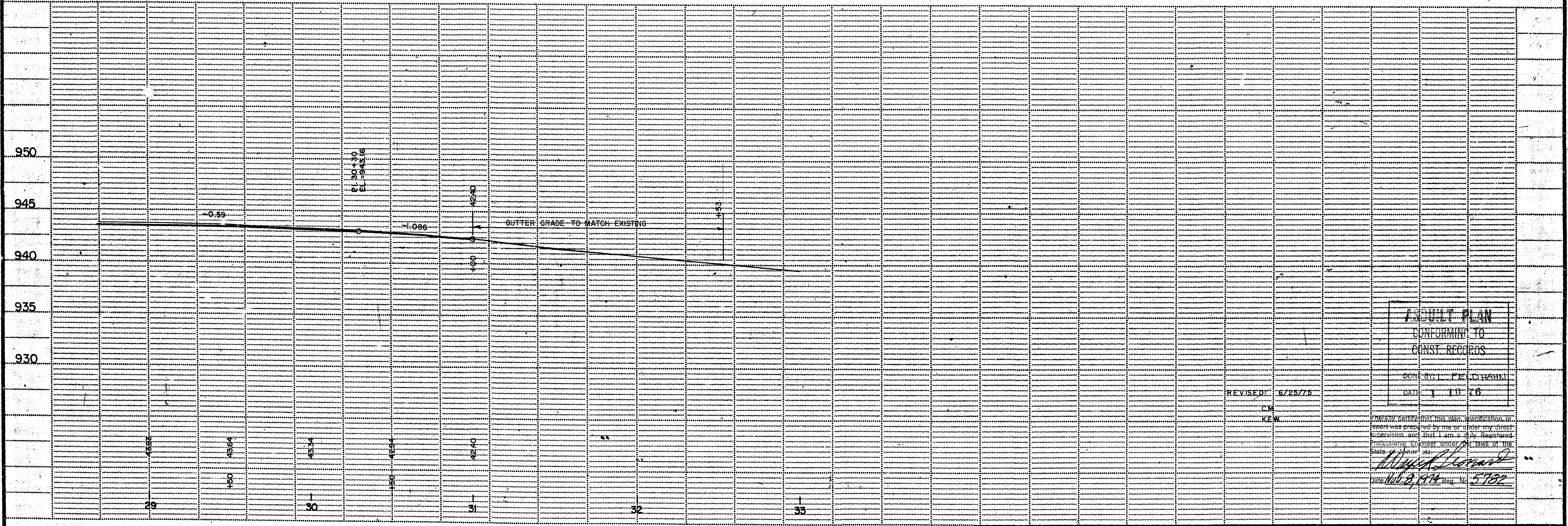
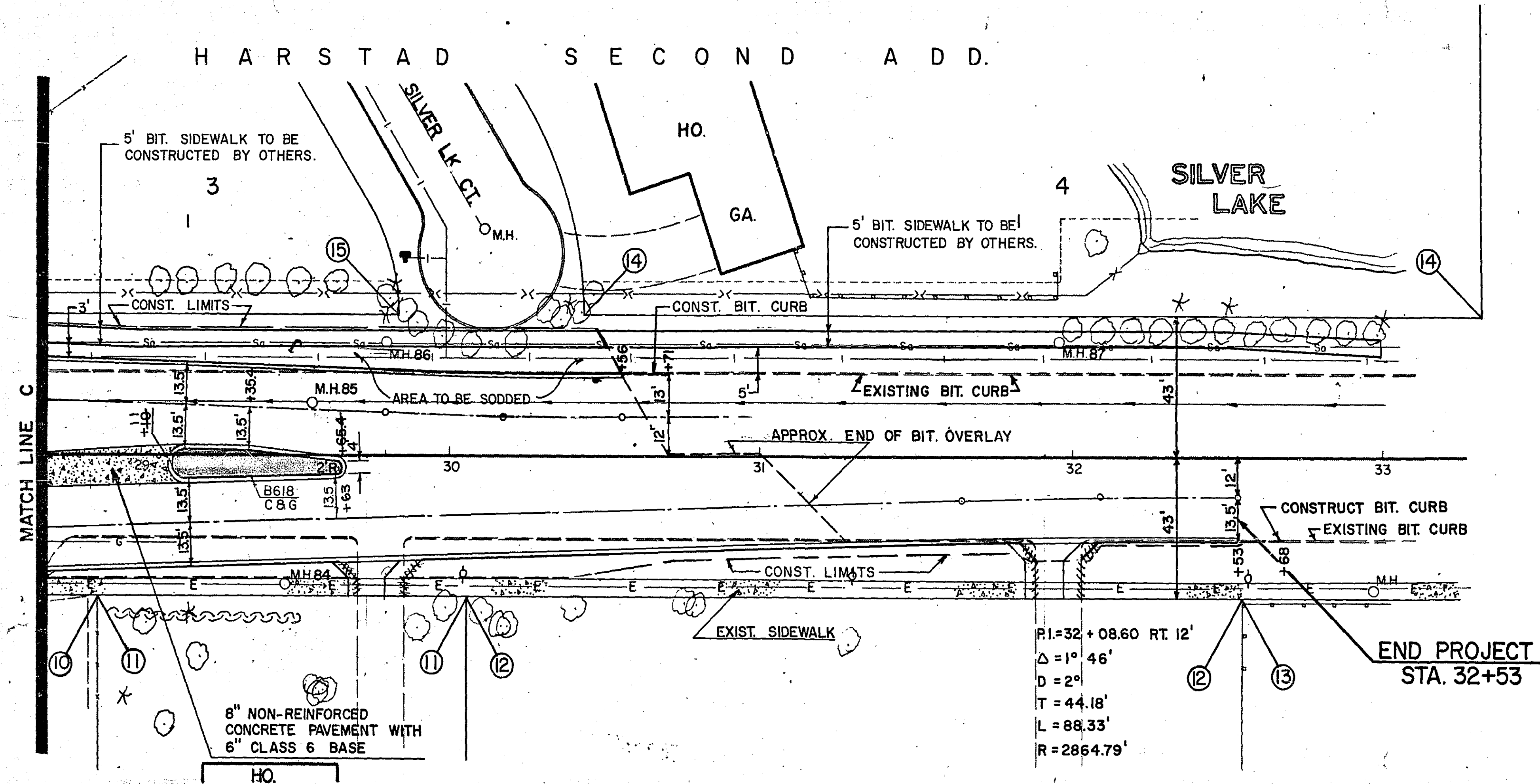
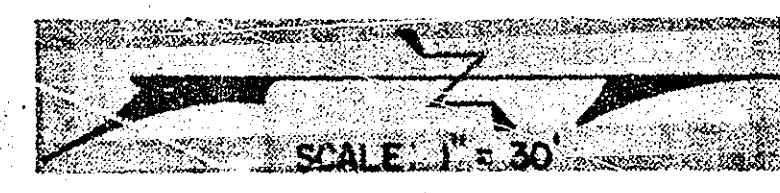
I hereby certify that this plan, specification, or contract was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
[Signature]
Date: 6/25/75

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS

DONE BY: FIELDHORN
DATE: 1-10-76



PI = 30+17.66 LT 12'
Δ = 2° 18' 30"
D = 3°
T = 38.46'
L = 76.94'
R = 1909.86'



- | | |
|---|--|
| ① JAMES R. & PATRICIA A. LUND | ①⑦ EBERHARDT CO.
DONALD E. COTTLE &
LOIS M. |
| ② JOHN L. TERNES | ①⑧ ROLAND COTTLE &
ETTA M. COTTLE |
| ③ KENNETH H. LEE | ①⑨ VILLAGE OF ST. ANTHONY |
| ④ FRANK S. HOLIEN | ①⑩ JEROME W. MANDELL |
| ⑤ RICHARD D. JOHNSON | ①⑪ JAYBARCAR ASSOCIATES
BURGER CHEF SYSTEMS, INC. |
| ⑥ VANDA E. MILLER
GORDON HEDLUND | ①⑫ APACHE PLAZA INVESTMENT
COMPANY |
| ⑦ LEONARD A. BONA | ①⑬ WILLIAM H. SHIELS |
| ⑧ BERNARD J. BLANSKE
BEVERLY BLANSKE | |
| ⑨ REPROCO INC.
PHILLIPS PETROLEUM CO.
ALMA STATIONS, INC. | |
| ⑩ HARTLEY F. BRUDER
POLKA DOT DAIRY INC. | |
| ⑪ HARRY YURISTA | |
| ⑫ ESTHER SWANSON | |
| ⑬ MARILYN E. FERRARA
ARTHUR C. KURZ | |
| ⑭ FRANK A. & DIANA K. BRACCHI | |
| ⑮ KEITH T. HARSTAD | |
| ⑯ ELICHI YOSHINO
NORTH EAST REALTY | |

RESULT PLAN
CONFORMING TO
CONST. RECORDS

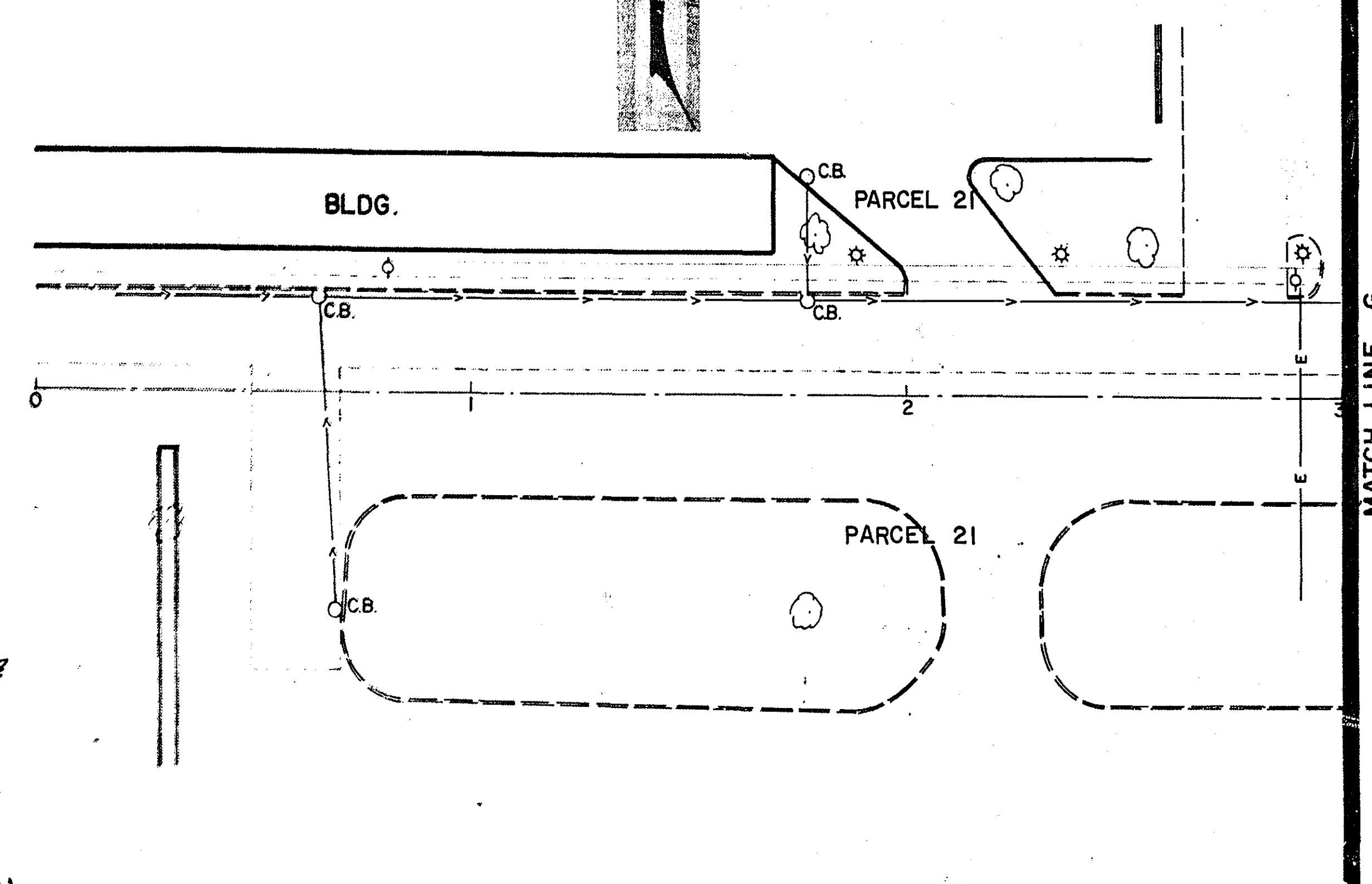
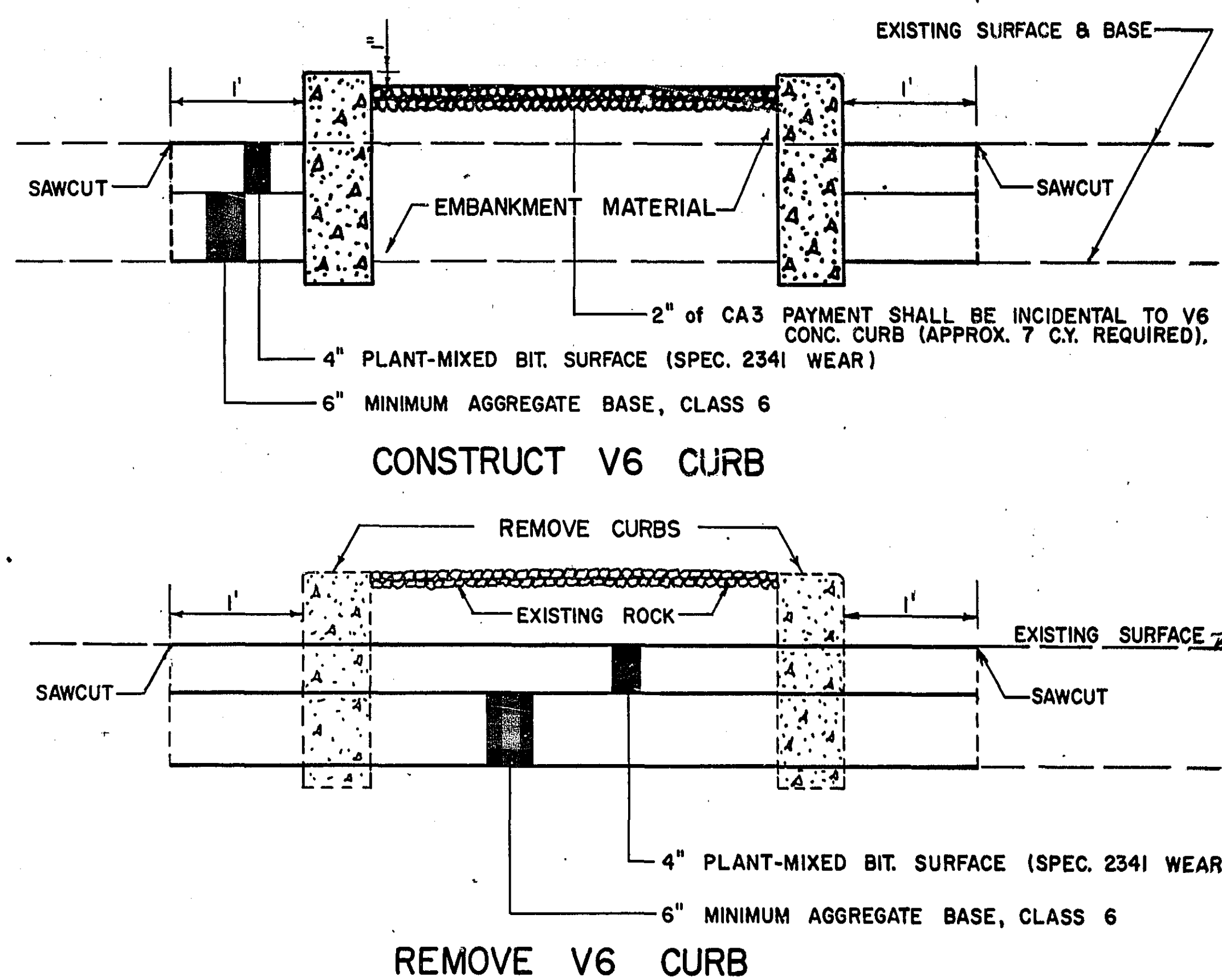
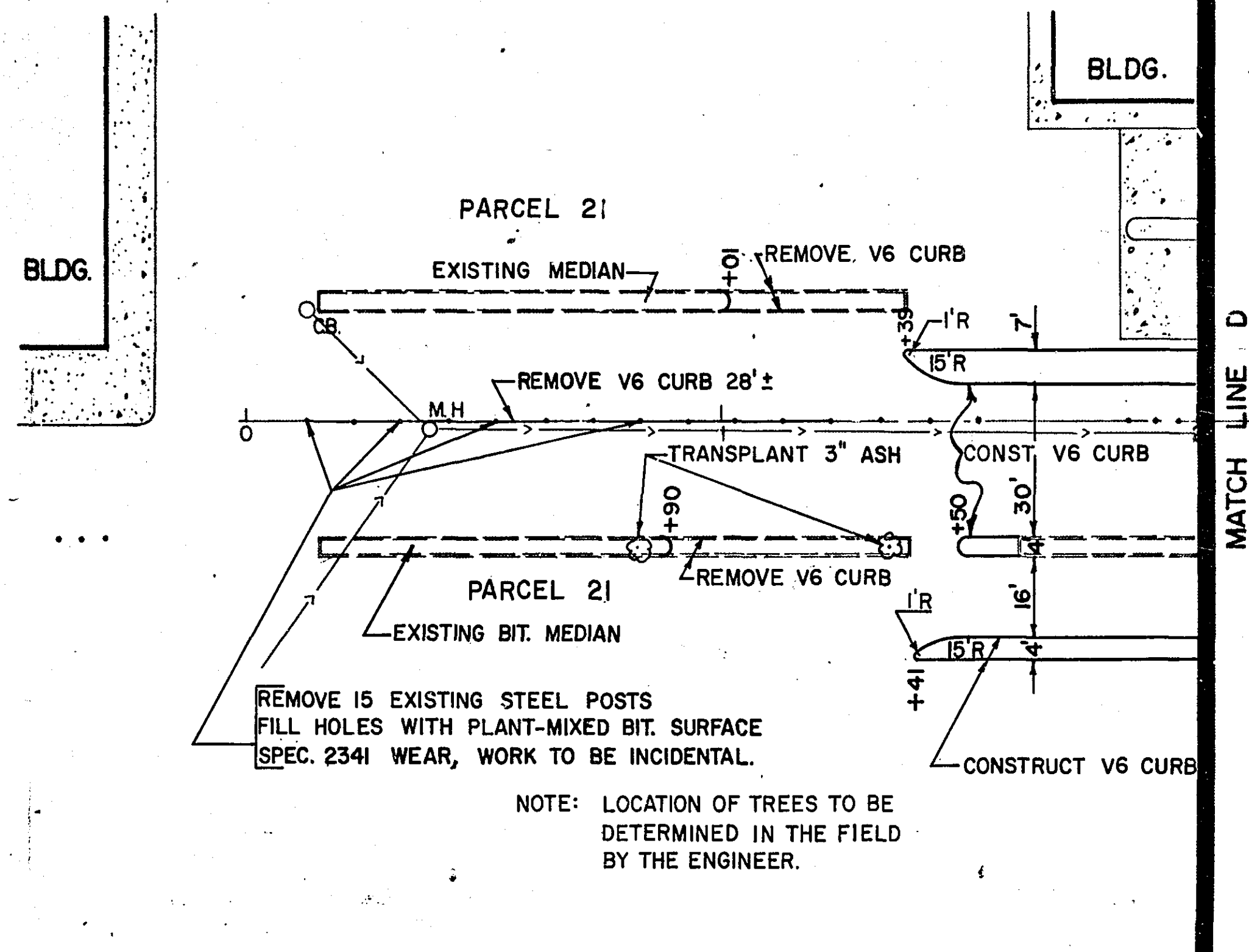
DONE BY: L. F. CHANK
DATE: 1-10-76

REVISED: 6/25/75

CM
KEW

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 Illinois.
[Signature]
DATE: 6/25/75 REG. NO. 5782

SCALE 1"=30'

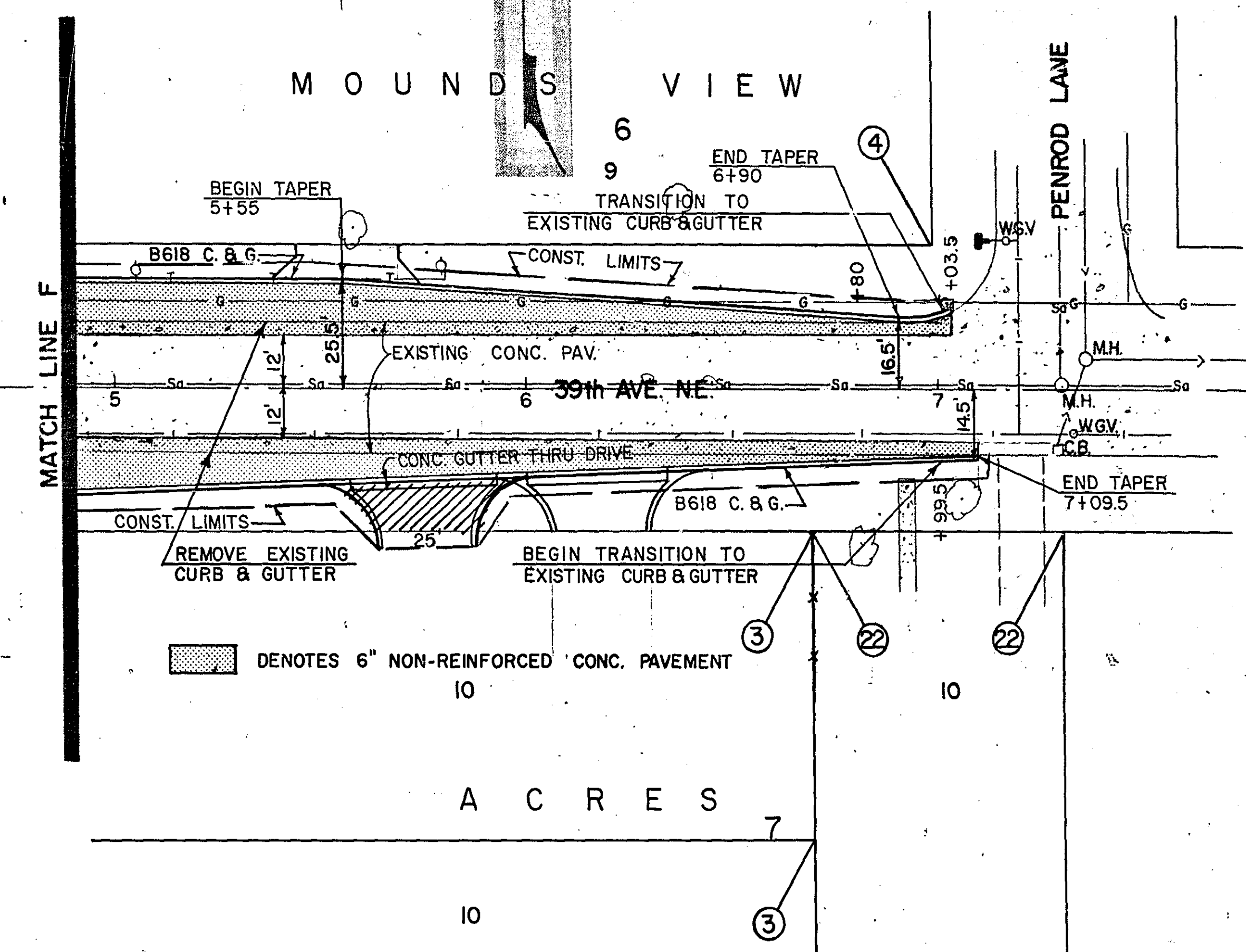


I hereby certify that this plan or specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Michigan.
 Date 10/1/74 Reg. No. 2706

M O U N D S V I E W



39th AVE. N.E. 4+00 =
SILVER LK. RD 13+07.65



USE EXISTING GRADE
(SEE TYPICAL SECTION)

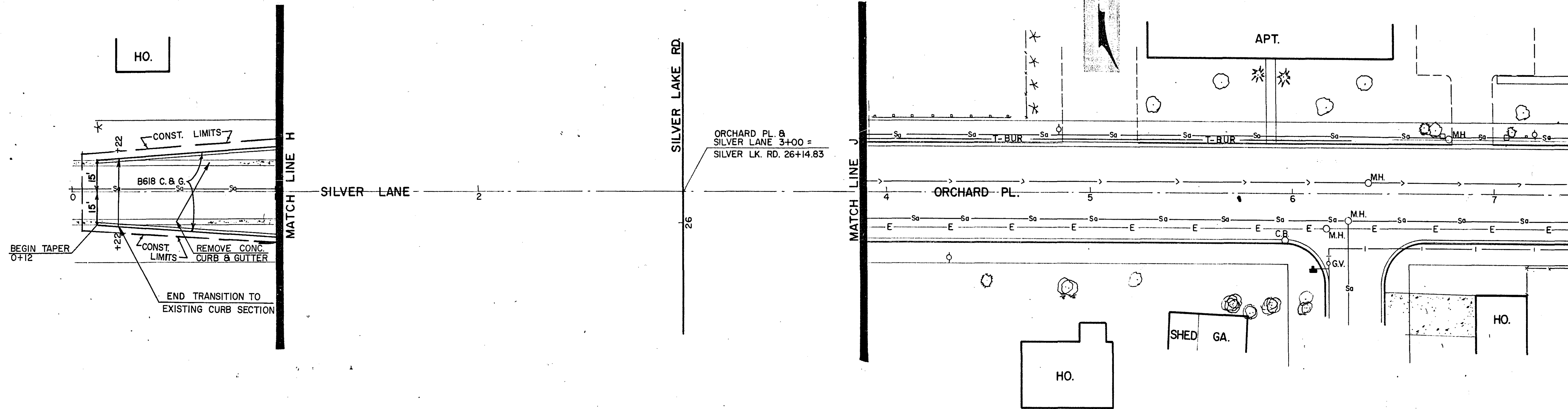
ROBERT PLAIN
CONCERNING TO
CONST RECORDS

DONE BY: _____
DATE: 1-12-78

I hereby certify that this plan specification and 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.

REVISÉ: 8/25/77
C.M.
KFW

Date Nov. 7, 1974 Reg. No. 5782



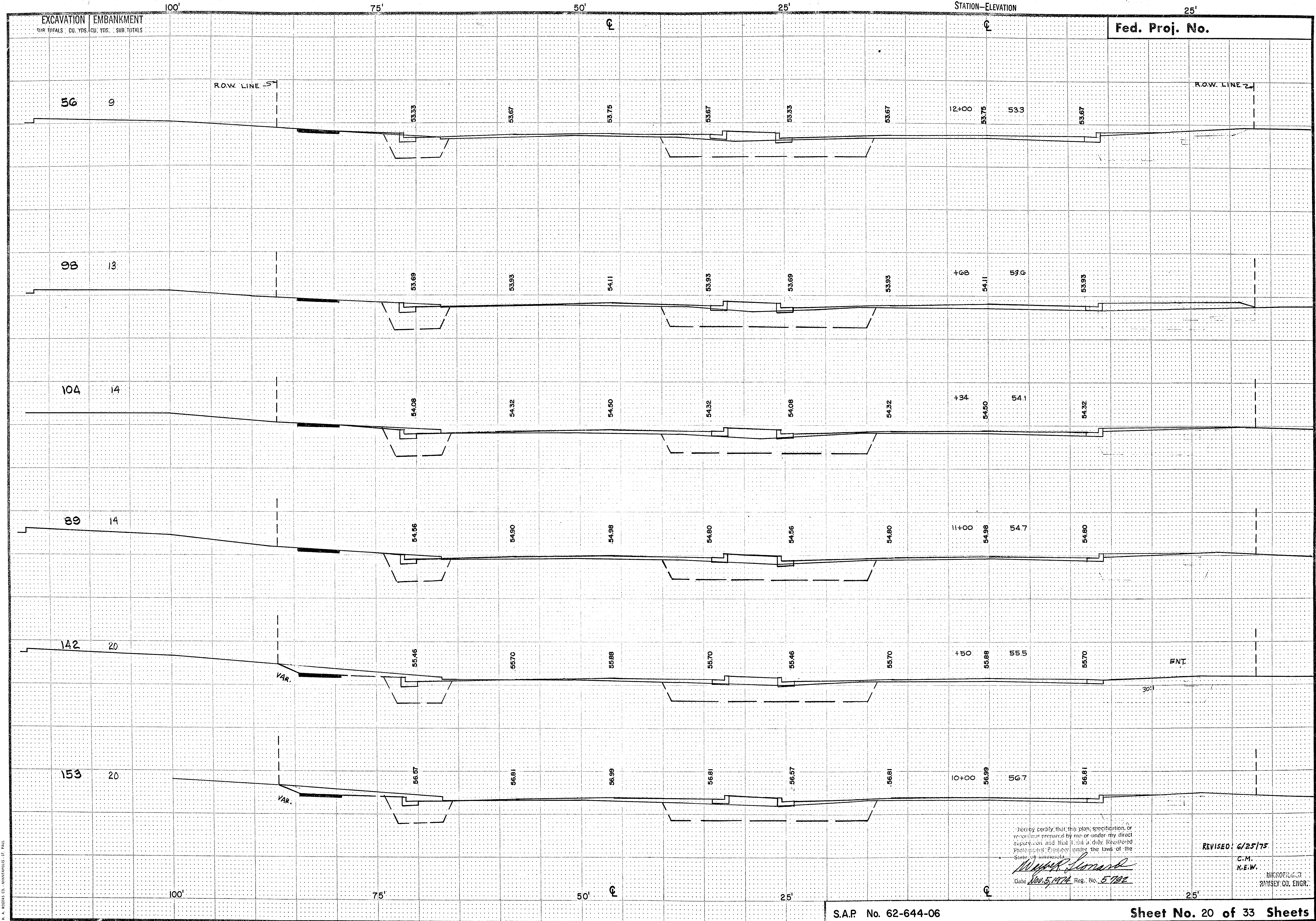
USE EXISTING GRADE
(SEE TYPICAL SECTION)

I hereby certify that this plan, specification, or report 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.
Walter J. Lomask
 Date *Nov. 7, 1977* Reg. No. *5782*

FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. ROGERS CO. - MINNEAPOLIS - ST. PAUL



FUNCTIONAL CROSS SECTION - OPEN DOTTED
N. A. 62583 CO. MINNEAPOLIS ST. PAUL



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.
Walter L. Lomax
Date Nov. 5, 1974 Reg. No. 5702

REVISED: 6/25/75

C.M.
K.E.W.
MICROFILMED
RAMSEY CO. ENGR.



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

Wayne R. Leonard

 Date: _____ Drawn: _____

REVISOR: 6/25/75

C.M.
K.E.W.
MICROFILMED
RAMSEY CO., ENG

FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. ROGERS CO. - MINNEAPOLIS - ST. PAUL

EXCAVATION EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUR TOTALS

Fed. Proj. No.

ROW. LINE 2

ROW. LINE 2

123 11

128 13

141 16

139 16

+50 44.66 44.3 44.48

17+00 45.54 45.3 45.36

+50 46.43 46.2 46.25

+40 46.73 46.4 46.55

16+00 47.31 47.1 47.13

15+60 48.15 947.7 47.97

ENT.

ENT.

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.

Edward J. Lusk
Date Nov. 5, 1974 Reg. No. 5722

REVISED: 6/25/75

C.M.
K.E.W.

MINN. ENG'G
RANSLEY CO. ENGR.

S.A.P. No. 62-644-06

Sheet No. 23 of 33 Sheets

22-108

EXCAVATION EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUB TOTALS

Fed. Proj. No.

R.O.W. LINE

ENT

42.18

42.30
42.21

42.12
42.03

42.21

41.97

42.21

19+00

42.39

42.0

42.21

R.O.W. LINE

30

2

C.B.

0

2

ENT

42.54

42.70
42.71

42.88

42.70

42.46

42.70

+57

42.88

42.5

42.70

59

6

42.83

42.94
42.98

43.12

42.94

42.70

42.94

+40

43.12

42.8

42.94

80

8

43.02

43.17
42.99

43.35

43.17

42.93

43.17

+25

43.35

43.1

43.17

78

6

43.55
43.19

43.59

43.77

43.59

43.35

43.59

18+00

43.77

43.5

43.59

VAR.

17+82

44.22

9438

44.04

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.

Wayne R. Schmitt
Date Nov. 5, 1974 Reg. No. 5792

REVISED: 6/25/75
C.M.
K.E.W.

8-7-75 RAB

REGISTERED
RAMSEY CO. ENGR.

S.A.P. No. 62-644-06

Sheet No. 24 of 33 Sheets

22-108

FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. ROGERS CO., MINNEAPOLIS, ST. PAUL

EXCAVATION EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUB TOTALS

Fed. Proj. No.

ROW. LINE

ROW. LINE

ENT

55 11

64 11

56 8

48 10

49 7

43 5

40.75
41.07

41.03

41.21
41.33

41.03

23.1

40.81

41.03

40.5

40.9

41.03

41.02
41.32

41.66

41.44
41.56

41.66

41.02

41.26

41.0

41.1

41.26

41.22
41.57

41.46

41.64
41.75

41.46

41.29

41.46

20+00

41.3

41.46

41.41
41.71

41.66

41.03
41.35

41.65

41.55

41.65

41.70

41.5

41.65

41.60
41.91

41.66

41.03
41.35

41.64

41.86

41.84

41.41

41.7

41.84

41.76
42.03

42.00

42.27
42.48

42.00

42.00

19+22

941.8

42.00

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.
Michael J. Leonard
Date Nov 5, 1974 Reg. No. 5782

MICROFILMED
RAMSEY CO. ENGR.

REVISED: 6/25/75
C.M.
K.E.W.
8-7-75 RAP

FUNCTIONAL CROSS SECTION - OPEN DOTTED
M. A. ROGERS CO. - MINNEAPOLIS, ST. PAUL

EXCAVATION EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUB TOTALS

Fed. Proj. No.

ROW. LINE

94 7

210 18

98 10

108 13

76 12

72 14

70 14

ROW. LINE

ENT.

GRATE

ENT.

ENT.

ENT.

ENT.

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.

William R. Leonard
Date Nov. 5, 1974 Reg. No. 5782

MICROFILMED
HARVEY CO.

REVISED: 6/25/75
C.M.
K.E.W.
REV. 7-8-74 E.A.B.
8-7-75 R.A.P.

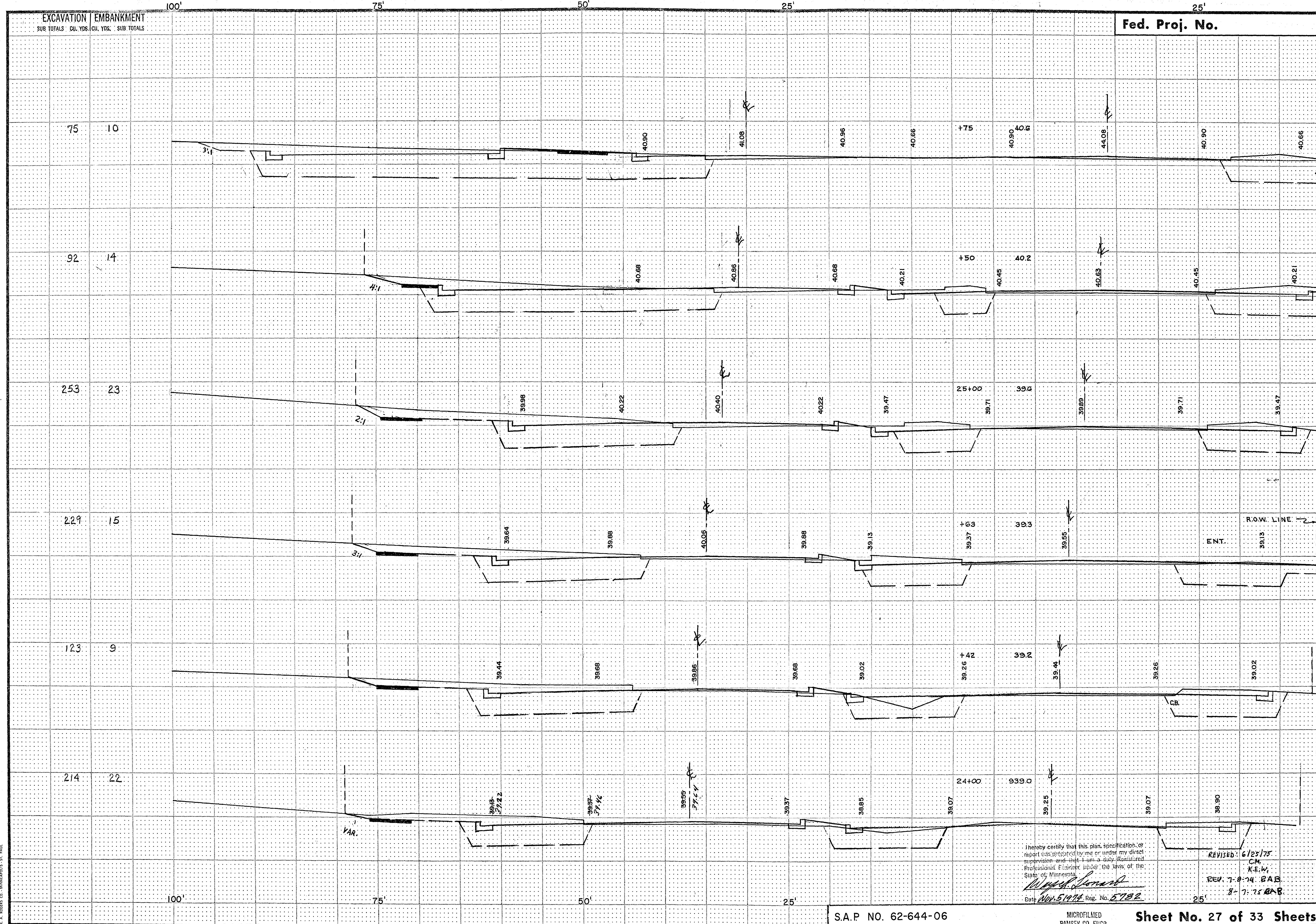
S.A.P. NO. 62-644-06

Sheet No. 26 of 33 Sheets

22-108

EXCAVATION		EMBANKMENT	
SUB TOTALS	CU. YDS.	CU. YDS.	SUB TOTALS
1	100	100	100
2	200	200	200
3	300	300	300
4	400	400	400
5	500	500	500
6	600	600	600
7	700	700	700
8	800	800	800
9	900	900	900
10	1000	1000	1000
11	1100	1100	1100
12	1200	1200	1200
13	1300	1300	1300
14	1400	1400	1400
15	1500	1500	1500
16	1600	1600	1600
17	1700	1700	1700
18	1800	1800	1800
19	1900	1900	1900
20	2000	2000	2000
21	2100	2100	2100
22	2200	2200	2200
23	2300	2300	2300
24	2400	2400	2400
25	2500	2500	2500
26	2600	2600	2600
27	2700	2700	2700
28	2800	2800	2800
29	2900	2900	2900
30	3000	3000	3000
31	3100	3100	3100
32	3200	3200	3200
33	3300	3300	3300
34	3400	3400	3400
35	3500	3500	3500
36	3600	3600	3600
37	3700	3700	3700
38	3800	3800	3800
39	3900	3900	3900
40	4000	4000	4000
41	4100	4100	4100
42	4200	4200	4200
43	4300	4300	4300
44	4400	4400	4400
45	4500	4500	4500
46	4600	4600	4600
47	4700	4700	4700
48	4800	4800	4800
49	4900	4900	4900
50	5000	5000	5000
51	5100	5100	5100
52	5200	5200	5200
53	5300	5300	5300
54	5400	5400	5400
55	5500	5500	5500
56	5600	5600	5600
57	5700	5700	5700
58	5800	5800	5800
59	5900	5900	5900
60	6000	6000	6000
61	6100	6100	6100
62	6200	6200	6200
63	6300	6300	6300
64	6400	6400	6400
65	6500	6500	6500
66	6600	6600	6600
67	6700	6700	6700
68	6800	6800	6800
69	6900	6900	6900
70	7000	7000	7000
71	7100	7100	7100
72	7200	7200	7200
73	7300	7300	7300
74	7400	7400	7400
75	7500	7500	7500
76	7600	7600	7600
77	7700	7700	7700
78	7800	7800	7800
79	7900	7900	7900
80	8000	8000	8000
81	8100	8100	8100
82	8200	8200	8200
83	8300	8300	8300
84	8400	8400	8400
85	8500	8500	8500
86	8600	8600	8600
87	8700	8700	8700
88	8800	8800	8800
89	8900	8900	8900
90	9000	9000	9

Fed. Proj. No.



FUNCTIONAL CROSS SECTION - OPEN DOTTED

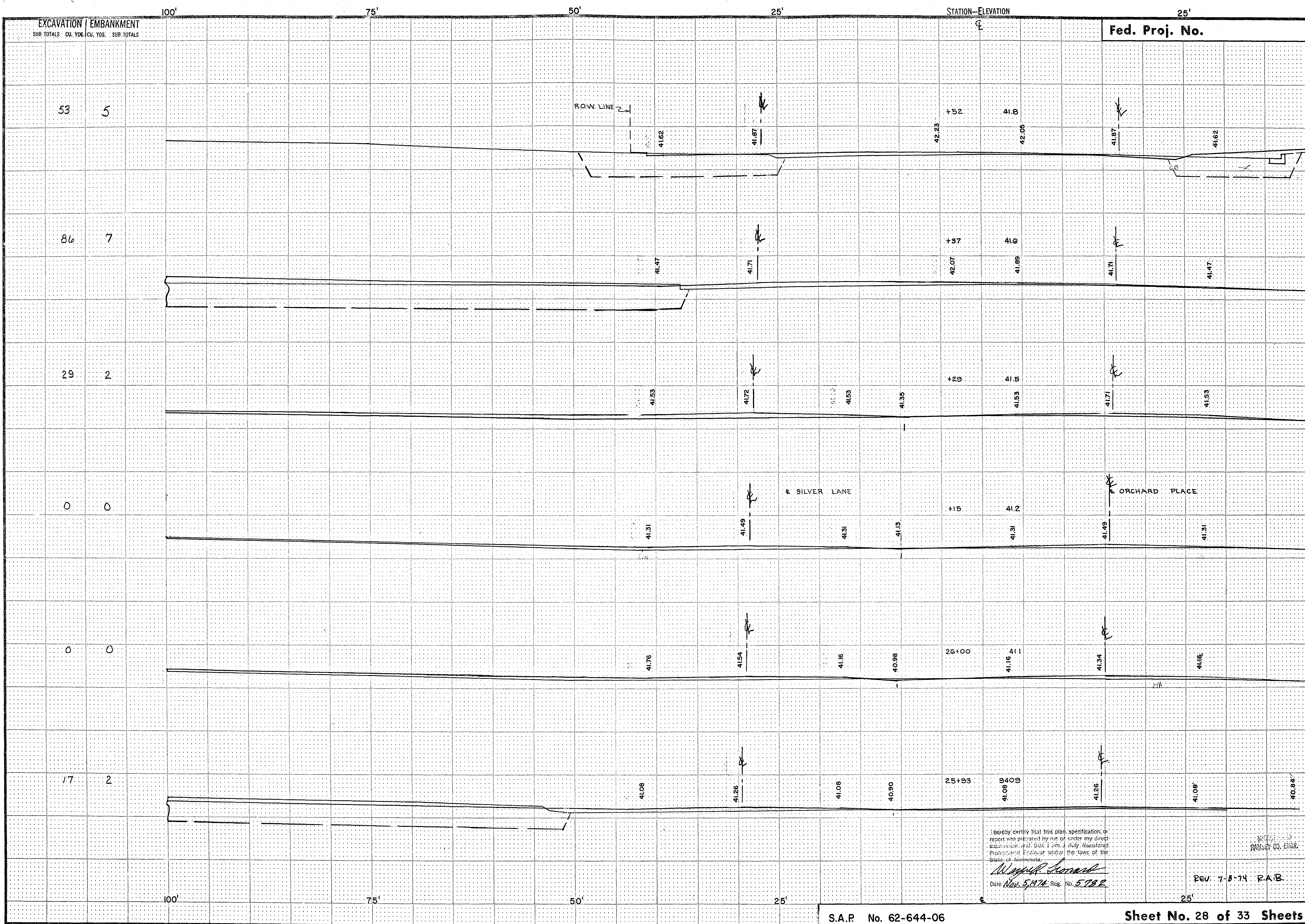
S.A.P NO. 62-644-06

MICROFILMED
RAMSEY CO. ENG2

Sheet No. 27 of 33 Sheets

22-108

FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. ROGERS CO. - MINNEAPOLIS, ST. PAUL



EXCAVATION EMBANKMENT
SUR TOTALS CU. YDS. CU. YDS. SUB TOTALS

Fed. Proj. No.

110 9

ROW LINE 2

+50

ENT.

117 10

28+00

ENT.

78 7

+70

ENT.

134 11

+21

ENT.

57 5

27+00

42.4

42.12

81 8

26+68

942.1

ENT.

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.
Wayne L. Lomack
Date Nov 5, 1974 Reg. No. 5782

REV. 7-8-74 R.A.B.

MICROFILMED
RAMSEY CO. ENGR

S.A.P. No. 62-644-06

Sheet No. 29 of 33 Sheets

22-108

FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. JOSEPH CO. MINNEAPOLIS, ST. PAUL

EXCAVATION EMBANKMENT
SUR TOTALS CU. YDS. CU. YDS. SUB TOTALS

Fed. Proj. No.

30 7

45 4

38 3

34 3

48 5

99 9

GA

ENT.

R.O.W. LINE 2

+70

42.7

42.94

42.76

42.52

+30

43.1

43.34

43.16

43.34

42.92

+70

43.1

43.34

43.16

43.34

42.92

CUL DE SAC

MH

+75

43.4

43.67

43.49

43.25

+47

43.6

43.83

43.65

43.41

+29+00

43.7

43.96

43.76

43.54

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.

W. J. J. J. J.
Date Nov 5, 1974 Reg. No. 5782

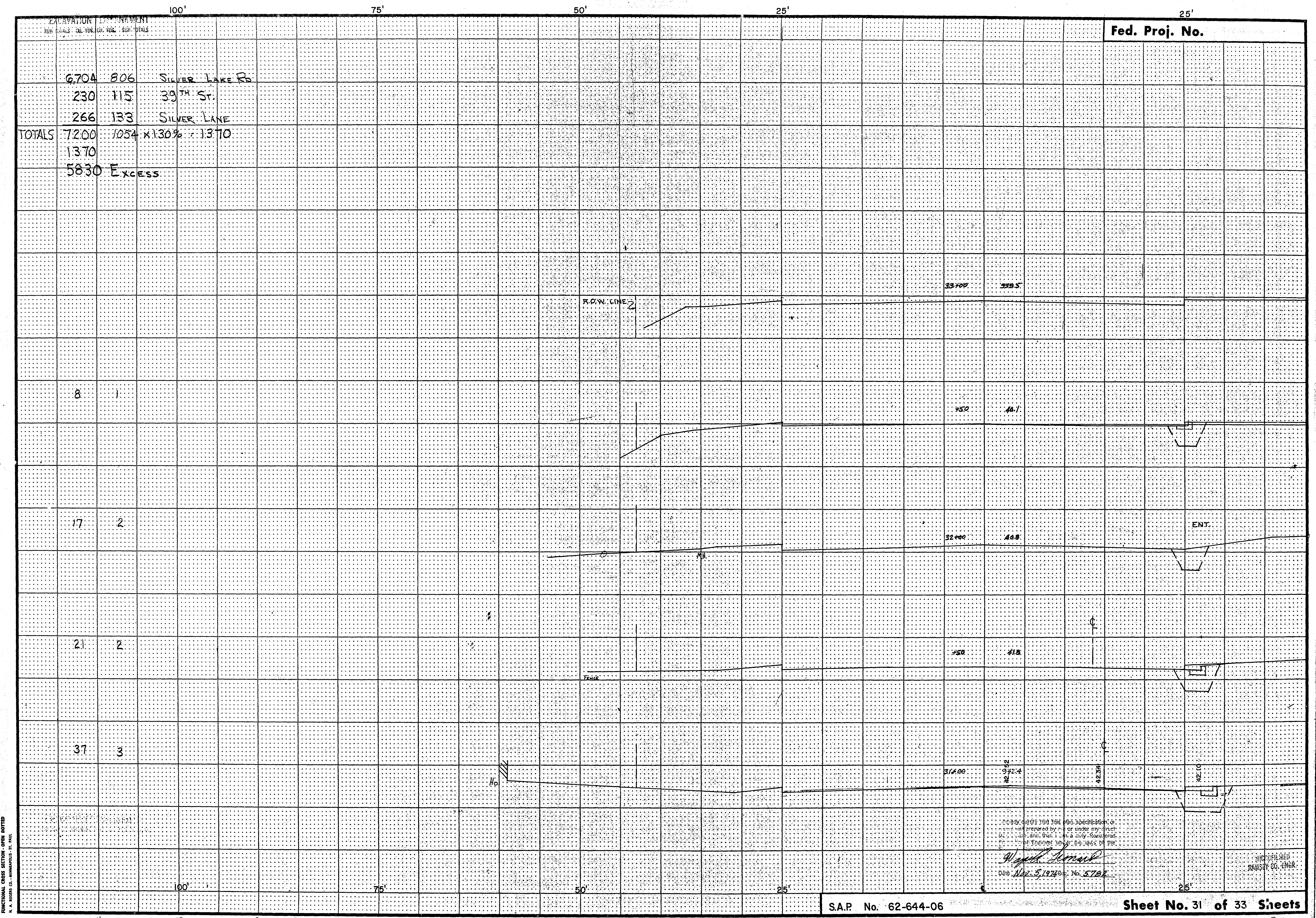
REV. 7-8-74 - PAB

MICROFILMED
RAMSEY CO. ENGR.

S.A.P. No. 62-644-06

Sheet No. 30 of 33 Sheets

22-108



EXCAVATION FILL
SUB TOTALS: CU. YDS. SUB TOTALS

Fed. Proj. No.

	6704	806	SILVER LAKE RD
	230	115	39TH ST.
	266	133	SILVER LAKE
TOTALS	7200	1054	x 1.30% = 1370
	1370		
	5830		EXCESS

ROW LINE 2

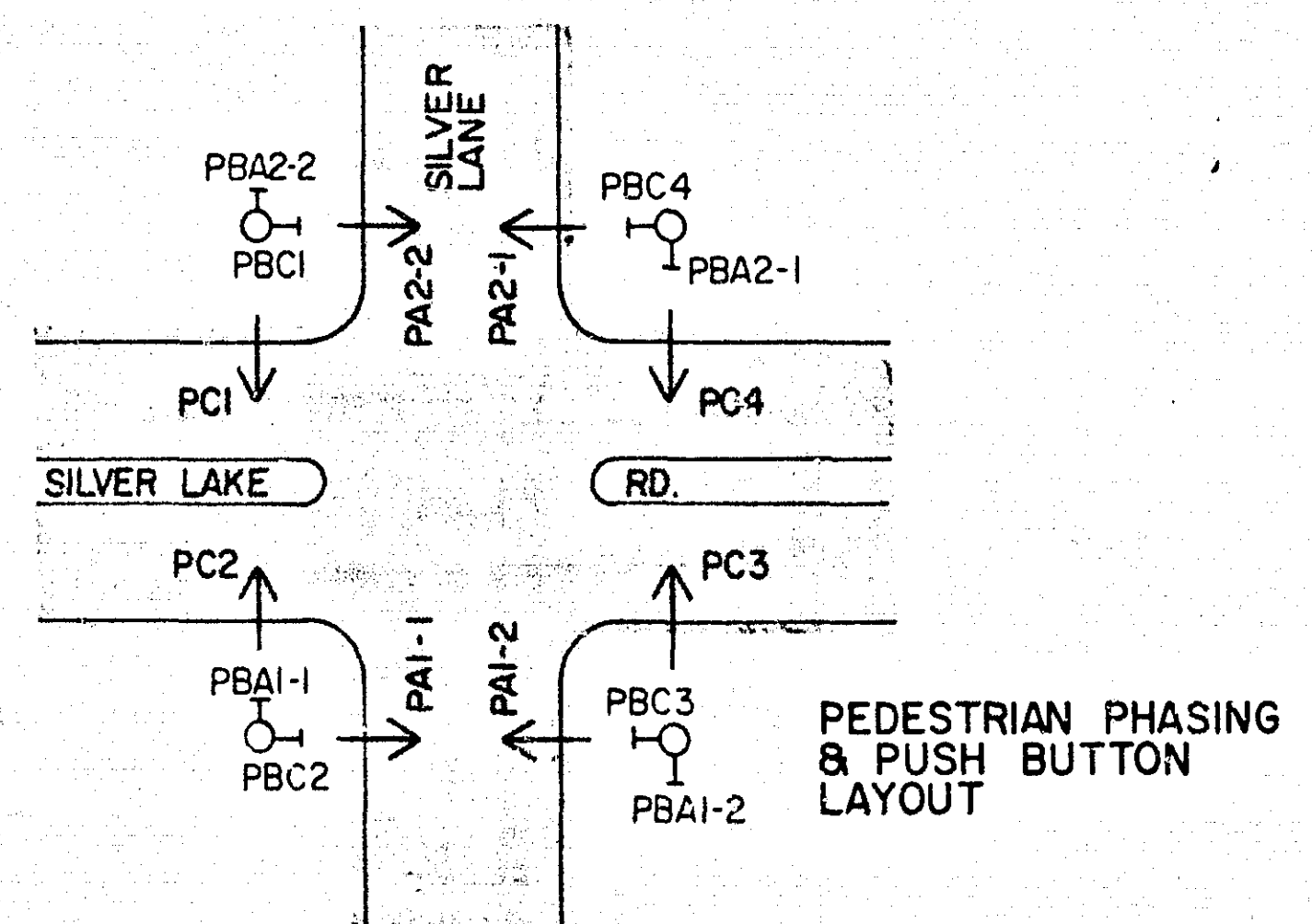
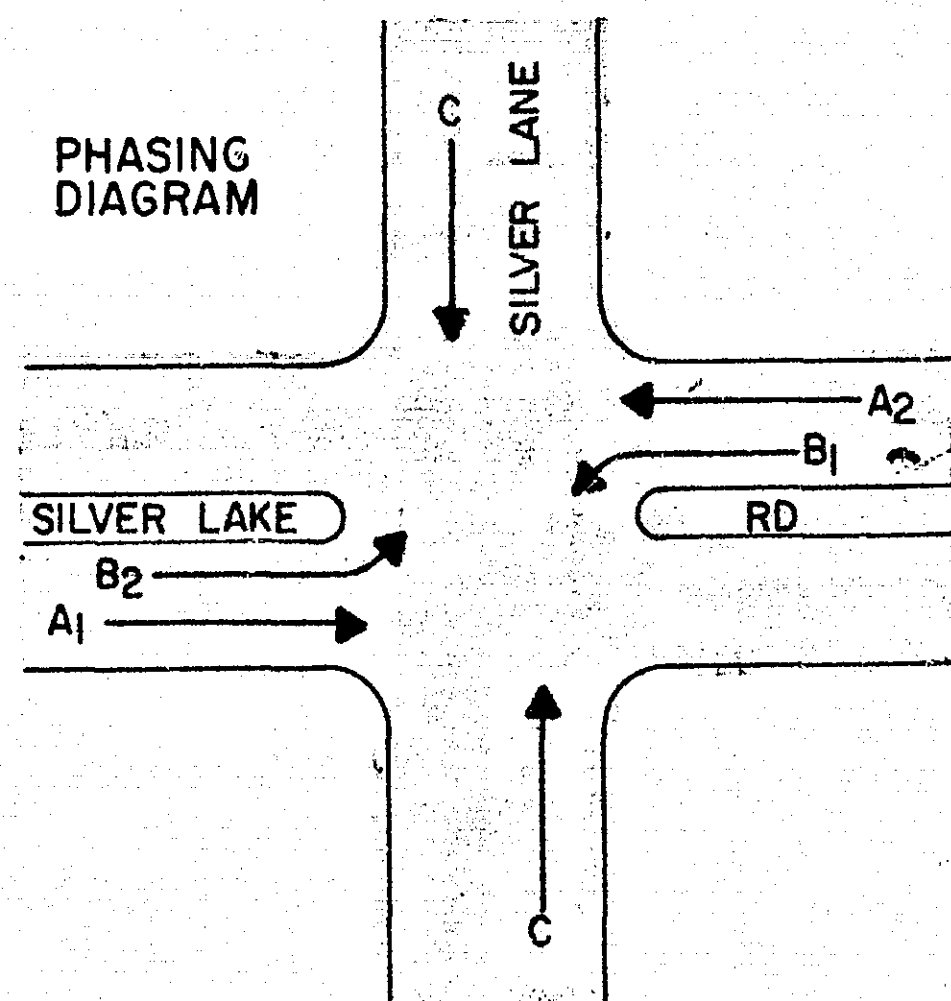
FENCE

ENT

I hereby certify that this plan, specification, or estimate 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 Illinois.
W. J. [Signature]
Date Nov. 5, 1974 No. 5782

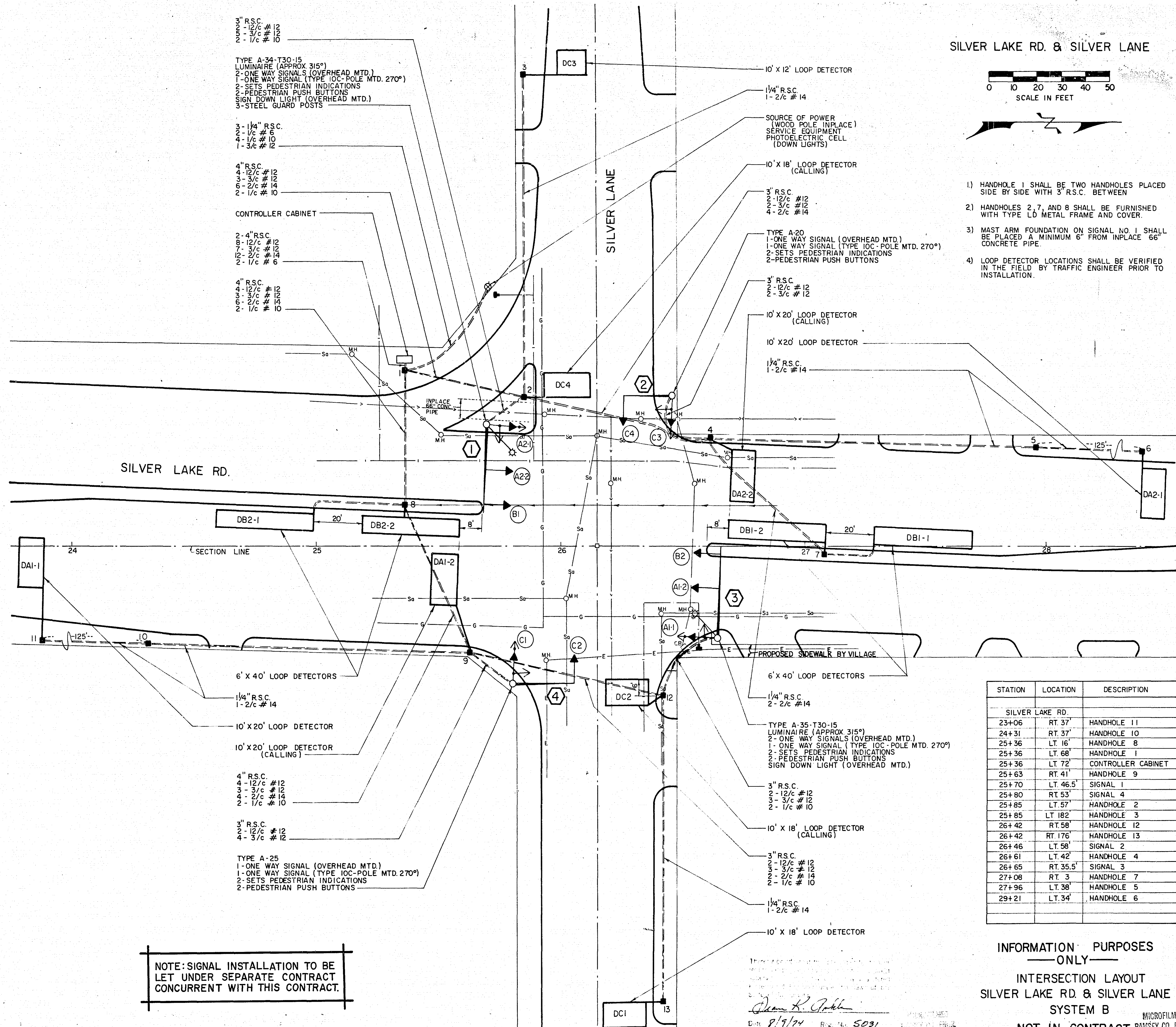
RECEIVED
RAVENSLEY CO. ENGR.

LEGEND OF SYMBOLS	
	CONTROLLER
	PEDESTAL
	HANDHOLE (PULLBOX)
	RIGID STEEL CONDUIT (R.S.C.)
	MAST ARM & POLE
	SIGNAL FACE
	SIGNAL FACE WITH BACKGROUND SHIELD
	MAST ARM & LUMINAIRE
	PEDESTRIAN INDICATION
	SOURCE OF POWER (S.O.P.)

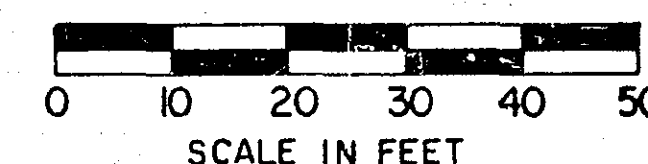


FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	←	↑	→
A1-1	A1	Y	12"	12"	12"	-	-	-
* A1-2	A1	Y	12"	12"	12"	-	-	-
A2-1	A2	Y	12"	12"	12"	-	-	-
* A2-2	A2	Y	12"	12"	12"	-	-	-
* B1	B1	R	12"	12"	-	12"	-	-
* B2	B2	R	12"	12"	-	12"	-	-
C1	C	R	12"	12"	12"	-	-	-
C2	C	R	12"	12"	12"	-	-	-
C3	C	R	12"	12"	12"	-	-	-
C4	C	R	12"	12"	12"	-	-	-

* SPECIAL SIGNAL FACE
(SEE SPECIAL PROVISIONS)



SILVER LAKE RD. & SILVER LANE



- HANDHOLE 1 SHALL BE TWO HANDHOLES PLACED SIDE BY SIDE WITH 3" R.S.C. BETWEEN
- HANDHOLES 2, 7, AND 8 SHALL BE FURNISHED WITH TYPE LD METAL FRAME AND COVER.
- MAST ARM FOUNDATION ON SIGNAL NO. 1 SHALL BE PLACED A MINIMUM 6" FROM INPLACE 66" CONCRETE PIPE.
- LOOP DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY TRAFFIC ENGINEER PRIOR TO INSTALLATION.

STATION	LOCATION	DESCRIPTION
SILVER LAKE RD.		
23+06	RT. 37'	HANDHOLE 11
24+31	RT. 37'	HANDHOLE 10
25+36	LT. 16'	HANDHOLE 8
25+36	LT. 68'	HANDHOLE 1
25+36	LT. 72'	CONTROLLER CABINET
25+63	RT. 41'	HANDHOLE 9
25+70	LT. 46.5'	SIGNAL 1
25+80	RT. 53'	SIGNAL 4
25+85	LT. 57'	HANDHOLE 2
25+85	LT. 182'	HANDHOLE 3
26+42	RT. 58'	HANDHOLE 12
26+42	RT. 176'	HANDHOLE 13
26+46	LT. 58'	SIGNAL 2
26+61	LT. 42'	HANDHOLE 4
26+65	RT. 35.5'	SIGNAL 3
27+08	RT. 3'	HANDHOLE 7
27+96	LT. 38'	HANDHOLE 5
29+21	LT. 34'	HANDHOLE 6

INFORMATION PURPOSES — ONLY —

INTERSECTION LAYOUT SILVER LAKE RD. & SILVER LANE SYSTEM B

NOT IN CONTRACT