

FORM 2165-10-58

STATEMENT OF ESTIMATED QUANTITIES

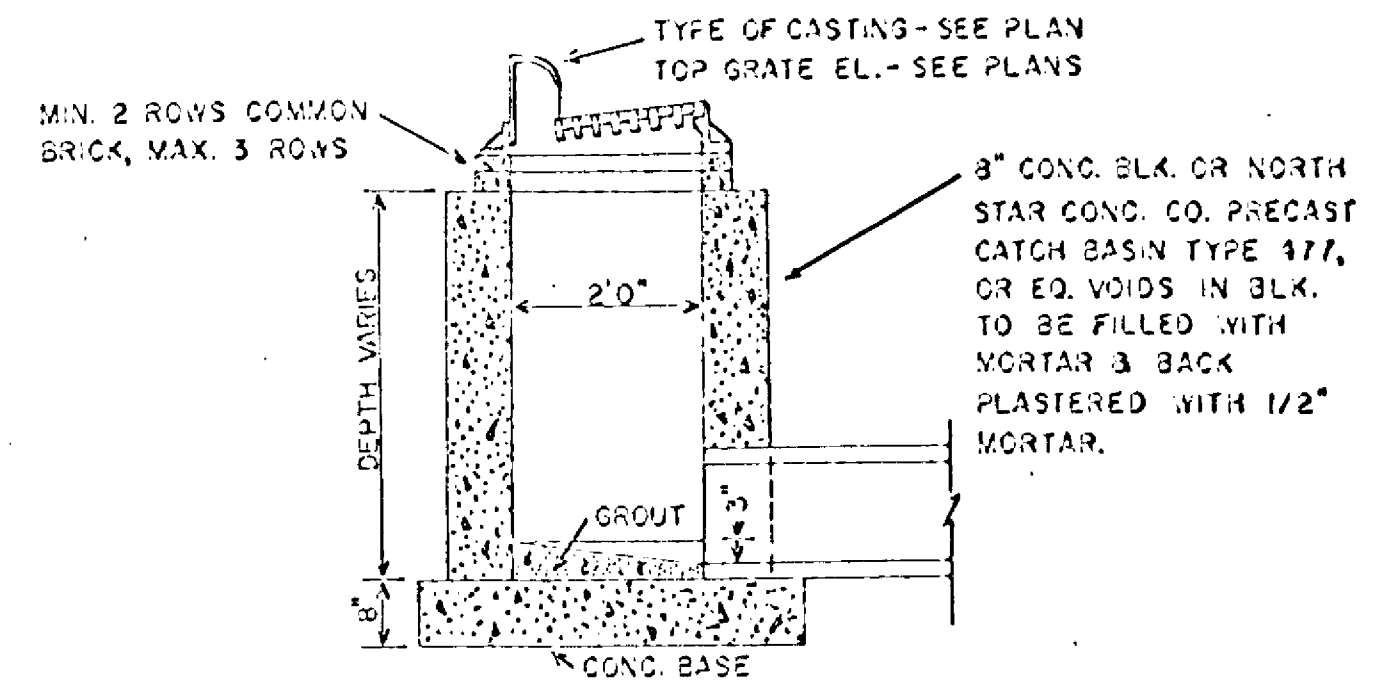
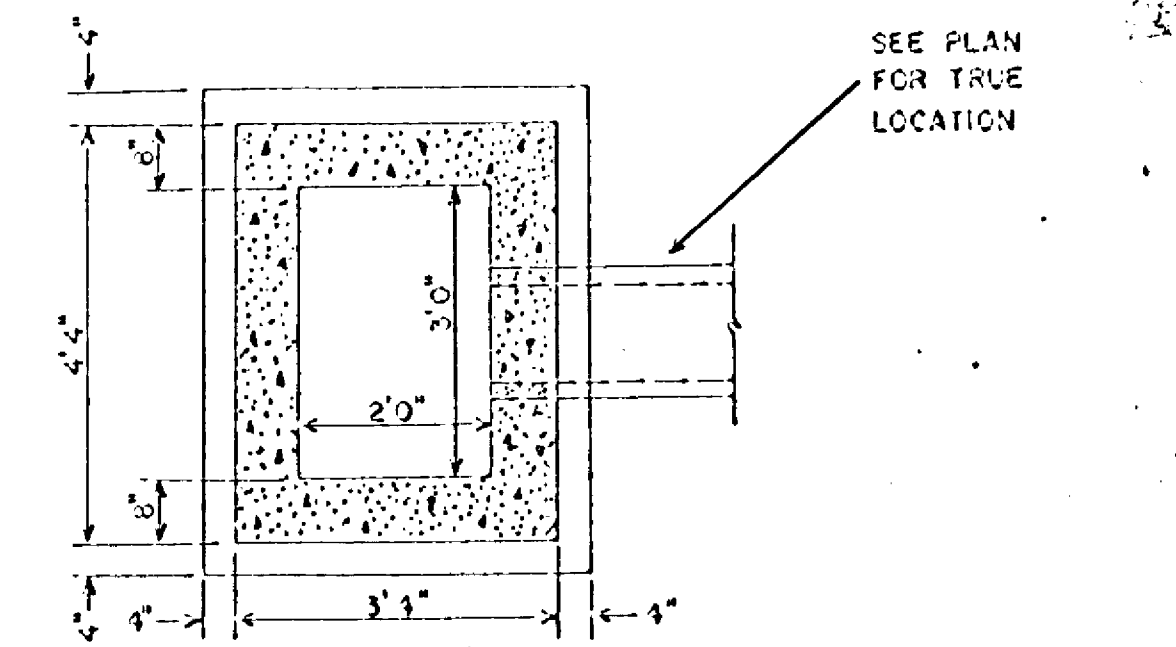
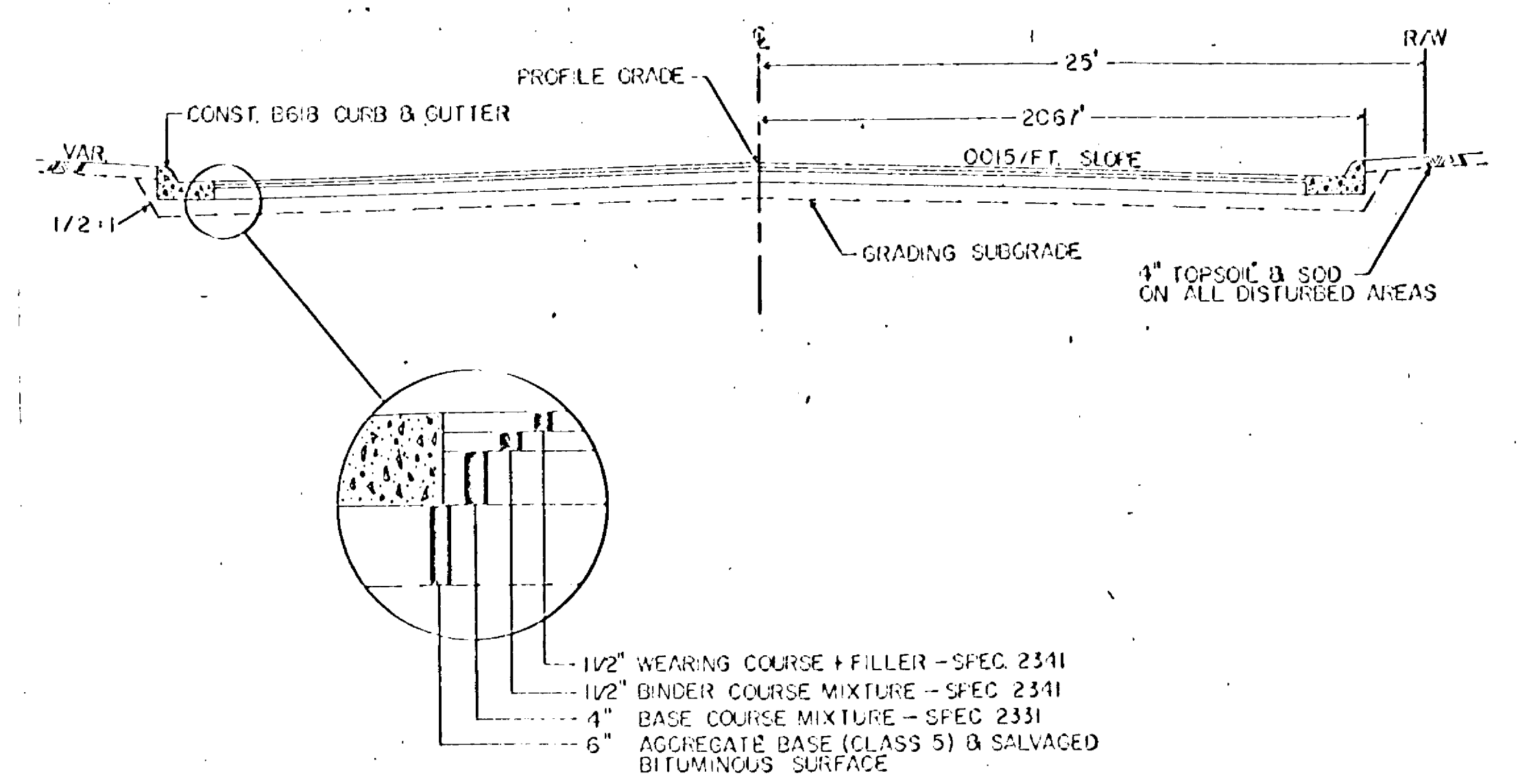
ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE	3
2101.507	GRUBBING	TREE	3
2101.502	REMOVE PAVEMENT	SQ. YD.	51
2101.503	REMOVE CURB & GUTTER	LIN. FT.	840
2101.506	REMOVE SIDEWALK	SQ. FT.	382
2101.507	REMOVE MASONRY AND CONCRETE STRUCT.	CU. YD.	1
2101.511	REMOVE MANHOLES AND CATCH BASINS	STRUCTURE	8
2101.515	REMOVE PIPE SEWERS	LIN. FT.	182
2105.501	COMMON EXCAVATION	CU. YD.	2197
2105.531	SALVAGED BITUMINOUS MIXTURE	CU. YD.(VM)	793
2130.531	WATER	M-GAL.	20
2211.501	AGGREGATE BASE, CLASS 5	TON	1,345
2331.501	BITUMINOUS MATERIAL FOR MIXTURE	TON	16
2331.511	BASE COURSE MIXTURE	TON	1,300
2331.518	BIT. MIXTURE FOR DRIVEWAY REPLACEMENT	TON	10
2341.501	BIT. MATERIAL FOR MIXTURE	TON	56
2341.502	WEARING COURSE MIXTURE+FILLER	TON	530
2341.510	BINDER COURSE MIXTURE	TON	530
2357.502	BIT. MATERIAL FOR TACK COAT	GAL.	960
2358.501	BIT. MATERIAL FOR PRIME COAT	GAL.	1,925
2411.507	CONC. BLOCK RETAINING WALL	CU. YD.	4
2461.501	CONCRETE MIX NO. 3A32	CU. YD.	2
421.512	MORTAR RUBBLE MASONRY RETAIN. WALL	CU. YD.	15
2503.502	12" REINF. CONC. SEWER CL. 1	LIN. FT.	545
2503.502	15" REINF. CONC. SEWER CL. 2	LIN. FT.	291
2506.506	CONST. MANHOLES DESIGN C&G	LIN. FT.	8.3
2506.507	CONST. CATCH BASIN DESIGN 2	LIN. FT.	12.8
2506.516	CASTING ASSEMBLIES	ASSEMBLY	17
2506.522	ADJ. FRAME & RING CASTING	ASSEMBLY	9
501.685	ADJ. WATER GATE HOUSING	HOUSING	4
501.601	6" WATER MAIN	LIN. FT.	19
501.674	MOVE HYDRANT	HYDRANT	3
2521.501	1" CONC. WALK	SQ. FT.	80
2531.501	CONC. CURB & GUTTER DESIGN B-618	LIN. FT.	2,535
2531.507	6" CONC. DRIVEWAY PAVEMENT	SQ. YD.	30
2575.505	SODDING	SQ. YD.	835
2575.551	TOPSOIL	CU. YD. (VM)	95

FORM 2165-10-58

The following Standard Detail plates, approved by the Bureau of Public Roads, shall apply on this project.

STANDARD DETAIL PLATES	
PLATE NO.	DESCRIPTION
3000 F	REINFORCED CONCRETE PIPE
3006 A	GASKET JOINT FOR RC PIPE
4002 D	MANHOLE OR CATCH BASIN
4006 F	MANHOLE OR CATCH BASIN
4101 B	RING CASTING FOR MANHOLE
4110 D	COVER CASTING FOR MANHOLE
4180 F	MANHOLE STEP CASTING
7100 D	CONCRETE CURB & GUTTER (DESIGN B)
7111 D	INSTALLATION OF CATCH BASIN CASTINGS
8000 C	STANDARD BARRICADES
8003 C	CONTRACTORS SIGN

TYPICAL SECTION



SEWER SYSTEM

NO.	STATION	LOCATION	REMARKS	TYPE	DESIGN	LIN. FT.	TOP	OUTLET	F&I CAST. ASSEMBLY	DRAINS TO	F&I R.C. PIPE CL. 1	F&I R.C. PIPE CL. 2
1	42+11	14' LT.	INP. ADJ. CASTING	MH	INP.		302.48	295.98	A	INP. MH	12"	15"
2	42+30	19' 7" LT.		CB	NO. 2	4.2	303.00	299.00	B	MH NO. 1	18"	
3	44+93	14' LT.	C.B. INP. F&I MH CAST.	MH	INP.		312.13	306.69	A	MH NO. 1		
4	44+93	19' 7" LT.		CB	NO. 2	3.9	311.74	308.00	B	MH NO. 3	6"	
5	45+00	19' 7" LT.		CB	NO. 2	1.2	311.86	307.86	B	MH NO. 3	36"	
6	47+85	21' RT.		MH	C or G	1.1	311.88	310.82	A	MH NO. 10	36"	
7	47+51	38' RT.		CB	NO. 2	2.5	314.74	312.13	B	CB NO. 8	28"	
8	47+83	38' RT.		CB	NO. 2	3.9	314.74	311.00	B	MH NO. 6-	17"	
9	48+00	19' 7" RT.		CB	NO. 2	3.6	314.86	311.50	B	MH NO. 6	15"	
10	47+91	14' LT.	C.B. INP. F&I MH CAST.	MH	INP.		315.17	307.11	A	MH NO. 3		
11	47+83	19' 7" LT.		CB	NO. 2	3.9	314.68	311.00	B	MH NO. 10	7"	
12	50+82	21' RT.		MH	C or G	1.2	323.11	319.00	A	MH NO. 16	36"	
13	50+52	38' RT.		CB	NO. 2	4.4	323.70	319.46	B	CB NO. 14	28"	
14	50+82	38' RT.		CB	NO. 2	4.7	323.70	319.18	B	MH NO. 12	17"	
15	51+00	19' 7" RT.		CB	NO. 2	3.6	323.37	320.00	B	MH NO. 16	18"	
16	50+85	14' LT.	C.B. INP. F&I MH CAST.	MH	INP.		323.30	317.49	A	MH NO. 10		291'
17	50+93	19' 7" LT.		CB	NO. 2	3.9	323.16	319.50	B	MH NO. 16	8'	
18	53+60	14' LT.	TO BE CONSTRUCTED WITH PROJECT 02-604-05	MH			334.82	329.51		MH NO. 16	275'	
									TOTALS	17	545'	291'

CASTING ASSEMBLIES

KEY	GRATE	FRAME	COVER	HEIGHT	QUANTITY
A		700-7	711	7"	6
B		NEENAH R-3216-B OR EQUAL	6"	6"	11

BASIS OF PLANNED QUANTITIES

- 2211 AGGREGATE BASE, CLASS 5 145 LBS. PER. CU. FT. COMPACTED
- 2331 PLANT MIXED BITUMINOUS BASE COURSE
BASE COURSE MIXTURE 100 LBS. PER SQ. YD. PER INCH THICKNESS
BITUMINOUS MATERIAL FOR MIXTURE 3.5% BY WEIGHT
- 2341 PLANT MIXED BITUMINOUS BINDER COURSE
BITUMINOUS MIXTURE 165 LBS. PER SQ. YD.
BITUMINOUS MATERIAL FOR MIXTURE 1.5% BY WEIGHT
- 2341 PLANT MIXED BITUMINOUS WEARING COURSE
BITUMINOUS MIXTURE 165 LBS. PER SQ. YD.
BITUMINOUS MATERIAL FOR MIXTURE 6.0% BY WEIGHT
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER SQ. YD.
- 2358 BITUMINOUS MATERIAL FOR PRIME COAT 0.30 GAL. PER SQ. YD.

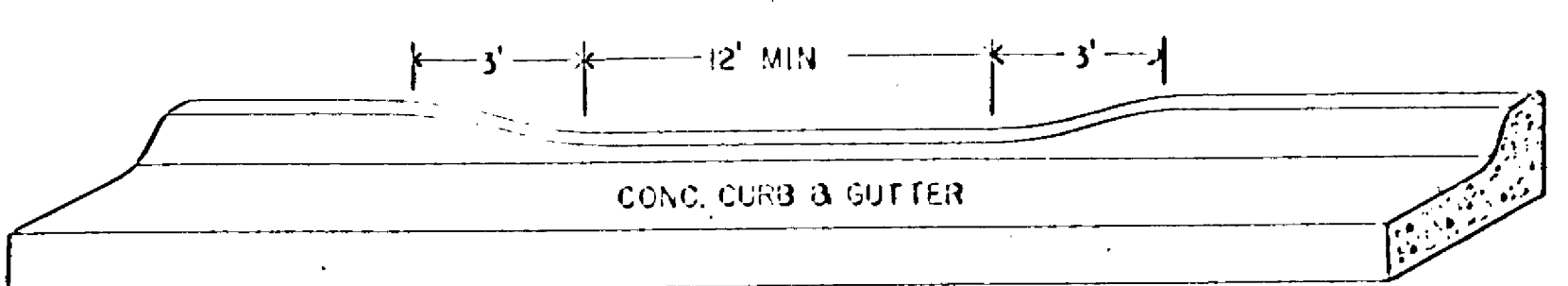
REMOVE CATCH BASINS

STATION	LOCATION
42+08	15' RT.
44+95	14' RT.
47+56	26' RT.
47+83	24' RT.
47+93	14' RT.
50+55	25' RT.
50+31	14' RT.
50+83	25' RT.

ADJ. WATER GATE HOUSING

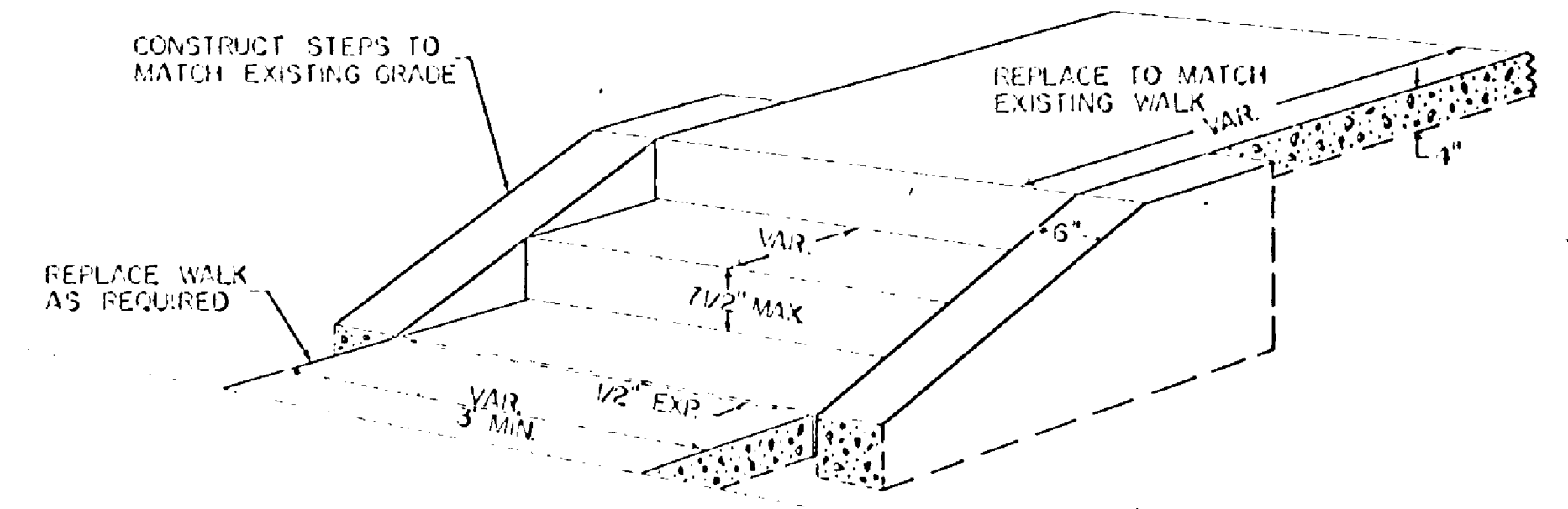
STATION	LOCATION
41+80	12' RT.
42+00	13' RT.
44+80	13' RT.
47+79	30' RT.

CURB OPENINGS AT ENTRANCES



CONCRETE STEP DETAIL

SCALE = NONE



CONSTRUCT CONCRETE STEPS AT LOCATIONS WHERE CONSTRUCTION REQUIRED THE REMOVAL OF ORIGINAL STEPS AND AT LOCATIONS DETERMINED BY THE ENGINEER. THE BASIC DESIGN AS SHOWN WILL BE BUILT TO CONFORM WITH THE EXISTING CONDITIONS AT EACH LOCATION.

B.M. NO. 2 ELEV. 334.95
 TOP & S.E. COR. TOP STEP
 I.S.F. NO. 2345 LT. STA. 53+00

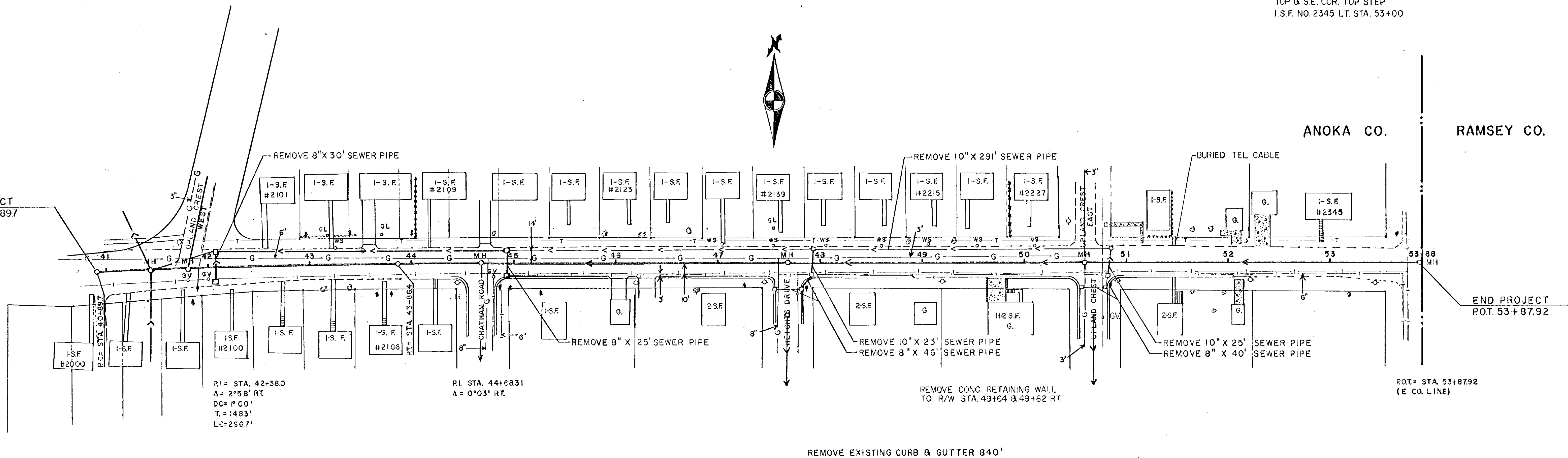


ANOKA CO.

RAMSEY CO.

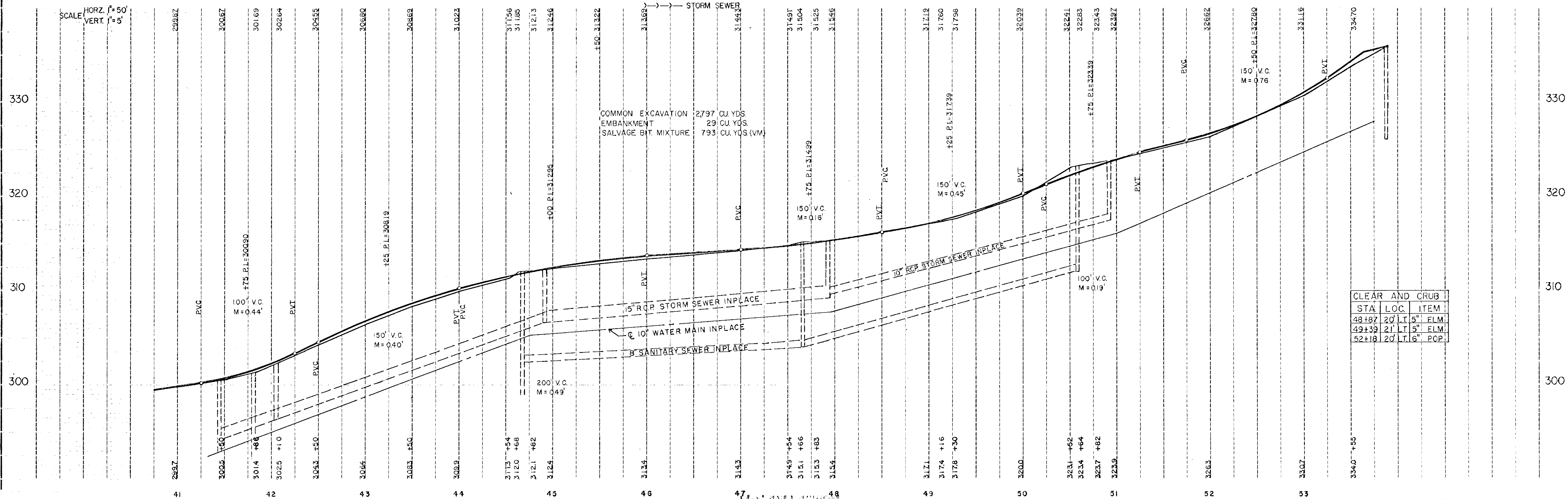
BEGIN PROJECT
 RC. STA. 40+897

END PROJECT
 POT. STA. 53+87.2



B.M. NO. 1 ELEV. 305.80
 TOP HYD. 20' RT. STA. 41+90

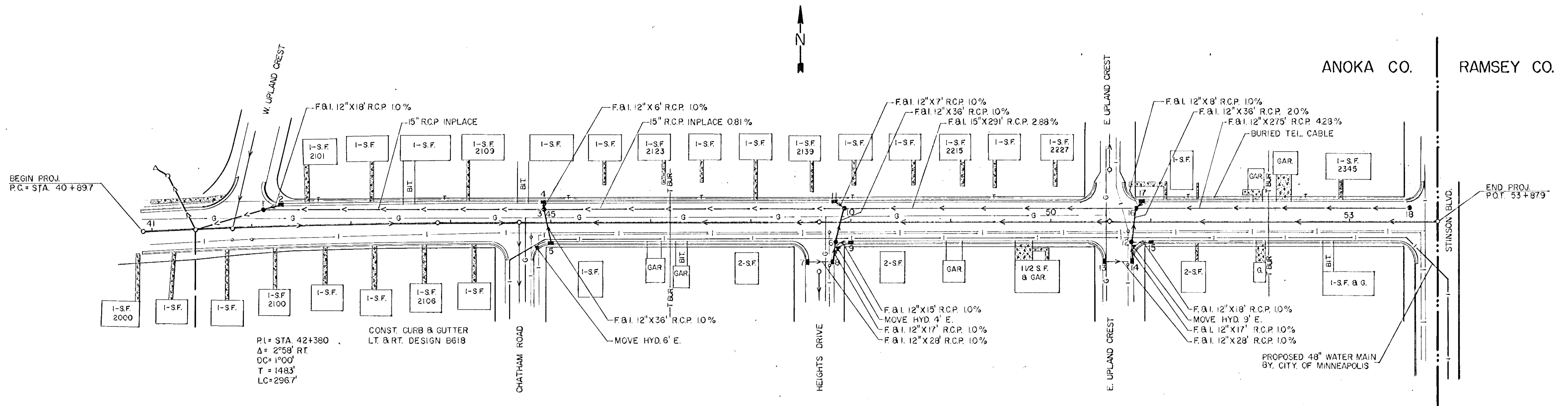
→ SANITARY
 - - - WATERMAIN
 G GAS
 --- STORM SEWER



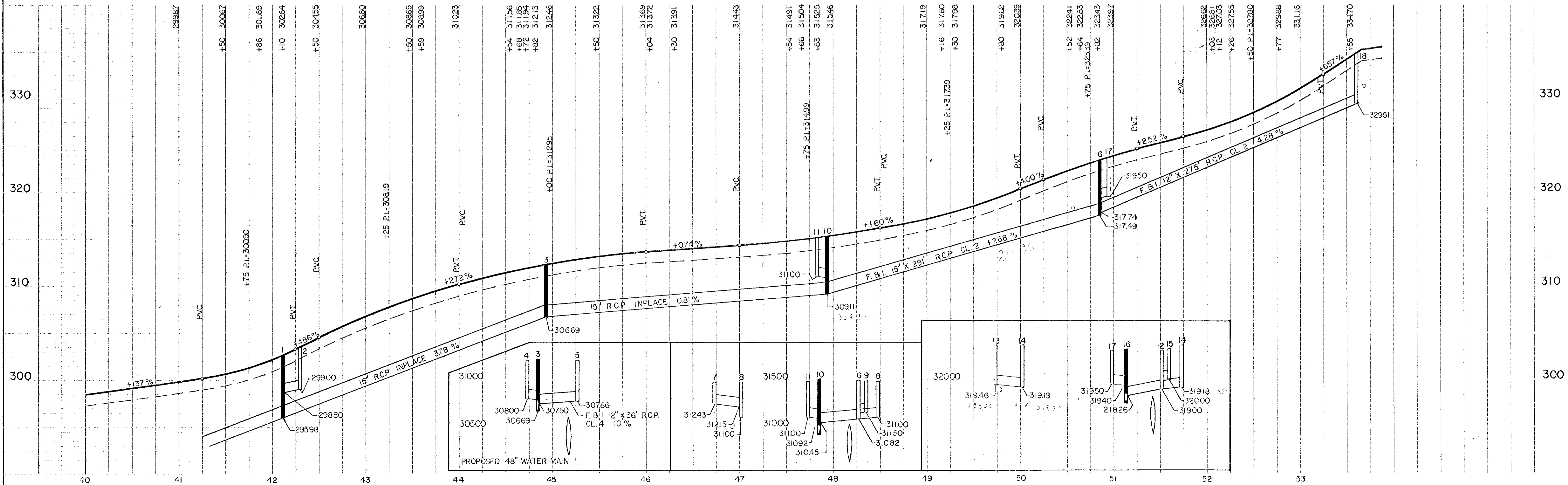
STA.	LOC.	ITEM
48+87	20' LT	5" ELM.
49+39	21' LT	5" ELM.
52+18	20' LT	6" POP.

STORM SEWER & CONCRETE CONSTRUCTION

BM. NO. 2 ELEV. 334.95
 TOP & S.E. COR. TOP STEP
 I.S.F. NO. 2345 LT. STA. 53+00



BM. NO. 1 ELEV. 305.80
 TOP HYD. 20' RT. STA. 41+90



STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR STORM SEWER, GRADING, BASE & BIT SURFACE

County State Aid Highway No. 4

Between C.S.A.H. NO. 2 And FAIRWAY DRIVE

From A POINT 20' NO. OF THE N.E. COR. OF SEC. 36 R. 24 W. T. 30 N. To A POINT 2,225.0' NO. OF THE N.E. COR. OF SEC. 36 R. 24 W. T. 30 N.

Give proper reference to Section, Township and Range

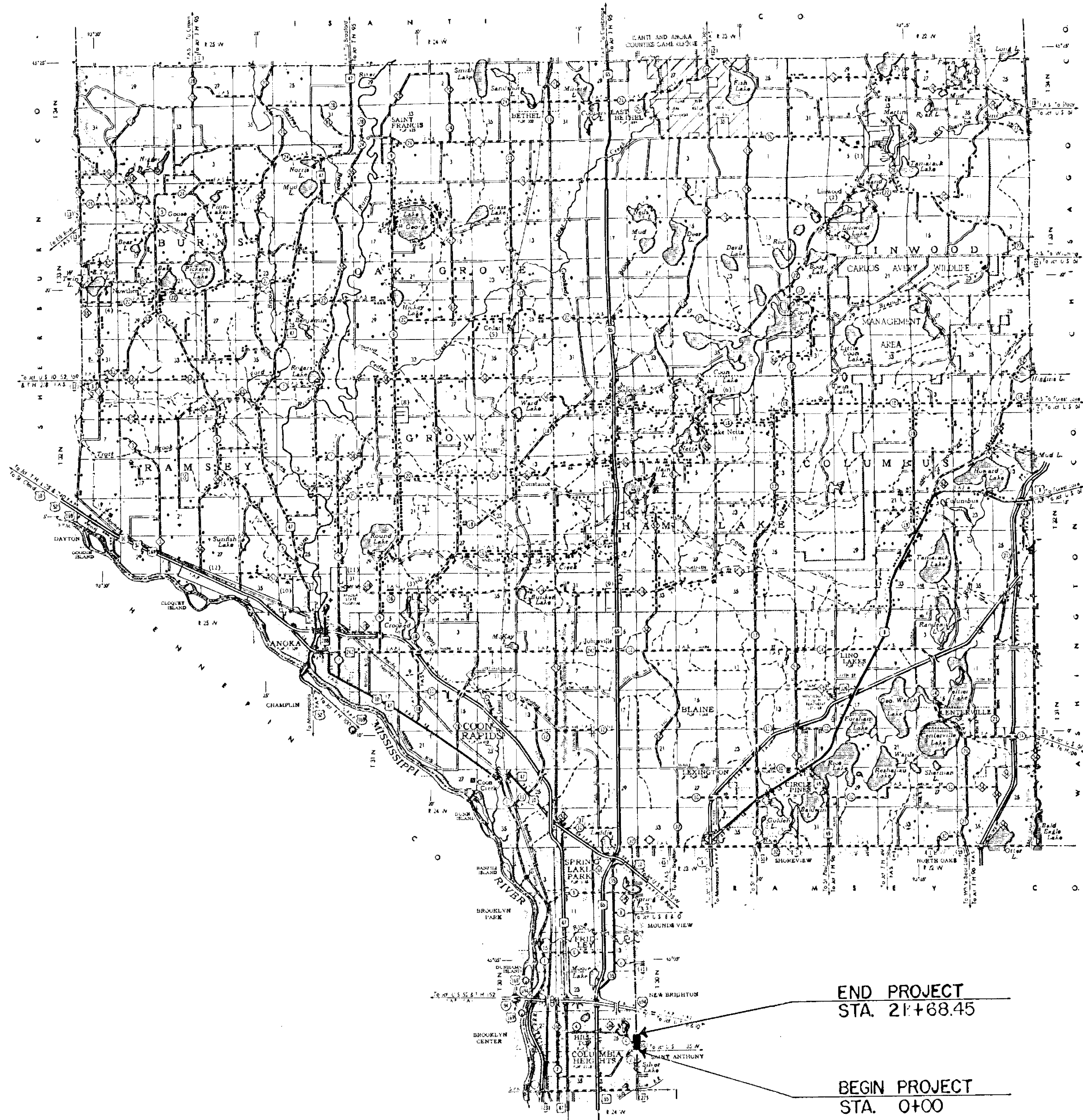
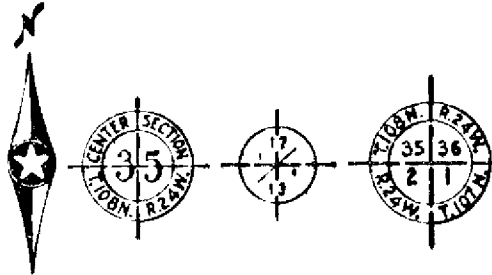
GROSS LENGTH 2,205.0 FEET 0.418 MILES
BRIDGES LENGTH 0.0 FEET 0.0 MILES
EXCEPTIONS LENGTH 0.0 FEET 0.0 MILES
NET LENGTH 2,205.0 FEET 0.418 MILES

INDEX OF SHEETS

- Sheet No. 1 Title Sheet & Layout Map
- No. 2 Est. Quantities & Typical Sec
- No. 3 To 4 Plan & Profile
- No. 5 STORM SEWER
- No. 6 - 11 CROSS SECTIONS
- No. 12 CONC. CURB WALL

CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- STATEMENT LINE
- RIGHT OF WAY LINE
- PRESERT RIGHT OF WAY LINE
- CENTRE OF ACCESS LINE
- PROPERTY LINE (Except Line Lines)
- UNCLEAR PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- ELECTRIC POWER LINE
- TELEPHONE OR TELEGRAM LINE
- JOINT TELEPHONE AND POWER
- CONDUIT
- TELEPHONE CABLE ABOVE
- TELEPHONE CABLE UNDERGROUND
- POWER CABLE UNDERGROUND
- GAS MAIN
- CELESTIAL
- DROP INLET
- SAVED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SHOW FENCE
- STONE WALL OR FENCE
- HESSIE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPRING
- MURKSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERY
- CATCH BASIN
- MANHOLE
- PIPE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F FRAME
- C CONCRETE
- S STONE
- T TILE
- B BRICK
- ST STUCCO
- IRON PIPE OR ROD
- MANHOLE (STONE, CONCRETE, OR METAL)
- WOODEN PILE
- GRAVEL PIT
- SAND PIT
- BURROW PIT
- ROCK QUARRY
- MEANDER CORNER



END PROJECT
STA. 21+68.45

BEGIN PROJECT
STA. 0+00

MINNEAPOLIS
HENNEPIN CO.

DESIGN DESIGNATION

ADT (CURRENT YEAR) _____
 ADT (FUTURE YEAR) 2600
 T (HEAVY COMMERCIAL) 150 - 300
 9-Ton Design
 Design Speed 30 MPH
 Design Speed not achieved at:
 STA. _____ TO STA. _____ MPH
 STA. _____ TO STA. _____ MPH

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", DATED JAN. 1, 1968 SHALL GOVERN

ALL APPLICABLE FEDERAL STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

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.

E. J. Lundberg COUNTY ENGINEER DATE 8-11-69

ANOKA COUNTY REG. NO. 2551

RECOMMENDED FOR APPROVAL _____ 19____
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL _____ 19____

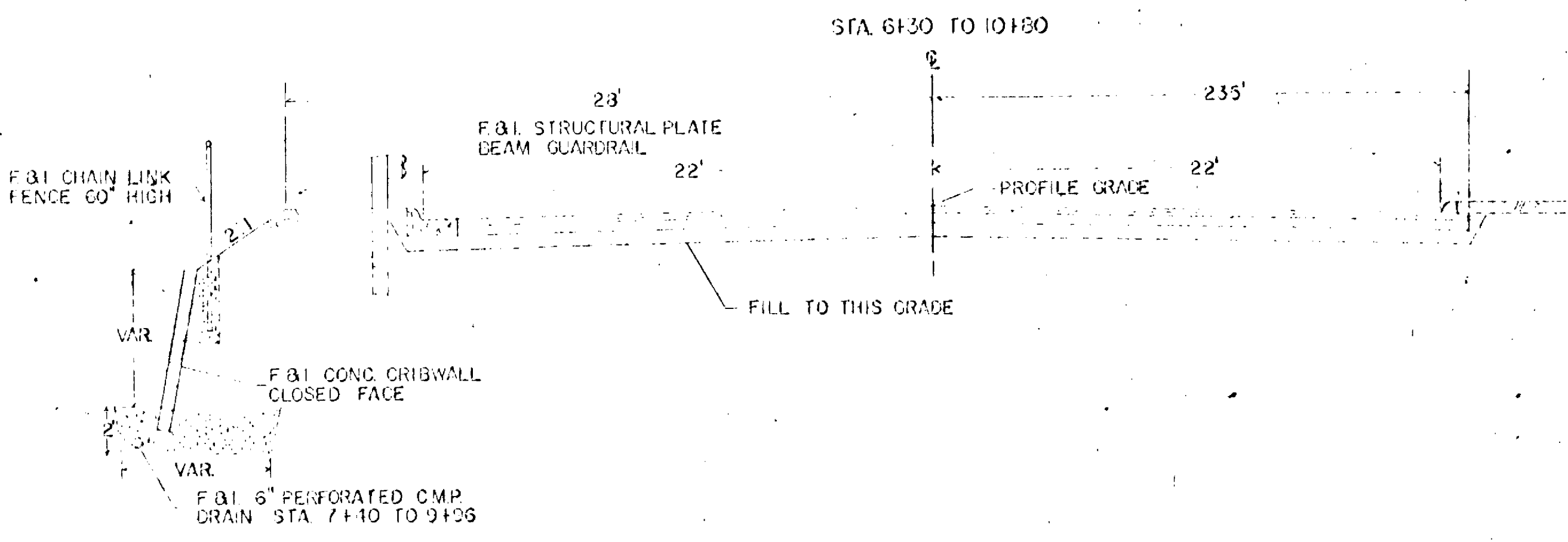
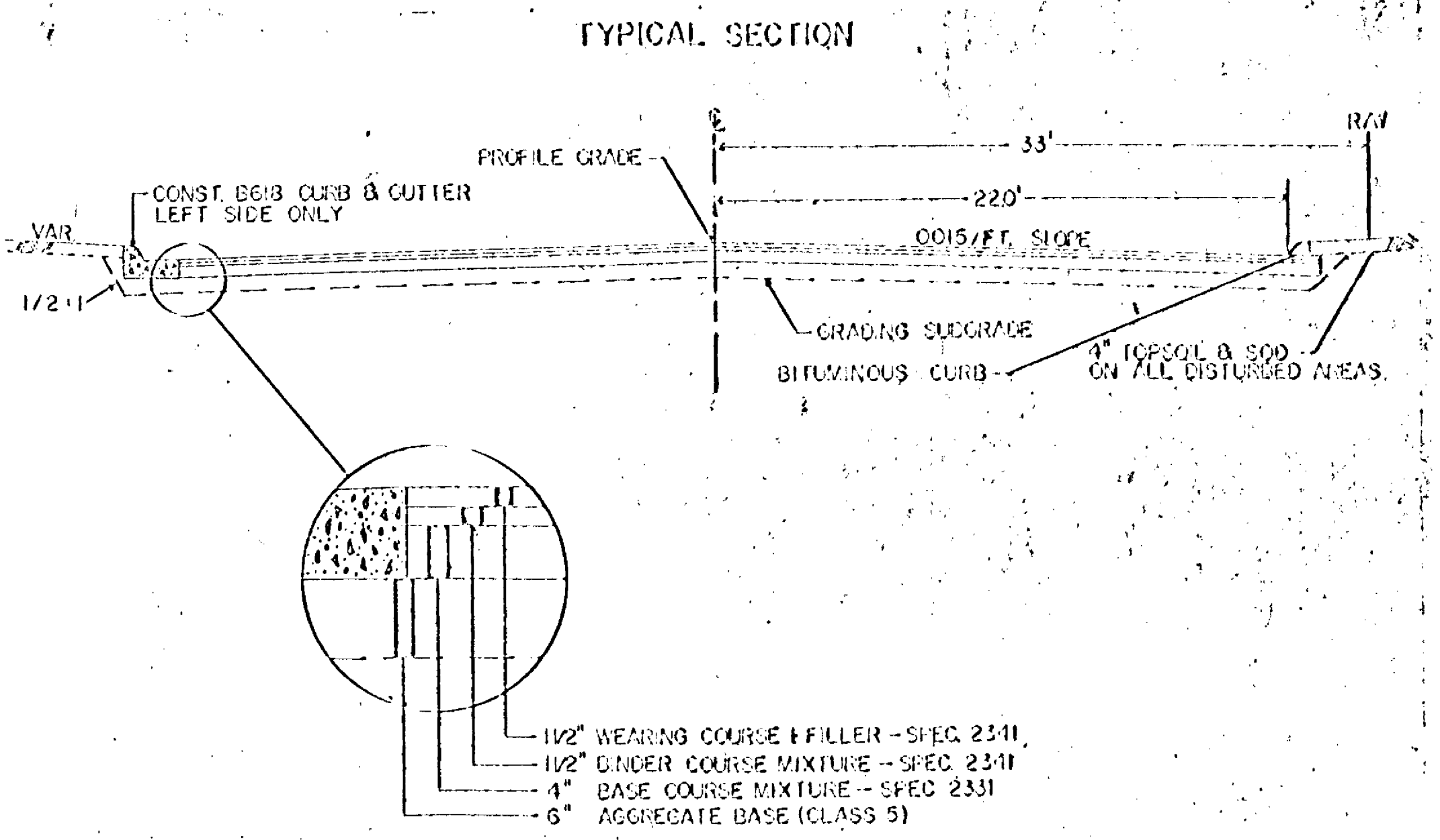
APPROVED _____ 19____ STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. _____

State Proj. No. _____ S.A.P. 02-604-05

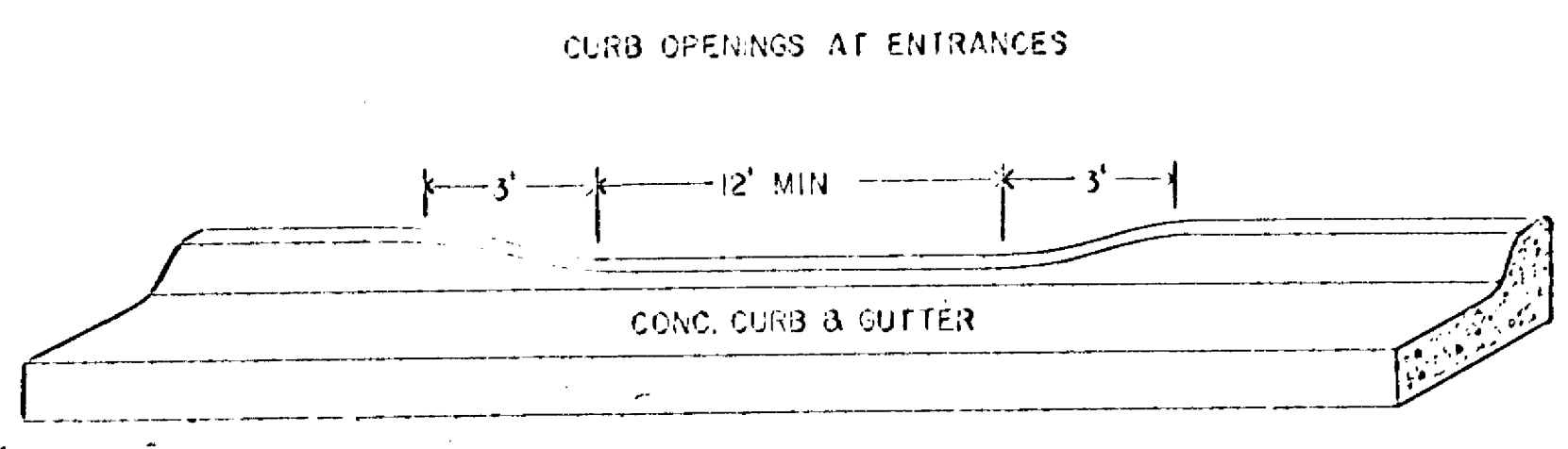
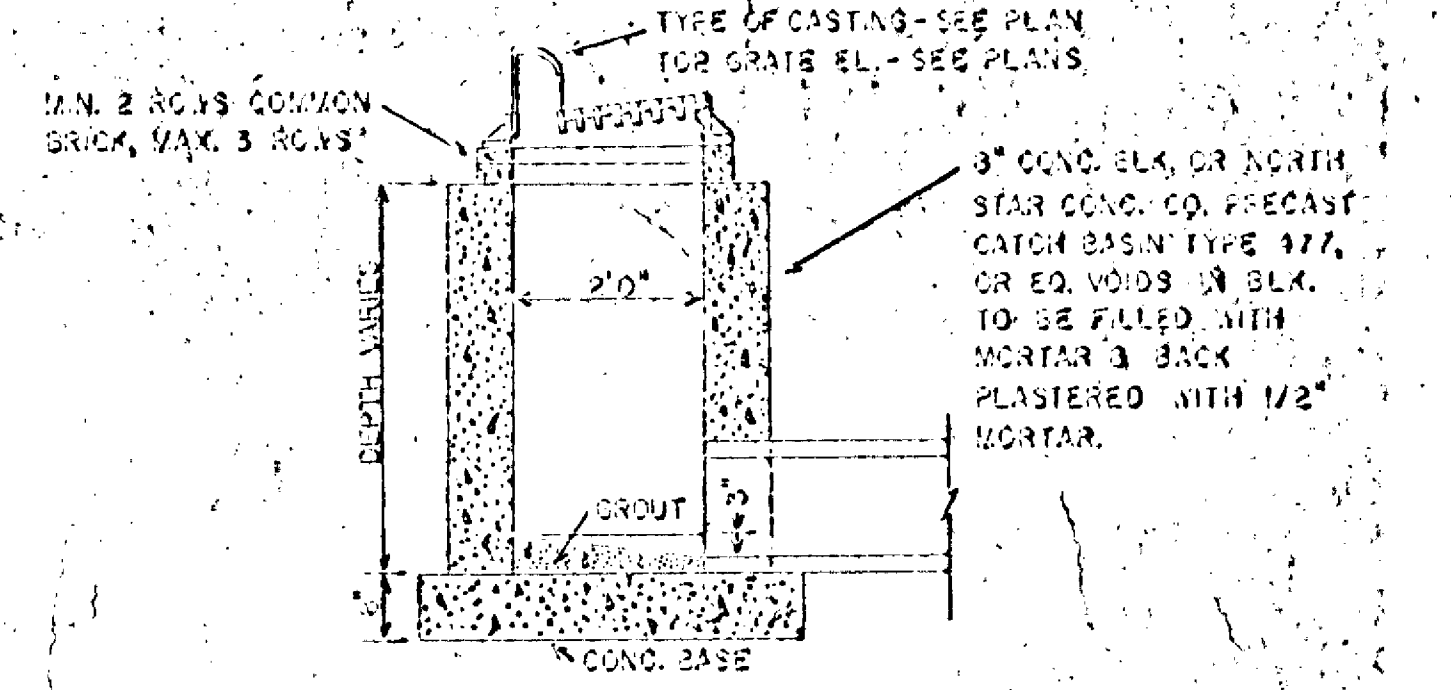
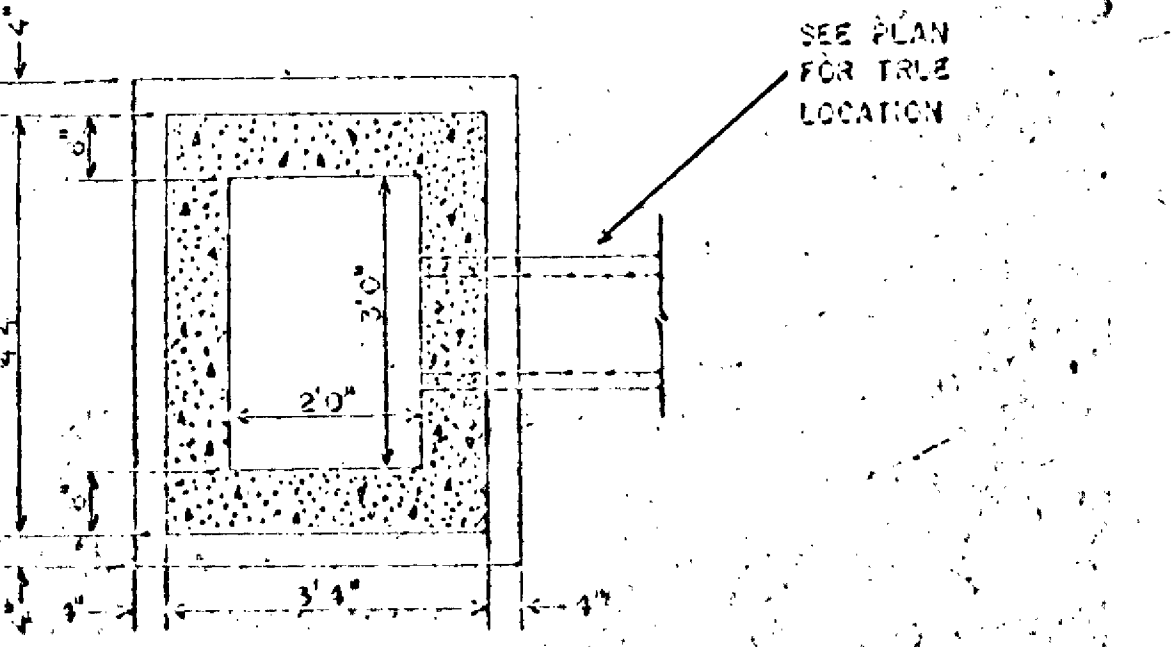
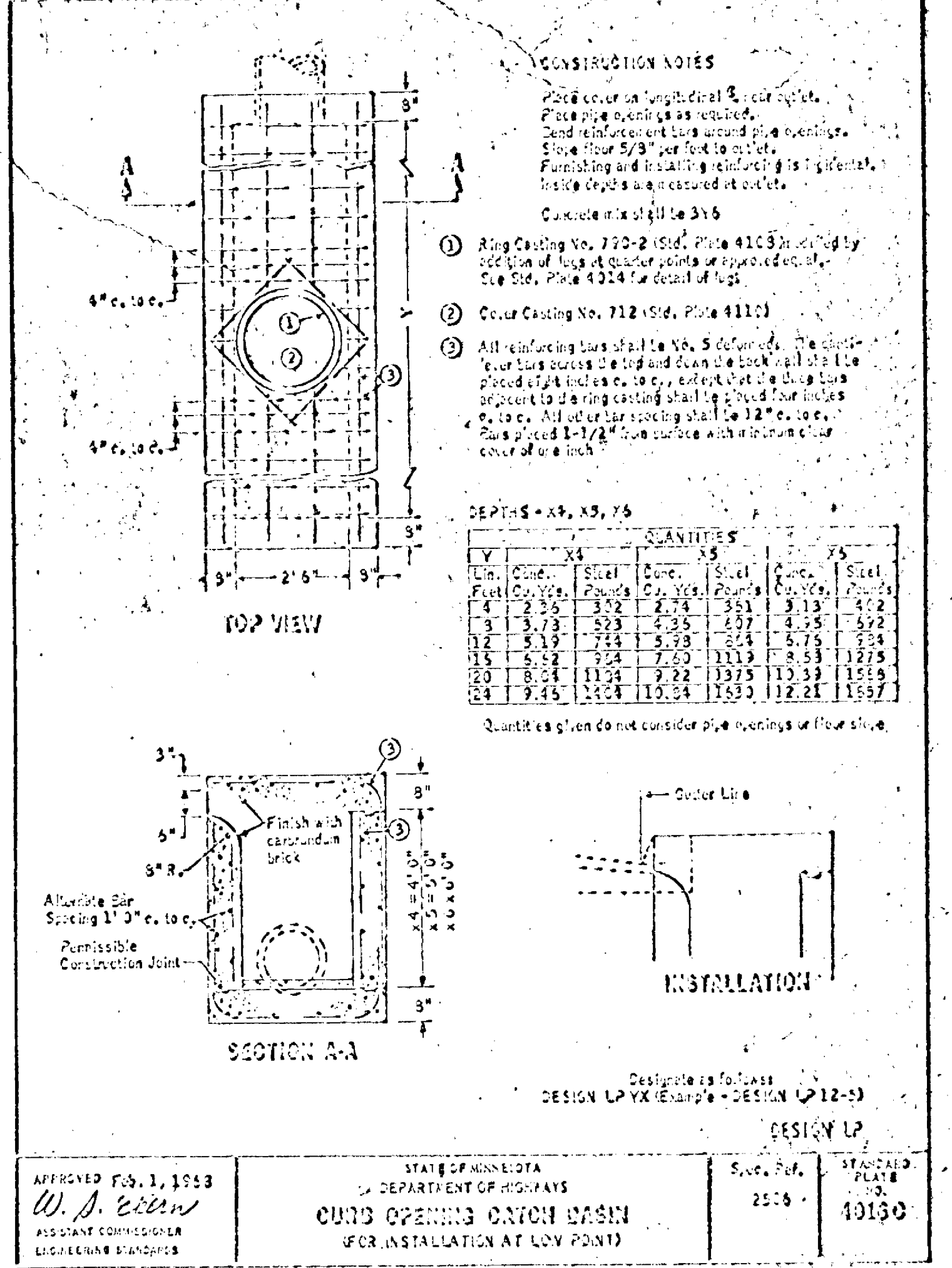
STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2031.503	FIELD LABORATORY, TYPE B	EACH	1
2101.501	CLEARING	ACRE	1.3
2101.502	CLEARING	TREE	38
2101.506	GRUBBING	ACRE	1.3
2101.507	GRUBBING	TREE	300
2104.503	REMOVE CURB & GUTTER	LIN. FT.	24
2104.510	REMOVE FENCE	LIN. FT.	128
557.621	RESET FENCE	LIN. FT.	128
2105.501	COMMON EXCAVATION	CU. YD.	26.617
2211.501	AGGREGATE BASE, CLASS 5	TON	3,625
2130.501	WATER	M-GAL.	30
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	75
2331.511	BASE COURSE MIXTURE	TON	2,150
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	90
2341.509	WEARING COURSE MIX. # FILLER	TON	900
2341.510	BINDER COURSE MIXTURE	TON	900
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	1,065
2358.501	BITUMINOUS MATERIAL FOR PRIME COAT	GAL.	3,200
2122.501	STRUCTURE EXCAVATION CLASS U	CU. YD.	450
2122.507	CONCRETE CRIB WALLS	SQ. FT.	2,835
2122.512	GRAVEL CRIB FILLING	CU. YD.	700
2502.514	6" PERFORATED METAL PIPE DRAIN	LIN. FT.	256
2503.502	12" R.C. SEWER CL. 1	LIN. FT.	254
2503.502	15" R.C. SEWER CL. 2	LIN. FT.	474
2501.536	15" CONC. APRON	APRON	1
2506.506	CONSTRUCT MANHOLES, DESIGN A&F	LIN. FT.	14.4
2506.506	CONSTRUCT MANHOLES, DESIGN C&G	LIN. FT.	27.5
2506.507	CONSTRUCT CATCH BASIN, DESIGN 2	LIN. FT.	22.0
2506.509	CONSTRUCT CATCH BASIN, DESIGN LP4-4	STRUCTURE	2
2506.516	CASTING ASSEMBLIES	ASSEMBLY	13
2506.522	ADJ. FRAME & RING CASTINGS	ASSEMBLY	5
501.685	ADJ. WATER GATE HOUSING	ASSEMBLY	1
2531.501	CONCRETE CURB & GUTTER DESIGN B-613	LIN. FT.	2,170
2535.501	BITUMINOUS CURB	LIN. FT.	2,170
2551.501	TRAFFIC BARRIER, DESIGN B	LIN. FT.	130
2551.521	ANCHORAGE ASSEMBLIES	ASSEMBLY	2
2557.501	CHAIN LINK FENCE 60" HIGH	LIN. FT.	103
2575.501	ROADSIDE SEEDING	ACRE	1.10
2575.505	SODDING	SQ. YD.	3,200
2575.511	MULCH MATERIAL, TYPE 5	TON	1
2575.551	TOPSOIL	CU. YD. (VM)	375



The following Standard Detail plates, approved by the Bureau of Public Roads, shall apply on this project.

PLATE NO.	DESCRIPTION
3000 F	REINFORCED CONCRETE PIPE
3006 A	GASKET JOINT FOR R.C. PIPE
3100 E	CONCRETE APRON FOR R.C. PIPE
4000 G	MANHOLE OR CATCH BASIN
4002 D	"
4005 H	"
4006 F	"
4101 C	CURB OPENING CATCH BASIN
4101 B	RING CASTING FOR MANHOLE
4110 D	COVER CASTING FOR MANHOLE
4180 F	MANHOLE STEP CASTING
6000 A	CONCRETE CRIBBING
7065 C	BITUMINOUS CURB
7100 D	CONCRETE CURB & GUTTER (DESIGN B)
7110 E	CURB & GUTTER CONSTRUCTION AT CATCH BASIN
8000 C	STANDARD BARRICADES
8008 C	CONTRACTOR'S SIGN
8307 I	STRUCTURAL PLATE BEAM GUARD RAIL (DESIGN B)
8319 C	GUARDRAIL TWISTED END TREATMENT
9322 D	CHAIN LINK FENCE



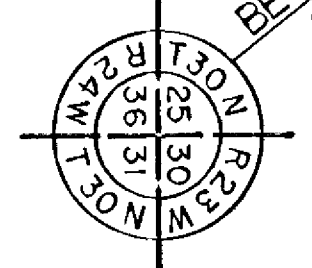
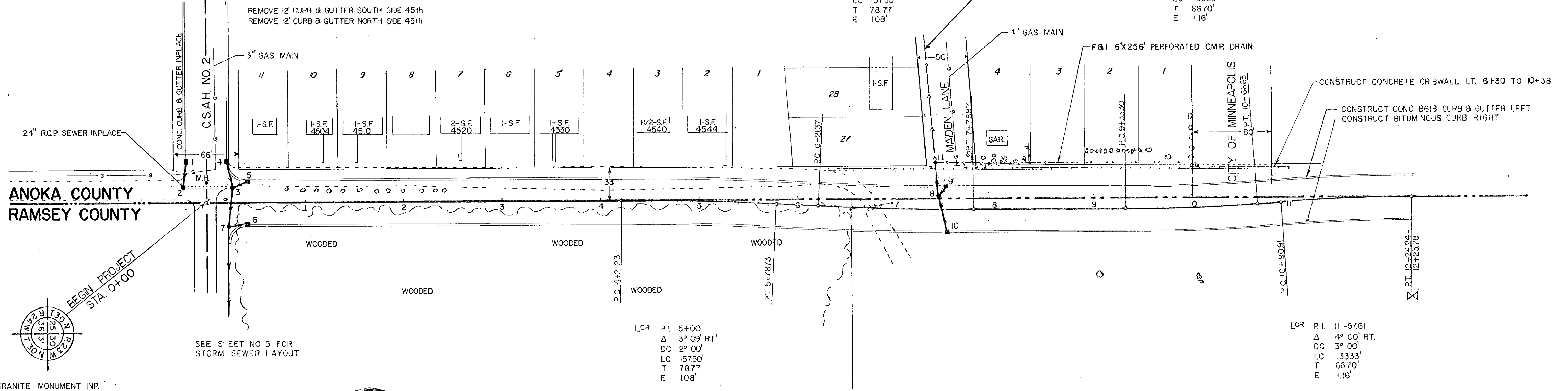
B.M. NO. 1 ELEV. 317.42
TOP HYDRANT N.E. COR.
45th. & HEIGHTS DRIVE

B.M. NO. 2 ELEV. 336.21
TOP & N.E. COR. TOP STEP
HOUSE NO. 4544

REMOVE 75 LIN. FT. FENCE LT.
RESET 75 LIN. FT. FENCE LT.

LOR P.I. 7+00.14
Δ 3° 09' LT.
DC 2° 00'
LC 157.50'
T 78.77'
E 1.08'

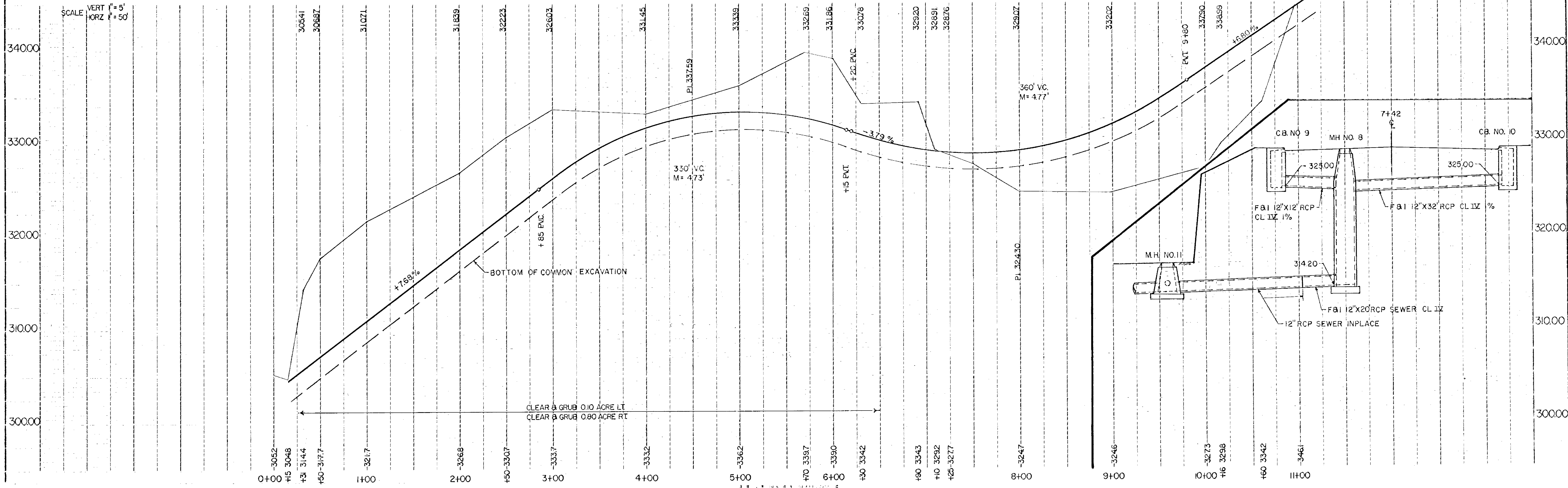
LOR P.I. 10+00
Δ 4° 00' LT.
DC 3° 00'
LC 133.33'
T 66.70'
E 1.16'



SEE SHEET NO. 5 FOR
STORM SEWER LAYOUT

GRANITE MONUMENT INP.

SCALE
VERT 1" = 5'
HORZ 1" = 50'



B.M. NO. 3 ELEV. 353.68
TOP OF E. BOLT AT BASE
OF WATER TOWER

ADJ. WATER GATE HOUSING
LT. 13+40

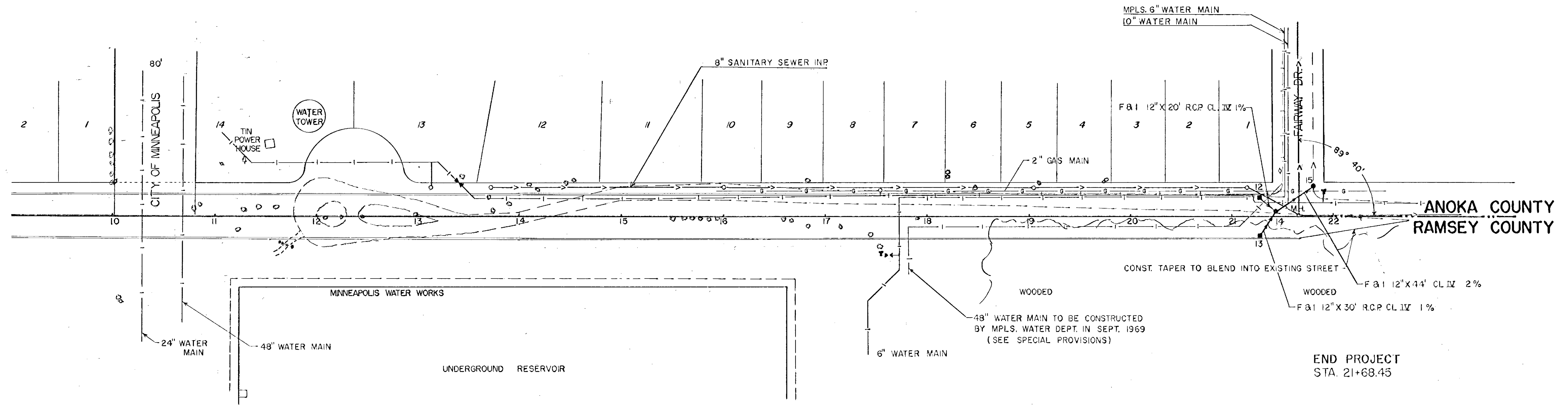
ADJ. FRAME & RING CASTING
LT. 13+75

ADJ. FRAME & RING CASTING
LT. 16+00

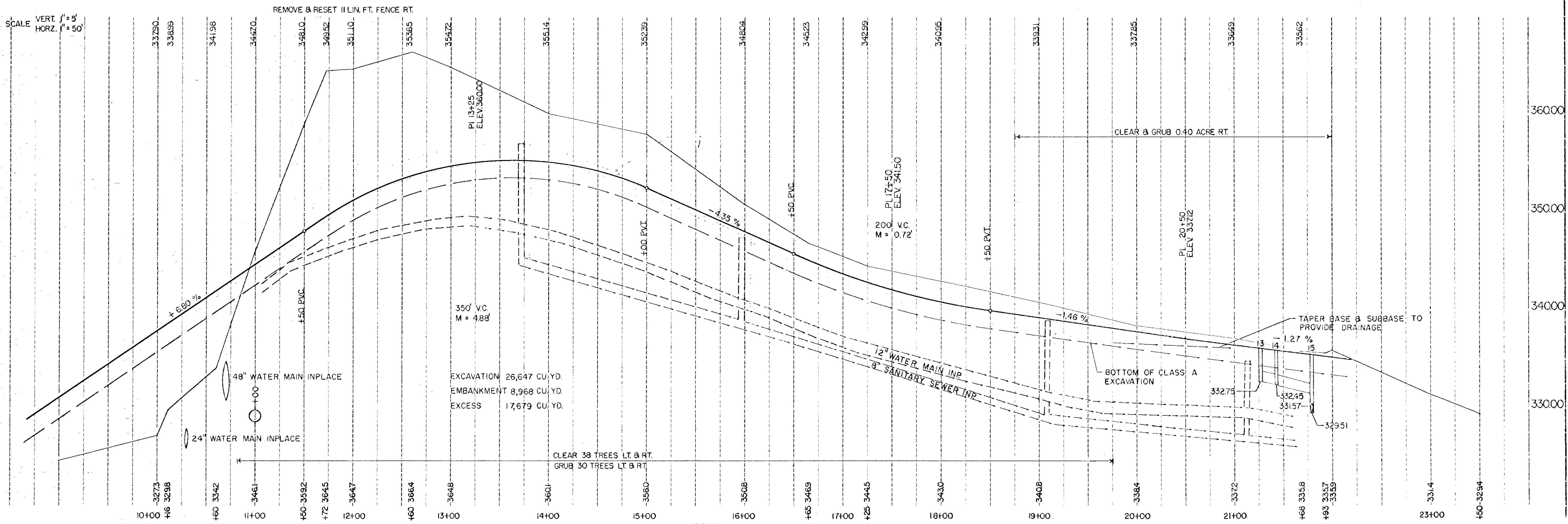
ADJ. FRAME & RING CASTING
LT. 19+05

ADJ. FRAME & RING CASTING
LT. 21+15 & 21+68

B.M. NO. 4 ELEV. 334.95
TOP & S.E. COR. TOP STEP
I-S-F. LT. STA. 22+15



END PROJECT
STA. 21+68.45

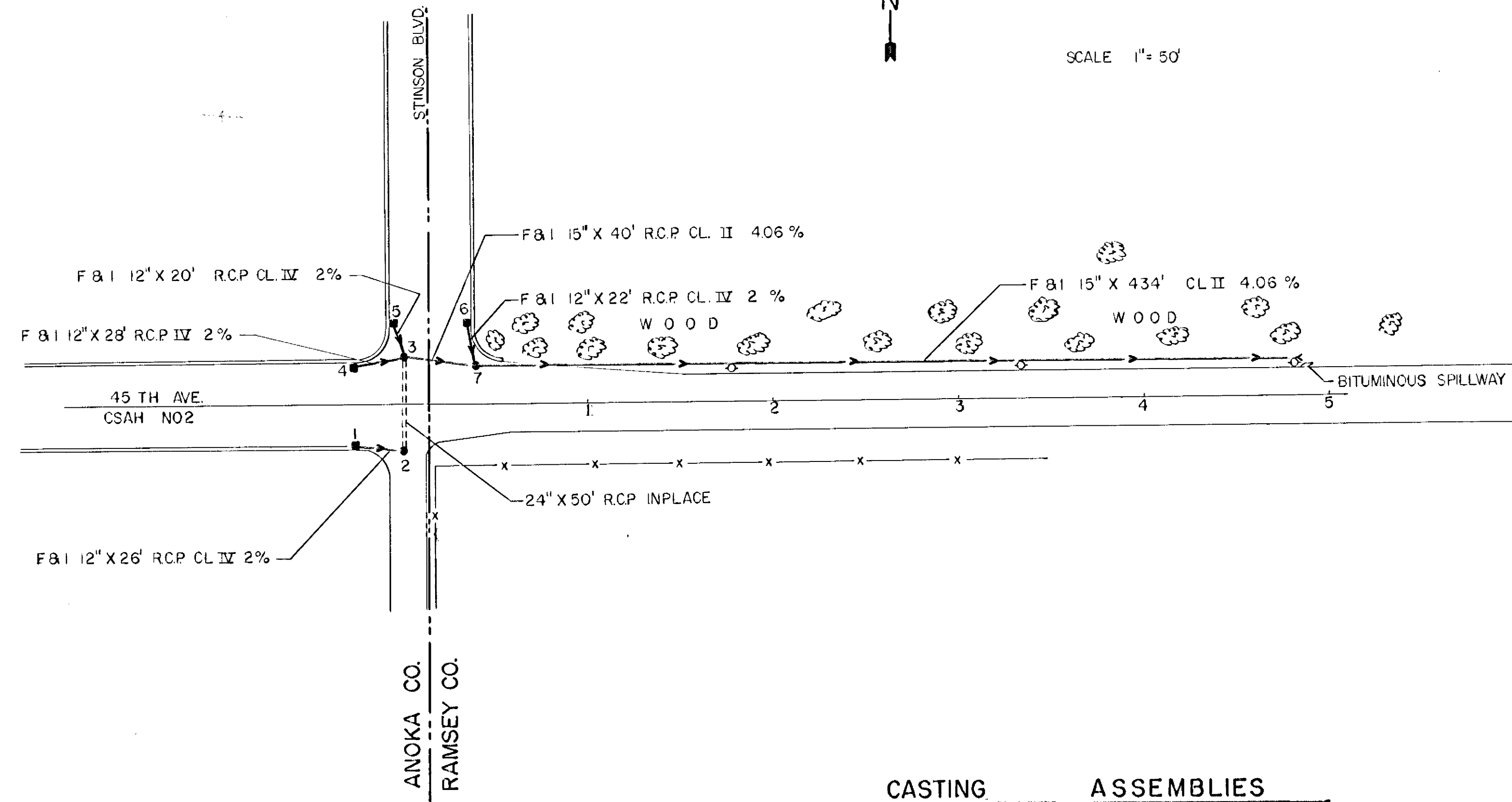


EXCAVATION 26,647 CU. YD.
EMBANKMENT 8,968 CU. YD.
EXCESS 17,679 CU. YD.

CLEAR 38 TREES LT. & RT.
GRUB 30 TREES LT. & RT.

STORM SEWER CONSTRUCTION

SCALE 1" = 50'



CASTING ASSEMBLIES

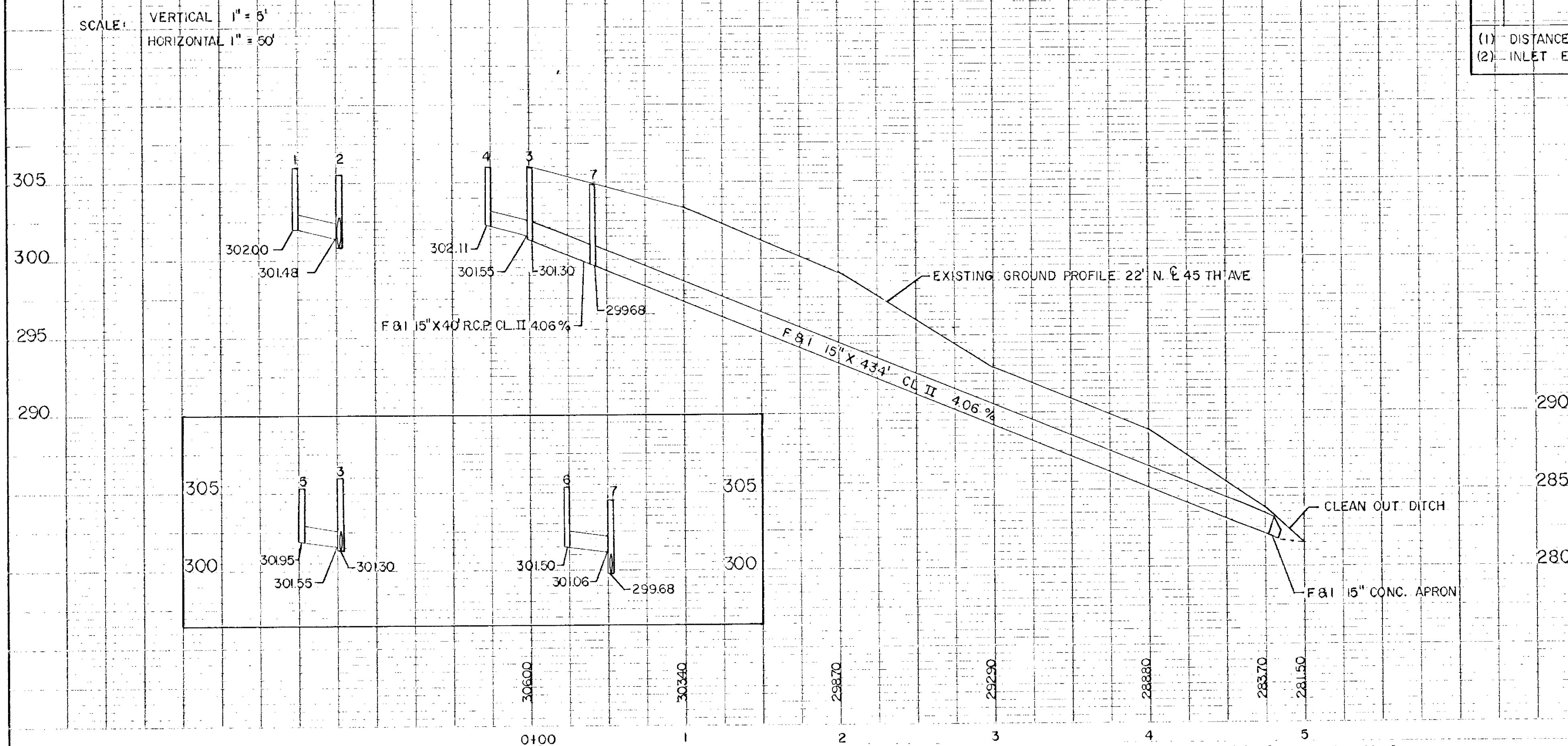
	GRATE	FRAME	COVER	HEIGHT	QUANTITY
A		700-7	711	7"	7
B		NEENAH	R-3246-B OR EQUAL	6"	6

DRAINAGE

NO	STATION	LOCATION	REMARKS	TYPE	DESIGN	LIN. FT.	TOP	OUTLET	F&I CAST ASSEMBLY	DRAINS TO	F&I R.C.P.	
											CL 4	CL 2
1	0+21	40' LT.		C.B.	2	4.2	306.00	302.00	B	MH 2	26'	
2	0+25	14' LT.	CONST. M.H. ON INP 24"	M.H.	C OR G	4.8	305.50	300.80	A	MH 3		40'
3	0+25	14' LT.	" " " "	M.H.	C OR G	4.5	305.75	301.30	A	MH 7		
4	0+21	40' LT.		C.B.	2	4.1	306.00	302.11	B	MH 3	28'	
5	0+40	21.7' LT.		C.B.	2	3.6	305.35	301.95	B	MH 3	20'	
6	0+40	21.7' RT.		C.B.	2	4.1	305.35	301.50	B	MH 7	22'	
7	0+22	25' RT.		M.H.	C OR G	4.9	304.50	299.68	A	OUTFALL		434' APRON
8	7+42	11' LT.		M.H.	A OR F	14.4	328.50	314.20	A	INP SYSTEM	20'	
9	7+49	22.1' LT. (1)	SEE STANDARD PLATE NO. 4016 C	C.B.	LP 4-4	STRUCT	328.18 (2)	325.00		MH 8	12'	
10	7+49	22.1' RT. (1)		C.B.	LP 4-4	STRUCT	328.18 (2)	325.00		MH 8	32'	
11	7+41	48' LT.	CONST. ON INP 12" RCP	M.H.	C OR G	4.4	318.00	313.70	A	INP SYSTEM		
12	21+28	21.7' LT.		C.B.	2	3.0	335.58	332.75	B	MH 14	20'	
13	21+28	21.7' RT.		C.B.	2	3.0	335.58	332.75	B	MH 14	30'	
14	21+44	5' LT.		M.H.	C OR G	3.5	335.65	332.45	A	MH 15	44'	
15	21+82	30' LT.		M.H.	C OR G	5.4	334.82	329.51	A	MH 16 ON FAIRWAY PROJECT		
TOTALS											254'	474'

(1) DISTANCE TO FACE OF STRUCTURE
(2) INLET ELEV.

SCALE: VERTICAL 1" = 5'
HORIZONTAL 1" = 50'

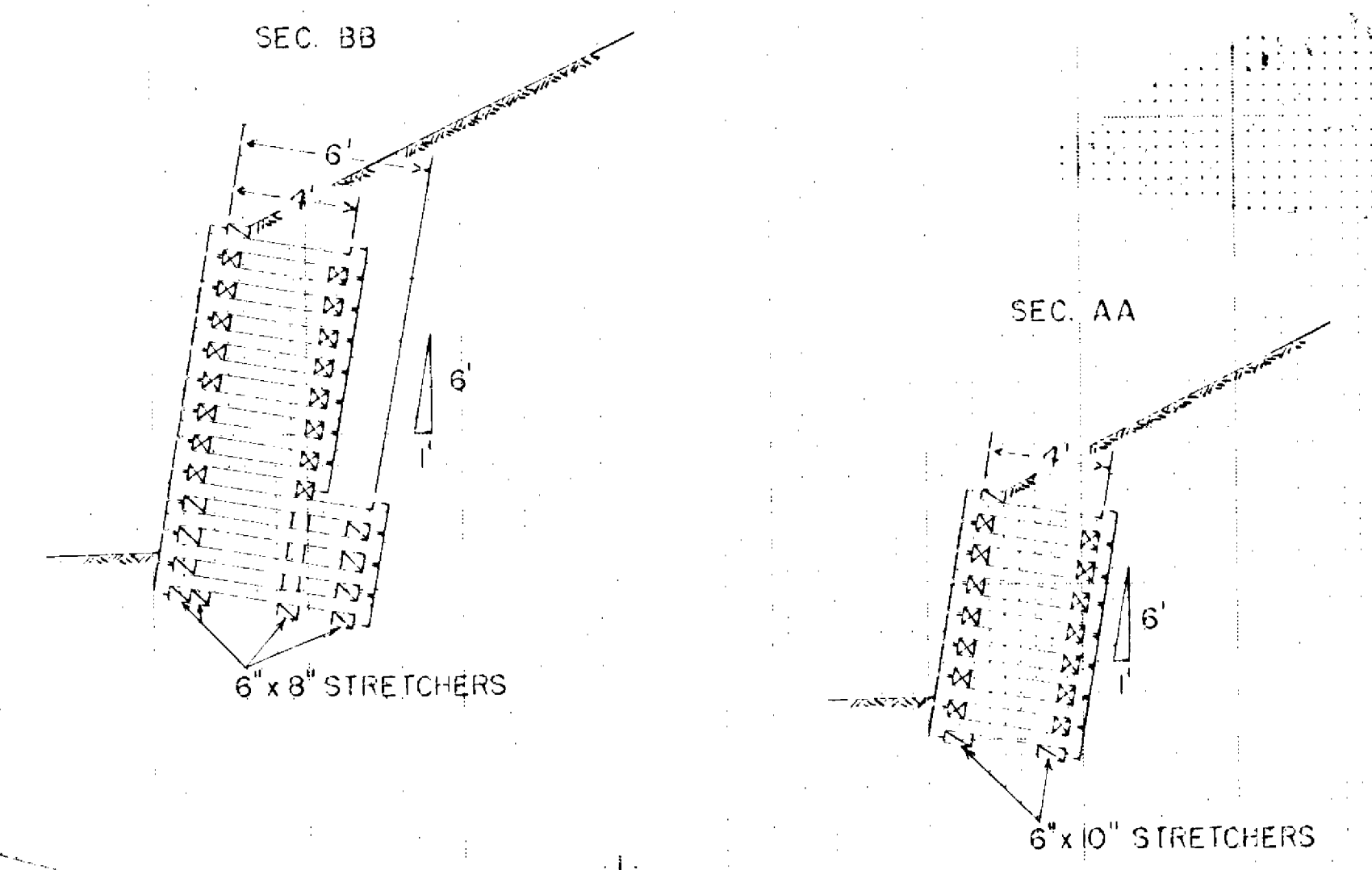


CONCRETE CRIBWALL CONSTRUCTION

STATION 6+30 TO 10+38 LT.

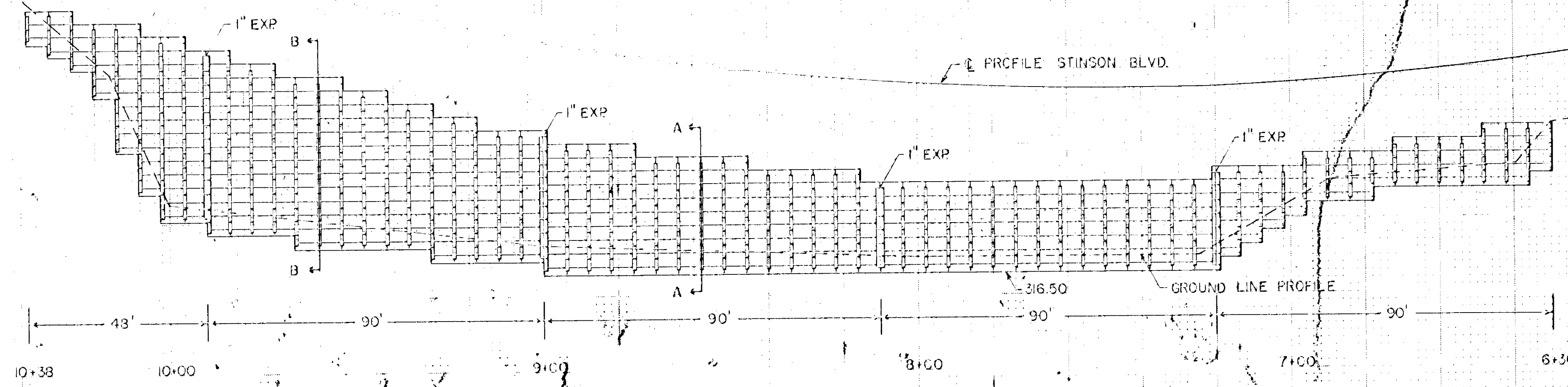
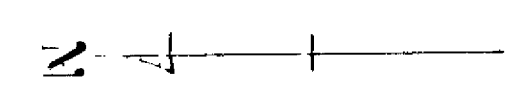
(ALTERNATE: II METAL CRIBWALL)

ALLSO SEE SPEC. PROVISIONS



NOTE: CRIBWALL SHALL BE CONSTRUCTED WITH CLOSED FACE STRETCHERS. BACKFILL SHALL BE WITH SELECT GRANULAR MATERIAL.

350.00
340.00
330.00
320.00
310.00



PROFILE STINSON BLVD.

GROUND LINE PROFILE

SCALE
VERT. 1" = 5'
HORIZ. 1" = 20'