

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES
2101.501	CLEARING	ACRE			1.3
2101.502	CLEARING	TREE			50
2101.506	GRUBBING	ACRE			1.3
2101.507	GRUBBING	TREE			25
2104.501	REMOVE PORT. CULV.	LIN. FT.			625
2104.516	REMOVE PAVEMENT (FOR TRENCH)	SQ. YD.			27
2104.507	REMOVE CONC. STRUCTURE	CU. YD.			3
2104.508	REMOVE RAILWAY TRACK	LIN. FT.			558
2104.509	REMOVE GUARD RAIL	LIN. FT.			1,465
2104.510	REMOVE FENCE	LIN. FT.			1,914
557.621	RESET FENCE	LIN. FT.			76
2104.519	REMOVE INTEGRANT CURB	LIN. FT.			4,784
2105.501	CLASS A EXCAVATION	CU. YD.			20,076
110.621	EMBANKMENT INPLACE	CU. YD.			10,793
2105.510	TOPSOIL COVERING	CU. YD. (VM)			640
2202.526	GRAVEL BASE INPLACE (CL-5)	TON			9,969
2130.501	WATER	M-GAL			200
2208.501	BIT. MATL. FOR PRIME COAT	GAL.			6,800
2208.503	BIT. MATL. FOR MIXTURE	GAL.			16,200
2208.506	AGGREGATE	TON			1,350
2341.502	BIT. MATL. FOR TACK COAT	GAL.			2,000
2341.504	BIT. MATL. FOR MIX	TON			331
2341.511	BIT. MIXTURE (BINDER COURSE)	TON			3,300
2341.511	BIT. MIXTURE (WEARING COURSE)	TON			3,300
2501.501	PIPE CULVERT EXCAVATION	CU. YD.			7
2501.511-15	F.B.I. CMP CULV. (15")	LIN. FT.			44
2503.512-18	F.B.I. RCP SEWER (18") CL II	LIN. FT.			757
2503.512-18	F.B.I. RCP SEWER (18") CL III	LIN. FT.			54
2515.541-18	CONC. APRON FOR 18" RCP (F.B.I.)	APRON			3
2515.522-18	F.B.I. METAL PIPE FLUMES (18")	LIN. FT.			256
2515.531-18	F.B.I. APRON FOR 18" CMP	APRON			6
506.601	CONSTRUCT CATCH BASIN	STRUCTURE			6
2506.506	CONSTRUCT MANHOLES (DESIGN C OR G)	LIN. FT.			8.5
2506.507	CONSTRUCT CATCH BASIN (DESIGN C OR G)	LIN. FT.			29.1
2506.516	F.B.I. CASTING ASSEMBLY	ASSEMBLY			9
2506.522	ADJ. FRAME & RING CASTINGS	ASSEMBLY			19
504.695	ADJ. GATE VALVE HOUSING	ASSEMBLY			15
2531.501	CONCRETE CURB & GUTTER (DESIGN S-512)	LIN. FT.			5,845
2535.501	BITUMINOUS CURB	LIN. FT.			2,366
2574.501	ROADSIDE SEEDING	ACRE			6
2575.501	SURFACE MULCHING, TYPE I (7)	TON			9
2575.506	SURFACE MULCHING, TYPE G (7)	GALLON			900
2130.501	WATER	M-GAL.			30
2578.501	SODDING	SQ. YD.			7,665

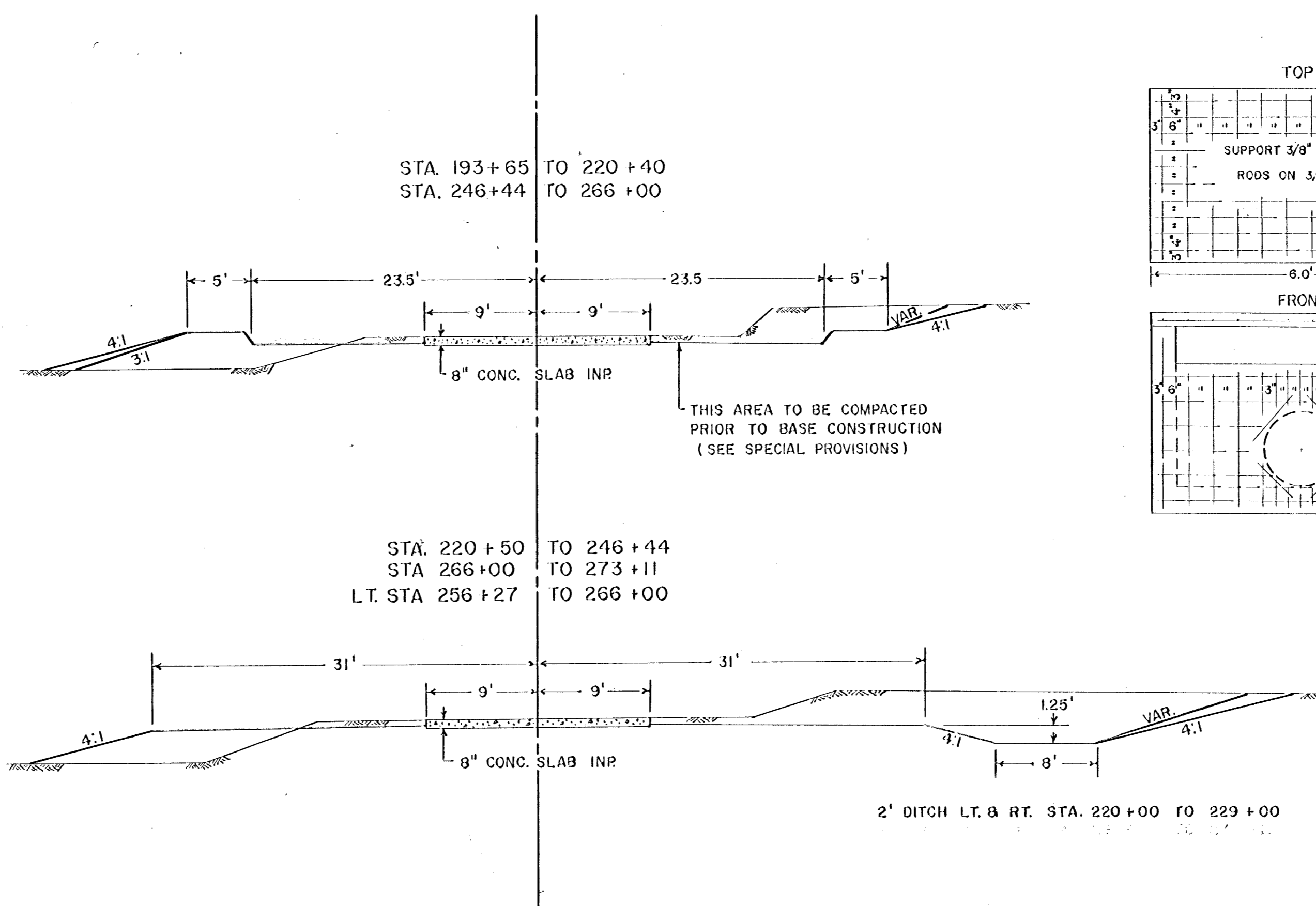
- ① COUNTY WILL FURNISH SEED
- ② INCLUDES 6 ELBOWS

STANDARD DETAIL PLATES

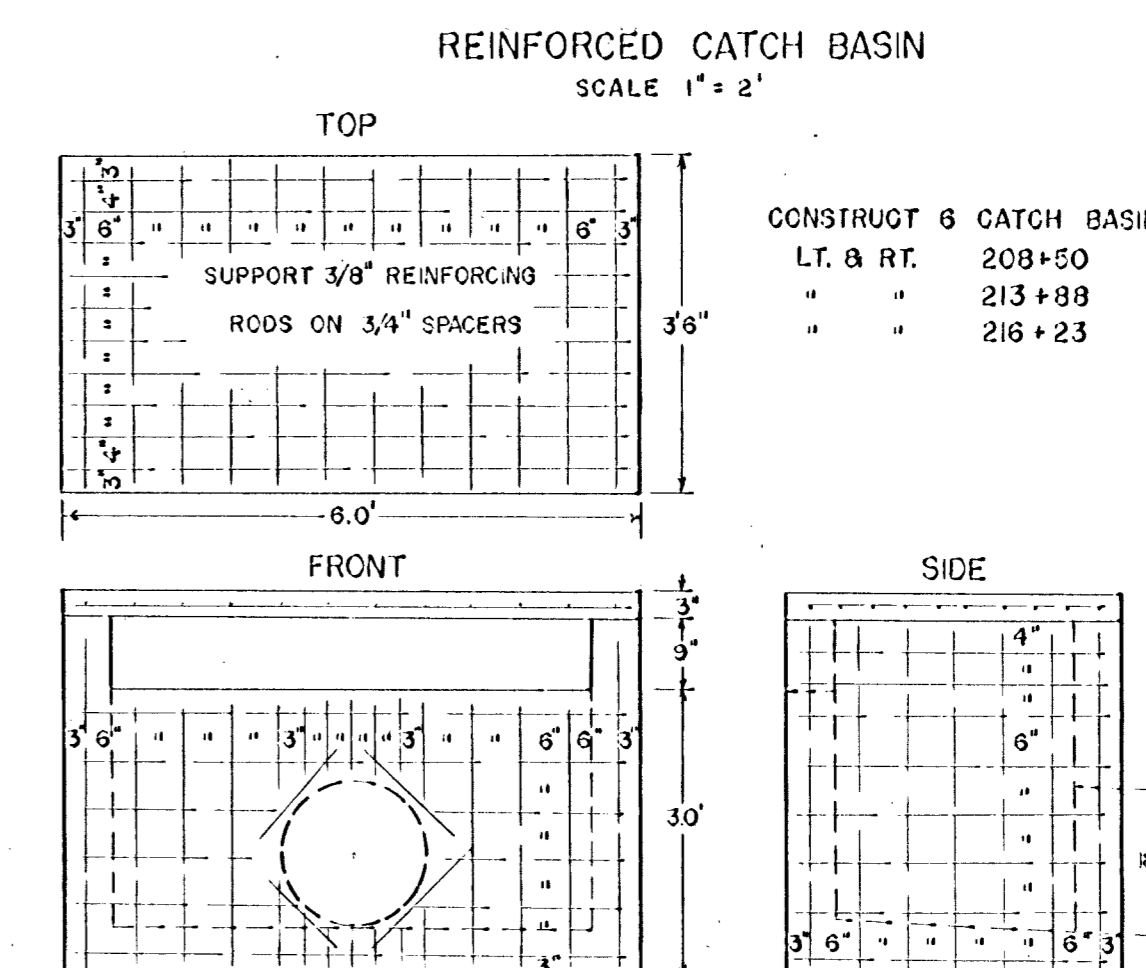
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3000 B	REINFORCED CONCRETE PIPE
3100 B	CONCRETE APRON FOR RCP
4002 C, 4006 D	MANHOLE OR CATCH BASIN
4101 A	RING CASTING FOR MANHOLES
4111 C	COVER CASTING FOR MANHOLE
4126 B	CATCH BASIN FRAME CASTING
4149 B	GRATE CASTING FOR CATCH BASIN
4162 A	CURB BOX CASTING FOR CATCH BASIN
7102 B	CONCRETE CURB & GUTTER DESIGN S-512
7110 D	CURB & GUTTER CONSTRUCTION AT CATCH BASIN
8000 A, 8009 A	STANDARD SIGNS & BARRICADES
7065 B	BITUMINOUS CURB

TYPICAL GRADING SECTIONS

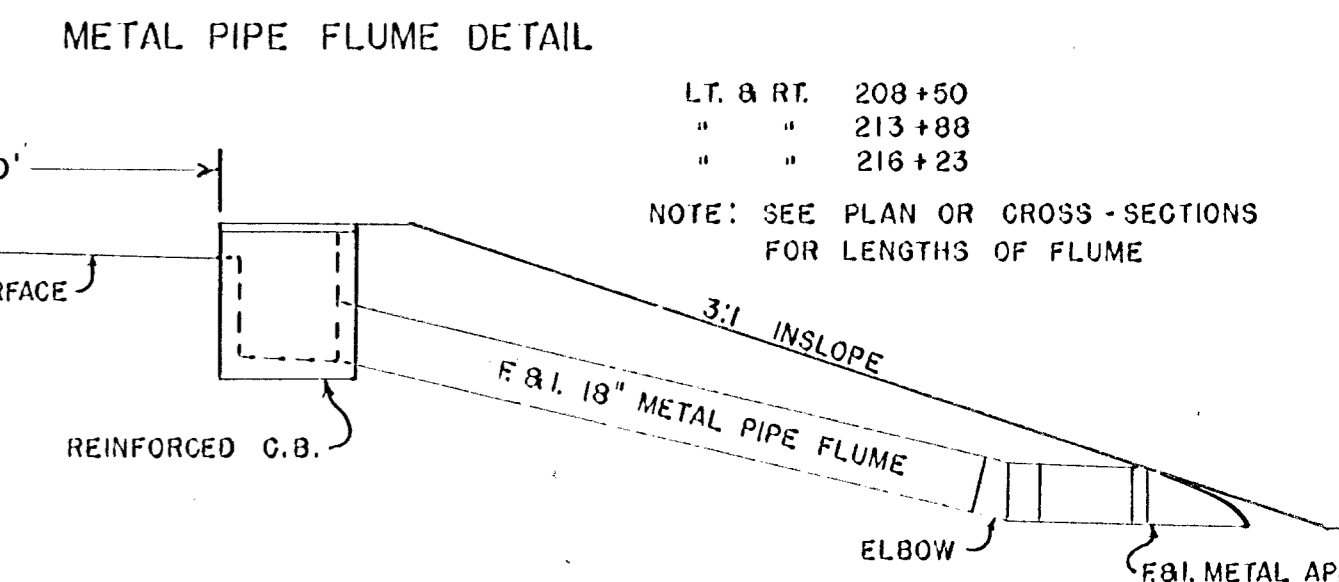
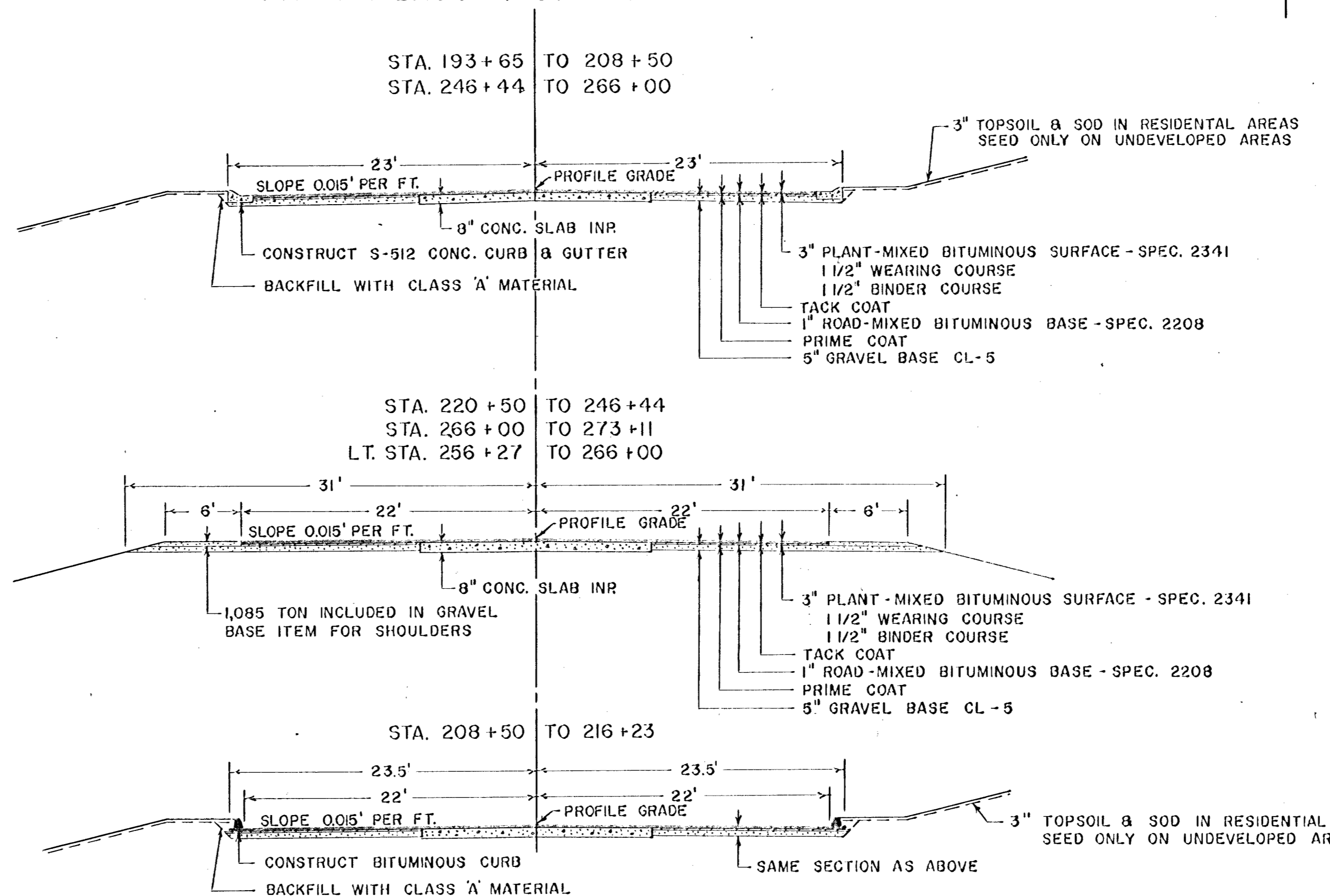


SPECIAL DETAILS



- MATERIAL LIST FOR C.B.**
- 3/4" REINFORCING
 - TOP: 11 PC 5' 8"
 - 3/8" REINFORCING
 - TOP: 12 PC 3' 4"
 - FACE: 6 " 5' 4"
 - 13 " 3' 8"
 - BACK: 8 " 5' 4"
 - 13 " 4' 6"
 - 6 " 2' 0"
 - 2 ENDS: 16 " 3' 4"
 - 14 " 4' 6"
 - CORNERS: 18 PC 2' 0" BENT 90° AT MID POINT
 - 66-1010 MESH BOTTOM ONLY 20 SQ. FT.
 - CONCRETE: SPEC. 3 A-15 1.8 CU. YD.

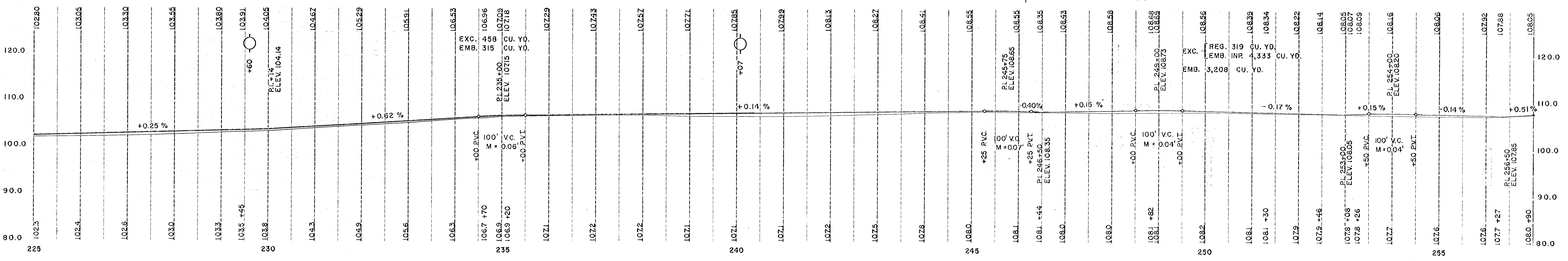
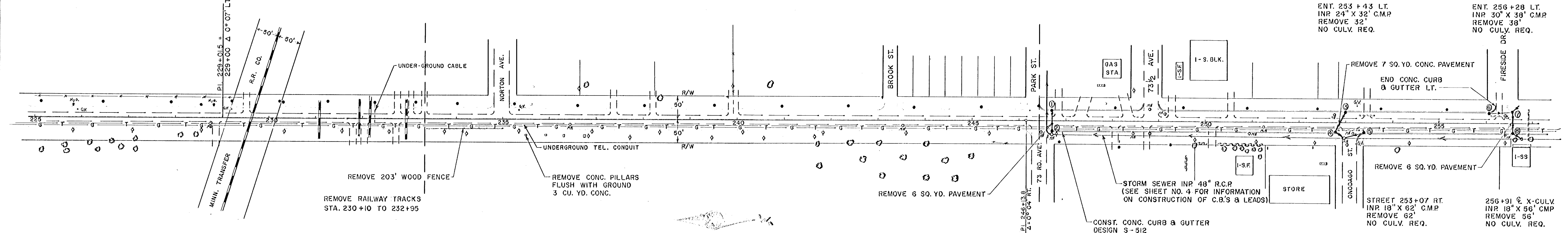
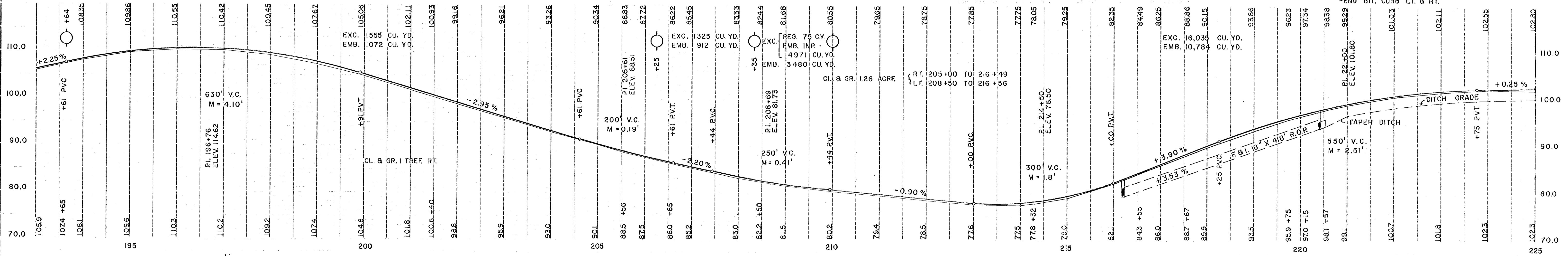
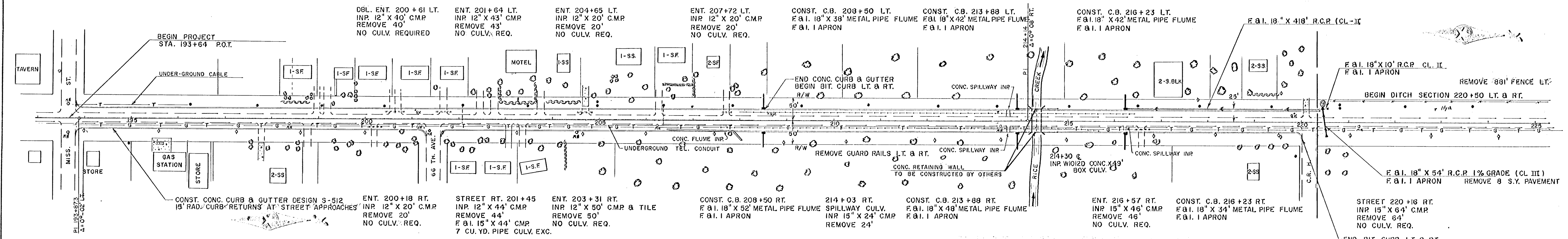
TYPICAL BASE & SURFACE SECTIONS

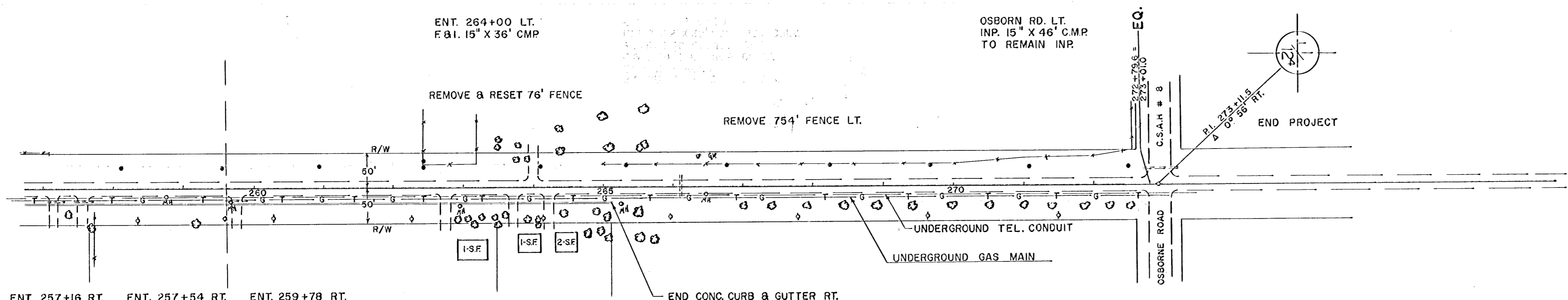


BASIS OF PLANNED QUANTITIES

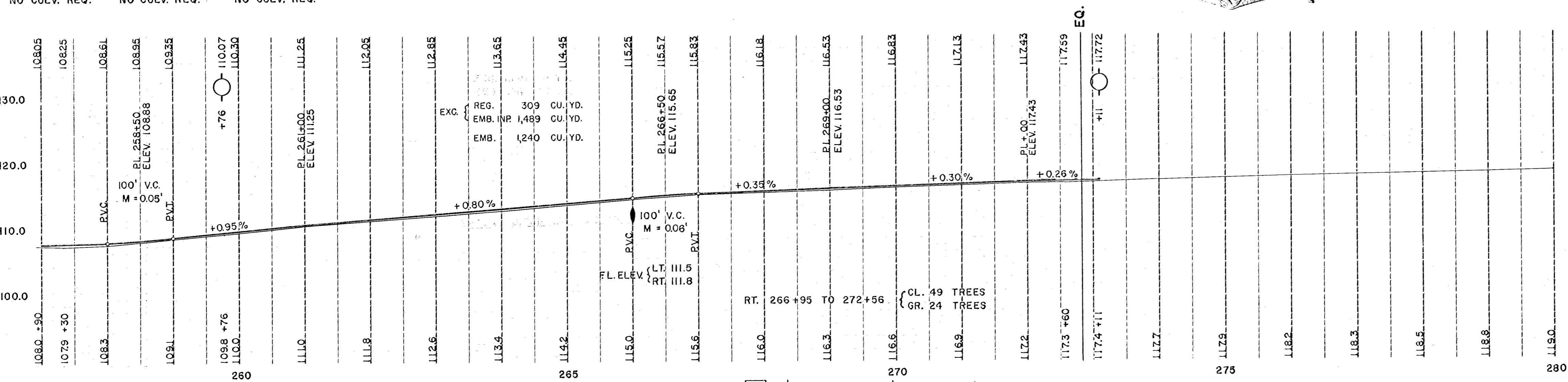
- GRAVEL BASE: COMPACTED DRY DENSITY - 140 LBS. PER CU. FT.
- WATER: 20 GALS. PER TON
- PRIME: 0.3 GAL. PER SQ. YD.
- TACK: 0.05 GAL. PER SQ. YD.
- 2208 BITUMINOUS BASE:
 - AGGREGATE - 100 LBS. PER SQ. YD.
 - BITUMINOUS MATERIAL - 0.6 GAL PER 100 LBS. AGGREGATE
- 2341 PLANT-MIXED BINDER COURSE - 165 LB. PER SQ. YD.
- BITUMINOUS MATERIAL 4.5% OF MIXTURE BY WEIGHT
- 2341 PLANT-MIXED WEARING COURSE - 165 LB. PER SQ. YD.
- BITUMINOUS MATERIAL 5.5% OF MIXTURE BY WEIGHT

Minn. Project No. _____ S.A.P. 02-635-03
State Project No. _____





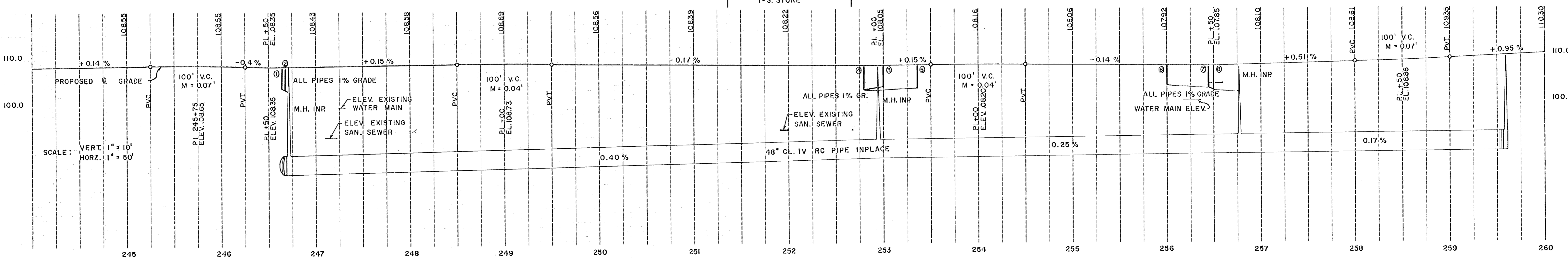
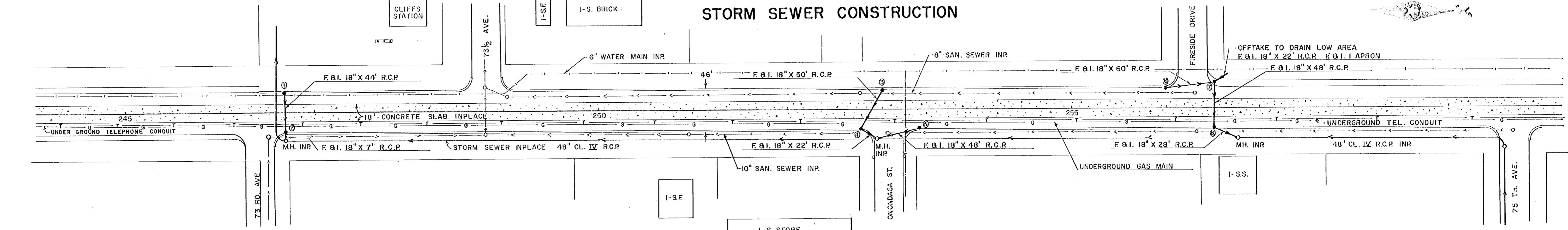
ENT. 257+16 RT. INP. 24" X 28" CMP REMOVE 26' NO CULV. REQ.
 ENT. 257+54 RT. INP. 24" X 20" CMP REMOVE 20' NO CULV. REQ.
 ENT. 259+78 RT. INP. 18" X 20" CMP REMOVE 20' NO CULV. REQ.



SEWER SYSTEM										
NO.	STA.	LOCATION	TYPE	DESIGN	IN. FT.	TOP CAST.	OUTLE	F&I, CAST. ASSEM.	DRAINS TO	F&I, R.C. PIPE 18" CL. II
1	246+70	21.5' LT.	C.B.	COR6	4.0	107.72	103.50	A	C.B. NO. 2	44
2	246+70	21.5' RT.	"	"	4.5	107.72	103.06	A	M.H. INP.	7
3	253+00	21.5' LT.	"	"	3.9	107.35	103.30	A	C.B. NO. 4	50
4	252+75	21.5' RT.	"	"	4.4	107.39	102.80	A	M.H. INP.	22
5	253+40	21.5' RT.	"	"	4.3	107.60	103.10	A	M.H. INP.	18
6	256+00	21.5' LT.	"	"	3.5	107.27	103.60	A	C.B. NO. 7	60
7	256+50	25' LT.	M.H.	"	4.4	107.30	103.00	B	C.B. NO. 8	48
8	256+50	21.5' RT.	C.B.	"	4.5	107.15	102.50	A	M.H. INP.	28
9	220+40	25' LT.	M.H.	"	4.1	98.00	94.00	B	C.B.	22

CASTINGS			
	GRATE	FRAME	CURB BOX
A	810	801	822
B	712	700-7	

STORM SEWER CONSTRUCTION



SCALE: VERT. 1" = 10'
 HORZ. 1" = 50'