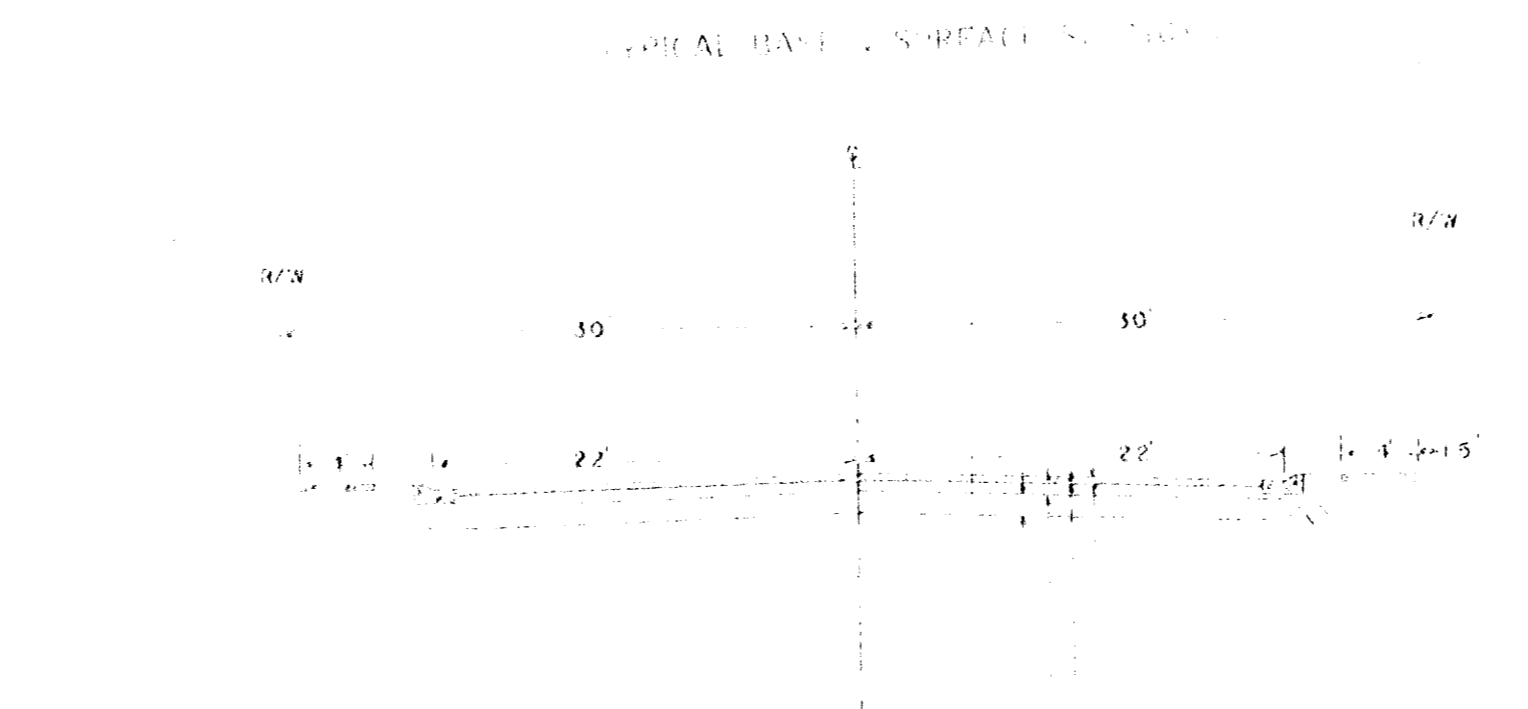
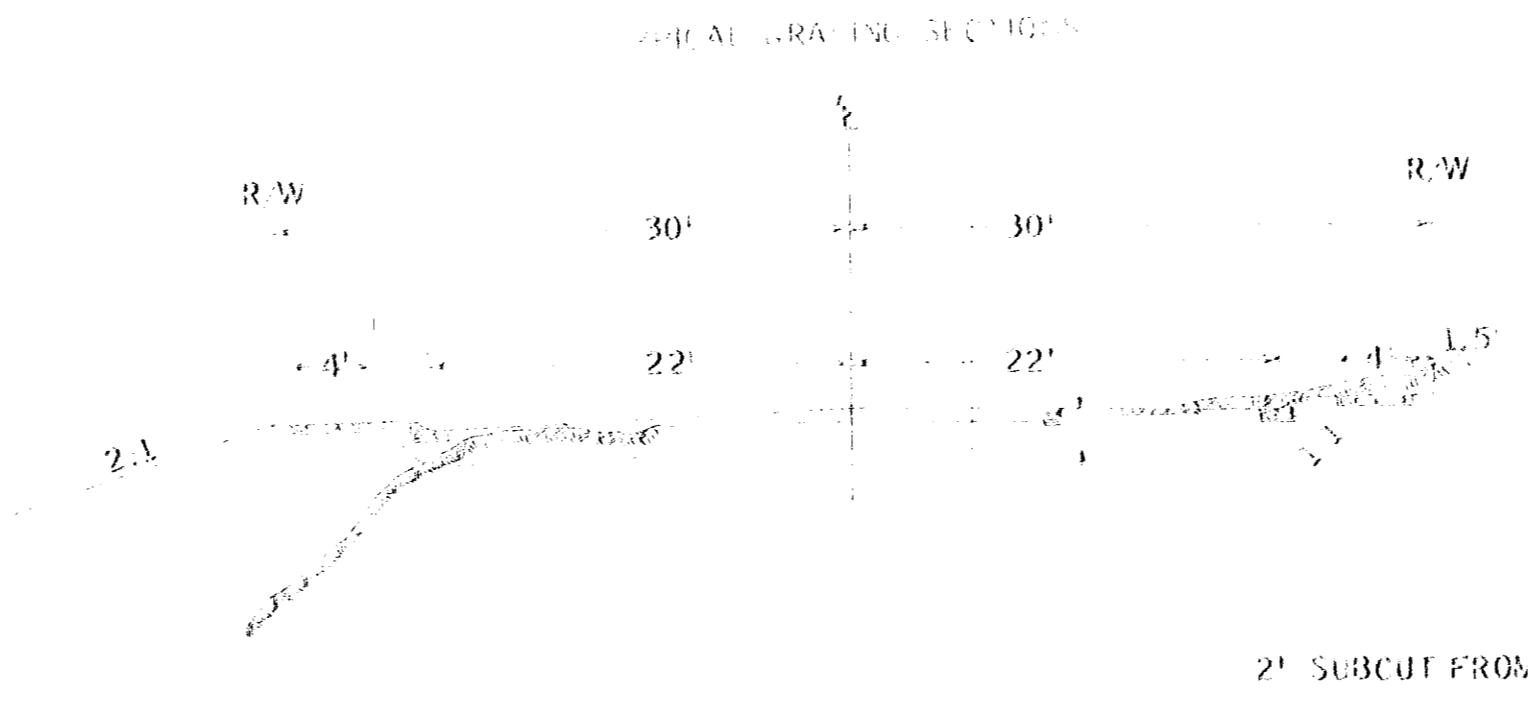


STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2101.501	CLEARING	ACRE	0.95	
2101.502	CLEARING	TREE	24	
2101.506	GRUBBING	ACRE	0.95	
2101.507	GRUBBING	TREE	24	
2104.501	REMOVE PORT. CULV.	LIN. FT.	29	
2104.502	REMOVE PAVEMENT	SQ. YD.	340	
2104.503	REMOVE CURB & GUTTER	LIN. FT.	1293	
2104.506	REMOVE SIDEWALK	SQ. YD.	1100	
2104.507	REMOVE MASONRY (CONC. STRUCT. (CONC. STEPS)	CU. YD.	1	
2104.511	REMOVE M.H. OR C.B. S.	STRUCT.	5	
2104.515	REMOVE PIPE SEWERS	LIN. FT.	422	
2104.520	REMOVE MISC. MINOR STRUCT. (PRESSURER PLATE)	STRUCT.	1	
2105.501	CLASS A EXC.	CU. YD.	2,848	
2130.501	WATER	M. GAL.	160	
2201.526	GRAVEL SUB-BASE (CL-4)	TON	5,887	
2202.526	GRAVEL BASE INF. (CL-5)	TON	2,475	
2208.501	BIT. MAFL. FOR PRIME COAT	GAL.	2,472	
2208.503	BIT. MAFL. FOR MIXTURE	GAL.	5,436	
2208.506	AGGREGATE	TON.	453	
2351.502	BIT. MAFL. FOR TACK	GAL.	412	
2351.504	ASPHALT CEMENT	TON	76	
2351.511	ASPHALTIC CONCRETE (BINDER COURSE)	TON.	682	
2351.511	ASPHALTIC CONCRETE (WEARING COURSE)	TON.	682	
2401.501	CONCRETE GRADE MIX NO.	CU. YD.	1	
2501.511-18	F. & I. C.M.P. CULV. (18")	LIN. FT.	42	
2501.512-44	F. & I. C.M.P. A CULV. (44" SPAN)	LIN. FT.	75	
2503.512-18	F. & I. RCP SEWER (18" CL. 2)	LIN. FT.	238	
2503.518-44	F. & I. RCP SEWER (44" SPAN) CL. 2	LIN. FT.	75	
2503.518-44	F. & I. RCP SEWER (44" SPAN) CL. 3	LIN. FT.	240	
504.685	ADJUST. WATER GATE HOUSING	ASSEM.	4	
2506.507	CONSTRUCT CATCH BASIN DESIGN A OR F	LIN. FT.	39.2	
2506.507	CONSTRUCT CATCH BASIN DESIGN C OR G	LIN. FT.	7.4	
2506.516	F. & I. CASTING ASSEMBLIES	ASSEM.	10	
2506.522	ADJ. FRAME & RING CASTINGS	ASSEM.	6	
2506.511	RECONSTRUCT MANHOLES	LIN. FT.	3	
2515.531	F. & I. APRONS FOR CMP (18")	APRON	1	
2515.532	F. & I. APRONS FOR CMP-A (44" SPAN)	APRON	1	
2503.512-24	F. & I. R.C.P. SEWER 24" CLASS 2	LIN. FT.	16	
2521.501	CONCRETE WALK 4" THICK	SQ. FT.	8140	
2521.501	CONCRETE WALK 6" THICK	SQ. FT.	3266	
2531.501	CONCRETE CURB & GUTTER (DESIGN 5.512)	LIN. FT.	3500	
2574.501	ROADSIDE SEEDING	ACRE.	0.33	
2576.501	SODDING	SQ. YD.	1,830	



NOTE: ALL DIMENSIONS & SLOPES SHOWN ON TYPICAL SECTIONS ARE APPROXIMATE ONLY.

BASIS OF PLANNED QUANTITIES

SAND GRAVEL SUBBASE: COMPACTED DRY DENSITY 135 LBS. PER CU. FT.
 GRAVEL BASE: COMPACTED DRY DENSITY 140 LBS. PER CU. FT.
 WATER: 20 GALS. PER TON OF AGGREGATE
 BITUMINOUS PRIME 0.3 GAL. PER SQ. YD.
 BITUMINOUS BASE
 AGGREGATE: 110 LBS. PER SQ. YD. PER INCH OF DEPTH
 BITUMINOUS MATERIAL 0.6 GAL. PER 100 POUNDS OF AGGREGATE
 BITUMINOUS TACK COAT: 0.05 GAL. PER SQ. YD.
 BITUMINOUS BINDER COURSE
 BITUMINOUS MIXTURE - 165 POUNDS PER SQ. YD.
 BITUMINOUS MATERIAL 5.0% OF MIXTURE BY WEIGHT
 BITUMINOUS WEARING COURSE
 BITUMINOUS MIXTURE - 165 POUNDS PER SQ. YD.
 BITUMINOUS MATERIAL 6.2% OF MIXTURE BY WEIGHT

SPECIAL DETAILS

THE 24" LEAD TO THE SOUTH AT CATCH BASIN NO. 3 WILL BE SEALED, IN A MANNER TO FACILITATE USE IN THE FUTURE.

ANY LEADS REMAINING AFTER AND DUE TO REMOVING OF CATCH BASINS SHALL BE PERMANENTLY SEALED WITH CEMENT OR LIKE MATERIAL. THIS WILL BE CONSIDERED INCIDENTAL TO REMOVAL OF CATCH BASINS.

ALL AREAS (TO BE SODDED) NOT ALREADY CLAY OR TOP SOIL WILL BE COVERED WITH A MINIMUM OF 3 INCHES OF CLAY OR TOP SOIL. THIS WILL BE CONSIDERED INCIDENTAL TO CLASS A EXC.

EXCESS CLASS A EXC. (APPROX. 1926 CU. YDS) TO BE DISPOSED OF BY THE CONTRACTOR WILL BE HAULED OFF PROJECT WITH RUBBER Tired VEHICLES. DUMP AREAS WILL BE AT THE APPROVAL OF THE CITY OF COLUMBIA HEIGHTS.

BITUMINOUS SURFACE (IN PLACE) WILL BE SALVAGED AND PLACED IN LAYERS (TO THE SATISFACTION OF THE ENGINEER) IN THE LOWER PORTION OF BACK-FILL. THIS WILL BE CONSIDERED INCIDENTAL TO CLASS A EXC.

DUE TO THE WIDE SPAN OF ARCH SEWER PIPE USED, CATCH BASIN NO. 3 AND NO. 7 WILL HAVE AN AMOUNT OF CHIPPING OR SAWING. THIS WILL BE CONSIDERED INCIDENTAL TO CATCH BASIN CONSTRUCTION. A TOTAL OF 4 LIN. FT. EXTRA PIPE HAS BEEN FIGURED, IF NEEDED.

THE CONNECTING OF THE 3 FT. LEAD AT CATCH BASIN NO. 1 WITH THE INPLACE LINE WILL BE CONSIDERED INCIDENTAL TO THE END OF 18" R.C.P. SEWER.

THE BACKFILL BEHIND CURB WILL BE CONSIDERED AN INCIDENTAL ITEM.

THE RIGHT IS RESERVED TO CHANGE THE WIDTH OF SIDEWALK (FROM 3' TO 3 1/2') IF DEEMED NECESSARY. ALSO TO ADD WALK IF REQUIRED BY CITY.

THE 6" CONCRETE WALK USED AT ENDS WILL BE DROPPED APPROX. 1" ON CURB SIDE. SLOPE FROM WALK TO GUTTER LINE WILL NOT EXCEED .15 PER FOOT.

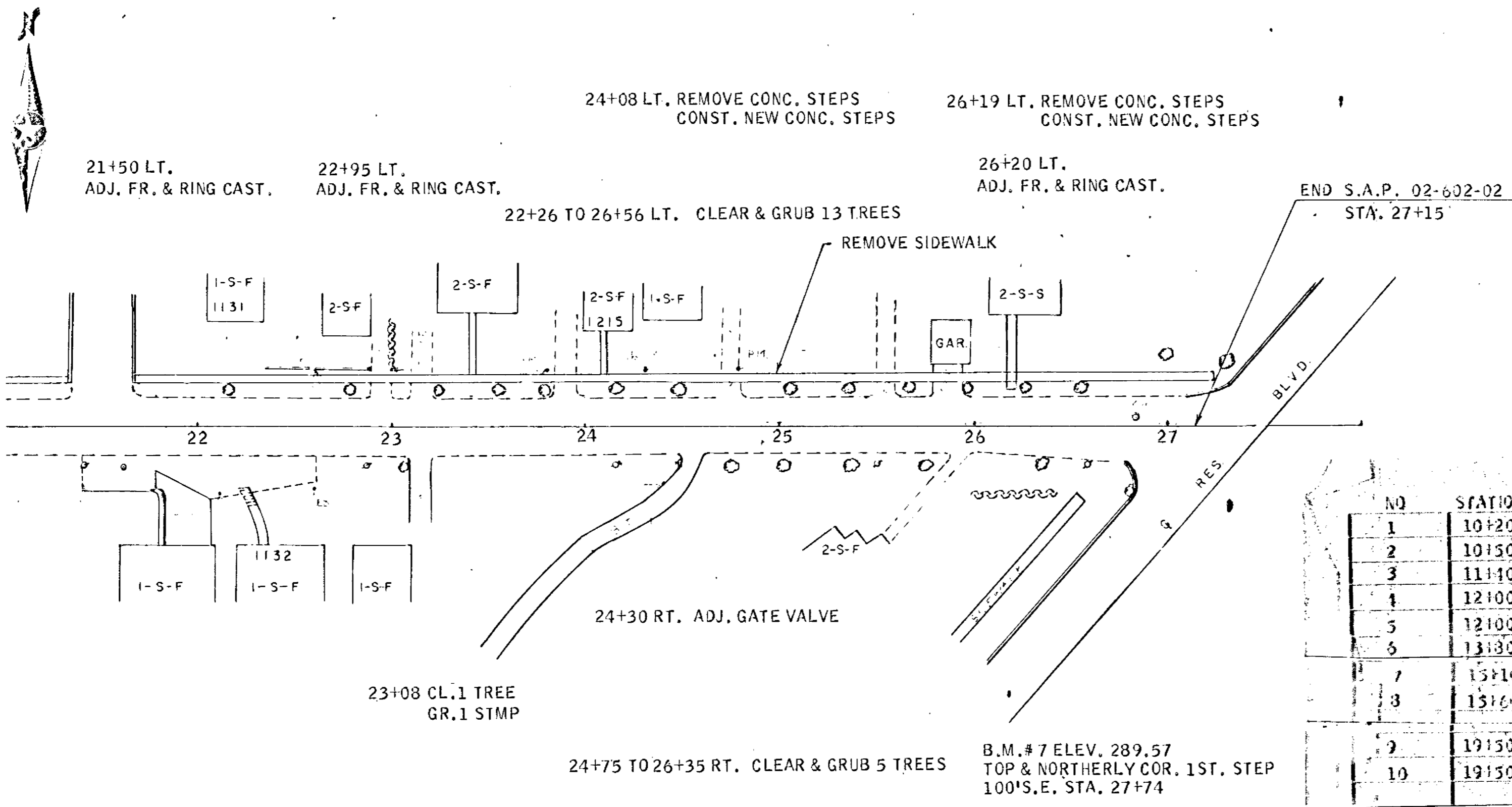
The following Standard Detail plates, approved by the Bureau of Public Roads, shall apply on this project.

STANDARD DETAIL PLATES	
PLATE NO.	DESCRIPTION
3000 B	REINFORCED CONCRETE PIPE
3014 A	REINFORCED CONCRETE PIPE ARCH
3040	CORRUGATED METAL PIPE ARCH
3122 B	METAL APRON FOR C.M. PIPE ARCH CULVERTS
3122 B	METAL APRON FOR C.M. PIPES
R 3246 C NEEMAH	TYPE 3-C INLET & ADJ. CURB BOX
4000 E - 4002 C	MANHOLE OR CATCH BASIN
4005 E - 4006 D	MANHOLE OR CATCH BASIN
7102 B	CONCRETE CURB & GUTTER DESIGN NO. 5.512
7110 D	CURB & GUTTER CONSTRUCTION AT CATCH BASIN
7111 B	INSTALLATION OF CATCH BASIN CASTING
7200 B	CONCRETE WALK
8000 A - 8001	
8003 & 8008 A	STANDARD SIGNS & BARRICADES

CATCH BASINS AND STORM SEWER TO BE REMOVED ARE APPROX. 3 FT. TO 5 FT. IN DEPTH. STORM SEWER 8" TO 12" DIA.

6" CONC. WALK WILL BE CONSTR. ON ALL ENDS & APPROACHES. ALSO ON AREA BEH. BACK OF CURB TO NEW WALK AT THESE ENDS.

STEEL & WOOD CLAMP TO BE FURNISHED BY COUNTY.



STORM SEWER SYSTEM

NO	STATION	LOCATION	TYPE	DESIGN	LINE FT.	ELEV. TOP CAST.	P.L.	F&I CAST. ASSEMBLY	DRAINS TO R.S. SEWER PIPE
1	10+20	LT. 22'	C.B.	A.O.R.F.	1.2	218.70	211.5	A C.B.#2	18" X 60' R.C.P. CL.2
2	10+50	RT. 22'	C.B.	A.O.R.F.	1.3	218.60	211.3	A C.B.#3	18" X 60' R.C.P. CL.2
3	11+40	RT. 22'	C.B.	A.O.R.F.	1.3	218.40	211.1	A C.B.#1	18" X 60' R.C.P. CL.3
4	12+00	RT. 22'	C.B.	A.O.R.F.	1.3	218.30	211.0	A C.B.#5	18" X 60' R.C.P. CL.3
5	12+00	LT. 22'	C.B.	A.O.R.F.	1.1	218.20	211.2	A C.B.#1	18" X 48' R.C.P. CL.2
6	13+30	RT. 22'	C.B.	A.O.R.F.	5.3	218.21	213.6	A C.B.#7	14" SPX 132' R.C.P.A. CL.2
7	15+10	RT. 22'	C.B.	A.O.R.F.	5.8	217.20	213.4	A C.B.#3	14" SPX 88' R.C.P.A. CL.2
8	15+60	LT. 22'	C.B.	A.O.R.F.	6.2	217.10	213.2	A SWAMP	27" X 44" X 70" CMP ARCH & 1 APR
9	19+50	RT. 22'	C.B.	C.O.R.G.	3.5	220.90	227.1	A C.B.#10	18" X 18' R.C.P. CL.2
10	19+50	LT. 22'	C.B.	C.O.R.G.	3.2	230.90	227.0	A SWAMP	18" X 12' C.M.P. & 1 APRON

1) 3" PIPE TO BE USED TO TIE INTO EXISTING LINE ON CENTRAL AVE
 TO LEAD TO THE SOUTH AT C.B.#3 (24" DIA. RCP)
 2) EXTRA PIPE FIGURED TO COMPENSATE FOR EXTRA CONSTRUCTION
 OF M.H. NO.7 (DO NOT ORDER)
 LINE FT. ABOVE INCLUDES 3" BASE
 A- ABOVE = REVENUE R-3214-C TYPE 3-C INLET

B.M.#5 ELEV. 248.96
TOP & N.W. COR STONE WALL
FRONT #1126 RT. 21+40

B.M.#6 ELEV. 271.59
NORTHERLY COR. GAR.
SLAB RT. STA. 24+35

REMOVE 40' OF CONC. CURB
ON RADIUS OF RES. BLVD.

