GEN. NOTES ~ COMPUTATIONS & SUB-SUMMARIES

EXCAVATION FOR CULVERTS (5 FT. DIAMETER AND OVER)

Excavation for these culverts has been shown and calculated as channel excavation, item E-3, through the proposed pipe structure site above the flow line of the culvert. Although the channel sections through these structure sites has been drawn using 2:1 side slopes, they shall be built with 1:1 side slopes as shown. The E-3 quantities have been recomputed accordingly and are reflected in the general summary. Backfill furnished for these culverts shall be granular as defined in Sec. E-2.08 below the point where operation of heavy earth moving and compacting equipment is restricted under method (a) of Sec. E-2.08. Above this point, the requirements of Sec. E-2.08 for granular backfill will be waived and backfill shall be placed in accordance with the provisions of Sec. E-1.08.

E-4, BORROW

EMBANKMENT PLUS 20%		988,662
E-1 ROADWAY EXCAVATION	375,711	
E-3 CHANNEL EXCAVATION	114,333	
TOTALS	490,044	988,662
TOTAL E-4 BORROW	498,618 C.Y.	

SS-18 FENCE

Sheet No	SS-18 Fence, Type "D" Lin. Ft.	
365	5919	
366	6024	
368	6107	
369	2998	
370	2530	
371	2846	
372	3007	
373	2850	
374	1529	
375	1319	
376	1420	
377	3075	
378	3005	
379	400	
Total =	43029	

CENTERLINE REFERENCE MONUMENTS ~ ITEM I-8

From Sheet No 362 = 12 Each
From Sheet No 363 = 12 Each

Total = 24 Each

T-71, 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

TOTAL NET LENGTH AS PER S.R. 2
TYPICAL SECTION = 20,346.50 LIN. FT.
WIDTH, 4 LANES @ 12 FT. = 48 FT.
20,346.50 x 48 ÷ 9 = 108,514.67 Sq. Yds.

B-219, 3" WATERPROOFED AGGREGATE BASE COURSE

TOTAL LENGTH AS PER S.R. 2
TYPICAL SECTIONS = 20,396.50 LIN. FT.
WIDTH 2 SHOULDERS @ 5 FT. = 10 LIN. FT.
WIDTH 2 SHOULDERS @ 10 FT. = 20 LIN. FT.
TOTAL WIDTH = 30 LIN. FT.
20,396.50 x 30 x $\frac{3}{12}$ ÷ 27 = 5,665.69 CU. YDS.

T-31, BITUMINOUS SURFACE TREATMENT

BITUMINOUS MATERIAL APPLIED @ 0.25 GAL.
PER SQ. YD. OF B-219
AREA B-219 - 20,396.50 X 30 ÷ 9 = 67,988.33 SQ. YDS.
67,988.33 x 0.25 = 16,997.08 GALS.
NO. 6 AGGREGATE APPLIED @ 0.008 CU. YDS.
PER SQ. YD. OF B-219
67,988.33 x 0.008 = 543.91 CU. YDS.

I-18, STABILIZED CRUSHED AGGREGATE SHOULDER MATERIAL

TOTAL NET LENGTH AS PER S.R. 2
TYPICAL SECTIONS = 20,396.50 LIN. FT.
WIDTH 2 SHOULDERS @ 5.25 FT.
WIDTH 2 SHOULDERS @ 10.25 FT.
TOTAL WIDTH = 31.0 FT.
20,396.50 x 31 x $\frac{5}{12}$ ÷ 27 = 9,757.61 CU. YDS.

I-22, SUBBASE

TOTAL NET LENGTH NORMAL SECTION 15,639.62
END AREA = 39.58
TOTAL NET LENGTH TRANSITION SECTION 1811.33
END AREA = 39.99
TOTAL NET LENGTH SUPER SECTION 2945.55
END AREA = 41.40

15,639.62 x 39.58 ÷ 27 =	22,927.10
1,811.33 x 39.99 ÷ 27 =	2,682.78
2,945.55 x 41.40 ÷ 27 =	4,516.40
TOTAL	30,126.28 CU. YDS.

E-1, COMPACTED SUBGRADE

AREA AS T-71	=	108,515	SQ. YD.
AREA AS B-219	=	67,988	SQ. YD.
AREA AS I-7	=	267	SQ. YD.
TOTAL	=	176,770	SQ. YD.

E-11, WATER M-GAL. = $\frac{\text{VOL} \times 5}{1000}$

EMBANKMENT	823,885
I-22	42,686
I-18	12,352
B-19	3,703
TOTAL VOLUME C.Y.	882,626
M-GALS.	4,413

EARTHWORK

SHEET NO.	STATION FROM	STATION TO	E-1 ROADWAY EXCAVATION CU. YDS.	EMBANKMENT PLUS 20% CU. YDS.
18	446+50	455+00	19,454	228
19	455+00	465+00	1,910	29,747
20	465+00	475+00	1,227	49,847
21	475+00	485+00	1,196	33,656
22	485+00	495+00	793	28,021
23	495+00	505+00	1,019	35,662
24	505+00	515+00	1,050	34,916
25	515+00	525+00	672	24,347
26	525+00	535+00	1,225	40,138
27	535+00	545+00	2,034	47,795
28	545+00	555+00	2,263	28,703
29	555+00	565+00	2,035	15,936
30	565+00	575+00	9,603	1,518
31	575+00	585+00	17,533	3,874
32	585+00	595+00	13,127	27,072
33	595+00	605+00	13,211	16,358
34	605+00	615+00	13,276	11,024
35	615+00	625+00	25,477	0
36	625+00	635+00	24,887	2,014
37	635+00	645+00	41,370	1,286
38	645+00	651+75	21,455	9,895
	HENDRICKS RD.			
125	21+00	25+00	345	3,691
126	25+00	35+00	184	44,825
127	35+00	39+25	103	4,682
	FRONTAGE RD. (LT.)			
142	95+00	108+00	262	1,116
	HEISLEY RD.			
147	19+50	25+00	991	13,644
148	25+00	35+00	1,491	64,219
149	35+00	40+00	142	15,607
166	RAMP A		3,696	12,347
167	RAMP B		2,969	10,453
168	RAMP C		5,087	9,728
169	RAMP D		2,901	5,227
	RAMP E			
201	0+00	10+00	6,233	14,610
202	10+00	20+00	5,652	88,594
203	20+00	30+00	5,830	91,471
	RAMP F			
204	0+00	10+00	15,064	5,927
205	10+00	18+42.04	5,945	3,637
	RAMP G			
206	10+00	20+00	467	10,712
207	20+00	28+00	7,464	22,559
208	28+00	37+00	4,618	32,738
209	37+00	46+86.23	8,478	6,748
	RAMP H			
210	0+00	8+00	3,519	57,742
211	8+00	16+31.29	13,661	5,586
	BLACKBROOK RD.			
269	37+50	10+00	4,820	7,836
270	10+00	20+00	8,734	1,697
271	20+00	30+00	10,026	50
272	30+00	40+00	15,846	0
273	40+00	50+00	25,093	50
274	50+00	53+60	899	10,771
	NIKE SITE RD.			
269	5+25	7+25	374	359
	TOTALS		375,711	988,662