

# CALCULATIONS

I T E M	QUANTITY	UNIT	
<u>CONSTRUCTION CODE TYPE 6203</u>			
<u>E-1 COMPACTED SUBGRADE</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 197+32.89	$5614.89 \times 56.17 \div 9 =$	35,043.15	SQ. YD.
FROM STA. 197+32.89 TO STA. 199+12.89	$180.00 \times 62.17 \div 9 =$	1,243.40	SQ. YD.
FROM STA. 199+12.89 TO STA. 199+72.94	$60.05 \times 68.17 \div 9 =$	454.84	SQ. YD.
U.S. 20			
FROM STA. 1+68.37 TO STA. 6+18.37	$450.00 \times 14 \div 9 =$	700.00	SQ. YD.
FROM STA. 6+18.37 TO STA. 7+78.43	$160.06 \times 28 \div 9 =$	497.96	SQ. YD.
FROM STA. 10+21.58 TO STA. 10+81.62	$60.04 \times 28 \div 9 =$	186.79	SQ. YD.
FROM STA. 10+81.62 TO STA. 15+31.62	$450.00 \times 14 \div 9 =$	700.00	SQ. YD.
<b>TOTAL</b>		38,826	SQ. YD.
<u>E-8 REMOVAL AND DISPOSAL OF EXISTING PAVEMENT</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 199+72.94	$5854.94 \times 18 \div 9 =$	11,709.88	SQ. YD.
<b>TOTAL</b>		11,710	SQ. YD.
<u>E-8 REMOVAL AND DISPOSAL OF EXISTING CURB</u>			
U.S. 20			
FROM STA. 1+68.37 TO STA. 7+78.43	$610.06 \times 2 =$	1,220.12	L.F.
FROM STA. 10+21.58 TO STA. 15+31.62	$510.04 \times 2 =$	1,020.08	
<b>TOTAL</b>		2,240	L.F.
<u>E-11 WATER</u>			
EMBANKMENT + 25%	$11,193 \text{ C.Y.} \times 5 \div 1000 =$	55.97	M. GAL.
B-19 FROM RECAP. SH'T. NO. 7	$288 \text{ C.Y.} \times 5 \div 1000 =$	1.44	
I-22 FROM RECAP. SH'T. NO. 7	$7,570 \text{ C.Y.} \times 10 \div 1000 =$	75.70	
<b>TOTAL</b>		133	M. GAL.
<u>L-9 COMMERCIAL FERTILIZER(12-12-12)</u>			
L-9 SEEDING 37,129 SY.	$= 37,129 \text{ S.Y.} \times 9 \times 20 \div 1000 \div 2000 =$	3.34	TON
<u>L-9 AGRICULTURAL LIMING MATERIAL</u>			
L-9 SEEDING 37,129 SY.	$= 37,129 \text{ S.Y.} \times 9 \times 100 \div 1000 \div 2000 =$	16.71	TON
<u>T-30 BITUMINOUS TACK COAT</u>			
U.S. 20			
FROM STA. 1+68.37 TO STA. 7+78.43	$610.06 \times 38 \div 9 \times 0.1 =$	257.58	GAL.
FROM STA. 10+21.58 TO STA. 15+31.62	$510.04 \times 38 \div 9 \times 0.1 =$	215.35	
<b>TOTAL</b>		473	GAL.
<u>T-35 ASPHALTIC CONCRETE SURFACE COURSE</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 197+32.89	$5614.89 \times 56.167 \times .00309 =$	974.50	C.Y.
FROM STA. 197+32.89 TO STA. 199+12.89	$180.00 \times 62.167 \times .00309 =$	34.58	
FROM STA. 199+12.89 TO STA. 199+72.94	$60.05 \times 68.167 \times .00309 =$	12.65	
U.S. 20			
FROM STA. 1+68.37 TO STA. 6+18.37	$450.00 \times 52.00 \times .00309 =$	72.31	
FROM STA. 6+18.37 TO STA. 7+78.43	$160.06 \times 66.00 \times .00309 =$	32.64	
FROM STA. 10+21.58 TO STA. 10+81.62	$60.04 \times 66.00 \times .00309 =$	12.24	
FROM STA. 10+81.62 TO STA. 15+31.62	$450.00 \times 52.00 \times .00309 =$	72.31	
<b>TOTAL</b>		1,211	C.Y.

EARTHWORK & SEEDING SUMMARY				
SHEET No.	DESCRIPTION	EXCAVATION CU. YDS.	EMBANKMENT CU. YDS.	SEEDING SQ. YDS.
10	ROADWAY & DRIVES	9,251	1,514	5,109
11	"	33,677	4,478	14,391
12	"	5,043	86	3,212
13	"	2,752	2,635	6,098
14	"	5,594	241	4,148
15	"	3,931	0	4,171
	<b>TOTAL =</b>	60,248	8,954	37,129
46	E-2 EXCAV. FOR STRUCT.	10		
46	E-3 CHANNEL EXCAVATION	340		
	<b>GRAND TOTAL =</b>	60,598	8,954	37,129

I T E M	QUANTITY	UNIT	
<u>B-21 WATERPROOF AGGREGATE BASE COURSE</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 197+32.89	$= 5614.89 \times 57.167 \times .021605 =$	6934.91	C.Y.
FROM STA. 197+32.89 TO STA. 199+12.89	$= 180.00 \times 63.167 \times .021605 =$	245.65	
FROM STA. 199+12.89 TO STA. 199+72.94	$= 60.05 \times 69.167 \times .021605 =$	89.74	
U.S. 20			
FROM STA. 1+68.37 TO STA. 6+18.37	$= 450.00 \times 13.50 \times .021605 =$	131.25	
FROM STA. 6+18.37 TO STA. 7+78.43	$= 160.06 \times 27.00 \times .021605 =$	93.37	
FROM STA. 10+21.58 TO STA. 10+81.62	$= 60.04 \times 27.00 \times .021605 =$	35.02	
FROM STA. 10+81.62 TO STA. 15+31.62	$= 450.00 \times 13.50 \times .021605 =$	131.25	
<b>TOTAL</b>		7661	C.Y.
<u>B-35 ASPHALTIC CONCRETE PRE-LEVELING COURSE</u>			
U.S. 20			
FROM STA. 1+68.37 TO STA. 7+78.43	$= 610.06 \times 38 \times .0417 \div 27 =$	35.80	C.Y.
FROM STA. 10+21.58 TO STA. 15+31.62	$= 510.04 \times 38 \times .0417 \div 27 =$	29.93	
<b>TOTAL</b>		66	C.Y.
<u>B-35 ASPHALTIC CONCRETE LEVELING COURSE</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 197+32.89	$= 5614.89 \times 56.167 \times .00463 =$	1460.17	C.Y.
FROM STA. 197+32.89 TO STA. 199+12.89	$= 180.00 \times 62.167 \times .00463 =$	51.81	
FROM STA. 199+12.89 TO STA. 199+72.94	$= 60.05 \times 68.167 \times .00463 =$	18.95	
U.S. 20			
FROM STA. 1+68.37 TO STA. 6+18.37	$= 450.00 \times 14.00 \times .00463 =$	29.17	
FROM STA. 6+18.37 TO STA. 7+78.43	$= 160.06 \times 28.00 \times .00463 =$	20.75	
FROM STA. 10+21.58 TO STA. 10+81.62	$= 60.04 \times 28.00 \times .00463 =$	7.78	
FROM STA. 10+81.62 TO STA. 15+31.62	$= 450.00 \times 14.00 \times .00463 =$	29.17	
<b>TOTAL</b>		1,618	C.Y.
<u>I-22 SLURRY</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 197+32.89	$= 5614.89 \times 61.00 \times .01852 =$	6343.25	C.Y.
FROM STA. 197+32.89 TO STA. 199+12.89	$= 180.00 \times 67.00 \times .01852 =$	223.35	
FROM STA. 199+12.89 TO STA. 199+72.94	$= 60.05 \times 73.00 \times .01852 =$	81.18	
U.S. 20			
FROM STA. 1+68.37 TO STA. 6+18.37	$= 450.00 \times 14.00 \times .01852 =$	116.68	
FROM STA. 6+18.37 TO STA. 7+78.43	$= 160.06 \times 28.00 \times .01852 =$	83.00	
FROM STA. 10+21.58 TO STA. 10+81.62	$= 60.04 \times 28.00 \times .01852 =$	31.13	
FROM STA. 10+81.62 TO STA. 15+31.62	$= 450.00 \times 14.00 \times .01852 =$	116.68	
<b>TOTAL</b>		6,995	C.Y.
<u>I-24 ASPHALTIC CONCRETE CURB TYPE C (70-85)</u>			
S.R. 91			
FROM STA. 141+18 TO STA. 199+72.94	$= 5854.94 \times 2 =$	11,709.88	L.F.
DEDUCT FOR DRIVES AND APRONS			
			822.00
<b>TOTAL</b>		10,888	L.F.
<u>I-12 CONCRETE CURB, STANDARD TYPE 6</u>			
U.S. 20			
FROM STA. 1+68.37 TO STA. 7+78.43	$= 610.06 \times 2 =$	1220.12	L.F.
FROM STA. 10+21.58 TO STA. 15+31.62	$= 510.04 \times 2 =$	1020.08	L.F.
<b>TOTAL</b>		2,240	L.F.
<u>I-23 PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS</u>			
S.R. 91			
FROM STA. 141+19.94 TO STA. 200+11.94	$= 5892' \div 12 =$	491	SPACES OF 12' = 492 EACH
FROM STA. 201+76 TO STA. 202+12	$= 36' \div 12 =$	3	SPACES OF 12' = 4
U.S. 20			
FROM STA. 1+68.37 TO STA. 8+16.37	$= 648' \div 12 =$	54	SPACES OF 12' = 55
FROM STA. 9+83.08 TO STA. 15+23.08	$= 540' \div 12 =$	45	SPACES OF 12' = 46
<b>TOTAL</b>		597	EACH