

PAVEMENT, BASE & SUBBASE CALCULATIONS

See Sheet No.	Station Location Calculations, etc.	E-1 Compacted Subgrade Sq. Yds.	B-35 3" Asphaltic Conc. Base Course (70-85) Sq. Yds.	B-219 3" Waterproof Aggregate Base Course Sq. Yds.	B-10 8" Aggregate Base Course Sq. Yds.	B-10 5" Aggregate Base Course Sq. Yds.	T-30 Bituminous Prime Coat Sq. Yds.	T-31 Bituminous Surf. Treat. Bit. Mat'l. Sq. Yds.	T-31 Bituminous Surf. Treat. No. 6 Aggr. Sq. Yds.	T-32 Road Mix. Bituminous Material Sq. Yds.	T-32 Seal Coat Bituminous Material Sq. Yds.	T-32 No. 46 Aggr. For Road Mix. Sq. Yds.	T-32 No. 6 or 8 Aggregate For Choke Sq. Yds.	T-32 No. 6 Aggr. For Seal Coat Sq. Yds.	T-35 1 1/2" Asphaltic Conc. Surf. Course (70-85) Sq. Yds.	T-71 8" Reinf. Portland Cem. Conc. Pavt. Sq. Yds.	T-71 10" Reinf. Portland Cem. Conc. Pavt. Sq. Yds.	B-35 1 1/2" Asphaltic Conc. Leveling Course (70-85) Sq. Yds.	I-7 Reinf. Conc. Appr. Slabs as per Plan Sq. Yds.	I-18 Slab. Crv. Appr. Slabs & Approaches 5' - 6' Sq. Yds.	I-22 Subbase Grading for B' as per Plan Cu. Yds.
8,230,239,240	Typical Section "N" 2500.15 L.F. X 16' W. X 1/2" " " " 2500.15 L.F. X 17' W. X 1/2" " " " 2500.15 L.F. X 18' W. X 0.33' D. X 1/27	4444.71				4722.51	4722.51			4444.71	4444.71	4444.71	4444.71	4444.71							555.58
230	Extra Area in Intersection Hanna Rd. Conn. Sta. 51+50(P) - 52.20 S.4 Pavt. " " " " " " " (P) = 54.09 S.4 Base " " " " " " " (P) = 55.28 S.4 Subbase @ 4" D. - 55.28 X 1/2	52.20				54.09	54.09			52.20	52.20	52.20	52.20	52.20							6.22
230	Extra Area in Intersection Hanna Rd. Conn. Sta. 10+02(P) - 42.95 S.4 Pavt. " " " " " " " (P) = 41.82 S.4 Base " " " " " " " (P) = 40.09 S.4 Subbase @ 4" D. - 40.09 X 1/2	42.95				41.82	41.82			42.95	42.95	42.95	42.95	42.95							4.45
239,240	2 Bridge Approach Slabs on Maple Grove Rd. (P) = 145.62 S.4 " " " " " " " (145.62 S.4 @ 4" D.) = 145.62 X 1/2	145.62																		145.62	16.18
5,101,102,105	Typical Section "E" 407.42 L.F. X 28.58 Avg. W. X 1/2" = 1203.78 S.4 407.42 L.F. X 29.58 Avg. W. X 1/2" 407.42 L.F. X 4' W. X 2 X 1/2" 407.42 L.F. X 20.29 S.F. Avg. End Area X 1/27	1203.78	1203.78			1339.05	1203.78								1203.78						362.15
5,102,105	Typical Section "F" 206.68 L.F. X 9.8.32 Avg. W. X 1/2" 206.68 L.F. X 49.32 Avg. W. X 1/2" Slab. Shoulder Lt. 210.0' Avg. L. X 4' W. X 1/2" Paved Shoulder Rt. 204.0' Avg. L. X 4' W. X 1/2" " " " 204.0' Avg. L. X 6.5' W. X 1/2" 206.68 L.F. X 20.57 S.F. Avg. End Area X 1/27	1109.64	1109.64			1132.61	1109.64								1109.64						362.15
5,102,105	Typical Section "G" 61.92 L.F. X 51' W. X 1/2" Slab. Shoulder Lt. 61.92 L.F. X 4' W. X 1/2" Paved Shoulder Rt. 61.92 L.F. X 6' W. X 1/2" " " " 61.92 L.F. X 6.5' W. X 1/2" 61.92 L.F. X 33.00 S.F. Avg. End Area X 1/27	350.88						41.28	41.28												306.17
6,102,103,106	Typical Section "H" 670.58 Avg. Lgth. X 51' W. X 1/2" 670.58 Avg. Lgth. X 53' W. X 0.5' D. X 1/27 2 X 670.58 Avg. Lgth. Less (637 along Ramp @ D' Intersec.) X 4' W. X 1/2" 2 X 670.58 Avg. Lgth. Less (637 along Ramp @ D' Intersec.) X 4.5' W. X 0.68' Avg. D. X 1/27 Add for Recovery Lane & Cross-over (P) = 76.72 S.4 Pavt. " " " " " " " - 76.72 S.4 @ 0.5' D. - 76.72 X 1/2	3700.96																			362.15
6,103,104,105,106	Typical Section "J" 877.86' X 51' W. X 1/2" 877.86' X 53' W. X 0.5' D. X 1/27 2 X 877.86' Less (239.3' Intersections) X 4' W. X 1/2" 2 X 877.86' Less (239.3' Intersections) X 4.5' W. X 0.68' Avg. D. X 1/27 Add for Cross-over & Lt. Turn Lane Sta. 24+39.18 to Sta. 26+49.51 (P) = 272.03 S.4 Pavt. " " " " " " " " 272.03 S.4 @ 0.5' D. - 272.03 X 1/2 Add for Lt. Turn Lane, Cross-over & Recovery Lane Sta. 33+20.07 to Sta. 36+47.44 (P) = 345.87 S.4 Pavt. " " " " " " " " 345.87 S.4 @ 0.5' D. - 345.87 X 1/2 Add for Cross-over Sta. 38+32 to Sta. 38+88 (P) = 59.62 S.4 Pavt. " " " " " " " " Subbase (P) = 41.19 S.4 @ 0.5' D. - 41.19 X 1/2 Sta. 26+49.51 to Sta. 26+74.51 & Sta. 33+20.07 to Sta. 33+20.07 Approach Slabs (P) AS-1 = 111.55 S.4, AS-4 = 84.00 S.4, AS-3 = 83.66 S.4, AS-2 = 111.55 Total = 390.76 " " " " " " " " 390.76 S.4 @ 0.5' D. - 390.76 X 1/2	4974.54																			306.17
7,104,105	Typical Section "K" Sta. 39+26.60 to Sta. 40+91 (P) = 648.44 S.4 Pavt. " " " " " " " " Base (P) = 654.40 S.4 Lt. Shoulder 15.0' X 4' W. X 1/2" Rt. Shoulder 24.0' X 4' W. X 1/2" 24.0 L.F. X 41.31 S.F. Avg. End Area X 1/27 (P) = 1508.80 S.4 Pavt. " " " " " " " " Base (P) = 1627.78 S.4 Lt. Shoulder 261.0' X 4' W. X 1/2" Rt. Shoulder 260.0' X 4' W. X 1/2" 250.0 L.F. X 32.88 S.F. Avg. End Area X 1/27	648.44	648.44		654.40		648.44								648.44						6.67
7,104,105	Typical Section "L" Sta. 40+91 to Sta. 43+50 (P) = 1508.80 S.4 Pavt. " " " " " " " " Base (P) = 1627.78 S.4 Lt. Shoulder 261.0' X 4' W. X 1/2" Rt. Shoulder 260.0' X 4' W. X 1/2" 250.0 L.F. X 32.88 S.F. Avg. End Area X 1/27	1508.80	1508.80		1627.78		1508.80								1508.80						41.78
7,104,105	Typical Section "M" Sta. 43+50 to Sta. 45+25 (P) = 145.56 S.4 Pavt. " " " " " " " " Base (P) = 155.34 S.4 Lt. Shoulder 176.0' X 4' W. X 1/2" 175.0 L.F. X 8.01 S.F. Avg. End Area X 1/27	145.56	145.56		155.34		145.56								145.56						116.00
	Sub-Totals	10,920.45	4706.31	177.28	4000.18	4818.12	9614.43	177.28	177.28	4,539.86	4539.86	4539.86	4539.86	4539.86	4706.31	9870.62					115.56

NOTE: (P) Denotes Area Obtained by Planimeter

MICHAEL BAKER, JR., CONSULTING ENGINEERS
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STATE HIGHWAY NO. 1
C-43
PAVEMENT, BASE & SUBBASE CALCULATIONS

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
B.P.	J.S.	K.A.	R.E.F.		