FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1103 (20) S-46 (7)	

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LAKE COUNTY
LAK-1-4.02

PAVEMENT, BASE & SUBBASE CALCULATIONS

See Sheet No.	Station, Locations, Calculations; Etc.	E-1 Compacted Subgrade Sq.Yds.	B-20 8" Waterbound Macadam Base Course Sq. Yds.	B-219 3" Waterpacked Aggregate Base Course Sq. Yds.	B-35 2¾" Asphaltic Conc. Base Course (70-80) Sq. Yds.	B-19 5" Aggregate Base Course Sq. Yds.	T-30 Bituminous Prime Coat Sq. Yds.	T-31 Bituminous Surf. Treat. Bit. Matrl. Sq. Yds.	Special Mixing Calc. Chloride & Crushed Aggreg. 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 9 Aggr. for Choke Sq. Yds.	T-32 No.6 Aggr. for Seal Coat Sq. Yds.	T-35 1½" Asphaltic Conc. Surf. Course (70-80) Sq. Yds.	T-71 9" Reinf. Portland Cem. Conc. Pav't. Sq. Yds.	T-71 10" Reinf. Portland Cem. Conc. Pav't. Sq. Yds.	I-7 Reinf. Conc. Approach Slabs (T-13") Sq. Yds.	I-7 Reinf. Conc. Appr. Slabs as per Plan Sq. Yds.	I-18 5" Slab. Cr. Aggr. Shldrs. & Approaches Sq. Yds.	I-22 Subbase Grading A or B as per Plan Cu. Yds.
194	Rt. Ramp "C" Sta. 7+10 To Sta. 8+62 = 151.77' Avg. Lgth. X 8.61' Avg. W. X 1/9	145.19		145.19				145.19		145.19												
	151.77' Avg. Lgth. X 9.11' Avg. W. X 1/9																				153.62	
	151.77' Avg. Lgth. X 9.11' Avg. W. X 0.52' Avg. D. X 1/27																					26.63
194 & 195	Rt. " " Sta. 8+62 To Sta. 18+32.52 = 971.79' Avg. Lgth. X 8' W. X 1/9	863.81		863.81				863.81		863.81												
	971.79' Avg. Lgth. X 8.5' W. X 1/9																				917.80	
	971.79' Avg. Lgth. X 8.5' W. X 0.52' Avg. D. X 1/27																					159.09
194	Lt. " " Sta. 6+10 To Sta. 7+10 = (P) = 34.00 S.Y.	34.00		34.00				34.00		34.00											34.00	
	(34.00 S.Y. @ 0.5' Avg. D.) = 34.0 X 1/6																					5.67
194 & 195	Lt. " " Sta. 7+10 To Sta. 18+32.52 = 1,116.02' Avg. Lgth. X 3' W. X 1/9	372.01		372.01				372.01		372.01												
	1,116.02' Avg. Lgth. X 3.5' W. X 1/9																				434.01	
	1,116.02' Avg. Lgth. X 3.5' W. X 0.57' Avg. D. X 1/27																					82.46
8 & 201	RAMP "D" Sta. 9+36.70 To Sta. 9+86.70 - Intersection (P) = 156.26 S.Y. Pvt.	156.26																	156.26			
	" " " " " " = 69.44 S.Y. Shldr.	69.44		69.44				69.44		69.44												
	" " " " " " = 75.89 S.Y. Shldr. Base																				75.80	
	" " (156.26 S.Y. Pvt. + 75.89 S.Y. Base = 232.15 S.Y. @ 0.5' Avg. D.) = 232.15 X 1/6																					38.69
201 & 202	" " Sta. 9+86.70 To Sta. 18+15 = 868.05' Avg. Lgth. X 16' W. X 1/9	1543.20																	1543.20			
	868.05' Avg. Lgth. X 16' W. X 0.5' D. X 1/27																					257.20
202	" " Sta. 18+15 To Sta. 23+15.16 = 500.16' X 15.84' Avg. W. X 1/9	880.28																	880.28			
	500.16' X 15.84' Avg. W. X 0.5' D. X 1/27																					146.71
30	" " Sta. 23+15.16 To Sta. 375+00 = 184.84' X 23.08' Avg. W. X 1/9	474.01																	474.01			
	184.84' X 23.08' Avg. W. X 0.5' D. X 1/27																					79.00
201 & 202	Rt. Ramp "D" Sta. 9+86.70 To Sta. 17+65.16 = 778.30 Avg. Lgth. X 8' W. X 1/9	691.82		691.82				691.82		691.82												
	778.30 Avg. Lgth. X 8.5 W. X 1/9																				735.06	
	778.30' Avg. Lgth. X 8.5 W. X 0.52' Avg. D. X 1/27																					127.41
202	Rt. " " Sta. 17+65.16 To Sta. 20+15.16 = 249.30 Avg. Lgth. X 9' Avg. W. X 1/9	249.30		249.30				249.30		249.30												
	249.30 Avg. Lgth. X 9.5 Avg. W. X 1/9																				263.15	
	249.30' Avg. Lgth. X 9.5' Avg. W. X 0.52' Avg. D. X 1/27																					45.61
202	Rt. " " Sta. 20+15.16 To Sta. 23+15.16 = 299.88 Avg. Lgth. X 10' W. X 1/9	333.20		333.20				333.20		333.20												
	299.88 Avg. Lgth. X 10.5 W. X 1/9																				349.86	
	299.88 Avg. Lgth. X 10.5 W. X 0.52' Avg. D. X 1/27																					60.64
201	Lt. " " Sta. 9+86.70 To Sta. 16+65 = 676.73 Avg. Lgth. X 3' W. X 1/9	225.58		225.58				225.58		225.58												
	676.73 Avg. Lgth. X 3.5' W. X 1/9																				263.17	
	676.73' Avg. Lgth. X 3.5' W. X 0.57 Avg. D. X 1/27																					50.00
201 & 202	Lt. " " Sta. 16+65 To Sta. 17+65.16 = 102.45' Avg. Lgth. X 3' W. X 1/9	34.15		34.15				34.15		34.15											34.15	
	102.45' Avg. Lgth. X 3' W. X 0.54' Avg. D. X 1/27																					6.15
202	Lt. " " Sta. 17+65.16 To Sta. 18+15 = 50.97' Avg. Lgth. X 2.5 Avg. W. X 1/9	14.16		14.16				14.16		14.16											14.16	
	50.97' Avg. Lgth. X 2.5 Avg. W. X 0.54' Avg. D. X 1/27																					2.55
202	Extra Lt Ramp "D" Curb Sta. 18+34 To Sta. 23+15.16 (P) = 158.33 S.Y. Shldr. & Base	158.33		158.33				158.33		158.33											158.33	
	(158.33 S.Y. @ 0.5' Avg. D.) = 158.33 X 1/6																					26.39
18, 19, 21, 22	16 Bridge Approach Slabs = 16 X 25' Lgth. X 24' Width X 1/9	1,067.00																		1,067.00		
& 23	" " " " Adjacent Shldrs. - 1 @ 10' & 1 @ 5' = 15' W. X 25' Lgth. X 16 X 1/9	666.67		666.67				666.67		666.67												
	" " " " Adjacent Shldr. Base - 1 @ 10.5 & 1 @ 5.5 = 16' W. X 25' L. X 16 X 1/9																				711.11	
	" " " " Subbase - 16 X 25 Lgth. X 28.79 Sq. Ft. End Area. X 1/27																					426.52
	KIRTLAND ROAD																					
6	Typical Section "E" 140.25 L.F.; "F" 250.00 L.F.; Total = 390.25' X 20' W. X 1/9	867.22			867.22											867.22						
	" " " " " = 390.25' X 21' W. X 1/9		910.58				910.58															
	" " " 390.25' X 22' W. X 0.5' Depth x 1/27																					158.99
179, 180 & 239	2 Bridge Approach Slabs @ 25' Lgth. (P) = 91.72 S.Y. Each	183.44																		183.44		
	" " " Subbase = 50' X 13.51 Sq. Ft. End Area. X 1/27																					25.02
	RANDALL ROAD																					
6	Typical Section "G" 175.00 L.F.; "H" 330.39 L.F.; Total = 505.39' X 16' W. X 1/9	898.47									898.47	898.47	898.47	898.47	898.47							
	" " " " " = 505.39' X 17' W. X 1/9					954.63	954.63															
	" " " 505.39' X 18' W. X 0.33' Depth x 1/27																					111.19
178	Extra Area. In Turnout Rt & Lt Sta. 9+55.39 (P) = 57.78 S.Y. Pvt.	57.78									57.78	57.78	57.78	57.78	57.78							
	" " " " " " (P) = 62.77 S.Y. Base					62.77	62.77															
	" " " " Subbase (P) = 67.74 S.Y. @ 0.33' Depth) = 67.74 X 1/9																					7.53
	S.R. NO. 306 Sta. 272+85 To Sta. 281+71.85 = **I-1103(20)** Portion																					
7 & 212	Typical Section "J" Sta. 272+85 To Sta. 275+05.44 (P) = 1503.91 S.Y. Pvt.	1503.91															1503.91					
7 & 209	" " " " " = 262.88 L.F. X 4' W. X 1/9								116.84												116.84	
	1503.91 S.Y. Pvt. Area + 67.05 S.Y. Median Area = 1570.91 S.Y. @ 0.5' Depth) = 1570.91 X 1/6																					261.82
	Subbase Under Shldr. - 262.88' X 4.5' W. X 0.75' Avg. Depth x 1/27																					32.86
209 & 239	Sta. 275+05.44 To Sta. 275+30.44 = 25 L.F. Bridge Approach Slabs (P)	194.33																		194.33		
	194.33 S.Y. Slab Areas + 8.00 S.Y. Median Area = 202.33 S.Y. @ 0.5 Avg. D) = 202.33 1/6																					33.72
209 & 239	Sta. 279+27.94 To Sta. 279+52.94 = 25 L.F. Bridge Approach Slabs.	193.71																		193.71		
	193.71 S.Y. Slab Area + 11.00 S.Y. Median Area = 204.71 S.Y. @ 0.5 Avg. D) = 204.71 X 1/6																					34.12
7 & 213	Typical Section "J" Sta. 279+52.94 To Sta. 281+71.85 (P) = 1503.92 S.Y. Pavt.	1503.92															1503.92					
	Sub Totals:	13,381.19	910.58	3,857.66	867.22	1017.40	1,927.98	3,857.66	116.84	3,857.66	956.25	956.25	956.25	956.25	956.25	867.22	1,503.92	3,053.75	4,067.00	571.48	4,261.15	2,205.97

NOTE: (P) Denotes Area Obtained By Planimeter

MICHAEL BAKER, JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE HIGHWAY NO. I
C-44
PAVEMENT, BASE & SUBBASE CALCULATIONS

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
B.P.	A.H.	K.A.	E.H.		