

FUNCTIONAL SYSTEM LENGTH - 1999
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

TABLE HM-64
SHEET 1 OF 4

OCTOBER 2000

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	INTERSTATE									TOTAL REPORTED
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	
Alabama	-	228	260	73	33	4	3	-	-	601
Alaska	-	23	318	346	218	79	35	-	11	1,030
Arizona	-	747	205	30	8	5	1	-	1	997
Arkansas	15	-	56	35	78	87	51	41	31	379
California	-	7	613	302	235	124	40	13	27	1,361
Colorado	-	73	492	103	62	34	4	-	-	768
Connecticut	-	-	58	20	13	6	2	1	2	102
Delaware	-	-	-	-	-	-	-	-	-	-
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-
Florida	22	769	70	16	49	24	3	-	-	931
Georgia	-	596	185	26	-	-	-	-	-	807
Hawaii	6	-	-	-	-	-	-	-	-	-
Idaho	-	220	198	94	3	3	4	3	1	526
Illinois	-	43	549	469	282	159	10	-	2	1,514
Indiana	-	454	341	52	4	1	-	-	-	852
Iowa	1	101	308	190	33	-	1	-	-	633
Kansas	-	201	342	116	28	6	5	-	-	698
Kentucky	-	133	250	23	95	35	-	-	-	536
Louisiana	65	-	142	149	95	105	33	6	17	547
Maine	29	15	222	36	8	2	-	-	-	283
Maryland	1	28	157	30	10	1	-	-	-	226
Massachusetts	-	-	90	65	6	-	-	-	1	162
Michigan	-	67	257	187	127	55	23	14	11	741
Minnesota	-	216	315	56	71	23	1	-	-	682
Mississippi	-	85	230	114	62	40	19	8	-	558
Missouri	-	3	178	328	184	103	9	1	1	807
Montana	-	339	516	139	83	45	7	5	-	1,134
Nebraska	-	175	107	75	51	21	9	-	-	438
Nevada	-	126	265	48	20	11	7	1	1	479
New Hampshire	-	51	95	28	2	-	-	-	-	176
New Jersey	9	1	41	41	9	11	4	3	1	111
New Mexico	-	-	89	442	261	59	17	16	8	892
New York	15	-	533	154	87	51	40	30	29	924
North Carolina	-	69	256	143	90	65	6	20	1	650
North Dakota	-	143	276	90	20	1	-	-	-	530
Ohio	-	293	421	95	15	3	2	-	-	829
Oklahoma	-	81	339	162	102	14	22	1	1	722
Oregon	1	-	205	340	35	-	-	-	-	580
Pennsylvania	1	127	733	216	69	31	12	11	8	1,207
Rhode Island	-	-	18	3	-	-	-	-	-	21
South Carolina	-	275	295	81	13	1	6	-	-	671
South Dakota	2	2	262	210	41	99	12	-	-	626
Tennessee	-	128	530	58	13	5	-	-	-	734
Texas	-	407	1,378	304	84	38	1	-	-	2,212
Utah	-	166	368	127	44	54	9	2	-	770
Vermont	-	-	200	31	32	9	2	5	2	281
Virginia	-	18	586	109	9	2	1	-	-	725
Washington	-	211	218	51	19	-	2	-	-	501
West Virginia	-	47	246	57	46	35	8	9	8	456
Wisconsin	1	66	235	167	53	41	5	1	-	568
Wyoming	-	384	352	71	14	5	-	-	-	826
U.S. Total	168	7,118	14,400	6,102	2,916	1,497	416	191	164	32,804
Puerto Rico	-	-	8	23	51	13	5	-	3	103
Grand Total	168	7,118	14,408	6,125	2,967	1,510	421	191	167	32,907

**FUNCTIONAL SYSTEM LENGTH - 1999
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL**

TABLE HM-64
SHEET 2 OF 4

OCTOBER 2000

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	OTHER PRINCIPAL ARTERIAL										MINOR ARTERIAL 3/									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	517	1,175	314	47	9	9	2	-	2,073	-	486	2,100	886	145	76	-	-	-	3,693
Alaska	455	7	109	39	148	33	15	3	-	354	-	-	52	17	107	12	-	37	-	225
Arizona	-	241	402	266	143	74	26	14	20	1,186	-	154	374	333	261	93	25	17	-	1,257
Arkansas	214	9	607	656	380	220	95	28	18	2,013	-	-	705	969	426	476	360	46	17	2,999
California	3	31	1,042	1,207	820	440	94	48	4	3,686	-	293	1,266	1,767	1,550	1,178	351	240	260	6,905
Colorado	-	89	861	582	321	244	76	9	16	2,198	-	443	848	1,371	286	403	162	97	72	3,682
Connecticut	-	-	54	84	69	35	16	4	1	263	-	-	3	123	254	81	19	9	8	497
Delaware	9	5	88	93	18	3	4	3	1	215	-	-	50	30	8	7	4	7	4	110
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	71	1,681	1,489	294	109	45	25	2	1	3,646	242	834	1,208	197	65	24	23	-	6	2,357
Georgia	8	2,123	614	47	-	5	-	-	-	2,789	-	4,364	1,026	212	-	-	-	-	-	5,602
Hawaii	125	-	-	-	-	-	-	-	-	-	376	-	-	-	-	-	-	-	-	-
Idaho	-	269	665	464	196	54	15	4	2	1,669	-	257	441	385	124	67	17	-	13	1,304
Illinois	-	74	856	646	538	276	150	51	33	2,624	-	794	878	1,211	473	1,025	70	232	145	4,828
Indiana	4	335	771	331	151	82	49	2	1	1,722	-	317	893	615	166	215	20	10	1	2,237
Iowa	187	443	1,065	623	418	372	243	43	65	3,272	384	528	839	377	665	544	310	179	129	3,571
Kansas	43	710	1,737	421	143	80	26	8	2	3,127	1	1,052	2,168	794	130	85	20	23	23	4,295
Kentucky	-	320	1,143	335	190	54	9	-	1	2,052	-	1	810	389	309	61	37	-	1	1,608
Louisiana	29	17	394	245	183	144	126	76	22	1,207	-	3	405	282	448	154	101	86	96	1,575
Maine	7	57	410	174	74	43	7	11	6	782	430	-	360	72	115	23	51	19	1	641
Maryland	11	48	330	117	18	7	10	3	4	537	-	22	498	285	86	30	32	-	-	953
Massachusetts	5	-	56	144	40	40	19	4	3	306	103	-	21	187	225	73	14	15	33	568
Michigan	12	470	1,128	556	289	168	68	36	35	2,750	-	867	1,666	665	395	325	51	36	67	4,072
Minnesota	-	1,107	1,321	725	287	87	29	10	11	3,577	-	1,322	2,903	1,098	577	251	83	98	56	6,388
Mississippi	-	168	882	469	248	91	19	17	9	1,903	-	5	1,309	1,318	850	242	99	45	1	3,869
Missouri	14	21	498	949	923	459	159	40	43	3,092	-	-	540	1,159	622	640	325	114	46	3,446
Montana	-	259	1,359	554	215	140	63	24	9	2,623	-	228	1,398	719	400	191	50	-	-	2,986
Nebraska	-	602	862	553	295	133	158	72	38	2,713	-	993	1,546	723	226	146	205	128	245	4,212
Nevada	18	131	608	225	233	148	25	-	-	1,370	-	96	284	196	124	14	-	11	-	725
New Hampshire	-	58	257	77	21	21	18	6	5	463	-	33	238	110	66	16	11	7	6	487
New Jersey	85	-	36	116	85	121	34	7	49	448	76	-	26	162	83	95	13	-	32	411
New Mexico	5	47	575	578	289	159	56	42	50	1,796	33	70	329	451	328	142	248	64	202	1,834
New York	38	2	965	392	161	112	81	33	71	1,817	33	10	1,972	1,010	332	220	122	175	250	4,091
North Carolina	-	75	1,087	502	253	198	69	23	20	2,227	-	29	838	849	645	334	188	34	98	3,015
North Dakota	-	528	1,442	664	235	34	6	21	1	2,931	-	335	1,366	658	151	-	2	-	-	2,512
Ohio	-	298	1,408	357	105	30	13	3	7	2,221	-	171	1,799	570	194	21	37	25	12	2,829
Oklahoma	-	39	996	664	326	202	66	24	19	2,365	-	3	582	1,184	512	337	90	19	22	2,749
Oregon	119	32	322	1,400	780	136	41	3	1	2,715	-	22	162	618	781	351	235	27	16	2,212
Pennsylvania	2	138	983	673	349	193	87	39	21	2,483	-	79	1,865	1,242	908	564	290	52	105	5,105
Rhode Island	-	-	24	23	9	5	1	2	-	64	-	3	36	15	11	7	-	1	2	75
South Carolina	-	73	945	283	83	38	19	10	4	1,455	-	250	1,693	844	476	307	57	7	21	3,655
South Dakota	143	34	530	525	524	414	151	117	103	2,398	174	16	756	964	690	436	182	126	5	3,175
Tennessee	75	118	978	379	195	85	18	2	1	1,776	23	51	1,748	733	339	340	175	-	-	3,386
Texas	-	329	3,366	2,196	683	203	72	25	13	6,887	-	324	3,850	3,550	1,219	443	155	85	23	9,649
Utah	-	27	451	338	120	55	17	-	-	1,008	13	57	330	623	328	159	10	15	-	1,522
Vermont	-	-	77	57	69	59	25	12	17	316	-	-	268	133	78	109	44	43	59	734
Virginia	-	6	686	522	191	107	16	11	8	1,547	-	-	604	1,395	1,121	245	18	32	9	3,424
Washington	-	338	1,277	351	79	25	5	4	2	2,081	25	160	932	518	238	51	6	19	29	1,953
West Virginia	-	102	397	316	172	51	19	19	4	1,080	-	59	381	422	305	194	44	66	63	1,534
Wisconsin	-	306	1,032	815	552	307	161	107	84	3,364	-	604	1,373	1,125	768	399	254	415	46	4,984
Wyoming	3	841	942	123	33	37	-	3	3	1,982	-	145	726	306	1	74	4	-	52	1,308
U.S. Total	1,685	13,125	39,302	22,464	11,810	6,078	2,539	1,027	828	97,173	1,913	15,480	46,465	33,862	18,611	11,280	4,614	2,661	2,276	135,249
Puerto Rico	22	-	-	2	8	37	19	3	5	74	134	-	-	-	5	59	48	21	21	154
Grand Total	1,707	13,125	39,302	22,466	11,818	6,115	2,558	1,030	833	97,247	2,047	15,480	46,465	33,862	18,616	11,339	4,662	2,682	2,297	135,403

FUNCTIONAL SYSTEM LENGTH - 1999
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-64
SHEET 3 OF 4

OCTOBER 2000

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	INTERSTATE									TOTAL REPORTED
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	
Alabama	-	85	115	36	34	27	7	-	-	304
Alaska	-	1	31	12	2	7	1	-	-	54
Arizona	-	96	36	31	8	2	-	-	-	173
Arkansas	4	2	13	31	27	33	18	10	9	143
California	1	24	169	214	272	231	103	62	18	1,093
Colorado	-	30	80	46	16	12	1	-	-	185
Connecticut	-	1	80	90	35	19	8	5	6	244
Delaware	1	-	7	11	7	3	6	2	3	39
Dist. of Columbia	1	-	3	2	-	1	1	4	3	14
Florida	33	269	144	30	20	17	6	-	-	486
Georgia	1	307	118	8	-	1	2	-	-	436
Hawaii	49	-	-	-	-	-	-	-	-	-
Idaho	-	25	29	9	4	13	4	1	-	85
Illinois	1	40	190	200	115	61	40	3	-	649
Indiana	-	72	165	53	12	9	4	2	-	317
Iowa	-	2	48	36	30	10	19	2	-	147
Kansas	2	7	74	69	19	1	1	1	-	172
Kentucky	-	61	85	23	36	6	12	3	-	226
Louisiana	59	-	21	72	25	62	29	3	11	223
Maine	10	1	36	6	1	-	-	-	-	44
Maryland	9	5	114	74	24	9	9	5	5	245
Massachusetts	2	-	182	147	43	23	6	1	-	402
Michigan	1	20	179	112	94	44	25	13	12	499
Minnesota	1	66	105	41	12	4	2	-	-	230
Mississippi	-	2	20	46	45	10	2	3	-	128
Missouri	-	-	47	119	107	68	17	6	6	370
Montana	-	4	27	12	9	4	1	-	-	57
Nebraska	-	2	19	15	3	3	1	-	1	44
Nevada	-	11	26	21	6	14	-	-	-	78
New Hampshire	-	14	26	7	-	-	1	-	-	48
New Jersey	30	2	52	114	44	40	5	7	7	271
New Mexico	-	-	12	38	28	17	5	2	6	108
New York	17	-	259	135	81	65	58	32	82	712
North Carolina	-	2	163	80	59	24	9	22	10	369
North Dakota	-	14	20	4	2	-	-	-	-	40
Ohio	-	124	406	142	35	19	6	7	3	742
Oklahoma	-	3	55	49	32	28	22	11	9	209
Oregon	4	-	27	76	30	8	-	1	-	142
Pennsylvania	3	16	254	150	62	35	16	10	5	548
Rhode Island	-	-	16	13	13	5	1	-	-	48
South Carolina	-	43	78	21	7	4	5	-	-	158
South Dakota	-	-	9	8	8	17	5	2	1	50
Tennessee	-	63	150	69	35	12	8	2	-	339
Texas	-	39	400	308	178	76	18	2	-	1,021
Utah	-	16	63	43	27	10	7	1	-	167
Vermont	-	-	27	6	7	-	-	-	-	40
Virginia	-	-	159	118	84	13	10	8	1	393
Washington	1	65	108	29	24	27	5	4	-	262
West Virginia	-	11	53	15	6	5	3	1	-	94
Wisconsin	4	15	55	34	31	32	4	1	-	172
Wyoming	-	23	26	24	8	4	1	-	1	87
U.S. Total	234	1,583	4,581	3,049	1,807	1,135	514	239	199	13,107
Puerto Rico	1	-	5	48	40	23	18	7	6	147
Grand Total	235	1,583	4,586	3,097	1,847	1,158	532	246	205	13,254

FUNCTIONAL SYSTEM LENGTH - 1999 MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-64
SHEET 4 OF 4

OCTOBER 2000

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	OTHER FREEWAYS AND EXPRESSWAYS										OTHER PRINCIPAL ARTERIAL									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama	-	2	13	2	2	1	-	-	-	20	-	258	473	171	69	21	7	3	3	1,005
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	7	23	11	6	4	2	2	55
Arizona	1	28	46	23	6	4	-	-	-	107	-	214	505	110	96	63	19	5	17	1,029
Arkansas	21	4	36	10	9	24	9	4	7	103	89	-	57	113	89	88	40	34	68	489
California	-	42	219	316	368	270	88	45	26	1,374	3	91	273	533	974	1,001	964	768	1,225	5,829
Colorado	-	11	72	88	35	12	3	4	-	225	15	13	104	257	115	86	64	148	73	860
Connecticut	-	-	53	71	26	21	15	6	6	198	-	-	14	93	142	148	82	50	78	607
Delaware	-	-	5	5	-	1	-	-	-	11	1	17	48	33	13	8	3	3	8	133
Dist. of Columbia	2	-	-	-	1	5	4	1	6	17	4	-	-	1	2	4	8	14	58	87
Florida	11	155	203	33	13	7	2	-	1	414	248	514	1,134	386	211	90	37	34	33	2,439
Georgia	2	104	48	5	2	3	2	-	-	164	13	950	620	124	34	13	3	-	-	1,744
Hawaii	34	-	-	-	-	-	-	-	-	-	137	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	4	15	43	42	50	35	22	25	25	257
Illinois	-	-	10	39	22	6	1	2	4	84	50	85	652	501	432	333	229	168	159	2,559
Indiana	7	16	22	31	21	17	12	2	9	130	442	50	250	235	192	143	100	37	86	1,093
Iowa	-	-	-	-	-	-	-	-	-	-	112	62	110	90	84	91	49	33	84	603
Kansas	9	14	43	34	14	14	4	2	2	127	432	15	57	45	23	27	20	16	12	215
Kentucky	-	20	30	22	15	5	1	-	-	93	-	37	246	245	49	44	14	8	7	650
Louisiana	11	-	4	5	10	3	9	1	1	33	139	7	126	97	76	95	76	85	153	715
Maine	1	-	10	4	2	1	1	-	-	18	30	1	43	36	17	24	8	7	9	145
Maryland	9	11	85	51	31	17	12	7	12	226	3	16	122	135	106	118	72	73	214	856
Massachusetts	10	-	74	72	27	7	2	-	6	188	469	3	34	142	237	224	160	108	177	1,085
Michigan	-	8	35	54	50	37	23	10	8	225	1	12	106	155	193	396	271	262	577	1,972
Minnesota	-	26	58	42	17	-	2	-	-	145	1	89	182	114	80	36	22	10	23	556
Mississippi	-	6	15	11	4	5	-	-	-	41	-	20	145	145	127	84	39	27	78	665
Missouri	6	-	21	54	94	65	55	18	6	313	384	-	21	95	129	139	112	62	112	670
Montana	-	-	-	-	-	-	-	-	-	-	2	2	27	38	31	23	13	14	23	171
Nebraska	-	-	1	7	4	3	2	1	-	18	104	12	26	32	38	50	46	31	75	310
Nevada	-	4	23	14	2	1	-	-	-	44	-	8	64	61	27	22	15	12	17	226
New Hampshire	-	2	33	3	2	1	-	-	-	41	-	11	66	29	25	16	8	9	11	175
New Jersey	89	-	36	72	55	27	24	5	5	224	351	-	41	86	190	215	144	104	182	962
New Mexico	3	-	-	-	-	-	-	-	-	-	36	12	70	120	95	67	34	37	43	478
New York	24	6	182	148	102	108	65	64	94	769	212	-	299	318	263	249	160	129	836	2,254
North Carolina	-	5	116	43	39	41	18	5	6	273	-	14	328	338	248	169	104	48	118	1,367
North Dakota	-	-	-	-	-	-	-	-	-	-	-	9	37	30	23	21	13	8	22	163
Ohio	-	33	158	101	41	31	14	4	3	385	-	56	437	461	359	282	147	102	128	1,972
Oklahoma	-	-	44	33	25	13	12	5	3	135	5	-	63	125	102	130	91	111	175	797
Oregon	2	-	4	34	14	-	-	-	-	52	16	2	40	129	163	150	79	42	46	651
Pennsylvania	2	14	132	115	92	59	42	17	12	483	17	17	505	351	385	411	209	170	204	2,252
Rhode Island	-	1	28	22	14	2	1	-	-	68	-	1	52	99	78	47	30	27	17	351
South Carolina	-	10	34	11	4	9	-	-	1	69	-	13	201	205	108	76	31	23	44	701
South Dakota	-	-	-	-	-	-	-	-	-	-	110	-	8	1	6	5	2	2	1	25
Tennessee	14	7	49	32	12	8	1	4	1	114	131	28	457	296	190	105	55	29	35	1,195
Texas	1	40	349	345	271	159	29	6	1	1,200	12	62	770	958	693	519	1,436	187	288	4,913
Utah	-	1	6	1	-	-	-	-	-	8	-	5	85	66	48	45	15	6	8	278
Vermont	-	-	10	5	2	1	-	-	-	18	-	-	10	21	20	17	7	8	15	98
Virginia	25	-	67	72	32	12	5	3	2	193	42	1	172	300	215	166	89	69	85	1,097
Washington	4	31	153	55	33	16	11	4	4	307	807	25	92	72	47	22	10	9	18	295
West Virginia	-	-	1	3	3	2	-	-	-	9	-	6	59	56	29	28	12	9	5	204
Wisconsin	-	6	29	32	35	36	19	8	8	173	2	13	100	166	181	219	177	144	323	1,323
Wyoming	-	1	2	-	-	-	-	-	-	3	16	30	73	30	27	13	11	3	3	190
U.S. Total	288	608	2,559	2,120	1,551	1,054	488	228	234	8,842	4,440	2,796	9,454	8,309	7,142	6,384	5,363	3,315	6,003	48,766
Puerto Rico	2	-	-	11	4	15	9	4	5	48	57	-	2	17	29	48	39	22	27	184
Grand Total	290	608	2,559	2,131	1,555	1,069	497	232	239	8,890	4,497	2,796	9,456	8,326	7,171	6,432	5,402	3,337	6,030	48,950

1/ Data are reported as the International Roughness Index (IRI) in inches per mile. Reference: World Bank Technical Paper Number 46, 1986. Lower IRI represents smoother riding roadways; to obtain a comprehensive assessment of pavement condition, additional measures of pavement distress are needed.

2/ May include sections entirely on structures and unpaved miles.

3/ Estimated from sample data.