

**NATIONAL HIGHWAY SYSTEM LENGTH - 2009
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL**

TABLE HM-47
SHEET 1 OF 4

MARCH 2012

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	INTERSTATE SYSTEM										OTHER									
	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 3/	2	403	92	19	11	-	12	-	-	537	19	892	1,011	92	18	1	-	-	-	2,014
Alaska	-	39	352	323	206	25	59	-	-	1,004	249	18	150	74	149	105	72	69	106	742
Arizona 3/	-	561	376	37	5	3	-	-	-	982	5	509	347	121	92	32	7	1	1	1,110
Arkansas 3/	1	256	131	25	12	9	10	2	2	447	9	146	881	468	205	76	25	10	12	1,823
California	-	213	491	266	142	77	36	29	27	1,282	-	191	1,705	779	462	139	74	16	4	3,369
Colorado 3/	-	81	274	160	106	43	18	-	-	682	-	142	935	476	165	67	47	14	13	1,859
Connecticut	-	5	34	3	0	1	-	-	-	43	-	4	55	52	24	18	4	0	0	158
Delaware	-	-	-	-	-	-	-	-	-	-	-	22	114	27	3	3	1	-	0	170
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida 3/	-	498	251	-	-	-	-	-	-	749	-	560	822	95	13	17	-	4	-	1,511
Georgia	20	416	216	60	2	-	-	1	-	695	8	1,978	1,127	38	8	4	-	2	1	3,158
Hawaii	-	-	-	-	6	-	-	-	-	6	-	1	13	15	42	18	6	9	3	105
Idaho	-	141	310	39	18	7	-	6	1	522	-	237	1,030	254	73	24	27	2	2	1,651
Illinois	-	471	619	206	53	7	-	-	0	1,356	-	123	692	543	174	78	30	11	9	1,660
Indiana	-	87	418	156	36	6	-	-	-	704	-	288	637	167	94	21	5	4	3	1,220
Iowa	0	146	259	129	56	25	6	4	3	628	11	266	687	479	306	160	72	41	29	2,040
Kansas 3/	10	110	439	81	16	-	-	-	-	646	37	224	1,709	513	78	11	5	1	1	2,542
Kentucky	-	338	188	13	13	-	-	-	-	553	0	645	896	103	77	9	4	1	-	1,735
Louisiana	-	100	192	101	66	73	1	1	-	534	-	52	484	240	94	78	59	38	8	1,052
Maine	-	96	143	44	13	3	0	-	-	299	-	116	345	128	82	47	24	26	26	794
Maryland	-	71	105	12	1	0	0	-	0	189	-	171	225	35	18	13	5	6	1	474
Massachusetts	-	20	62	5	4	-	-	-	-	91	-	10	44	68	30	5	9	0	-	166
Michigan	-	187	245	72	33	50	6	10	4	607	-	864	928	166	117	44	13	7	5	2,144
Minnesota 3/	4	100	279	89	88	51	1	17	5	630	23	455	1,058	512	260	123	85	5	5	2,503
Mississippi	-	125	282	37	32	8	2	2	-	488	-	285	866	226	184	62	26	38	7	1,694
Missouri	-	332	382	3	2	4	-	-	-	722	-	536	1,245	368	192	62	14	2	3	2,423
Montana	-	365	695	19	31	7	8	4	0	1,130	-	471	1,528	370	166	74	5	2	1	2,616
Nebraska	-	204	187	30	-	-	-	-	-	420	-	474	1,004	406	187	126	52	40	19	2,308
Nevada	-	350	60	18	21	3	0	0	-	451	-	1,004	407	3	1	0	2	1	1	1,419
New Hampshire 3/	-	69	54	23	4	-	-	-	-	150	-	76	193	67	32	19	14	4	2	407
New Jersey	-	12	30	14	8	1	-	0	-	65	-	9	66	73	62	27	11	9	2	259
New Mexico	-	499	285	55	4	3	-	-	-	844	-	921	469	197	98	21	3	1	1	1,709
New York	0	127	502	90	43	29	29	18	5	842	24	105	843	342	114	53	9	8	12	1,485
North Carolina 3/	-	115	284	60	36	38	8	1	-	542	-	249	1,105	433	113	36	13	4	2	1,955
North Dakota	-	234	256	29	-	-	-	-	-	519	-	554	962	259	205	86	17	4	2	2,088
Ohio 3/	-	260	375	63	11	11	1	2	1	724	3	268	895	259	141	64	14	5	7	1,653
Oklahoma 3/	-	154	358	99	38	17	12	6	-	684	-	248	909	491	185	111	68	50	36	2,098
Oregon	-	25	348	162	19	-	-	-	-	554	-	356	1,375	493	264	105	15	7	5	2,619
Pennsylvania 3/	1	461	428	154	36	13	2	1	1	1,096	3	238	824	385	200	96	27	11	7	1,788
Rhode Island	-	1	21	0	-	-	-	-	-	21	-	-	2	7	9	7	7	5	5	47
South Carolina	-	184	279	73	13	20	9	0	3	581	-	35	643	273	127	30	3	1	2	1,113
South Dakota 3/	-	72	340	144	40	5	-	-	-	601	2	436	1,034	321	192	79	42	41	39	2,184
Tennessee	-	604	61	9	7	0	-	4	2	687	-	608	713	150	52	18	3	2	4	1,548
Texas 3/	-	501	1,307	191	39	19	1	-	-	2,058	18	612	3,264	1,604	584	68	14	19	2	6,167
Utah	-	166	391	98	63	5	1	-	-	725	-	36	417	256	148	69	38	3	3	971
Vermont	-	102	139	24	8	3	0	0	4	280	-	15	209	37	25	20	4	6	5	320
Virginia	-	89	522	37	17	2	0	-	0	667	0	36	822	291	97	27	16	3	1	1,293
Washington	-	97	205	54	76	35	-	-	-	467	-	250	1,236	340	122	42	25	9	1	2,025
West Virginia	-	49	255	33	18	6	7	-	2	371	-	46	540	236	134	49	22	6	13	1,046
Wisconsin 3/	-	113	193	101	41	14	7	9	-	478	-	662	875	499	269	96	31	21	8	2,461
Wyoming	-	185	471	125	32	1	1	0	-	816	-	151	983	569	175	36	34	1	6	1,956
U.S. Total	39	9,832	14,188	3,585	1,526	623	238	117	60	30,170	416	16,593	39,323	14,399	6,666	2,577	1,100	571	423	81,653
Puerto Rico	-	-	1	10	4	11	5	4	7	42	-	-	1	3	13	2	-	-	-	19
Grand Total	39	9,832	14,189	3,595	1,530	634	243	121	67	30,211	416	16,593	39,324	14,402	6,679	2,580	1,100	571	423	81,672

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2009
MILES BY MEASURED PAVEMENT ROUGHNESS - RURAL

TABLE HM-47
SHEET 2 OF 4

MARCH 2012

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	TOTAL RURAL NHS									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama 3/	21	1,296	1,102	111	29	1	13	-	-	2,552
Alaska	249	57	501	397	355	130	131	69	106	1,747
Arizona 3/	5	1,070	723	158	96	35	7	1	1	2,091
Arkansas 3/	11	401	1,013	493	217	86	35	12	13	2,270
California	-	404	2,196	1,045	604	216	110	45	31	4,650
Colorado 3/	-	223	1,209	637	270	110	64	14	13	2,540
Connecticut	-	10	89	55	24	19	4	0	0	201
Delaware	-	22	114	27	3	3	1	-	0	170
Dist. of Columbia	-	-	-	-	-	-	-	-	-	-
Florida 3/	-	1,058	1,072	95	13	17	-	4	-	2,259
Georgia	28	2,394	1,343	98	10	4	-	3	1	3,852
Hawaii	-	1	13	15	48	18	6	9	3	112
Idaho	-	378	1,341	294	91	31	27	8	3	2,172
Illinois	-	594	1,311	749	227	85	30	11	9	3,016
Indiana	-	375	1,055	323	131	27	5	4	3	1,923
Iowa	11	412	946	608	362	184	78	45	33	2,668
Kansas 3/	47	334	2,148	594	94	11	5	1	1	3,188
Kentucky	0	983	1,084	117	90	9	4	1	-	2,288
Louisiana	-	152	676	340	160	151	59	39	8	1,586
Maine	-	212	488	172	95	50	24	26	26	1,093
Maryland	-	242	330	47	19	13	6	6	1	663
Massachusetts	-	30	106	73	34	5	9	0	-	258
Michigan	-	1,051	1,173	238	150	94	19	16	9	2,751
Minnesota 3/	26	555	1,337	601	347	174	86	22	10	3,132
Mississippi	-	410	1,148	263	216	70	28	40	7	2,182
Missouri	-	868	1,627	371	195	65	14	2	3	3,145
Montana	-	835	2,223	389	197	81	14	6	1	3,745
Nebraska	-	677	1,191	436	187	126	52	40	19	2,728
Nevada	-	1,354	467	21	22	3	2	1	1	1,870
New Hampshire 3/	-	145	247	90	36	19	14	4	2	557
New Jersey	-	21	96	87	70	28	11	9	2	324
New Mexico	-	1,419	753	251	102	24	3	1	1	2,554
New York	25	231	1,345	432	157	82	38	26	16	2,327
North Carolina 3/	-	364	1,389	493	149	75	21	4	2	2,497
North Dakota	-	788	1,218	288	205	86	17	4	2	2,607
Ohio 3/	3	528	1,270	322	152	76	14	7	7	2,376
Oklahoma 3/	-	402	1,267	590	224	128	80	56	36	2,783
Oregon	-	381	1,723	655	283	105	15	7	5	3,173
Pennsylvania 3/	4	699	1,253	539	236	109	29	12	7	2,884
Rhode Island	-	1	22	7	11	9	7	7	5	69
South Carolina	-	219	921	346	140	50	13	2	4	1,694
South Dakota 3/	2	508	1,375	465	233	84	42	41	39	2,787
Tennessee	-	1,212	774	159	59	18	3	6	6	2,236
Texas 3/	18	1,113	4,571	1,795	623	87	15	19	2	8,225
Utah	-	202	809	353	211	74	40	3	3	1,696
Vermont	-	117	348	61	32	23	4	6	9	600
Virginia	0	125	1,344	329	113	29	16	3	2	1,960
Washington	-	347	1,442	395	197	77	25	9	1	2,492
West Virginia	-	95	795	269	152	56	29	6	15	1,417
Wisconsin 3/	-	775	1,068	600	310	109	37	30	8	2,937
Wyoming	5	336	1,455	695	207	37	36	1	6	2,773
U.S. Total	455	26,425	53,512	17,985	8,191	3,202	1,337	687	481	111,819
Puerto Rico	-	-	3	13	17	13	5	4	7	61
Grand Total	455	26,425	53,515	17,998	8,208	3,215	1,342	691	488	111,880

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2009
MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-47
SHEET 3 OF 4

MARCH 2012

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/																			
	INTERSTATE SYSTEM										OTHER									
	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 3/	15	185	110	21	12	16	4	1	1	350	37	314	317	47	18	8	2	-	3	709
Alaska	-	11	40	22	3	1	0	-	1	78	-	2	12	17	18	2	5	2	2	76
Arizona 3/	-	84	83	17	4	-	-	-	-	188	18	150	126	53	74	36	18	7	6	470
Arkansas 3/	-	42	84	35	18	18	5	1	3	206	5	13	76	54	30	37	20	14	17	261
California	-	36	344	277	192	138	69	78	44	1,178	-	28	507	422	301	234	96	67	87	1,741
Colorado 3/	-	36	108	64	27	18	15	1	2	271	-	24	232	156	166	75	41	24	36	754
Connecticut	-	35	146	65	32	13	6	3	4	303	-	18	123	135	85	44	21	16	17	459
Delaware	-	2	20	10	3	3	3	1	0	41	-	17	72	20	9	5	1	1	2	127
Dist. of Columbia	-	-	-	-	5	1	2	2	3	13	-	-	-	5	2	3	9	51	70	70
Florida 3/	3	376	330	7	4	2	-	-	-	719	18	368	755	128	58	22	10	14	10	1,365
Georgia	12	332	133	45	5	-	-	-	-	516	21	449	531	80	24	15	5	1	3	1,108
Hawaii	-	-	12	3	11	9	8	3	2	49	-	16	40	30	33	35	26	8	9	196
Idaho	-	25	48	9	1	1	-	3	3	90	1	9	38	25	11	9	1	1	5	99
Illinois	-	110	304	206	116	41	26	19	3	826	-	43	240	485	304	241	165	112	305	1,895
Indiana	-	27	232	126	46	19	4	8	5	467	-	34	189	95	88	52	25	16	21	519
Iowa	1	26	64	28	16	8	5	3	2	152	25	16	95	97	53	37	26	19	38	382
Kansas 3/	20	9	89	51	47	2	-	-	-	198	8	21	148	106	21	10	5	2	6	319
Kentucky	-	55	79	43	19	13	1	-	-	209	1	56	152	108	27	24	10	3	9	389
Louisiana	-	21	113	73	50	67	37	4	6	371	2	3	139	129	95	68	101	64	77	676
Maine	-	12	35	13	6	2	0	0	-	68	-	10	30	29	23	13	9	8	7	131
Maryland	-	68	150	41	18	8	9	5	9	308	0	82	195	85	46	45	19	16	60	547
Massachusetts	5	191	238	34	8	4	2	-	-	476	1	67	228	163	164	204	161	117	125	1,230
Michigan	-	94	283	141	50	43	11	7	6	635	0	101	302	284	186	122	115	95	172	1,376
Minnesota 3/	-	10	116	62	60	32	1	-	3	284	47	34	221	106	63	52	16	5	6	503
Mississippi	-	27	106	37	27	9	5	0	1	211	-	38	182	100	51	35	19	18	16	459
Missouri	-	100	277	51	19	5	3	3	1	458	5	96	399	172	82	30	20	7	8	813
Montana	-	18	39	0	-	1	2	2	-	62	-	4	22	13	13	7	2	2	3	67
Nebraska	-	4	40	9	5	2	2	0	-	61	1	12	27	20	42	61	33	43	39	276
Nevada	-	44	43	15	14	3	1	0	0	120	1	65	49	17	7	2	7	1	5	152
New Hampshire 3/	-	33	38	2	-	1	1	-	1	76	6	43	78	17	7	9	2	2	3	161
New Jersey	-	57	102	87	30	28	31	13	19	366	13	45	229	283	276	190	121	78	154	1,376
New Mexico	-	42	86	17	8	3	0	0	-	156	0	26	105	26	34	15	6	4	8	224
New York	9	72	399	134	73	64	38	28	46	854	73	31	431	465	328	196	122	70	270	1,912
North Carolina 3/	-	96	274	99	75	27	10	1	1	583	-	66	445	169	85	32	11	7	12	827
North Dakota	-	9	34	7	1	-	-	-	-	52	-	4	13	14	23	4	2	4	4	69
Ohio 3/	-	182	437	121	73	22	9	3	2	849	8	86	504	255	150	95	55	34	44	1,223
Oklahoma 3/	-	35	86	51	28	15	11	8	14	248	-	27	145	68	38	28	25	14	21	366
Oregon	-	3	92	58	16	5	1	-	1	175	-	23	115	110	61	38	22	18	16	403
Pennsylvania 3/	13	154	316	131	50	21	7	2	1	682	34	158	534	453	333	212	104	61	54	1,909
Rhode Island	-	9	25	14	1	0	0	-	-	50	-	-	35	43	27	18	12	8	14	156
South Carolina	-	75	117	43	18	5	2	1	0	262	-	10	208	222	119	60	22	15	17	673
South Dakota 3/	-	9	29	25	6	2	5	-	-	76	2	1	14	12	14	14	13	1	3	72
Tennessee	-	236	116	34	12	9	3	3	3	417	-	210	296	109	64	37	19	12	28	775
Texas 3/	3	68	542	304	164	75	15	3	-	1,171	117	104	1,056	1,035	744	416	194	158	223	3,930
Utah	-	53	94	35	25	4	0	0	-	211	-	28	111	55	29	16	7	5	5	255
Vermont	-	19	20	1	0	-	-	-	-	40	-	0	17	9	3	6	5	4	8	52
Virginia	-	21	203	102	70	43	8	3	2	452	30	20	353	273	133	105	61	37	39	1,020
Washington	-	37	157	59	19	19	5	2	0	297	-	24	263	124	59	47	21	23	64	624
West Virginia	-	25	117	19	8	7	6	1	0	184	-	13	98	48	28	13	12	7	5	224
Wisconsin 3/	1	40	100	66	30	9	14	3	3	265	5	38	196	236	156	125	79	79	80	989
Wyoming	-	8	37	27	13	4	6	0	1	97	0	4	37	19	11	4	2	1	4	81
U.S. Total	82	3,261	7,087	2,942	1,536	842	391	218	194	16,471	480	3,051	10,729	7,223	4,818	3,223	1,895	1,334	2,219	34,492
Puerto Rico	2	-	30	74	47	44	28	8	6	238	2	-	2	7	11	33	21	11	25	109
Grand Total	84	3,261	7,117	3,016	1,583	886	420	225	200	16,709	482	3,051	10,731	7,230	4,829	3,256	1,916	1,345	2,244	34,601

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2009

MILES BY MEASURED PAVEMENT ROUGHNESS - URBAN

TABLE HM-47
SHEET 4 OF 4

MARCH 2012

STATE	INTERNATIONAL ROUGHNESS INDEX (IRI) 1/									
	TOTAL URBAN NHS									
	NOT REPORTED 2/	< 60	60-94	95-119	120-144	145-170	171-194	195-220	> 220	TOTAL REPORTED
Alabama 3/	52	498	428	69	30	25	7	1	4	1,062
Alaska	-	13	52	39	20	19	3	5	3	154
Arizona 3/	18	234	209	70	78	36	18	7	6	658
Arkansas 3/	5	55	161	89	48	55	25	15	19	467
California	-	64	851	699	493	372	165	145	130	2,919
Colorado 3/	-	60	340	219	193	93	55	25	38	1,023
Connecticut	-	53	269	199	117	57	27	19	21	762
Delaware	-	19	92	29	12	8	4	1	3	168
Dist. of Columbia	-	-	-	-	10	3	5	11	54	82
Florida 3/	21	744	1,085	135	62	24	10	14	10	2,084
Georgia	33	781	664	125	29	15	5	1	3	1,623
Hawaii	-	16	51	33	44	44	34	11	11	245
Idaho	1	34	86	34	12	10	1	4	8	189
Illinois	-	153	544	691	420	282	191	131	308	2,721
Indiana	-	61	421	221	133	72	28	24	27	986
Iowa	26	41	159	126	70	44	31	22	40	533
Kansas 3/	28	30	236	157	67	12	6	2	7	517
Kentucky	1	111	231	151	46	37	11	3	9	598
Louisiana	2	24	253	202	145	136	138	68	83	1,048
Maine	-	22	65	42	29	15	10	8	7	199
Maryland	0	150	344	126	64	53	28	21	68	855
Massachusetts	6	258	467	197	172	208	163	117	125	1,707
Michigan	0	194	585	426	235	165	126	101	178	2,011
Minnesota 3/	47	43	337	168	123	84	17	5	9	786
Mississippi	-	65	288	137	77	45	24	18	17	670
Missouri	5	196	676	223	101	34	23	10	9	1,272
Montana	-	22	61	14	13	8	4	4	3	129
Nebraska	1	16	66	28	46	64	35	44	39	338
Nevada	1	109	92	32	21	4	8	1	5	272
New Hampshire 3/	6	76	116	19	7	10	3	2	3	236
New Jersey	13	102	331	370	306	218	151	91	173	1,743
New Mexico	0	68	192	43	41	18	6	4	8	379
New York	82	103	830	599	401	260	160	98	315	2,766
North Carolina 3/	-	162	719	268	159	59	22	7	13	1,409
North Dakota	-	14	47	22	24	4	2	4	4	120
Ohio 3/	8	268	941	376	223	117	64	36	46	2,071
Oklahoma 3/	-	63	231	120	66	43	37	22	35	617
Oregon	-	26	207	168	77	42	23	18	17	578
Pennsylvania 3/	47	312	850	584	383	233	112	62	55	2,591
Rhode Island	-	9	60	57	28	18	12	8	14	205
South Carolina	-	85	325	266	137	65	24	16	17	935
South Dakota 3/	2	10	43	38	20	17	18	2	3	151
Tennessee	-	446	412	143	75	46	23	15	31	1,192
Texas 3/	119	173	1,599	1,339	908	492	209	161	224	5,105
Utah	-	81	204	90	54	20	7	5	5	467
Vermont	-	19	37	11	3	6	5	4	8	93
Virginia	30	40	556	375	202	148	68	40	41	1,472
Washington	-	61	420	183	78	65	25	25	65	921
West Virginia	-	37	216	68	36	20	18	8	6	408
Wisconsin 3/	6	77	296	302	186	133	93	83	83	1,253
Wyoming	0	12	74	46	24	8	8	1	5	178
U.S. Total	561	6,311	17,818	10,167	6,352	4,067	2,290	1,551	2,413	50,969
Puerto Rico	4	-	32	82	58	77	49	19	31	347
Grand Total	565	6,311	17,850	10,248	6,410	4,144	2,339	1,570	2,444	51,317

For footnotes, see Footnotes Page.

NATIONAL HIGHWAY SYSTEM LENGTH - 2009

MILES BY MEASURED PAVEMENT ROUGHNESS

HM-47 Footnotes Page:

- 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/ 2008 data used due to FHWA process status.