APPENDIX A

Asphalt Pavement QC/QA Questionnaire

ASPHALT PAVEMENT QUALITY CONTROL/QUALITY ASSURANCE (QC/QA)

QUESTIONNAIRE

UNIVERSITY OF WYOMING

Your assistance in answering the following questions will help in evaluating the effectiveness of Asphalt Concrete QC/QA programs. The Federal Highway Administration is funding this project through the Mountain Plains Consortium. We thank you in advance for your time and cooperation, and would be glad to provide you with a copy of the survey results.

PART I – Your Agency's QC/QA Program History

1) Has your agency implemented a QC/QA program for asphalt pavements?

□ Yes □ No

If no, please skip to Part IV, page 6 of this survey. If yes, please answer the following:

a) What year was your QC/QA program first implemented? _____

b) To date, approximately how many projects have been completed under this QC/QA program?

_____

c) For which projects is your QC/QA program used?

(mark all that apply)

□ Large (>75,000 tons)
□ Medium (5,000 tons to 75,000 tons)
□ Small (<5000 tons)
□ Interstates
□ Primary Roads
□ Secondary Roads

2) Has your QC/QA program been significantly modified since its implementation?

□ Yes □ No

If yes, please answer the following:

a) Approximately how many times has your program been modified? _____

b) What are some of the major modifications that were made? _____

_____

_____

_____

3) Has your QC/QA program been evaluated for effectiveness? □ Yes □ No

If yes, please answer the following:

a) What asphalt mix properties were used in the evaluation?

(mark all that apply)

- □ Density
- □ Asphalt Content
- □ Aggregate Gradations
- □ Air Voids
- □ VMA
- □ Other(s):_____

Comments:_____

_____

b) How long after implementation was your QC/QA program evaluated? _____

c) Did your program prove to be effective? □ Yes □ No

d) Have the results from this analysis been published? □ Yes □ No

If yes, what is the Report #: _____ Date Published: _____

If possible, please include a copy of the evaluative report.

PART II – QC/QA Use

1) Please answer the following regarding Quality Control Responsibilities:

a) Who is responsible for conducting the QC testing? □ State □ Contractor

b) Who is responsible for evaluating the QC test results? □ State □ Contractor

c) Who is responsible for initiating corrective action? □ State □ Contractor

d) Is your agency moving to change the above involvements in any way? □ Yes □ No

If yes, please explain: _____

_____

2) Does the State do any Quality Assurance testing? □ Yes □ No

If yes, please answer the following:

a) How many QA tests are performed for a typical project?

- □ (#)_____
- □ Varies Significantly

b) What is the approximate ratio between the number of QA and QC tests performed?

- □ *(QA to QC)*: _____ : _____
- □ Varies Significantly

c) What are the QA tests used for?

(mark all that apply)

- ☐ QC test result verification
- ☐ Initial correlation
- ☐ Final pay adjustments
- ☐ Other(s):_____

d) Is your agency moving to change the Contractor's or State's involvement with QA testing in any way? ☐ Yes ☐ No

If yes, please explain: _____

_____

3) Please answer the following regarding QC/QA testing:

a) Which mixture properties are required by the state to be tested for QC and QA purposes?

(mark all that apply in the appropriate columns)

QC	QA		QC	QA	
☐	☐	Mat Density	☐	☐	Air Voids
☐	☐	Asphalt Content (extract.)	☐	☐	Aggregate Gradation (extract.)
☐	☐	Asphalt Content	☐	☐	Aggregate Gradation
☐	☐	Smoothness	☐	☐	Stability
☐	☐	Retained Tensile Strength	☐	☐	VMA
☐	☐	Voidless Unit Weight	☐	☐	Film Thickness
☐	☐	Dust/Asphalt	☐	☐	Clay Content
☐	☐	Swelling	☐	☐	Temperature
☐	☐	Other(s): _____			

Comments:_____

_____

b) Who is required to be certified to perform QC and QA testing?

(mark all that apply in the appropriate columns)

QC	QA		QC	QA	
☐	☐	No certification required	☐	☐	All testing technicians
☐	☐	The engineers	☐	☐	The testing supervisor
☐	☐	Other(s): _____			

Comments:_____

_____

4) ***If available, please send documentation summarizing the QC/QA involvements of the Contractor and DOT in your program. Otherwise, if posted on the internet;***
URL: *www.*_____

PART III – Control

1) Are there different levels of control included in your agency's QC/QA program?

(levels of control refer to levels of differing test and testing frequency requirements.)

□ Yes □ No

If yes, please answer the following:

a) How many levels of control are there? _____

b) What does the level of control depend on?

(mark all that apply)

□ Quantity of Material □ Available Personnel
□ Traffic Loads □ Type of Facility
□ Type of Funding □ Type of Construction
□ Other(s): _____

c) What are some of the differences among the different levels of control?

(mark all that apply)

□ QC testing frequencies vary □ QA testing frequencies vary
□ Number of control properties varies □ Source of the JMF varies
□ Other(s): _____

*d) If available, please send a copy of your level of control summary table, or similar documentation. Otherwise, if posted on the internet; URL: www.*_____

2) Does your agency's QC/QA program have different levels/classes of specified asphalt mixture properties? □ Yes □ No

If yes, please answer the following:

a) How many different levels/classes of specified mixture properties are there? _____

b) What does the level/class of control depend on?

(mark all that apply)

- ☐ Traffic Loads
- ☐ Type of Facility
- ☐ Type of Construction
- ☐ Other(s): _____

c) What characteristics are specified within these required mixture properties?

(mark all that apply)

- ☐ Los Angeles Abrasion
- ☐ VMA
- ☐ Compaction Energy
- ☐ Dust/Asphalt
- ☐ Stability
- ☐ Flow
- ☐ Minimum % Asphalt
- ☐ Minimum Tensile Strength Retained
- ☐ Film Thickness
- ☐ Voids in Laboratory Mix
- ☐ Voids in Production Mix
- ☐ Clay Content
- ☐ Temperature
- ☐ Mix Moisture Content
- ☐ Other(s): _____

d) If available, please send a copy of your specified mixture properties summary table and accompanying tolerances, or similar documentation. Otherwise, if posted on the internet; URL: www._____

3) Are incentives or disincentives used in your agency's QC/QA program? ☐ Yes ☐ No

If yes, please answer the following:

a) For your agency's QC/QA program, which attributes are being used to adjust the pay? Also, what are the possible ranges for pay adjustments?

(please mark all that apply and indicate the ranges for those selected)

	Pay Factor Range *Ex: .75 to 1.05*	Comments
☐ Mat Density	_____ to _____	
☐ Air Voids	_____ to _____	
☐ Asphalt Content	_____ to _____	
☐ Aggregate Gradation	_____ to _____	
☐ Smoothness	_____ to _____	
☐ Stability	_____ to _____	
☐ Other(s):_____	_____ to _____	
_____	_____ to _____	

b) Does your agency use an equation to factor together all of the individual pay factors?

□ Yes □ No

If yes, please include this equation: _____

c) Do the attributes being used to adjust the pay vary with the mix design methods used?

□ Yes □ No □ N/A

Comments: _____

_____

d) Overall, is your QC/QA pay adjustment system increasing the cost of construction?

□ Yes □ No

e) What percent of the projects let under your agency's QC/QA program are receiving incentives? *(an estimate is acceptable)* _____

f) If available, please send a copy of your Pay Adjustment Specification summary table, or similar documentation. Otherwise, if posted on the internet;

URL: www. _____

PART IV – Contact Information

1) Your contact information.

Name: _____ Title: _____

Organization: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ E-mail: _____

2) Would you like a copy of questionnaire results? □ Yes □ No

(The results will be sent to the name and address listed above).

Thank you for your time and effort in answering the questionnaire.

If you have any questions, feel free to e-mail Dr. Khaled Ksaibati at Khaled@uwyo.edu, or Nathan Butts, for a more immediate response, at buttsn@uwyo.edu.

APPENDIX B. WYDOT DATA

Data for Pavement Sections Constructed Under the QC/QA Specification

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
WB	90-100		60-85		35-55		20-40		10-30		2-7								NHP-012-1(87)	1997	Primary
Design/JMF	97		76		48		32		17		5.0		5.30		13.1		3.4				
JMF Limits	90-100		69-83		41-55		27-37		12-22		3-7										
	98	1	77	1	52	4	35	3	20	3	6.4	1.40	5.65	0.35	12.5	-0.6	2.1	-1.3			
	100	3	83	7	54	6	37	5	21	4	6.8	1.80	5.56	0.26	12.2	-0.9	2.1	-1.3			
WB	90-100		60-85		40-60		25-45		10-30		2-7								NHP-030-3(28)	1997	Primary
Design/JMF	95		75		51		38		22		4.20		5.80		14.3		3.7				
JMF Limits	90-100		68-82		44-58		33-43		17-27		2-7										
	96	1	78	3	56	5	41	3	24	2	5.6	1.40	5.63	-0.17	14.3	0.0	3.8	0.1			
WB	100		90-100		35-55		20-45		5-25		2-7								SCP-0300(30)	1997	Secondary
Design/JMF	100		98		39		23		10		5.2		5.20		13.7		4.0				
JMF Limits	100		90-100		36-50		20-30		5-15		3-7										
	100	0	97	-1	40	1	24	1	13	3	9.50	4.30	4.97	-0.23	11.7	-2.0	2.9	-1.1			
WB	90-100		60-85		35-60		20-45		10-30		2-7								ACIM-80-4(188)246	1998	Interstate
Design/JMF	94		72		40		31		21		5.10		4.80		12.9		4.4				w/ RAP
JMF Limits																					
	95	1	67	-5	39	-1	30	-1	21	0	6.40	1.30	4.05	-0.75	12.4	-0.5	4.9	0.5			
	95	1	60	-12	31	-9	25	-6	18	-3	6.40	1.30	3.79	-1.01	12.6	-0.3	5.1	0.7			
	94	0	67	-5	34	-6	28	-3	19	-2	5.70	0.60	3.62	-1.18	12.3	-0.6	4.7	0.3			
WB	90-100		60-85		35-60		20-45		10-30		2-7								ACIM-80-4(188)246	1998	Interstate
Design/JMF	94		72		40		31		21		5.10		4.80		12.9		4.4				w/ RAP
JMF Limits																					
	94	0	72	0	39	-1	30	-1	21	0	6.00	0.90	4.20	-0.60	12.3	-0.6	4.9	0.5			
	93	-1	78	6	45	5	34	3	23	2	5.80	0.70	5.50	0.70			5.3				
WB	90-100		60-85		35-60		20-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		ACIM-80-4(188)246	1998	Interstate
Design/JMF	94		72		40		31		21		5.10		4.80		12.9		4.4				w/ RAP
JMF Limits	90-100		60-85		35-60		20-45		10-30		2-7		4.5 min.		13.0 min.		3.0-5.0				
	87	-7	59	-13	31	-9	25	-6	18	-3	4.80	-0.30	4.02	-0.78	12.2	-0.7	3.6	-0.8			
	89	-5	62	-10	31	-9	24	-7	17	-4	4.90	-0.20	3.88	-0.92	13.2	0.3	5.3	0.9			
	93	-1	75	3	40	0	31	0	21	0	5.80	0.70	4.15	-0.65	12.8	-0.1	4.7	0.3			
	91	-3	60	-12	29	-11	22	-9	16	-5	4.50	-0.60	3.25	-1.55	13.7	0.8	8.2	3.8			
	95	1	67	-5	39	-1	30	-1	21	0	6.40	1.30	4.05	-0.75	12.4	-0.5	4.9	0.5			
	90	-4	69	-3	39	-1	29	-2	20	-1	4.90	-0.20	3.89	-0.91	12.8	-0.1	4.5	0.1			
	95	1	60	-12	31	-9	25	-6	18	-3	6.40	1.30	3.79	-1.01	12.6	-0.3	5.1	0.7			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	99	5	75	3	43	3	34	3	23	2	6.10	1.00	4.80	0.00	12.3	-0.6	2.7	-1.7			
	92	-2	65	-7	38	-2	29	-2	20	-1	5.10	0.00	4.67	-0.13	12.7	-0.2	3.5	-0.9			
	94	0	66	-6	38	-2	30	-1	21	0	5.60	0.50	4.49	-0.31	12.7	-0.2	4.2	-0.2			
	97	3	77	5	46	6	36	5	24	3	6.20	1.10	5.21	0.41	12.7	-0.2	2.2	-2.2			
	96	2	74	2	42	2	32	1	22	1	6.00	0.90	4.74	-0.06	12.9	0.0	3.2	-1.2			
	93	-1	70	-2	37	-3	28	-3	20	-1	5.20	0.10	4.52	-0.28	12.8	-0.1	3.7	-0.7			
	95	1	72	0	42	2	32	1	21	0	5.20	0.10	4.75	-0.05	12.7	-0.2	3.1	-1.3			
	90	-4	70	-2	40	0	31	0	21	0	5.10	0.00	4.96	0.16	12.7	-0.2	3.3	-1.1			
	94	0	67	-5	38	-2	29	-2	20	-1	5.20	0.10	4.45	-0.35	12.6	-0.3	3.9	-0.5			
	91	-3	63	-9	37	-3	28	-3	19	-2	5.00	-0.10	4.69	-0.11	12.7	-0.2	3.6	-0.8			
	86	-8	62	-10	27	-13	21	-10	15	-6	3.90	-1.20	3.60	-1.20			6.9				
	95	1	70	-2	40	0	31	0	21	0	5.50	0.40	4.50	-0.30			6.2				
	93	-1	69	-3	36	-4	25	-6	19	-2	4.80	-0.30	4.20	-0.60			6.3				
	92	-2	57	-15	27	-13	22	-9	16	-5	4.10	-1.00	4.40	-0.40			6.2				
	92	-2	66	-6	34	-6	27	-4	19	-2	5.00	-0.10	4.40	-0.40			4.6				
	94	0	72	0	36	-4	27	-4	19	-2	5.00	-0.10	5.46	0.66			4.9				
	95	1	78	6	41	1	32	1	21	0	6.00	0.90	5.12	0.32			3.4				
	97	3	75	3	36	-4	27	-4	19	-2	5.10	0.00	4.89	0.09			4.0				
	93	-1	62	-10	33	-7	26	-5	18	-3	4.40	-0.70	5.00	0.20			5.1				
	88	-6	59	-13	33	-7	25	-6	17	-4	4.70	-0.40	4.10	-0.70			4.0				
	93	-1	68	-4	36	-4	28	-3	20	-1	5.80	0.70	4.70	-0.10			4.6				
	91	-3	66	-6	34	-6	27	-4	19	-2	5.10	0.00	4.92	0.12			3.2				
WB	90-100		60-85		35-60		20-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		ACIM-80-4(188)246	1998	Interstate
Design/JMF	94		72		40		31		21		5.10		4.90		13.6		5.0				w/ RAP
JMF Limits	88-100		60-74		32-46		21-31		10-20		2.4-6.4		4.5 min.		13.0 min.		3.0-5.0				
	90	-4	70	-2	38	-2	29	-2	20	-1	5.80	0.70	4.50	-0.40	12.5	-1.1	3.4	-1.6			
	94	0	69	-3	37	-3	29	-2	20	-1	5.20	0.10	4.74	-0.16	12.9	-0.7	3.6	-1.4			
	93	-1	72	0	39	-1	30	-1	20	-1	4.50	-0.60	5.11	0.21	13.0	-0.6	2.5	-2.5			
	87	-7	46	-26	23	-17	18	-13	14	-7	3.80	-1.30	3.35	-1.55	13.0	-0.6	6.6	1.6			
	89	-5	64	-8	36	-4	29	-2	20	-1	5.50	0.40	4.50	-0.40	12.3	-1.3	3.0	-2.0			
	87	-7	62	-10	38	-2	30	-1	21	0	5.80	0.70	4.29	-0.61	12.8	-0.8	4.9	-0.1			
	95	1	74	2	40	0	31	0	21	0	5.60	0.50	4.98	0.08	12.5	-1.1	2.2	-2.8			
	95	1	78	6	48	8	36	5	24	3	6.50	1.40	5.46	0.56	13.0	-0.6	1.3	-3.7			
	96	2	79	7	46	6	35	4	24	3	6.50	1.40	4.89	-0.01	12.3	-1.3	2.1	-2.9			
	100	6	85	13	50	10	38	7	26	5	8.20	3.10	5.16	0.26							

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	92	-2	62	-10	32	-8	25	-6	18	-3	3.50	-1.60	4.24	-0.66			4.5				
	94	0	73	1	36	-4	28	-3	19	-2	2.30	-2.80	4.52	-0.38			3.7				
	94	0	64	-8	32	-8	25	-6	17	-4	3.60	-1.50	5.10	0.20			4.7				
	95	1	70	-2	36	-4	28	-3	19	-2	3.80	-1.30	5.10	0.20			3.7				
	89	-5	60	-12	29	-11	22	-9	15	-6	3.10	-2.00	4.53	-0.37			3.6				
WB	90-100		60-85		35-60		20-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		ACNHP-010-3(77)	1998	Primary
Design/JMF	95		77		48		32		18		5.30		5.00		14.5		4.9				
JMF Limits	90-100		70-84		41-55		27-37		13-23		3-7		4.5 min.		12.0 min.		2.5-4.5				
	95	0	80	3	50	2	35	3	21	3	5.10	-0.20	5.63	0.63	12.9	-1.6	2.7	-2.2			
	95	0	74	-3	47	-1	33	1	20	2	5.20	-0.10	5.09	0.09	12.3	-2.2	2.7	-2.2			
	94	-1	76	-1	46	-2	32	0	18	0	4.80	-0.50	5.30	0.30	12.6	-1.9	2.5	-2.4			
	93	-2	76	-1	47	-1	32	0	18	0	5.00	-0.30	5.25	0.25	13.2	-1.3	3.5	-1.4			
	94	-1	76	-1	51	3	35	3	21	3	5.50	0.20	5.41	0.41	13.1	-1.4	3.2	-1.7			
	94	-1	69	-8	44	-4	31	-1	19	1	4.80	-0.50	4.85	-0.15	12.5	-2.0	3.8	-1.1			
WB	100		90-100		35-55		20-40		5-25		2-6								ACSTPS-2303(13)	1998	Secondary
Design/JMF	100		96		45		28		10		4.70		5.20		14.4		4.0				
JMF Limits	100		90-100		38-52		23-33		5-15		2-6										
	100	0	96	0	46	1	29	1	13	3	7.70	3.00	5.47	0.27	14.1	-0.3	2.3	-1.7			
WB	100		90-100		35-55		20-40		5-25		2-6				13.0 min				ACSTPS-2303(13)	1998	Secondary
Design/JMF	100		96		45		28		10		4.70		5.20		14.4		4.0				
JMF Limits	100		90-100		38-52		23-33		5-15		2-6		4.95-5.45		12.9-15.9		2.5-4.5				
	100	0	97	1	52	7	31	3	13	3	7.90	3.20	5.17	-0.03	12.7	-1.7	2.6	-1.4			
	100	0	97	1	48	3	30	2	13	3	7.20	2.50	5.24	0.04	12.2	-2.2	1.4	-2.6			
	100	0	96	0	46	1	28	0	12	2	7.00	2.30	5.23	0.03	12.5	-1.9	1.9	-2.1			
	100	0	97	1	48	3	30	2	13	3	7.10	2.40	4.75	-0.45	12.1	-2.3	3.0	-1.0			
WB	90-100		60-85		35-60		20-45		10-30		2-7								CMP-PO-024-2(13)	1998	Primary
Design/JMF	99		78		55		40		19		3.80		5.60		14.8		2.9				
JMF Limits	90-100		71-85		46-60		35-45		14-24		2-6										
	100	1	85	7	61	6	42	2	19	0	3.00	-0.80	5.58	-0.02	15.8	1.0	5.0	2.1			
WB	90-100		60-85		35-60		20-45		10-30		2-7								CMP-PO-013-1(45)	1998	Primary
Design/JMF	95		74		49		31		15		3.60		5.40		13.5		4				
JMF Limits	90-100		67-81		42-56		26-36		10-20		2-6										
	94	-1	70	-4	45	-4	29	-2	16	1	4.70	1.10	5.10	-0.30	13.7	0.2	3.9	-0.1			
WB	100		90-100		35-55		20-40		5-25		2-6		+/- 0.25		+/- 1.5		+/- 1.5		CMP-PO-043-2(36)	1998	Primary

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
Design/JMF	100		96		47		27		10		4.00		4.90		13.0		3.2				
JMF Limits	100		90-100		40-54		22-32		5-15		2-6		4.5 min.		13.0 min.		2.5-4.5				
	100	0	94	-2	43	-4	25	-2	12	2	6.50	2.50	4.93	0.03	13.2	0.2	3.1	-0.1			
	100	0	94	-2	44	-3	25	-2	11	1	6.00	2.00	5.05	0.15	14.2	1.2	4.2	1.0			
WB	100		90-100		35-55		20-40		5-25		2-6								CMP-PO-043-2(36)	1998	Primary
Design/JMF	100		96		47		27		10		4.00		4.90		13.5		3.8				
JMF Limits	100		90-100		40-54		22-32		5-15		2-6										
	100	0	96	0	45	-2	27	0	12	2	6.40	2.40	4.70	-0.20	14.1	0.6	4.8	1.0			
WB	90-100		60-85		35-60		20-45		10-30		2-7				12.0 min				NHI-80-6(140)362 &	1998	Interstate
Design/JMF	92		70		42		26		15		5.0		5.50		15.9		4.3		NHI-80-6(165)364		
JMF Limits	90-100		63-77		35-49		21-31		10-20		3.0-7.0		5.25-5.75		14.4-17.4		2.5-4.5				
	91	-1	72	2	47	5	28	2	13	-2	3.90	-1.10	5.63	0.13	15.9	0.0	4.0	-0.3			
	89	-3	69	-1	45	3	29	3	14	-1	5.70	0.70	5.31	-0.19	15.2	-0.7	4.4	0.1			
	88	-4	74	4	51	9	32	6	14	-1	5.70	0.70	5.33	-0.17	15.6	-0.3	3.3	-1.0			
	76	-16	61	-9	38	-4	25	-1	13	-2	4.60	-0.40	4.81	-0.69	11.7	-4.2	3.1	-1.2			
	97	5	80	10	48	6	30	4	15	0	6.10	1.10	5.82	0.32	15.3	-0.6	2.7	-1.6			
WB	90-100		60-85		35-60		20-45		10-30		2-7								NHI-80-6(140)362	1998	Interstate
Design/JMF	94		75		48		31		15		5.80		5.20		13.1		4.0				w/ RAP
JMF Limits																					
	96	2	84	9	51	3	33	2	17	2	7.50	1.70	5.25	0.05	12.8	-0.3	3.0	-1.0			
WB	70-90		55-80		35-55		20-40		10-25		2-7				11.0 min				NHI-80-6(140)362	1998	Interstate
Design/JMF	89		66		47		32		16		6.60		5.20		12.5		3.1				w/ RAP
JMF Limits													4.95-5.45		11.-14		2.5-5.5				
	84	-5	57	-9	42	-5	29	-3	16	0	6.40	-0.20	4.73	-0.47	11.2	-1.3	2.6	-0.5			
	84	-5	62	-4	46	-1	30	-2	16	0	6.00	-0.60	5.04	-0.16	11.4	-1.1	3.0	-0.1			
	85	-4	65	-1	45	-2	32	0	16	0	6.00	-0.60	5.62	0.42	12.0	-0.5	1.3	-1.8			
	86	-3	54	-12	38	-9	26	-6	14	-2	5.70	-0.90	5.34	0.14	12.7	0.2	2.6	-0.5			
	86	-3	62	-4	44	-3	30	-2	17	1	6.80	0.20	5.80	0.60	12.2	-0.3	1.4	-1.7			
	87	-2	57	-9	40	-7	29	-3	15	-1	5.80	-0.80	8.10	2.90	14.1	1.6	1.8	-1.3			
WB	100		90-100		40-60		25-45		10-30		2-7				13.0 min				NHI-80-6(140)362	1998	Interstate
Design/JMF	100		95		50		32		15		5.70		6.00		15.8		4.3				w/ RAP
JMF Limits													5.75-6.25		14.3-17.3		2.5-4.5				
	100	0	93	-2	54	4	35	3	17	2	6.50	0.80	6.44	0.44	15.0	-0.8	2.6	-1.7			
	100	0	94	-1	55	5	36	4	18	3	7.30	1.60	5.93	-0.07	14.7	-1.1	3.6	-0.7			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	94	-1	57	7	36	4	18	3	6.80	1.10	7.00	1.00	15.1	-0.7	1.6	-2.7			
	100	0	94	-1	53	3	30	-2	14	-1	5.30	-0.40	6.15	0.15	16.4	0.6	4.4	0.1			
	100	0	96	1	57	7	36	4	18	3	6.10	0.40	6.23	0.23	15.5	-0.3	4.1	-0.2			
WB	90-100		60-85		35-60		20-45		10-30		2-7				12.0 min				NHI-80-6(140)362	1998	Interstate
Design/JMF	94		75		48		31		15		5.80		5.20		13.1		4.0				w/ RAP
JMF Limits													4.95-5.45		11.6-14.6		2.5-4.5				
	94	0	80	5	55	7	34	3	16	1	6.30	0.50	5.55	0.35	14.2	1.1	4.5	0.5			
	95	1	84	9	56	8	36	5	18	3	6.60	0.80	5.69	0.49	13.6	0.5	3.0	-1.0			
	98	4	85	10	53	5	32	1	16	1	6.50	0.70	5.82	0.62	13.3	0.2	2.7	-1.3			
	91	-3	80	5	56	8	39	8	20	5	7.60	1.80	5.10	-0.10	14.1	1.0	2.2	-1.8			
	93	-1	73	-2	46	-2	31	0	16	1	5.60	-0.20	5.41	0.21	11.9	-1.2	3.1	-0.9			
	91	-3	79	4	54	6	36	5	18	3	6.50	0.70	4.94	-0.26	12.6	-0.5	3.4	-0.6			
	94	0	82	7	52	4	32	1	16	1	5.60	-0.20	5.48	0.28	14.9	1.8	4.6	0.6			
	96	2	82	7	55	7	35	4	16	1	5.60	-0.20	5.59	0.39	13.7	0.6	2.5	-1.5			
WB	90-100		60-85		35-60		20-45		10-30		2-7								SCP-012-1(95)	1998	Primary
Design/JMF	98		72		45		28		15		5.00		5.25		14.4		5.2				
JMF Limits	90-100		65-79		35-52		23-33		10-20		3-7										
	97	-1	67	-5	44	-1	30	2	17	2	5.30	0.30	5.19	-0.06	12.1	-2.3	3.1	-2.1			
WB	90-100		60-85		35-60		20-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		SCP-012-1(95)	1998	Primary
Design/JMF	98		72		45		28		15		5.00		5.25		14.4		5.2				
JMF Limits	90-100		65-79		38-52		23-33		10-20		3-7		4.5 min.		13.0 min.		3.0-5.0				
	98	0	69	-3	44	-1	30	2	18	3	5.20	0.20	4.84	-0.41	12.9	-1.5	4.3	-0.9			
	99	1	80	8	55	10	36	8	20	5	5.80	0.80	5.89	0.64	13.0	-1.4	1.8	-3.4			
	95	-3	70	-2	44	-1	28	0	16	1	4.90	-0.10	4.83	-0.42	13.0	-1.4	4.0	-1.2			
	99	1	76	4	48	3	30	2	16	1	4.90	-0.10	5.28	0.03	13.6	-0.8	3.8	-1.4			
	97	-1	76	4	51	6	34	6	19	4	5.40	0.40	5.30	0.05	13.5	-0.9	4.2	-1.0			
	98	0	78	6	51	6	33	5	18	3	5.80	0.80	5.10	-0.15	13.0	-1.4	3.8	-1.4			
	96	-2	74	2	49	4	33	5	19	4	5.60	0.60	5.04	-0.21	13.8	-0.6	4.9	-0.3			
WB	100		90-100		40-60		25-45		10-30		2-7								SCP-031-1(12)	1998	Primary
Design/JMF	100		96		51		35		19		5.60		5.50		13.3		4.1				
JMF Limits	100		90-100		44-58		30-40		14-24		3-7										
	100	0	93	-3	43	-8	30	-5	18	-1	6.00	0.40	5.42	-0.08	14.5	1.2	6.2	2.1			
WB	90-100		60-85		35-60		20-45		10-30		2-7								STPS-0505(9)	1998	Secondary
Design/JMF	99		72		38		26		14		4.60		5.40		13.9		3.8				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	90-100		60-85		35-60		20-45		10-20		2-7										
	99	0	80	8	46	8	30	4	17	3	6.10	1.50	5.72	0.32	12.5	-1.4	4.6	0.8			
WB	90-100		60-85		35-60		20-45		10-30		2-7								STPUNP-027-3(5)	1998	Primary
Design/JMF	96		74		50		37		19		4.90		5.40		13.1		4				
JMF Limits	90-100		67-81		43-57		32-42		14-24		2.9-6.9										
	97	1	82	8	56	6	40	3	21	2	5.30	0.40	5.56	0.16	12.7	-0.4	3.7	-0.3			
WB	90-100		60-85		35-60		20-45		10-30		2-7								ACNHP-010-3(77)	1999	Primary
Design/JMF	95		77		48		32		18		5.30		5.00		13.4		3.7				
JMF Limits	90-100		70-84		41-55		27-37		13-23		3-7										
	94	-1	65	-12	36	-12	26	-6	16	-2	4.60	-0.70	4.05	-0.95	14.2	0.8	6.9	3.2			
	88	-7	65	-12	36	-12	26	-6	16	-2	5.30	0.00	4.26	-0.74	14.4	1.0	6.9	3.2			
WB	100		85-100		35-70		20-55		5-35		2-7								ACNHP-031-1(64) &	1999	Primary
Design/JMF	100		96		51		34		16		4.70		6.50		15.9		4.8		ACNHP-031-1(61)		
JMF Limits	100		90-100		45-59		29-39		11-21		2.7-6.7										
	100	0	94	-2	51	0	33	-1	15	-1	5.20	0.50	5.90	-0.60	12.8	-3.1	2.6	-2.2			
WB	100%		85-100%		35-70%		20-55%		5-35%		2-7%				14.0 min				ACNHP-031-1(64)	1999	Primary
Design/JMF	100		96		51		34		16		4.70		6.50		15.9		4.8				
JMF Limits	100		90-100		45-59		29-39		11-21		2.7-6.7		6.25-6.75		14.4-17.4		3.0-5.0				
	100	0	94	-2	50	-1	35	1	16	0	4.40	-0.30	6.60	0.10	14.8	-1.1	4.6	-0.2			
	100	0	93	-3	48	-3	33	-1	16	0	4.90	0.20	6.40	-0.10	14.9	-1.0	4.4	-0.4			
	100	0	95	-1	48	-3	33	-1	16	0	4.30	-0.40	6.20	-0.30	14.7	-1.2	4.3	-0.5			
	100	0	94	-2	54	3	35	1	16	0	4.60	-0.10	6.70	0.20	16.1	0.2	5.2	0.4			
	100	0	95	-1	56	5	38	4	18	2	6.50	1.80	6.20	-0.30	14.0	-1.9	3.6	-1.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								AM-0502(13)	1999	Secondary
Design/JMF	94		72		43		31		17		5.40		4.80		12.7		4.1				
JMF Limits	90-100		65-79		36-50		26-36		12-22		3-7										
	95	1	77	5	47	4	33	2	20	3	8.00	2.60	4.46	-0.34	10.7	-2.0	3.0	-1.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				AM-0502(13)	1999	Secondary
Design/JMF	94		72		43		31		17		5.40		4.80		12.7		4.1				
JMF Limits	90-100		65-79		36-50		26-36		12-22		3.0-7.0		4.55-5.05		11.2-14.2		2.5-4.5				
	96	2	77	5	48	5	34	3	19	2	8.40	3.00	4.96	0.16	10.8	-1.9	1.8	-2.3			
	91	-3	73	1	45	2	32	1	19	2	7.70	2.30	4.81	0.01	11.0	-1.7	1.8	-2.3			
	96	2	76	4	47	4	33	2	19	2	7.90	2.50	4.93	0.13	11.3	-1.4	1.7	-2.4			
	94	0	72	0	42	-1	30	-1	18	1	7.30	1.90	4.47	-0.33	11.1	-1.6	2.2	-1.9			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	93	-1	70	-2	42	-1	30	-1	18	1	7.20	1.80	4.71	-0.09	10.7	-2.0	2.2	-1.9			
	98	4	75	3	46	3	33	2	20	3	7.40	2.00	4.88	0.08	10.7	-2.0	2.3	-1.8			
	90	-4	65	-7	36	-7	27	-4	17	0	6.90	1.50	4.08	-0.72	10.7	-2.0	3.7	-0.4			
	96	2	75	3	46	3	33	2	19	2	8.00	2.60	4.57	-0.23	11.6	-1.1	3.6	-0.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				AM-90-3(71)113	1999	Interstate
Design/JMF	99		89		44		26		10		3.60		4.70		14.3		4.8				w/ RAP
JMF Limits													4.45-4.95		12.8-15.8		2.5-4.5				
	100	1	91	2	46	2	29	3	13	3	5.10	1.50	4.76	0.06	12.3	-2.0	2.6	-2.2			
	99	0	88	-1	50	6	31	5	14	4	5.00	1.40	4.64	-0.06	11.8	-2.5	2.0	-2.8			
	100	1	93	4	49	5	30	4	14	4	5.30	1.70	4.82	0.12	12.1	-2.2	2.2	-2.6			
	100	1	88	-1	42	-2	26	0	13	3	5.10	1.50	4.62	-0.08	13.0	-1.3	4.0	-0.8			
WB	90-100		55-95		30-65		20-50		5-30		2-7								AM-90-3(71)113	1999	Interstate
Design/JMF	99		89		44		26		10		3.60		4.70								w/ RAP
JMF Limits													4.45-4.95								
	98	-1	87	-2	42	-2	25	-1	12	2	6.10	2.50	4.46	-0.24	12.5		3.4				
	99	0	87	-2	41	-3	26	0	12	2	4.30	0.70	4.31	-0.39	11.8		3.3				
	100	1	92	3	44	0	27	1	14	4	5.90	2.30	4.48	-0.22	12.1		3.2				
	100	1	87	-2	41	-3	26	0	13	3	4.50	0.90	4.45	-0.25	12.9		4.1				
	99	0	90	1	46	2	26	0	13	3	4.20	0.60	4.68	-0.02	12.8		3.7				
	99	0	89	0	46	2	26	0	13	3	4.30	0.70	4.38	-0.32	12.3		3.6				
	100	1	89	0	46	2	28	2	13	3	4.30	0.70	4.72	0.02	13.0		3.0				
	100	1	91	2	47	3	29	3	13	3	4.90	1.30	4.85	0.15	12.6		2.6				
	100	1	87	-2	48	4	29	3	14	4	5.50	1.90	4.91	0.21	12.0		2.4				
	99	0	89	0	47	3	28	2	13	3	5.10	1.50	4.93	0.23	12.3		2.2				
	100	1	86	-3	41	-3	25	-1	12	2	5.00	1.40	4.54	-0.16	12.3		2.9				
	100	1	90	1	49	5	30	4	14	4	5.90	2.30	4.75	0.05	12.0		2.2				
	99	0	89	0	44	0	28	2	13	3	5.00	1.40	4.67	-0.03	12.4		3.1				
	99	0	92	3	48	4	29	3	14	4	6.30	2.70	4.78	0.08	11.2		1.6				
	99	0	84	-5	41	-3	26	0	13	3	5.60	2.00	4.58	-0.12	11.2		1.6				
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				AM-90-3(71)113	1999	Interstate
Design/JMF	99		89		47		28		11		3.70		4.70		14.5		4.9				w/ RAP
JMF Limits													4.45-4.95		13.0-16.0		2.5-4.5				
	99	0	90	1	45	-2	26	-2	12	1	4.40	0.70	4.69	-0.01	12.6	-1.9	3.0	-1.9			
	100	1	93	4	46	-1	27	-1	13	2	4.20	0.50	4.70	0.00	12.5	-2.0	3.1	-1.8			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	1	91	2	46	-1	27	-1	12	1	4.30	0.60	4.54	-0.16	12.5	-2.0	3.5	-1.4			
	99	0	91	2	46	-1	28	0	14	3	5.60	1.90	4.69	-0.01	12.3	-2.2	2.7	-2.2			
	99	0	88	-1	44	-3	28	0	13	2	5.60	1.90	4.67	-0.03	12.4	-2.1	3.1	-1.8			
	99	0	88	-1	45	-2	28	0	13	2	5.20	1.50	4.64	-0.06	12.0	-2.5	2.5	-2.4			
	98	-1	86	-3	45	-2	27	-1	14	3	6.00	2.30	4.76	0.06	11.7	-2.8	2.0	-2.9			
WB	90-100		55-95		30-65		20-50		5-30		2-7								AM-90-3(71)113	1999	Interstate
Design/JMF	99		89		47		28		11		3.70		4.70		14.5		4.9				w/ RAP
JMF Limits																					
	100	1	88	-1	48	1	28	0	13	2	6.70	3.00	4.52	-0.18	12.3	-2.2	3.1	-1.8			
WB	100		85-100		35-70		20-55		5-35		2-7								AM-90-3(71)113	1999	Interstate
Design/JMF	100		89		46		26		9		5.00		4.70		13.0		3.9				
JMF Limits	100		85-99		39-53		21-31		5-15		3-7										
	100	0	95	6	53	7	30	4	13	4	6.70	1.70	4.58	-0.12	10.7	-2.3	2.1	-1.8			
WB	100		85-100		35-70		20-55		5-35		2-7								AMS-2302(8)	1999	Secondary
Design/JMF	100		91		44		26		8		3.90		4.50		13.5		4.5				
JMF Limits	100		86-100		37-51		21-31		5-15		3-7										
	100	0	92	1	48	4	26	0	9	1	5.60	1.70	4.86	0.36	14.5	1.0	6.2	1.7			
	100	0	93	2	49	5	27	1	10	2	5.30	1.40	4.64	0.14	14.5	1.0	6.2	1.7			
WB	90-100		55-95		30-65		20-50		5-30		2-7								BROS-411(2)/	1999	Secondary
Design/JMF	100		78		48		32		14		2.60		5.40		15		4.2		BROS-1900(5)		
JMF Limits	90-100		71-85		40-54		27-37		10-20		2-6										
	84	-16	75	-3	38	-10	21	-11	9	-5	5.80	3.20	5.21	-0.19	14.2	-0.8	2.5	-1.7			
	82	-18	73	-5	37	-11	20	-12	11	-3	6.00	3.40	5.64	0.24	14.6	-0.4	2.5	-1.7			
WB	100		90-100		40-60		25-45		10-30		2-7								CMI-90-1(92)23	1999	Interstate
Design/JMF	100		95		47		29		15		5.00		5.30		16		4.9				
JMF Limits	100		90-100		40-54		25-35		10-20		3-7										
	100	0	93	-2	47	0	31	2	15	0	4.80	-0.20	5.07	-0.23	15.2	-0.8	4.2	-0.7			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-1209(4)	1999	Secondary
Design/JMF	100		88		40		26		15		5.00		6.00		14.8		4.4				
JMF Limits	90-100		81-95		33-47		21-31		10-20		3-7										
	100	0	90	2	43	3	28	2	17	2	6.10	1.10	6.34	0.34	14.7	-0.1	3.9	-0.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-025-3(73)	1999	Primary
Design/JMF	96		74		49		34		16		4.10		6.00		13.8		4.5				
JMF Limits	90-100		73-87		41-55		29-39		12-22		2.9-6.9										

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	97	1	78	4	50	1	35	1	18	2	4.00	-0.10	5.82	-0.18	11.2	-2.6	2.4	-2.1			
WB	100%		85-100%		35-70%		20-30%		5-35%		2-7%				13.0 min				CMP-PO-025-3(73)	1999	Primary
Design/JMF	100		94		48		34		16		4.30		5.75		13.2		4.0				
JMF Limits	100		87-100		41-55		29-39		37216		2.3-6.3		5.50-6.00		11.7-14.7		2.5-4.5				
	100	0	96	2	56	8	38	4	17	1	4.50	0.20	6.00	0.25	11.8	-1.4	1.3	-2.7			
	100	0	94	0	50	2	35	1	18	2	5.70	1.40	5.88	0.13	11.6	-1.6	1.8	-2.2			
	100	0	97	3	53	5	37	3	18	2	5.10	0.80	6.10	0.35	11.8	-1.4	1.4	-2.6			
	100	0	97	3	53	5	35	1	16	0	3.50	-0.80	6.08	0.33	12.6	-0.6	2.9	-1.1			
	100	0	96	2	56	8	37	3	17	1	5.10	0.80	6.67	0.92	12.3	-0.9	2.1	-1.9			
WB	90-100%		55-95%		30-65%		20-50%		5-30%		2-7%				12.0 min				CMP-PO-025-3(73)	1999	Primary
Design/JMF	96		74		49		34		16		4.10		6.00		13.8		4.5				
JMF Limits	90-100		67-81		42-56		29-39		11-21		2.1-6.1		5.75-6.25		12.3-15.3		2.5-4.5				
	94	-2	69	-5	46	-3	32	-2	16	0	3.80	-0.30	6.26	0.26	10.7	-3.1	1.7	-2.8			
	93	-3	75	1	49	0	34	0	17	1	4.30	0.20	6.35	0.35	11.1	-2.7	1.6	-2.9			
	96	0	76	2	52	3	35	1	16	0	3.60	-0.50	5.99	-0.01	10.9	-2.9	1.8	-2.7			
	92	-4	79	5	53	4	35	1	16	0	4.30	0.20	5.61	-0.39	10.7	-3.1	2.6	-1.9			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-034-2(28)	1999	Primary
Design/JMF	98		79		53		38		21		4.40		5.00		13.6		5.3				
JMF Limits	90-100		72-86		46-60		33-43		16-26		2.4-6.4										
	97	-1	71	-8	46	-7	33	-5	19	-2	4.90	0.50	5.07	0.07	11.6	-2.0	3.6	-1.7			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min				CMP-PO-034-2(28)	1999	Primary
Design/JMF	98		79		53		38		21		4.40		5.00		13.6		5.3				
JMF Limits	90-100		72-86		46-60		33-43		16-26		2.4-6.4		4.75-5.25		12.1-15.1		3.0-5.0				
	98	0	80	1	56	3	39	1	21	0	5.30	0.90	5.60	0.60	11.7	-1.9	3.1	-2.2			
	95	-3	75	-4	53	0	38	0	21	0	5.00	0.60	5.10	0.10	11.4	-2.2	3.6	-1.7			
	98	0	86	7	63	10	45	7	23	2	5.30	0.90	5.80	0.80	12.1	-1.5	3.9	-1.4			
	99	1	80	1	55	2	40	2	22	1	6.10	1.70	5.40	0.40	12.1	-1.5	4.1	-1.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				CMP-PO-043-2(38) &	1999	Primary
Design/JMF	99		86		56		34		12		5.70		4.80		13.7		4.0		STPE-042-3(28)		
JMF Limits	90-100		81-95		49-63		28-38		7-17		3.0-7.0		4.55-5.05		12.2-15.2		2.5-4.5				
	99	0	86	0	54	-2	34	0	14	2	7.00	1.30	4.84	0.04	11.1	-2.6	1.8	-2.2			
	97	-2	86	0	49	-7	30	-4	13	1	6.40	0.70	4.80	0.00	12.5	-1.2	3.4	-0.6			
	100	1	85	-1	50	-6	31	-3	13	1	6.30	0.60	4.88	0.08	12.0	-1.7	3.0	-1.0			
	99	0	85	-1	58	2	38	4	15	3	7.40	1.70	4.83	0.03	11.6	-2.1	2.5	-1.5			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	99	0	88	2	60	4	37	3	15	3	6.90	1.20	4.70	-0.10	12.1	-1.6	3.0	-1.0			
	98	-1	84	-2	55	-1	35	1	14	2	7.20	1.50	4.70	-0.10	13.0	-0.7	3.9	-0.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-043-2(38)	1999	Primary
Design/JMF	99		86		56		34		12		5.70		4.80		13.7		4.0				
JMF Limits	90-100		81-95		49-63		28-38		7-17		3-7										
	99	0	84	-2	55	-1	34	0	14	2	7.40	1.70	4.51	-0.29	12.3	-1.4	4.5	0.5			
WB	100		85-100		35-70		20-55		5-35		2-7								CMP-PO-1105(4)	1999	Secondary
Design/JMF	100		93		52		39		19		5.00		5.40		15.1		4.0				
JMF Limits	100		86-100		45-59		34-44		14-24		3-7										
	100	0	95	2	59	7	45	6	23	4	5.60	0.60	5.42	0.02	13.9	-1.2	2.8	-1.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				CMP-PO-1208(10)	1999	Secondary
Design/JMF	99		79		45		31		19		5.80		5.20		12.8		4.0				
JMF Limits	90-100		72-86		39-53		26-36		14-24		3.0-7.0		4.95-5.45		11.3-14.3		2.5-4.5				
	100	1	82	3	48	3	33	2	21	2	5.90	0.10	5.59	0.39							
	98	-1	84	5	48	3	31	0	18	-1	5.40	-0.40	6.00	0.80							
	100	1	82	3	45	0	30	-1	18	-1	5.20	-0.60	5.70	0.50							
	100	1	82	3	45	0	31	0	18	-1	5.40	-0.40	5.70	0.50							
													5.24	0.04							
													5.10	-0.10							
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-1208(10)	1999	Secondary
Design/JMF	99		79		45		31		19		5.80		5.20		12.8		4.0				
JMF Limits	90-100		72-86		39-53		26-36		14-24		3-7										
	99	0	76	-3	41	-4	28	-3	18	-1	5.20	-0.60	5.20	0.00	11.8	-1.0	2.1	-1.9			
	100	1	85	6	49	4	33	2	21	2	6.10	0.30	5.53	0.33	12.1	-0.7	2.1	-1.9			
	98	-1	79	0	43	-2	30	-1	19	0	6.00	0.20	5.06	-0.14	12.1	-0.7	3.2	-0.8			
	99	0	78	2	44	3	30	2	19	1	5.70	0.50	5.25	0.05	11.9	0.1	2.4	0.3			
WB	100		85-100		35-70		20-55		5-35		2-7								CMP-PO-2303(15)	1999	Secondary
Design/JMF	100		97		46		27		9		5.10		5.20		14.4		4				
JMF Limits	100		90-100		39-53		22-32		5-15		3-7										
	100	0	96	-1	44	-2	28	1	12	3	7.90	2.80	5.01	-0.19	13.4	-1.0	3.2	-0.8			
WB	90-100%		55-95%		60-65%		20-50%		5-30%		2-7%				12.0 min				CMP-PO-FX-023-2(35)	1999	Primary
Design/JMF	97		73		41		26		12		4.90		4.75		13.5		3.7				
JMF Limits	90-100		66-80		34-48		21-31		7-17		2.9-6.9		4.5-5.0		12.0-15.0		2.5-4.5				
													5.00	0.25	14.6	1.1	3.1	-0.6			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
													4.85	0.10	14.6	1.1	3.4	-0.3			
													4.80	0.05	15.1	1.6	4.0	0.3			
													4.78	0.03	14.8	1.3	3.8	0.1			
													4.81	0.06	15.0	1.5	3.9	0.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-FX-023-2(35)	1999	Primary
Design/JMF	97		73		41		26		12		4.90		4.75		13.5		3.7				
JMF Limits	90-100		66-80		34-48		21-31		7-17		2.9-6.9										
	94	-3	64	-9	37	-4	26	0	15	3	7.00	2.10	4.52	-0.23	9.7	-3.8	0.7	-3.0			
	96	-1	71	-2	41	0	28	2	16	4	7.90	3.00	4.37	-0.38	9.7	-3.8	2.1	-1.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								FH-0601(29)	1999	Secondary
Design/JMF	94		79		49		27		9		5.00		5.75		14.8		4.8				
JMF Limits	90-100		72-86		42-56		22-32		5-15		3-7										
	92	-2	72	-7	46	-3	31	4	14	5	7.30	2.30	4.89	-0.86	10.2	-4.6	1.2	-3.6			
	83	-11	67	-12	44	-5	30	3	14	5	7.30	2.30	5.17	-0.58	10.5	-4.3	1.2	-3.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								IM-25-4(135)219	1999	Interstate
Design/JMF	97		76		47		29		15		5.40		5.20		12.5		4				
JMF Limits	90-100		69-83		40-54		24-34		10-20		3-7										
	96	-1	78	2	51	4	35	6	20	5	7.00	1.60	5.74	0.54	11.9	-0.6	2.7	-1.3			
WB	100		85-100		35-70		20-55		5-35		2-7				13.0 min				IM-25-4(135)219	1999	Interstate
Design/JMF	100		95		48		29		15		5.80		5.60		13.8		4.4				
JMF Limits	100		88-100		41-55		24-34		10-20		3.0-7.0		5.35-5.85		12.3-15.3		2.5-4.5				
	100	0	97	2	51	3	33	4	18	3	7.60	1.80	5.19	-0.41	13.5	-0.3	5.2	0.8			
	100	0	96	1	45	-3	29	0	16	1	6.30	0.50	5.70	0.10	13.7	-0.1	4.0	-0.4			
	100	0	95	0	44	-4	28	-1	16	1	6.20	0.40	5.60	0.00	13.6	-0.2	3.7	-0.7			
	100	0	96	1	54	6	33	4	17	2	7.30	1.50	5.80	0.20	14.3	0.5	5.3	0.9			
	100	0	96	1	50	2	29	0	14	-1	5.80	0.00	5.60	0.00	13.9	0.1	5.1	0.7			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				IM-25-4(135)219	1999	Interstate
Design/JMF	97		76		47		29		15		5.40		5.20		12.8		4.0				
JMF Limits	90-100		69-83		40-54		24-34		10-20		3.0-7.0		4.95-5.45		11.3-14.3		2.5-4.5				
	97	0	74	-2	47	0	32	3	18	3	6.50	1.10	4.60	-0.60	11.6	-1.2	4.3	0.3			
	95	-2	74	-2	49	2	32	3	17	2	5.90	0.50	5.60	0.40	12.5	-0.3	4.3	0.3			
	94	-3	78	2	52	5	34	5	18	3	6.60	1.20	5.55	0.35	11.2	-1.6	2.9	-1.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				IM-25-4(135)219	1999	Interstate
Design/JMF	97		76		47		29		15		5.40		5.60		13.8		4.7				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	90-100		69-83		40-54		24-34		10-20		3.0-7.0		5.35-5.85		12.3-15.3		2.5-4.5				
	96	-1	80	4	52	5	34	5	19	4	7.00	1.60	5.14	-0.46	12.0	-1.8	3.7	-1.0			
	97	0	76	0	50	3	33	4	18	3	6.80	1.40	5.49	-0.11	12.0	-1.8	3.1	-1.6			
	94	-3	74	-2	46	-1	29	0	16	1	6.20	0.80	4.63	-0.97	12.1	-1.7	3.8	-0.9			
	97	0	77	1	49	2	32	3	18	3	6.40	1.00	5.60	0.00	12.8	-1.0	3.9	-0.8			
	94	-3	71	-5	41	-6	26	-3	13	-2	4.80	-0.60	4.67	-0.93	12.0	-1.8	4.8	0.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7								IM-80-3(127)187	1999	Interstate
Design/JMF	97		75		41		25		11		6.10		5.00		13.9		4.9				
JMF Limits	90-100		68-82		34-48		20-30		6-16		3.0-7.0		4.75-5.25		12.4-15.4		3.0-5.0				
	96	-1	81	6	41	0	24	-1	11	0	5.30	-0.80	5.27	0.27	12.4	-1.5	3.0	-1.9			
	95	-2	78	3	42	1	25	0	11	0	5.60	-0.50	5.20	0.20	12.8	-1.1	3.9	-1.0			
	94	-3	69	-6	37	-4	24	-1	11	0	5.50	-0.60	4.54	-0.46	10.7	-3.2	3.2	-1.7			
	97	0	75	0	39	-2	24	-1	10	-1	5.10	-1.00	4.91	-0.09	11.6	-2.3	2.7	-2.2			
	92	-5	72	-3	40	-1	26	1	12	1	5.40	-0.70	4.81	-0.19	10.6	-3.3	2.5	-2.4			
	95	-2	78	3	38	-3	23	-2	10	-1	5.40	-0.70	5.14	0.14	12.7	-1.2	3.0	-1.9			
	95	-2	77	2	40	-1	24	-1	11	0	5.40	-0.70	5.10	0.10	12.7	-1.2	3.1	-1.8			
	98	1	81	6	43	2	27	2	11	0	5.30	-0.80	5.20	0.20	13.2	-0.7	3.7	-1.2			
	98	1	81	6	44	3	27	2	11	0	5.40	-0.70	5.46	0.46	13.0	-0.9	3.2	-1.7			
	99	2	81	6	42	1	25	0	11	0	5.50	-0.60	5.34	0.34	12.3	-1.6	3.2	-1.7			
	97	0	79	4	42	1	25	0	11	0	5.60	-0.50	5.06	0.06	11.6	-2.3	3.1	-1.8			
	90	-7	60	-15	27	-14	19	-6	9	-2	4.60	-1.50	4.84	-0.16	12.0	-1.9	4.0	-0.9			
	96	-1	76	1	44	3	28	3	12	1	6.00	-0.10	5.14	0.14	12.6	-1.3	3.2	-1.7			
	97	0	76	1	44	3	28	3	12	1	5.30	-0.80	4.99	-0.01	12.0	-1.9	3.5	-1.4			
	95	-2	78	3	44	3	28	3	11	0	5.00	-1.10	5.08	0.08	12.2	-1.7	3.0	-1.9			
	95	-2	67	-8	35	-6	22	-3	11	0	4.8	-1.30	4.33	-0.67	11.4	-2.5	4.1	-0.8			
	97	0	75	0	41	0	25	0	11	0	5.5	-0.60	4.99	-0.01	13.9	0.0	4.8	-0.1			
	93	-4	75	0	44	3	27	2	12	1	5.9	-0.20	5.01	0.01	14	0.1	5.1	0.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								IM-80-3(127)187	1999	Interstate
Design/JMF	96		84		36		22		11		5.00		4.90		13.9		5				
JMF Limits	90-100		77-91		30-44		20-30		6-16		3-7										
	98	2	87	3	42	6	25	3	12	1	5.60	0.60	4.68	-0.22	12.9	-1.0	2.9	-2.1			
WB	90-100		90-MAX				23-49				2-7								IM-80-3(129)143 &	1999	Interstate
Design/JMF	100		82		42		27		14		3.50		5.00		14.2		4.2		CMP SR-80-3(125)173		w/ RAP
JMF Limits																					

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	82	0	46	4	30	3	15	1	4.6	1.10	4.20	-0.80	14.1	-0.1	6.3	2.1			
	100	0	82	0	46	4	29	2	15	1	4.3	0.80	4.27	-0.73	14.2	0.0	6.1	1.9			
	100	0	85	3	49	7	32	5	17	3	5.4	1.90	5.23	0.23	12.7	-1.5	2.6	-1.6			
	100	0	80	-2	43	1	31	4	16	2	4.1	0.60	4.97	-0.03	13	-1.2	3.6	-0.6			
	100	0	84	2	46	4	30	3	16	2	5.2	1.70	4.67	-0.33	12.5	-1.7	3.5	-0.7			
	100	0	85	3	49	7	32	5	17	3	5.4	1.90	5.23	0.23	12.7	-1.5	2.6	-1.6			
	100	0	84	2	48	6	31	4	16	2	4.60	1.10	4.82	-0.18	13.2	-1.0	4	-0.2			
	100	0	83	1	44	2	29	2	16	2	4.4	0.90	4.66	-0.34	12.9	-1.3	3.9	-0.3			
	100	0	80	-2	47	5	32	5	17	3	4.90	1.40	4.67	-0.33	11.4	-2.8	2.4	-1.8			
	100	0	80	-2	44	2	29	2	15	1	4.30	0.80	4.91	-0.09	12.9	-1.3	3.5	-0.7			
	100	0	83	1	49	7	32	5	17	3	6.10	2.60	4.65	-0.35	12.3	-1.9	2.4	-1.8			
	100	0	82	0	47	5	31	4	16	2	4.40	0.90	4.98	-0.02	12.9	-1.3	2.8	-1.4			
	100	0	85	3	50	8	32	5	17	3	4.20	0.70	5.29	0.29	12.4	-1.8	1.8	-2.4			
	100	0	84	2	48	6	31	4	16	2	4.20	0.70	5.18	0.18	13.5	-0.7	3.2	-1.0			
	100	0	80	-2	45	3	30	3	16	2	4.80	1.30	4.85	-0.15	11.7	-2.5	1.9	-2.3			
	100	0	85	3	50	8	32	5	17	3	4.50	1.00	5.05	0.05	12.4	-1.8	2.7	-1.5			
	100	0	83	1	48	6	31	4	16	2	4.90	1.40	4.97	-0.03	12.3	-1.9	2.3	-1.9			
	100	0	80	-2	45	3	30	3	16	2	4.90	1.40	4.74	-0.26	11.7	-2.5	2.1	-2.1			
	100	0	78	-4	44	2	29	2	16	2	5.30	1.80	4.37	-0.63	12.3	-1.9	3.9	-0.3			
	100	0	88	6	53	11	33	6	16	2	5.40	1.90	4.75	-0.25	14.8	0.6	5.2	1.0			
	100	0	86	4	45	3	29	2	15	1	4.90	1.40	4.40	-0.60	14.4	0.2	5.5	1.3			
	100	0	86	4	46	4	29	2	15	1	4.80	1.30	4.50	-0.50	14.2	0.0	5.6	1.4			
	100	0	88	6	49	7	31	4	16	2	5.20	1.70	4.63	-0.37	13.8	-0.4	4.4	0.2			
	100	0	83	1	47	5	30	3	16	2	5.20	1.70	5.20	0.20	12.4	-1.8	2.7	-1.5			
	100	0	84	2	51	9	33	6	17	3	5.70	2.20	5.21	0.21	12.5	-1.7	1.4	-2.8			
	100	0	77	-5	46	4	31	4	17	3	4.80	1.30	4.83	-0.17	12.5	-1.7	2.5	-1.7			
	100	0	84	2	51	9	32	5	16	2	5.00	1.50	5.18	0.18	13.3	-0.9	2.7	-1.5			
	100	0	81	-1	42	0	27	0	15	1	4.50	1.00	5.03	0.03	13.9	-0.3	3.5	-0.7			
	100	0	80	-2	45	3	29	2	15	1	5.00	1.50	5.12	0.12	14.3	0.1	3.5	-0.7			
	100	0	82	0	44	2	29	2	16	2	4.80	1.30	4.64	-0.36	13.4	-0.8	3.5	-0.7			
	100	0	84	2	44	2	28	1	15	1	4.40	0.90	5.01	0.01	14.4	0.2	4.2	0.0			
	100	0	77	-5	41	-1	27	0	16	2	5.20	1.70	4.74	-0.26	12.5	-1.7	2.6	-1.6			
	100	0	82	0	46	4	30	3	16	2	4.30	0.80	5.21	0.21	13.3	-0.9	2.8	-1.4			
	100	0	86	4	54	12	34	7	17	3	5.50	2.00	5.23	0.23	13.5	-0.7	2.9	-1.3			
	100	0	83	1	48	6	31	4	16	2	5.20	1.70	4.84	-0.16	12.9	-1.3	3.4	-0.8			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	77	-5	39	-3	27	0	16	2	5.50	2.00	4.25	-0.75	12.5	-1.7	3.9	-0.3			
	100	0	79	-3	45	3	30	3	17	3	5.80	2.30	4.65	-0.35	12.4	-1.8	2.7	-1.5			
WB	90-100		90 max				23-49				2-7				13.0 min				IM-80-3(129)143 &	1999	Interstate
Design/JMF	100		82		42		27		14		3.50		5.00		14.2		4.1		CMP SR-80-3(125)173		w/ RAP
JMF Limits															12.7-15.7		3.0-5.0				
	100	0	83	1	47	5	31	4	16	2	3.40	-0.10	4.61	-0.39	12.4	-1.8	3.1	-1.0			
	99	-1	86	4	48	6	32	5	17	3	4.00	0.50	4.45	-0.55	12.5	-1.7	3.2	-0.9			
	100	0	84	2	49	7	32	5	16	2	4.30	0.80	4.84	-0.16	12.9	-1.3	3.4	-0.7			
	100	0	81	-1	46	4	30	3	15	1	3.50	0.00	4.68	-0.32	13.4	-0.8	3.9	-0.2			
	100	0	79	-3	43	1	28	1	15	1	3.80	0.30	4.46	-0.54	12.7	-1.5	3.2	-0.9			
	100	0	82	0	43	1	28	1	15	1	4.10	0.60	4.65	-0.35	13.3	-0.9	3.8	-0.3			
	100	0	78	-4	41	-1	27	0	15	1	4.30	0.80	4.16	-0.84	13.3	-0.9	4.5	0.4			
	100	0	78	-4	44	2	30	3	17	3	5.00	1.50	4.37	-0.63	13.1	-1.1	5.0	0.9			
	100	0	83	1	48	6	31	4	17	3	4.80	1.30	4.65	-0.35	13.1	-1.1	3.6	-0.5			
	100	0	82	0	44	2	29	2	16	2	4.40	0.90	4.70	-0.30	13.2	-1.0	4.1	0.0			
	100	0	80	-2	44	2	29	2	17	3	3.80	0.30	4.19	-0.81	11.9	-2.3	3.1	-1.0			
	100	0	76	-6	39	-3	26	-1	14	0	4.20	0.70	4.16	-0.84	13.1	-1.1	4.8	0.7			
	100	0	83	1	47	5	31	4	16	2	4.60	1.10	4.70	-0.30	12.4	-1.8	3.3	-0.8			
	100	0	79	-3	41	-1	27	0	15	1	4.80	1.30	4.61	-0.39	13.8	-0.4	4.7	0.6			
	99	-1	82	0	44	2	29	2	16	2	4.40	0.90	4.71	-0.29	13.1	-1.1	4.1	0.0			
	100	0	82	0	43	1	28	1	15	1	4.40	0.90	4.77	-0.23	13.3	-0.9	3.5	-0.6			
	100	0	86	4	50	8	31	4	16	2	5.00	1.50	5.14	0.14	14.2	0.0	4.2	0.1			
	100	0	82	0	44	2	28	1	15	1	5.10	1.60	4.71	-0.29	13.3	-0.9	3.6	-0.5			
	100	0	84	2	47	5	31	4	16	2	5.30	1.80	4.66	-0.34	12.9	-1.3	3.2	-0.9			
	100	0	81	-1	41	-1	27	0	15	1	5.80	2.30	4.79	-0.21	13.8	-0.4	4.4	0.3			
	100	0	87	5	49	7	31	4	16	2	5.10	1.60	5.11	0.11	14.1	-0.1	3.9	-0.2			
	100	0	83	1	45	3	29	2	16	2	5.10	1.60	4.76	-0.24	13.3	-0.9	4.2	0.1			
	100	0	84	2	46	4	31	4	17	3	6.50	3.00	4.42	-0.58	13.0	-1.2	3.5	-0.6			
	100	0	81	-1	42	0	28	1	16	2	5.00	1.50	4.59	-0.41	13.5	-0.7	4.1	0.0			
	100	0	83	1	46	4	30	3	16	2	5.10	1.60	4.96	-0.04	13.8	-0.4	4.0	-0.1			
	100	0	86	4	50	8	30	3	17	3	5.10	1.60	4.58	-0.42	13.8	-0.4	4.7	0.6			
	100	0	83	1	46	4	29	2	15	1	5.00	1.50	4.91	-0.09	13.3	-0.9	3.7	-0.4			
	100	0	84	2	47	5	30	3	16	2	4.60	1.10	4.40	-0.60	13.5	-0.7	4.7	0.6			
	100	0	89	7	47	5	30	3	16	2	5.20	1.70	4.90	-0.10	13.8	-0.4	4.2	0.1			
	100	0	81	-1	42	0	27	0	15	1	5.10	1.60	4.76	-0.24	13.7	-0.5	5.5	1.4			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	81	-1	44	2	27	0	16	2	4.90	1.40	4.73	-0.27	12.8	-1.4	2.9	-1.2			
	100	0	83	1	45	3	30	3	16	2	5.00	1.50	4.98	-0.02							
	100	0	81	-1	43	1	28	1	16	2	5.30	1.80	4.79	-0.21	12.7	-1.5	3.2	-0.9			
	100	0	82	0	44	2	29	2	16	2	4.80	1.30	4.86	-0.14	13.6	-0.6	4.0	-0.1			
	100	0	83	1	46	4	28	1	15	1	4.90	1.40	4.61	-0.39	13.5	-0.7	4.0	-0.1			
	100	0	75	-7	42	0	26	-1	13	-1	4.40	0.90	4.83	-0.17	13.5	-0.7	4.1	0.0			
	100	0	86	4	48	6	30	3	16	2	5.10	1.60	5.21	0.21	14.2	0.0	4.2	0.1			
	100	0	80	-2	43	1	28	1	16	2	5.00	1.50	4.62	-0.38	13.0	-1.2	3.4	-0.7			
	100	0	82	0	43	1	26	-1	16	2	5.50	2.00	4.59	-0.41	14.0	-0.2	4.7	0.6			
	100	0	83	1	45	3	30	3	16	2	4.90	1.40	4.74	-0.26	13.2	-1.0	3.4	-0.7			
	100	0	83	1	43	1	28	1	17	3	5.00	1.50	4.62	-0.38	13.2	-1.0	3.8	-0.3			
	100	0	83	1	45	3	30	3	16	2	5.50	2.00	4.71	-0.29	12.5	-1.7	3.0	-1.1			
WB	90-100		90 max				23-49				2-7				13.0 MIN				IM-80-3(129)143 &	1999	Interstate
Design/JMF	100		82		42		27		14		3.50		5.00		13.8		4.0		CMP SR-80-3(125)173		w/ RAP
JMF Limits													4.75-5.25		12.3-15.3		3.0-5.0				
	100	0	79	-3	43	1	29	2	17	3	4.70	1.20	4.63	-0.37	13.2	-0.6	4.0	0.0			
	100	0	81	-1	45	3	31	4	16	2	5.10	1.60	4.76	-0.24	14.4	0.6	5.3	1.3			
	100	0	83	1	49	7	32	5	16	2	4.90	1.40	4.99	-0.01	14.3	0.5	4.7	0.7			
	100	0	83	1	46	4	31	4	16	2	5.00	1.50	4.62	-0.38	13.1	-0.7	3.9	-0.1			
	100	0	82	0	45	3	31	4	16	2	4.80	1.30	4.42	-0.58	12.8	-1.0	3.7	-0.3			
	100	0	82	0	55	13	37	10	17	3	4.90	1.40	4.70	-0.30	13.1	-0.7	3.8	-0.2			
	100	0	82	0	44	2	29	2	16	2	4.70	1.20	4.78	-0.22	13.3	-0.5	3.7	-0.3			
	100	0	77	-5	40	-2	26	-1	15	1	4.20	0.70	4.63	-0.37	13.6	-0.2	4.5	0.5			
	100	0	80	-2	44	2	29	2	16	2	4.40	0.90	4.83	-0.17	13.9	0.1	4.5	0.5			
	100	0	80	-2	46	4	29	2	16	2	4.80	1.30	4.54	-0.46	12.7	-1.1	3.3	-0.7			
WB	100		85-100		35-70		20-55		5-35		2-7								IM-90-4(101)169	1999	Interstate
Design/JMF	100		94		49		27		10		3.60		5.00		13.9		4.1				w/ RAP
JMF Limits													4.75-5.25		12.4-15.4		2.5-4.5				
	100	0	94	0	46	-3	27	0	12	2	5.6	2.00	4.87	-0.13	12	-1.9	2.8	-1.3			
	100	0	93	-1	45	-4	27	0	12	2	6.00	2.40	5.00	0.00	11.9	-2.0	2.1	-2.0			
	100	0	97	3	46	-3	27	0	12	2	6.10	2.50	5.17	0.17	12.1	-1.8	1.1	-3.0			
	100	0	94	0	42	-7	25	-2	14	4	6.90	3.30	4.70	-0.30	11.4	-2.5	2.1	-2.0			
	99	-1	95	1	50	1	30	3	14	4	6.90	3.30	4.77	-0.23	11.3	-2.6	2.0	-2.1			
	100	0	93	-1	44	-5	26	-1	13	3	6.70	3.10	4.48	-0.52	12.0	-1.9	3.4	-0.7			
	99	-1	93	-1	41	-8	26	-1	12	2	5.70	2.10	4.61	-0.39	11.4	-2.5	2.1	-2.0			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	92	-2	41	-8	26	-1	12	2	5.80	2.20	4.78	-0.22	11.3	-2.6	1.4	-2.7			
	100	0	95	1	48	-1	29	2	14	4	6.70	3.10	4.54	-0.46	11.3	-2.6	2.2	-1.9			
	100	0	96	2	46	-3	28	1	14	4	6.20	2.60	4.74	-0.26	11.5	-2.4	2.2	-1.9			
	100	0	94	0	48	-1	29	2	14	4	6.70	3.10	4.26	-0.74	12.9	-1.0	4.4	0.3			
	100	0	96	2	53	4	30	3	11	1	5.40	1.80	4.94	-0.06	12.2	-1.7	2.3	-1.8			
	100	0	97	3	48	-1	28	1	12	2	5.50	1.90	4.20	-0.80	11.3	-2.6	2.8	-1.3			
	100	0	96	2	53	4	31	4	13	3	6.20	2.60	4.52	-0.48	11.7	-2.2	2.1	-2.0			
	100	0	96	2	50	1	29	2	13	3	5.90	2.30	4.61	-0.39	11.6	-2.3	2.1	-2.0			
	100	0	93	-1	50	1	29	2	12	2	6.10	2.50	5.00	0.00	11.5	-2.4	1.4	-2.7			
	100	0	96	2	50	1	29	2	13	3	6.40	2.80	4.20	-0.80	11.2	-2.7	2.9	-1.2			
	100	0	95	1	46	-3	27	0	12	2	6.20	2.60	4.50	-0.50	11.3	-2.6	2.5	-1.6			
	100	0	95	1	48	-1	28	1	12	2	6.50	2.90	4.30	-0.70	12.6	-1.3	4.3	0.2			
	100	0	96	2	45	-4	27	0	12	2	6.80	3.20	4.20	-0.80	11.4	-2.5	3.2	-0.9			
	100	0	93	-1	39	-10	23	-4	9	-1	4.20	0.60	3.64	-1.36	11.3	-2.6	4.6	0.5			
	100	0	94	0	43	-6	26	-1	12	2	6.00	2.40	4.07	-0.93	10.8	-3.1	2.6	-1.5			
	100	0	89	-5	36	-13	23	-4	10	0	5.30	1.70	4.02	-0.98	11.8	-2.1	4.0	-0.1			
	100	0	95	1	52	3	32	5	16	6	6.00	2.40	4.22	-0.78	12.0	-1.9	3.9	-0.2			
	100	0	95	1	48	-1	27	0	11	1	6.50	2.90	4.30	-0.70	11.4	-2.5	3.3	-0.8			
	100	0	91	-3	42	-7	25	-2	11	1	6.10	2.50	3.53	-1.47	11.6	-2.3	5.1	1.0			
	100	0	93	-1	47	-2	27	0	12	2	6.80	3.20	4.70	-0.30	11.1	-2.8	1.3	-2.8			
	100	0	94	0	43	-6	25	-2	11	1	5.70	2.10	4.59	-0.41	11.4	-2.5	2.2	-1.9			
	100	0	94	0	43	-6	25	-2	11	1	5.40	1.80	4.49	-0.51	12.3	-1.6	3.6	-0.5			
	100	0	93	-1	42	-7	25	-2	11	1	6.20	2.60	4.36	-0.64	11.9	-2.0	2.8	-1.3			
WB	100		85-100		35-70		20-55		5-35		2-7				13.0 min				IM-90-4(101)169	1999	Interstate
Design/JMF	100		94		49		27		10		3.60		5.00		13.6		4.0				w/ RAP
JMF Limits													4.75-5.25		12.1-15.1		2.5-4.5				
	100	0	92	-2	38	-11	25	-2	13	3	7.20	3.60	4.66	-0.34	12.2	-1.4	3.8	-0.2			
	100	0	94	0	46	-3	29	2	14	4	6.60	3.00	5.16	0.16	11.6	-2.0	1.1	-2.9			
	100	0	97	3	50	1	30	3	14	4	7.90	4.30	4.66	-0.34	12.5	-1.1	3.4	-0.6			
	100	0	95	1	47	-2	29	2	14	4	7.80	4.20	4.74	-0.26	11.9	-1.7	2.6	-1.4			
	100	0	97	3	47	-2	28	1	13	3	6.10	2.50	4.45	-0.55	12.4	-1.2	3.4	-0.6			
	100	0	97	3	48	-1	28	1	13	3	7.30	3.70	4.47	-0.53	12.2	-1.4	2.6	-1.4			
	100	0	96	2	51	2	30	3	13	3	6.50	2.90	4.69	-0.31	12.7	-0.9	3.2	-0.8			
	100	0	96	2	42	-7	25	-2	10	0	4.90	1.30	4.53	-0.47	12.2	-1.4	2.3	-1.7			
	100	0	88	-6	46	-3	26	-1	11	1	5.20	1.60	4.28	-0.72	13.2	-0.4	3.7	-0.3			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	94	0	43	-6	25	-2	12	2	6.40	2.80	4.61	-0.39	12.7	-0.9	3.0	-1.0			
WB	90-100		55-95		30-65		20-50		5-30		2-7								MG-042-1(18)	1999	Primary
Design/JMF	97		79		40		26		14		5.50		5.80		14.4		4.0				
JMF Limits	90-100		72-86		33-47		21-31		9-19		3-7										
	96	-1	82	3	44	4	28	2	15	1	5.8	0.30	6.61	0.81	15.4	1.0	4.4	0.4			
	96	-1	82	3	44	4	28	2	15	1	5.8	0.30	6.24	0.44	15.4	1.0	4.4	0.4			
	96	-1	78	-1	41	1	26	0	14	0	4.90	-0.60	6.45	0.65	14.9	0.5	3.2	-0.8			
	95	-2	80	1	42	2	28	2	15	1	5.20	-0.30	6.55	0.75	14.8	0.4	2.6	-1.4			
	94	-3	79	0	39	-1	24	-2	12	-2	5.20	-0.30	6.33	0.53	15.4	1.0	3.5	-0.5			
	96	-1	74	-5	40	0	25	-1	14	0	5.50	0.00	6.06	0.26	15.5	1.1	4.7	0.7			
	95	-2	73	-6	39	-1	25	-1	13	-1	4.70	-0.80	6.13	0.33	14.6	0.2	3.3	-0.7			
	96	-1	77	-2	41	1	25	-1	14	0	5.90	0.40	6.12	0.32	14.5	0.1	3.1	-0.9			
	99	2	86	7	46	6	31	5	18	4	7.60	2.10	6.99	1.19	13.1	-1.3	1.2	-2.8			
	98	1	81	2	42	2	27	1	14	0	6.20	0.70	6.24	0.44	14.1	-0.3	3.2	-0.8			
	98	1	81	2	40	0	26	0	14	0	6.60	1.10	5.93	0.13	13.7	-0.7	2.9	-1.1			
	95	-2	76	-3	38	-2	24	-2	17	3	6.60	1.10	5.55	-0.25	13.0	-1.4	2.9	-1.1			
	96	-1	80	1	41	1	26	0	14	0	6.30	0.80	5.55	-0.25	13.7	-0.7	4.7	0.7			
	96	-1	72	-7	36	-4	23	-3	13	-1	5.60	0.10	5.80	0.00	14.1	-0.3	5.2	1.2			
	96	-1	75	-4	40	0	25	-1	14	0	6.10	0.60	5.20	-0.60	12.8	-1.6	4.2	0.2			
	93	-4	73	-6	31	-9	21	-5	12	-2	4.70	-0.80	6.11	0.31	13.8	-0.6	3.2	-0.8			
	95	-2	73	-6	37	-3	23	-3	12	-2	5.00	-0.50	5.98	0.18	13.6	-0.8	3.9	-0.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min				NHI-80-4(207)246 &	1999	Interstate
Design/JMF	100		77		44		28		15		5.40		4.50		13.0		4.3		CMP PO-0410(10)		w/ RAP
JMF Limits													4.25-4.75		11.5-14.5		3.0-5.0				
	100	0	75	-2	43	-1	31	3	19	4	5.90	0.50	4.01	-0.49	12.3	-0.7	5.0	0.7			
	100	0	75	-2	47	3	33	5	19	4	5.90	0.50	4.28	-0.22	12.0	-1.0	4.1	-0.2			
	100	0	79	2	48	4	35	7	21	6	6.90	1.50	4.39	-0.11	11.3	-1.7	2.6	-1.7			
	99	-1	71	-6	43	-1	31	3	18	3	5.70	0.30	4.19	-0.31	11.5	-1.5	3.5	-0.8			
	100	0	80	3	46	2	33	5	20	5	5.80	0.40	4.70	0.20	11.6	-1.4	2.9	-1.4			
	100	0	78	1	44	0	32	4	20	5	5.50	0.10	4.44	-0.06	11.5	-1.5	3.1	-1.2			
	100	0	82	5	52	8	36	8	20	5	6.90	1.50	4.84	0.34	12.7	-0.3	3.0	-1.3			
	100	0	78	1	48	4	33	5	18	3	6.40	1.00	4.60	0.10	12.4	-0.6	3.5	-0.8			
	100	0	74	-3	44	-1	30	2	17	2	5.70	0.30	4.39	-0.11	12.8	-0.2	4.3	0.0			
	100	0	78	1	47	3	34	6	20	5	6.10	0.70	4.60	0.10	12.3	-0.7	4.6	0.3			
	100	0	79	2	46	2	33	5	20	5	6.10	0.70	4.43	-0.07	11.9	-1.1	3.3	-1.0			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	78	1	48	4	35	7	22	7	7.00	1.60	4.74	0.24	12.2	-0.8	3.7	-0.6			
	100	0	75	-2	46	2	33	5	20	5	6.70	1.30	4.67	0.17	12.2	-0.8	3.3	-1.0			
	100	0	75	-2	43	-1	32	4	20	5	6.40	1.00	4.56	0.06	11.5	-1.5	3.0	-1.3			
	100	0	77	0	46	2	34	6	21	6	6.90	1.50	4.50	0.00	11.6	-1.4	2.8	-1.5			
	100	0	81	4	49	5	36	8	21	6	7.00	1.60	4.60	0.10	12.7	-0.3	3.2	-1.1			
	100	0	78	1	46	2	34	6	22	7	6.50	1.10	4.65	0.15	12.0	-1.0	3.4	-0.9			
	100	0	75	-2	40	-4	30	2	20	5	6.10	0.70	4.24	-0.26	11.4	-1.6	2.7	-1.6			
	100	0	77	0	45	1	34	6	21	6	6.60	1.20	4.48	-0.02	11.8	-1.2	3.5	-0.8			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				NHI-80-4(207)246 &	1999	Interstate
Design/JMF	100		76		46		28		13		5.80		5.00		13.1		4.0		CMP PO-0410(10)		
JMF Limits	90-100		69-83		39-53		23-33		8-18		3.0-7.0		4.75-5.25		11.6-14.6		3.0-5.0				
	99	-1	75	-1	44	-2	32	4	19	6	5.3	-0.50	4.17	-0.83	11.3	-1.8	4.6	0.6			
	100	0	71	-5	39	-7	27	-1	16	3	5.3	-0.50	3.95	-1.05	12.9	-0.2	5.9	1.9			
	100	0	78	2	49	3	35	7	21	8	6.60	0.80	4.71	-0.29	11.0	-2.1	2.1	-1.9			
	99	-1	77	1	44	-2	29	1	17	4	4.60	-1.20	4.98	-0.02	12.4	-0.7	3.8	-0.2			
	100	0	83	7	54	8	37	9	20	7	6.20	0.40	5.14	0.14	13.0	-0.1	3.9	-0.1			
	98	-2	76	0	42	-4	29	1	17	4	4.90	-0.90	4.85	-0.15	12.2	-0.9	4.1	0.1			
	100	0	69	-7	39	-7	27	-1	17	4	4.70	-1.10	5.21	0.21	12.0	-1.1	3.0	-1.0			
WB	100		85-100		30-65		20-50		5-35		2-7								NHI-90-4(112)186	1999	Interstate
Design/JMF	100		92		44		26		8		3.90		4.50		13.5		4.5				
JMF Limits	100		86-100		37-51		21-31		5-15		3-7										
	100	0	89	-3	43	-1	25	-1	11	3	6.90	3.00	4.59	0.09	12.9	-0.6	4.3	-0.2			
	100	0	86	-6	39	-5	23	-3	11	3	6.90	3.00	4.90	0.40	13.1	-0.4	4.3	-0.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								NH-ON034-02(031)	1999	Primary
Design/JMF	95		70		47		34		20		4.00		5.90		14.7		4.0				
JMF Limits	90-100		63-77		40-54		29-39		15-25		2.0-6.0		5.65-6.15		13.2-16.2		2.5-4.5				
	99	4	77	7	48	1	35	1	20	0	4.30	0.30	6.40	0.50	13.7	-1.0	2.2	-1.8			
	95	0	69	-1	44	-3	33	-1	19	-1	4.00	0.00	6.00	0.10	13.8	-0.9	3.0	-1.0			
	98	3	76	6	50	3	39	5	23	3	5.00	1.00	6.56	0.66	14.0	-0.7	1.6	-2.4			
	94	-1	71	1	48	1	37	3	23	3	5.50	1.50	6.01	0.11	13.0	-1.7	2.1	-1.9			
	94	-1	68	-2	46	-1	37	3	22	2	5.10	1.10	5.77	-0.13	12.5	-2.2	2.0	-2.0			
	92	-3	64	-6	44	-3	34	0	21	1	4.2	0.20	5.71	-0.19	13.7	-1.0	3.7	-0.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7								NHP-010-3(75)	1999	Primary
Design/JMF	99		79		46		30		21		5.70		5.40		13.8		3.1				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	90-100		72-86		39-53		25-35		16-26		3-7										
	98	-1	83	4	57	11	42	12	27	6	7.60	1.90	5.71	0.31	13.5	-0.3	2.2	-0.9			
	99	0	90	11	64	18	48	18	32	11	11.90	6.20	5.98	0.58	13.8	0.0	2.2	-0.9			
	99	0	78	-1	48	2	36	6	24	3	8.40	2.70	5.3	-0.10	13.1	-0.7	2.2	-0.9			
													5.69	0.29	14.8	1.0	1.4	-1.7			
													5.25	-0.15	14.8	1.0	2.7	-0.4			
													5.82	0.42	16.8	3.0	3.6	0.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7								NHP-012-2(9)	1999	Primary
Design/JMF	100		77		38		25		14		4.7		5.30		15.4		3.9				
JMF Limits	90-100		70-84		31-45		20-30		9-19		3-7										
	100	0	76	-1	40	2	26	1	16	2	5.1	0.40	5.15	-0.15	14	-1.4	2.7	-1.2			
	100	0	78	1	41	3	27	2	17	3	4.50	-0.20	5.40	0.10	14.3	-1.1	2.2	-1.7			
	100	0	78	1	42	4	29	4	19	5	5.90	1.20	5.65	0.35	14.2	-1.2	2.5	-1.4			
	100	0	84	7	47	9	30	5	19	5	6.20	1.50	5.75	0.45	15.4	0.0	4.1	0.2			
	100	0	76	-1	40	2	27	2	17	3	5.50	0.80	5.23	-0.07	15.9	0.5	5.1	1.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				SCP-ON040-02(018) &	1999	Primary
Design/JMF	94		73		50		37		21		5.30		4.75		12.4		3.3		ARSCT-ON040-02(018)		
JMF Limits	87-100		66-80		43-57		32-42		16-26		3.0-7.0		4.50-5.00		10.9-13.9		2.5-4.5				
	96	2	80	7	56	6	42	5	25	4	8.90	3.60	4.85	0.10	11.1	-1.3	1.7	-1.6			
	95	1	77	4	54	4	42	5	25	4	8.50	3.20	4.86	0.11	11.7	-0.7	2.5	-0.8			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				SCP-ON040-02(018) &	1999	Primary
Design/JMF	94		73		50		34		21		5.30		4.75		12.4		3.3		ARSCT-ON040-02(018)		
JMF Limits	87-100		66-80		43-57		29-39		16-26		3.0-7.0		4.50-5.00		10.9-13.9		2.5-4.5				
	95	1	72	-1	52	2	34	-3	20	-1	8.40	3.10	4.60	-0.15	11.5	-0.9	2.9	-0.4			
													4.76	0.01	11.2	-1.2	2.0	-1.3			
	95	1	75	2	49	-1	37	0	23	2	8.00	2.70	4.77	0.02	11.7	-0.7	2.6	-0.7			
	95	1	73	0	50	0	38	1	23	2	8.40	3.10	4.77	0.02	11.4	-1.0	2.5	-0.8			
	94	0	72	-1	50	0	35	-2	20	-1	8.50	3.20	4.80	0.05	12.6	0.2	3.5	0.2			
	93	-1	66	-7	42	-8	33	-4	18	-3	7.50	2.20	5.00	0.25	12.1	-0.3	2.5	-0.8			
	94	0	67	-6	43	-7	33	-4	20	-1	7	1.70	4.75	0.00	12.3	-0.1	4.4	1.1			
	91	-3	70	-3	45	-5	33	-4	20	-1	7.1	1.80	4.56	-0.19	12.1	-0.3	4.4	1.1			
WB	100		85-100		35-70		20-55		5-35		2-7				13.0 min				SCP-ON040-02(018) &	1999	Primary
Design/JMF	100		93		47		34		19		5.70		5.00		13.7		4.1		ARSCT-ON040-02(018)		
JMF Limits	100		86-100		40-54		29-39		14-24		3.0-7.0		4.75-5.25		12.2-15.2		2.5-4.5				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	95	2	60	13	45	11	26	7	9.70	4.00	5.13	0.13							
	100	0	95	2	54	7	41	7	25	6	9.00	3.30	5.00	0.00	11.8	-1.9	1.7	-2.4			
	100	0	95	2	52	5	38	4	23	4	8.80	3.10	4.98	-0.02	12.9	-0.8	2.9	-1.2			
	100	0	93	0	46	-1	37	3	22	3	8.00	2.30	5.15	0.15	13.1	-0.6	2.7	-1.4			
	100	0	94	1	49	2	36	2	22	3	7.60	1.90	4.99	-0.01	12.4	-1.3	2.6	-1.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-010-4(39)	1999	Primary
Design/JMF	96		73		48		33		20		5.60		5.10		14.1		4.9				
JMF Limits	90-100		66-80		41-55		28-38		15-25		3-7										
	98	2	74	1	48	0	33	0	19	-1	4.60	-1.00	5.31	0.21	13.0	-1.1	2.9	-2.0			
WB	90-100		60-85		35-60		20-45		10-30		2-7				12.0 min				SCP-010-4(39)	1999	Primary
Design/JMF	96		73		48		33		20		5.60		5.10		12.8		4.0				
JMF Limits	90-100		66-80		41-55		28-38		15-25		3.0-7.0		4.85-5.35		11.3-14.3		2.5-4.5				
	99	3	81	8	56	8	39	6	22	2	5.60	0.00	5.65	0.55	12.0	-0.8	2.5	-1.5			
	95	-1	77	4	54	6	38	5	21	1	6.00	0.40	5.36	0.26	11.9	-0.9	2.9	-1.1			
	97	1	82	9	57	9	38	5	22	2	5.90	0.30	5.58	0.48	12.6	-0.2	3.7	-0.3			
	97	1	69	-4	45	-3	31	-2	18	-2	5.50	-0.10	5.13	0.03	14.0	1.2	6.3	2.3			
	95	-1	73	0	49	1	34	1	19	-1	5.90	0.30	5.07	-0.03	12.2	-0.6	4.3	0.3			
	98	2	77	4	52	4	36	3	21	1	6.30	0.70	6.00	0.90	12.7	-0.1	3.5	-0.5			
	96	0	68	-5	41	-7	28	-5	17	-3	4.90	-0.70	5.50	0.40	12.5	-0.3	4.5	0.5			
WB	90-100%		55-95%		30-65%		20-50%		5-30%		2-7%				12.0 min				SCP-012-1(96)	1999	Primary
Design/JMF	100		78		42		27		14		5.00		5.70		16.0		4.5				
JMF Limits	90-100		71-85		35-49		22-32		37153		3.0-7.0		5.45-5.95		14.5-17.5		2.5-4.5				
	100	0	78	0	43	1	28	1	16	2	5.30	0.30	5.60	-0.10	13.3	-2.7	2.3	-2.2			
	100	0	71	-7	39	-3	26	-1	15	1	5.00	0.00	5.36	-0.34	13.4	-2.6	2.7	-1.8			
	100	0	81	3	46	4	30	3	16	2	4.90	-0.10	5.58	-0.12	13.6	-2.4	2.7	-1.8			
	100	0	81	3	46	4	30	3	17	3	5.60	0.60	5.59	-0.11	14.0	-2.0	2.6	-1.9			
	100	0	78	0	43	1	26	-1	15	1	5.70	0.70	5.39	-0.31	14.3	-1.7	3.7	-0.8			
	100	0	78	0	41	-1	25	-2	14	0	5.10	0.10	5.15	-0.55	13.0	-3.0	2.8	-1.7			
	100	0	81	3	44	2	29	2	16	2	6.50	1.50	5.57	-0.13	13.2	-2.8	1.9	-2.6			
	100	0	80	2	46	4	29	2	16	2	6.10	1.10	5.62	-0.08	13.5	-2.5	2.1	-2.4			
	100	0	76	-2	39	-3	26	-1	15	1	5.40	0.40	5.16	-0.54	13.5	-2.5	2.8	-1.7			
	100	0	81	3	45	3	29	2	16	2	6.10	1.10	5.85	0.15	13.6	-2.4	1.1	-3.4			
	100	0	79	1	45	3	27	0	15	1	5.80	0.80	5.44	-0.26	13.3	-2.7	2.1	-2.4			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-012-1(96)	1999	Primary

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
Design/JMF	100		78		42		27		14		5.00		5.30		13.5		2.5				
JMF Limits	90-100		71-85		35-49		22-32		9-19		3-7										
	100	0	76	-2	40	-2	25	-2	14	0	5.40	0.40	5.33	-0.37	12.5	-3.5	2.2	-2.3			
	100	0	77	-1	41	-1	26	-1	14	0	5.80	0.80	5.31	-0.39	13.0	-3.0	2.6	-1.9			
	100	0	78	0	39	-3	23	-4	13	-1	5.80	0.80	5.40	-0.30	13.4	-2.6	3.1	-1.4			
	100	0	77	-1	39	-3	24	-3	15	1	5.90	0.90	5.14	-0.56	12.5	-3.5	2.3	-2.2			
	100	0	73	-5	39	-3	26	-1	15	1	5.9	0.90	5.18	-0.52	13.1	-2.9	2.8	-1.7			
	100	0	77	-1	43	1	27	0	15	1	4.6	-0.40	5.48	-0.22	13.4	-2.6	2.8	-1.7			
WB	100%		90-100%		40-60%		20-45%		10-30%		2-7%				13.0 min				SCP-FX-023-2(29)	1999	Primary
Design/JMF	100		96		44		30		18		6.00		5.25		13.5		3.7				
JMF Limits	100		90-100		40-54		25-35		13-23		3.0-7.0		5.00-5.50		12.0-15.0		2.5-4.5				
	100	0	95	-1	51	7	34	4	19	1	6.50	0.50	5.79	0.54							
	100	0	98	2	50	6	34	4	19	1	6.00	0.00	5.72	0.47							
	100	0	94	-2	43	-1	30	0	17	-1	5.70	-0.30	5.27	0.02							
	100	0	97	1	50	6	34	4	20	2	7.00	1.00	5.60	0.35							
	100	0	95	-1	47	3	32	2	19	1	6.60	0.60	5.90	0.65	12.3	-1.2	1.4	-2.3			
	100	0	97	1	49	5	33	3	19	1	6.70	0.70	6.10	0.85	13.0	-0.5	2.5	-1.2			
	100	0	96	0	49	5	32	2	17	-1	4.90	-1.10	5.70	0.45	14.0	0.5	3.1	-0.6			
	100	0	95	-1	45	1	28	-2	15	-3	4.60	-1.40	5.70	0.45	12.7	-0.8	2.8	-0.9			
	100	0	97	1	47	3	31	1	17	-1	5.90	-0.10	6.20	0.95	13.8	0.3	2.5	-1.2			
	100	0	95	-1	46	2	31	1	18	0	6.50	0.50	5.30	0.05	12.3	-1.2	1.8	-1.9			
WB	100		90-100		40-60		20-45		10-30		2-7								SCP-FX-0300(31)	1999	Secondary
Design/JMF	100		92		55		38		18		5.50		5.00		13.9		4.0				
JMF Limits	100		90-100		46-60		33-43		13-23		3.0-7.0		4.75-5.25		12.4-15.4		2.5-4.5				
	100	0	94	2	55	0	38	0	18	0	7.40	1.90	5.08	0.08	12.3	-1.6	1.9	-2.1			
	100	0	94	2	57	2	38	0	21	3	7.20	1.70	5.07	0.07	12.3	-1.6	2.2	-1.8			
	100	0	94	2	55	0	35	-3	18	0	5.80	0.30	4.96	-0.04	12.7	-1.2	3.0	-1.0			
	100	0	93	1	57	2	36	-2	18	0	5.60	0.10	5.32	0.32	13.5	-0.4	2.7	-1.3			
WB	100		90-100		40-60		25-45		10-30		2-7								SCP-FX-0300(31)	1999	Secondary
Design/JMF	100		92		55		37		18		5.40		5.00		13.3		3.9				
JMF Limits	100		90-100		46-60		29-39		13-23		3-7										
	100	0	92	0	53	-2	33	-5	16	-2	7.30	1.80	4.80	-0.20	13.1	-0.8	2.9	-1.1			
	100	0	96	4	60	5	36	-2	16	-2	7.50	2.00	5.21	0.21	13.7	-0.2	3.2	-0.8			
	100	0	94	2	58	3	36	-2	17	-1	7	1.50	4.92	-0.08	13.6	-0.3	3.3	-0.7			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	95	3	59	4	36	-2	17	-1	7.7	2.20	4.98	-0.02	13.6	-0.3	3.3	-0.7			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-FX-0800(8)	1999	Secondary
Design/JMF	98		80		48		34		17		4.90		5.00		12.1		3.2				
JMF Limits	90-100		73-87		41-55		29-39		12-22		2.9-6.9										
	100	2	81	1	55	7	40	6	20	3	4.50	-0.40	5.44	0.44	12.8	0.7	3.7	0.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-OP22-01(041)	1999	Primary
Design/JMF	100		75		47		31		15		4.50		5.10		13.1		4.0				
JMF Limits	100		68-82		40-54		26-36		10-20		2.5-6.5										
	100	0	86	11	51	4	33	2	17	2	5.80	1.30	5.53	0.43	12.2	-0.9	2.8	-1.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-OP22-01(041)	1999	Primary
Design/JMF	100		75		45		30		17		6.00		5.10		13.1		4.0				
JMF Limits	90-100		68-82		38-52		25-35		12-22		3.0-7.0										
	100	0	85	10	47	2	32	2	18	1	6.20	0.20	5.08	-0.02	12.3	-0.8	3.4	-0.6			
WB	90-100%		55-95%		30-65%		20-50%		5-30%		2-7%				12.0 min				SCP-OP22-01(041)	1999	Primary
Design/JMF	97		75		43		28		15		5.00		5.10		13.1		4.0				
JMF Limits	90-100		68-82		36-50		23-33		37184		3.0-7.0		4.85-5.35		11.6-14.6		2.5-4.5				
	100	3	80	5	43	0	29	1	16	1	5.80	0.80	4.99	-0.11	13.2	0.1	5.0	1.0			
	100	3	85	10	55	12	35	7	17	2	5.70	0.70	5.51	0.41	14.0	0.9	4.4	0.4			
	100	3	84	9	50	7	33	5	17	2	5.70	0.70	5.37	0.27	14.0	0.9	4.9	0.9			
	100	3	82	7	46	3	30	2	16	1	5.30	0.30	5.49	0.39	13.1	0.0	3.8	-0.2			
	100	3	74	-1	40	-3	28	0	16	1	5.10	0.10	4.89	-0.21	12.6	-0.5	3.4	-0.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								STPP-011-2(13)	1999	Primary
Design/JMF	100		90		47		29		12		3.7		6.70		15.2		4.2				
JMF Limits	100		81-95		40-54		24-34		7-17		3-7										
	100	0	92	2	46	-1	30	1	15	3	7.10	3.40	6.79	0.09	12.6	-2.6	2.8	-1.4			
WB	90-100		55-95		30-65		20-50		5-30		2-7								STPP-011-3(13) &(22)	1999	Primary
Design/JMF	97		80		49		36		20		4.60		5.60		13.6		5.0				
JMF Limits	90-100		73-87		42-56		31-41		15-25		3-7										
	100	3	83	3	48	-1	35	-1	19	-1	3.5	-1.10	5.71	0.11	12.6	-1.0	3.8	-1.2			
	100	3	76	-4	47	-2	36	0	22	2	6.30	1.70	5.70	0.10	11.8	-1.8	2.6	-2.4			
	100	3	86	6	53	4	40	4	25	5	6.80	2.20	5.60	0.00	10.8	-2.8	1.9	-3.1			
	98	1	79	-1	45	-4	35	-1	20	0	3.60	-1.00	5.50	-0.10	11.9	-1.7	3.7	-1.3			
	98	1	77	-3	43	-6	32	-4	19	-1	3.70	-0.90	5.90	0.30	12.0	-1.6	2.6	-2.4			
	94	-3	75	-5	42	-7	31	-5	19	-1	3.80	-0.80	5.90	0.30	12.1	-1.5	3.1	-1.9			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
WB	100%		85-100%		35-70%		20-55%		5-35%		2-7%				13.0 min				STPP-011-4(23)	1999	Primary
Design/JMF	100		91		42		25		14		5.50		6.00		15.4		4.5				
JMF Limits	100		85-99		35-49		20-30		37153		3.0-7.0		5.75-6.25		13.9-16.9		2.5-4.5				
	100	0	93	2	51	9	29	4	17	3	7.10	1.60	5.72	-0.28	15.3	-0.1	5.4	0.9			
	100	0	95	4	49	7	30	5	18	4	6.60	1.10	5.40	-0.60	15.3	-0.1	6.3	1.8			
	100	0	94	3	50	8	29	4	17	3	6.30	0.80	5.42	-0.58	14.8	-0.6	5.8	1.3			
	100	0	94	3	52	10	29	4	17	3	6.50	1.00	6.02	0.02	15.0	-0.4	4.7	0.2			
	100	0	93	2	48	6	28	3	15	1	5.80	0.30	6.16	0.16	14.7	-0.7	4.4	-0.1			
	100	0	91	0	46	4	29	4	17	3	5.7	0.20	5.44	-0.56	15	-0.4	5.8	1.3			
WB	100%		90-100%		40-60%		20-45%		10-30%		2-7%				13.0 min				STPP-033-3(9)	1999	Primary
Design/JMF	100		93		43		29		16		6.30		5.40		13.0		4.0				
JMF Limits	100		90-100		40-54		24-34		11-21		3.0-7.0		5.15-5.65		11.5-14.5		2.5-4.5				
	100	0	96	3	56	13	37	8	21	5	9.70	3.40	6.00	0.60	11.7	-1.3	1.8	-2.2			
	100	0	93	0	46	3	31	2	19	3	9.40	3.10	5.50	0.10	12.3	-0.7	3.2	-0.8			
	100	0	90	-3	47	4	30	1	17	1	6.50	0.20	5.40	0.00	17.9	4.9	3.2	-0.8			
	100	0	93	0	53	10	33	4	20	4	6.70	0.40	5.60	0.20	18.2	5.2	3.1	-0.9			
WB	100		90-100		40-60		25-45		10-30		2-7								STPP-033-3(9)	1999	Primary
Design/JMF	100		93		43		29		16		6.30		5.40		13.0		4.0				
JMF Limits	100		90-100		40-54		24-34		11-21		3-7										
	100	0	91	-2	45	2	31	2	19	3	8.10	1.80	5.62	0.22							
	100	0	91	-2	43	0	28	-1	16	0	7.00	0.70	5.30	-0.10	11.9	-1.1	4.0	0.0			
	100	0	93	0	45	2	29	0	17	1	7.20	0.90	5.55	0.15	12.1	-0.9	4.0	0.0			
WB	100		85-100		35-70		20-55		5-35		2-7								STPP-034-1(86)	1999	Primary
Design/JMF	100		95		58		45		25		4.1		5.40		14.2		3.7				
JMF Limits	100		86-100		51-65		40-50		20-30		2.1-6.1										
	100	0	93	-2	60	2	45	0	25	0	5.30	1.20	6.03	0.63	13.9	-0.3	1.5	-2.2			
WB	100		90-100		40-60		25-45		10-30		2-7								STPS-0200(14)	1999	Secondary
Design/JMF	100		97		47		32		17		5.60		6.20		15.5		4.5				
JMF Limits	100		90-100		40-54		27-37		12-22		3-7										
	100	0	99	2	51	4	31	-1	15	-2	3.20	-2.40	6.05	-0.15	18.6	3.1	8.9	4.4			
	100	0	99	2	51	4	31	-1	15	-2	3.20	-2.40	6.05	-0.15	17.9	2.4	8.1	3.6			
WB	100		85-100		35-70		20-55		5-35		2-7								STPU-1110(2)	1999	Secondary
Design/JMF	100		93		52		39		19		5.00		5.20		14.1		3.1				
JMF Limits	100		86-100		45-59		34-44		14-24		3-7										

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	93	0	62	10	49	10	24	5	5.20	0.20	4.99	-0.21	14.8	0.7	4.9	1.8			
WB	90-100		60-85		35-60		20-45		10-30		2-7				13.0 min				IM-25-3(86)160	1999	Interstate
Design/JMF	98		74		40		28		16		5.0		5.40		13.4		4.0				
JMF Limits	90-100		67-81		35-49		23-33		11-21		3.0-7.0		5.15-5.65		11.9-14.9		3.0-5.0				
	99	1	84	10	42	2	27	-1	17	1	6.70	1.70	5.68	0.28	14.0	0.6	3.3	-0.7			
	100	2	87	13	46	6	29	1	17	1	6.90	1.90	5.70	0.30	14.7	1.3	3.8	-0.2			
	94	-4	81	7	45	5	28	0	15	-1	5.00	0.00	5.21	-0.19	14.3	0.9	5.3	1.3			
	91	-7	78	4	41	1	25	-3	15	-1	5.70	0.70	5.15	-0.25	13.6	0.2	3.7	-0.3			
WB	90-100%		55-95%		30-65%		20-50%		5-30%		2-7%				12.0 min				AM-ON25-04(057)	2000	Primary
Design/JMF	100		84		41		31		17		5.00		5.00		12.9		2.6				
JMF Limits	90-100		77-91		34-48		26-36		37247		3.0-7.0		4.75-5.25		11.4-14.4		2.5-4.5				
	100	0	80	-4	35	-6	26	-5	15	-2	5.60	0.60	4.64	-0.36	13.6	0.7	4.0	1.4			
													4.74	-0.26	13.2	0.3	3.1	0.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7								AM-ON34-02(032)	2000	Primary
Design/JMF	98		76		48		36		21		3.70		5.75		15.5		5.1				
JMF Limits	90-100		69-83		41-55		31-41		16-26		2-6										
	99	1	78	2	52	4	38	2	21	0	4.60	0.90	6.01	0.26	14.1	-1.4	3.4	-1.7			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				AM-ON34-02(032)	2000	Primary
Design/JMF	98		76		48		36		21		3.70		5.75		15.5		5.1				
JMF Limits	90-100		69-83		41-55		31-41		16-26		2.0-6.0		5.55-6.05		14.0-17.0		2.5-4.5				
	99	1	83	7	53	5	39	3	22	1	4.60	0.90	6.40	0.65	14.7	-0.8	3.6	-1.5			
	98	0	81	5	52	4	39	3	22	1	4.70	1.00	5.90	0.15	14.7	-0.8	4.1	-1.0			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-042-1(16)	2000	Primary
Design/JMF	96		77		46		27		13		5.8		5.40		12.9		4				
JMF Limits	90-100		70-84		39-53		22-32		8-18		3-7										
	98	2	84	7	53	7	36	9	21	8	9.80	4.00	6.27	0.87	14.8	1.9	3.9	-0.1			
	99	3	84	7	56	10	37	10	22	9	10.20	4.40	6.15	0.75	14.7	1.8	3.9	-0.1			
	96	0	81	4	51	5	34	7	21	8	9.70	3.90	6.17	0.77	14.6	1.7	3.9	-0.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				CMP-042-1(16)	2000	Primary
Design/JMF	96		77		46		27		13		5.80		5.40		12.9		4.0				
JMF Limits	90-100		70-84		39-53		22-32		8-18		3.0-7.0		5.15-5.65		11.4-14.4		2.5-4.5				
	95	-1	75	-2	44	-2	30	3	18	5	7.60	1.80	6.00	0.60	16.0	3.1	6.3	2.3			
	93	-3	74	-3	43	-3	29	2	16	3	6.30	0.50	5.20	-0.20	14.5	1.6	5.7	1.7			
	97	1	80	3	46	0	31	4	18	5	6.80	1.00	5.30	-0.10	14.8	1.9	5.3	1.3			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	98	2	79	2	50	4	33	6	17	4	6.00	0.20	5.20	-0.20	15.3	2.4	5.8	1.8			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min.				CMP-PM-IO80-05(136)	2000	Interstate
Design/JMF	95		73		53		35		18		5.00		5.00		13.7		4.1				
JMF Limits	90-100		66-80		46-60		30-40		13-23		3.0-7.0		4.75-5.25		12.2-15.2		3.0-5.0				
	91	-4	65	-8	50	-3	37	2	19	1	5.60	0.60	4.99	-0.01	13.5	-0.2	3.1	-1.0			
	99	4	76	3	53	0	38	3	20	2	5.80	0.80	5.05	0.05	13.4	-0.3	3.6	-0.5			
	96	1	75	2	54	1	38	3	19	1	5.10	0.10	5.25	0.25	13.4	-0.3	1.9	-2.2			
	99	4	79	6	58	5	43	8	22	4	6.20	1.20	5.35	0.35	13.3	-0.4	1.9	-2.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PM-IO80-05(136)	2000	Interstate
Design/JMF	95		73		53		35		18		5.00		5.00		13.7		4.1				
JMF Limits	90-100		66-80		46-60		30-40		13-23		3-7										
	97	2	79	6	55	2	40	5	21	3	5.60	0.60	4.41	-0.59	14.2	0.5	5.4	1.3			
WB			100		50-70		33-63				3-12								CMP-PO-0107-00(022)	2000	Secondary
Design/JMF			100		57		40				5.70		5.70		14.2		4.1				
JMF Limits			100		50-64		35-45				3.7-7.7										
			100	0	65	8	42	2	21		5.80	0.10	5.61	-0.09	16.4	2.2	5.6	1.5			
WB	100		90-100				25-58				2-7								CMP-PO-043-02(044)	2000	Primary
Design/JMF	100		92		61		33		11		3.90		5.00		14.3		5.4				
JMF Limits	100		90-100		56-66		29-37		8-14		2-6										
	100	0	92	0	54	-7	34	1	14	3	7.2	3.30	4.98	-0.02	12.2	-2.1	2.8	-2.6			
	100	0	93	1	64	3	37	4	13	2	6.20	2.30	5.18	0.18	12.1	-2.2	3.1	-2.3			
	100	0	93	1	64	3	37	4	13	2	6.20	2.30	5.18	0.18	11.1	-3.2	2.0	-3.4			
	100	0	94	2	64	3	37	4	13	2	5.90	2.00	5.05	0.05	12.8	-1.5	4.0	-1.4			
	100	0	94	2	64	3	37	4	13	2	5.90	2.00	5.05	0.05	11.3	-3.0	2.4	-3.0			
	100	0	92	0	61	0	35	2	13	2	6.40	2.50	4.89	-0.11	12.0	-2.3	3.6	-1.8			
	100	0	92	0	61	0	35	2	13	2	6.40	2.50	4.89	-0.11	10.9	-3.4	2.4	-3.0			
	100	0	93	1	61	0	35	2	13	2	6.60	2.70	5.35	0.35	12.4	-1.9	2.9	-2.5			
	100	0	93	1	61	0	35	2	13	2	6.60	2.70	5.35	0.35	11.1	-3.2	1.4	-4.0			
	100	0	91	-1	60	-1	33	0	12	1	6.30	2.40	4.90	-0.10	12.6	-1.7	4.2	-1.2			
	100	0	91	-1	60	-1	33	0	12	1	6.30	2.40	4.90	-0.10	11.3	-3.0	2.8	-2.6			
	100	0	95	3	61	0	33	0	12	1	5.70	1.80	5.09	0.09	13.1	-1.2	3.9	-1.5			
	100	0	95	3	61	0	33	0	12	1	5.70	1.80	5.09	0.09	11.6	-2.7	2.2	-3.2			
	100	0	93	1	64	3	36	3	13	2	6.60	2.70	4.90	-0.10	12.0	-2.3	3.5	-1.9			
	100	0	93	1	64	3	36	3	13	2	6.60	2.70	4.90	-0.10	10.8	-3.5	2.2	-3.2			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	96	4	67	6	38	5	13	2	6.00	2.10	5.20	0.20	12.4	-1.9	2.6	-2.8			
	100	0	94	2	66	5	37	4	13	2	6.10	2.20	5.00	0.00	12.2	-2.1	2.9	-2.5			
	100	0	91	-1	55	-6	32	-1	12	1	6.40	2.50	5.60	0.60	12.7	-1.6	2.8	-2.6			
															11.5	-2.8	1.9	-3.5			
															11.7	-2.6	2.2	-3.2			
WB	100		85-100		35-70		20-55		5-35		2-7								CMP-PO-FX-035-2(30)	2000	Primary
Design/JMF	100		91		49		32		15		5.00		5.64		14.8		4				
JMF Limits	100		85-99		42-56		27-37		10-20		3-7										
	100	0	89	-2	46	-3	29	-3	15	0	6.90	1.90	5.63	-0.01	13.9	-0.9	3.2	-0.8			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-ON20-02(051)	2000	Primary
Design/JMF	95		70		45		34		20		5.40		5.00		13.2		4.7				
JMF Limits	90-100		63-77		38-52		29-39		15-25		3-7										
	96	1	75	5	45	0	34	0	22	2	5.20	-0.20	5.18	0.18	13.2	0.0	4.4	-0.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				CMP-PO-ON20-02(051)	2000	Primary
Design/JMF	95		70		45		34		20		5.40		5.00		13.2		4.7				
JMF Limits	90-100		63-77		38-52		29-39		15-25		3.0-7.0		4.75-5.25		11.7-14.7		2.5-4.5				
	94	-1	74	4	45	0	33	-1	20	0	3.80	-1.60	5.39	0.39	11.7	-1.5	3.1	-1.6			
	93	-2	70	0	47	2	34	0	21	1	4.80	-0.60	5.09	0.09	11.1	-2.1	2.7	-2.0			
	93	-2	77	7	51	6	37	3	22	2	4.90	-0.50	5.44	0.44	10.7	-2.5	2.5	-2.2			
	90	-5	61	-9	40	-5	30	-4	19	-1	4.90	-0.50	4.90	-0.10	11.8	-1.4	2.8	-1.9			
	98	3	74	4	48	3	35	1	23	3	6.90	1.50	5.10	0.10	11.5	-1.7	2.6	-2.1			
	86	-9	59	-11	34	-11	25	-9	17	-3	3.90	-1.50	4.54	-0.46	12.7	-0.5	4.4	-0.3			
	97	2	74	4	44	-1	32	-2	20	0	5.20	-0.20	5.01	0.01	12.1	-1.1	3.5	-1.2			
	97	2	71	1	42	-3	30	-4	20	0	5.00	-0.40	4.93	-0.07	12.8	-0.4	3.7	-1.0			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-ON21-01(054)	2000	Primary
Design/JMF	96		74		45		30		14		5.30		5.30		14.8		6.6				
JMF Limits	90-100		67-81		38-52		25-35		9-19		3-7										
	95	-1	71	-3	47	2	33	3	17	3	5.40	0.10	5.55	0.25	12.4	-2.4	3.7	-2.9			
	91	-5	59	-15	34	-11	24	-6	13	-1	4.30	-1.00	5.41	0.11	11.9	-2.9	3.3	-3.3			
	95	-1	75	1	50	5	34	4	16	2	5.20	-0.10	5.70	0.40	12.4	-2.4	3.5	-3.1			
	100	5	80	9	52	5	36	3	18	1	5.80	0.40	5.83	0.28	12.6	0.2	3.9	0.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-ON27-02(011)	2000	Primary
Design/JMF	94		72		50		37		20		4.4		5.50		14.7		4.6				
JMF Limits	90-100		65-79		43-57		32-42		15-25		2.4-6.4										

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	93	-1	77	5	54	4	38	1	22	2	6.00	1.60	5.72	0.22	12.2	-2.5	2.3	-2.3			
	95	1	72	0	46	-4	32	-5	19	-1	3.70	-0.70	5.20	-0.30	12.9	-1.8	2.2	-2.4			
	90	-4	67	-5	46	-4	33	-4	19	-1	3.70	-0.70	5.50	0.00	13.2	-1.5	2.2	-2.4			
	91	-2	70	-7	45	-9	32	-6	18	-4	3.50	-2.50	5.20	-0.52	12.7	0.5	2.5	0.2			
	94	0	74	2	48	-2	34	-3	21	1	3.70	-0.70	5.70	0.20	12.5	-2.2	1.9	-2.7			
	93	-1	73	1	49	-1	34	-3	18	-2	4.10	-0.30	5.50	0.00	12.3	-2.4	1.8	-2.8			
WB	100		85-100		35-70		20-50		5-30		2-7								CMP-PO-ON36-02(026)	2000	Primary
Design/JMF	100		95		49		33		18		5.8		5.50		15.1		4.5				
JMF Limits	100		86-100		42-56		28-38		13-23		3-7										
	100	0	97	2	54	5	37	4	19	1	5.90	0.10	5.57	0.07	14.4	-0.7	3.8	-0.7			
WB	100		85-100		35-70		20-50		5-30		2-7				13.0 min				CMP-PO-ON36-02(026)	2000	Primary
Design/JMF	100		95		49		33		18		5.80		5.50		15.1		4.5				
JMF Limits	100		86-100		42-56		28-38		13-23		3.0-7.0		5.25-5.75		13.6-16.6		2.5-4.5				
	100	0	97	2	47	-2	30	-3	16	-2	4.70	-1.10	5.30	-0.20	14.0	-1.1	4.3	-0.2			
	100	0	97	2	54	5	35	2	17	-1	5.00	-0.80	5.90	0.40	14.8	-0.3	4.7	0.2			
	100	0	97	2	48	-1	32	-1	16	-2	4.80	-1.00	5.80	0.30	15.0	-0.1	4.1	-0.4			
	100	0	96	1	47	-2	31	-2	16	-2	4.50	-1.30	5.40	-0.10	14.4	-0.7	4.4	-0.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-OP17-01(022)	2000	Primary
Design/JMF	97		75		39		27		17		4.2		5.50		15.1		3.3				
JMF Limits	90-100		68-82		32-46		22-32		12-22		2.2-6.2										
	98	1	67	-8	33	-6	25	-2	17	0	4.40	0.20	4.87	-0.63	15.0	-0.1	4.8	1.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMP-PO-W374-00(008)	2000	Federal
Design/JMF	99		77		43		29		18		4.50		5.50		14		3.9				
JMF Limits	90-100		70-84		36-50		24-34		13-23		2.5-6.5										
	97	-2	75	-2	45	2	31	2	21	3	5.70	1.20	5.68	0.18	13.8	-0.2	2.9	-1.0			
WB	100		85-100		35-70		20-55		5-35		2-7								CMP-PO-W374-00(008)	2000	Federal
Design/JMF	100		93		41		28		18		5.00		5.50		14.3		4.2				
JMF Limits	100		86-100		34-48		23-33		13-23		3-7										
	100	0	95	2	39	-2	28	0	19	1	5.80	0.80	5.55	0.05	13.5	-0.8	3.8	-0.4			
WB	90-100		55-95		30-65		20-50		5-30		2-7								CMPS-PO-1906-00(019)	2000	Secondary
Design/JMF	98		75		45		31		18		5.10		5.00		12.9		3.7				
JMF Limits	90-100		68-82		38-52		26-36		13-23		3-7										
	99	1	76	1	43	-2	29	-2	18	0	6.30	1.20	4.94	-0.06	13.7	0.8	4.5	0.8			
WB	100		85-100		35-70		20-55		5-35		2-7								CMS-0302(60)	2000	Secondary

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
Design/JMF	100		95		51		34		17		6.3		6.00		15.2		4.8				
JMF Limits	100		86-100		44-58		29-39		12-22		3-7										
	100	0	91	-4	54	3	38	4	21	4	7.90	1.60	6.15	0.15	12.6	-2.6	2.2	-2.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								FLH-6-54	2000	County Rd.
Design/JMF	95		76		48		37		19		3.50		5.00		14		3.8				
JMF Limits	90-100		69-83		41-55		32-42		14-24		2.0-6.0										
	97	2	79	3	48	0	37	0	21	2	4.40	0.90	5.12	0.12	12.5	-1.5	3.4	-0.4			
WB	100		90-100				25-58				2-7								IM-25-1(137)31	2000	Interstate
Design/JMF	100		94		46		32		16		5.7		5.30		14.4		4.0				
JMF Limits	95-100		90-100		41-51		28-36		13-19		3-7										
	100	0	92	-2	50	4	35	3	19	3	6.60	0.90	5.33	0.03	12.8	-1.6	1.6	-2.4			
													5.23	-0.07	14.1	-0.3	2.5	-1.5			
													5.30	0.00	15.1	0.7	4.4	0.4			
	100	0	88	-6	42	-4	29	-3	16	0	5.80	0.10	5.21	-0.09	13.6	-0.8	2.3	-1.7			
	100	0	92	-2	46	0	30	-2	15	-1	5.30	-0.40	5.49	0.19	14.5	0.1	3.5	-0.5			
	100	0	92	-2	45	-1	31	-1	17	1	6.30	0.60	5.03	-0.27	13.4	-1.0	2.6	-1.4			
	100	0	95	1	54	8	39	7	20	4	6.90	1.20	5.64	0.34	13.6	-0.8	2.3	-1.7			
													5.52	0.22	14.4	0.0	3.1	-0.9			
													5.41	0.11	14.3	-0.1	3.2	-0.8			
WB	100		90-100				28-58				2-7				14.0-16.0				IM-25-1(137)31	2000	Interstate
Design/JMF	100		94		46		32		16		5.70		5.30		14.4		4.0				
JMF Limits	100		90-100		41-51		28-36		13-19		3.0-7.0		5.05-5.55		12.9-15.9		3.0-5.0				
													5.52	0.22	14.4	0.0	3.1	-0.9			
													5.41	0.11	14.3	-0.1	3.2	-0.8			
													5.45	0.15	14.1	-0.3	3.4	-0.6			
													5.35	0.05	13.9	-0.5	3.0	-1.0			
													5.23	-0.07	14.1	-0.3	2.5	-1.5			
													5.30	0.00	15.1	0.7	4.4	0.4			
WB	90-100		90 Max				23-49				2-7								IM-80-3(129)143 &	2000	Interstate
Design/JMF	100		82		42		27		14		3.50		5.00		14.2		4.2		CMP SR-80-3(125)173		w/ RAP
JMF Limits													4.75-5.25		12.7-15.7		3.0-5.0				
	100	0	83	1	39	-3	24	-3	13	-1	3.60	0.10	4.49	-0.51	15.3	1.1	6.1	1.9			
	100	0	78	-4	39	-3	26	-1	14	0	4.80	1.30	4.48	-0.52	13.7	-0.5	4.3	0.1			
	100	0	78	-4	40	-2	26	-1	14	0	4.60	1.10	4.97	-0.03	13.9	-0.3	4.0	-0.2			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	83	1	51	9	35	8	18	4	5.90	2.40	5.43	0.43	12.5	-1.7	1.6	-2.6			
	100	0	79	-3	39	-3	26	-1	15	1	4.90	1.40	4.82	-0.18	13.2	-1.0	3.2	-1.0			
	100	0	86	4	47	5	31	4	16	2	5.20	1.70	5.23	0.23	13.7	-0.5	3.2	-1.0			
	100	0	85	3	46	4	30	3	17	3	6.00	2.50	4.95	-0.05	13.0	-1.2	3.1	-1.1			
	100	0	82	0	37	-5	24	-3	13	-1	4.10	0.60	4.91	-0.09	14.7	0.5	5.0	0.8			
	100	0	82	0	44	2	29	2	16	2	5.00	1.50	5.12	0.12	12.9	-1.3	2.2	-2.0			
	100	0	84	2	44	2	29	2	16	2	4.70	1.20	4.96	-0.04	12.2	-2.0	2.0	-2.2			
	100	0	83	1	41	-1	27	0	14	0	4.60	1.10	5.14	0.14	14.1	-0.1	4.1	-0.1			
	100	0	85	3	41	-1	26	-1	14	0	4.90	1.40	4.75	-0.25	14.1	-0.1	4.3	0.1			
	100	0	83	1	43	1	28	1	15	1	5.00	1.50	4.88	-0.12	13.7	-0.5	3.6	-0.6			
	100	0	85	3	45	3	30	3	16	2	5.10	1.60	5.13	0.13	13.7	-0.5	3.4	-0.8			
	100	0	80	-2	39	-3	26	-1	14	0	4.60	1.10	4.98	-0.02	13.8	-0.4	3.6	-0.6			
	100	0	86	4	48	6	32	5	17	3	5.10	1.60	4.98	-0.02	13.5	-0.7	3.5	-0.7			
	100	0	84	2	45	3	29	2	15	1	4.00	0.50	5.04	0.04	13.6	-0.6	3.2	-1.0			
	100	0	83	1	46	4	31	4	17	3	4.30	0.80	5.17	0.17	13.0	-1.2	2.5	-1.7			
	100	0	83	1	45	3	31	4	17	3	4.90	1.40	5.04	0.04	13.3	-0.9	3.1	-1.1			
	100	0	84	2	46	4	31	4	17	3	5.20	1.70	5.40	0.40	12.9	-1.3	2.2	-2.0			
	100	0	85	3	47	5	31	4	17	3	4.90	1.40	5.02	0.02	13.4	-0.8	3.2	-1.0			
	100	0	78	-4	36	-6	24	-3	14	0	4.80	1.30	4.81	-0.19	14.6	0.4	4.8	0.6			
	100	0	80	-2	41	-1	27	0	15	1	4.90	1.40	4.91	-0.09	13.6	-0.6	3.5	-0.7			
	100	0	77	-5	37	-5	25	-2	14	0	4.30	0.80	4.91	-0.09	13.3	-0.9	3.5	-0.7			
	100	0	83	1	42	0	28	1	15	1	4.50	1.00	5.30	0.30	14.0	-0.2	4.2	0.0			
	100	0	86	4	46	4	30	3	16	2	5.10	1.60	5.29	0.29	13.4	-0.8	2.9	-1.3			
	100	0	82	0	42	0	30	3	17	3	4.80	1.30	5.05	0.05	14.4	0.2	4.2	0.0			
	100	0	81	-1	41	-1	27	0	14	0	4.20	0.70	5.04	0.04	14.3	0.1	4.2	0.0			
	100	0	84	2	43	1	28	1	15	1	4.70	1.20	5.00	0.00	13.3	-0.9	3.1	-1.1			
WB	90-100		90 Max				23-49				2-7				13-15				IM-80-3(129)143 &	2000	Interstate
Design/JMF	100		82		42		27		14		3.50		5.00		14.2		4.2		CMP SR-80-3(125)173		w/ RAP
JMF Limits													4.75-5.25		12.7-15.7		3.0-5.0				
	100	0	78	-4	39	-3	24	-3	11	-3	2.50	-1.00	4.49	-0.51	14.1	-0.1	4.3	0.1			
	100	0	80	-2	39	-3	25	-2	12	-2	3.00	-0.50	4.48	-0.52	13.7	-0.5	3.6	-0.6			
	100	0	79	-3	37	-5	24	-3	11	-3	2.40	-1.10	4.97	-0.03	13.7	-0.5	3.4	-0.8			
	100	0	80	-2	39	-3	24	-3	11	-3	2.60	-0.90	5.43	0.43	13.8	-0.4	3.6	-0.6			
	100	0	79	-3	36	-6	24	-3	11	-3	2.20	-1.30	4.82	-0.18	13.5	-0.7	3.4	-0.8			
	100	0	75	-7	32	-10	19	-8	9	-5	2.10	-1.40	5.23	0.23	13.6	-0.6	3.2	-1.0			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	80	-2	40	-2	26	-1	12	-2	2.70	-0.80	4.95	-0.05							
	100	0	78	-4	36	-6	22	-5	10	-4	1.90	-1.60	4.91	-0.09							
	100	0	78	-4	37	-5	24	-3	11	-3	2.30	-1.20	5.12	0.12							
	100	0	81	-1	39	-3	25	-2	11	-3	2.10	-1.40	4.96	-0.04							
	100	0	85	3	41	-1	26	-1	14	0	4.90	1.40	4.80	-0.20	14.1	-0.1	4.3	0.1			
	100	0	83	1	43	1	28	1	15	1	5.00	1.50	4.90	-0.10	13.7	-0.5	3.6	-0.6			
	100	0	85	3	45	3	30	3	16	2	5.10	1.60	5.10	0.10	13.7	-0.5	3.4	-0.8			
	100	0	80	-2	39	-3	26	-1	14	0	4.60	1.10	5.00	0.00	13.8	-0.4	3.6	-0.6			
	100	0	86	4	48	6	32	5	17	3	5.10	1.60	5.00	0.00	13.5	-0.7	3.4	-0.8			
	100	0	84	2	45	3	29	2	15	1	4.00	0.50	5.00	0.00	13.6	-0.6	3.2	-1.0			
	100	0	83	1	46	4	31	4	17	3	4.30	0.80	5.20	0.20	13.0	-1.2	2.5	-1.7			
	100	0	83	1	45	3	31	4	17	3	4.90	1.40	5.00	0.00	13.3	-0.9	3.1	-1.1			
	100	0	84	2	46	4	31	4	17	3	5.20	1.70	5.40	0.40	12.9	-1.3	2.2	-2.0			
	100	0	85	3	47	5	31	4	17	3	4.90	1.40	5.00	0.00	13.4	-0.8	3.2	-1.0			
	100	0	78	-4	36	-6	24	-3	14	0	4.80	1.30	4.81	-0.19	14.6	0.4	4.8	0.6			
	100	0	80	-2	41	-1	27	0	15	1	4.90	1.40	4.91	-0.09	13.6	-0.6	3.5	-0.7			
	100	0	77	-5	37	-5	25	-2	14	0	4.30	0.80	4.91	-0.09	13.3	-0.9	3.5	-0.7			
	100	0	83	1	42	0	28	1	15	1	4.50	1.00	5.30	0.30	14.0	-0.2	4.2	0.0			
	100	0	86	4	46	4	30	3	16	2	5.10	1.60	5.29	0.29	13.4	-0.8	2.9	-1.3			
	100	0	82	0	42	0	30	3	17	3	4.80	1.30	5.05	0.05	14.4	0.2	4.2	0.0			
	100	0	81	-1	41	-1	27	0	14	0	4.20	0.70	5.04	0.04	14.3	0.1	4.2	0.0			
	100	0	84	2	43	1	28	1	15	1	4.70	1.20	5.00	0.00	13.3	-0.9	3.1	-1.1			
	100	0	85	3	44	2	28	1	15	1	4.70	1.20	5.30	0.30	13.7	-0.5	3.2	-1.0			
	100	0	85	3	44	2	29	2	16	2	5.20	1.70	5.71	0.71	13.2	-1.0	2.3	-1.9			
	100	0	81	-1	42	0	29	2	16	2	5.40	1.90	4.94	-0.06	12.6	-1.6	2.1	-2.1			
	100	0	80	-2	41	-1	27	0	15	1	4.50	1.00	5.10	0.10	14.1	-0.1	3.0	-1.2			
	100	0	80	-2	40	-2	27	0	15	1	4.90	1.40	4.80	-0.20	14.1	-0.1	4.5	0.3			
	100	0	81	-1	42	0	28	1	15	1	4.80	1.30	5.10	0.10	13.3	-0.9	3.1	-1.1			
	100	0	78	-4	39	-3	26	-1	13	-1	4.20	0.70	4.95	-0.05	14.6	0.4	4.5	0.3			
WB	90-100		90 Max				23-49				2-7				13-15				IM-80-3(129)143 &	2000	Interstate
Design/JMF	100		82		42		27		14		3.50		5.00		14.2		4.2		CMP SR-80-3(125)173		w/ RAP
JMF Limits													4.75-5.25		12.7-15.7		3.0-5.0				
	100	0	83	1	40	-2	25	-2	13	-1	4.10	0.60	4.97	-0.03	14.8	0.6	4.9	0.7			
	100	0	83	1	42	0	27	0	14	0	4.50	1.00	5.05	0.05	13.3	-0.9	3.2	-1.0			
	100	0	84	2	45	3	29	2	16	2	5.10	1.60	5.12	0.12	13.8	-0.4	3.0	-1.2			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
WB	100		90-100				28-58				2-7				14.0-16.0				IM-90-3(87)118	2000	Interstate
Design/JMF	100		96		51		31		10		4.30		4.80		14.4		4.4				
JMF Limits	100		90-100		46-56		28-36		7-13		3.0-7.0		4.55-5.05		12.9-15.9		3.0-5.0				
	100	0	97	1	60	9	32	1	13	3	8.50	4.20	4.70	-0.10	12.2	-2.2	3.0	-1.4			
	100	0	97	1	58	7	35	4	14	4	8.40	4.10	4.70	-0.10	13.3	-1.1	4.2	-0.2			
	100	0	97	1	60	9	36	5	14	4	8.30	4.00	4.70	-0.10	11.8	-2.6	2.4	-2.0			
	100	0	97	1	59	8	34	3	14	4	8.70	4.40	4.80	0.00	12.6	-1.8	3.6	-0.8			
	100	0	98	2	60	9	35	4	15	5	9.20	4.90	4.80	0.00	12.2	-2.2	2.4	-2.0			
	100	0	95	-1	48	-3	27	-4	12	2	7.30	3.00	4.70	-0.10	12.8	-1.6	3.2	-1.2			
	100	0	97	1	51	0	30	-1	13	3	8.70	4.40	4.70	-0.10	12.2	-2.2	2.3	-2.1			
	100	0	96	0	50	-1	28	-3	12	2	8.30	4.00	4.70	-0.10	12.7	-1.7	2.9	-1.5			
WB	90-100		93 MAX				23-49				2-7								IM-90-3(87)118	2000	Interstate
Design/JMF	99		89		48		27		9		3.30		4.60		13.5		4.1				
JMF Limits	90-100		83-93		43-53		23-31		7-13		3-7										
	99	0	90	1	51	3	29	2	12	3	7.80	4.50	4.78	0.18	12.4	-1.1	3.0	-1.1			
WB	90-100		90 Max				23-49				2-7				13.0-15.0				IM-90-3(87)118	2000	Interstate
Design/JMF	99		84		57		35		11		3.60		4.80		13.5		4.1				
JMF Limits	90-100		79-89		52-62		31-39		8-14		3-7		4.35-4.85		12.0-15.0		3.0-5.0				
	100	1	86	2	55	-2	31	-4	13	2	8.40	4.80	4.80	0.00	11.5	-2.0	1.6	-2.5			
	99	0	87	3	56	-1	31	-4	12	1	6.80	3.20	4.80	0.00	11.6	-1.9	1.4	-2.7			
WB	90-100		93 Max				23-49				2-7				13.0-15.0				IM-90-3(87)118	2000	Interstate
Design/JMF	99		89		48		27		9		3.30		4.60		13.5		4.1				
JMF Limits	90-100		83-93		43-53		23-31		7-13		3-7		4.35-4.85		12.0-15.0		3.0-5.0				
	99	0	87	-2	46	-2	28	1	12	3	7.20	3.90	4.50	-0.10	11.5	-2.0	0.8	-3.3			
	99	0	89	0	47	-1	28	1	12	3	7.40	4.10	4.70	0.10	12.2	-1.3	2.7	-1.4			
	100	1	88	-1	50	2	30	3	13	4	7.60	4.30	4.80	0.20	11.7	-1.8	1.9	-2.2			
	100	1	89	0	48	0	29	2	12	3	7.50	4.20	4.70	0.10	11.3	-2.2	1.7	-2.4			
	99	0	85	-4	42	-6	26	-1	12	3	7.20	3.90	4.50	-0.10	11.5	-2.0	2.3	-1.8			
	99	0	87	-2	44	-4	25	-2	11	2	6.50	3.20	4.70	0.10	12.8	-0.7	3.3	-0.8			
	98	-1	89	0	43	-5	24	-3	11	2	7.10	3.80	4.50	-0.10	12.4	-1.1	3.1	-1.0			
	99	0	87	-2	42	-6	24	-3	10	1	6.70	3.40	4.50	-0.10	13.2	-0.3	4.0	-0.1			
	99	0	89	0	47	-1	27	0	12	3	7.20	3.90	4.50	-0.10	12.2	-1.3	2.5	-1.6			
	98	-1	87	-2	44	-4	26	-1	12	3	7.30	4.00	4.50	-0.10	12.1	-1.4	2.4	-1.7			
	98	-1	88	-1	44	-4	26	-1	11	2	7.00	3.70	4.50	-0.10	12.2	-1.3	3.0	-1.1			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	99	0	91	2	45	-3	26	-1	12	3	7.40	4.10	4.70	0.10	12.7	-0.8	3.3	-0.8			
	98	-1	90	1	48	0	27	0	11	2	6.50	3.20	4.70	0.10	12.4	-1.1	2.6	-1.5			
	97	-2	85	-4	43	-5	24	-3	10	1	5.50	2.20	4.90	0.30	13.0	-0.5	3.0	-1.1			
	99	0	92	3	47	-1	27	0	11	2	6.80	3.50	4.70	0.10	12.9	-0.6	3.0	-1.1			
	99	0	89	0	45	-3	25	-2	11	2	6.90	3.60	4.50	-0.10	12.6	-0.9	3.4	-0.7			
	99	0	86	-3	44	-4	25	-2	11	2	6.70	3.40	4.50	-0.10	12.6	-0.9	3.4	-0.7			
WB	90-100		93 Max				23-49				2-7				13.0-15.0				IM-90-3(87)118	2000	Interstate
Design/JMF	99		89		47		27		9		3.00		4.60		13.3		3.9				
JMF Limits	90-100		83-93		42-52		23-31		6-12		2.0-6.0		4.35-4.85		11.8-14.8		3.0-5.0				
	99	0	93	4	48	1	27	0	11	2	6.50	3.50	4.50	-0.10	13.4	0.1	4.0	0.1			
	99	0	92	3	51	4	28	1	11	2	6.40	3.40	4.70	0.10	12.4	-0.9	2.8	-1.1			
	100	1	92	3	49	2	26	-1	11	2	6.30	3.30	4.70	0.10	12.8	-0.5	3.0	-0.9			
	99	0	88	-1	46	-1	26	-1	10	1	6.20	3.20	4.70	0.10	12.7	-0.6	3.0	-0.9			
	99	0	86	-3	48	1	27	0	11	2	6.30	3.30	4.70	0.10	12.3	-1.0	2.6	-1.3			
	99	0	87	-2	46	-1	26	-1	11	2	6.70	3.70	4.70	0.10	12.4	-0.9	2.7	-1.2			
	99	0	88	-1	47	0	27	0	11	2	6.60	3.60	4.70	0.10	12.3	-1.0	2.6	-1.3			
	100	1	90	1	47	0	27	0	11	2	6.30	3.30	4.60	0.00	12.4	-0.9	2.8	-1.1			
	99	0	90	1	48	1	28	1	11	2	6.70	3.70	4.90	0.30	12.2	-1.1	2.2	-1.7			
	100	1	88	-1	47	0	28	1	12	3	6.90	3.90	5.00	0.40	12.5	-0.8	2.3	-1.6			
	98	-1	91	2	45	-2	24	-3	10	1	5.80	2.80	4.70	0.10	12.7	-0.6	3.0	-0.9			
	97	-2	89	0	48	1	28	1	12	3	6.90	3.90	4.80	0.20	12.2	-1.1	2.5	-1.4			
	99	0	89	0	46	-1	27	0	11	2	6.80	3.80	4.90	0.30	12.1	-1.2	2.0	-1.9			
	97	-2	87	-2	48	1	28	1	12	3	6.80	3.80	4.70	0.10	12.5	-0.8	3.0	-0.9			
	99	0	89	0	43	-4	25	-2	10	1	5.90	2.90	4.60	0.00	12.6	-0.7	2.8	-1.1			
WB	90-100		90 Max				23-49				2-7				13.0-15.0				IM-IO80-6(139)	2000	Interstate
Design/JMF	100		84		44		29		15		5.00		4.50		13.5		4.0				
JMF Limits	90-100		79-89		39-49		25-33		12-18		3.0-7.0		4.25-4.75		12.0-15.0		3.0-5.0				
	100	0	84	0	50	6	33	4	17	2	7.00	2.00	4.27	-0.23	13.4	-0.1	4.0	0.0			
	100	0	88	4	49	5	32	3	17	2	7.00	2.00	4.50	0.00	14.0	0.5	4.8	0.8			
	100	0	84	0	45	1	29	0	15	0	6.20	1.20	4.28	-0.22	13.4	-0.1	5.3	1.3			
	100	0	83	-1	40	-4	26	-3	15	0	6.30	1.30	3.85	-0.65	13.8	0.3	5.4	1.4			
	100	0	77	-7	42	-2	30	1	18	3	6.80	1.80	4.37	-0.13	13.6	0.1	4.9	0.9			
	100	0	82	-2	44	0	30	1	17	2	6.50	1.50	4.72	0.22	13.2	-0.3	3.4	-0.6			
WB	90-100		90 Max				23-49				2-7								IM-IO80-6(139)	2000	Interstate
Design/JMF	100		84		44		29		15		5.00		4.70		13.3		3.2				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	90-100		79-89		39-49		25-33		12-18		3.0-7.0		4.45-4.95		11.8-14.8		3.0-5.0				
	100	0	77	-7	40	-4	29	0	17	2	8.30	3.30	4.87	0.17	11.5	-1.8	2.0	-1.2			
	100	0	82	-2	43	-1	30	1	17	2	7.10	2.10	4.84	0.14	13.1	-0.2	3.4	0.2			
	100	0	86	2	51	7	34	5	18	3	7.30	2.30	5.00	0.30	12.6	-0.7	1.3	-1.9			
	100	0	84	0	47	3	32	3	17	2	6.60	1.60	4.57	-0.13	13.1	-0.2	3.2	0.0			
	100	0	83	-1	39	-5	26	-3	15	0	5.30	0.30	4.30	-0.40	13.6	0.3	4.9	1.7			
	100	0	89	5	51	7	35	6	18	3	6.90	1.90	5.09	0.39	13.1	-0.2	1.7	-1.5			
	100	0	83	-1	48	4	32	3	17	2	6.80	1.80	4.87	0.17	12.7	-0.6	2.0	-1.2			
	100	0	87	3	47	3	29	0	15	0	5.60	0.60	4.94	0.24	13.8	0.5	3.6	0.4			
	100	0	84	0	51	7	34	5	18	3	7.40	2.40	5.16	0.46	12.6	-0.7	2.1	-1.1			
	100	0	81	-3	38	-6	25	-4	13	-2	6.30	1.30	4.50	-0.20	13.7	0.4	5.1	1.9			
	100	0	84	0	45	1	29	0	15	0	6.70	1.70	4.79	0.09	12.9	-0.4	3.5	0.3			
	100	0	87	3	52	8	33	4	18	3	7.30	2.30	5.09	0.39	13.4	0.1	2.7	-0.5			
	100	0	82	-2	41	-3	27	-2	14	-1	5.90	0.90	4.39	-0.31	13.2	-0.1	4.4	1.2			
	100	0	82	-2	48	4	32	3	16	1	6.70	1.70	4.73	0.03	13.0	-0.3	3.7	0.5			
	100	0	81	-3	46	2	30	1	15	0	6.30	1.30	4.58	-0.12	13.0	-0.3	3.7	0.5			
	100	0	85	1	46	2	29	0	14	-1	6.40	1.40	4.47	-0.23	13.4	0.1	4.9	1.7			
	99	-1	79	-5	39	-5	25	-4	13	-2	5.70	0.70	4.15	-0.55	13.5	0.2	5.0	1.8			
WB	100		85-100		35-70		20-55		5-35		2-7				13.0 min				IM-IO90-3(89)145	2000	Interstate
Design/JMF	100		93		43		25		10		3.70		5.00		13.8		4.0				
JMF Limits	100		86-100		36-50		20-30		5-15		3.0-7.0		4.75-5.25		12.3-15.3		2.5-4.5				
	100	0	92	-1	46	3	26	1	11	1	7.40	3.70	4.80	-0.20	15.3	1.5	6.4	2.4			
	100	0	91	-2	47	4	27	2	12	2	7.90	4.20	4.70	-0.30	13.7	-0.1	4.9	0.9			
	100	0	92	-1	44	1	25	0	11	1	7.00	3.30	4.70	-0.30	14.4	0.6	6.1	2.1			
	100	0	93	0	52	9	29	4	12	2	7.80	4.10	5.20	0.20	13.2	-0.6	3.4	-0.6			
	100	0	92	-1	54	11	30	5	13	3	8.60	4.90	5.10	0.10	12.4	-1.4	2.5	-1.5			
	100	0	89	-4	46	3	27	2	11	1	7.10	3.40	5.00	0.00	12.6	-1.2	2.8	-1.2			
	100	0	88	-5	43	0	25	0	12	2	7.00	3.30	4.70	-0.30	13.7	-0.1	4.5	0.5			
WB	90-100		55-95		35-65		20-50		5-30		2-7				12.0 min				IM-IO90-3(89)145	2000	Interstate
Design/JMF	99		83		51		29		10		4.20		4.60		12.2		4.1				
JMF Limits	92-100		76-90		44-58		24-34		5-15		3-7		4.35-4.85		10.7-13.7		2.5-4.5				
	98	-1	80	-3	51	0	28	-1	10	0	5.80	1.60	4.50	-0.10	11.5	-0.7	3.0	-1.1			
	98	-1	84	1	55	4	32	3	12	2	7.10	2.90	4.80	0.20	11.5	-0.7	2.4	-1.7			
	99	0	85	2	54	3	31	2	13	3	8.30	4.10	4.30	-0.30	10.5	-1.7	2.3	-1.8			
	100	1	90	7	60	9	34	5	14	4	10.00	5.80	4.40	-0.20	10.5	-1.7	2.3	-1.8			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	1	87	4	54	3	31	2	13	3	8.50	4.30	4.40	-0.20	10.8	-1.4	2.4	-1.7			
	99	0	87	4	52	1	29	0	12	2	7.60	3.40	4.30	-0.30	10.7	-1.5	3.1	-1.0			
	99	0	91	8	64	13	38	9	16	6	11.00	6.80	4.10	-0.50	10.4	-1.8	2.4	-1.7			
	100	1	85	2	49	-2	28	-1	12	2	7.80	3.60	4.10	-0.50	10.8	-1.4	3.6	-0.5			
	100	1	86	3	51	0	30	1	13	3	8.10	3.90	4.20	-0.40	10.7	-1.5	2.9	-1.2			
	100	1	83	0	46	-5	27	-2	11	1	7.20	3.00	4.00	-0.60	10.9	-1.3	3.7	-0.4			
	99	0	83	0	53	2	30	1	12	2	7.40	3.20	4.40	-0.20	10.8	-1.4	2.8	-1.3			
	99	0	79	-4	45	-6	28	-1	12	2	7.60	3.40	5.00	0.40	11.7	-0.5	2.6	-1.5			
	98	-1	92	9	39	-12	25	-4	14	4	10.00	5.80	4.30	-0.30	11.3	-0.9	3.6	-0.5			
	100	1	80	-3	46	-5	28	-1	14	4	11.00	6.80	4.60	0.00	11.7	-0.5	3.6	-0.5			
	100	1	89	6	55	4	31	2	12	2	7.90	3.70	4.90	0.30	11.6	-0.6	2.6	-1.5			
	100	1	84	1	49	-2	27	-2	11	1	7.00	2.80	4.00	-0.60	11.2	-1.0	4.1	0.0			
	100	1	81	-2	46	-5	26	-3	11	1	7.30	3.10	4.40	-0.20	11.0	-1.2	3.4	-0.7			
	100	1	89	6	55	4	31	2	13	3	8.60	4.40	4.90	0.30	11.5	-0.7	2.7	-1.4			
	100	1	84	1	47	-4	26	-3	11	1	7.30	3.10	4.60	0.00	11.3	-0.9	3.0	-1.1			
	97	-2	77	-6	45	-6	25	-4	11	1	6.70	2.50	4.40	-0.20	11.4	-0.8	3.5	-0.6			
	100	1	79	-4	43	-8	25	-4	10	0	6.60	2.40	4.40	-0.20	12.0	-0.2	4.1	0.0			
	100	1	83	0	49	-2	28	-1	12	2	7.50	3.30	4.60	0.00	11.4	-0.8	2.7	-1.4			
	99	0	86	3	46	-5	27	-2	12	2	7.70	3.50	4.40	-0.20	10.8	-1.4	2.5	-1.6			
	99	0	87	4	53	2	31	2	12	2	7.90	3.70	4.50	-0.10	11.3	-0.9	2.6	-1.5			
	99	0	88	5	54	3	31	2	12	2	7.30	3.10	4.50	-0.10	12.0	-0.2	3.6	-0.5			
	99	0	87	4	53	2	30	1	12	2	7.80	3.60	4.90	0.30	11.9	-0.3	2.5	-1.6			
	98	-1	86	3	52	1	30	1	13	3	8.50	4.30	4.60	0.00	11.6	-0.6	2.8	-1.3			
	97	-2	82	-1	44	-7	27	-2	12	2	7.90	3.70	4.90	0.30	11.3	-0.9	2.6	-1.5			
	99	0	85	2	48	-3	28	-1	11	1	6.90	2.70	4.60	0.00	13.1	0.9	4.5	0.4			
WB	90-100		55-95		30-65		20-50		5-30		2-7								IM-IO90-3(89)	2000	Interstate
Design/JMF	99		83		51		29		10		4.20		4.60		12.2		4.1				
JMF Limits	92-100		76-90		44-58		24-34		5-15		3-7										
	100	1	82	-1	47	-4	29	0	14	4	8.90	4.70	4.45	-0.15	11.1	-1.1	3.5	-0.6			
	98	-1	82	-1	50	-1	29	0	12	2	7.40	3.20	4.78	0.18	11.9	-0.3	3.0	-1.1			
WB															12.0 min				IM-IO90-3(89)145	2000	Interstate
Design/JMF	99		83		47		27		10		5.20		4.80		13.1		4.0				
JMF Limits	90-100		76-90		41-55		23-33		5-15		3.0-7.0		4.55-5.05		11.6-14.6		2.5-4.5				
	96	-3	84	1	50	3	28	1	12	2	7.50	2.30	4.60	-0.20	12.2	-0.9	3.3	-0.7			
	98	-1	84	1	49	2	28	1	11	1	7.10	1.90	4.90	0.10	11.8	-1.3	2.5	-1.5			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	99	0	82	-1	51	4	31	4	13	3	8.70	3.50	4.70	-0.10	12.2	-0.9	2.9	-1.1			
	97	-2	80	-3	48	1	28	1	11	1	7.20	2.00	4.80	0.00	12.2	-0.9	2.7	-1.3			
	99	0	84	1	51	4	29	2	12	2	7.90	2.70	4.50	-0.30	12.5	-0.6	3.9	-0.1			
WB	100		85-100		35-70		20-55		5-35		2-7				13.0 min				MG-ON-34-03(033)	2000	Interstate
Design/JMF	100		93		54		37		21		4.90		5.80		16.1		5.0				
JMF Limits	100		86-100		47-61		32-42		16-26		3.0-7.0		5.55-6.05		14.6-17.6		2.5-4.5				
	100	0	96	3	65	11	45	8	26	5	5.30	0.40	5.94	0.14	15.8	-0.3	5.4	0.4			
	100	0	93	0	60	6	41	4	23	2	5.10	0.20	5.78	-0.02	16.3	0.2	5.3	0.3			
	100	0	94	1	61	7	43	6	25	4	5.10	0.20	5.74	-0.06	15.4	-0.7	4.3	-0.7			
	100	0	91	-2	59	5	40	3	24	3	5.80	0.90	5.55	-0.25	15.3	-0.8	4.9	-0.1			
	100	0	91	-2	54	0	37	0	21	0	5.40	0.50	5.24	-0.56	15.2	-0.9	5.0	0.0			
	100	0	95	2	66	12	48	11	28	7	4.80	-0.10	6.90	1.10	16.0	-0.1	3.3	-1.7			
	100	0	92	-1	58	4	41	4	23	2	3.70	-1.20	6.60	0.80	16.8	0.7	4.6	-0.4			
	100	0	94	1	59	5	41	4	23	2	3.80	-1.10	6.60	0.80	16.6	0.5	5.4	0.4			
	100	0	93	0	60	6	41	4	22	1	4.40	-0.50	6.20	0.40	16.2	0.1	5.6	0.6			
	100	0	96	3	57	3	38	1	23	2	4.60	-0.30	6.00	0.20	16.0	-0.1	4.3	-0.7			
	100	0	94	1	58	4	41	4	24	3	4.90	0.00	5.70	-0.10	14.9	-1.2	4.5	-0.5			
	100	0	92	-1	54	0	37	0	20	-1	4.30	-0.60	5.50	-0.30	15.2	-0.9	4.9	-0.1			
WB	100		85-100		35-70		20-55		5-35		2-7								MGS-0200-00(023)	2000	Secondary
Design/JMF	100		92		56		37		20		5.50		6.50		16		4.6				
JMF Limits	100		85-98		49-63		32-42		15-25		3-7										
	100	0	93	1	54	-2	35	-2	19	-1	6.60	1.10	6.44	-0.06	14.0	-2.0	2.9	1.0			
WB	100		85-100		35-70		20-55		5-35		2-7								MGS-0208-00(008)	2000	Secondary
Design/JMF	100		93		55		36		17		5.60		6.40		15.9		5				
JMF Limits	100		86-100		48-62		31-41		12-22		3-7										
	100	0	96	3	57	2	36	0	16	-1	5.40	-0.20	6.78	0.38	16.0	0.1	5.4	0.4			
WB	100		85-100		35-70		20-50		5-30		2-7								MGS-2300(34)	2000	Secondary
Design/JMF	100		93		50		30		11		4.9		5.25		15.5		5.2				
JMF Limits	100		86-100		43-57		25-35		6-16		3-7										
	100	0	92	-1	52	2	31	1	15	4	8.80	3.90	5.35	0.10	13.1	-2.4	3.1	-2.1			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				NHI-010-04(032)	2000	Primary
Design/JMF	100		85		42		28		18		5.20		5.30		14.7		4.2				
JMF Limits	90-100		78-92		35-49		23-33		13-23		3.0-7.0		5.05-5.55		13.2-16.2		2.5-4.5				
	100	0	91	6	48	6	32	4	21	3	6.10	0.90	5.80	0.50	13.1	-1.6	1.4	-2.8			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	92	7	48	6	32	4	21	3	6.50	1.30	5.90	0.60	13.1	-1.6	1.2	-3.0			
	100	0	86	1	40	-2	27	-1	18	0	6.20	1.00	5.60	0.30	13.5	-1.2	2.5	-1.7			
	100	0	90	5	46	4	30	2	20	2	4.70	-0.50	5.80	0.50	13.9	-0.8	2.8	-1.4			
	100	0	87	2	40	-2	28	0	18	0	5.50	0.30	5.50	0.20	13.6	-1.1	2.9	-1.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min				NHI-80-4(197)216 &	2000	Interstate
Design/JMF	95		74		42		29		15		6.40		5.25		12.7		4.4		BRI-80-4(206)220		w/ RAP
JMF Limits													5.00-5.50		11.2-14.2						
	99	4	87	13	47	5	30	1	14	-1	5.60	-0.80	5.64	0.39	11.8	-0.9	3.3	-1.1			
	98	3	87	13	46	4	28	-1	13	-2	5.90	-0.50	5.71	0.46	13.0	0.3	5.6	1.2			
	97	2	84	10	39	-3	25	-4	12	-3	5.50	-0.90	5.39	0.14	11.3	-1.4	2.9	-1.5			
	98	3	67	-7	30	-12	21	-8	11	-4	5.30	-1.10	4.80	-0.45	12.9	0.2	5.7	1.3			
	97	2	63	-11	45	3	29	0	14	-1	6.50	0.10	5.39	0.14	10.1	-2.6	2.3	-2.1			
	97	2	78	4	38	-4	24	-5	11	-4	4.80	-1.60	5.25	0.00	9.7	-3.0	2.4	-2.0			
	97	2	83	9	42	0	26	-3	12	-3	4.60	-1.80	5.76	0.51	9.2	-3.5	1.8	-2.6			
	99	4	86	12	42	0	26	-3	12	-3	4.20	-2.20	5.31	0.06	10.6	-2.1	3.1	-1.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min				NHI-80-4(197)216 &	2000	Interstate
Design/JMF	94		72		40		27		14		6.00		5.25		13.3		4.9		BRI-80-4(206)220		
JMF Limits	90-100		65-79		33-47		22-32		9-19		3.0-7.0		4.75-5.50		11.8-14.8						
	99	5	83	11	44	4	26	-1	10	-4	4.40	-1.60	5.24	-0.01	12.8	-0.5	6.1	1.2			
	98	4	70	-2	34	-6	22	-5	10	-4	4.00	-2.00	5.03	-0.22	12.4	-0.9	5.5	0.6			
	96	2	74	2	34	-6	21	-6	10	-4	4.30	-1.70	4.93	-0.32	12.6	-0.7	5.9	1.0			
	98	4	80	8	37	-3	24	-3	11	-3	5.20	-0.80	5.01	-0.24	12.0	-1.3	4.7	-0.2			
	100	6	79	7	38	-2	24	-3	11	-3	4.90	-1.10	5.39	0.14	12.6	-0.7	5.7	0.8			
	96	2	78	6	39	-1	23	-4	10	-4	4.20	-1.80	5.11	-0.14	12.6	-0.7	6.6	1.7			
	94	0	69	-3	31	-9	20	-7	9	-5	4.10	-1.90	4.57	-0.68	12.4	-0.9	6.9	2.0			
	97	3	84	12	44	4	27	0	11	-3	4.10	-1.90	5.79	0.54	11.7	-1.6	4.0	-0.9			
	98	4	79	7	37	-3	23	-4	10	-4	1.40	-4.60	5.47	0.22	11.8	-1.5	3.8	-1.1			
	97	3	79	7	39	-1	25	-2	11	-3	5.10	-0.90	5.57	0.32	10.4	-2.9	2.6	-2.3			
	98	4	77	5	39	-1	24	-3	10	-4	4.20	-1.80	5.52	0.27	10.4	-2.9	2.6	-2.3			
	97	3	84	12	42	2	26	-1	10	-4	4.00	-2.00	5.40	0.15	10.5	-2.8	3.1	-1.8			
	97	3	73	1	33	-7	21	-6	10	-4	3.70	-2.30	5.07	-0.18	10.6	-2.7	4.3	-0.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								NHI-80-4(197)216 &	2000	Interstate
Design/JMF	94		72		40		27		14		6.00		5.25		13.3		4.9		BRI-80-4(206)220		
JMF Limits	90-100		65-79		33-47		22-32		9-19		3-7										

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	99	5	83	11	44	4	26	-1	10	-4	4.40	-1.60	5.24	-0.01	12.8	-0.5	6.1	1.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7				12.0 min				NH-ON25-03(074)	2000	Primary
Design/JMF	100		86		54		43		25		4.50		5.00		13.0		3.1				
JMF Limits	90-100		79-93		47-61		38-48		20-30		2.5-6.5		4.75-5.25		13.0-16.0		2.5-4.5				
													5.00	0.00	16.6	3.6	7.4	4.3			
	100	0	91	5	63	9	48	5	27	2	4.20	-0.30	5.10	0.10	16.7	3.7	7.1	4.0			
	100	0	88	2	62	8	47	4	25	0	4.00	-0.50	5.30	0.30	15.4	2.4	5.2	2.1			
	99	-1	86	0	57	3	45	2	28	3	5.50	1.00	5.50	0.50	14.8	1.8	3.2	0.1			
	100	0	87	1	60	6	46	3	27	2	5.70	1.20	5.50	0.50	13.7	0.7	2.8	-0.3			
	100	0	91	5	64	10	50	7	30	5	6.90	2.40	5.45	0.45	13.8	0.8	3.2	0.1			
	100	0	93	7	64	10	48	5	26	1	4.60	0.10	5.43	0.43	13.5	0.5	3.4	0.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7								NHP-010-4(32)	2000	Primary
Design/JMF	100		85		42		28		18		5.2		5.30		14.7		4.2				
JMF Limits	90-100		78-92		35-49		23-33		13-23		3-7										
	99	-1	91	6	47	5	30	2	20	2	7.10	1.90	5.70	0.40	14.6	-0.1	4.0	-0.2			
WB	90-100		55-95		30-65		20-50		5-30		2.0-7.0				12.0 min				NHP-021-1(49)	2000	Primary
Design/JMF	96		74		45		30		14		5.30		5.30		14.8		6.6				
JMF Limits	90-100		67-81		28-52		25-35		9-19		3.0-7.0		5.05-5.55		13.3-16.3		2.5-4.5				
	92	-4	65	-9	39	-6	26	-4	12	-2			5.37	0.07	12.4	-2.4	3.3	-3.3			
	92	-4	66	-8	37	-8	24	-6	11	-3			5.37	0.07	12.8	-2.0	4.8	-1.8			
	91	-5	70	-4	42	-3	29	-1	12	-2			5.37	0.07	11.7	-3.1	2.7	-3.9			
	96	0	74	0	43	-2	29	-1	11	-3	3.90	-1.40	5.31	0.01	11.9	-2.9	3.4	-3.2			
	95	-1	74	0	45	0	31	1	14	0					11.7	-3.1	2.3	-4.3			
	94	-2	75	1	44	-1	29	-1	15	1	5.10	-0.20	5.79	0.49	12.9	-1.9	3.8	-2.8			
	92	-4	69	-5	41	-4	28	-2	15	1	5.40	0.10	5.36	0.06	13.1	-1.7	4.8	-1.8			
	99	3	76	2	43	-2	30	0	15	1	5.80	0.50	5.47	0.17	13.2	-1.6	4.1	-2.5			
WB	90-100%		55-95%		30-65%		20-50%		5-30%		2-7%				12.0 min				SCP-012-1(96)	2000	Primary
Design/JMF	100		78		42		27		14		5.00		5.30		15.1		4.3				
JMF Limits	90-100		71-85		35-49		22-32		9-19		3.0-7.0		5.05-5.55		13.6-16.6		2.5-4.5				
	100	0	87	9	48	6	29	2	16	2	5.50	0.50	5.26	-0.04	12.5	-2.6	3.0	-1.3			
	100	0	85	7	46	4	28	1	16	2	5.80	0.80	5.12	-0.18	12.1	-3.0	2.4	-1.9			
	100	0	85	7	47	5	29	2	17	3	5.60	0.60	5.17	-0.13	13.0	-2.1	2.7	-1.6			
	100	0	78	0	44	2	28	1	15	1	5.90	0.90	5.15	-0.15	12.3	-2.8	2.7	-1.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-IO90-01(106)	2000	Interstate

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
Design/JMF	99		83		46		34		18		4.8		4.90		13.6		3.6				w/ RAP
JMF Limits																					
	100	1	83	0	44	-2	31	-3	18	0	7.20	2.40	4.92	0.02	13.4	-0.2	4.7	1.1			
WB	90-100		55-95		30-65		20-50		5-30		2.0-7.0				12.0 min				SCP-IO90-01(106)	2000	Interstate
Design/JMF	99		82		44		31		17		5.30		4.70		13.0		3.3				w/ RAP
JMF Limits													4.45-4.95		11.5-14.5		2.5-4.5				
	99	0	83	1	43	-1							4.61	-0.09	12.6	-0.4	3.5	0.2			
	98	-1	83	1	43	-1							4.89	0.19	12.8	-0.2	2.7	-0.6			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SCP-ON13-01(047)	2000	Primary
Design/JMF	98		75		45		31		18		5.1		5.00		12.9		3.7				
JMF Limits	90-100		68-82		38-52		26-36		13-23		3-7										
	97	-1	72	-3	43	-2	30	-1	18	0	5.90	0.80	4.88	-0.12	12.9	0.0	4.8	1.1			
WB	100		85-100		35-70		20-55		5-35		2-7								SCPS-0109(025)	2000	Secondary
Design/JMF	100		91		44		30		17		6.00		5.25		13.5		3.7				
JMF Limits	100		85-98		37-51		25-35		12-22		3-7										
	100	0	93	2	48	4	34	4	22	5	8.90	2.90	5.81	0.56	12.0	-1.5	2.5	-1.2			
	99	-1	90	-1	48	4	34	4	22	5	9.10	3.10	5.81	0.56							
WB	90-100		55-95		30-65		20-50		5-30		2-7								SIB-ACIM-80-1(104)49	2000	Interstate
Design/JMF	99		77		43		29		18		4.5		5.50		14		3.9				
JMF Limits	90-100		70-84		36-50		24-34		13-23		2.5-6.5										
	99	0	81	4	52	9	36	7	24	6	7.20	2.70	5.62	0.12	11.9	-2.1	2.5	-1.4			
	97	-2	73	-4	48	5	33	4	22	4	6.90	2.40	5.60	0.10	12.0	-2.0	1.6	-2.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7								SIB-ACIM-80-1(104)49	2000	Interstate
Design/JMF	98		70		39		28		19		5.3		5.00		13.3		4.2				
JMF Limits	90-100		63-77		32-46		23-33		14-24		3-7										
	99	1	78	8	40	1	27	-1	19	0	6.30	1.00	4.89	-0.11	12.5	-0.8	3.7	-0.5			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min				SIB-ACIM-80-1(104)49	2000	Interstate
Design/JMF	98		77		43		31		21		5.90		5.50		14.0		3.9				
JMF Limits	90-100		70-84		36-50		26-36		16-26		3.0-7.0		5.25-5.75		12.5-15.5						
	99	1	81	4	52	9	36	5	21	0	7.20	1.30	5.62	0.12	11.9	-2.1	2.5	-1.4			
	97	-1	73	-4	48	5	33	2	22	1	6.90	1.00	5.60	0.10	12.0	-2.0	1.6	-2.3			
WB	90-100		55-95		30-65		20-50		5-30		2-7				13.0 min				SIB-ACIM-80-1(104)49	2000	Interstate
Design/JMF	98		70		39		28		19		5.30		5.00		13.3		4.2				
JMF Limits	90-100		63-77		32-46		23-33		14-24		3.0-7.0		4.75-5.25		11.8-14.8						

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	98	0	73	3	40	1	28	0	19	0	6.40	1.10	5.08	0.08	14.0	0.7	5.5	1.3			
	99	1	76	6	41	2	28	0	19	0	6.30	1.00	5.01	0.01	12.3	-1.0	3.1	-1.1			
	97	-1	66	-4	30	-9	22	-6	17	-2	5.90	0.60	4.16	-0.84	12.1	-1.2	3.3	-0.9			
	99	1	78	8	40	1	27	-1	19	0	6.30	1.00	4.89	-0.11	12.5	-0.8	3.7	-0.5			
	96	-2	72	2	37	-2	26	-2	18	-1	4.90	-0.40	5.05	0.05	11.2	-2.1	2.0	-2.2			
	97	-1	72	2	34	-5	24	-4	17	-2	4.50	-0.80	4.65	-0.35	11.3	-2.0	2.1	-2.1			
	97	-1	81	11	41	2	28	0	19	0	5.40	0.10	5.75	0.75	12.8	-0.5	1.8	-2.4			
	98	0	71	1	39	0	27	-1	17	-2	4.50	-0.80	5.30	0.30	11.8	-1.5	2.0	-2.2			
WB	90-100		55-95		30-65		20-50		5-30		2-7								STPNP-034-3(27)	2000	Primary
Design/JMF	98		75		45		31		17		4.5		6.25		16.2		5.5				
JMF Limits	90-100		68-82		38-52		26-36		12-22		2.5-6.5		6.00-6.50		14.7-17.7		2.5-4.5				
	98	0	78	3	48	3	34	3	19	2	5.3	0.80	6.61	0.36	14.5	-1.7	2.6	-2.9			
	98	0	75	0	44	-1	31	0	18	1	4.9	0.40	6.57	0.32	14.3	-1.9	2.6	-2.9			
	96	-2	74	-1	43	-2	31	0	17	0	4.3	-0.20	6.11	-0.14							
	96	-2	69	-6	40	-5	29	-2	16	-1	4.1	-0.40	6.2	-0.05							
	94	-4	70	-5	42	-3	30	-1	17	0	4.1	-0.40	5.98	-0.27	14.6	-1.6	4.1	-1.4			
	97	-1	74	-1	45	0	31	0	17	0	4.4	-0.10	6.62	0.37	15.1	-1.1	4.1	-1.4			
	98	0	81	6	49	4	34	3	18	1	3.50	-1.00	6.40	0.15	13.8	-2.4	1.3	-4.2			
	99	1	83	8	51	6	35	4	18	1	4.00	-0.50	5.90	-0.35	14.3	-1.9	2.1	-3.4			
	100	2	85	10	51	6	36	5	19	2	3.90	-0.60	7.20	0.95	15.4	-0.8	3.0	-2.5			
	99	1	79	4	46	1	30	-1	16	-1	3.40	-1.10	6.70	0.45	14.7	-1.5	3.1	-2.4			
	96	-2	78	3	47	2	33	2	17	0	3.60	-0.90	6.70	0.45	14.6	-1.6	2.8	-2.7			
WB	100		85-100		35-70		20-50		5-35		2-7				13.0 min				STPS, ARSCT &	2000	Secondary
Design/JMF	100		98		48		25		13		5.40		6.00		14.3		3.9		ARSCT-1900(30)		
JMF Limits	100		86-100		41-55		20-30		8-18		3.0-7.0		5.75-6.25		12.8-15.8		2.5-4.5				
	100	0	99	1	42	-6	24	-1	12	-1	5.60	0.20	5.27	-0.73	16.3	2.0	7.0	3.1			
	100	0	98	0	41	-7	25	0	15	2	5.80	0.40	6.50	0.50	15.6	1.3	3.1	-0.8			
	100	0	99	1	45	-3	29	4	16	3	6.60	1.20	6.19	0.19	16.0	1.7	2.5	-1.4			
	100	0	99	1	46	-2	25	0	13	0	6.30	0.90	6.50	0.50	16.4	2.1	1.3	-2.6			
WB	100		85-100		35-70		20-50		5-35		2-7				13.0 min				STPS, ARSCT &	2000	Secondary
Design/JMF	100		98		45		26		16		5.40		6.00		12.6		3.4		ARSCT-1900(30)		
JMF Limits	100		86-100		38-52		21-31		11-21		3.0-7.0		5.75-6.25		11.1-14.1		2.5-4.5				
	100	0	99	1	46	1	23	-3	14	-2	6.10	0.70	6.09	0.09	12.8	0.2	3.0	-0.4			
	100	0	98	0	45	0	26	0	18	2	5.40	0.00	6.19	0.19	13.2	0.6	3.1	-0.3			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	99	1	45	0	25	-1	11	-5	6.30	0.90	5.96	-0.04	13.6	1.0	4.2	0.8			
	100	0	98	0	48	3	25	-1	13	-3	5.40	0.00	6.19	0.19	12.6	0.0	2.8	-0.6			
	100	0	99	1	50	5	29	3	18	2	8.90	3.50	6.00	0.00	12.6	0.0	3.3	-0.1			
WB	100		85-100		35-70		20-55		5-35		2-7								STPS-0202-00(013)	2000	Secondary
Design/JMF	100		95		51		34		17		5.90		5.90		15.9		4.9				
JMF Limits	100		86-100		44-58		29-39		12-22		3-7										
	100	0	98	3	57	6	37	3	19	2	6.30	0.40	6.09	0.19	15.9	0.0	6.0	1.1			
WB	100		85-100		35-70		20-55		5-35		2-7								STPS-0703-00(012)	2000	Secondary
Design/JMF	100		91		55		38		21		4.40		6.00		16.5		4.4				
JMF Limits	100		85-99		48-62		33-43		16-26		3-7										
	100	0	92	1	58	3	42	4	25	4	6.40	2.00	6.34	0.34	15.4	-1.1	2.8	-1.6			
WB	100		85-100		35-70		20-55		5-35		2-7								STPS-E-0607(28)/	2000	Secondary
Design/JMF	100		93		43		25		10		3.70		5.00		13.8		4		STPS-0607(13)		
JMF Limits	100		86-100		36-50		20-30		5-15		3-7										
	100	0	88	-5	42	-1	25	0	12	2	7.70	4.00	5.01	0.01	13.7	-0.1	4.4	0.4			
WB	90-100		55-95		30-65		20-50		5-30		2-7								STPU-4200(10)	2000	Urban
Design/JMF	100		81		44		30		15		5.00		5.00		14.4		3.4				
JMF Limits	90-100		74-88		37-51		25-35		10-20		3-7										
	100	0	78	-3	43	-1	29	-1	15	0	6.50	1.50	4.70	-0.30	14.2	-0.2	5.1	1.7			
WB	100		85-100		35-70		20-50		5-35		2-7								STPUCO-4708(4)	2000	Urban
Design/JMF	100		93		54		37		21		4.9		5.80		16.1		5				
JMF Limits	100		86-100		47-61		32-42		16-26		3-7										
	100	0	85	-8	47	-7	33	-4	21	0	5.40	0.50	4.96	-0.84	13.7	-2.4	4.1	-0.9			

Data for Pavement Sections Constructed Under the Non-QC/QA Specification

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
WB	90-100		60-85		40-60		25-45		10-30		2-7								BROS-0100(5)	1997	Secondary
Design/JMF	99		74		45		29		13		4.50		5.50		14.6		4.0				
JMF Limits	90-100		67-81		38-52		24-34		10-20		2-7										
	100	1	82	8	52	7	33	4	15	2	3.90	-0.60	5.77	0.27	15.0	0.4	3.4	-0.6			
WB	100		90-100		40-60		25-45		10-30		2-7								BROS-0400(6)	1997	Secondary
Design/JMF	100		93		51		35		21		5.0		5.60		14.8		4.1				
JMF Limits	100		90-100		44-58		30-40		16-26		2-7										
	100	0	87	-6	55	4	40	5	25	4	6.50	1.50	5.34	-0.26	13.4	-1.4	3.6	-0.5			
WB	100		90-100		40-60		25-45		10-30		2-7								CMP-PM-9710	1997	Urban
Design/JMF	100		95		53		36		18		4.5		5.60		16.0		5.2				
JMF Limits	100		90-100		46-60		31-41		13-23		2-7										
	100	0	97	2	62	9	42	6	20	2	5.40	0.90	5.70	0.10	16.2	0.2	5.7	0.5			
WB	90-100		60-85		40-60		25-45		10-30		2-7								CMP-PO-012-1(94)	1997	Primary
Design/JMF	98		67		47		30		17		5.4		5.30		12.8		4.2				
JMF Limits	90-100		60-74		40-54		25-35		12-22		2-7										
	100	2	76	9	50	3	33	3	20	3	4.6	-0.80	5.43	0.13	12.7	-0.1	3.5	-0.7			
	98	0	76	9	52	5	34	4	20	3	4.00	-1.40	5.65	0.35	12.4	-0.4	2.8	-1.4			
WB	90-100		60-85		30-50		15-35		5-25		2-6								CMP-PO-025-3(70)	1997	Primary
Design/JMF	96		74		39		24		12		3.5		5.50		14.4		4.9				
JMF Limits	90-100		67-81		32-46		19-29		7-17		2-6										
	97	1	74	0	43	4	26	2	15	3	3.60	0.10	5.57	0.07	14.8	0.4	6.2	1.3			
	96	0	73	-1	40	1	24	0	13	1	3.20	-0.30	5.55	0.05	14.8	0.4	6.2	1.3			
	97	1	73	-1	44	5	26	2	15	3	3.70	0.20	5.56	0.06	14.8	0.4	6.2	1.3			
	96	0	67	-7	36	-3	23	-1	12	0	3.10	-0.40	5.49	-0.01	14.8	0.4	6.2	1.3			
WB	100		90-100		40-60		20-40		5-25		2-6								CMP-PO-025-3(70)	1997	Primary
Design/JMF	100		95		47		28		15		4.7		6.00		16.1		6.4				
JMF Limits	100		90-100		40-54		23-33		10-20		2-6										
	100	0	95	0	45	-2	28	0	16	1	4.50	-0.20	5.65	-0.35	17.1	1.0	7.6	1.2			
	100	0	96	1	43	-4	27	-1	15	0	4.20	-0.50	5.82	-0.18	17.1	1.0	7.6	1.2			
WB	90-100		60-85		40-60		20-40		5-25		2-7								CMP-PO-9718	1997	Urban
Design/JMF	96		74		47		27		10		5.0		4.80		13.3		4.2				
JMF Limits	90-100		67-81		40-54		22-32		5-15		2-7										
	88	-8	68	-6	41	-6	26	-1	13	3	7.90	2.90	4.46	-0.34	11.0	-2.3	1.9	-2.3			
	97	1	74	0	44	-3	27	0	13	3	7.50	2.50	5.00	0.20	11.4	-1.9	1.7	-2.5			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	97	1	73	-1	41	-6	26	-1	12	2	6.80	1.80	4.58	-0.22	11.4	-1.9	2.6	-1.6			
WB	100		90-100		40-60		20-40		5-25		2-7								CMP-PO-9718	1997	Urban
Design/JMF	100		95		47		26		10		5.00		4.9		13.3		3.9				
JMF Limits	100		90-100		40-54		21-31		5-15		2-7										
	100	0	88	-7	43	-4	25	-1	12	2	7.30	2.30	4.89	-0.01	12.4	-0.9	3.1	-0.8			
WB	100		90-100		40-60		20-40		5-25		2-7								DPI-0156(1) & (5)	1997	Urban
Design/JMF	100		95		53		36		18		4.5		6.00		15.8		3.9				
JMF Limits	100		90-100		46-60		31-41		13-23		2-7										
	100	0	96	1	56	3	39	3	22	4	6.50	2.00	5.66	-0.34	15.3	-0.5	4.2	0.3			
WB	90-100		60-85		40-60		25-45		10-30		2-7								DPI-0156(06)	1997	Urban
Design/JMF	95		68		46		30		15		5.0		5.50		12.9		3.7				
JMF Limits	90-100		61-75		40-54		25-35		10-20		2-7										
	92	-3	63	-5	40	-6	27	-3	16	1	6.30	1.30	4.86	-0.64	12.3	-0.6	5.4	1.7			
WB	100		90-100		40-60		20-40		5-25		2-7								DPI-0156(11)	1997	Urban
Design/JMF	100		93		52		33		16		4.0		5.30		13.6		3.9				
JMF Limits	100		90-100		45-59		28-38		11-21		2-7										
	100	0	91	-2	56	4	41	8	25	9	7.20	3.20	5.19	-0.11	12.5	-1.1	2.7	-1.2			
	100	0	90	-3	56	4	38	5	21	5	6.10	2.10	5.64	0.34	12.3	-1.3	2.0	-1.9			
WB	90-100		60-85		40-60		20-40		5-25		2-7								DPI-0156(13)	1997	Urban
Design/JMF	99		78		52		39		25		6.0		5.20		12.4		3.1				
JMF Limits	90-100		71-85		45-59		34-44		20-30		2-7										
	97	-2	78	0	54	2	40	1	26	1	7.40	1.40	5.64	0.44	11.8	-0.6	0.8	-2.3			
WB	100		90-100		4060		20-40		5-25		2-7								DPI-0156(13)	1997	Urban
Design/JMF	100		100		50		38		25		6.0		5.20		12.1		2.7				
JMF Limits	100		90-100		43-57		33-43		20-30		2-7										
	100	0	96	-4	49	-1	35	-3	23	-2	6.90	0.90	5.12	-0.08	12.1	0.0	1.7	-1.0			
WB	100		90-100		40-60		25-45		10-30		2-7								DPI-0156(14)	1997	Urban
Design/JMF	100		94		47		33		16		4.0		5.50		14.7		4.1				
JMF Limits	100		90-100		40-54		28-38		11-21		2-7										
	100	0	92	-2	49	2	33	0	17	1	6.90	2.90	5.51	0.01	13.8	-0.9	2.5	-1.6			
	100	0	95	1	53	6	35	2	18	2	7.50	3.50	5.95	0.45	14.6	-0.1	2.1	-2.0			
WB	100		90-100		40-60		25-45		10-30		2-7								DPI-0156(15)	1997	Urban
Design/JMF	100		93		52		32		14		5.0		6.50		17.6		5.2				
JMF Limits	100		90-100		45-59		27-37		10-20		2-7										

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	91	-2	48	-4	32	0	18	4	4.70	-0.30	6.55	0.05	13.1	-4.5	2.9	-2.3			
WB Design/JMF JMF Limits	100 100 100		90-100 95 90-100		40-60 50 43-57		25-45 34 29-39		10-30 18 13-23		2-7 5.6 2-7		5.70		16.6		5.2		DPI-0156(16)	1997	Urban
	100	0	97	2	57	7	38	4	22	4	8.10	2.50	6.16	0.46	15.0	-1.6	2.7	-2.5			
WB Design/JMF JMF Limits	90-100 92		60-85 67		40-60 49		25-45 35		10-30 22		2-7 4.5		5.00		13.4		4.2		IM-80-1(153)44	1997	Interstate w/ RAP
	88	-4	68	1	41	-8	26	-9	13	-9	7.90	3.40	5.15	0.15	12.0	-1.4	1.9	-2.3			
WB Design/JMF JMF Limits	92		67		49		35		22		4.5		4.90		13.0		4.2		IM-80-1(153)44	1997	Interstate w/ RAP
	91	-1	57	-10	41	-8	29	-6	19	-3	4.70	0.20	4.68	-0.22	11.5	-1.5	2.2	-2.0			
WB Design/JMF JMF Limits	90-100 95 90-100		60-85 78 71-85		40-60 47 40-54		25-45 34 29-39		10-30 22 17-27		2-7 4.0 2-7		5.00		12.5		3.4		IM-80-1(153)44	1997	Interstate
	96	1	78	0	48	1	34	0	23	1	6.50	2.50	5.25	0.25	12.2	-0.3	3.3	-0.1			
WB Design/JMF JMF Limits	97		79		54		34		14		5.0		4.90		14.9		5.3		IM-80-4(198)221	1997	Interstate w/ RAP
	92	-5	73	-6	45	-9	31	-3	15	1	6.00	1.00	4.78	-0.12	11.6	-3.3	2.2	-3.1			
WB Design/JMF JMF Limits	90-100 100 90-100		60-85 76 69-83		40-60 48 41-55		25-45 32 27-37		10-30 17 12-22		2-7 7.0 2-7		5.00		11.8		3.6		IM-80-5(120)310	1997	Interstate
	100	0	84	8	40	-8	28	-4	16	-1	7.10	0.10	4.57	-0.43	12.4	0.6	3.8	0.2			
WB Design/JMF JMF Limits	90-100 95		60-85 78		40-60 44		25-45 30		10-30 14		2-7 6.3		4.90		12.4		3.6		IM-90-1(95)10	1997	Interstate w/ RAP
	96 92 95	1 -3 0	77 72 72	-1 -6 -6	40 37 35	-4 -7 -9	27 26 24	-3 -4 -6	15 14 13	1 0 -1	6.70 6.30 6.10	0.40 0.00 -0.20	4.91 4.59 4.51	0.01 -0.31 -0.39	11.3 11.5 11.8	-1.1 -0.9 -0.6	3.1 3.3 4.1	-0.5 -0.3 0.5			
WB Design/JMF JMF Limits	90-100 95		60-85 78		40-60 44		25-45 30		10-30 14		2-7 6.3		4.90		12.3		3.7		IM-90-1(95)10	1997	Interstate w/ RAP

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	93	-2	76	-2	34	-10	22	-8	12	-2	5.90	-0.40	4.35	-0.55	12.5	0.2	4.9	1.2			
	95	0	72	-6	34	-10	22	-8	12	-2	5.20	-1.10	4.46	-0.44	12.5	0.2	4.9	1.2			
	91	-4	67	-11	28	-16	20	-10	11	-3	5.20	-1.10	4.53	-0.37	12.1	-0.2	3.6	-0.1			
	93	-2	67	-11	29	-15	20	-10	11	-3	5.20	-1.10	4.79	-0.11	12.1	-0.2	3.6	-0.1			
WB	100		90-100		40-60		20-40		5-25		2-7								IM-90-1(95)10	1997	Interstate
Design/JMF	100		93		48		33		16		4.7		5.50		14.8		3.1				
JMF Limits	100		90-100		41-55		28-38		11-21		2-7										
	100	0	88	-5	41	-7	29	-4	17	1	5.70	1.00	5.23	-0.27	13.8	-1.0	2.1	-1.0			
WB	90-100		60-85		40-60		25-45		10-30		2-7								IM-90-2(93)56 &	1997	Interstate
Design/JMF	95		71		50		35		18		6.0		5.60		13.4		3.1		IM -25-5(83)299		
JMF Limits	90-100		64-78		43-57		30-40		13-23		2-7										
	97	2	63	-8	39	-11	28	-7	17	-1	5.40	-0.60	4.52	-1.08	13.7	0.3	6.7	3.6			
	99	4	68	-3	43	-7	30	-5	17	-1	5.90	-0.10	5.26	-0.34	12.8	-0.6	2.2	-0.9			
WB	90-100		60-85		40-60		25-45		10-30		2-7								NHI-80-4(198)221	1997	Interstate
Design/JMF	98		79		49		31		12		5.5		4.50		12.0		4.5				
JMF Limits	90-100		71-85		42-56		26-36		10-20		2-7										
	99	1	72	-7	40	-9	24	-7	11	-1	5.60	0.10	3.86	-0.64	12.1	0.1	5.1	0.6			
WB	100		90-100		35-55		20-40		5-25		2-7								NHI-90-3(70)107	1997	Interstate
Design/JMF	100		98		39		23		10		5.2		5.20		13.7		4.2				
JMF Limits	100		90-100		36-50		20-30		5-15		3-7										
	100	0	95	-3	41	2	27	4	15	5	11.00	5.80	5.10	-0.10	12.4	-1.3	2.4	-1.8			
WB	100		90-100		40-60		25-45		10-30		2-7								SC-CFM 23-35	1997	County Rd.
Design/JMF	100		95		47		31		19		6.0		6.30		15.0		3.8				
JMF Limits	100		90-100		40-54		26-36		14-24		2-7										
	100	0	94	-1	45	-2	31	0	19	0	6.50	0.50	6.10	-0.20	13.4	-1.6	2.0	-1.8			
	100	0	97	2	53	6	35	4	21	2	7.40	1.40	6.70	0.40	13.8	-1.2	1.9	-1.9			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPHNP-034-2(21)	1997	Primary
Design/JMF	99		82		49		34		18		5.8		6.00		14.2		4.0				
JMF Limits	90-100		75-85		42-56		29-39		13-23		2-7										
	97	-2	74	-8	38	-11	28	-6	17	-1	5.00	-0.80	5.81	-0.19	12.6	-1.6	1.9	-2.1			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPNP-030-3(36)	1997	Primary
Design/JMF	96		74		52		37		19		4.4		5.75		15.9		4.9				
JMF Limits	90-100		67-81		45-59		32-42		14-24		2-7										
	94	-2	69	-5	46	-6	33	-4	18	-1	4.60	0.20	5.78	0.03	13.7	-2.2	2.2	-2.7			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
WB	90-100		70-90		35-55		20-40		5-25		2-7								STPP-043-1(22)	1997	Primary
Design/JMF	99		76		43		27		12		4.0		5.10		13.7		4.2				w/ RAP
JMF Limits																					
	100	1	79	3	45	2	28	1	13	1	6.50	2.50	5.53	0.43	12.5	-1.2	3.5	-0.7			
	99	0	70	-6	31	-12	20	-7	11	-1	5.40	1.40	4.74	-0.36	11.4	-2.3	3.6	-0.6			
	99	0	74	-2	39	-4	24	-3	11	-1	5.10	1.10	5.07	-0.03	12.4	-1.3	4.0	-0.2			
	100	1	75	-1	39	-4	25	-2	12	0	5.70	1.70	5.10	0.00	12.7	-1.0	4.5	0.3			
	97	-2	72	-4	38	-5	24	-3	12	0	5.10	1.10	4.80	-0.30	11.6	-2.1	3.2	-1.0			
WB	100		90-100		40-60		25-45		10-30		2-7								STPP-056-1(16)	1997	Primary
Design/JMF	100		93		50		35		17		5.0		6.00		15.9		4.7				
JMF Limits	100		90-100		43-57		30-40		12-22		2-7										
	100	0	96	3	53	3	37	2	20	3	6.30	1.30	6.06	0.06	13.9	-2.0	2.8	-1.9			
	100	0	96	3	51	1	35	0	18	1	5.70	0.70	5.87	-0.13	14.0	-1.9	3.6	-1.1			
	100	0	96	3	51	1	33	-2	17	0	5.2	0.20	5.86	-0.14	14.9	-1.0	4.8	0.1			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPS-0103(28)	1997	Secondary
Design/JMF	100		74		47		33		16		5.5		5.25		14.0		3.5				
JMF Limits	90-100		67-81		40-54		28-38		11-21		2-7										
	99	-1	68	-6	40	-7	29	-4	16	0	5.70	0.20	4.85	-0.40	13.1	-0.9	3.2	-0.3			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPS-1900(25)	1997	Secondary
Design/JMF	100		78		44		31		19		6.00		5.75		13.3		4.2				
JMF Limits	90-100		71-85		40-54		26-36		14-24		2-7										
	100	0	76	-2	44	0	32	1	21	2	6.80	0.80	5.39	-0.36	12.1	-1.2	3.8	-0.4			
WB	100		90-100		35-55		20-40		5-25		2-6								STPS-2303(14)	1997	Secondary
Design/JMF	100		95		42		25		10		4.5		4.70		13.7		4.0				
JMF Limits	100		90-100		35-49		20-30		5-15		2-6										
	100	0	98	3	41	-1	24	-1	11	1	6.70	2.20	4.90	0.20	14.1	0.4	4.7	0.7			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPU-0212(7)	1997	Secondary
Design/JMF	97		72		53		38		17		4.4		5.50		15.1		4.0				
JMF Limits	90-100		65-79		46-60		33-43		12-22		2-7										
	100	3	80	8	57	4	39	1	20	3	5.80	1.40	5.74	0.24	14.3	-0.8	3.3	-0.7			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPU-258(4)	1997	Secondary
Design/JMF	95		78		53		40		22		4.0		5.20		14.2		4.0				
JMF Limits	90-100		71-85		46-60		35-45		17-27		2-7										
	99	4	78	0	47	-6	32	-8	17	-5	6.20	2.20	5.22	0.02	13.5	-0.7	3.0	-1.0			

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
WB	100		90-100		45-70		25-55		10-30		2-7								STPUDO-4802(1)	1997	Urban
Design/JMF	100		98		57		40		21		3.5		5.90		15.5		3.9				
JMF Limits	100		90-100		51-65		35-45		16-26		2-7										
	100	0	98	0	65	8	47	7	26	5	5.30	1.80	6.10	0.20	14.4	-1.1	2.2	-1.7			
WB	100		90-100		40-60		25-45		10-30		2-7								STPUGR-4363(1)	1997	Secondary
Design/JMF	100		93		51		35		21		5.0		5.60		14.8		4.1				
JMF Limits	100		90-100		44-58		30-40		16-26		2-7										
	100	0	97	4	54	3	38	3	24	3	6.60	1.60	6.37	0.77	14.5	-0.3	1.9	-2.2			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPURA-4554(1)	1997	Urban
Design/JMF	96		76		49		32		13		4.7		5.30		16.4		6.8				
JMF Limits	90-100		69-83		42-56		27-37		10-20		2-7										
	96	0	80	4	52	3	35	3	17	4	6.80	2.10	5.45	0.15	11.7	-4.7	1.8	-5.0			
WB	90-100		60-85		40-60		25-45		10-30		2-7								ACIM-80-3(128)143	1998	Interstate
Design/JMF	97		74		43		29		15		4.9		4.70		13.4		4.0				
JMF Limits	90-100		67-81		40-54		25-35		10-20		2-7										
	98	1	77	3	48	5	30	1	17	2	5.50	0.60	4.84	0.14	13.7	0.3	4.1	0.1			
WB	100		90-100		35-55		20-40		5-25		2-6								ACSTPH-0607(30)	1998	Secondary
Design/JMF	100		95		48		27		10		4.50		5.30		13.5		3.9				
JMF Limits	100		90-100		41-55		22-32		5-15		2-6										
	100	0	94	-1	47	-1	28	1	11	1	5.60	1.10	4.64	-0.66	12.9	-0.6	5.1	1.2			
WB	90-100		60-85		40-60		25-45		10-30		2-7								BR-80-3(124)177	1998	Interstate
Design/JMF	100		83		49		30		14		5.00		5.4		15.4		5				
JMF Limits	90-100		71-85		42-56		25-35		10-20		2-7										
	100	0	83	0	47	-2	29	-1	16	2	5.70	0.70	5.34	-0.06	15.4	0.0	5.1	0.1			
WB	100		90-100		40-60		25-45		10-30		2-7								CMI-90-1(92)23	1998	Interstate
Design/JMF	100		95		47		30		15		4.00		5.5		12.8		3.6				
JMF Limits	100		90-100		40-54		25-35		10-20		2-7										
	100	0	91	-4	46	-1	28	-2	14	-1	5.60	1.60	5.72	0.22	14.4	1.6	5.7	2.1			
WB	100		90-100		40-60		25-45		10-30		2-7								CMP-PM-25-3(95)135	1998	Interstate
Design/JMF	100		95		47		32		16		4.10		4.9		14.1		3.6				
JMF Limits	100		90-100		40-54		27-37		11-21		2-7										
	100	0	96	1	49	2	35	3	18	2	4.00	-0.10	5.24	0.34	15.8	1.7	5.0	1.4			
WB	100		90-100		40-60		25-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		CMP-PO-060-1(18)	1998	Primary
Design/JMF	100		95		47		30		15		4.00		5.50		12.8		3.6				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	100		90-100		40-54		25-35		10-20		2-7		4.5 min.		13.0 min.		2.5-4.5				
	100	0	90	-5	49	2	30	0	15	0	5.80	1.80	6.13	0.63	14.8	2.0	4.9	1.3			
	100	0	97	2	55	8	33	3	15	0	6.10	2.10	6.42	0.92	15.7	2.9	5.1	1.5			
	100	0	94	-1	54	7	32	2	15	0	5.90	1.90	6.34	0.84	14.0	1.2	3.4	-0.2			
	100	0	93	-2	54	7	31	1	15	0	6.30	2.30	6.23	0.73	14.1	1.3	3.8	0.2			
WB	90-100		60-85		40-60		25-45		10-30		2-7								DPI-0156(8)	1998	County Rd.
Design/JMF	97		77		47		33		17		5.60		5.40		14.9		4				
JMF Limits	90-100		70-84		40-54		28-38		12-22		2-7										
	100	3	86	9	55	8	41	8	23	6	7.00	1.40	5.49	0.09	14.6	-0.3	4.3	0.3			
WB	90-100		60-85		30-55		20-45		10-30		2-7								NHI-90-1(89)	1998	Interstate
Design/JMF	100		73		34		22		11		4.50		5.40		12.8		4				w/ RAP
JMF Limits																					
	100	0	70	-3	33	-1	23	1	14	3	7.00	2.50	5.33	-0.07	13.7	0.9	4.9	0.9			
WB	90-100		70-95		35-55		20-40		5-25		2-6								NHI-90-3(70)107	1998	Interstate
Design/JMF	99		84		46		26		8		2.40		4.70		13.7		4.2				w/ RAP
JMF Limits																					
	98	-1	84	0	49	3	31	5	13	5	5.80	3.40	4.06	-0.64	12.0	-1.7	4.0	-0.2			
WB	100		90-100		40-60		25-45		10-30		2-7								SC-CFM 2-65	1998	County Rd.
Design/JMF	100		95		53		38		18		4.50		5.60		16		5.2				
JMF Limits	100		90-100		46-60		33-43		13-23		2-7										
	100	0	93	-2	58	5	42	4	22	4	6.50	2.00	5.27	-0.33	14.5	-1.5	4.1	-1.1			
WB	100		90-100		35-55		20-40		5-25		2-6		+/- 0.25		+/- 1.5		+/- 1.5		STPI-90-3(74)124	1998	Interstate
Design/JMF	100		95		48		27		10		4.50		4.90		14.1		3.9				
JMF Limits	100		90-100		41-55		22-32		5-15		2-6		4.5 min.		14.0 min.		3.0-5.0				
	100	0	92	-3	50	2	29	2	13	3	7.80	3.30	4.88	-0.02	12.2	-1.9	1.9	-2.0			
	100	0	90	-5	46	-2	27	0	12	2	7.50	3.00	4.77	-0.13	12.0	-2.1	2.0	-1.9			
	100	0	90	-5	51	3	29	2	13	3	6.90	2.40	4.90	0.00	12.7	-1.4	2.4	-1.5			
	100	0	94	-1	56	8	32	5	13	3	6.80	2.30	5.14	0.24	13.1	-1.0	1.8	-2.1			
	100	0	94	-1	54	6	30	3	12	2	7.00	2.50	5.03	0.13	12.8	-1.3	2.2	-1.7			
	100	0	91	-4	50	2	29	2	12	2	7.50	3.00	4.82	-0.08	12.4	-1.7	2.2	-1.7			
	100	0	93	-2	51	3	31	4	13	3	8.30	3.80	4.75	-0.15	12.2	-1.9	2.0	-1.9			
	100	0	93	-2	51	3	28	1	12	2	7.30	2.80	5.00	0.10	13.5	-0.6	3.4	-0.5			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPNP-015-1(12)	1998	Primary
Design/JMF	96		75		50		36		21		5.00		5.40		13.8		3.9				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	90-100		68-82		43-57		31-41		16-26		2-7										
	99	3	83	8	58	8	43	7	26	5	8.70	3.70	5.78	0.38	13.5	-0.3	3.0	-0.9			
WB	90-100		60-85		40-60		25-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		STPNP-015-1(12)	1998	Primary
Design/JMF	96		75		50		36		21		6.80		5.40		13.8		3.9				
JMF Limits	90-100		68-82		43-57		31-41		16-26		2-7		4.5 min.		12.0 min.		2.5-4.5				
	99	3	78	3	56	6	41	5	23	2	7.10	0.30	5.53	0.13	14.5	0.7	4.2	0.3			
	98	2	77	2	58	8	42	6	25	4	7.20	0.40	5.95	0.55	13.9	0.1	3.1	-0.8			
	100	4	85	10	61	11	45	9	27	6	8.50	1.70	6.01	0.61	14.1	0.3	2.4	-1.5			
	97	1	81	6	57	7	43	7	26	5	7.50	0.70	5.91	0.51	13.2	-0.6	1.8	-2.1			
	98	2	82	7	57	7	41	5	25	4	7.80	1.00	5.84	0.44	13.2	-0.6	1.8	-2.1			
	98	2	85	10	58	8	43	7	26	5	7.40	0.60	5.94	0.54	13.7	-0.1	2.5	-1.4			
WB	90-100		60-85		40-60		20-45		10-30		2-7								STPS-0109(19)	1998	Secondary
Design/JMF	94		72		48		36		21		5.70		5.50		14		5.3				
JMF Limits	90-100		65-79		41-55		31-41		16-26		2-7										
	99	5	86	14	51	3	37	1	21	0	5.50	-0.20	5.82	0.32	13.0	-1.0	2.8	-2.5			
WB	90-100		60-85		40-60		20-45		10-30		2-7								STPS-0109(19)	1998	Secondary
Design/JMF	94		72		48		36		21		5.70		5.50		14		3.8				
JMF Limits	90-100		65-79		41-55		31-41		16-26		2-7										
	97	3	72	0	44	-4	33	-3	18	-3	4.00	-1.70	5.40	-0.10	12.6	-1.4	3.2	-0.6			
WB	90-100		60-85		40-60		25-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		STPS-0109(19)	1998	Secondary
Design/JMF	94		72		48		36		21		5.70		5.50		14.0		3.8				
JMF Limits	90-100		65-79		41-55		31-41		16-26		2-7		4.5 min.		12.0 min.		2.5-4.5				
	91	-3	64	-8	42	-6	30	-6	17	-4	3.30	-2.40	5.44	-0.06	12.2	-1.8	2.0	-1.8			
	94	0	70	-2	43	-5	31	-5	17	-4	3.10	-2.60	5.35	-0.15	12.2	-1.8	2.4	-1.4			
	92	-2	71	-1	47	-1	34	-2	18	-3	3.90	-1.80	5.55	0.05	12.7	-1.3	2.2	-1.6			
	92	-2	73	1	47	-1	33	-3	18	-3	4.10	-1.60	5.54	0.04	12.4	-1.6	1.6	-2.2			
	96	2	73	1	47	-1	34	-2	19	-2	3.90	-1.80	5.49	-0.01	12.5	-1.5	2.7	-1.1			
	94	0	75	3	51	3	38	2	20	-1	3.80	-1.90	5.72	0.22	12.9	-1.1	1.9	-1.9			
	95	1	75	3	50	2	36	0	19	-2	3.60	-2.10	5.55	0.05	12.9	-1.1	2.6	-1.2			
	90	-4	72	0	50	2	37	1	21	0	4.10	-1.60	5.64	0.14	12.9	-1.1	2.2	-1.6			
	95	1	79	7	53	5	38	2	21	0	4.00	-1.70	5.67	0.17	12.9	-1.1	1.9	-1.9			
	98	4	80	8	52	4	38	2	21	0	4.40	-1.30	5.60	0.10	12.6	-1.4	1.6	-2.2			
WB	100		90-100		40-60		25-45		10-30		2-7								STPS-2103(15)	1998	Secondary
Design/JMF	100		98		47		30		12		5.80		6.30		15.2		4.1				

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
JMF Limits	100		90-100		40-54		25-35		10-20		2-7										
	100	0	93	-5	43	-4	27	-3	13	1	7.30	1.50	6.36	0.06	15.0	-0.2	4.4	0.3			
WB	100		90-100		40-60		25-45		10-30		2-7		+/- 0.25		+/- 1.5		+/- 1.5		STPS-2103(15)	1998	Secondary
Design/JMF	100		98		47		30		12		5.80		6.30		15.2		4.1				
JMF Limits	100		90-100		40-54		25-35		10-20		2-7		4.5 min.		13.0 min.		2.5-4.5				
	100	0	95	-3	45	-2	27	-3	13	1	6.20	0.40	6.86	0.56	15.9	0.7	4.4	0.3			
	100	0	97	-1	45	-2	28	-2	13	1	6.30	0.50	6.72	0.42	15.7	0.5	4.1	0.0			
	100	0	95	-3	46	-1	28	-2	12	0	6.10	0.30	6.73	0.43	16.0	0.8	4.6	0.5			
	100	0	94	-4	45	-2	28	-2	12	0	5.80	0.00	6.75	0.45	16.0	0.8	4.7	0.6			
	100	0	95	-3	45	-2	29	-1	14	2	6.70	0.90	6.58	0.28	14.5	-0.7	3.3	-0.8			
	100	0	96	-2	47	0	29	-1	13	1	5.90	0.10	6.68	0.38	14.9	-0.3	3.7	-0.4			
WB	100		97-100		45-70		25-55		15-40		2-11								STPUEV-4862(1)	1998	Urban
Design/JMF	100		92		57		37		23		6.00		4.90		14.7		4				
JMF Limits	100		97-100		50-64		32-42		18-28		3-9										
	100	0	100	8	61	4	40	3	25	2	5.50	-0.50	5.71	0.81	15.9	1.2	5.2	1.2			
WB	100		97-100		45-70		25-55		15-40		2-11								STPUEV-4862(1) &	1998	Urban
Design/JMF	100		92		57		37		23		6.00		4.90		14.7		5.2		BR-4862(2)		
JMF Limits	100		97-100		50-64		32-42		18-28		3-9										
	100	0	100	8	66	9	42	5	24	1	5.10	-0.90	5.69	0.79	17.1	2.4	6.8	1.6			
	100	0	100	8	65	8	41	4	24	1	4.80	-1.20	5.91	1.01	18.3	3.6	8.7	3.5			
	100	0	100	8	61	4	40	3	25	2	5.50	-0.50	5.71	0.81	15.5	0.8	4.5	-0.7			
WB	100		90-100		40-60		25-45		10-30		2-7								STPURO-4302(1)	1998	Urban
Design/JMF	100		93		51		35		21		5.00		5.60		14.8		4.1				
JMF Limits	100		90-100		44-58		30-40		16-26		2-7										
	100	0	95	2	53	2	36	1	21	0	4.90	-0.10	5.45	-0.15	14.5	-0.3	4.7	0.6			
WB	100		90-100		40-60		25-45		10-30		2-7								BROS-0200(22)	1999	Secondary
Design/JMF	100		96		53		37		17		5.0		6.00		15.9		4.7				
JMF Limits	100		90-100		46-60		32-42		12-22		2-7										
	100	0	98	2	61	8	41	4	21	4	6.10	1.10	6.07	0.07	13.3	-2.6	2.8	-1.9			
WB	100		90-100		40-60		25-45		10-30		2-7								IM-25-1(122)13	1999	Interstate
Design/JMF	100		95		51		38		18		4.5		5.50		14.6		4.1				
JMF Limits	100		90-100		46-60		31-41		13-23		2-7										
	100	0	96	1	57	6	38	0	20	2	5.50	1.00	5.32	-0.18	13.8	-0.8	4.0	-0.1			
WB	90-100		60-85		40-60		25-45		10-30		2-7								NH-035-2(22)	1999	Primary

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
Design/JMF	98		75		48		33		16		5.00		5.20		14.1		3.9				
JMF Limits	90-100		69-83		42-56		28-38		11-21		2-7										
	98	0	74	-1	47	-1	35	2	17	1	3.90	-1.10	5.80	0.60	14.2	0.1	3.8	-0.1			
	99	1	70	-5	47	-1	34	1	17	1	5.20	0.20	5.56	0.36	14.0	-0.1	3.8	-0.1			
WB	90-100		60-85		40-60		25-45		10-30		2-7								NHP-030-3(40)	1999	Primary
Design/JMF	95		75		46		34		21		4.30		5.00		14.9		4.9				
JMF Limits	90-100		68-82		40-54		29-39		16-26		2-7										
	94	-1	67	-8	39	-7	28	-6	19	-2	4.50	0.20	4.25	-0.75	13.3	-1.6	5.2	0.3			
WB	90-100		60-85		40-60		25-45		10-30		2-7								SC-CFM 13-49	1999	County Rd.
Design/JMF	100		80		47		35		17		3.50		5.20								
JMF Limits	90-100		71-85		40-54		33-43		12-22		2-7										
	100	0	83	3	55	8	38	3	20	3	4.40	0.90	5.49	0.29							
WB	90-100		60-85		40-60		25-45		10-30		2-7								SIB-ACNHI-80-5(122) &	1999	Interstate
Design/JMF	95		78		47		30		15		5.00		5.00		13		2.9		SIB-ACNHI-80-133(313)		
JMF Limits	90-100		71-85		40-54		25-35		10-20		2-7										
	100	5	83	5	44	-3	29	-1	14	-1	5.10	0.10	5.09	0.09	14.8	1.8	4.7	1.8			
WB	100		90-100		40-60		25-45		10-30		2-7								STPHNP-034-5(71)	1999	Primary
Design/JMF	100		95		47		33		17		4.00		5.90		16.5		4.8				
JMF Limits	100		90-100		40-54		28-38		12-22		2-7										
	100	0	97	2	54	7	35	2	19	2	5.10	1.10	5.81	-0.09	17.1	0.6	6.9	2.1			
	100	0	96	1	54	7	36	3	19	2	4.70	0.70	5.92	0.02	17.2	0.7	6.9	2.1			
	100	0	96	1	54	7	36	3	19	2	4.70	0.70	4.26	-1.64	14.4	-2.1	6.9	2.1			
	100	0	95	0	47	0	31	-2	17	0	4.60	0.60	4.94	-0.96	16.3	-0.2	6.9	2.1			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPS-0711(2)	1999	Secondary
Design/JMF	98		75		50		35		20		4.00		5.40		14.8		3.9				
JMF Limits	90-100		68-82		43-57		30-40		15-25		2-7										
	98	0	67	-8	43	-7	33	-2	20	0	4.80	0.80	5.33	-0.07	13.1	-1.7	2.8	-1.1			
WB	90-100		60-85		40-60		25-45		10-30		2-7								STPS-1604(2)	1999	Secondary
Design/JMF	99		75		47		34		17		4.00		5.20		14.2		4				
JMF Limits	90-100		68-82		40-54		29-39		12-22		2-7										
	98	-1	80	5	51	4	38	4	21	4	3.70	-0.30	5.58	0.38	13.6	-0.6	2.9	-1.1			
WB	100		90-100		40-60		25-45		10-30		2-7								CMP-GM-B002-00(019)	2000	County Rd.
Design/JMF	100		94		55		37		17		4.1		5.70		14.8		4				
JMF Limits	100		90-100		46-60		32-42		12-22		2-7										

	3/4" Sieve	diff. 3/4"	1/2" Sieve	diff. 1/2"	#4 Sieve	diff. #4	#8 Sieve	diff. #8	#30 Sieve	diff. #30	#200 Sieve	diff. #200	Asphalt Content	diff. AC	VMA	diff. VMA	VTM	diff VTM	Project Designation	Year	Road Classification
	100	0	94	0	55	0	35	-2	16	-1	3.30	-0.80	6.03	0.33	17.9	3.1	5.6	1.6			
	100	0	91	-3	56	1	35	-2	16	-1	3.80	-0.30	5.94	0.24	17.9	3.1	5.6	1.6			
	100	0	90	-4	56	1	37	0	16	-1	3.40	-0.70	5.97	0.27	18.2	3.4	6.0	2.0			
	100	0	97	3	59	4	38	1	17	0	3.90	-0.20	5.96	0.26	18.2	3.4	6.0	2.0			
WB	100		85-100		35-70		20-50		5-30		2-7								STP-H-ON43-02(046)	2000	Primary
Design/JMF	100		93		43		25		10		3.7		5.00		13.8		4				
JMF Limits	100		86-100		36-50		20-30		5-15		3-7										
	100	0	90	-3	51	8	31	6	15	5	7.50	3.80	4.82	-0.18	11.5	-2.3	2.3	-1.7			
WB	100		90-100		45-70		25-55		10-30		2-11								STPP-056-1(22)	2000	Primary
Design/JMF	100		100		56		37		19		8.1		6.10		15.9		4				
JMF Limits	100		93-100		49-63		32-42		14-24		5-11										
	100	0	100	0	66	10	44	7	23	4	11.00	2.90	5.58	-0.52	16.7	0.8	5.9	1.9			

APPENDIX C. DATA ANALYSIS OUTPUT

Aggregate Gradation Analysis

#200 Sieve:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a $Y^{0.25}$ Transformation
Non-constant variance: OK
Independence: OK

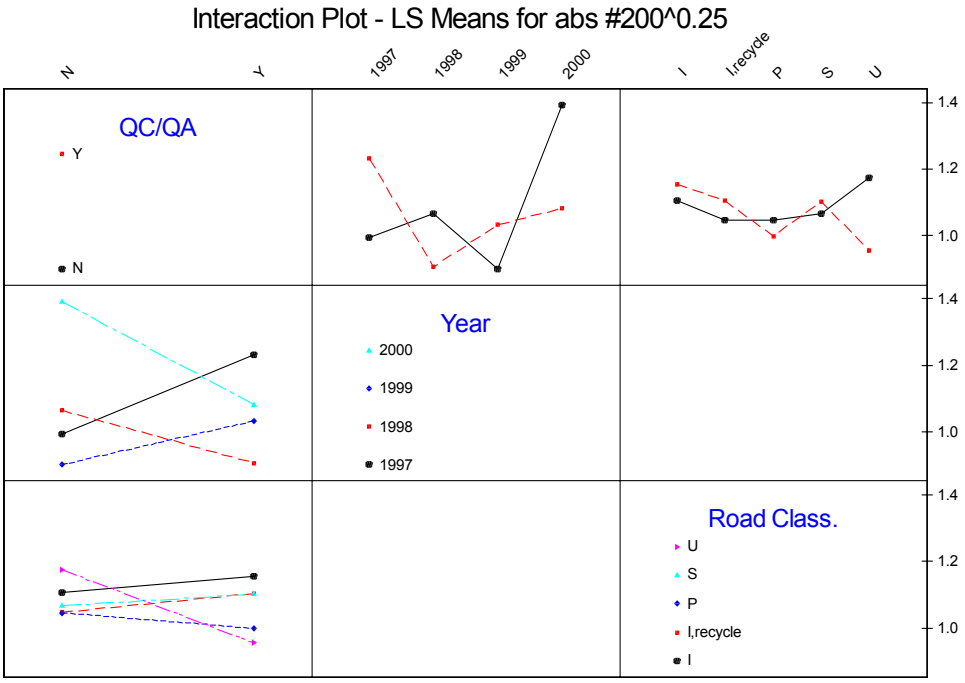
Minitab ANOVA Table:

General Linear Model: abs #200^0.25 versus QC/QA, Year, Road Class.

```
Factor     Type Levels Values
QC/QA     fixed      2 N Y
Year      fixed      4 1997 1998 1999 2000
Road Cla  fixed      5 I         I,recycle P         S         U

Analysis of Variance for abs no20, using Adjusted SS for Tests

Source           DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA             1     0.2098     0.0076     0.0076    0.06  0.809
Year              3     2.6497     0.6911     0.2304    1.76  0.156
Road Cla          4     2.8829     0.5604     0.1401    1.07  0.372
QC/QA*Year        3     1.1181     1.1846     0.3949    3.02  0.031
QC/QA*Road Cla    4     0.2605     0.2605     0.0651    0.50  0.737
Error           205    26.8071    26.8071     0.1308
Total           220    33.9282
```



Relevant Tukey's Pair-Wise Comparisons:

QC/QA = Y
Year = 1998 subtracted from:

Level QC/QA	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	1999	0.1266	0.04063	3.116	0.0429
Y	2000	0.1752	0.04356	4.023	0.0020

QC/QA = Y
Road Cla = I subtracted from:

Level QC/QA	Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	I,recycl	-0.0515	0.03534	-1.458	0.9067
Y	P	-0.1567	0.03562	-4.399	0.0007
Y	S	-0.0530	0.05280	-1.004	0.9918
Y	U	-0.2005	0.25701	-0.780	0.9988

QC/QA = Y
Road Cla = I,recycl subtracted from:

Level QC/QA	Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	P	-0.1052	0.03106	-3.386	0.0286
Y	S	-0.0015	0.04947	-0.030	1.0000
Y	U	-0.1490	0.25740	-0.579	0.9999

#30 Sieve:

Absolute Difference, |Actual – Target|:

Check assumptions.

Normality: NOT OK, used a $Y^{0.75}$ Transformation

Non-constant variance: OK

Independence: OK

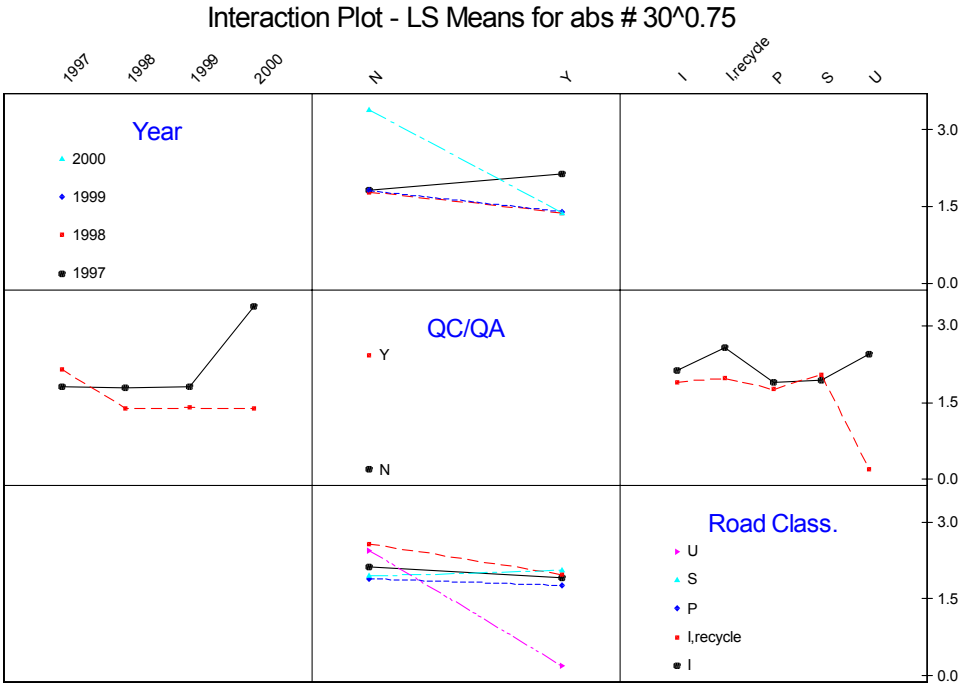
Minitab ANOVA Table:

General Linear Model: abs no 30^0.75 versus QC/QA, Year, Road Class.

```
Factor     Type Levels Values
QC/QA     fixed      2 N Y
Year      fixed      4 1997 1998 1999 2000
Road Cla  fixed      5 I         I,recycle P         S         U

Analysis of Variance for abs no 3, using Adjusted SS for Tests

Source            DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA              1      0.069      4.733      4.733    1.89  0.171
Year               3      1.688      6.324      2.108    0.84  0.473
Road Cla           4      8.400     10.042      2.510    1.00  0.409
QC/QA*Year         3      6.571      6.918      2.306    0.92  0.433
QC/QA*Road Cla     4     11.039     11.039      2.760    1.10  0.358
Error            204    512.001    512.001      2.510
Total            219    539.769
```



#8 Sieve:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a $Y^{0.5}$ Transformation

Non-constant variance: OK

Independence: OK

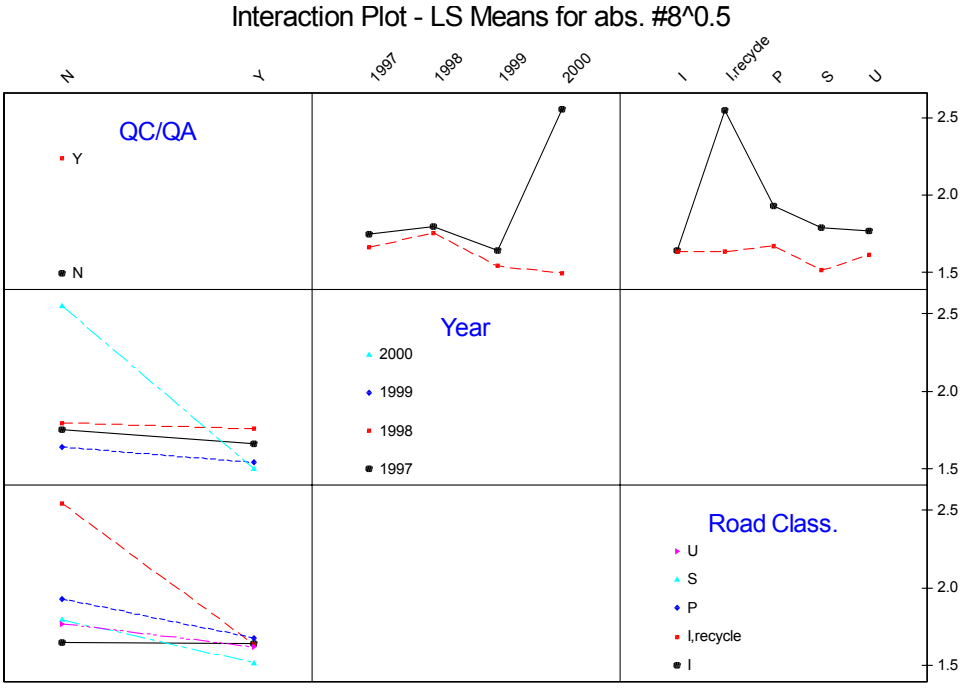
Minitab ANOVA Table:

General Linear Model: no. 8^0.5 versus QC/QA, Year, Road Class.

```
Factor     Type Levels Values
QC/QA      fixed      2 N Y
Year       fixed      4 1997 1998 1999 2000
Road Cla   fixed      5 I         I,recycle P         S         U

Analysis of Variance for no. 8^0., using Adjusted SS for Tests

Source            DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA              1     2.1586     1.2644     1.2644    1.51  0.220
Year               3     4.6176     1.8880     0.6293    0.75  0.522
Road Cla           4     2.8621     6.5579     1.6395    1.96  0.102
QC/QA*Year         3     1.9121     1.8410     0.6137    0.73  0.533
QC/QA*Road Cla     4     5.6251     5.6251     1.4063    1.68  0.156
Error            205   171.5904   171.5904     0.8370
Total            220   188.7660
```



Relevant Tukey's Pair-Wise Comparisons:

Road Cla = I subtracted from:

Level Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
I,recycl	0.44855	0.1774	2.52808	0.0884
P	0.15975	0.1357	1.17738	0.7643
S	0.01274	0.1457	0.08747	1.0000
U	0.05094	0.3561	0.14307	0.9999

Road Cla = I,recycl subtracted from:

Level Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
P	-0.2888	0.1615	-1.788	0.3834
S	-0.4358	0.1757	-2.481	0.0991
U	-0.3976	0.3647	-1.090	0.8114

#4 Sieve:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a $Y^{0.75}$ Transformation

Non-constant variance: OK

Independence: OK

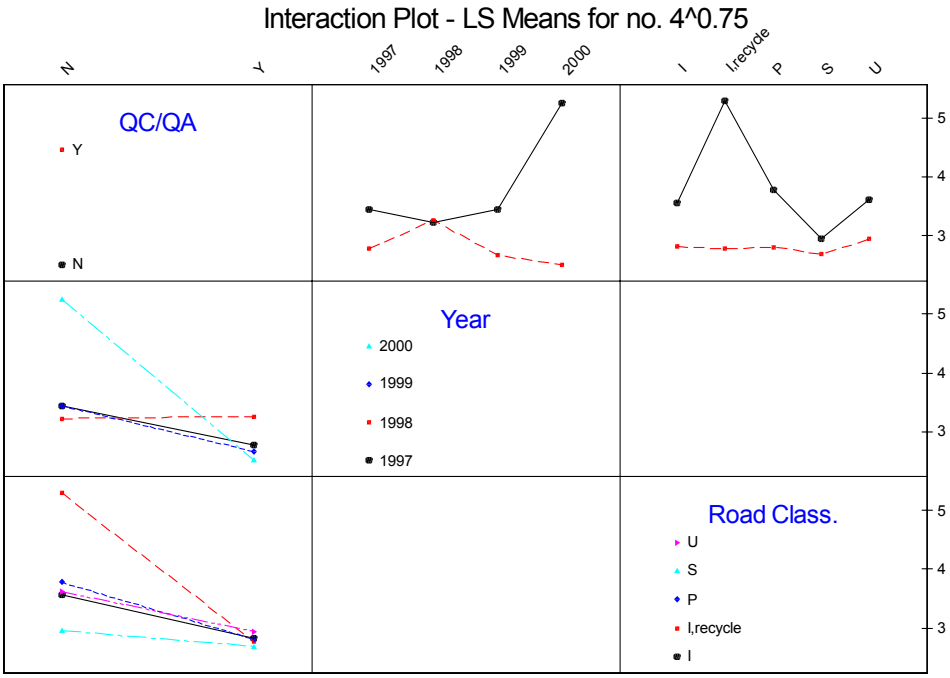
Minitab ANOVA Table:

General Linear Model: #4^0.75 versus QC/QA, Year, Road Class.

```
Factor     Type Levels Values
QC/QA     fixed      2 N Y
Year      fixed      4 1997 1998 1999 2000
Road Cla  fixed      5 I         I,recycle P         S         U

Analysis of Variance for no. 4^0., using Adjusted SS for Tests

Source           DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA             1     31.253     13.124     13.124    3.75  0.054
Year              3     36.303      5.017      1.672    0.48  0.698
Road Cla          4     12.524     40.038     10.010    2.86  0.024
QC/QA*Year        3     20.918     17.269      5.756    1.65  0.180
QC/QA*Road Cla    4     35.372     35.372      8.843    2.53  0.042
Error           206    720.624    720.624      3.498
Total           221    856.994
```



Relevant Tukey's Pair-Wise Comparisons:

Road Cla = I,recycl subtracted from:

Level Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
P	-0.740	0.3302	-2.242	0.1685
S	-1.211	0.3591	-3.373	0.0078
U	-0.753	0.7455	-1.011	0.8503

QC/QA = Y
Year = 1998 subtracted from:

Level QC/QA*Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y 1999	-0.5993	0.2101	-2.852	0.0882
Y 2000	-0.7508	0.2245	-3.345	0.0216

QC/QA = N
Road Cla = I,recycl subtracted from:

Level QC/QA*Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
N P	-1.515	0.6407	-2.365	0.3528
N S	-2.334	0.6712	-3.477	0.0214
N U	-1.674	0.6716	-2.492	0.2791
Y I	-2.474	0.7277	-3.400	0.0273
Y I,recycl	-2.516	0.7207	-3.491	0.0205
Y P	-2.481	0.7199	-3.447	0.0236
Y S	-2.604	0.7460	-3.491	0.0204
Y U	-2.349	1.5057	-1.560	0.8656

1/2” Sieve:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a $Y^{0.5}$ Transformation

Non-constant variance: OK

Independence: OK

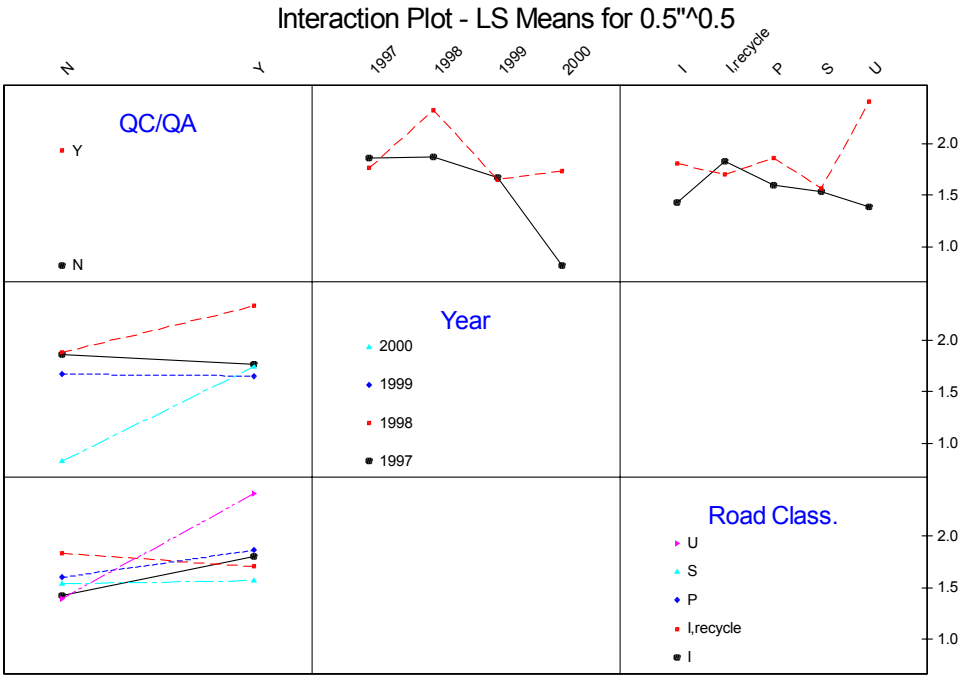
Minitab ANOVA Table:

General Linear Model: 0.5-inch^0.5 versus QC/QA, Year, Road Class.

```
Factor      Type Levels Values
QC/QA      fixed      2 N Y
Year       fixed      4 1997 1998 1999 2000
Road Cla   fixed      5 I         I,recycle P         S         U

Analysis of Variance for 0.5"^0.5, using Adjusted SS for Tests

Source            DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA              1      2.383      1.206      1.206    0.94  0.333
Year               3     33.603     10.039      3.346    2.61  0.052
Road Cla           4      5.091      2.396      0.599    0.47  0.759
QC/QA*Year         3      3.191      3.222      1.074    0.84  0.474
QC/QA*Road Cla     4      3.731      3.731      0.933    0.73  0.574
Error            206    263.844    263.844      1.281
Total            221    311.843
```



Relevant Tukey's Pair-Wise Comparisons:

QC/QA = Y
Year = 1998 subtracted from:

Level QC/QA	*Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	1999	-0.6787	0.1271	-5.338	0.0000
Y	2000	-0.5902	0.1358	-4.345	0.0006

3/4" Sieve:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a Y^0 ➔natural log transformation

Non-constant variance: OK, after transformation

Independence: OK

***Note: One outlier was removed.

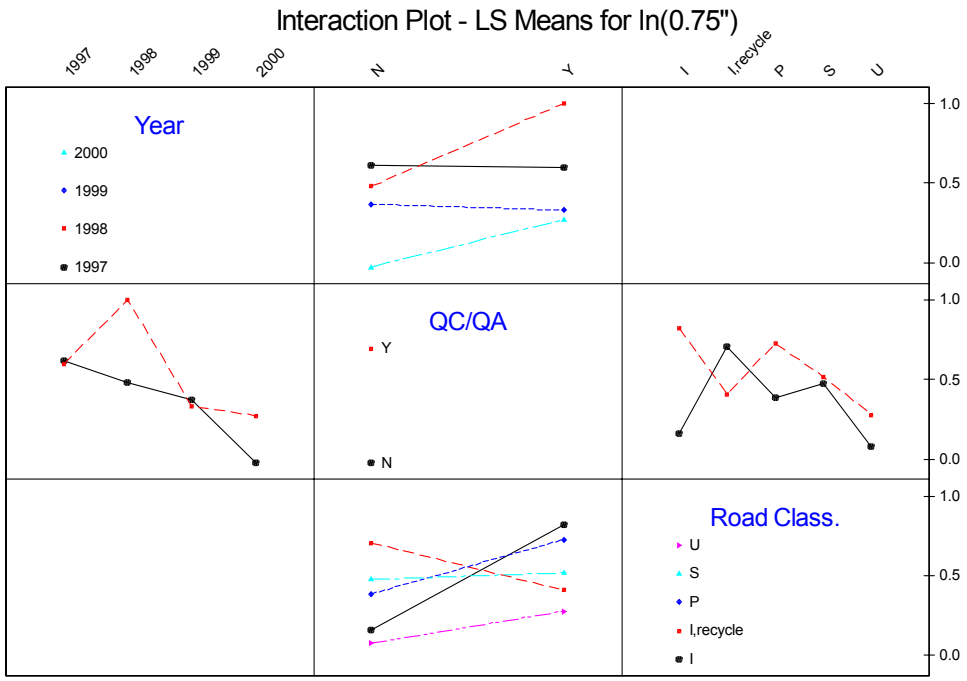
Minitab ANOVA Table:

General Linear Model: ln(0.75") versus QC/QA, Year, Road Class.

```
Factor      Type Levels Values
QC/QA      fixed      2 N Y
Year       fixed      4 1997 1998 1999 2000
Road Cla   fixed      5 I         I,recycle P         S         U

Analysis of Variance for ln(0.75", using Adjusted SS for Tests

Source            DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA              1      0.400      0.444      0.444    0.40  0.529
Year               3     28.691      6.719      2.240    2.00  0.115
Road Cla           4     19.630      1.171      0.293    0.26  0.902
QC/QA*Year         3      2.947      3.079      1.026    0.92  0.433
QC/QA*Road Cla     4      7.538      7.538      1.885    1.69  0.155
Error            204    227.994    227.994      1.118
Total            219    287.200
```



Relevant Tukey's Pair-Wise Comparisons:

QC/QA = Y
Year = 1998 subtracted from:

Level QC/QA	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	1999	-0.6699	0.1188	-5.638	0.0000
Y	2000	-0.7280	0.1270	-5.735	0.0000

QC/QA = Y
Road Cla = I subtracted from:

Level QC/QA	Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	I,recycl	-0.4143	0.1029	-4.024	0.0032
Y	P	-0.0959	0.1035	-0.927	0.9954
Y	S	-0.3052	0.1570	-1.944	0.6394
Y	U	-0.5456	0.7513	-0.726	0.9993

QC/QA = Y
Road Cla = I,recycl subtracted from:

Level QC/QA	Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	P	0.3184	0.09031	3.5254	0.0183
Y	S	0.1091	0.14735	0.7406	0.9992
Y	U	-0.1313	0.75242	-0.1745	1.0000

Asphalt Content Analysis

AC:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a $Y^{0.25}$ Transformation

Non-constant variance: OK

Independence: OK

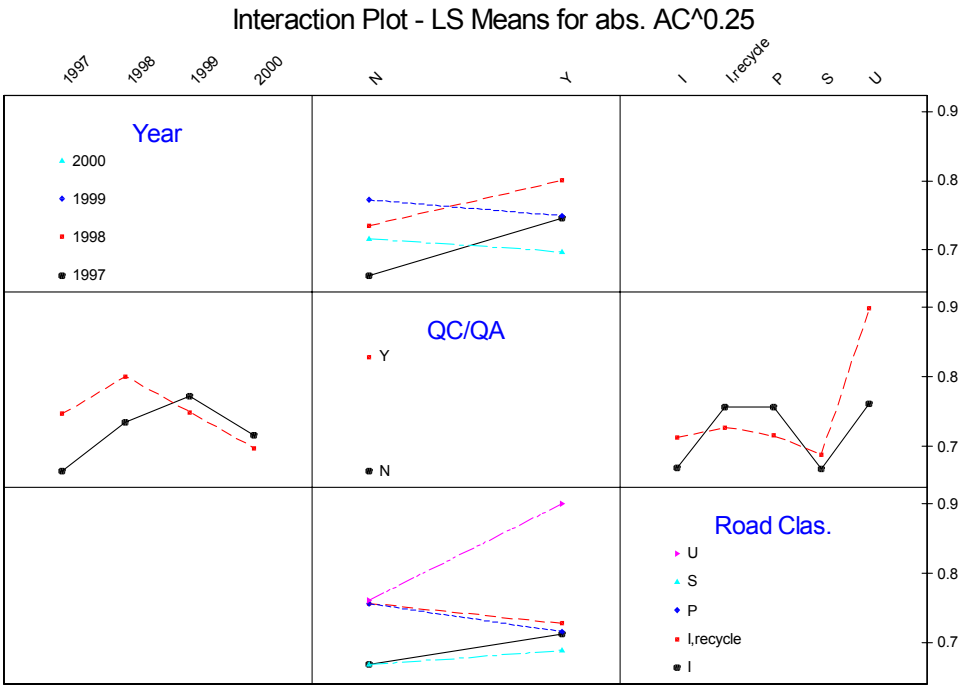
Minitab ANOVA Table:

General Linear Model: %AC^0.25 versus Year, QC/QA, Road Clas.

```
Factor     Type Levels Values
Year       fixed      4 1997 1998 1999 2000
QC/QA      fixed      2 N Y
Road Cla   fixed      5 I         I,recycle P         S         U

Analysis of Variance for %AC^.25, using Adjusted SS for Tests

Source            DF     Seq SS     Adj SS     Adj MS       F      P
Year               3    1.05314    0.07252    0.02417    0.49  0.690
QC/QA              1    0.03599    0.00872    0.00872    0.18  0.675
Road Cla           4    0.24617    0.31767    0.07942    1.61  0.174
QC/QA*Road Cla     4    0.17623    0.13488    0.03372    0.68  0.605
Year*QC/QA         3    0.07581    0.07581    0.02527    0.51  0.675
Error            207   10.22793   10.22793    0.04941
Total            222   11.81527
```



Relevant Tukey's Pair-Wise Comparisons:

Year = 1998
QC/QA = Y subtracted from:

Level Year*QC/QA	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1999 N	-0.0282	0.07854	-0.359	1.0000
1999 Y	-0.0512	0.02494	-2.055	0.4479
2000 N	-0.0846	0.16615	-0.509	0.9996
2000 Y	-0.1031	0.02667	-3.866	0.0037

Year = 1999
QC/QA = Y subtracted from:

Level Year*QC/QA	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2000 N	-0.03337	0.16494	-0.202	1.0000
2000 Y	-0.05186	0.01747	-2.968	0.0648

Asphalt Mixture Characteristic Analysis

VMA:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: NOT OK, used a $Y^{0.5}$ Transformation

Non-constant variance: OK

Independence: OK

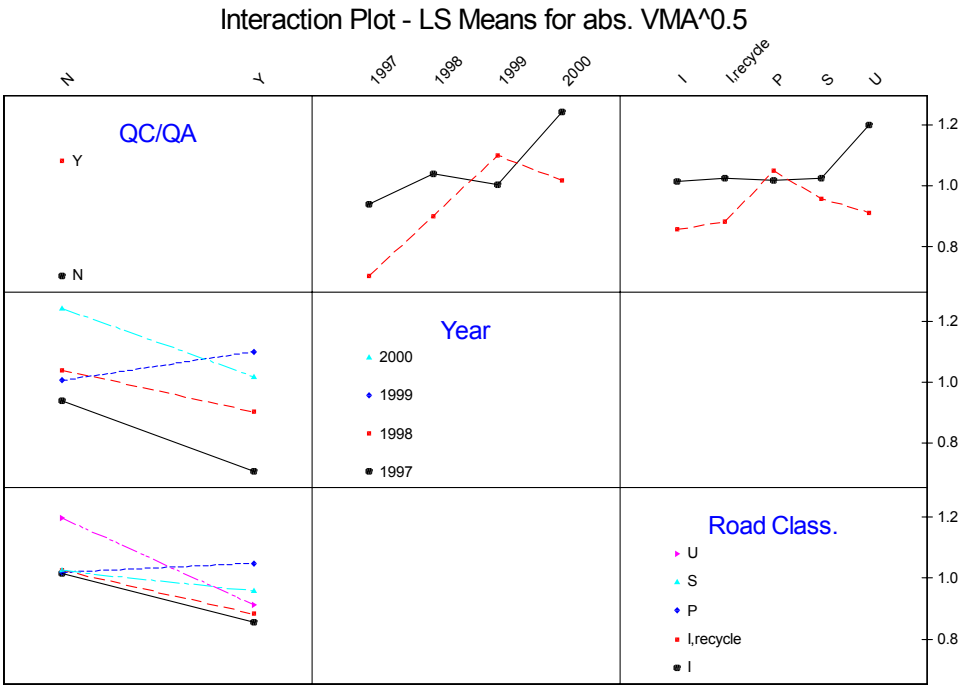
Minitab ANOVA Table:

General Linear Model: %VMA^0.5 versus QC/QA, Year, Road Class.

```
Factor     Type Levels Values
QC/QA      fixed      2 N Y
Year       fixed      4 1997 1998 1999 2000
Road Cla   fixed      5 I         I,recycle P         S         U

Analysis of Variance for %VMA^0.5, using Adjusted SS for Tests

Source           DF     Seq SS     Adj SS     Adj MS       F      P
QC/QA             1     0.3604     0.1929     0.1929    0.44  0.510
Year              3     4.0841     0.7602     0.2534    0.57  0.633
Road Cla          4     5.2538     0.5466     0.1366    0.31  0.872
QC/QA*Year        3     0.7360     0.5707     0.1902    0.43  0.731
QC/QA*Road Cla    4     0.5929     0.5929     0.1482    0.34  0.854
Error           206    91.0277    91.0277     0.4419
Total           221   102.0549
```



Relevant Tukey's Pair-Wise Comparisons:

QC/QA = Y
Road Cla = I subtracted from:

Level QC/QA	Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	I,recycl	0.02573	0.06524	0.3944	1.0000
Y	P	0.19278	0.06439	2.9937	0.0882
Y	S	0.10156	0.09953	1.0204	0.9907
Y	U	0.05530	0.47233	0.1171	1.0000

VTM:

Absolute Difference, |Actual – Target|:

Check assumptions:

Normality: OK

Non-constant variance: OK

Independence: OK

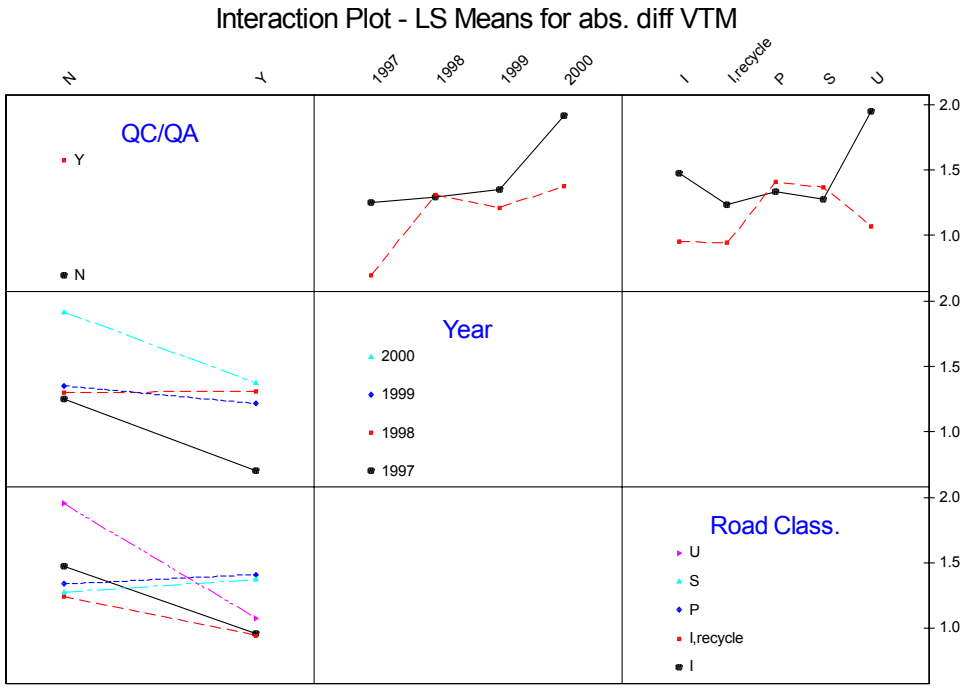
Minitab ANOVA Table:

General Linear Model: abs. VTM versus QC/QA, Year, Road Class.

```
Factor     Type Levels Values
QC/QA     fixed      2 N Y
Year      fixed      4 1997 1998 1999 2000
Road Cla  fixed      5 I         I,recycle P         S         U

Analysis of Variance for abs. dif, using Adjusted SS for Tests

Source           DF     Seq SS     Adj SS     Adj MS       F       P
QC/QA             1      0.022      1.138      1.138    0.70   0.404
Year              3      1.905      2.468      0.823    0.51   0.678
Road Cla          4     39.565      3.488      0.872    0.54   0.709
QC/QA*Year        3      1.202      1.463      0.488    0.30   0.825
QC/QA*Road Cla    4      6.428      6.428      1.607    0.99   0.414
Error           206    334.688    334.688      1.625
Total           221    383.810
```



Relevant Tukey's Pair-Wise Comparisons:

QC/QA = Y
Road Cla = I subtracted from:

Level QC/QA	Level Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	I,recycl	-0.01187	0.1251	-0.09483	1.0000
Y	P	0.45477	0.1235	3.68294	0.0108
Y	S	0.41579	0.1909	2.17842	0.4750
Y	U	0.11972	0.9057	0.13219	1.0000

QC/QA = Y
Road Cla = I,recycl subtracted from:

Level QC/QA	Level Road Cla	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
Y	P	0.4666	0.1111	4.2019	0.0016
Y	S	0.4277	0.1818	2.3522	0.3604
Y	U	0.1316	0.9075	0.1450	1.0000