

The Road Inventory of Great Basin National Park GRBA - 8420









Road Inventory Program

Prepared By: Federal Highway Administration Eastern Federal Lands Highway Division Cycle 3



Great Basin National Park in Nevada

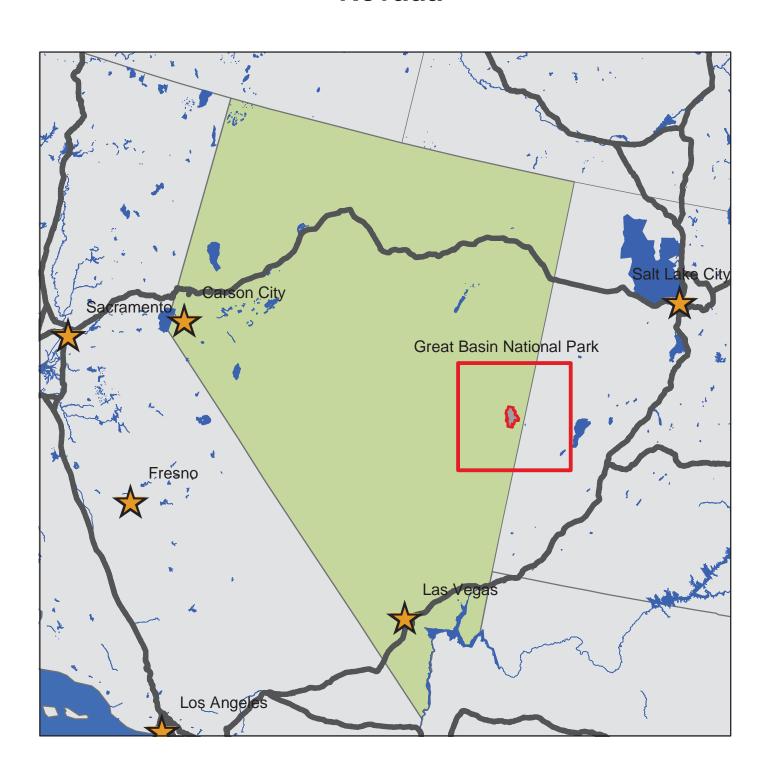




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INTRODUCTION

<u>Background:</u> In July 1976, the National Park Service (NPS) and the Federal Highway Administration (FHWA) entered into a Memorandum of Agreement (MOA), establishing the Road Inventory Program (RIP). In 1980, the NPS and the FHWA terminated the 1976 MOA and entered into a new MOA that provided for the completion of the initial phase of the RIP. The purpose of the RIP, per the 1980 MOA, was to maintain and update RIP data in order to develop long-range and short-range costs and programs to bring National Park Service (NPS) roads up to, or to maintain, designated standards, and to establish a maintenance management program.

The FHWA's Federal Lands Highway (FLH) was assigned the task of identifying condition deficiencies and corrective priorities along with associated corrective costs, inventorying maintenance features (e.g., culverts, signs, guardrail, etc.), summarizing the data and findings in a report, and providing a photographic record of the road system.

The FLH completed the initial phase of the RIP in the early 1980's. As a result of this effort, each park received a RIP book, also known as the "Brown Book," that included the information collected during this initial RIP phase.

In an effort to maintain and update the RIP data, a cyclical data collection and reporting process was reestablished in the 1990's. The FLH completed two cycles of RIP data collection between 1994 and 2001. Cycle 1 data was collected in 44 large parks from 1994 to 1995. This data was found to be unusable for comparison to future cycles. Cycle 2 data was collected from March 1997 to January 2001 in 79 large parks and 5 small parks containing 4,874 route miles. Each park received a copy of a Cycle 2 RIP Report, also known as the "Blue Book."

Since 1984, the RIP Program has been funded through the Federal Lands Highway Program's Park Roads and Parkways (PRP) Program. Currently, the NPS Washington Headquarters' Park Facility Management Division is responsible for coordinating the RIP program with the FLH. The FLH Washington office coordinates policy and prepares national reports and needs assessment studies for Congress.

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) amended Title 23 U.S.C., and inserted Section 204(a)(6) which requires the Federal Highway Administration and the National Park Service, to develop, by rule, a Pavement Management System (PMS) for the park roads and parkways serving the National Park System. As a result of the requirements in TEA-21, the NPS and the FHWA are in the process of developing a PMS. The PMS will assist the decision-makers in effectively spending limited PRP Program funds. The PMS will provide information for planning and programming road maintenance, rehabilitation, and reconstruction activities. RIP data will provide the basic information for this system.

Key information included in the RIP is the mileage inventory and condition assessments accomplished by the RIP Program. The mileage and condition data are used in the current allocation formula of PRP Program funds.

RIP Cycle 3: A third RIP cycle was initiated in 2001. Data was collected from March 2001 to July 2004, and is included in the Cycle 3 Reports. Cycle 3 includes 254 large and small parks with a combined total of 5,455 route miles.

In the Cycle 3 Reports, a general condition rating of excellent, good, fair and poor is ascribed to each onemile section of paved roadway, and to each paved parking area. This condition rating system provides a realistic means of assessing the general funding needs for road improvements. Along with these descriptive condition ratings, a numerical rating between 0 and 100 is ascribed to each mile of road and to each parking area. This numerical rating is called a Pavement Condition Rating (PCR). The PCR rating system is described in Section 10 of this report.

All of the fieldwork required for obtaining inventory, condition, and maintenance feature information is coordinated with each park and the regional offices to ensure that the information in the RIP reports is accurate.

The FLH is responsible for all of the data presented in this report. Anyone having questions or comments regarding the contents of this report is encouraged to contact the FHWA RIP Coordinator. It is our aim to provide exceptional customer satisfaction in our delivery of the RIP program.

FHWA RIP Coordinator:

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Great Basin National Park Summaries

Overall Park Mileage Summary

PARK TOTAL SUMMARY ITEMS	TOTAL	DATE
Paved ARAN Driven Route Miles	14.82	6/13/2003
Unpaved Estimated Route Miles	19.77	6/13/2003
Paved ARAN and Unpaved Route Miles	34.59	
Paved ARAN Driven Lane Miles	27.75	6/13/2003
Paved MRR Lane Miles	0.00	
Parking Lot Lane Miles	3.03	6/13/2003
Total Paved Lane Miles	30.78	

Notes: Total Paved Lane Miles includes the sum of Paved ARAN Driven Lane Miles, Paved MRR Lane Miles, and Parking Lot Lane Miles

Unpaved Route Miles are estimates, they have not been inventoried by the Roadway Inventory Program (RIP)

Great Basin National Park Summaries

Cost to Improve to "Excellent" Condition

SOURCE	WORK PERFORMED	COST PER MILE	INITIAL CONDITION
FHWA Awarded Projects	Surface Maintenance	\$30,000	Excellent
FHWA Awarded Projects	3-R (Resurfacing)	\$110,000	Good
FHWA Awarded Projects	3-R (Resurfacing, Restoration, and Rehabilitation) Projects	\$560,000	Fair
FHWA Awarded Projects	4-R (Resurfacing, Restoration, Rehabilitation, and Reconstruction) Projects	\$1,540,000	Poor

Based on the above table, the cost to improve ARAN driven paved road condition miles to "Excellent" PCR are:

Existing Condition	Existing Miles	Estimated Cost to Improve
Excellent	0.02	\$600
Good	0.84	\$92,400
Fair	7.69	\$4,306,400
Poor	6.27	\$9,655,800
Totals	14.82	\$14,055,200

The above numbers include the 35% PE, CE and contingency costs and are national averages. The cost estimates were used in the calculations for the 2004 Reauthorization Bill to determine the level of funding required to bring all the NPS roads into a Pavement Condition Rating (PCR) of Good (85).

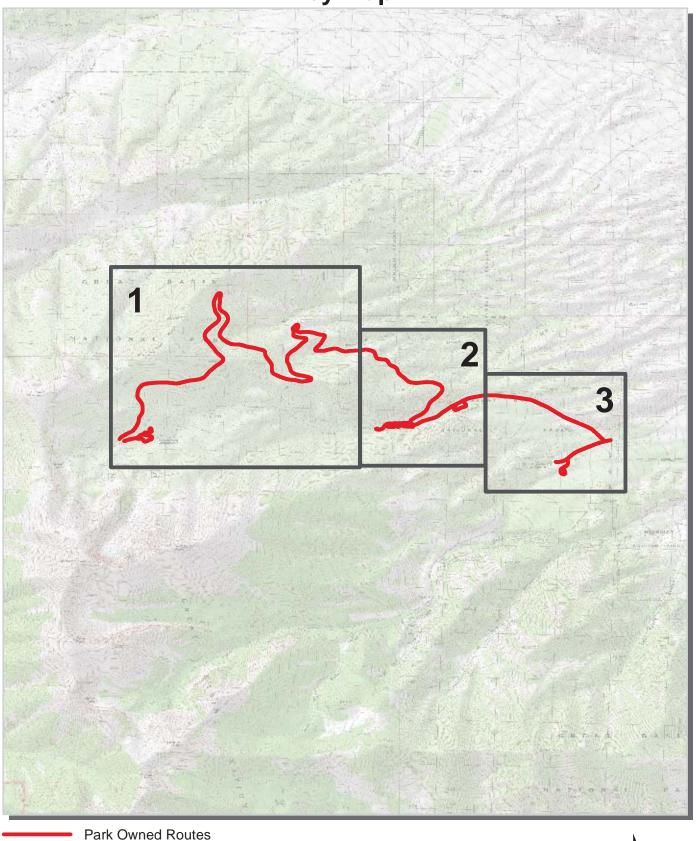
These numbers are for preliminary planning purposes only and should not be used for project level proposals. For park planning level analysis, apply your park multiplier for more accurate regional costs.

Great Basin National Park Summaries

Paved Route Miles and Percentages by Functional Class and PCR for ARAN Driven Paved Roads

			Paveme	nt Conditio	n Rating				
	Poor (<=60)	Fair (6	Fair (61-84)		(85-94)	Excellent	(95-100)	TOTAL
F.C.	MILES	%	MILES	%	MILES	%	MILES	%	MILES
1	0.04	0.27%	0.57	3.85%	0.10	0.67%			0.71
2	4.96	33.47%	6.46	43.59%	0.74	4.99%	0.02	0.13%	12.18
3	1.17	7.89%	0.39	2.63%					1.56
4									
5	0.10	0.67%	0.27	1.82%					0.37
6									
7									
8									
Totals	6.27	42.31%	7.69	51.89%	0.84	5.67%	0.02	0.13%	14.82

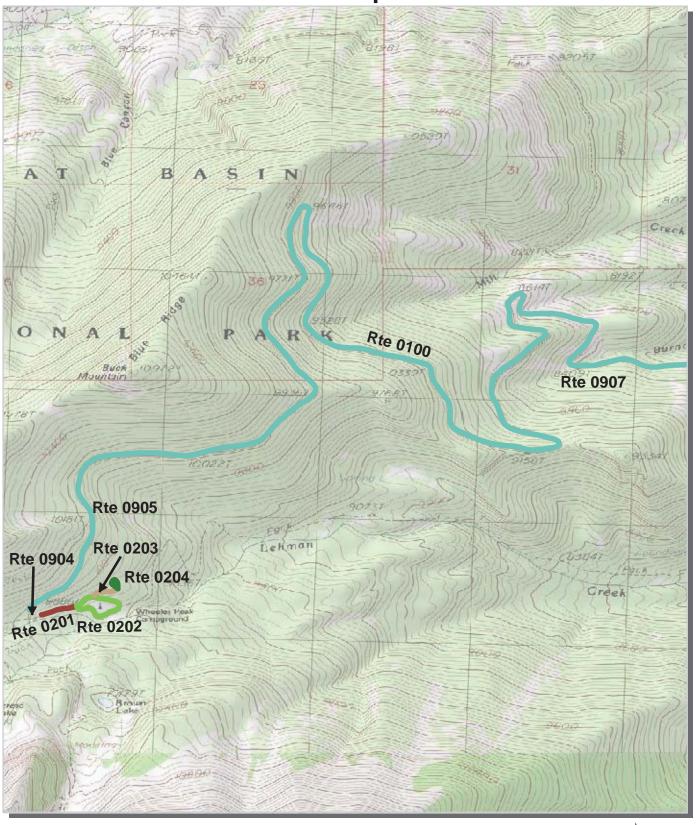
Great Basin National Park Route Location Key Map



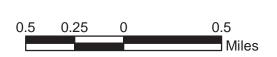
2 1 0 2 Miles

3-1

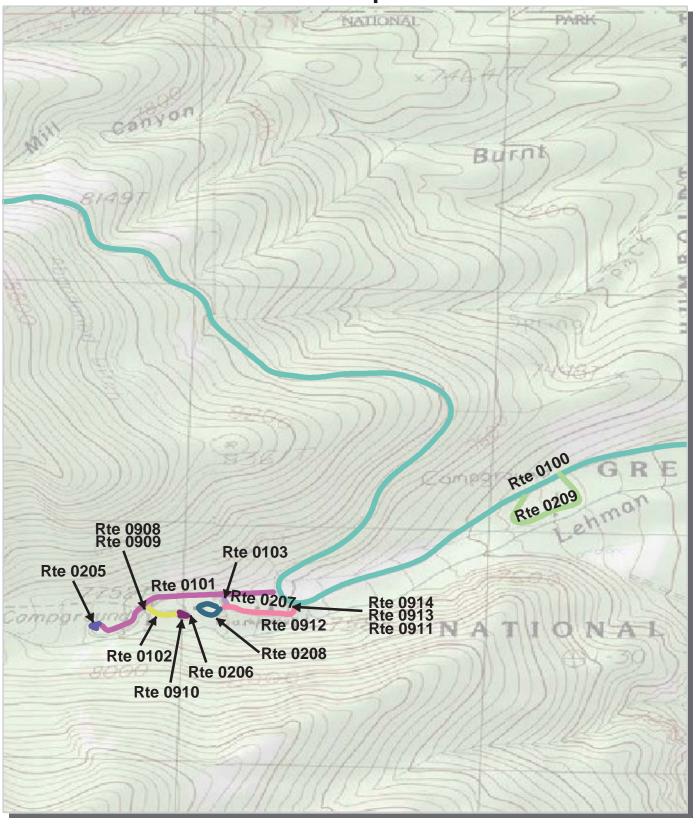
Great Basin National Park Route Location Map Area Map 1



Unique colors used to differentiate routes



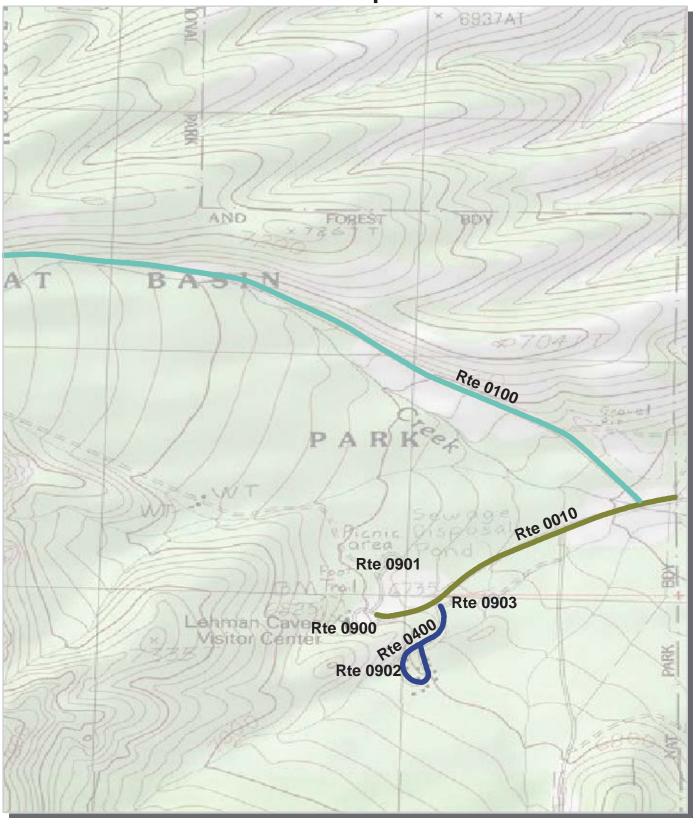
Great Basin National Park Route Location Map Area Map 2



Unique colors used to differentiate routes



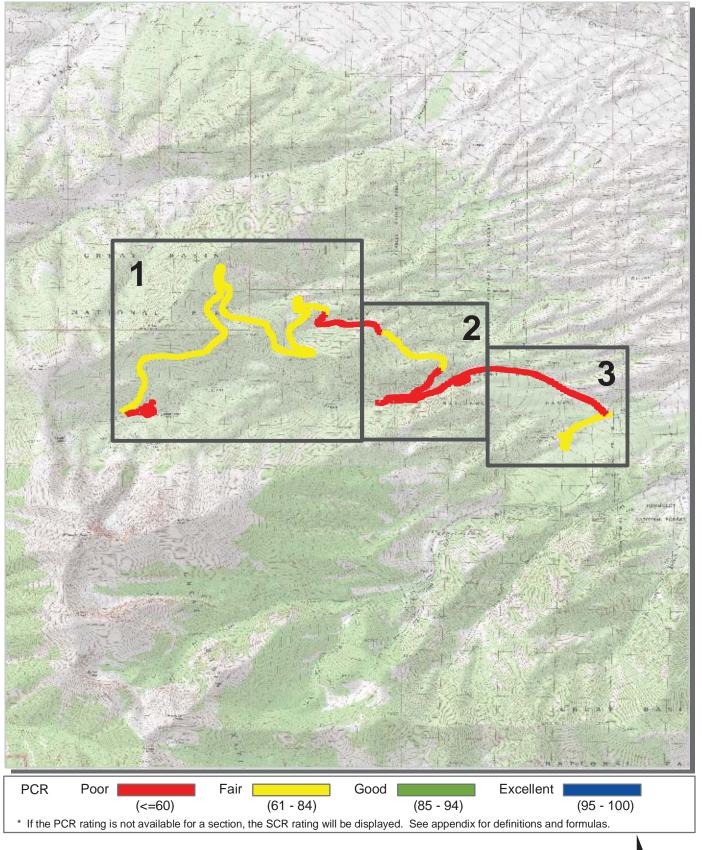
Great Basin National Park Route Location Map Area Map 3



Unique colors used to differentiate routes

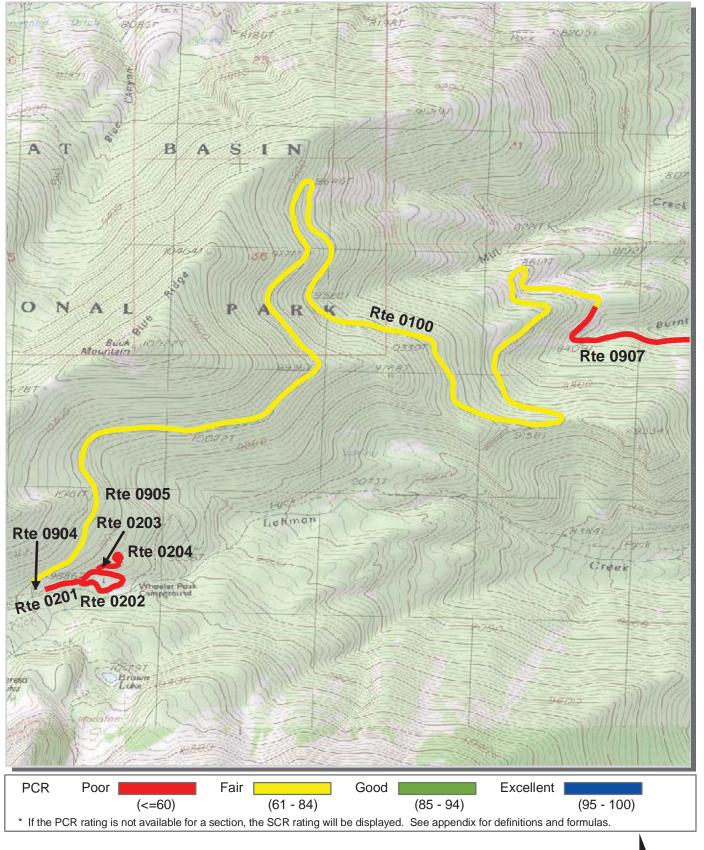


Great Basin National Park Route Condition Key Map PCR - Mile by Mile



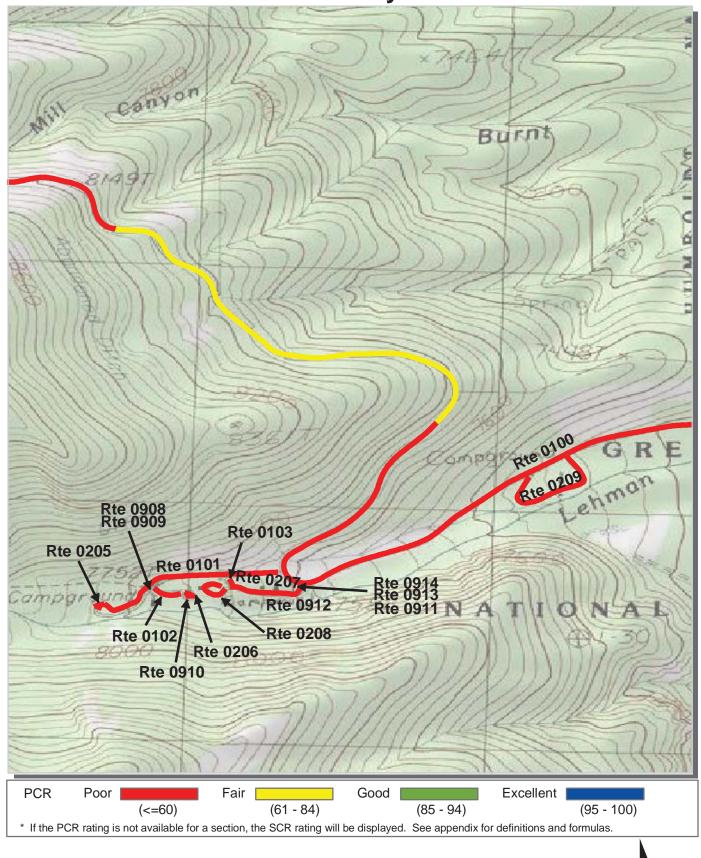


Great Basin National Park Route Condition Area Map 1 PCR - Mile by Mile

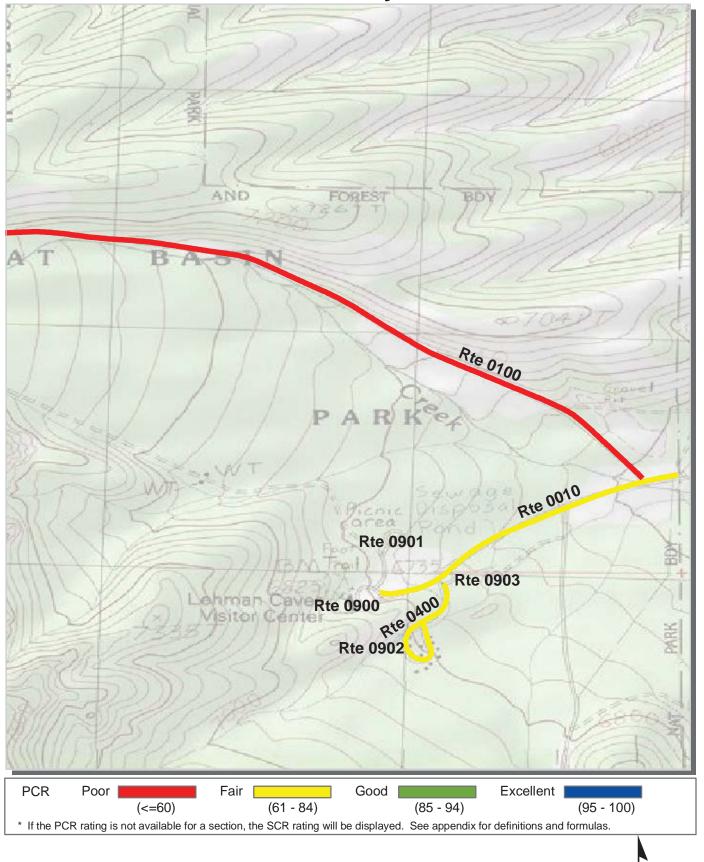




Great Basin National Park Route Condition Area Map 2 PCR - Mile by Mile



Great Basin National Park Route Condition Area Map 3 PCR - Mile by Mile



NPS/RIP Route ID Report

(Numerical By Route #)

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Shading Color Key: Red text denotes approx. mileage White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Grey = Paved Routes, ARAN not Driven

Black = Paved State, Local or Private non-NPS Routes, ARAN Driven

Red =

Green = All Unpaved Parking Areas

Purple =

GRBA

Great Basin National Park

Rte.	FMSS		Route Des	cription	Paved	Un-	Rte.	Func.	Rte.	Manual	Surf.
#	Asset #	Route Name	From	То	Miles	Paved Miles	Lgth	Class		Rated SQ/FT	Туре
0010	77068	ENTRANCE ROAD	FROM CATTLE GUARD AT EAST PARK BOUNDARY	TO ROUTE 0900	0.71	0.00	0.71	1	2	0	AS
0100	77080	WHEELER PEAK SCENIC DRIVE	FROM ROUTE 0010	TO ROUTE 0904	11.66	0.00	11.66	2	2	0	ОС
0101		UPPER LEHMAN CREEK CAMPGROUND ACCESS ROAD	FROM ROUTE 0100	TO ROUTE 0205	0.41	0.00	0.41	2	2	0	AS
0102		UPPER LEHMAN CREEK UPPER CAMPGROUND ACCESS ROAD	FROM ROUTE 0101	TO ROUTE 0206	0.08	0.00	0.08	2	2	0	AS
0103	77400	UPPER LEHMAN CREEK CAMPGROUND CONNECTOR ROAD	FROM ROUTE 0101	TO ROUTE 0207	0.03	0.00	0.03	2	1	0	AS
0201		WHEELER PEAK CAMPGROUND ROAD	FROM ROUTE 0904	TO ROUTE 0202	0.15	0.00	0.15	3	2	0	AS
0202	77073	WHEELER PEAK LOWER CAMPGROUND LOOP	FROM ROUTE 0201	TO END OF LOOP	0.45	0.00	0.45	3	1	0	AS
0203	77075	WHEELER PEAK UPPER CAMPGROUND ROAD	FROM ROUTE 0202	TO ROUTE 0204	0.12	0.00	0.12	3	1	0	AS
0204	77081	WHEELER PEAK UPPER CAMPGROUND LOOP	FROM ROUTE 0203	TO END OF LOOP	0.11	0.00	0.11	3	1	0	ОС
0205		UPPER LEHMAN CREEK UPPER UPPER CAMPGROUND LOOP	FROM ROUTE 0101	TO END OF LOOP	0.06	0.00	0.06	3	1	0	AS
0206	77089	UPPER LEHMAN CREEK UPPER CAMPGROUND LOOP	FROM ROUTE 0102	TO END OF LOOP	0.06	0.00	0.06	3	1	0	AS
0207		UPPER LEHMAN CREEK LOWER CAMPGROUND ROAD	FROM ROUTE 0100	TO ROUTE 0208	0.18	0.00	0.18	3	2	0	AS
0208		UPPER LEHMAN CREEK LOWER CAMPGROUND LOOP	FROM ROUTE 0207	TO END OF LOOP	0.12	0.00	0.12	3	1	0	AS
0209		LOWER LEHMAN CREEK CAMPGROUND LOOP	FROM ROUTE 0100	TO ROUTE 0100	0.31	0.00	0.31	3	2	0	AS
0400	77076	RESIDENTIAL / MAINTENANCE ROAD	FROM ROUTE 0010	TO END OF LOOP	0.37	0.00	0.37	5	2	0	AS
0401		WATER TANK ROAD	FROM ROUTE 0901	TO END	0.00	0.50	0.50	6	1	0	ОТ
0700	77082	ROAD FC Mather Overlook	FROM	ТО	0.00	0.20	0.20	ZZ		0	GR
0701	77086	ROAD FC Pole Canyon Road RT	FROM	ТО	0.00	0.66	0.66	ZZ		0	GR
0702	77100	ROAD FC Pole Canyon Back Road RT	FROM	ТО	0.00	3.30	3.30	ZZ		0	GR
0703	77101	ROAD FC Cave Springs Road RT	FROM	ТО	0.00	1.15	1.15	ZZ		0	GR
0704	77186	ROAD BC Snake Creek Road RT	FROM	ТО	0.00	6.80	6.80	ZZ		0	GR
0705	77190	ROAD BC Strawberry Creek Road RT	FROM	ТО	0.00	4.00	4.00	ZZ		0	GR
0706	77193	ROAD FC Lagoon Road RT	FROM	ТО	0.00	0.20	0.20	ZZ		0	GR
0707	77198	ROAD BC Mount Washington Road RT	FROM	ТО	0.00	1.50	1.50	ZZ		0	GR

02/03/2005

NPS/RIP Route ID Report

(Numerical By Route #)

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Shading Color Key: Red text denotes approx. mileage White = Paved Routes, ARAN Driven

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Blue = All Paved Parking Areas

Grey = Paved Routes, ARAN not Driven

Red =

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Great Basin National Park

Rte.	FMSS		Route Des	scription		Un-	D:	[_	<u></u>	Manual	
#	Asset #	Route Name	From	То	Paved Miles	Paved Miles	Rte. Lgth	Func. Class	Rte. Lanes	Rated SQ/FT	Surf. Type
0708	77199	ROAD BC North Decathon Canyon Road RT	FROM	то	0.00	0.20	0.20	ZZ		0	GR
0709	77200	ROAD FC Boneyard Road RT	FROM	ТО	0.00	0.20	0.20	ZZ		0	GR
0710	77201	ROAD BC South Decathon Canyon Road RT	FROM	ТО	0.00	0.09	0.09	ZZ		0	GR
0711	77202	ROAD FC Tank Farm Road RT	FROM	ТО	0.00	0.10	0.10	ZZ		0	GR
0712	77205	ROAD FC Gravel Pit Road RT	FROM	ТО	0.00	0.30	0.30	ZZ		0	GR
0713	79410	ROAD BC Kious Basin Road	FROM	ТО	0.00	0.57	0.57	ZZ		0	GR
0900		VISITOR CENTER PARKING	FROM ROUTE 0010	TO PARKING	0.00	0.00	0.00	9		43,327	AS
0901		VISITOR CENTER PICNIC AREA	FROM ROUTE 0900	TO PARKING	0.00	0.00	0.00	9		30,541	AS
0902		MAINTENANCE YARD	FROM ROUTE 0400	TO ROUTE 0400	0.00	0.00	0.00	9		15,044	AS
0903		R.V. DUMP STATION	FROM ROUTE 0010	TO ROUTE 0010	0.00	0.00	0.00	9		12,333	AS
0904		BRISTLECONE PARKING AREA	FROM ROUTE 0100	TO PARKING	0.00	0.00	0.00	9		29,722	AS
0905		SUMMIT TRAILHEAD PARKING	FROM ROUTE 0100	TO PARKING	0.00	0.00	0.00	9		8,727	AS
0906		MATHER OVERLOOK	FROM ROUTE 0100	TO PARKING	0.00	0.00	0.00	9		8,514	GR
0907		OSCEOLA DITCH TRAILHEAD PARKING	FROM ROUTE 0100	TO PARKING	0.00	0.00	0.00	9		8,879	AS
0908		LEHMAN CREEK TRAILHEAD PARKING	FROM ROUTE 0101	TO ROUTE 0101	0.00	0.00	0.00	9		3,065	AS
0909		LEHMAN CREEK LOWER TRAILHEAD PARKING	FROM ROUTE 0102	TO PARKING	0.00	0.00	0.00	9		2,992	AS
0910		UPPER LEHMAN CREEK UPPER CAMPGROUND PARKING	FROM ROUTE 0206	TO PARKING	0.00	0.00	0.00	9		1,259	AS
0911		UPPER LEHMAN CREEK PICNIC AREA PARKING	FROM ROUTE 0913	TO PARKING	0.00	0.00	0.00	9		855	AS
0912		UPPER LEHMAN CREEK DAY USE PICNIC AREA PARKING	FROM ROUTE 0207	TO PARKING	0.00	0.00	0.00	9		3,627	AS
0913		UPPER LEHMAN CREEK PICNIC AREA PARKING LOOP	FROM ROUTE 0207	TO ROUTE 0207	0.00	0.00	0.00	9		4,073	AS
0914		LEHMAN CREEK WINTER TRAILHEAD PARKING (UPPER LEHMAN CREEK CAMPGROUND)	FROM ROUTE 0100	TO ROUTE 0100	0.00	0.00	0.00	9		11,437	AS
				Total	l s: 14.82	19.77	34.59			184,397	

Roadway Inventory Program

NPS/RIP Route ID Report

(Numerical By Route #)

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Shading Color Key: Red text denotes approx. mileage

White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Purple =

Blue = All Paved Parking Areas

Grey = Paved Routes, ARAN not Driven

Red =

Green = All Unpaved Parking Areas

Black = Paved State, Local or Private non-NPS Routes, ARAN Driven

General Park Road Functional Classification Table

Class 1 Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 - 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 - 9. State Routes Invetoried for Park. Route Numbers 5000-5999

- Class 2 Connector Park Road (Public Roads) Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, campgrounds, etc. Route Numbers 100-199.
- Class 3 Special Purpose Park Road (Public Roads) Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc. These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.
- Class 4 Primitive Park Roads (Public Roads) Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas. These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299.

Note: Functional Classes 3 and 4 have the same route numbers because, historically, they were numbered similarly.

- Class 5 Administrative Access Road (Administrative Roads) All public roads intended for access to administrative developments or structures such as park offices, employee quarters, or utility areas. Route Numbers 400-499.
- Class 6 Restricted Road (Administrative Roads) All roads normally closed to the public, including patrol roads, truck trails, and other similar roads. Route Numbers 400-499.

 Note: Functional Classes 5 and 6 have the same route numbers because historically they were numbered similarly and often there is little distinction between these routes. For example, because utility areas and

similarly and often there is little distinction between these routes. For example, because utility areas and employee housing are often closed to the public, this restriction would result in classification of FC 6 rather than FC 5.

- Class 7 Urban Parkway (Urban Parkways and City Streets) These facilities serve high volumes of park and non-park related traffic and are restricted, limited-access facilities in an urban area. This category of roads primarily encompasses the major parkways which serve as gateways to our nation's capital. Other major park roads or portions thereof, however, may be included in this category. Route Numbers 1-9.
- Class 8 City Streets (Urban Parkways and City Streets) City streets are usually extensions of the adjoining street system that are owned and maintained by the National Park Service. The construction and/or reconstruction should conform with accepted local engineering practice and local conditions. Route Numbers 600-699.
- Class 9 Boat Ramp (Public and Administrative) Route Numbers 800-899.
 Parking Area (Public and Administrative) Route Numbers 900-1999.

A park road system contains those roads within or giving access to a park or other unit of the NPS which are administered by the NPS, or by the Service in cooperation with other agencies. The assignment of a functional classification (FC) to a park road is not based on traffic volumes or design speed, but on the intended use or function of that road or route.

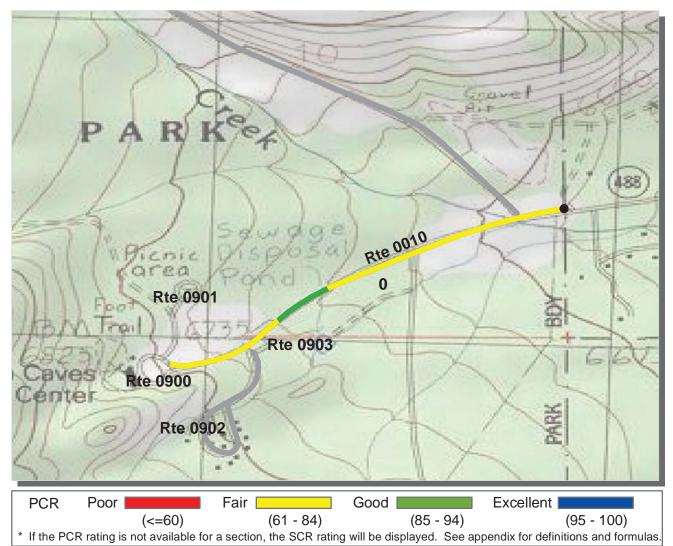
The historic route numbering system also included a 300 number series for interpretive roads, and a 500 series for one-way roads. There are approximately 250 roads nationwide which are designated by the 300 and 500 series. The numbers for these roads will be maintained for reporting consistency. However, since these interpretive and one-way routes are not as clearly tied to a specific functional class, the 300 and 500 series will be discontinuted for future use.

ZZ Functional Class Routes were added from FMSS Database. Final Route Number and Functional Class will be established during Park visit for Cycle 4 data collection.

Surface Type Abbreviations:

- AS Asphaltic Concrete Pavement
- CO Portland Cement Concrete Pavement
- NC New Chip Seal Pavement (Under 5 Years)
- OC Old Chip Seal Pavement (5 Years and Greater)
- SS Slurry Seal Pavement
- GR Gravel Road Bed
- BR Brick or Pavers Road Bed
- CB Cobble Stone Road Bed
- SA Sand Road Bed
- DT Dirt or Native Material Road Bed
- OT Other Materials Road Bed





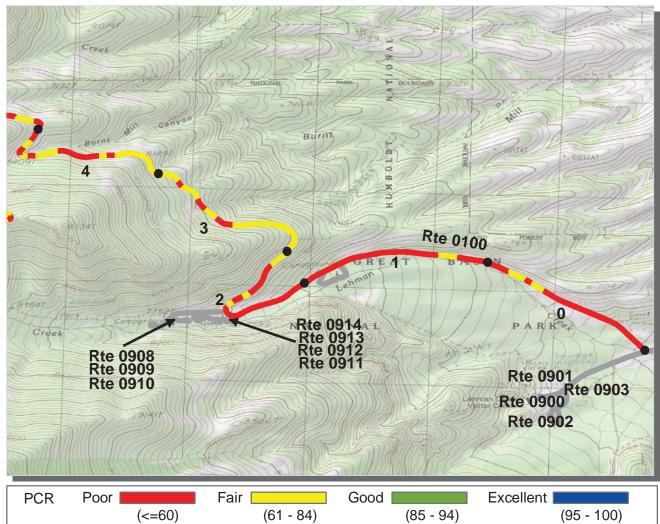
GRBA: Great Basin National Park

ROUTE: 0010 Entrance Road TOTAL LEN			AL LENGTH	: 0.71 Miles	
Section Number	0				
Section Length (mi)	0.71				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	23				
Lane Width (ft)	12				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	74				
RCI (Roughness Condition Index)	81				
SCR (Surface Condition Rating)	69				
Alligator Cracking Index	100				
Rutting Index	70				
Patching Index	100				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0010 Entrance Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



(<=60) * If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

Pacific West Region

GRBA: Great Basin National Park

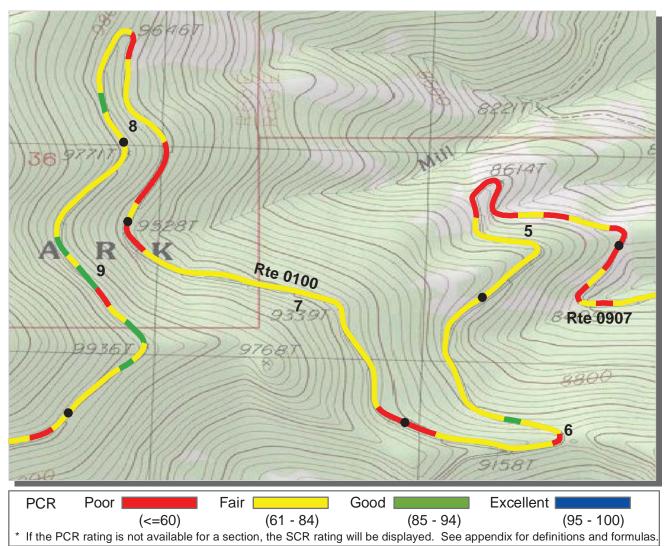
ROUTE: 0100 Wheeler Peak So	ROUTE: 0100 Wheeler Peak Scenic Drive				
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	23	24	22	21	21
Lane Width (ft)	12	12	11	11	11
Shoulder Width (ft)	0	0	0	0	0
Roadway Condition Information					
PCR (Pavement Condition Rating)	53	53	52	63	60
RCI (Roughness Condition Index)	96	88	79	80	77
SCR (Surface Condition Rating)	27	29	34	53	50
Alligator Cracking Index	92	88	91	99	99
Rutting Index	60	64	59	61	58
Patching Index	100	100	100	99	98
Tranverse Cracking Index	87	91	94	96	96
Longitudinal Cracking Index	86	85	89	96	97
Shoulder Condition Rating	N/A	N/A	N/A	N/A	N/A
Drainage Condition Rating	GOOD	GOOD	GOOD	GOOD	GOOD

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0100 Wheeler Peak Scenic Drive

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

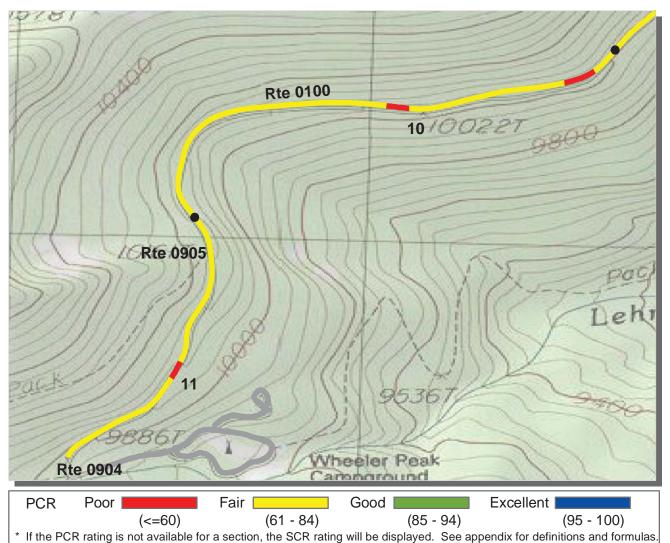
ROUTE: 0100 Wheeler Peak Scenic Drive

TOTAL LENGTH: 11.66 Miles Section Number Section Length (mi) 1.00 1.00 1.00 1.00 1.00 **AADT** SADT ADT Date **Cross Section Information** Number of Lanes 22 20 21 21 Paved Width (ft) 21 12 11 10 Lane Width (ft) 11 10 Shoulder Width (ft) 0 0 0 0 Roadway Condition Information PCR (Pavement Condition Rating) 71 65 69 66 78 RCI (Roughness Condition Index) 80 86 78 80 92 SCR (Surface Condition Rating) 56 61 63 57 68 Alligator Cracking Index 99 99 99 99 99 62 66 69 64 Rutting Index 74 Patching Index 100 99 97 99 98 Tranverse Cracking Index 97 97 98 97 99 Longitudinal Cracking Index 96 97 97 96 96 **Shoulder Condition Rating** N/A N/A N/A N/A N/A **Drainage Condition Rating** GOOD GOOD GOOD GOOD GOOD

^{*} NC designates data not collected NA designates not applicable

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

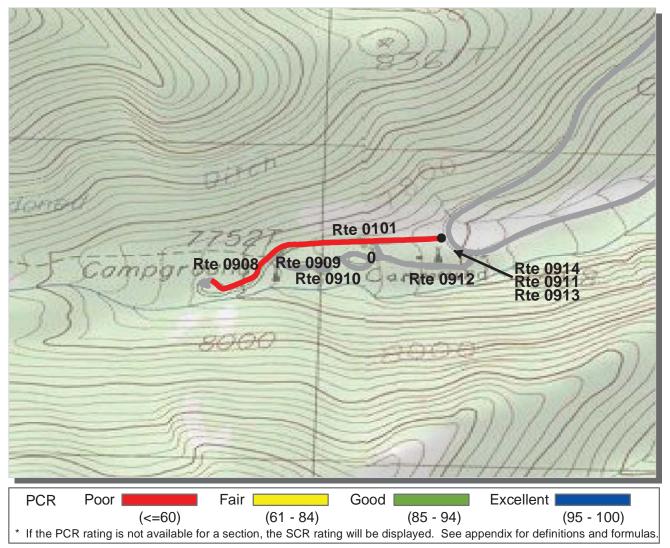
ROUTE: 0100 Wheeler Peak Scenic Drive			TOTAI	L LENGTH:	11.66 Miles
Section Number	10	11			
Section Length (mi)	1.00	0.66			
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2	2			
Paved Width (ft)	21	21			
Lane Width (ft)	10	11			
Shoulder Width (ft)	0	0			
Roadway Condition Information					
PCR (Pavement Condition Rating)	72	72			
RCI (Roughness Condition Index)	87	81			
SCR (Surface Condition Rating)	62	65			
Alligator Cracking Index	99	100			
Rutting Index	68	66			
Patching Index	99	99			
Tranverse Cracking Index	98	99			
Longitudinal Cracking Index	96	98			
Shoulder Condition Rating	N/A	N/A			
Drainage Condition Rating	GOOD	GOOD			

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0100 Wheeler Peak Scenic Drive

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

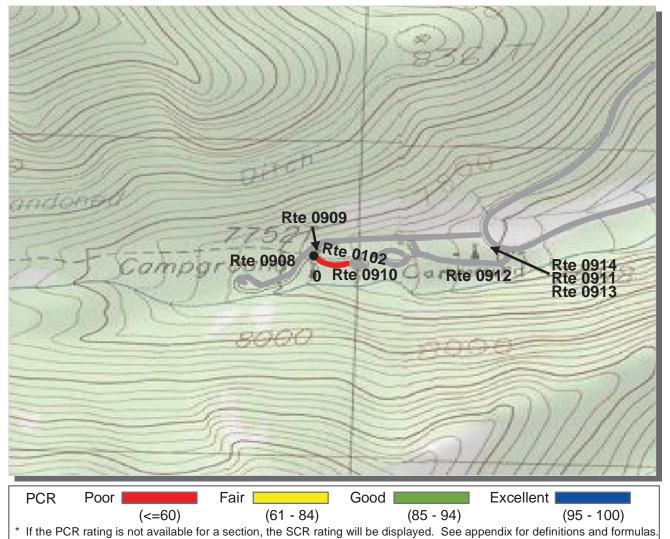
ROUTE: 0101 Upper Lehman Cred	ek Campgrou	ina Access R	toad 1017	AL LENGTH	: 0.41 Willes
Section Number	0				
Section Length (mi)	0.41				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	17				
Lane Width (ft)	9				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	15				
RCI (Roughness Condition Index)	38				
SCR (Surface Condition Rating)	11				
Alligator Cracking Index	60				
Rutting Index	28				
Patching Index	96				
Tranverse Cracking Index	93				
Longitudinal Cracking Index	95				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0101 Upper Lehman Creek Campground Access Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





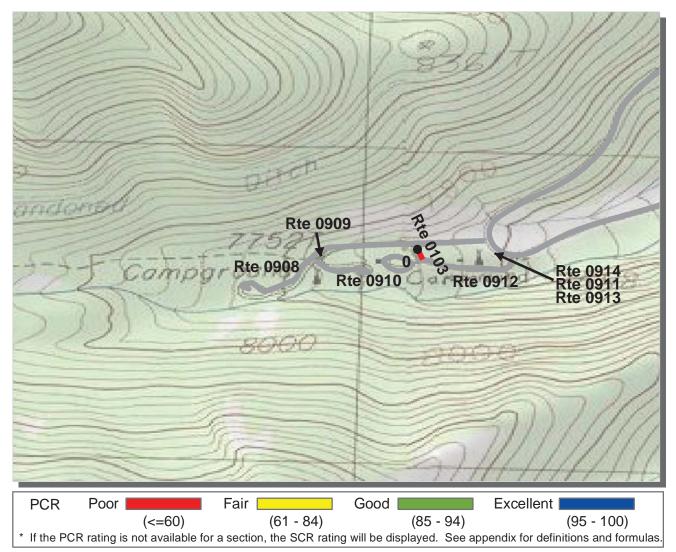
GRBA: Great Basin National Park

ROUTE: 0102 Upper Lehman Creek l	Jpper Campgr	ound Access	Road IOIA	AL LENGTH	: 0.08 Miles
Section Number	0				
Section Length (mi)	0.08				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	11				
Lane Width (ft)	11				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	9				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	9				
Alligator Cracking Index	48				
Rutting Index	26				
Patching Index	99				
Tranverse Cracking Index	90				
Longitudinal Cracking Index	94				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0102 Upper Lehman Creek Upper Campground Access Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



GRBA: Great Basin National Park

ROUTE: 0103 Upper Lehman Creek Campground Connector Road	TOTAL LENGTH: 0.03 Miles

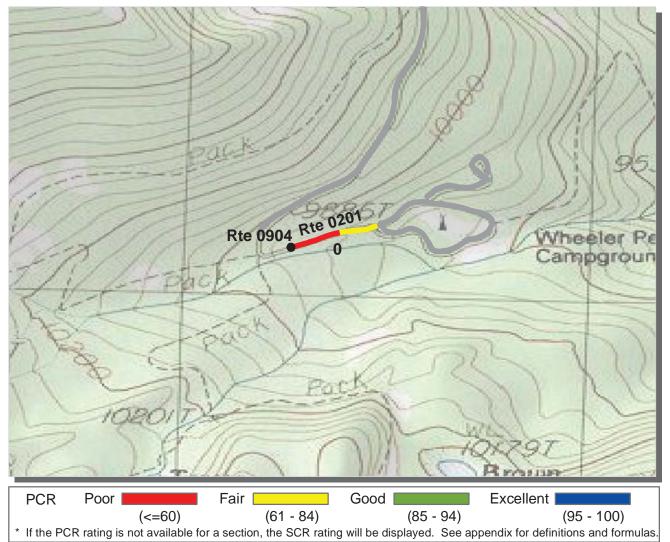
ROUTE: 0103 Opper Lenman Creek (zampground C	Joinnector Roa	1017	AL LENGIN	. U.US WIIIES
Section Number	0				
Section Length (mi)	0.03				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	15				
Lane Width (ft)	15				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	0				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	0				
Alligator Cracking Index	29				
Rutting Index	25				
Patching Index	100				
Tranverse Cracking Index	93				
Longitudinal Cracking Index	95				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0103 Upper Lehman Creek Campground Connector Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

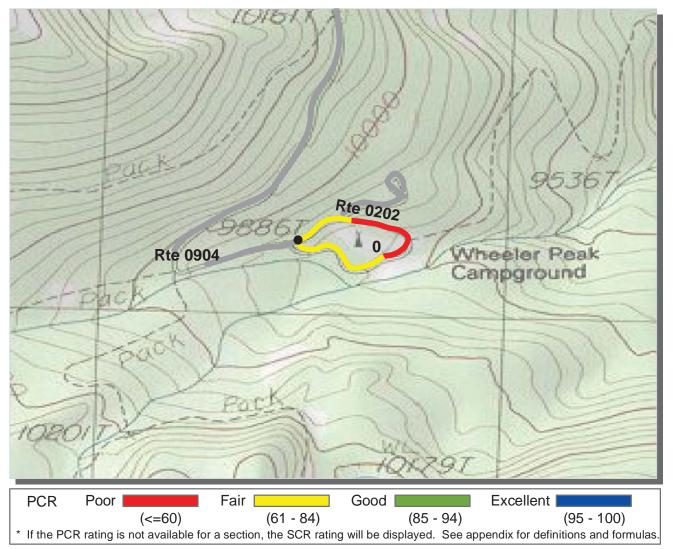
ROUTE: 0201 Wheeler Peak Campground Road TO	TAL LENGTH: 0.15 Miles
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ROUTE: 0201 Wheeler Peak Ca	ampground	Roau	1017	AL LENGIH	. U. 15 Willes
Section Number	0				
Section Length (mi)	0.15				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	18				
Lane Width (ft)	10				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	55				
RCI (Roughness Condition Index)	45				
SCR (Surface Condition Rating)	59				
Alligator Cracking Index	96				
Rutting Index	64				
Patching Index	99				
Tranverse Cracking Index	100				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0201 Wheeler Peak Campground Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



GRBA: Great Basin National Park

ROUTE: 0202 Wheeler Peak Lower Camparound Loop TOTAL LI	FNGTH	0.45 Miles
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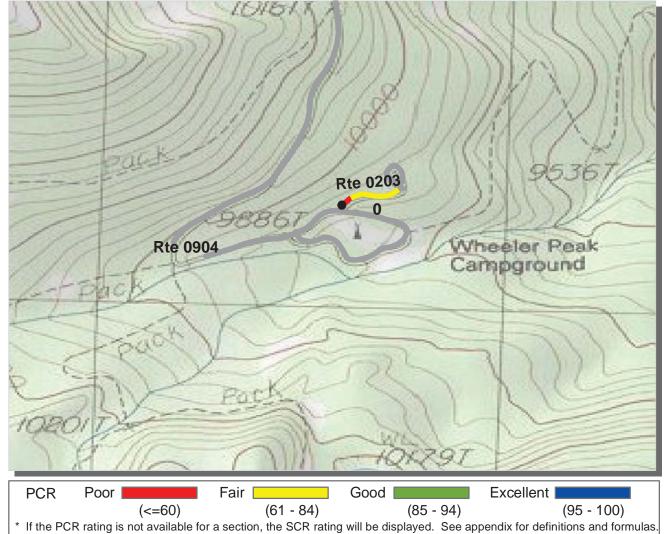
ROUTE: 0202 Wheeler Peak Lo	ower Campo	ground Loop) TOTA	AL LENGTH	: 0.45 Miles
Section Number	0				
Section Length (mi)	0.45				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	13				
Lane Width (ft)	13				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	57				
RCI (Roughness Condition Index)	25				
SCR (Surface Condition Rating)	63				
Alligator Cracking Index	97				
Rutting Index	66				
Patching Index	100				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0202 Wheeler Peak Lower Campground Loop

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

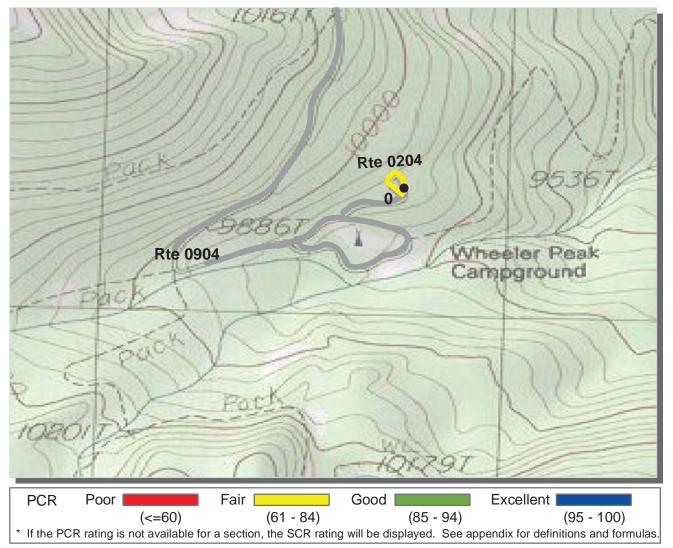
ROUTE: 0203 Wheeler Peak Upper Campground Road TOTAL LENGTH: 0.12 Miles

ROUTE: 0203 Wheeler Peak U	oper Campg	rouna Road	1 1017	AL LENGIH	: U. IZ Willes
Section Number	0				
Section Length (mi)	0.12				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	12				
Lane Width (ft)	12				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	60				
RCI (Roughness Condition Index)	41				
SCR (Surface Condition Rating)	62				
Alligator Cracking Index	100				
Rutting Index	63				
Patching Index	100				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	N/A				·
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0203 Wheeler Peak Upper Campground Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



GRBA: Great Basin National Park

ROUTE, 0504 Wheeler Beak Opper Camparoling Loop 10141 FNGTH, 0.11 Mile	ROUTF: 0204	Wheeler Peak Upper Campground Loop	TOTAL LENGTH: 0.11 Miles
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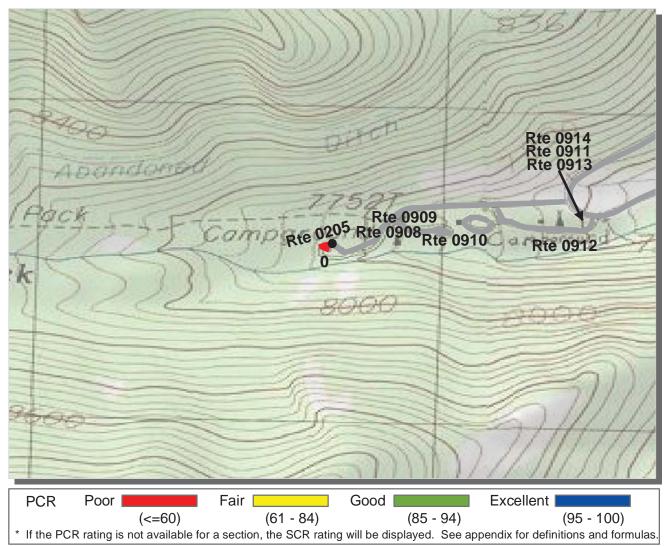
ROUTE: 0204 Wheeler Peak U	pper Campg	round Loop) TOT	AL LENGTH	: 0.11 Miles
Section Number	0				
Section Length (mi)	0.11				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	16				
Lane Width (ft)	16				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	59				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	59				
Alligator Cracking Index	99				
Rutting Index	60				
Patching Index	100				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	99				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0204 Wheeler Peak Upper Campground Loop

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

ROUTE: 0205 Upper Lehman Creek Upper Upper Campground Loop TOTAL LENGTH: 0.06 Miles

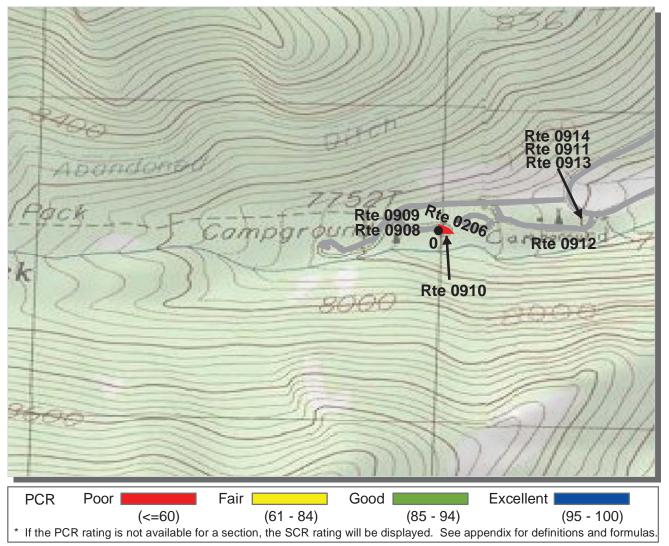
ROUTE: 0205 Upper Lenman Creek	Opper Opper	Campground	Loop 1017	AL LENGIR	. U.UO WIIIES
Section Number	0				
Section Length (mi)	0.06				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	10				
Lane Width (ft)	10				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	8				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	8				
Alligator Cracking Index	79				
Rutting Index	30				
Patching Index	91				
Tranverse Cracking Index	96				
Longitudinal Cracking Index	96				
Shoulder Condition Rating	N/A				·
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0205 Upper Lehman Creek Upper Upper Campground Loop

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

ROUTE: 0206 Upper Lehman Creek Upper Campground Loop	TOTAL LENGTH: 0.06 Miles
KOUTE: UZUG TODDEL LENMAN GREEK UDDEL GAMDOLOUNG LOOD	TOTAL LENGTH. U.UU WIIIES

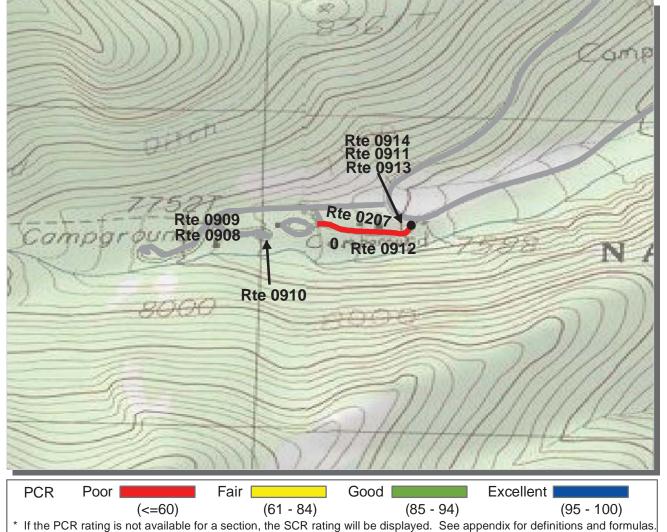
ROUTE: 0206 Opper Lenman Creek	Opper Camp	ground Loop	1017	AL LENGIH	. 0.00 1411162
Section Number	0				
Section Length (mi)	0.06				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	11				
Lane Width (ft)	11				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	27				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	27				
Alligator Cracking Index	97				
Rutting Index	43				
Patching Index	100				
Tranverse Cracking Index	91				
Longitudinal Cracking Index	96				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0206 Upper Lehman Creek Upper Campground Loop

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

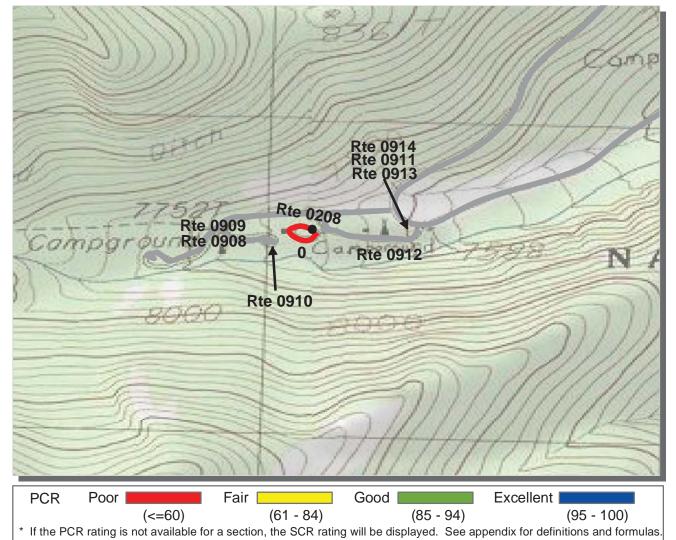
ROUTE: 0207 Upper Lehman Creek Lower Camparound Road	TOTAL LENGTH: 0.18 Miles
KOUTE. VZV/ ODDELLENINAN GIEEK LOWELGANDOLOUNG KOAG	TOTAL LLINGTII. V. 10 MIIIES

KOUTE: 0207 Opper Lenman Creek	Lower Camp	ground Road	1017	AL LENGIH	. U. 10 WIIIES
Section Number	0				
Section Length (mi)	0.18				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	9				
Lane Width (ft)	9				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	0				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	0				
Alligator Cracking Index	15				
Rutting Index	40				
Patching Index	97				
Tranverse Cracking Index	93				
Longitudinal Cracking Index	94				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0207 Upper Lehman Creek Lower Campground Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm



GRBA: Great Basin National Park

- KOUTE, USOV ADDELT EDWYD CLEEK FOMEL CYWDOLONOU FOOD	ROUTE: 0208	Upper Lehman Creek Lower Camparound Loop	TOTAL LENGTH: 0.12 Miles
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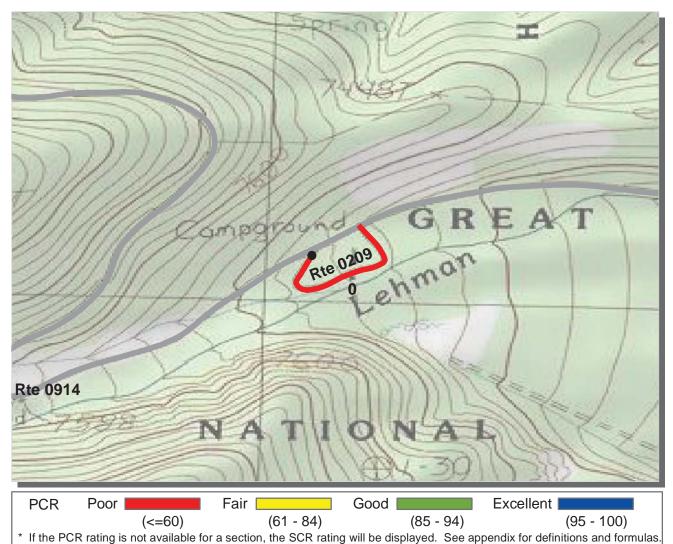
ROUTE: 0208 Opper Lenman Creek	Lower Camp	ground Loop	1017	AL LENGIA	. 0.12 1411163
Section Number	0				
Section Length (mi)	0.12				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	12				
Lane Width (ft)	12				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	35				
RCI (Roughness Condition Index)	NC				
SCR (Surface Condition Rating)	35				
Alligator Cracking Index	93				
Rutting Index	48				
Patching Index	99				
Tranverse Cracking Index	97				
Longitudinal Cracking Index	95				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0208 Upper Lehman Creek Lower Campground Loop

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

ROUTE: 0209 Lower Lehman C	reek Campground Loop	TOTAL LENGTH: 0.31 Miles

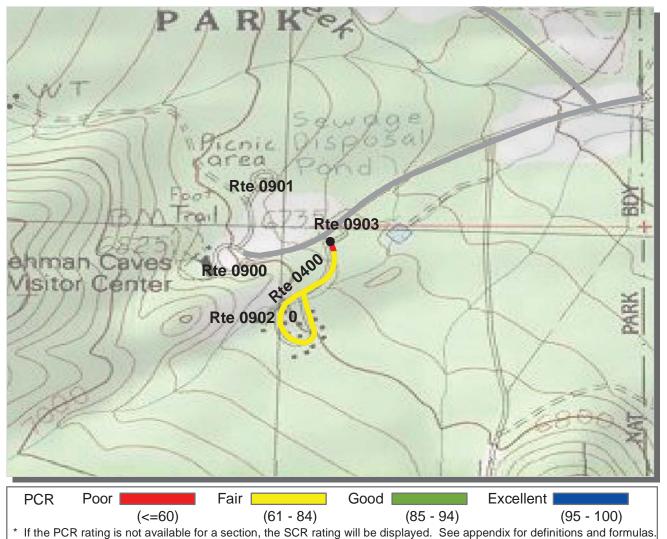
ROUTE: 0209 Lower Lenman (reek Camp	ground Loo	р тот	AL LENGIH	. U.ST WITES
Section Number	0				
Section Length (mi)	0.31				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	1				
Paved Width (ft)	11				
Lane Width (ft)	11				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	9				
RCI (Roughness Condition Index)	23				
SCR (Surface Condition Rating)	9				
Alligator Cracking Index	44				
Rutting Index	27				
Patching Index	99				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	98				
Shoulder Condition Rating	N/A		·		
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0209 Lower Lehman Creek Campground Loop

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm





GRBA: Great Basin National Park

ROUTE: 0400	Residential / Maintenance Road	TOTAL I FNGTH: 0.37 Miles

ROUTE: 0400 Residential / Wa	intenance K	oau	1017	AL LENGIR	: 0.37 Willes
Section Number	0				
Section Length (mi)	0.37				
AADT	**				
SADT	**				
ADT Date	**				
Cross Section Information					
Number of Lanes	2				
Paved Width (ft)	19				
Lane Width (ft)	10				
Shoulder Width (ft)	0				
Roadway Condition Information					
PCR (Pavement Condition Rating)	69				
RCI (Roughness Condition Index)	68				
SCR (Surface Condition Rating)	70				
Alligator Cracking Index	100				
Rutting Index	72				
Patching Index	99				
Tranverse Cracking Index	99				
Longitudinal Cracking Index	98				
Shoulder Condition Rating	N/A				
Drainage Condition Rating	GOOD				

^{*} NC designates data not collected NA designates not applicable

ROUTE: 0400 Residential / Maintenance Road

^{**} See website for traffic data: http://www.efl.fhwa.dot.gov/nps/index.htm

GRBA: Manually Rated Paved Route Condition Rating Sheets

No data available for this section

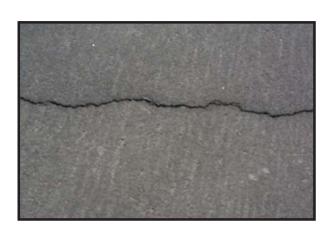
VISITOR CENTER PARKING FROM ROUTE 0010

ſ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0900	Public	6/14/2003	43327	0.75	AS	FAIR / 73

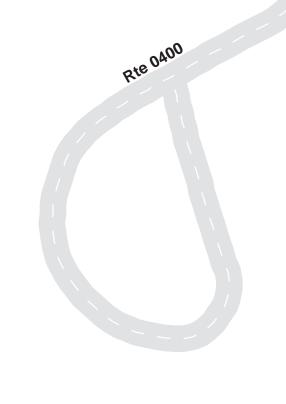
^{*} Lane miles are based on 11' lane widths



Rte 0010





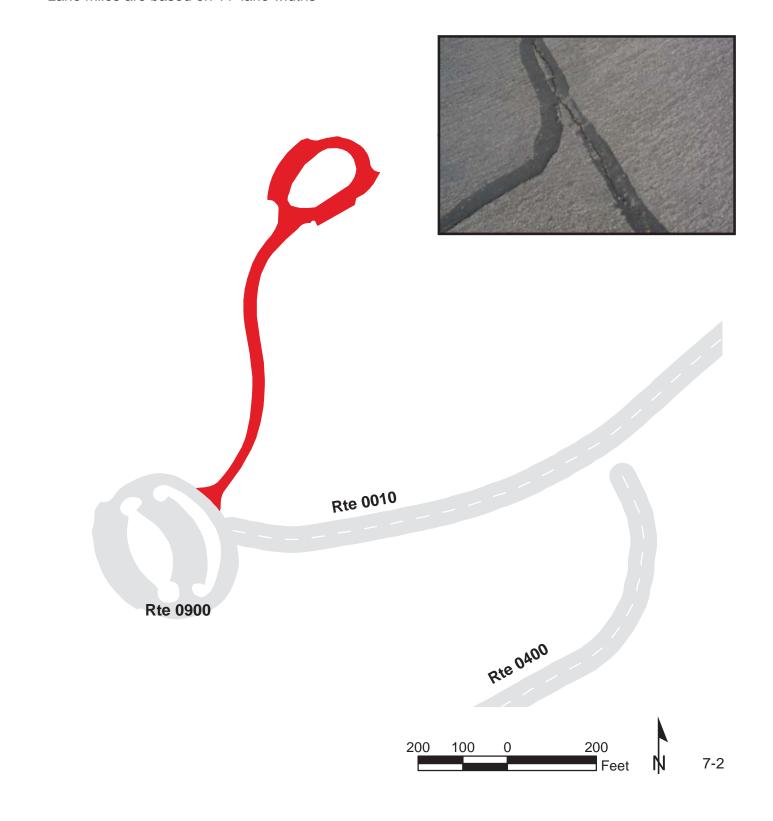


200

VISITOR CENTER PICNIC AREA FROM ROUTE 0900

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0901	Public	6/14/2003	30541	0.53	AS	GOOD / 90

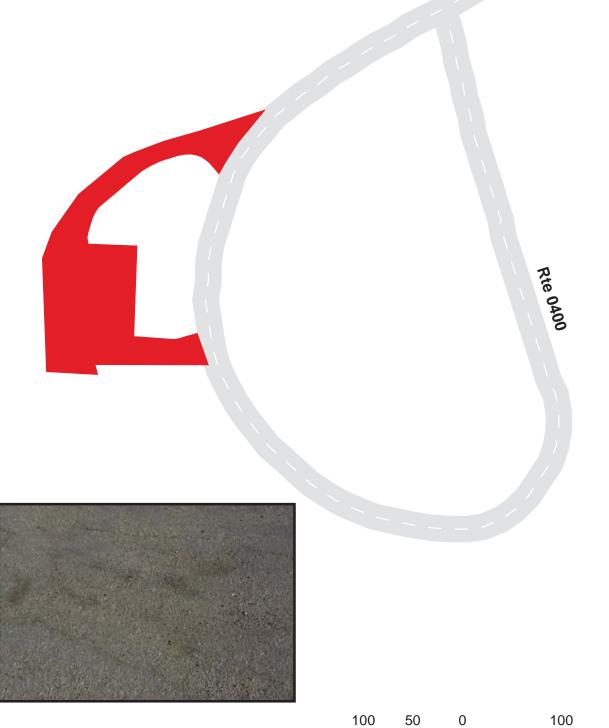
^{*} Lane miles are based on 11' lane widths



MAINTENANCE YARD FROM ROUTE 0400

I		Public /	Date		Lane	Surface	
ı	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
ı	0902	NonPublic	6/14/2003	15044	0.26	AS	POOR / 45

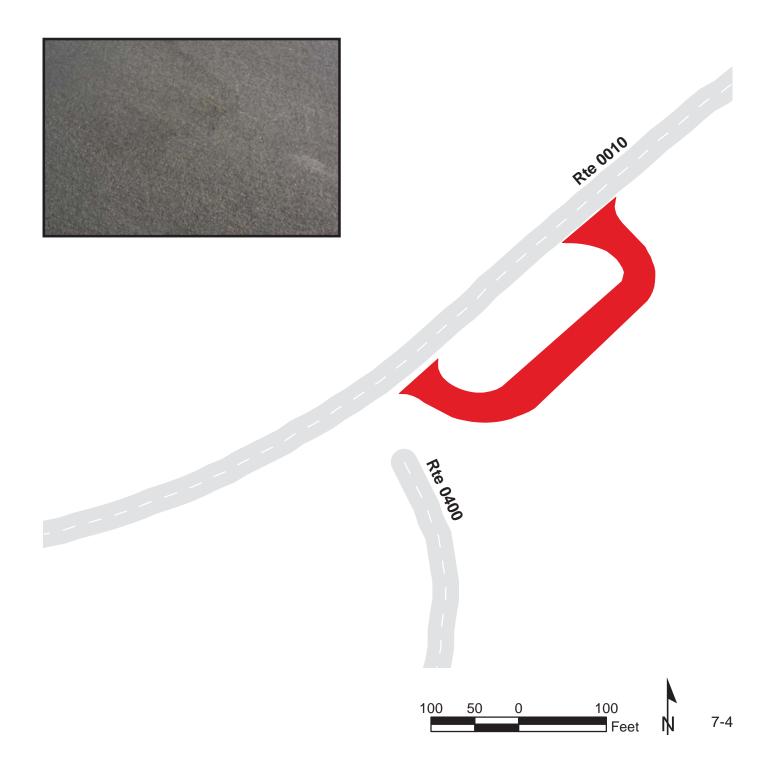
^{*} Lane miles are based on 11' lane widths



R.V. DUMP STATION FROM ROUTE 0010

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Туре	Condition / PCR
0903	Public	6/14/2003	12333	0.21	AS	FAIR / 73

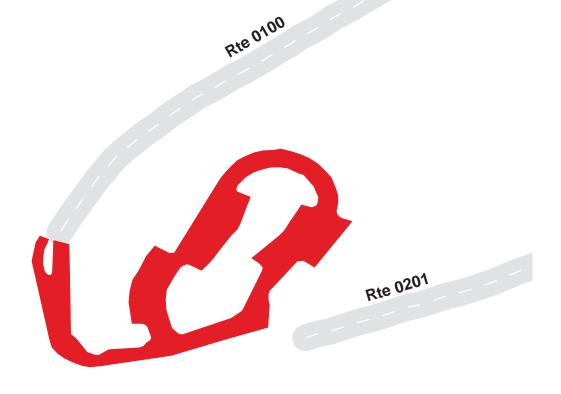
^{*} Lane miles are based on 11' lane widths



BRISTLECONE PARKING AREA FROM ROUTE 0100

Ĭ		Public /	Date		Lane	Surface	
١	Route	NonPublic	Visited	Area (sq ft)	Miles *	Туре	Condition / PCR
	0904	Public	6/14/2003	29722	0.51	AS	GOOD / 90

^{*} Lane miles are based on 11' lane widths







SUMMIT TRAILHEAD PARKING FROM ROUTE 0100

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0905	Public	6/14/2003	8727	0.15	AS	GOOD / 90

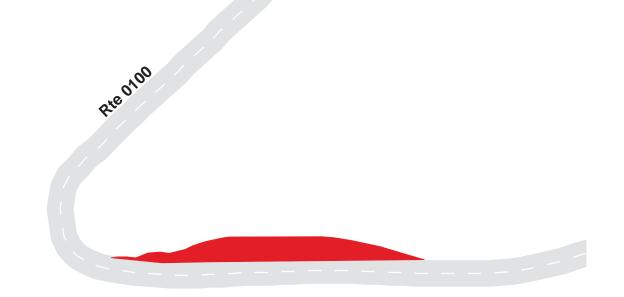
^{*} Lane miles are based on 11' lane widths



OSCEOLA DITCH TRAILHEAD PARKING FROM ROUTE 0100

I		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0907	Public	6/14/2003	8879	0.15	AS	FAIR / 73

^{*} Lane miles are based on 11' lane widths



150

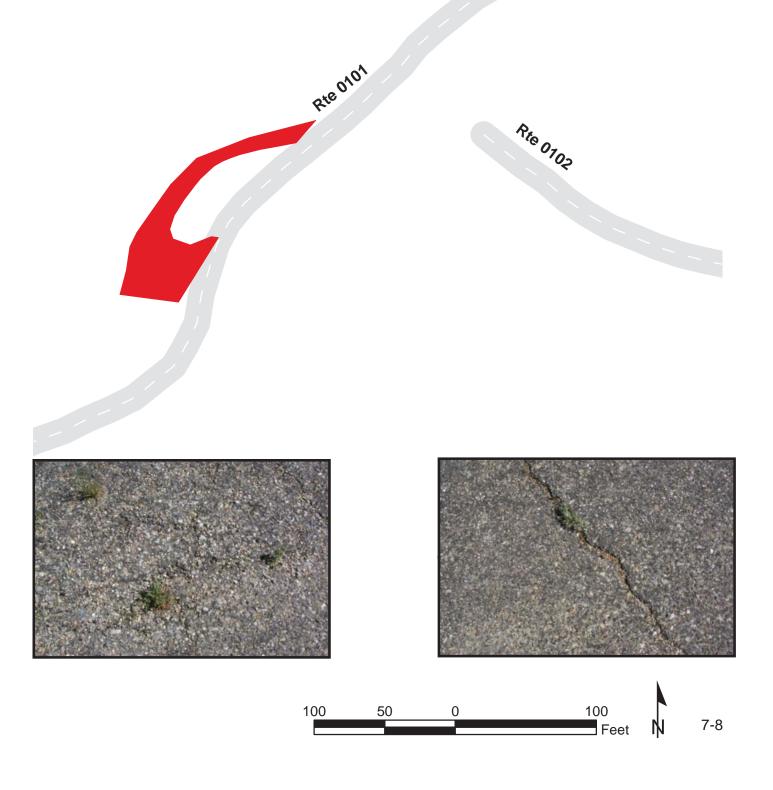




LEHMAN CREEK TRAILHEAD PARKING FROM ROUTE 0101

ľ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0908	Public	6/14/2003	3065	0.05	AS	POOR / 45

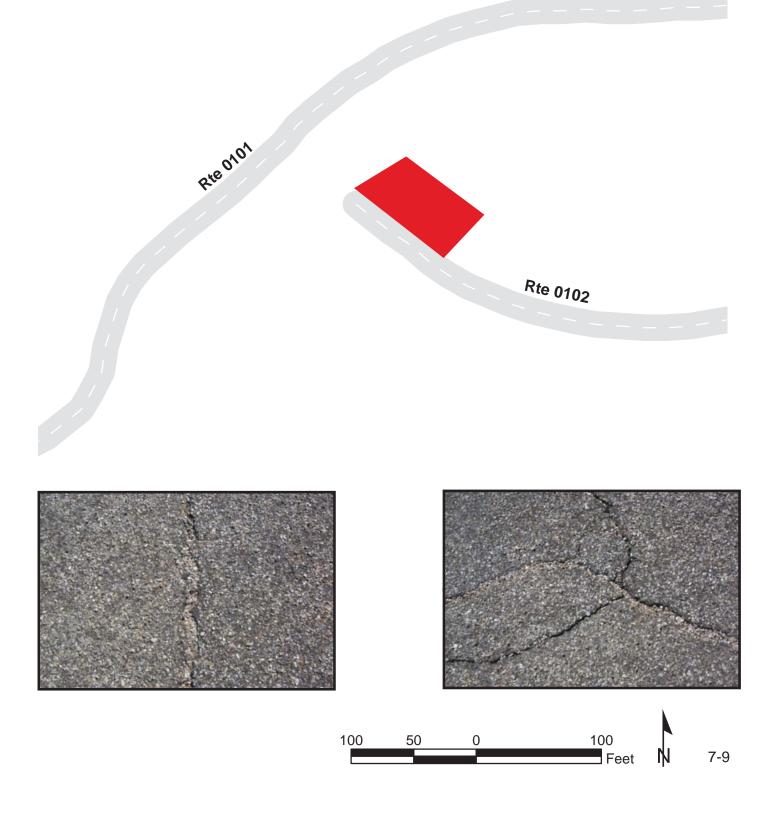
^{*} Lane miles are based on 11' lane widths



LEHMAN CREEK LOWER TRAILHEAD PARKING FROM ROUTE 0102

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0909	Public	6/14/2003	2992	0.05	AS	POOR / 45

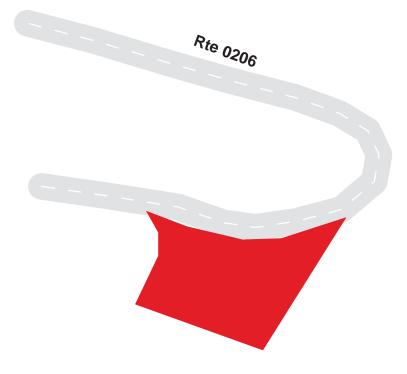
^{*} Lane miles are based on 11' lane widths



UPPER LEHMAN CREEK UPPER CAMPGROUND PARKING FROM ROUTE 0206

Ī		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0910	Public	6/14/2003	1259	0.02	AS	POOR / 45

^{*} Lane miles are based on 11' lane widths





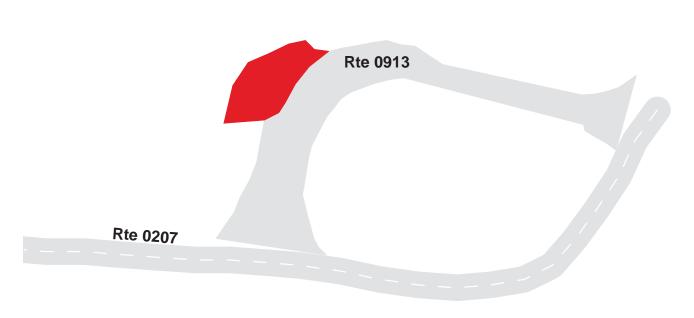


UPPER LEHMAN CREEK PICNIC AREA PARKING FROM ROUTE 0913

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0911	Public	6/14/2003	855	0.01	AS	FAIR / 73

^{*} Lane miles are based on 11' lane widths

Rte 0100



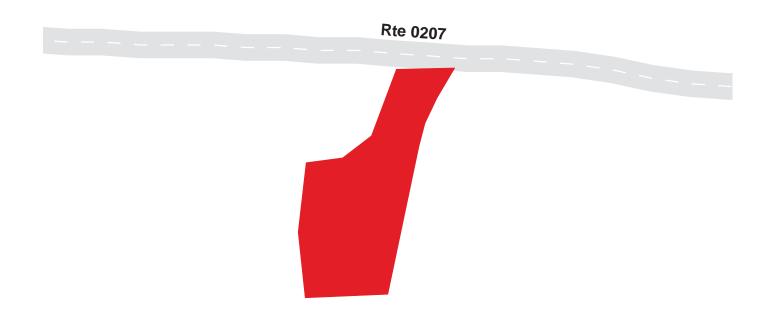




UPPER LEHMAN CREEK DAY USE PICNIC AREA PARKING FROM ROUTE 0207

		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
ı	0912	Public	6/14/2003	3627	0.06	AS	FAIR / 73

^{*} Lane miles are based on 11' lane widths





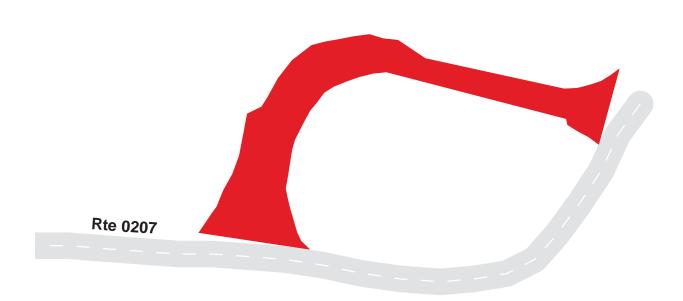


UPPER LEHMAN CREEK PICNIC AREA PARKING LOOP FROM ROUTE 0207

ľ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
ľ	0913	Public	6/14/2003	4073	0.07	AS	FAIR / 73

^{*} Lane miles are based on 11' lane widths





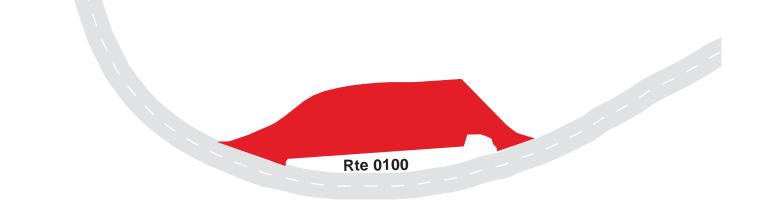




LEHMAN CREEK WINTER TRAILHEAD PARKING (UPPER LEHMAN CREEK CAMPGROUND) FROM ROUTE 0100

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0914	Public	6/14/2003	11437	0.20	AS	GOOD / 90

^{*} Lane miles are based on 11' lane widths



100

Rte 0207





GRBA: PARKWIDE MAINTENANCE FEATURES SUMMARY

PARK TOTAL	UNIT
0	EACH
0	EACH
0	EACH
5,856	LINEAR FEET
0	EACH
0	LINEAR FEET
1,146	LINEAR FEET
95	EACH
0	EACH
0	EACH
0	EACH
343	LINEAR FEET
6	EACH
0	LINEAR FEET
	0 0 5,856 0 0 1,146 95 0 0 0 343 6 0 0

GRBA: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0010 ENTRANCE ROAD	ROUTE 0100 WHEELER PEAK SCENIC DRIVE	ROUTE 0101 UPPER LEHMAN CREEK CAMPGROUND ACCESS	ROUTE 0102 UPPER LEHMAN CREEK UPPER CAMPGROUND ACCESS	ROUTE 0103 UPPER LEHMAN CREEK CAMPGROUND	ROUTE 0201 WHEELER PEAK CAMPGROUND ROAD	UNIT
BRIDGE	0	0	0	0	0	0	EACH
CATTLE GUARD	0	0	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	444	2,693	0	0	0	502	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
GUARD WALL	0	0	0	0	0	0	LINEAR FEET
GUARDRAIL	0	1,146	0	0	0	0	LINEAR FEET
INTERSECTION	6	12	7	3	3	8	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	2	3	1	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TRAFFIC LIGHT	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TURNOUT	0	0	0	0	0	0	LINEAR FEET

GRBA: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0202 WHEELER PEAK LOWER CAMPGROUND LOOP	ROUTE 0203 WHEELER PEAK UPPER CAMPGROUND ROAD	ROUTE 0204 WHEELER PEAK UPPER CAMPGROUND LOOP	ROUTE 0205 UPPER LEHMAN CREEK UPPER UPPER CAMPGROUND	ROUTE 0206 UPPER LEHMAN CREEK UPPER CAMPGROUND LOOP	ROUTE 0207 UPPER LEHMAN CREEK LOWER CAMPGROUND ROAD	UNIT
BRIDGE	0	0	0	0	0	0	EACH
CATTLE GUARD	0	0	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	1,579	475	164	0	0	0	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
GUARD WALL	0	0	0	0	0	0	LINEAR FEET
GUARDRAIL	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	6	5	2	3	4	10	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	0	0	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TRAFFIC LIGHT	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TURNOUT	0	0	0	0	0	0	LINEAR FEET

GRBA: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0208 UPPER LEHMAN CREEK LOWER CAMPGROUND LOOP	ROUTE 0209 LOWER LEHMAN CREEK CAMPGROUND LOOP	ROUTE 0400 RESIDENTIAL / MAINTENANCE ROAD	UNIT
BRIDGE	0	0	0	EACH
CATTLE GUARD	0	0	0	EACH
CULVERT	0	0	0	EACH
CURB	0	0	0	LINEAR FEET
DROP INLET	0	0	0	EACH
GUARD WALL	0	0	0	LINEAR FEET
GUARDRAIL	0	0	0	LINEAR FEET
INTERSECTION	2	11	13	EACH
LOW WATER CROSSING	0	0	0	EACH
OVERHEAD SIGN	0	0	0	EACH
PARK BOUNDARY	0	0	0	EACH
PAVED DITCH	0	0	343	LINEAR FEET
PULLOUT	0	0	0	EACH
RAILROAD CROSSING	0	0	0	EACH
RETAINING WALL	0	0	0	EACH
STATE BOUNDARY	0	0	0	EACH
TRAFFIC LIGHT	0	0	0	EACH
TUNNEL	0	0	0	EACH
TURNOUT	0	0	0	LINEAR FEET

ROUTE 0010 : ENTRANCE ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT CATTLE GUARD AT EAST PARK BOUNDARY
0.010	0.055	CURB	RIGHT	
0.010	0.056	PULLOUT	RIGHT	
0.011	0.050	CURB	LEFT	
0.011	0.051	PULLOUT	LEFT	
0.080	0.080	INTERSECTION	RIGHT	RTE 100
0.247	0.247	INTERSECTION	LEFT	NPS GRAVEL
0.514	0.514	INTERSECTION	LEFT	RTE 903
0.558	0.558	INTERSECTION	LEFT	RTE 903
0.570	0.570	INTERSECTION	LEFT	RTE 400
0.708	0.708	INTERSECTION	LEFT	RTE 900
0.710	0.710			ROUTE ENDS AT ROUTE 900
-				

ROUTE 0100 : WHEELER PEAK SCENIC DRIVE

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 010
0.008	0.008	INTERSECTION	LEFT	RTE 010
0.236	0.236	INTERSECTION	RIGHT	NPS GRAVEL
0.256	0.256	INTERSECTION	RIGHT	NPS GRAVEL
1.784	1.784	INTERSECTION	LEFT	RTE 209
1.874	1.874	INTERSECTION	LEFT	RTE 209
2.411	2.411	INTERSECTION	RIGHT	RTE 914
2.438	2.438	INTERSECTION	LEFT	RTE 207
2.453	2.453	INTERSECTION	RIGHT	RTE 914
2.487	2.487	INTERSECTION	LEFT	RTE 101
4.727	4.804	PULLOUT	RIGHT	
4.728	4.844	CURB	RIGHT	
5.188	5.226	CURB	RIGHT	
5.436	5.483	PULLOUT	RIGHT	
5.469	5.514	GUARDRAIL	RIGHT	
5.581	5.608	CURB	LEFT	
5.779	5.839	GUARDRAIL	LEFT	
6.759	6.759	INTERSECTION	LEFT	RTE 906
8.500	8.620	CURB	RIGHT	
8.522	8.634	GUARDRAIL	RIGHT	
8.811	8.873	CURB	LEFT	
9.693	9.758	PULLOUT	LEFT	
9.693	9.759	CURB	LEFT	
11.086	11.086	INTERSECTION	RIGHT	RTE 905
11.207	11.251	CURB	LEFT	
11.266	11.303	CURB	LEFT	
11.648	11.648	INTERSECTION	LEFT	RTE 904

ROUTE 0100 : WHEELER PEAK SCENIC DRIVE

FROM TO

MILEPOST MILEPOST FEATURE SIDE COMMENT

11.660 ROUTE ENDS AT ROUTE 904

ROUTE 0101 : UPPER LEHMAN CREEK CAMPGROUND ACCESS ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 100
0.007	0.007	INTERSECTION	RIGHT	RTE 100
0.113	0.113	INTERSECTION	LEFT	RTE 103
0.281	0.281	INTERSECTION	LEFT	RTE 102
0.295	0.295	INTERSECTION	RIGHT	RTE 908
0.315	0.315	INTERSECTION	RIGHT	RTE 908
0.333	0.333	INTERSECTION	LEFT	
0.346	0.359	PULLOUT	RIGHT	
0.406	0.406	INTERSECTION	LEFT	RTE 205
0.410	0.410			ROUTE ENDS AT ROUTE 205

ROUTE 0102 : UPPER LEHMAN CREEK UPPER CAMPGROUND ACCESS ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 101
0.002	0.002	INTERSECTION	RIGHT	RTE 101
0.013	0.013	INTERSECTION	LEFT	RTE 909
0.073	0.073	INTERSECTION	LEFT	RTE 206
0.080	0.080			ROUTE ENDS AT ROUTE 206

ROUTE 0103 : UPPER LEHMAN CREEK CAMPGROUND CONNECTOR ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 101
0.001	0.001	INTERSECTION	RIGHT	RTE 101
0.027	0.027	INTERSECTION	RIGHT	RTE 207
0.030	0.030			ROUTE ENDS AT ROUTE 207
0.112	0.112	INTERSECTION	LEFT	RTE 207

ROUTE 0201 : WHEELER PEAK CAMPGROUND ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 904
0.005	0.005	INTERSECTION	LEFT	RTE 904
0.005	0.036	CURB	RIGHT	
0.013	0.053	CURB	LEFT	
0.038	0.038	INTERSECTION	RIGHT	
0.057	0.057	INTERSECTION	LEFT	
0.076	0.076	INTERSECTION	RIGHT	
0.081	0.089	CURB	RIGHT	
0.103	0.103	INTERSECTION	RIGHT	
0.106	0.108	CURB	RIGHT	
0.124	0.124	INTERSECTION	RIGHT	
0.135	0.135	INTERSECTION	RIGHT	
0.148	0.150	CURB	RIGHT	
0.150	0.150			ROUTE ENDS AT ROUTE 202
0.154	0.154	INTERSECTION	RIGHT	RTE 202
0.156	0.168	CURB	RIGHT	

ROUTE 0202 : WHEELER PEAK LOWER CAMPGROUND LOOP

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 201
0.006	0.006	INTERSECTION	RIGHT	RTE 200
0.009	0.016	CURB	RIGHT	
0.020	0.037	CURB	RIGHT	
0.073	0.101	CURB	RIGHT	
0.087	0.087	INTERSECTION	LEFT	
0.092	0.092	INTERSECTION	LEFT	RTE 203
0.109	0.142	CURB	LEFT	
0.150	0.186	CURB	LEFT	
0.193	0.212	CURB	LEFT	
0.220	0.265	CURB	RIGHT	
0.232	0.239	CURB	LEFT	
0.272	0.281	CURB	RIGHT	
0.307	0.310	CURB	LEFT	
0.335	0.364	CURB	LEFT	
0.365	0.366	CURB	RIGHT	
0.366	0.366	INTERSECTION	LEFT	
0.370	0.386	CURB	LEFT	
0.388	0.388	INTERSECTION	RIGHT	
0.410	0.437	CURB	RIGHT	
0.412	0.417	CURB	LEFT	
0.426	0.443	CURB	LEFT	
0.449	0.449	INTERSECTION	LEFT	END OF LOOP
0.450	0.450			ROUTE ENDS AT END OF LOOP

ROUTE 0203 : WHEELER PEAK UPPER CAMPGROUND ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 202
0.001	0.001	INTERSECTION	RIGHT	RTE 202
0.042	0.052	CURB	RIGHT	
0.044	0.054	CURB	LEFT	
0.063	0.063	INTERSECTION	RIGHT	
0.064	0.073	CURB	RIGHT	
0.064	0.086	CURB	LEFT	
0.075	0.075	INTERSECTION	RIGHT	
0.080	0.080	INTERSECTION	RIGHT	
0.081	0.120	CURB	RIGHT	
0.114	0.114	INTERSECTION	LEFT	RTE 204
0.120	0.120			ROUTE ENDS AT ROUTE 204

ROUTE 0204 : WHEELER PEAK UPPER CAMPGROUND LOOP

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 203
0.007	0.007	INTERSECTION	LEFT	RTE 203
0.010	0.029	CURB	LEFT	
0.026	0.032	CURB	RIGHT	
0.061	0.067	CURB	LEFT	
0.107	0.107	INTERSECTION	LEFT	END OF LOOP
0.110	0.110	·		ROUTE ENDS AT END OF LOOP

ROUTE 0205 : UPPER LEHMAN CREEK UPPER UPPER CAMPGROUND LOOP

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 101
0.005	0.005	INTERSECTION	LEFT	RTE 101
0.032	0.032	INTERSECTION	RIGHT	
0.060	0.060			ROUTE ENDS AT END OF LOOP
0.063	0.063	INTERSECTION	LEFT	END OF LOOP

ROUTE 0206 : UPPER LEHMAN CREEK UPPER CAMPGROUND LOOP

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 102
0.001	0.001	INTERSECTION	LEFT	RTE 102
0.020	0.020	INTERSECTION	RIGHT	RTE 910
0.045	0.045	INTERSECTION	RIGHT	
0.056	0.056	INTERSECTION	LEFT	END OF LOOP
0.060	0.060			ROUTE ENDS AT END OF LOOP

ROUTE 0207 : UPPER LEHMAN CREEK LOWER CAMPGROUND ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 100
0.002	0.002	INTERSECTION	RIGHT	RTE 100
0.013	0.013	INTERSECTION	RIGHT	RTE 913
0.046	0.046	INTERSECTION	RIGHT	RTE 913
0.053	0.053	INTERSECTION	LEFT	RTE 912
0.088	0.088	INTERSECTION	LEFT	
0.095	0.095	INTERSECTION	RIGHT	
0.117	0.117	INTERSECTION	RIGHT	
0.119	0.119	INTERSECTION	LEFT	
0.162	0.162	INTERSECTION	RIGHT	RTE 103
0.175	0.175	INTERSECTION	LEFT	RTE 208
0.180	0.180			ROUTE ENDS AT ROUTE 208

ROUTE 0208 : UPPER LEHMAN CREEK LOWER CAMPGROUND LOOP

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 207
0.005	0.005	INTERSECTION	LEFT	RTE 207
0.120	0.120			ROUTE ENDS AT END OF LOOP
0.123	0.123	INTERSECTION	LEFT	END OF LOOP

ROUTE 0209 : LOWER LEHMAN CREEK CAMPGROUND LOOP

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 100
0.007	0.007	INTERSECTION	RIGHT	RTE 100
0.102	0.102	INTERSECTION	RIGHT	
0.140	0.140	INTERSECTION	LEFT	
0.174	0.174	INTERSECTION	RIGHT	
0.178	0.178	INTERSECTION	LEFT	
0.190	0.190	INTERSECTION	RIGHT	
0.205	0.205	INTERSECTION	LEFT	
0.210	0.210	INTERSECTION	RIGHT	
0.226	0.226	INTERSECTION	RIGHT	
0.302	0.302	INTERSECTION	LEFT	RTE 100
0.302	0.302	INTERSECTION	RIGHT	RTE 100
0.310	0.310			ROUTE ENDS AT ROUTE 100

ROUTE 0400 : RESIDENTIAL / MAINTENANCE ROAD

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000			ROUTE BEGINS AT ROUTE 010
0.006	0.006	INTERSECTION	LEFT	RTE 010
0.015	0.080	PAVED DITCH	RIGHT	
0.079	0.079	INTERSECTION	LEFT	
0.131	0.131	INTERSECTION	LEFT	RTE 400
0.153	0.153	INTERSECTION	LEFT	
0.166	0.166	INTERSECTION	RIGHT	RTE 902
0.211	0.211	INTERSECTION	RIGHT	RTE 902
0.245	0.245	INTERSECTION	RIGHT	
0.277	0.277	INTERSECTION	RIGHT	
0.299	0.299	INTERSECTION	RIGHT	
0.306	0.306	INTERSECTION	LEFT	
0.351	0.351	INTERSECTION	RIGHT	
0.362	0.362	INTERSECTION	LEFT	END OF LOOP
0.366	0.366	INTERSECTION	RIGHT	END OF LOOP
0.370	0.370			ROUTE ENDS AT END OF LOOP

APPENDIX A: GLOSSARY OF TERMS AND ABBREVIATIONS

TERM	OR
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ABBREVIATION DESCRIPTION OR DEFINITION

8420 Numeric Code for Great Basin National Park

AADT Annually Adjusted Daily Traffic. Average daily traffic adjusted for the term

period comprising 80% of annual visitation

CRS Condition Rating Sheets. (Section 5)

GRBA Alpha Code for Great Basin National Park

Drainage Condition

Rating

A visual rating (Good, Poor) of the drainage condition. (see Section 10)

Excellent rating with an index value of 95 or greater

Fair Fair rating with an index value between 61 and 84

Func. Class Functional Classification (see Route ID, Section 4)

Good Good rating with an index value between 85 and 94

IRI International Roughness Index

Lane Width

Distance from road centerline to fogline, or from centerline to edge-of-pavement

when no fogline exists

MRR Manually Rated Route

NA Not Applicable

NC Not Collected

Paved Width Distance from edge-of-pavement to edge-of-pavement

PCR Pavement Condition Rating (see Section 10)

Poor Poor Rating with an index value of 60 or less

RCI Roughness Condition Index

SADT Seasonal Annual Daily Traffic. Average daily traffic for the total defined

"season"

SCR Surface Condition Rating (see Section 10)

Shoulder Condition

Rating

Visual rating (Good, Poor) of the condition of shoulder. (see Section 10)

Shoulder Width Distance from fogline to hinge point, or if no fogline, from edge-of-pavement to

hinge point

APPENDIX B: DESCRIPTION OF RATING SYSTEM

A numerical roadway rating system is used to describe the overall condition of the paved roadways and paved parking areas. In this system, a numerical rating between 1 and 100 is ascribed to each 0.02 miles of road. This numerical rating is called a Pavement Condition Rating (PCR). A "perfect" road, newly constructed with no surface distresses and a smooth surface, would be assigned a PCR rating of 100. Based on the type, severity, and extent of surface distresses points are deducted from 100 to arrive at the final PCR.

Data is collected on the following distresses and conditions:

- **Alligator Cracking** a series of interconnecting cracks resembling alligator skin or chicken wire, which can ocurr anywhere in the lane.
- **Longitudinal Cracking** cracks which are parallel to the pavement centerline or asphalt lay-down direction.
- **Transverse Cracking** cracks perpendicular to the pavement centerline.
- **Pothole (patch)** a bowl-shaped hole in the pavement surface. May be patched or not.
- Rutting surface depressions in the wheel paths.

Roughness is collected as International Roughness Index (IRI) and is used in the PCR formula. Roughness is measured in inches of vertical displacement of the vehicle per mile traveled.

A Distress Rating Index value is calculated for each of the individual distresses at the 0.02 mile, or every 105.6 feet.

Rating Index Formulas

```
Alligator Cracking Index = 100 - [40 * (\%low/70 + \%medium/30 + \%high/10)]

Longitudinal Cracking Index = 100 - [40 * (\%low/350 + \%medium/200 + \%high/75)]

Transverse Cracking Index = 100 - [(20 * (low/15.1 + medium/7.5)) + (40 * (high/1.9))]

Patching Index = 100 - [40 * (\%patching / 80)]

Rutting Index: 100 - [40 * ((low/160) + (med/80) + (high/40))]

Roughness Condition Index: (RCI) = 32 * [5 * e^{(-0.0041 * average |RI)}]
```

These 0.02 Distress Rating Index values are then averaged over one mile sections for the mile-by-mile Disitress Rating Indexes, Surface Condition Rating (SCR) and Pavement Condition Rating (PCR).

```
Surface Condition Rating (SCR) = 100 - [(100 - AC_INDEX) + (100 - LC_INDEX) + (100 - TC_INDEX) + (100 - PATCH_INDEX) + (100 - RUT_INDEX)]
```

```
Pavement Condition Rating (PCR) = (SCR * 0.60) + (RCI * 0.40)
```

NOTE: Collection of roughness data is dependant on the data collection vehicle traveling at a minimum speed of 12 mph. In the event that a route cannot be safely traveled at this minimum speed, and results in no roughness data, the SCR only will be calculated.

Parking Lot and Manually Rated Road Condition Rating

Surface Condition Distresses- Chip Seal:

Raveling – loss of surface rock chips revealing previous surface

Bleeding – asphalt or tar is bleeding through to the surface where surface looks slick with asphalt

Rutting

Potholes/Patching

Ratings - Chip Seal:

Excellent – None of the surface affected by the above (recently constructed)

Good – Less than 10% of surface affected by the above

Fair - Between 10% and 40% of surface affected by the above

Poor - More than 40% of surface affected by the above

Surface Condition - Asphalt:

Cracking of any type

Rutting

Potholes/Patching

Ratings - Asphalt:

Excellent – None of the surface affected by the above (recently constructed)

Good - Less than 10% of surface affected by the above

Fair - Between 10% and 40% of surface affected by the above

Poor - More than 40% of surface affected by the above

Index Values of Visual Ratings on Parking Lots and Manually Rated Roads

Excellent 97

Good 90

Fair 73

Poor 45

Drainage Condition Rating Definitions

Good: Minimal overall drainage problems. If funding were available for pavement maintenance,

25% or less is estimated to correct drainage deficiencies.

Poor: Problems exist that jeopardizes the integrity of the road in this section. If funding were

available for pavement maintenance, 50% to 100% is estimated to correct drainage

deficiencies.

Drainage Condition Rating Criteria

The following are examples of basic criteria to help the rater to identify the different drainage ratings. While in the field, many other flaws will be discovered, but these criteria should give a feel for where the flaws would apply in the ratings.

Good Drainage

Most water clears the road prism adequately with little concern of base saturation.

- X Pavement has minor deficiencies that interrupt water flow.
- X Shoulders are mostly adequate as they relate to surrounding terrain. Shoulder design generally coincides with the drainage design.
- X Curbs have deficiencies, but still function without erosion.
- X Down drains are placed properly, but show signs of some deterioration.
- X Culverts are adequate in numbers and size however, minor deficiencies are evident.
- X Ditches are not paved, but solid and have enough area to maintain and carry required volume of water.

Poor Drainage

This section has areas of inadequate drainage ability that is causing base saturation that could cause a road failure.

- X Pavement grade is irregular and holds dangerous amounts of water (hydroplaning is a concern), or shows massive alligator cracking.
- X Shoulder design induces ponding that encroaches on the pavement (drivers try to avoid ponds).
- X Portions of curbs are missing, allowing water to escape causing erosion.
- X Drop inlets, due to various reasons, are only able to drain 50% or less efficiently.
- X Down drains show signs of water exiting in areas by the down drain causing erosion.
- X Culverts are functionally deficient including size, installation, location, or grade giving water opportunity to saturate the road base.
- X Ditches allow water opportunity to saturate the road base through various reasons such as low places in ditch where design has not allowed for water to drain, little or no room in the road prism for a needed ditch, or water is disappearing within the ditch.

Shoulder Condition Rating Definitions

Good: The shoulder is generally in good functional condition. If curbs are present, they are

functional.

Poor: There is no shoulder because erosion has removed it. If curbs are present, they need

to be replaced.

Shoulder Rating Criteria

The following are examples of basic criteria to help the rater to identify the different shoulder ratings. While in the field, many other flaws will be discovered, but these criteria should give a feel for where the flaws would apply in the ratings.

Good Shoulders

- X If shoulder is unpaved drop-offs are less than 1", but grading is required.
- X If shoulder is paved rut depth is less than 1/2", sealed cracks are present, and grading is required.
- X If curbs are present they are functional.

Poor Shoulder

- X If shoulder is unpaved drop-offs are greater than 4" and erosion has removed the shoulder.
- X If shoulder is paved rut depth is greater than 1". Open cracks are greater than 1/4" deep, and erosion has removed the shoulder.
- X If curbs are present they need replacement.
- X If curbs are present they need repairs, and there is erosion behind the curb.

APPENDIX C: DIGITAL IMAGE INFORMATION

All images collected in Cycle 3 are digital images. These images provide the best resolution for identifying sign inventories and pavement evaluations. The images can be viewed with an interactive software program called **Visi-Data**. Each park will have a copy of the Visi-Data program installed in the park for park personnel to access and use.

Only Cycle 3 data can be queried and reviewed using the Visi-Data software program. This program is a multimedia data presentation and analysis tool that can be accessed either at the individual park, park region or at NPS headquarters. The data is organized in a hierarchical manner and presented in tabular and graphical formats. The user is able to perform queries and drill down through the data to find the particular information they are trying to query. Associated digital right-of-way images from the either the LAN, USB port, individual DVD, or from the Visi-web application, can be presented along with the GPS locations.

APPENDIX D: METADATA

ARAN ROUTE GPS DATA

Background information of route spatial data.

GPS Records: GPS data for NPS routes is stored in the MS Access database for the park. The coordinates of the road traces are stored in the 'PMS_20' table in the 'GPS_LAT' and 'GPS_LON' fields.

Data Collection Device:

Vehicle Information: Ford Van

Type of GPS Unit: NovAtel MiLLennium, 12 channel, dual frequency L1/L2, DGPS ready

receiver w/MiLLennium 502 GPS antenna and OmniSTAR System 3000

LR

Inertial System: Applanix POS LV

Accuracy: Expected ground accuracy is 1 meter *

*The above accuracy assumes good GPS mission planning resulting in maximum GPS satellite observation and ideal environmental conditions. Due to less than ideal satellite and environmental conditions, some routes may lack the expected ground accuracy.

Geographic Datum: WGS 1984

Post Collection GPS Correction: Due to unanticipated GPS collection inaccuracies, some route locations have been digitized using DOQQ's and other data sources.

FHWA – NPS Road Inventory Program Cycle 3 Metadata for the Park Database

The purpose of these sheets is to provide users of the Road Inventory Program's data with data accuracies and tolerances to help users define ways in which the RIP data can and cannot be used. For further information on specifics of data collection equipment, data collection procedures, equipment calibrations, or quality control/quality assurance procedures, please contact Jim Kennedy, Project Manager, Data Quality Assurance, at 720-963-3560 or jim.kennedy@fhwa.dot.gov.

All Road Inventory Program data undergoes quality control and quality assurance testing. This document represents the known data accuracies and tolerances for the data collection equipment, data collection procedures, and data processing procedures currently in use. Many additional tests conducted on the park databases during the quality assurance phase to ensure data integrity are not listed as a part of this document. Before it is delivered, a park database undergoes a large set of table design consistency, field data format consistency, data completeness, uniqueness of key fields, data reasonableness, acceptable data range, within-field data consistency, between-field data consistency, and between-table data consistency tests. Additional data sampling checks are conducted to ensure proper data upload from raw files into the park database and to quality check the pavement crack analysis. Further information is detailed in the FHWA – NPS RIP Quality Assurance Manual, available upon request.

This description of metadata includes only the known accuracies with which a data field matches its expected value. The tables that follow this page show each database field's:

- Field field name
- Format data type and number of characters of field
- Expected Value meaning of value assigned to field
- Source when in process field value obtained
- Validation how field value obtained
- Expected Accuracy accuracy with which contents of field match Expected Value

Verifying and continually improving the accuracy of Road Inventory Program data is an ongoing goal of the Federal Highway Administration and the National Park Service. Field testing and post-collection analysis of ARAN (Automatic Road ANalyzer) -collected data will continue in Cycle 4. Data quality is expected to improve as the FHWA – NPS Road Inventory Program continues to operate, due to the fact that future data collection cycles will consist in large part of data updates. Also, technological improvements are expected to render the data increasingly consistent with actual roadway conditions as data collection cycles progress.

Specific Caveats

- Three canned reports are titled "Features in Good Condition", "Features in Fair Condition," and "Features in Poor Condition." These titles could be misleading. In Cycle 3, condition assessments have been conducted on **signs only**. Condition assessments have not been conducted on non-sign features, such as culverts, guardrails, pullouts, etc. Although the database and canned reports might report a default value of "good" for un-assessed features, these condition values are not valid for import into FMSS.
- Database records that show a concrete surface type sometimes include index values that seem
 to show a perfect roadway (e.g., a Pavement Condition Rating (PCR) of 100). The Road
 Inventory Program does not actually conduct condition assessments of concrete surfaces. The
 perfect values are just default values assigned to unassessed sections of pavement and do not
 represent an assessment of the roadway surface's quality.
- On the USB drive, in the Database folder, parks are provided with intersection lists and exceptions lists. These documents should be treated as raw files and are **not accurate**. Refer to the final database for accurately post-processed intersection data.
- Most roadway data is collected in the primary direction lane of a roadway. To save data storage

space and to reduce data analysis efforts, the assumption was made that the paved surface condition of a route's primary lane adequately represents the surface condition of the full roadway. Therefore, in the database, opposite-direction records in the PMS_Visidata table do not include assessed values for roadway surface distresses. Values such as 0, N/A, -1, or a repeat of the primary-direction assessed value indicate that no assessment was performed. The PMS_20 and PMS_Mile tables simply exclude all opposite routes.

 Most roadway features are collected relative to the primary direction lane of a roadway, using the primary-direction video. Signs are the only features collected using the opposite-direction video.

Key to Notes in Tables

- (1): Note that only one value fits in field, so even if this value varies throughout the route, only one value is recorded here.
- (2): Note that some MP values listed here are estimates recorded during the Route ID process for use by the data collection crew (e.g. "FROM ROUTE 0010 AT MILEPOST 30.3"). They are estimates only and are not expected to match the more accurate milepost values included elsewhere in the database in the BEG_MP, END_MP, and MP fields.
- (3): Mileage is measured by the ARAN (Automatic Road ANalyzer) data collection vehicle out to the 0.001 decimal place. The DMI (distance measuring instrument) is very accurate, with extremely slight variations in measurement due to air temperature, tire inflation, curves, hills, and equipment calibration.
- (4): Features are measured differently depending on whether they are visible in the forward-facing video of the roadway, but every feature milepost measurement depends on the baseline measurement of the data collection vehicle's mileage. The ARAN (Automatic Road ANalyzer) data collection vehicle's mileage is measured by the DMI (distance measuring instrument) out to the 0.001 decimal place. The DMI is very accurate, with extremely slight variations in measurement due to air temperature, tire inflation, curves, hills, and equipment calibration. If a feature will not be visible in the forward-facing video, its milepost is determined by the data collectors' key press tagging the milepost when the ARAN passes the feature. Key presses are entered into the ARAN software when the vehicle travels typically between 15 and 45 miles/hour, so a delay of a single second as the vehicle passes a feature would result in an inaccuracy of 0.004 miles (22 feet) to 0.012 miles (66 feet). If a feature is visible in the video, its milepost is determined during post-processing using a video measurement software called Surveyor. Features along the side of a roadway that are measured using the Surveyor software might not be located very accurately. Surveyor is known to be most accurate when measuring quantities near the center of the video frame, as opposed to in the edges of the video image.
- (5): Only signs are evaluated for condition. No other features' conditions are assessed, so "N/A" was originally intended to be the default value for unassessed features. However, some non-sign features do have condition ratings in the database. These are not accurate, because no assessment was ever done on non-sign features.
- (6): Condition assessments are not conducted on concrete (CO) surface types. Perfect values for concrete road sections are default values and do not represent a condition assessment of the concrete surfaces.
- (7): Roadway cracking presence, type, severity, and extent are determined by filming the roadway in the primary lane continuously with two overlapping analog cameras of 640 x 480 resolution. The images from both cameras are stitched together in real time to create a continuous strip image of the roadway pavement in the primary lane. Cracks 3 mm or greater in width are visible in this video. A semi-automatic process running the WiseCrax software with additional input by human operators provides the cracking quantities recorded in these database fields. Quality checks have determined that a consistent 80% or better of the visible cracks are recorded.

Access Database Metadata

Master Table Metadata:

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
RIP_CYCLE	×	3, for data collection cycle 3	Route ID Meeting	FHWA Determination	100%
STATE	×	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
PARK_ALPHA	××××	Park alpha code	Route ID Meeting	NPS References	Untested
PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	Untested
RTE_NO	XXXXXX	Route number	Route ID Meeting	Park Input/FHWA Classification	Untested
RTE_NAME	(Text)	Route name	Route ID Meeting	Park Input	Untested. 50 characters fit in field
FUNCT_CLAS S	×	Route functional classification	Route ID Meeting	Park Input/FHWA Classification	Untested
DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
BEG_MP_EST	999.999 (miles)	Estimated starting MP	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected
END_MP_EST	999.999 (miles)	Estimated ending MP	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected
RTE_LENGTH	999.999 (miles)	Collected route length	ARAN Data Collection	Automatic Output	100%
FROM_DESC	(Text)	Beginning terminus of route	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected. (2)
TO_DESC	(Text)	Ending terminus of route	Route ID Meeting	Park Input/FHWA Determination	Estimated before data collected. (2)
NO_LANES	×	Number of lanes in route	ARAN Data Collection	Survey Crew Input	Untested. (1)
SURF_TYPE	××	Surface type of route	ARAN Data Collection	Survey Crew Input	Untested. (1)
COMP_DIR	×	Compass direction of route's primary lane (nearest cardinal direction)	Route ID Meeting	Park Input/FHWA Determination	Untested
COMMENTS	(Text)	Special information, if any	Contractor Post-processing	Contractor Input	Untested
FILENAME	XXXXXXX	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
SECTION	XXXXXX	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
FKEY	6666666	Unique record ID	Contractor Post-processing	Database Processing	100%
DATE	DD/MM/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
BEG_MP	999.999 (miles)	Beginning MP collected	ARAN Data Collection	Automatic Output	100% (3)
END_MP	999.999 (miles)	Ending MP collected	ARAN Data Collection	Automatic Output	100% (3)

PMS_Feature Table Metadata:

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
RIP_CYCLE	×	3, for data collection cycle 3	Route ID Meeting	FHWA Determination	100%
STATE	X	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	Untested
PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	Untested
RTE_NO	XXXXXX	Route number	Route ID Meeting	Park Input/FHWA Classification	Untested
FUNCT_CLAS S	×	Route functional class	Route ID Meeting	Park Input/FHWA Classification	Untested
DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
MP	999.999 (miles)	Feature location along route	ARAN Data Collection/Contractor Post- processing	Survey Crew Input/Video Processing	Untested (4)
EVENT	XXXX	Event category of feature	Contractor Post-processing	Video Processing	Untested
EVENT_CODE	XXXX	Event sub-category of feature	Contractor Post-processing	Video Processing	Untested
EVENT_DESC	(Text)	Description of feature/contents of sign	Contractor Post-processing	Video Processing	Untested
MUTCD	"N/A"	N/A. Intended to be sign MUTCD code	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
CONDITION	XXX	Sign condition (G-D, F-R, P-R, N/A)	Contractor Post-processing	Video Processing	Untested (5)
COMMENT	(Text)	Sign label, intersecting route, etc.	Contractor Post-processing	Database Processing	Untested
OFFSET	"N/A"	N/A. Intended to be offset from pavement edge	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
SIDE	XXX	Side of route; "N/A" if not on one side	Contractor Post-processing	Video Processing	Untested
STR_NUMBER	XXXXXXXXX	FHWA bridge structure number	FHWA Post-processing	Database Processing	Untested
GPS_LAT	"N/A"	N/A. Intended to be latitude coordinate	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
GPS_LON	"N/A"	N/A. Intended to be longitude coordinate	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
GPS_ELEV	"N/A"	N/A. Intended to be elevation	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
GPS_MODE	"N/A"	N/A. Intended to be GPS mode	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to N/A
VIDEO	<park>C03VID<#</park>	Removable USB video hard drive number	Contractor Post-processing	Database Processing	Untested
IMAGE	(Text)	Filename of .jpg image showing feature	Contractor Post-processing	Automatic Output	Untested
DATE	DD/MM/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
FILENAME	XXXXXXX	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
SECTION	XXXXXX	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
FKEY	6666666	Unique record ID	Contractor Post-processing	Database Processing	100%
VISI_FROM	999999 (millimiles)	Raw MP of first video frame showing feature	Contractor Post-processing	Database Processing	Untested
VISI_TO	999999 (millimiles)	Raw MP of last video frame showing feature	Contractor Post-processing	Database Processing	Untested

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
IDKEY	(Text)	Unique record ID used by VisiData	Contractor Post-processing	Database Processing	Untested
MP_REF	(Text)	Range of mileage to play in VisiData	Contractor Post-processing	Database Processing	Untested

PMS_20, PMS_Mile & PMS_Visidata Tables Metadata:

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
RIP_CYCLE	×	3, for data collection cycle 3	Route ID Meeting	FHWA Determination	100%
STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	Untested
PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	Untested
RTE_NO	XXXXXX	Route number	Route ID Meeting	Park Input/FHWA Classification	Untested
FUNCT_CLASS	×	Route functional class	Route ID Meeting	Park Input/FHWA Classification	Untested
DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
BEG_MP	999.999 (miles)	MP at start of road interval described by database record	Contractor Post-processing	Database Processing	100% (3)
END_MP	999.999 (miles)	MP at end of road interval described by database record	Contractor Post-processing	Database Processing	100% (3)
INT_LENGTH	999.9 (ft)	Length of road interval as aggregated for data table	Contractor Post-processing	Database Processing	100%
RTE_LENGTH	999.999 (miles)	Collected route length	ARAN Data Collection	Automatic Output	100%
NO_LANES	×	Number of lanes in route	ARAN Data Collection	Survey Crew Input	Untested. (1)
LANE_NO	×	Data collection lane	Contractor Post-processing	Database Processing	Untested
WX_LANE_WID TH	99.999 (ft)	WiseCrax (crack detection software) analysis width	Contractor Post-processing	Automatic Output	Untested
LANE_WIDTH	99.999 (ft)	Width of lane	Contractor Post-processing	Video Processing	Untested
PAVE_WIDTH	99.999 (ft)	Full pavement width	Contractor Post-processing	Video Processing	Untested
SHLD_WIDTH_L	99.999 (ft)	Left shoulder width	Contractor Post-processing	Video Processing	Untested
SHLD_WIDTH_ R	99.999 (ft)	Right shoulder width	Contractor Post-processing	Video Processing	Untested
SHLD_COND_L	XXXX	Left shoulder condition	ARAN Data Collection	Survey Crew Input	Untested
SHLD_COND_R	XXXX	Right shoulder condition	ARAN Data Collection	Survey Crew Input	Untested
DRAIN_COND_L	XXXX	Left drainage condition	ARAN Data Collection	Survey Crew Input	Untested
DRAIN_COND_ R	XXXX	Right drainage condition	ARAN Data Collection	Survey Crew Input	Untested
SURF_TYPE	×	Surface type of route	ARAN Data Collection	Survey Crew Input	Untested. (1)
PCR	666	Pavement Condition Rating	Contractor Post-processing	Database Processing	100% for calculation (6)
RCI	666	Roughness Condition Index; -1 if invalid IRI	Contractor Post-processing	Database Processing	100% for calculation

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
SCR	666	Surface Condition Rating	Contractor Post-processing	Database Processing	100% for calculation (6)
IRI_AVG	999.9 (inches/mile)	Average IRI	Contractor Post-processing	Database Processing	Untested
IRI_SD	999.9 (inches/mile)	IRI standard deviation	Contractor Post-processing	Database Processing	Untested
IRI_L	999.9 (inches/mile)	Left wheel path IRI	ARAN Data Collection	Automatic Output	Untested
IRI_R	999.9 (inches/mile)	Right wheel path IRI	ARAN Data Collection	Automatic Output	Untested
IRI_FLAG	0 or -1	-1 if invalid IRI data	Contractor Post-processing	Database Processing	Untested
RUT_INDEX	666	Rut index	Contractor Post-processing	Database Processing	100% for calculation (6)
RUT_AVG	99.99 (inches)	Average rut depth of both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_MAX	99.99 (inches)	Maximum rut depth of both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_SD	6.6	Rut depth standard deviation	Contractor Post-processing	Database Processing	Untested (6)
RUT_LOW	(%) 666	Percent of low severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_MED	(%) 666	Percent of medium severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
RUT_HI	(%) 666	Percent of high severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (6)
XFALL	999.9 (% slope)	Cross fall at start of road interval	ARAN Data Collection	Automatic Output	Precise but inaccurate. Not reported in Cycle 4
GRADE	999.9 (% slope)	Grade at start of road interval	ARAN Data Collection	Automatic Output	Precise but inaccurate. Not reported in Cycle 4
AC_INDEX	666	Alligator cracking index	Contractor Post-processing	Database Processing	100% for calculation (6)
AC_LOW	686.9899 (%)	Percent of WiseCrax measured lane area with low-severity alligator cracking	Contractor Post-processing	Automatic Output	(2) (9)
AC_MED	999.9999 (%)	Percent of WiseCrax measured lane area with medium-severity alligator cracking	Contractor Post-processing	Automatic Output	(2) (2)
AC_HI	999.9999 (%)	Percent of WiseCrax measured lane area with high-severity alligator cracking	Contractor Post-processing	Automatic Output	(2) (2)
LC_INDEX	666	Longitudinal cracking index	Contractor Post-processing	Database Processing	100% for calculation (6)
LC_LOW	999.99 (%)	Low-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Automatic Output	(6) (7)
LC_MED	999.99 (%)	Medium-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Automatic Output	(6) (7)
LC_HI	999.99 (%)	High-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Automatic Output	(2) (9)
TC_INDEX	666	Transverse cracking index	Contractor Post-processing	Database Processing	100% for calculation (6)
TC_LOW	999.99 (cracks)	Count of low-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Automatic Output	(2) (9)
TC_MED	999.99 (cracks)	Count of medium-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Automatic Output	(2) (9)
TC_HI	999.99 (cracks)	Count of high-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Automatic Output	(6) (7)
PATCH_INDEX	666	Patching index	Contractor Post-processing	Database Processing	100% for calculation (6)

FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
PATCHING	(%) 6666.666	Percent of WiseCrax measured lane area affected by patching	Contractor Post-processing	Manual Pavement Video Processing	Untested (6)
GPS_LAT	666666666666666666666666666666666666666	Latitude coordinate	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
GPS_LON	-999.999999	Longitude coordinate	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
GPS_ELEV	6.9999.9	Elevation	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
GPS_MODE	XXX	GPS mode during collection	ARAN Data Collection	Automatic Output	See GPS Metadata sheet distributed with data
VIDEO	<park>C03VID<#></park>	Removable USB video hard drive number	Contractor Post-processing	Database Processing	Untested
IMAGE	(Text)	Filename of .jpg image showing road interval	Contractor Post-processing	Automatic Output	Untested
SPEED	999 (miles/hour)	Average ARAN speed during data collection	ARAN Data Collection	Automatic Output	Untested
BRIDGE_FLAG	0 or 1	Flag indicating presence of bridge in interval	ARAN Data Collection	Survey Crew Input	Untested
CONSTR_FLAG	0 or 1	Flag indicating construction in interval	ARAN Data Collection	Survey Crew Input	Untested
LANEDEV_FLA G	0 or 1	Flag indicating lane deviation in interval	ARAN Data Collection	Survey Crew Input	Untested
DATE	DD/MM/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
NODISTRESS	0 OR 1	Flag indicating absence of pavement distress	Contractor Post-processing	Database Processing	100%
FILENAME	XXXXXXX	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
SECTION	XXXXX	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
FKEY	6666666	Unique record ID	Contractor Post-processing	Database Processing	100%
VISI_FROM	999999 (millimiles)	Raw MP of first video frame in section	Contractor Post-processing	Database Processing	Untested
VISI_TO	999999 (millimiles)	Raw MP of last video frame in section	Contractor Post-processing	Database Processing	Untested
IDKEY	(Text)	Unique record ID used by VisiData	Contractor Post-processing	Database Processing	Untested
MP_REF	(Text)	Range of mileage to play in VisiData	Contractor Post-processing	Database Processing	Untested

Cycle 3 Shapefile Metadata

Metadata is provided for all shapefiles used for the creation of RIP report documents. The metadata for each shapefile associated with the park can be found in Section 10 of the PDF report provided on your park CD.

All shapefiles have the following spatial characteristics:

Geographic_Coordinate_Units: Decimal degrees Spheroid: WGS 1984

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Metadata also available as

Metadata:

- Identification Information
- Data Quality_Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity_and_Attribute_Information
- <u>Distribution_Information</u>
- Metadata Reference Information

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: The TSR Group
                 Publication_Date: 2005
                 Title: grba mi
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: Routes
           Purpose: Road Inventory Program
           Supplemental_Information:
                 Data created by The TSR Group from GPS coordinates provided in the PMS_20
                 table. The shapefile is processed to aggregate adjacent segments with the same PCR
                 rating provided in the PMS_mile table.
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                       Calendar_Date: 2005
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: As per RIP cycle
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: -114.307823
                 East_Bounding_Coordinate: -114.207581
                 North_Bounding_Coordinate: 39.040302
                 South_Bounding_Coordinate: 39.003315
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: GRBA
```

Theme_Keyword: GRBA

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Access_Constraints: None *Use_Constraints:* Redistribution meeds permission from EFLHD/NPS Point_of_Contact: *Contact_Information:* Contact_Person_Primary: Contact Person: Dan VanGilder Contact_Organization: EFLHD Contact_Position: GIS Coordinator Contact Address: Address_Type: mailing and physical address Address: 21400 Ridgetop Circle City: Sterling State_or_Province: Virginia Postal_Code: 20166 Country: United States Contact_Voice_Telephone: 703-404-6361 Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov Native Data Set Environment:

Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog

Data_Quality_Information:
Attribute_Accuracy:

8.3.0.800

Attribute_Accuracy_Report: Good Completeness_Report: Complete for routes

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
 SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: String
 Point_and_Vector_Object_Count: 24

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

 $Geodetic_Model:$

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866

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Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

Entity and Attribute Information: Detailed_Description: Entity_Type: Entity_Type_Label: grba_mi Attribute: *Attribute_Label:* FID Attribute_Definition: Internal feature number. Attribute Definition Source: ESRI Attribute_Domain_Values: *Unrepresentable_Domain:* Sequential unique whole numbers that are automatically generated. Attribute: Attribute_Label: Shape *Attribute_Definition:* Feature geometry. Attribute_Definition_Source: ESRI Attribute_Domain_Values: *Unrepresentable_Domain:* Coordinates defining the features. Attribute: Attribute_Label: FNODE_ Attribute_Definition: Length of feature Attribute_Definition_Source: ESRI Attribute: Attribute_Label: TNODE_ Attribute: Attribute_Label: LPOLY_ *Attribute_Definition:* Route number Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: RPOLY_ Attribute Definition: Collected route length Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: LENGTH Attribute_Definition: Numeric PCR definition Attribute_Domain_Values: Range_Domain: Range_Domain_Minimum: 0 Range_Domain_Maximum: 100 Attribute: Attribute_Label: GRBA_MI_ Attribute_Definition: Verbal PCR definition Attribute_Domain_Values: Enumerated Domain: Enumerated_Domain_Value: POOR Enumerated_Domain_Value_Definition: PCR value <= 60</pre> Enumerated_Domain:

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Enumerated_Domain_Value: FAIR

Enumerated_Domain_Value_Definition: PCR value 61-84

Enumerated_Domain:

Enumerated_Domain_Value: GOOD

Enumerated_Domain_Value_Definition: PCR value 85-94

Enumerated Domain:

Enumerated_Domain_Value: EXCELLENT

Enumerated_Domain_Value_Definition: PCR value 95-100

Attribute:

Attribute_Label: GRBA_MI_ID

Attribute_Definition: Indicates whether feature has been edited for graphic purposes.

Attribute_Domain_Values:

Enumerated Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: Edit has been made to feature

for graphic purposes

Enumerated_Domain:

Enumerated Domain Value: 0

Enumerated_Domain_Value_Definition: No edit made to feature.

Attribute:

Attribute_Label: ID

Attribute:

Attribute_Label: RTE_NO

Attribute:

Attribute_Label: BMP

Attribute:

Attribute_Label: EMP

Attribute:

Attribute_Label: PCR

Attribute:

Attribute_Label: PCR_RATE

Attribute:

Attribute_Label: RT_LENGTH

Attribute:

Attribute Label: PCRMI

Attribute:

Attribute_Label: PCR_RATEMI

Attribute:

Attribute_Label: PCR_RATEAV

Attribute:

Attribute_Label: PCRAV

Attribute:

Attribute_Label: TSR EDIT

Distribution_Information:

Resource_Description: Downloadable Data

Standard Order Process:

Digital_Form:

Digital_Transfer_Information:

grba_mi Page 5 of 5

Transfer_Size: 0.016

Metadata_Reference_Information:

Metadata Date: 20051219

Metadata_Contact:

Contact Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder Contact Position: GIS Coordinator

Contact Address:

Address_Type: mailing and physical address

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata Extensions:

Online_Linkage: http://www.esri.com/metadata/esriprof80.html

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Mon Dec 19 07:55:37 2005

grba_mi_pt Page 1 of 10

grba_mi_pt

Metadata also available as

Metadata:

- Identification Information
- Data Quality_Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity_and_Attribute_Information
- <u>Distribution_Information</u>
- Metadata Reference Information

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: The TSR Group
                 Publication_Date: 2005
                 Title: grba mi pt
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: Mile Points
           Purpose: Road Inventory Program
           Supplemental_Information:
                 Data created by The TSR Group from GPS coordinates provided in the PMS_20
                 table. All attributes found in the PMS_20 table are found on the miles points.
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                       Calendar_Date: 2005
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: Not Available
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: -114.306885
                 East_Bounding_Coordinate: -114.207581
                 North_Bounding_Coordinate: 39.035480
                 South_Bounding_Coordinate: 39.006191
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: GRBA
                 Theme_Keyword: GRBA
     Access_Constraints: None
```

grba_mi_pt Page 2 of 10

Use_Constraints: Redistribution needs permission from EFLHD/NPS *Point_of_Contact: Contact_Information:* Contact_Person_Primary: Contact_Person: Dan VanGilder Contact_Organization: EFLHD Sterling Contact_Position: GIS Coordinator Contact_Address: Address_Type: mailing and physical address Address: 21400 Ridgetop Circle City: Sterling State_or_Province: Virginia Postal Code: 20166 Country: United States Contact_Voice_Telephone: 703-404-6361 Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov *Native_Data_Set_Environment:* Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog

Data_Quality_Information:

Attribute_Accuracy:

8.3.0.800

Attribute_Accuracy_Report: Good

Completeness_Report: Complete for mile points

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Entity point

Point_and_Vector_Object_Count: 26

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

Geodetic Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866 Semi-major_Axis: 6378206.400000 grba_mi_pt Page 3 of 10

Denominator_of_Flattening_Ratio: 294.978698

```
Entity_and_Attribute_Information:
     Detailed Description:
           Entity_Type:
                  Entity_Type_Label: grba_mi_pt
           Attribute:
                 Attribute_Label: FID
                 Attribute_Definition: Internal feature number.
                 Attribute_Definition_Source: ESRI
                 Attribute_Domain_Values:
                        Unrepresentable_Domain:
                             Sequential unique whole numbers that are automatically generated.
           Attribute:
                 Attribute_Label: Shape
                 Attribute_Definition: Feature geometry.
                 Attribute_Definition_Source: ESRI
                 Attribute Domain Values:
                        Unrepresentable_Domain: Coordinates defining the features.
           Attribute:
                 Attribute_Label: RIP_CYCLE
                 Attribute_Definition: 3, for data collection cycle 3
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute Label: STATE
                 Attribute_Definition: State where route is located
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: PARK_ALPHA
                 Attribute_Definition: Park alpha code
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute Label: PARK NO
                 Attribute_Definition: Park numeric code
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE NO
                 Attribute_Definition: Route number
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: FUNCT_CLAS
                 Attribute_Definition: Route functional class
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: DIRECTION
                 Attribute_Definition: Survey lane: PRI (primary) or OPP (opposite)
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: BEG_MP
```

grba_mi_pt Page 4 of 10

Attribute_Definition: MP at end of road interval described by database record Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: END_MP

Attribute_Definition: MP at end of road interval described by database record

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: INT_LENGTH

Attribute_Definition: Length of road interval as aggregated from data table

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: RTE_LENGTH

Attribute_Definition: Collected route length

Attribute_Definition_Source: ARAN Data Collection

Attribute:

Attribute Label: NO LANES

Attribute_Definition: Number of lanes in route

Attribute_Definition_Source: ARAN Data Collection

Attribute:

Attribute_Label: LANE_NO

Attribute_Definition: Data collection lane

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: WX_LANE_WI

Attribute_Definition: WiseCrax (crack detection software) analysis width

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: LANE_WIDTH

Attribute_Definition: Width of lane

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: PAVE_WIDTH

Attribute_Definition: Full pavement width

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: SHLD WIDTH

Attribute_Definition: Left shouler width

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: SHLD_WID_1

Attribute_Definition: Right shoulder width

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: SHLD_COND_

Attribute_Definition: Left shoulder condition

Attribute_Definition_Source: ARAN Data Collection

Attribute:

Attribute_Label: SHLD_COND1

Attribute Definition: Right shoulder condition

Attribute Definition Source: ARAN Data Collection

Attribute:

grba_mi_pt Page 5 of 10

Attribute_Label: DRAIN_COND Attribute_Definition: Left drainage condition Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: DRAIN_CO_1 Attribute Definition: Right drainage condition Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: SURF_TYPE Attribute_Definition: Surface type of route Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute Label: PCR Attribute_Definition: Pavement Condition Rating Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute Label: RCI Attribute_Definition: Roughness Condition Index; -1 if invalid IRI Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute_Label: SCR Attribute_Definition: Surface Condition Rating Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute_Label: IRI_AVG Attribute_Definition: Average IRI Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute_Label: IRI_SD Attribute_Definition: IRI Standard Deviation Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute_Label: IRI_L Attribute_Definition: Left wheel path IRI Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: IRI_R Attribute_Definition: Rigth wheel path IRI Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: IRI_FLAG Attribute Definition: -1 if invalid IRI data Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute Label: RUT INDEX Attribute Definition: Rut index Attribute_Definition_Source: Contractor Post-processing Attribute:

 $file://J:\FHWA_RoadInvProg\Data\Park_Report\GRBA_8420\Section_10\grba_mi_pt_m... 12/19/2005$

Attribute_Definition: Average rut depth of both wheelpaths Attribute_Definition_Source: Contractor Post-processing

Attribute Label: RUT AVG

grba_mi_pt Page 6 of 10

Attribute:

Attribute_Label: RUT_MAX

Attribute_Definition: Maximum rut depth of both wheelpaths Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: RUT_SD

Attribute_Definition: Rut depth standard deviation

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: RUT_LOW

Attribute_Definition:

Percent of low severity ruts (on a 0-200% scale) in both wheelpaths

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: RUT_MED

Attribute Definition:

Percent of medium severity ruts (on a 0-200% scale) in both wheelpaths

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: RUT_HI

Attribute_Definition:

Percent of high severity ruts (on a 0-200% scale) in both wheelpaths

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: XFALL

Attribute_Definition: Cross fall at start of road interval

Attribute_Definition_Source: ARAN Data Collection

Attribute:

Attribute_Label: GRADE

Attribute_Definition: Grade at start of road interval

Attribute_Definition_Source: ARAN Data Collection

Attribute:

Attribute_Label: AC_INDEX

Attribute_Definition: Alligator cracking index

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: AC_LOW

Attribute_Definition:

Percent of WiseCrax measured lane area with low-severity alligator cracking

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute Label: AC MED

Attribute_Definition:

Percent of WiseCrax measured lane area with medium-severity alligator

cracking

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: AC_HI

Attribute Definition:

Percent of WiseCrax measured lane area with high-severity alligator cracking

Attribute_Definition_Source: Contractor Post-processing

grba_mi_pt Page 7 of 10

Attribute:

Attribute_Label: LC_INDEX

Attribute_Definition: Longitudinal cracking index

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute Label: LC LOW

Attribute_Definition:

Low-severity longitudinal cracking in lane as a percentage of road interval

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: LC_MED

Attribute_Definition:

Medium-severity longitudinal cracking in lane as a percentage of road interval length

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: LC_HI

Attribute_Definition:

High-severity longitudinal cracking in lane as a percentage of road interval length

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: TC_INDEX

Attribute_Definition: Transverse cracking index

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: TC_LOW

Attribute_Definition:

Count of low-severity transverse cracks, where one crack unit equals the WiseCrax measured land width

Attribute Definition Source: Contractor Post-processing

Attribute:

Attribute_Label: TC_MED

Attribute Definition:

Count of medium-severity transverse cracks, where one crack unit equals the WiseCrax measured land width

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: TC_HI

Attribute_Definition:

Count of high-severity transverse cracks, where one crack unit equals the WiseCrax measured land width

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: PATCH_INDE

Attribute_Definition: Patching index

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: PATCHING

Attribute_Definition: Percent of WiseCrax measured lane area affected by patching

grba_mi_pt Page 8 of 10

Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute_Label: GPS_LAT Attribute_Definition: Latitude coordinate Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: GPS_LON Attribute_Definition: Longitude coordinate Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: GPS_ELEV *Attribute_Definition:* Elevation Attribute Definition Source: ARAN Data Collection Attribute: Attribute_Label: GPS_MODE Attribute_Definition: GPS mode during collection Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: VIDEO Attribute_Definition: Removable USB video hard drive number Attribute Definition Source: Contractor Post-processing Attribute: Attribute_Label: IMAGE Attribute_Definition: Filename of .jpg image showing road interval Attribute_Definition_Source: Contractor Post-processing Attribute: Attribute_Label: SPEED Attribute_Definition: Average ARAN speed during data collection Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: BRIDGE_FLA Attribute_Definition: Flag indicating presence of bridge in interval Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute Label: CONSTR FLA Attribute_Definition: Flag indicating construction in interval Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: LANEDEV_FL Attribute_Definition: Flag indicating lane deviation in interval Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: DATE Attribute_Definition: Data collection date Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: NODISTRESS Attribute_Definition: Flag indicating absence of pavement distress Attribute Definition Source: Contractor Post-processing

 $file://J:\FHWA_RoadInvProg\Data\Park_Report\GRBA_8420\Section_10\grba_mi_pt_m... 12/19/2005$

Attribute:

Attribute_Label: FILENAME

grba_mi_pt Page 9 of 10

Attribute_Definition: Filename of raw data files Attribute_Definition_Source: ARAN Data Collection

Attribute:

Attribute_Label: SECTION

Attribute_Definition: route section ID

Attribute_Definition_Source: Route ID Meeting / ARAN Data Collection

Attribute:

Attribute_Label: FKEY

Attribute_Definition: Unique record ID

Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: VISI_FROM

Attribute_Definition: Raw MP of first video frame in section Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute Label: VISI TO

Attribute_Definition: Raw MP of last video frame in section Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: IDKEY

Attribute_Definition: Unique record ID used by VisiData Attribute_Definition_Source: Contractor Post-processing

Attribute:

Attribute_Label: MP_REF

Attribute_Definition: Range of mileage to play in VisiData Attribute_Definition_Source: Contractor Post-processing

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information: Transfer Size: 0.030

Metadata_Reference_Information:

Metadata_Date: 20051219

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

grba_mi_pt Page 10 of 10

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata_Extensions:

Online_Linkage: http://www.esri.com/metadata/esriprof80.html

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Mon Dec 19 07:55:54 2005

grba_pkg_03_map Page 1 of 4

grba_pkg_03_map

Metadata also available as

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity_and_Attribute_Information
- <u>Distribution_Information</u>
- Metadata Reference Information

```
Identification_Information:
```

Citation:

Citation_Information:

Originator: Eastern Federal Lands Highway Division

Publication_Date: Unknown Title: grba_pkg_03_map

Geospatial_Data_Presentation_Form: vector digital data

Online_Linkage: Not Available

Description:

Abstract: Copy of Parking Areas Purpose: Road Inventory Program

Supplemental_Information:

This shapefile is a copy of the source parking shapefile. The features are edited as

needed for graphic purposes.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 6/14/2003

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: As per RIP cycle

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -114.307930

East_Bounding_Coordinate: -114.215656 North_Bounding_Coordinate: 39.028681

South_Bounding_Coordinate: 39.003743

Keywords:

Theme:

Theme_Keyword_Thesaurus: GRBA

Theme_Keyword: GRBA

Access_Constraints: None

grba_pkg_03_map Page 2 of 4

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Native_Data_Set_Environment:

Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report: Good

Completeness_Report: Complete for parking areas

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 14

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

Geodetic Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866 Semi-major_Axis: 6378206.400000 grba_pkg_03_map Page 3 of 4

Denominator_of_Flattening_Ratio: 294.978698

```
Entity_and_Attribute_Information:
     Detailed Description:
           Entity_Type:
                 Entity_Type_Label: grba_pkg_03_map
           Attribute:
                 Attribute_Label: FID
                 Attribute_Definition: Internal feature number.
                 Attribute_Definition_Source: ESRI
                 Attribute_Domain_Values:
                       Unrepresentable_Domain:
                             Sequential unique whole numbers that are automatically generated.
           Attribute:
                 Attribute_Label: Shape
                 Attribute_Definition: Feature geometry.
                 Attribute_Definition_Source: ESRI
                 Attribute Domain Values:
                       Unrepresentable_Domain: Coordinates defining the features.
           Attribute:
                 Attribute_Label: PARK_ALPHA
                 Attribute_Definition: Park alpha code
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE_NO
                 Attribute_Definition: Route number
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE_NAME
                 Attribute_Definition: Route name
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute Label: FEATURE
           Attribute:
                 Attribute Label: SURF TYPE
                 Attribute_Definition: Surface type of route
                 Attribute_Domain_Values:
           Attribute:
                 Attribute Label: CONDITION
                 Attribute_Definition: Condition rating for route
           Attribute:
                 Attribute_Label: PHOTOS
                 Attribute_Definition: Photo filename associated with feature
           Attribute:
                 Attribute_Label: COMMENT
                 Attribute_Definition: Field comment
           Attribute:
                 Attribute_Label: GPS_DATE
                 Attribute_Definition: Date of GPS collection
```

grba_pkg_03_map Page 4 of 4

Attribute:

Attribute_Label: DATAFILE

Attribute:

Attribute_Label: SQ_FT

Attribute_Definition: Feature area in square feet

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

 $Digital_Transfer_Information:$

Transfer_Size: 0.018

Metadata_Reference_Information:

Metadata_Date: 20051219

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder

Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact Electronic Mail Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata Extensions:

Online_Linkage: http://www.esri.com/metadata/esriprof80.html

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Mon Dec 19 07:55:09 2005

grba_pkg_03 Page 1 of 4

grba_pkg_03

Metadata also available as

Metadata:

- Identification Information
- Data Quality_Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity_and_Attribute_Information
- <u>Distribution_Information</u>
- Metadata Reference Information

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: Eastern Federal Lands Highway Division
                 Publication_Date: Unknown
                 Title: grba_pkg_03
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: Parking Areas
           Purpose: Road Inventory Program
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                      Calendar_Date: 6/14/2003
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: As per RIP cycle
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: -114.307951
                 East_Bounding_Coordinate: -114.215656
                 North_Bounding_Coordinate: 39.028638
                 South_Bounding_Coordinate: 39.003743
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: GRBA
                 Theme_Keyword: GRBA
     Access Constraints: None
     Use_Constraints: Redistribution needs permission from EFLHD/NPS
     Point_of_Contact:
           Contact_Information:
```

grba_pkg_03 Page 2 of 4

Contact_Person_Primary:

Contact_Person: Dan VanGilder Contact_Organization: EFLHD Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Native_Data_Set_Environment:

Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog

8.3.0.800

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report: Good

Completeness_Report: Complete for parking areas

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector *Point_and_Vector_Object_Information:*

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 14

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866 Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

grba_pkg_03 Page 3 of 4

Entity_and_Attribute_Information: Detailed_Description: Entity_Type: Entity_Type_Label: grba_pkg_03 Attribute: Attribute Label: FID Attribute_Definition: Internal feature number. Attribute_Definition_Source: ESRI Attribute_Domain_Values: *Unrepresentable_Domain:* Sequential unique whole numbers that are automatically generated. Attribute: Attribute Label: Shape Attribute_Definition: Feature geometry. Attribute_Definition_Source: ESRI Attribute Domain Values: *Unrepresentable_Domain:* Coordinates defining the features. Attribute: Attribute_Label: PARK_ALPHA Attribute_Definition: Park alpha code Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: RTE_NO *Attribute_Definition:* Route number Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: RTE_NAME Attribute_Definition: Route name Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: FEATURE Attribute: Attribute_Label: SURF_TYPE Attribute_Definition: Surface type of route Attribute Domain Values: Attribute: Attribute_Label: CONDITION Attribute_Definition: Condition rating for route Attribute: Attribute_Label: PHOTOS Attribute_Definition: Photo filename associated with feature *Attribute:* Attribute_Label: COMMENT Attribute_Definition: Field comment Attribute: Attribute_Label: GPS_DATE Attribute_Definition: Date of GPS collection Attribute: Attribute Label: DATAFILE Attribute: *Attribute_Label:* SQ_FT

grba_pkg_03 Page 4 of 4

Attribute_Definition: Feature area in square feet

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

 $Digital_Transfer_Information:$

Transfer_Size: 0.018

Metadata_Reference_Information:

Metadata_Date: 20051219

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder

Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166

Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata Extensions:

Online_Linkage: <a href="mailto:metadata/esriprof80.htmlmetadata/esriprof80.html

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Mon Dec 19 07:54:46 2005

grba_seg Page 1 of 5

grba_seg

Metadata also available as

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity_and_Attribute_Information
- <u>Distribution_Information</u>
- Metadata Reference Information

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: The TSR Group
                 Publication_Date: 2005
                 Title: grba seg
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: Routes
           Purpose: Road Inventory Program
           Supplemental_Information:
                 Data created by The TSR Group from GPS coordinates provided in the PMS_20
                 table. The shapefile is processed to aggregate adjacent segments with the same PCR
                 rating.
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                       Calendar_Date: 2005
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: As per RIP cycle
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: -114.307823
                 East_Bounding_Coordinate: -114.207581
                 North_Bounding_Coordinate: 39.040302
                 South_Bounding_Coordinate: 39.003315
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: GRBA
                 Theme_Keyword: GRBA
```

grba_seg Page 2 of 5

Access_Constraints: None Use Constraints: Redistrib

Use_Constraints: Redistribution needs permission from EFLHD/NPS

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Dan VanGilder Contact_Organization: EFLHD Contact_Position: GIS Coordinator

Contact Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Native Data Set Environment:

Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report: Good Completeness_Report: Complete for routes

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: String

Point_and_Vector_Object_Count: 82

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866

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Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698 *Entity_and_Attribute_Information: Detailed_Description: Entity_Type:* Entity_Type_Label: grba_seg Attribute: Attribute_Label: FID Attribute_Definition: Internal feature number. Attribute Definition Source: ESRI Attribute_Domain_Values: *Unrepresentable_Domain:* Sequential unique whole numbers that are automatically generated. Attribute: Attribute_Label: Shape *Attribute_Definition:* Feature geometry. Attribute_Definition_Source: ESRI Attribute_Domain_Values: *Unrepresentable_Domain:* Coordinates defining the features. Attribute: Attribute_Label: FNODE_ Attribute_Definition: Length of feature Attribute_Definition_Source: ESRI Attribute: Attribute_Label: TNODE_ Attribute: Attribute_Label: LPOLY_ *Attribute_Definition:* Route number Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: RPOLY_ Attribute Definition: Collected route length Attribute_Definition_Source: ARAN Data Collection Attribute: Attribute_Label: LENGTH Attribute_Definition: Numeric PCR definition. Average PCR value based on programatic averaging of adjacent segments. Attribute_Domain_Values: Range_Domain: Range_Domain_Minimum: 0 Range_Domain_Maximum: 100 Attribute: Attribute_Label: GRBA_SEG_ Attribute_Definition: Verbal PCR definition based on value in PCRAV field Attribute_Domain_Values: *Enumerated_Domain:*

Enumerated_Domain_Value: POOR

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Enumerated_Domain_Value_Definition: PCR value <= 60

Enumerated_Domain:

Enumerated_Domain_Value: FAIR

Enumerated_Domain_Value_Definition: PCR value 61-84

Enumerated_Domain:

Enumerated_Domain_Value: GOOD

Enumerated_Domain_Value_Definition: PCR value 85-94

Enumerated_Domain:

Enumerated_Domain_Value: EXCELLENT

Enumerated_Domain_Value_Definition: PCR value 95-100

Attribute:

Attribute_Label: GRBA_SEG_I

Attribute_Definition: Indicates whether feature has been edited for graphic purposes.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: Edit has been made to feature

for graphic purposes

Enumerated_Domain:

Enumerated_Domain_Value: 0

Enumerated_Domain_Value_Definition: No edit made to feature.

Attribute:

Attribute_Label: ID

Attribute:

Attribute_Label: RTE_NO

Attribute:

Attribute_Label: BMP

Attribute:

Attribute_Label: EMP

Attribute:

Attribute_Label: PCR

Attribute:

Attribute_Label: PCR_RATE

Attribute:

Attribute Label: RT LENGTH

Attribute:

Attribute_Label: PCRMI

Attribute:

Attribute_Label: PCR_RATEMI

Attribute:

Attribute_Label: PCR_RATEAV

Attribute:

Attribute_Label: PCRAV

Attribute:

Attribute_Label: TSR_EDIT

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

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Digital_Form:

Digital_Transfer_Information: Transfer_Size: 0.016

Metadata_Reference_Information:

Metadata Date: 20051219

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder

Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata_Extensions:

Online_Linkage: http://www.esri.com/metadata/esriprof80.html

Profile_Name: ESRI Metadata Profile

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