



**national park service**

**The Road Inventory  
of  
Badlands National Park  
BADL – 1300  
Cycle 4**



**Prepared By:  
Federal Highway Administration  
Road Inventory Program  
Cycle 4**



# Badlands National Park in South Dakota





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# Badlands National Park



## **Section 1** **Introduction**

## INTRODUCTION

**Background:** In 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 costs and programs to bring National Park Service (NPS) roads up to, or to maintain, designated standards, and 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 was collected in 44 large parks from 1994 to 1996. 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". Cycle 3 was completed from 2001 through 2004, and included data collection in all parks that contain pavement.

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 21<sup>st</sup> 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 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 4:** Cycle 4 data collection was initiated in spring 2006, where 86 large parks, consisting of 5,553 route miles and 6,232 paved parking areas, were selected as a representative sample of the entire NPS paved road network. Cycle 4 is scheduled for completion in spring 2009 and will serve the PMS in further development of its pavement preservation techniques.

In the Cycle 4 Reports, a general condition rating of excellent, good, fair and poor is ascribed to each one-mile 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 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.

The FHWA RIP Team

FHWA/EFLHD  
21400 Ridgetop Circle  
Sterling, VA 20166  
(703) 404-6371

FHWA/CFLHD  
12300 West Dakota Ave.  
Lakewood, CO 80228  
(720) 963-3560

# Badlands National Park



## **Section 2**

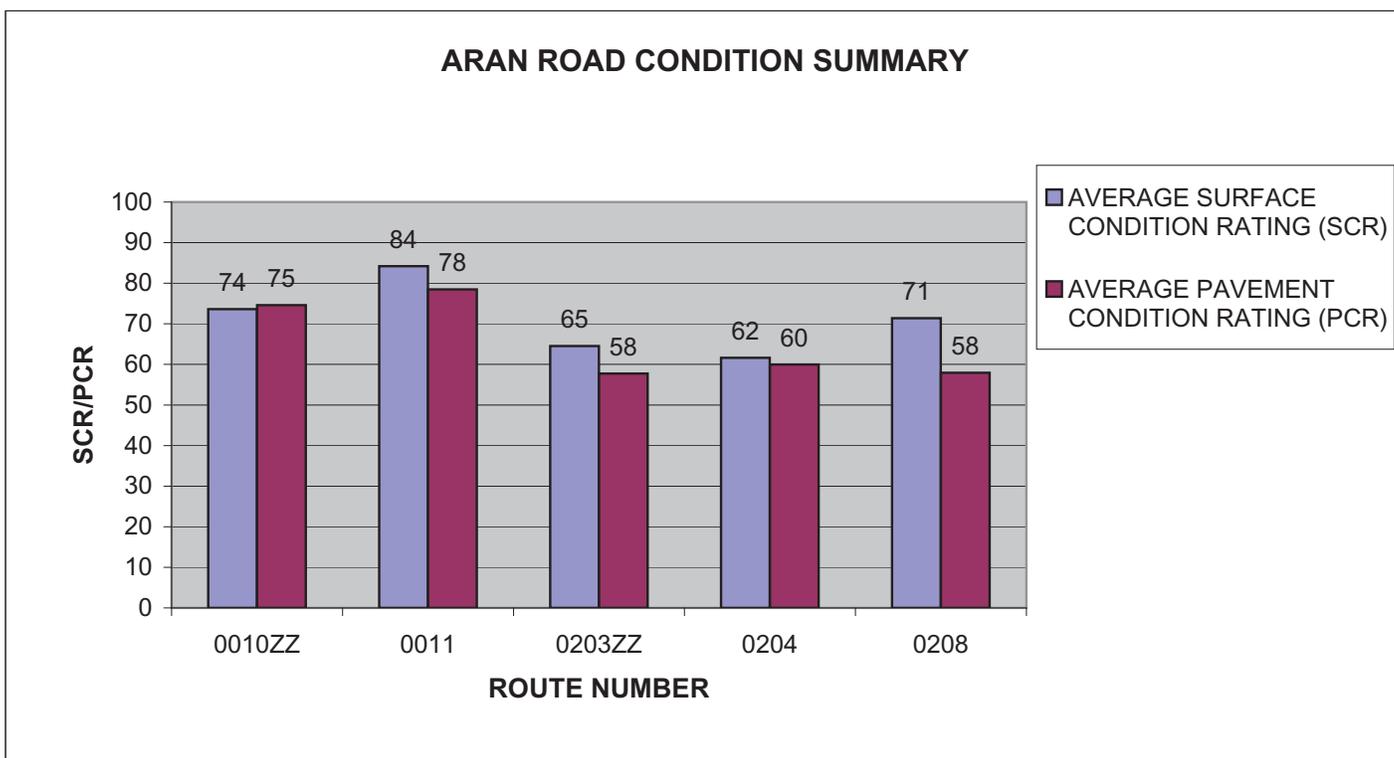
### **Park Summary Information**

**BADL: PAVED ROUTE MILES AND PERCENTAGES  
BY FUNCTIONAL CLASS AND PCR**

F.C.	Pavement Condition Rating (PCR)								TOTAL MILES
	Poor (<=60)		Fair (61-84)		Good (85-94)		Excellent (95-100)		
	MILES	%	MILES	%	MILES	%	MILES	%	
1	4.49	13.56%	16.60	50.12%	5.50	16.61%	2.02	6.10%	<b>28.61</b>
2									
3	1.68	5.07%	1.31	3.96%	0.18	0.54%	0.06	0.18%	<b>3.23</b>
4									
5	0.14	0.42%	0.60	1.81%	0.36	1.09%	0.18	0.54%	<b>1.28</b>
6									
7									
8									
<b>Totals</b>	<b>6.31</b>	<b>19.05%</b>	<b>18.51</b>	<b>55.89%</b>	<b>6.04</b>	<b>18.24%</b>	<b>2.26</b>	<b>6.82%</b>	<b>33.12</b>

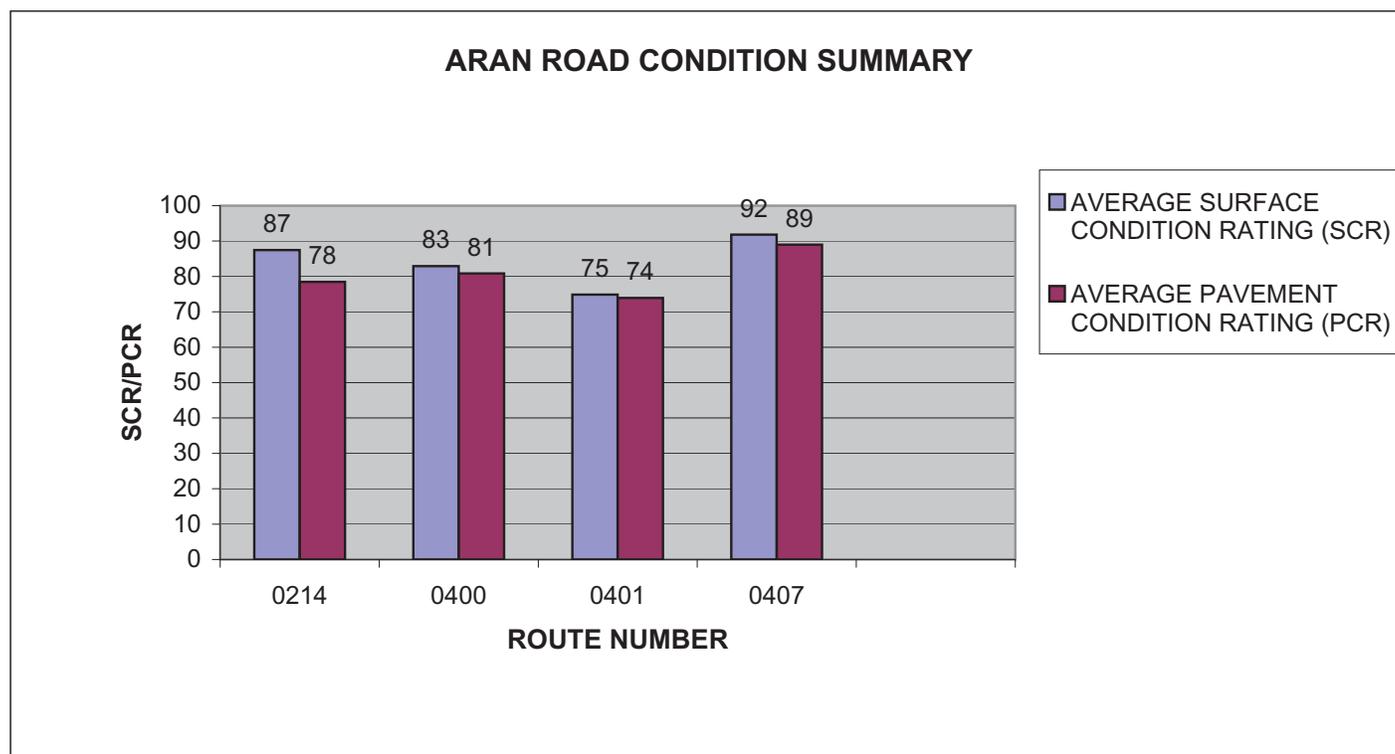
# BADL: ARAN ROAD CONDITION SUMMARY

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	ROUTE LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0010ZZ	BADLANDS LOOP ROADS	1	27.96	ASPHALT	74	75
0011	ENTRANCE ROAD (HIGHWAY 377)	1	0.69	ASPHALT	84	78
0203ZZ	CEDAR PASS CAMPGROUND ROADS	3	1.07	ASPHALT	65	58
0204	CONATA ROAD	3	1.65	ASPHALT	62	60
0208	CONATA PICNIC AREA ROAD	3	0.21	ASPHALT	71	58



# BADL: ARAN ROAD CONDITION SUMMARY

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	ROUTE LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0214	CEDAR PASS CAMPGROUND GROUP LOOP ROAD	3	0.3	ASPHALT	87	78
0400	CEDAR PASS MAINTENANCE ACCESS ROAD	5	1.13	ASPHALT	83	81
0401	RESIDENCE AREA ROAD AND PARKING	5	0.3	ASPHALT	75	74
0407	PINNACLES RANGER STATION SERVICE ACCESS ROAD	5	0.1	ASPHALT	92	89

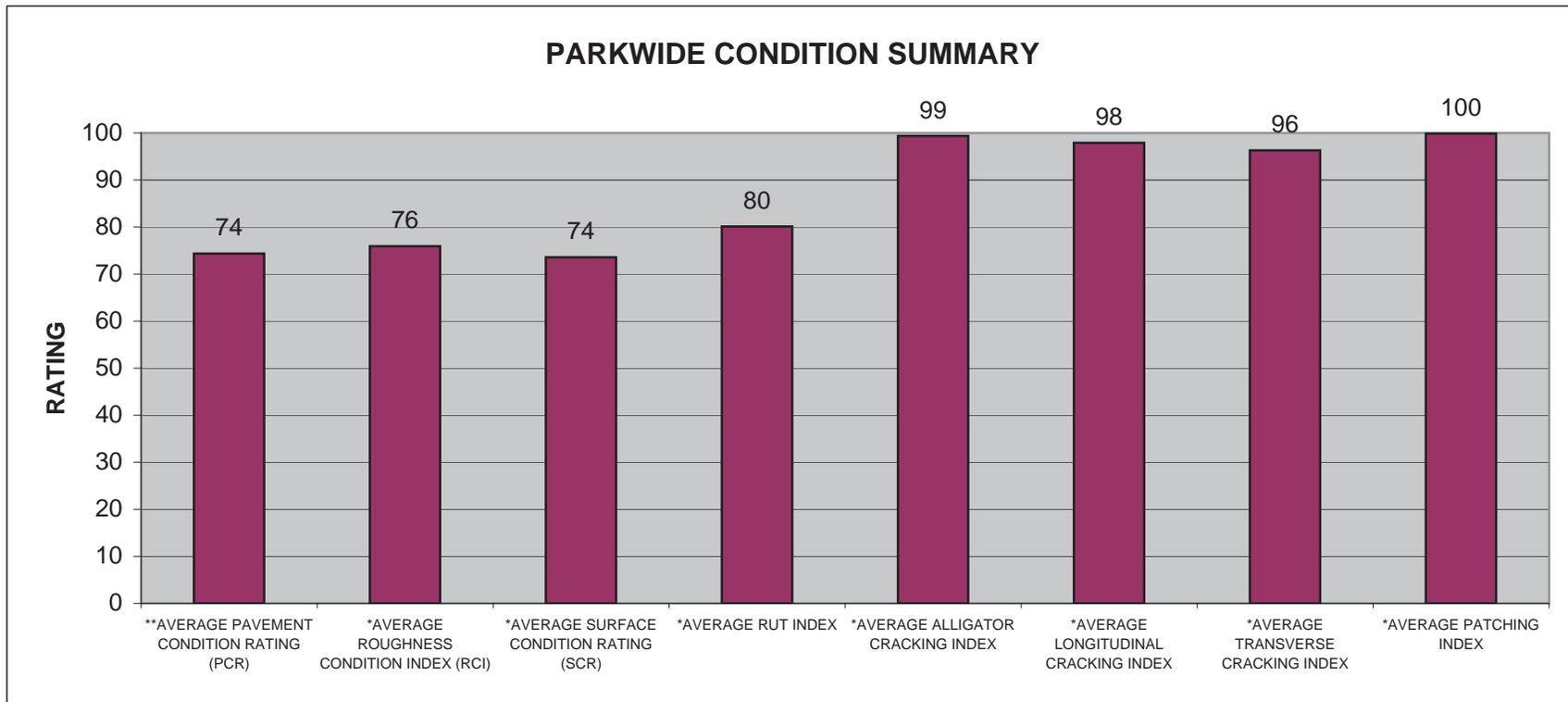


# BADL: PARKWIDE CONDITION SUMMARY

**AVERAGE PAVEMENT CONDITION RATING (PCR)	*AVERAGE ROUGHNESS CONDITION INDEX (RCI)	*AVERAGE SURFACE CONDITION RATING (SCR)	*AVERAGE RUT INDEX	*AVERAGE ALLIGATOR CRACKING INDEX	*AVERAGE LONGITUDINAL CRACKING INDEX	*AVERAGE TRANSVERSE CRACKING INDEX	*AVERAGE PATCHING INDEX
74	76	74	80	99	98	96	100

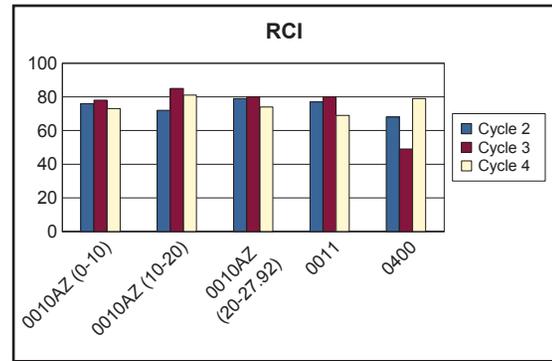
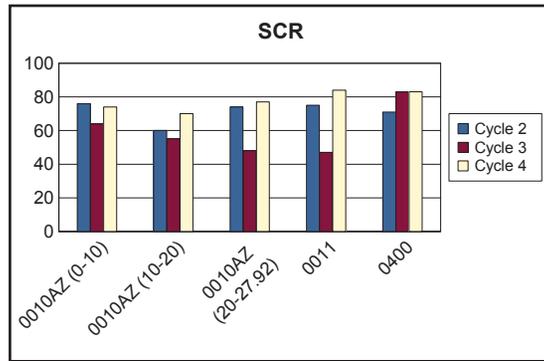
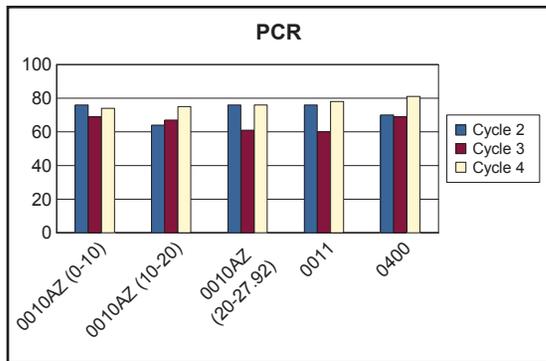
\*\* PCR Index is based on all ARAN-driven roads, parking areas, and manually rated routes.

\* Index values are based on ARAN-driven roads only.



# BADL CYCLE 2 vs CYCLE 3 vs CYCLE 4 CONDITION COMPARISONS

ROUTE NUMBER	PAVED MILES	FROM MILEPOST	TO MILEPOST	PAVEMENT CONDITION RATING (PCR)				SURFACE CONDITION RATING (SCR)				ROUGHNESS CONDITION INDEX (RCI)				COMMENT
				CYCLE 2	CYCLE 3	CYCLE 4	PERCENT CHANGE	CYCLE 2	CYCLE 3	CYCLE 4	PERCENT CHANGE	CYCLE 2	CYCLE 3	CYCLE 4	PERCENT CHANGE	
0010AZ	10.00	0.00	10.00	76	69	74	+7%	76	64	74	+16%	76	78	73	-6%	
0010AZ	10.00	10.00	20.00	64	67	75	+12%	60	55	70	+27%	72	85	81	-5%	
0010AZ	7.92	20.00	27.92	76	61	76	+25%	74	48	77	+60%	79	80	74	-7%	
0011	0.69	0.00	0.69	76	60	78	+30%	75	47	84	+79%	77	80	69	-14%	
0400	0.88	0.00	0.88	70	69	81	+17%	71	83	83	0%	68	49	79	+61%	

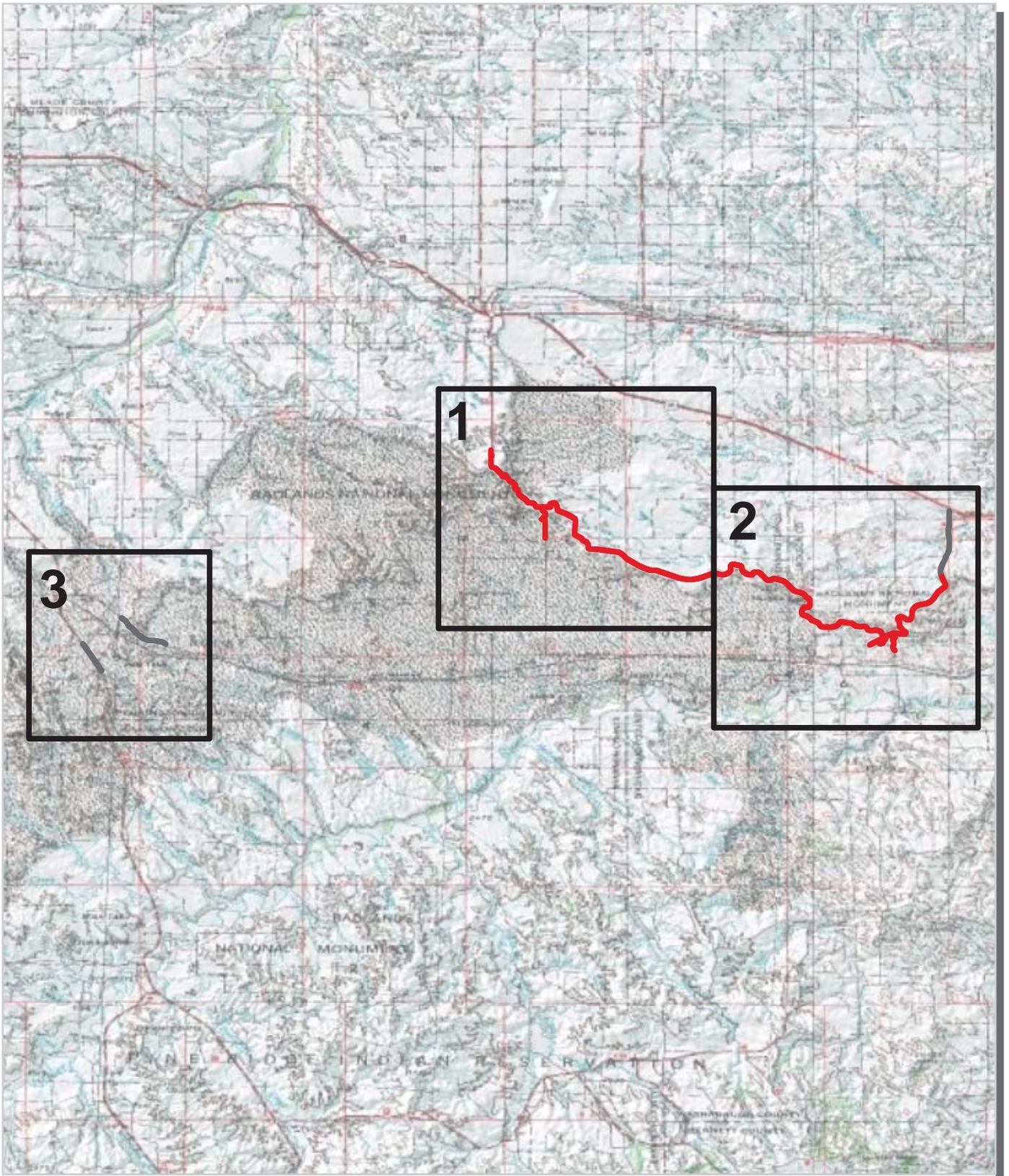


# Badlands National Park

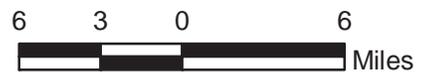


## **Section 3** **Park Route Location / Condition** **Maps**

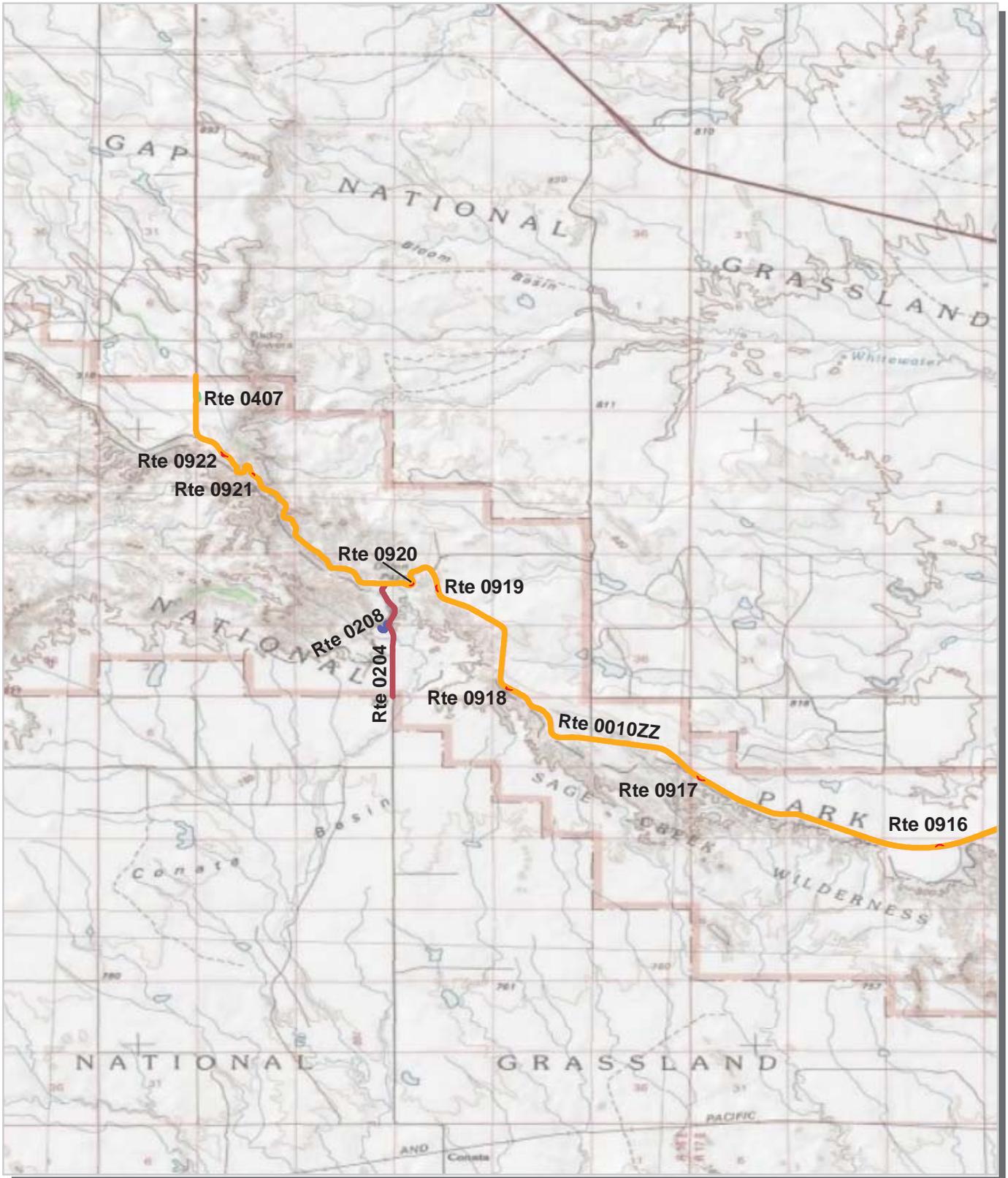
# Badlands National Park Route Location Map Key Map



 Park Owned Routes



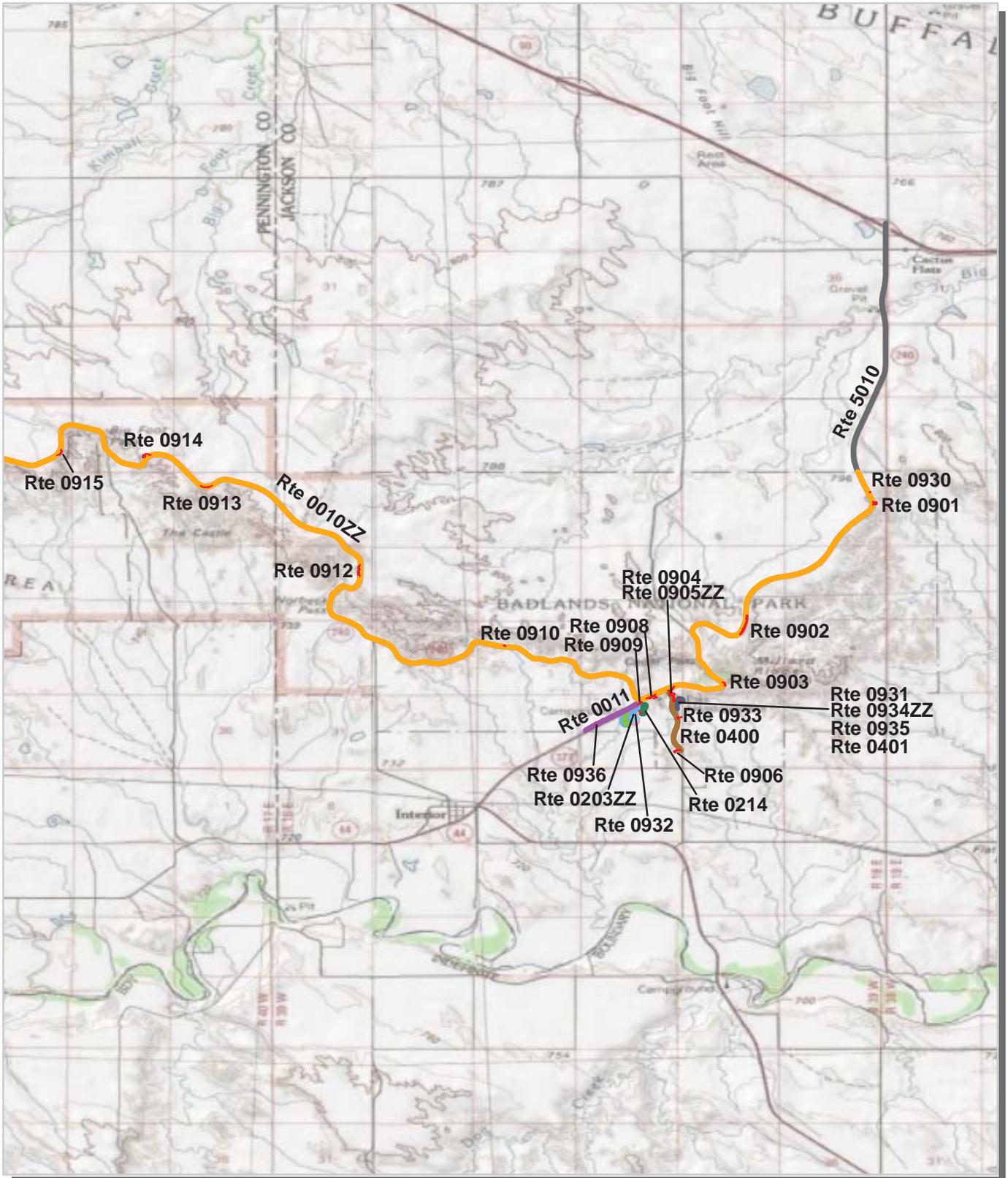
# Badlands National Park Route Location Map Area 1



Unique colors used to differentiate routes



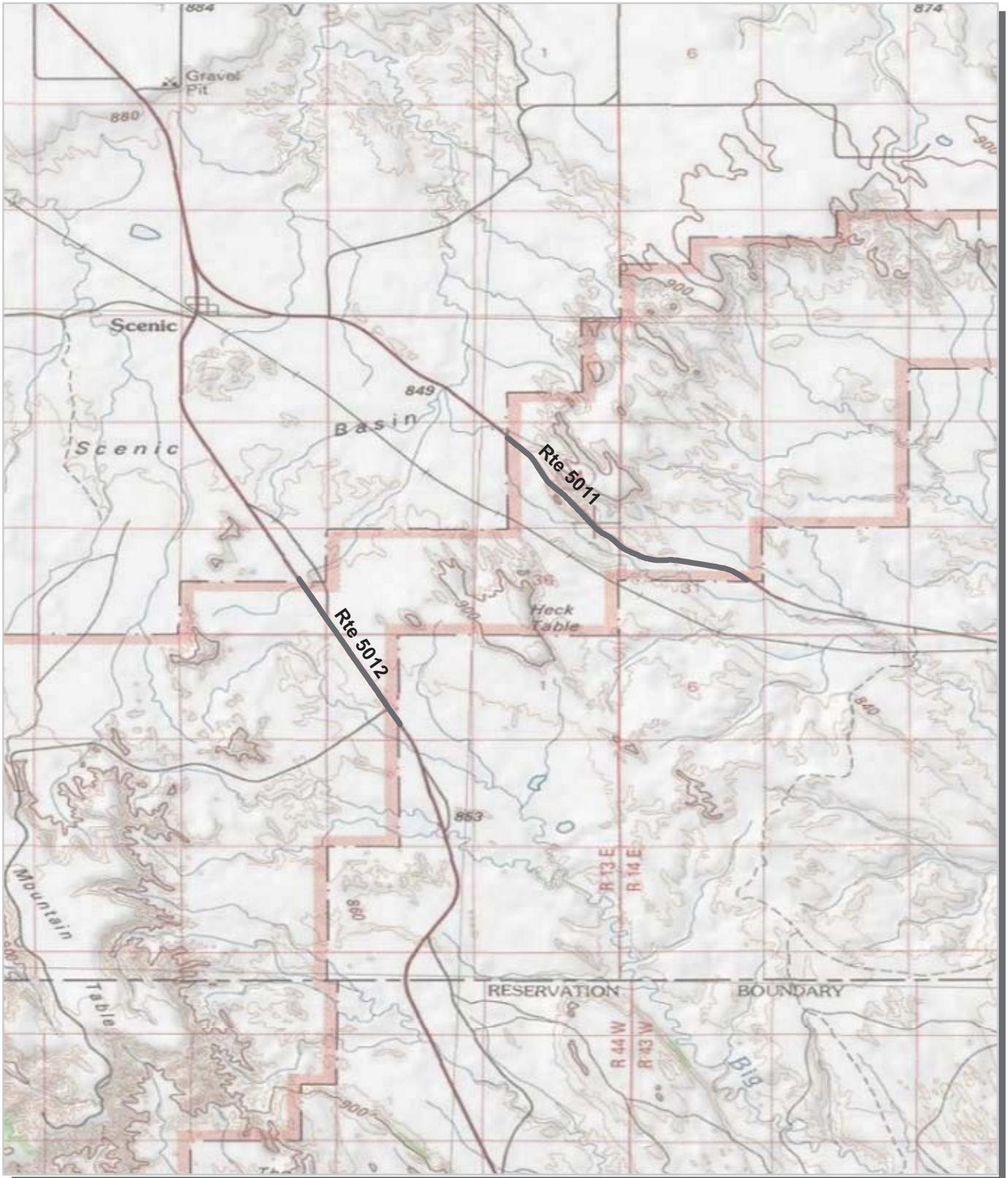
# Badlands National Park Route Location Map Area 2



Unique colors used to differentiate routes



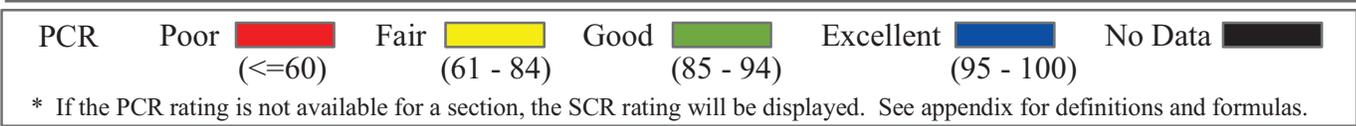
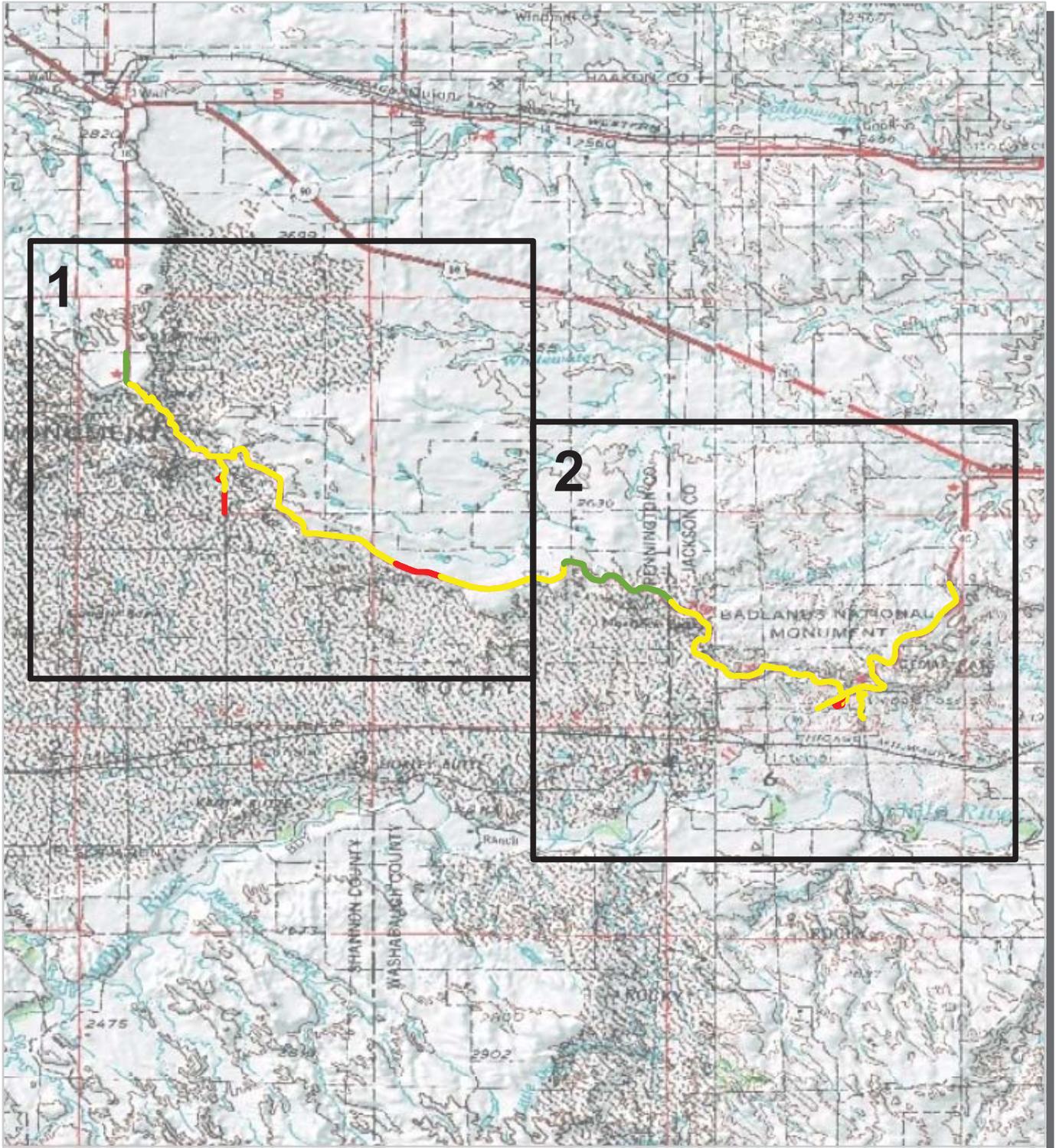
# Badlands National Park Route Location Map Area 3



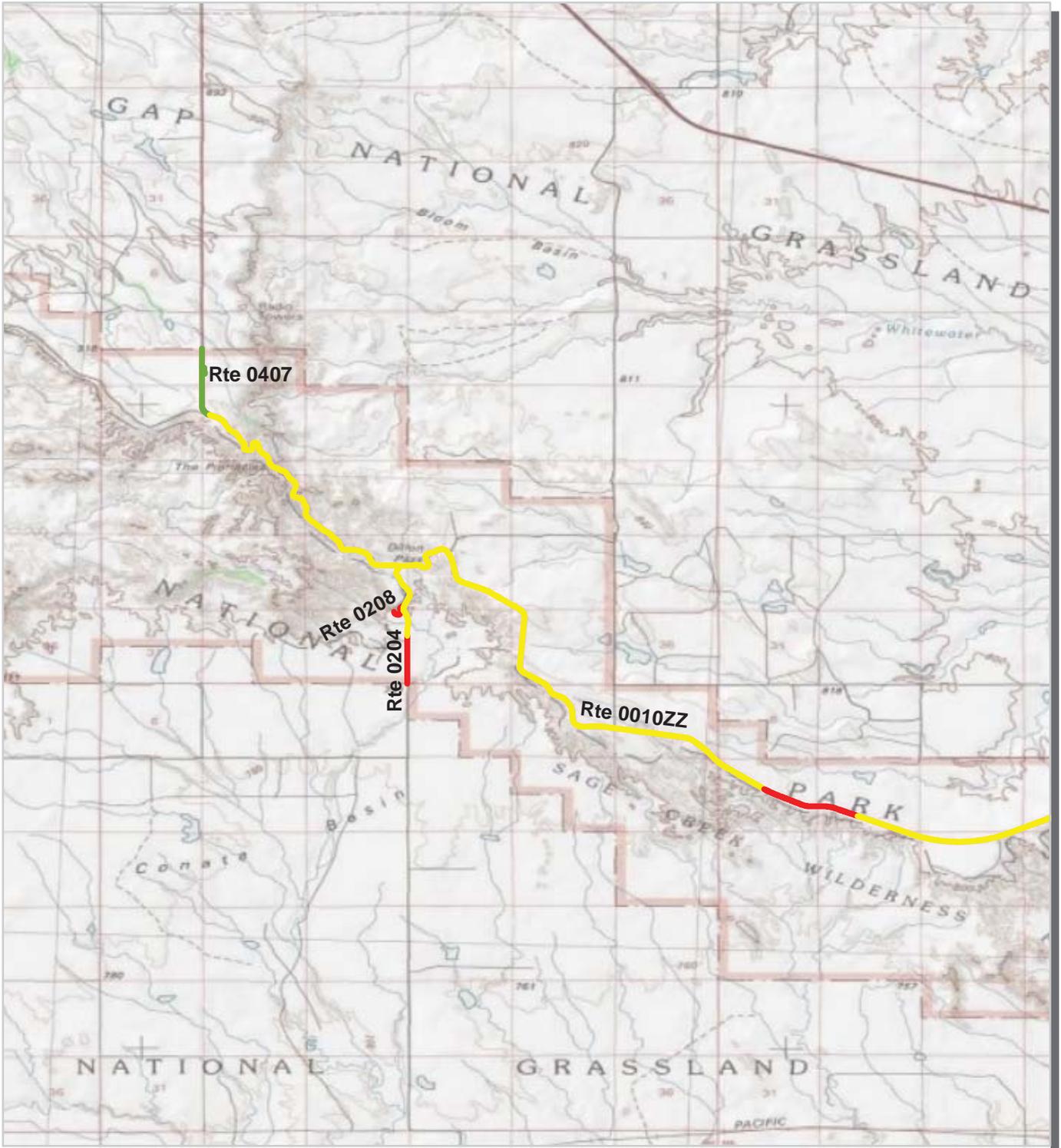
Unique colors used to differentiate routes



# Badlands National Park Route Condition Map PCR - Mile by Mile Key Map



**Badlands National Park  
Route Condition Map  
PCR - Mile by Mile  
Area 1**

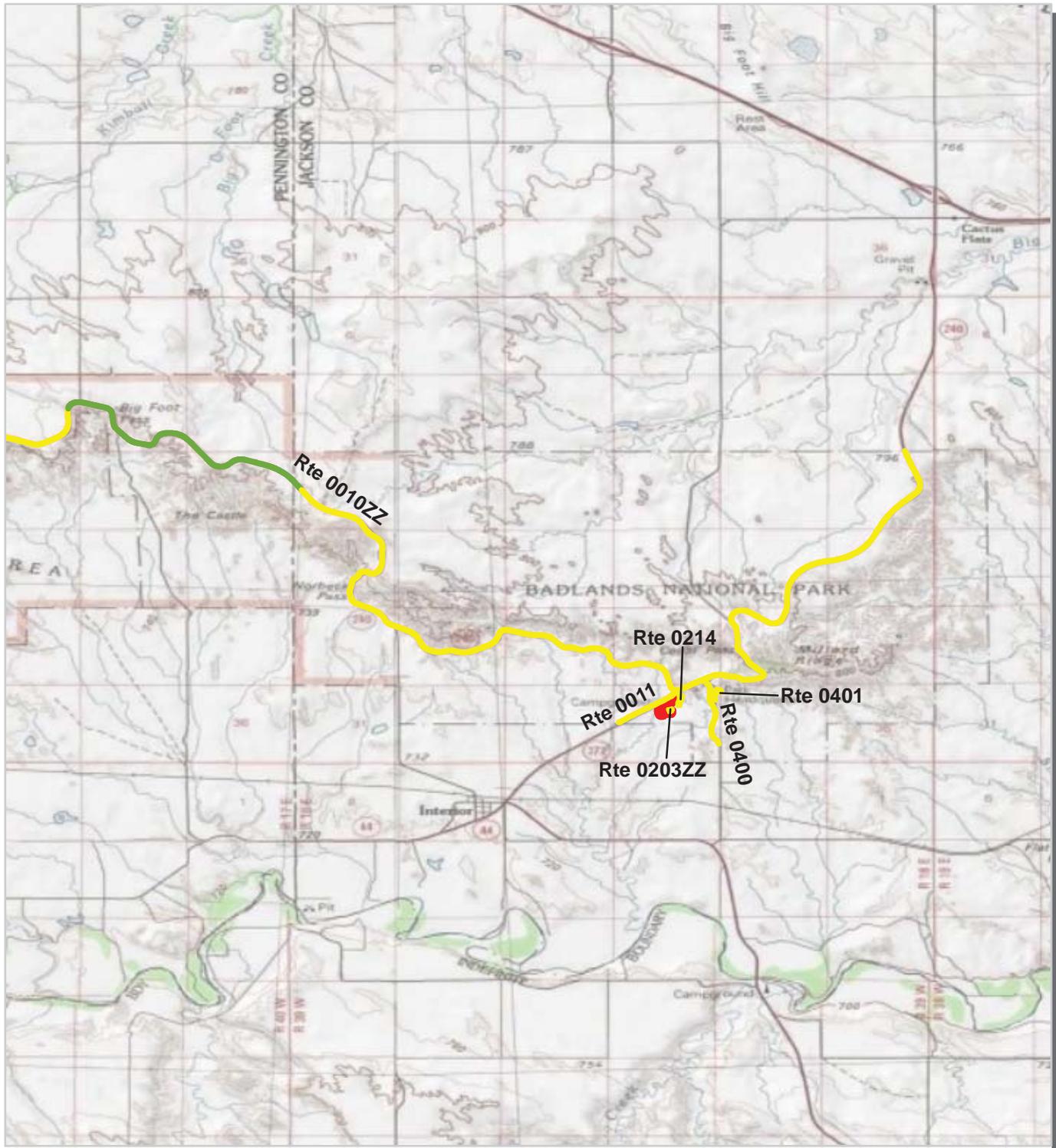


PCR	Poor (≤60)	Fair (61 - 84)	Good (85 - 94)	Excellent (95 - 100)	No Data

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.



# Badlands National Park Route Condition Map PCR - Mile by Mile Area 2



PCR	Poor	<span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span>	Fair	<span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span>	Good	<span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span>	Excellent	<span style="display: inline-block; width: 15px; height: 15px; background-color: blue; border: 1px solid black;"></span>	No Data	<span style="display: inline-block; width: 15px; height: 15px; background-color: black; border: 1px solid black;"></span>
	(<=60)		(61 - 84)	(85 - 94)	(95 - 100)					

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.



# Badlands National Park



## **Section 4**

### **Park Route Inventory**

# NPS/RIP Route ID Report

Road Inventory Program 10/16/2009

(Numerical By Route #)

Page 1 of 6

Shading Color Key:  
Red text denotes approx. mileage

White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, ARAN not Driven

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

  = Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## BADL

### BADLANDS NATIONAL PARK

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description		Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
				From	To									
0010ZZ	43372		BADLANDS LOOP ROADS	FROM PARK BOUNDARY AT NORTHEAST ENTRANCE	TO PARK BOUNDARY AT PINNACLES ENTRANCE	NORTH UNIT	27.960	0.000	27.960	1		9,981	AS	1,2
0011	43370		ENTRANCE ROAD (HIGHWAY 377)	FROM ROUTE 0010AZ	TO PARK BOUNDARY AT INTERIOR ENTRANCE	NORTH UNIT	0.690	0.000	0.690	1		0	AS	2
0200	43362		SHEEP MOUNTAIN TABLE ROAD	FROM COUNTY ROUTE 589 (SOUTH)	TO STONY PASS	SOUTH UNIT	0.000	7.260	7.260	3		0	GR	
0201	43361		SAGE CREEK RIM ROAD	FROM ROUTE 0010AZ AT MP 27.09 ON LEFT (WEST)	TO HOCKING "Y"	NORTH UNIT	0.000	6.450	6.450	3		0	GR	
0202	43359		SAGE CREEK CAMPGROUND ACCESS ROAD	FROM COUNTY ROUTE 590	TO CAMPGROUND	NORTH UNIT	0.000	1.420	1.420	3		0	GR	
0203ZZ	N/A		CEDAR PASS CAMPGROUND ROADS	FROM ROUTE 0011 AT MP .1 ON LEFT	THROUGH CAMPGROUND	NORTH UNIT	1.070	0.000	1.070	3		0	AS	2
0204	43352		CONATA ROAD	FROM ROUTE 0010AZ AT MP 23.76 ON LEFT	TO PARK BOUNDARY AT CATTLE GUARD/END OF PAVEMENT	NORTH UNIT	1.650	0.000	1.650	3		0	AS	1
0205	27813		OLD NORTHEAST ROAD	FROM ROUTE 0010AZ AT MP 3.41 ON RIGHT	TO PARK BOUNDARY	NORTH UNIT	0.000	1.840	1.840	3		0	GR	
0206	61753		CEDAR PASS CABINS LOOP	FROM CONCESSION PARKING AREA	TO AROUND LOOP	NORTH UNIT	0.000	0.290	0.290	3		0	GR	
0207	43357		WEST INTERIOR ROAD	FROM ROUTE 0010AZ AT MP 8.44 ON LEFT	TO PARK BOUNDARY	NORTH UNIT	0.000	0.760	0.760	3		0	GR	
0208	61759		CONATA PICNIC AREA ROAD	FROM ROUTE 0204	TO END OF PAVEMENT AT TRAILHEAD	NORTH UNIT	0.210	0.000	0.210	3		0	AS	1
0209	27754		CEDAR PASS AGATE LOOP	FROM CEDAR PASS CAMPGROUND ROAD (GRAVEL PORTION)	TO AGATE CAMPGROUND LOOP	NORTH UNIT	0.000	0.760	0.760	3		0	GR	
0210	92852		QUINN ROAD	FROM ROUTE 0010AZ AT MP 19.76 ON RIGHT	TO END	NORTH UNIT	0.000	0.590	0.590	3		0	GR	
0211	92853		UPPER BIGFOOT ROAD	FROM ROUTE 0010AZ AT MP 13.85 ON LEFT	TO END	NORTH UNIT	0.000	0.370	0.370	3		0	GR	
0212	92854		COTTONWOOD PASS ROAD	FROM 7 MILES NORTH OF BADL SU STRONGHOLD VISITOR CENTER ON BIA ROAD 27, HEADS 8 MILES WEST TO BADL BOUNDARY	ROAD SPLITS TO THE NORTH 6 MILES IN AND GOES NORTH FOR 4 MILES TO PARK BOUNDARY	SOUTH UNIT	0.000	11.060	11.060	3		0	GR	
0213	92855		BLINDMAN TABLE ROAD	FROM 1.5 MILES EAST OF RED SHIRT VILLAGE ON BIA ROAD 41, SOUTH SOUTHEAST	TO BLIND MAN TABLE	SOUTH UNIT	0.000	6.590	6.590	3		0	GR	

# NPS/RIP Route ID Report

Road Inventory Program 10/16/2009

(Numerical By Route #)

Page 2 of 6

Shading Color Key:

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approx. mileage

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= Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## BADL

### BADLANDS NATIONAL PARK

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description		Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
				From	To									
0214	27758		CEDAR PASS CAMPGROUND GROUP LOOP ROAD	FROM ROUTE 0203AZ AT MP 0.06	TO ROUTE 0203AZ AT MP 0.03	NORTH UNIT	0.300	0.000	0.300	3		0	AS	2
0400	53282		CEDAR PASS MAINTENANCE ACCESS ROAD	FROM ROUTE 0010AZ AT MP 4.83 ON LEFT	TO COUNTY MAINTENANCE AT ROUTE 0906	NORTH UNIT	0.880	0.250	1.130	5		0	AS	2
0401	43353		RESIDENCE AREA ROAD AND PARKING	FROM ROUTE 0400 AT MP 0.19 ON LEFT	TO END OF PAVEMENT	NORTH UNIT	0.300	0.000	0.300	5		0	AS	2
0403	61755		WHITE RIVER PUMPHOUSE ROAD	FROM STATE HWY 44 (SOUTH)	TO END AT PUMPHOUSE	SOUTH UNIT	0.000	0.700	0.700	5		0	GR	
0404	61760		BUFFALO CORRAL ROAD	FROM SAGE CREEK RIM ROAD	TO CORRAL	NORTH UNIT	0.000	0.470	0.470	5		0	GR	
0405	61756		FIRING RANGE ROAD	FROM CEDAR PASS MAINTENANCE ACCESS ROAD	TO GATE AT FIRING RANGE	NORTH UNIT	0.000	2.260	2.260	5		0	GR	
0406	61757		WHITE RIVER WELL FIELD ROAD	FROM LOST DOG ROAD	TO END AT WELL FIELD AND WATER WELLS	SOUTH UNIT	0.000	0.900	0.900	5		0	GR	
0407	53284		PINNACLES RANGER STATION SERVICE ACCESS ROAD	FROM ROUTE 0010AZ AT MP 27.66 ON RIGHT	TO RANGER STATION UNPAVED PARKING	NORTH UNIT	0.100	0.000	0.100	5		0	AS	1
0408	61754		CEDAR PASS LODGE SERVICE ROAD	FROM CEDAR PASS LODGE PARKING	TO END AT TRAILERS	NORTH UNIT	0.000	0.130	0.130	5		0	GR	
0901	53286		BIG BADLANDS PARKING	ADJACENT TO ROUTE 0010AZ AT MP 0.46 ON LEFT		NORTH UNIT	0.000	0.000	0.000			41,282	AS	2
0902	28222		DOORS AND WINDOWS PARKING	ADJACENT TO ROUTE 0010AZ AT MP 2.60 ON LEFT		NORTH UNIT	0.000	0.000	0.000			121,894	AS	2
0903	43342		CLIFF SHELF NATURE TRAIL PARKING	ADJACENT TO ROUTE 0010AZ AT MP 4.19 ON LEFT		NORTH UNIT	0.000	0.000	0.000			21,038	AS	2
0904	53288		BEN REIFEL VISITOR CENTER PARKING	ADJACENT TO ROUTE 0010AZ AND ROUTE 0400		NORTH UNIT	0.000	0.000	0.000			23,003	AS	2
0905ZZ	53292		RV PARKING AND REAR VISITOR CENTER PARKING	ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.06 (ON RIGHT AND LEFT)		NORTH UNIT	0.000	0.000	0.000			66,499	AS	2
0906	53293		MAINTENANCE AREA PARKING	FROM ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.86 (ON RIGHT)	TO PARKING	NORTH UNIT	0.000	0.000	0.000			32,495	AS	2
0908	53295		CEDAR PASS LODGE PARKING	FROM ROUTE 0010AZ (BADLANDS LOOP (ROAD 240)) AT MP 4.97 (ON LEFT)	TO ROUTE 0010AZ (BADLANDS LOOP (ROAD 240)) AT MP 5.05 (ON LEFT)	NORTH UNIT	0.000	0.000	0.000			57,828	AS	2

# NPS/RIP Route ID Report

Road Inventory Program 10/16/2009

(Numerical By Route #)

Page 3 of 6

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## BADL

### BADLANDS NATIONAL PARK

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
0909	53296		AMPHITHEATER PARKING	FROM ROUTE 0203AZ TO PARKING (CEDAR PASS CAMPGROUND ROAD LOOP A) AT MP 0.01 (ON LEFT)	NORTH UNIT	0.000	0.000	0.000			18,023	AS	2
0910	92858		SADDLE PASS PARKING	ADJACENT TO ROUTE 0010AZ AT MP 6.85 ON RIGHT	NORTH UNIT	0.000	0.000	0.000			9,027	AS	2
0912	43187		FOSSIL TRAIL PARKING	ADJACENT TO ROUTE 0010AZ AT MP 9.72 ON LEFT	NORTH UNIT	0.000	0.000	0.000			58,744	AS	2
0913	53297		WHITE RIVER VALLEY OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 11.91 ON LEFT	NORTH UNIT	0.000	0.000	0.000			25,868	AS	2
0914	53298		BIGFOOT PASS PICNIC AREA	ADJACENT TO ROUTE 0010AZ AT MP 12.70 ON RIGHT	NORTH UNIT	0.000	0.000	0.000			33,077	AS	2
0915	53299		PANORAMA POINT OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 14.25 ON LEFT	NORTH UNIT	0.000	0.000	0.000			26,237	AS	2
0916	53300		PRAIRIE WINDS OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 15.71 ON RIGHT	NORTH UNIT	0.000	0.000	0.000			19,535	AS	1
0917	53301		BURNS BASIN OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 18.39 ON LEFT	NORTH UNIT	0.000	0.000	0.000			25,537	AS	1
0918	53302		HOMESTEAD OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 20.97 ON LEFT	NORTH UNIT	0.000	0.000	0.000			20,290	AS	1
0919	53303		CONATA BASIN OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 22.75 ON LEFT	NORTH UNIT	0.000	0.000	0.000			22,029	AS	1
0920	53304		YELLOW MOUNDS OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 23.45 ON LEFT	NORTH UNIT	0.000	0.000	0.000			11,592	AS	1
0921	53305		ANCIENT HUNTERS OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 26.06 ON RIGHT	NORTH UNIT	0.000	0.000	0.000			8,843	AS	1
0922	43338		PINNACLES OVERLOOK PARKING	ADJACENT TO ROUTE 0010AZ AT MP 26.64 ON LEFT	NORTH UNIT	0.000	0.000	0.000			33,396	AS	1
0923	92856		HAY BUTTE OVERLOOK PARKING	FROM ROUTE 0201 TO PARKING	NORTH UNIT	0.000	0.000	0.000			0	GR	

# NPS/RIP Route ID Report

Road Inventory Program 10/16/2009

(Numerical By Route #)

Page 4 of 6

Shading Color Key:  
Red text denotes approx. mileage

White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, ARAN not Driven

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

= Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## BADL

### BADLANDS NATIONAL PARK

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
0924	92857		PINNACLES ENTRANCE AND RANGER STATION PARKING	FROM ROUTE 0407 (SOUTH) TO PARKING	NORTH UNIT	0.000	0.000	0.000			0	GR	
0925	92859		ROBERTS PRAIRIE DOG TOWN	FROM ROUTE 0201 AT MP 4.7 TO PARKING	NORTH UNIT	0.000	0.000	0.000			0	GR	
0926	92860		SAGE CREEK BASIN OVERLOOK	FROM ROUTE 0201 AT MP 6.1 TO PARKING	NORTH UNIT	0.000	0.000	0.000			0	GR	
0927	92861		GUNNERY RANGE OVERLOOK PARKING	FROM ROUTE 0200 TO PARKING	SOUTH UNIT	0.000	0.000	0.000			0	GR	
0928	92863		WHITE RIVER VISITOR CENTER PARKING	FROM STATE HIGHWAY 27 TO PARKING	SOUTH UNIT	0.000	0.000	0.000			0	GR	
0929	99537		BADLANDS WILDERNESS OVERLOOK	FROM ROUTE 0201 AT MP 1.7 TO PARKING	NORTH UNIT	0.000	0.000	0.000			0	GR	
0930	92865		NORTH ENTRANCE SUPPORT BUILDING PARKING	ADJACENT TO ROUTE 0010AZ (BADLANDS LOOP (ROAD 240)) AT MP 0.30 (ON LEFT)	NORTH UNIT	0.000	0.000	0.000			4,220	AS	2
0931	97369		VOLUNTEER RV PARKING	FROM ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.16 (ON LEFT) TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.02 (ON LEFT)	NORTH UNIT	0.000	0.000	0.000			21,963	AS	2
0932	N/A		CEDAR PASS DUMP STATION PARKING	ADJACENT TO ROUTE 0214 (CEDAR PASS CAMPGROUND GROUP LOOP ROAD) AT MP 0.05 (ON RIGHT)	NORTH UNIT	0.000	0.000	0.000			8,077	AS	2
0933	115273		CEDAR PASS FIRE CACHE PARKING	FROM ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.41 (ON LEFT) TO PARKING	NORTH UNIT	0.000	0.000	0.000			24,565	AS	2
0934ZZ	N/A		RESIDENCE AREA PARKING LOTS	FROM ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.09 (ON LEFT) TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.29 (ON LEFT)	NORTH UNIT	0.000	0.000	0.000			8,106	AS	2
0935	N/A		ADMINISTRATIVE PARKING	FROM ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.16 (ON RIGHT) TO PARKING	NORTH UNIT	0.000	0.000	0.000			6,265	AS	2
0936	115627		INTERIOR ENTRANCE BOOTH PARKING LOT	ADJACENT TO ROUTE 0011 (ENTRANCE ROAD (HIGHWAY 377)) AT MP 0.56 (ON RIGHT)	NORTH UNIT	0.000	0.000	0.000			1,112	AS	2



# NPS/RIP Route ID Report

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Grey = Paved Routes, ARAN not Driven	Black = Paved State, Local or Private non-NPS Routes, ARAN Driven		■ = Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## 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 Inventoried 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 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.

\*\*\*\*\*  
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 discontinued for future use.

5000 route numbers are assigned to Non-NPS Routes that are State, County or City owned which border, traverse, or provide access to Park Facilities or Assets. 5000 Routes are driven for GPS, Video Log and Road Features only.

## Surface Type Abbreviations:

- AS - Asphaltic Concrete Pavement**
- CO - Portland Cement Concrete Pavement**
- BR - Brick or Pavers Road Bed**
- CB - Cobble Stone Road Bed**
- GR - Gravel Road Bed**
- SA - Sand Road Bed**
- NV - Native or Dirt Material Road Bed**
- OT - Other Materials Road Bed**

# NPS/RIP Subcomponent Details for BADL

Road Inventory Program 10/16/2009

(Numerical By Subcomponent #)

Page 1 of 2

Shading Color Key:

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White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, ARAN not Driven

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

■ = Concession Route Flag ON

■ = Subcomponent Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## BADL

*BADLANDS NATIONAL PARK*

### Asset Entered in FMSS System

Rte. No.	FMSS No.	Sub Comp	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0010ZZ	43372		BADLANDS LOOP ROADS	FROM PARK BOUNDARY AT NORTHEAST ENTRANCE	TO PARK BOUNDARY AT PINNACLES ENTRANCE		1	27.96	0.00	27.96	9,981
0203ZZ	N/A		CEDAR PASS CAMPGROUND ROADS	FROM ROUTE 0011 AT MP .1 ON LEFT	THROUGH CAMPGROUND		3	1.07	0.00	1.07	0
0905ZZ	53292		RV PARKING AND REAR VISITOR CENTER PARKING	ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.06 (ON RIGHT AND LEFT)				0.00	0.00	0.00	66,499
0934ZZ	N/A		RESIDENCE AREA PARKING LOTS	FROM ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.09 (ON LEFT)	TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.29 (ON LEFT)			0.00	0.00	0.00	8,106

### Asset BADL-0010ZZ Subcomponent Breakdown

Rte. No.	FMSS No.	Sub Comp	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0010AZ	43372	■	BADLANDS LOOP (ROAD 240)	FROM PARK BOUNDARY AT NORTHEAST ENTRANCE	TO PARK BOUNDARY AT NORTHWEST/PINNACLES ENTRANCE		1	27.92	0.00	27.92	0
0010BZ	43372	■	NORTH EAST ENTRANCE TURNAROUND	FROM ROUTE 0010AZ AT MP 0.35	TO ROUTE 0010AZ AT MP 0.38		1	0.04	0.00	0.04	9,981

### Asset BADL-0203ZZ Subcomponent Breakdown

Rte. No.	FMSS No.	Sub Comp	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0203AAZ	N/A	■	CEDAR PASS CAMPGROUND ROAD AA	FROM ROUTE 0203AZ AT MP 0.20	TO ROUTE 0203AZ AT MP 0.40		3	0.13	0.00	0.13	0
0203AZ	N/A	■	CEDAR PASS CAMPGROUND ROAD LOOP A	FROM ROUTE 0011 AT MP .07 ON LEFT	TO END OF LOOP		3	0.54	0.00	0.54	0
0203BAZ	N/A	■	CEDAR PASS CAMPGROUND ROAD BA	FROM ROUTE 0203BZ AT MP 0.11	TO ROUTE 0203BZ AT MP 0.30		3	0.07	0.00	0.07	0
0203BZ	N/A	■	CEDAR PASS CAMPGROUND ROAD LOOP B	FROM ROUTE 0203AZ	TO END OF LOOP		3	0.33	0.00	0.33	0

# NPS/RIP Subcomponent Details for BADL

Road Inventory Program 10/16/2009

(Numerical By Subcomponent #)

Page 2 of 2

Shading Color Key:

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White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, ARAN not Driven

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

■ = Concession Route Flag ON

■ = Subcomponent Flag ON

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## BADL

*BADLANDS NATIONAL PARK*

### Asset BADL-0905ZZ Subcomponent Breakdown

Rte. No.	FMSS No.	Sub Comp	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0905AZ	53292	■	RV PARKING	ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.06 (ON RIGHT)				0.00	0.00	0.00	9,531
0905BZ	53292	■	REAR VISITOR CENTER PARKING	ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.09 (ON LEFT)				0.00	0.00	0.00	56,968

### Asset BADL-0934ZZ Subcomponent Breakdown

Rte. No.	FMSS No.	Sub Comp	Route Name	From	To	Concess Route	Func. Class	Paved Miles	Un-Paved Miles	Total Route Length	Manual Rated SQ/FT
0934AZ	N/A	■	RESIDENCE AREA PARKING A	ADJACENT TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.09 (ON LEFT)				0.00	0.00	0.00	3,985
0934BZ	N/A	■	RESIDENCE AREA PARKING B	ADJACENT TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.25 (ON LEFT)				0.00	0.00	0.00	1,810
0934CZ	N/A	■	RESIDENCE AREA PARKING C	ADJACENT TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.29 (ON LEFT)				0.00	0.00	0.00	2,311

# Badlands National Park



## **Section 5** **Paved Route Condition Rating Sheets** **(CRS)**



PCR	Poor	Fair	Good	Excellent	No Data
	(≤60)	(61 - 84)	(85 - 94)	(95 - 100)	

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0010ZZ BADLANDS LOOP ROADS**  
**BADL : BADLANDS NATIONAL PARK**

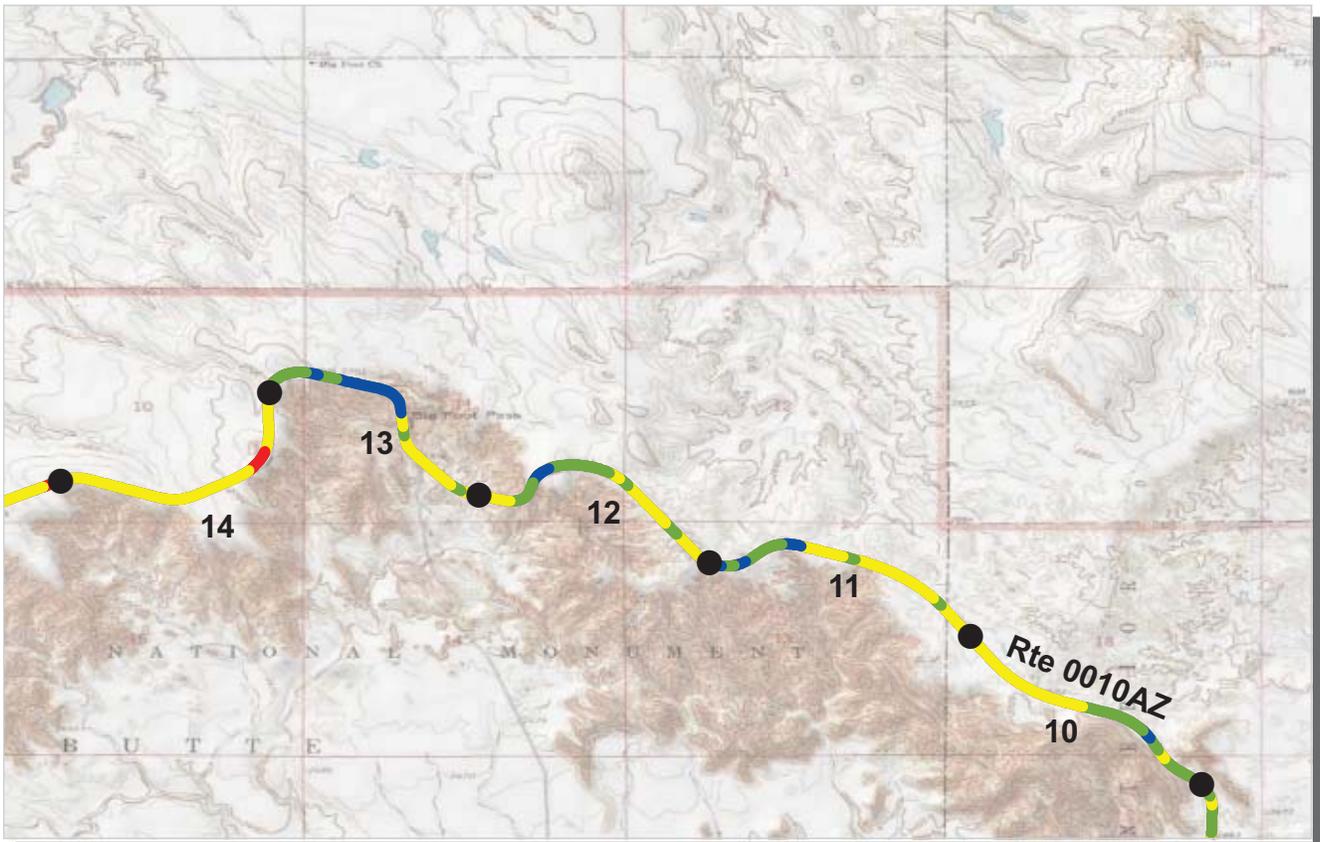
Summary Record COLLECTED: 10/14/2008  
**MIDWEST REGION** TOTAL LENGTH: 27.96 Miles

<b>Section Number</b>					
<b>Section Length (mi)</b>					
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	N/A				
Paved Width (ft)	N/A				
Lane Width (ft)	N/A				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	74				
PCR (Pavement Condition Rating)	75				
<b>Distress Index Values</b>					
Alligator Cracking Index	N/A				
Longitudinal Cracking Index	N/A				
Transverse Cracking Index	N/A				
Patching Index	N/A				
Rutting Index	N/A				
Roughness Condition Index (RCI)	N/A				

**ROUTE: 0010ZZ BADLANDS LOOP ROADS**







PCR Poor (≤60) Fair (61 - 84) Good (85 - 94) Excellent (95 - 100) No Data

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0010AZ BADLANDS LOOP (ROAD 240)**  
**BADL : BADLANDS NATIONAL PARK**

Subcomponent Record **COLLECTED: 10/14/2008**  
**MIDWEST REGION TOTAL LENGTH: 27.92 Miles**

Section Number	10	11	12	13	14
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	26	25	28	28	23
Lane Width (ft)	11	11	11	11	10
Shoulder Width Right (ft)	NC	NC	NC	NC	NC
Shoulder Width Left (ft)	NC	NC	NC	NC	NC
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	74	76	84	90	65
PCR (Pavement Condition Rating)	84	86	87	85	73
<b>Distress Index Values</b>					
Alligator Cracking Index	100	100	100	100	100
Longitudinal Cracking Index	100	100	100	99	100
Transverse Cracking Index	100	100	99	99	97
Patching Index	100	100	100	100	100
Rutting Index	74	76	85	92	69
Roughness Condition Index (RCI)	98	99	91	78	86

ROUTE: 0010AZ BADLANDS LOOP (ROAD 240)

NC - Not Collected









PCR    Poor ■    Fair ■    Good ■    Excellent ■    No Data ■  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0011 ENTRANCE ROAD (HIGHWAY 377)**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 0.69 Miles**

**MIDWEST REGION**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.69				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	28				
Lane Width (ft)	11				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	84				
PCR (Pavement Condition Rating)	78				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	99				
Transverse Cracking Index	97				
Patching Index	100				
Rutting Index	88				
Roughness Condition Index (RCI)	69				

**ROUTE: 0011 ENTRANCE ROAD (HIGHWAY 377)**





PCR    Poor ■    Fair ■    Good ■    Excellent ■    No Data ■  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0203AAZ CEDAR PASS CAMPGROUND ROAD AA**  
**BADL : BADLANDS NATIONAL PARK**

Subcomponent Record

**COLLECTED: 10/14/2008**

**MIDWEST REGION**

**TOTAL LENGTH: 0.13 Miles**

**ROUTE: 0203AAZ CEDAR PASS CAMPGROUND ROAD AA**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.13				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	28				
Lane Width (ft)	14				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	64				
PCR (Pavement Condition Rating)	56				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	100				
Transverse Cracking Index	100				
Patching Index	100				
Rutting Index	64				
Roughness Condition Index (RCI)	44				









PCR	Poor	Fair	Good	Excellent	No Data
	(≤60)	(61 - 84)	(85 - 94)	(95 - 100)	

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0204 CONATA ROAD**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 1.65 Miles**

**MIDWEST REGION**

Section Number	0	1			
Section Length (mi)	1.00	0.65			
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2	2			
Paved Width (ft)	25	24			
Lane Width (ft)	10	10			
Shoulder Width Right (ft)	NC	NC			
Shoulder Width Left (ft)	NC	NC			
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	72	46			
PCR (Pavement Condition Rating)	69	47			
<b>Distress Index Values</b>					
Alligator Cracking Index	100	99			
Longitudinal Cracking Index	100	98			
Transverse Cracking Index	100	99			
Patching Index	100	99			
Rutting Index	72	50			
Roughness Condition Index (RCI)	64	49			

**ROUTE: 0204 CONATA ROAD**



PCR    Poor █    Fair █    Good █    Excellent █    No Data █  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0208 CONATA PICNIC AREA ROAD**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 0.21 Miles**

**MIDWEST REGION**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.21				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	22				
Lane Width (ft)	11				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	71				
PCR (Pavement Condition Rating)	58				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	100				
Transverse Cracking Index	100				
Patching Index	100				
Rutting Index	71				
Roughness Condition Index (RCI)	36				

**ROUTE: 0208 CONATA PICNIC AREA ROAD**



PCR    Poor ■    Fair ■    Good ■    Excellent ■    No Data ■  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

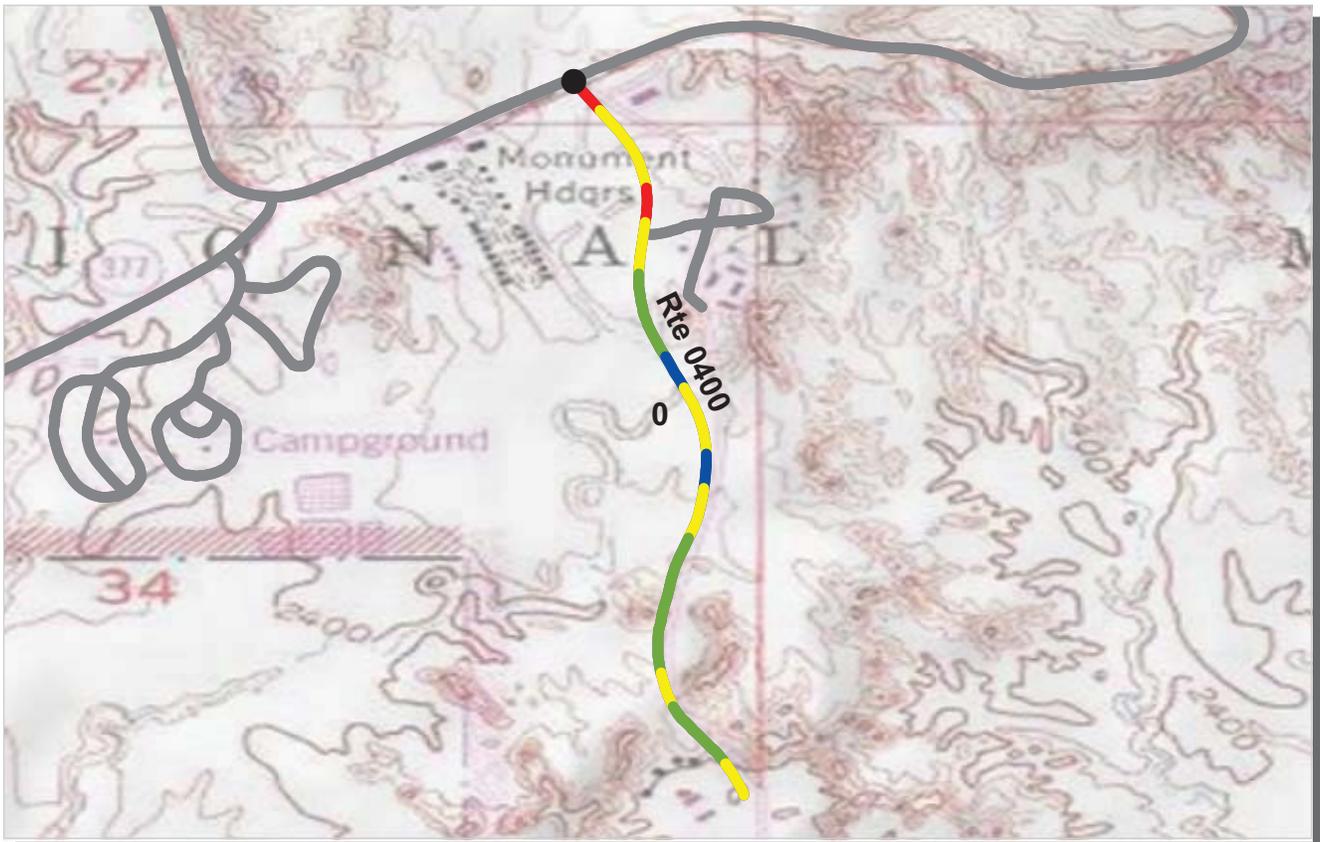
**ROUTE: 0214 CEDAR PASS CAMPGROUND GROUP LOOP ROAD**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 0.30 Miles**

**MIDWEST REGION**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.30				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	1				
Paved Width (ft)	20				
Lane Width (ft)	20				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	87				
PCR (Pavement Condition Rating)	78				
<b>Distress Index Values</b>					
Alligator Cracking Index	99				
Longitudinal Cracking Index	98				
Transverse Cracking Index	100				
Patching Index	100				
Rutting Index	90				
Roughness Condition Index (RCI)	60				

ROUTE: 0214 CEDAR PASS CAMPGROUND GROUP LOOP ROAD



PCR	Poor	Fair	Good	Excellent	No Data
	(≤60)	(61 - 84)	(85 - 94)	(95 - 100)	

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0400 CEDAR PASS MAINTENANCE ACCESS ROAD**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 0.88 Miles**

**MIDWEST REGION**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.88				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	23				
Lane Width (ft)	12				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	83				
PCR (Pavement Condition Rating)	81				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	97				
Transverse Cracking Index	98				
Patching Index	98				
Rutting Index	90				
Roughness Condition Index (RCI)	79				

**ROUTE: 0400 CEDAR PASS MAINTENANCE ACCESS ROAD**



PCR    Poor ■    Fair ■    Good ■    Excellent ■    No Data ■  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0401 RESIDENCE AREA ROAD AND PARKING**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 0.30 Miles**

**MIDWEST REGION**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.30				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	20				
Lane Width (ft)	10				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	75				
PCR (Pavement Condition Rating)	74				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	100				
Transverse Cracking Index	100				
Patching Index	100				
Rutting Index	75				
Roughness Condition Index (RCI)	29				

**ROUTE: 0401 RESIDENCE AREA ROAD AND PARKING**



PCR	Poor	Fair	Good	Excellent	No Data
	(≤60)	(61 - 84)	(85 - 94)	(95 - 100)	

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**ROUTE: 0407 PINNACLES RANGER STATION SERVICE ACCESS ROAD**  
**BADL : BADLANDS NATIONAL PARK**

**COLLECTED: 10/14/2008**  
**TOTAL LENGTH: 0.10 Miles**

**MIDWEST REGION**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.10				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on PROGRAMS / NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	22				
Lane Width (ft)	11				
Shoulder Width Right (ft)	NC				
Shoulder Width Left (ft)	NC				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	92				
PCR (Pavement Condition Rating)	89				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	95				
Transverse Cracking Index	100				
Patching Index	100				
Rutting Index	97				
Roughness Condition Index (RCI)	85				

ROUTE: 0407 PINNACLES RANGER STATION SERVICE ACCESS ROAD

# Badlands National Park



## **Section 6**

### **Manually Rated Paved Route Condition Rating Sheets (MRR)**

# BADLANDS NATIONAL PARK

## Route 0010ZZ

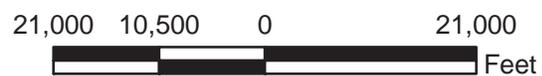
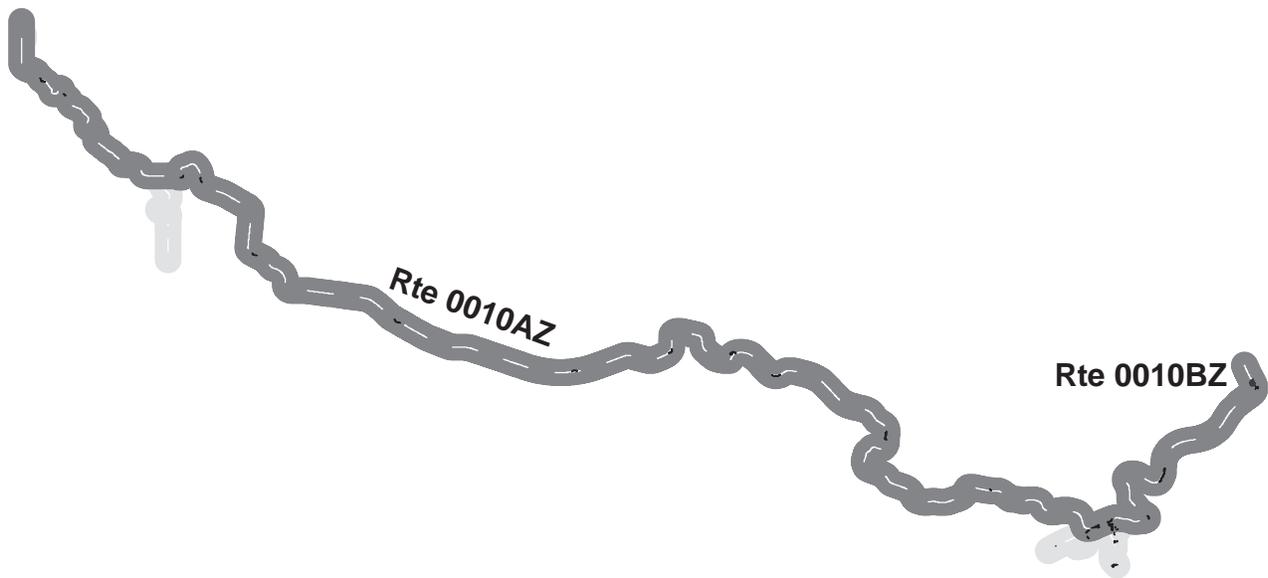
### BADLANDS LOOP ROADS

FROM PARK BOUNDARY AT NORTHEAST ENTRANCE  
TO PARK BOUNDARY AT PINNACLES ENTRANCE

#### Summary Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0010ZZ	PUBLIC	10/14/2008		9,981	64.26	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	2	0	N/A	N/A	SUMMARY/74.61

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0010BZ

NORTH EAST ENTRANCE TURNAROUND

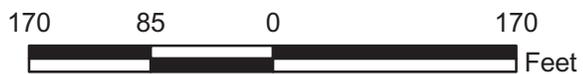
FROM ROUTE 0010AZ AT MP 0.35

TO ROUTE 0010AZ AT MP 0.38

Subcomponent Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0010BZ	PUBLIC	5/12/2008		9,981	0.17	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	CONCRETE CURB AND GUTTER	CONCRETE CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# Badlands National Park



## **Section 7** **Parking Area Condition Rating Sheets**

# BADLANDS NATIONAL PARK

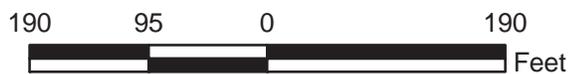
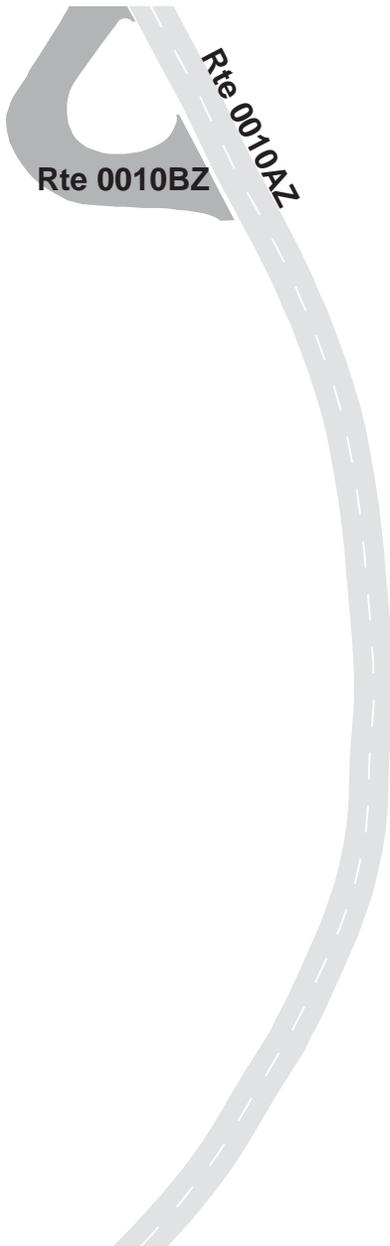
## Route 0901

### BIG BADLANDS PARKING

ADJACENT TO ROUTE 0010AZ AT MP 0.46 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0901	PUBLIC	5/12/2008		41,282	0.71	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	3	0	0	CONCRETE CURB AND GUTTER	CONCRETE & WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



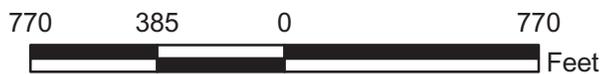
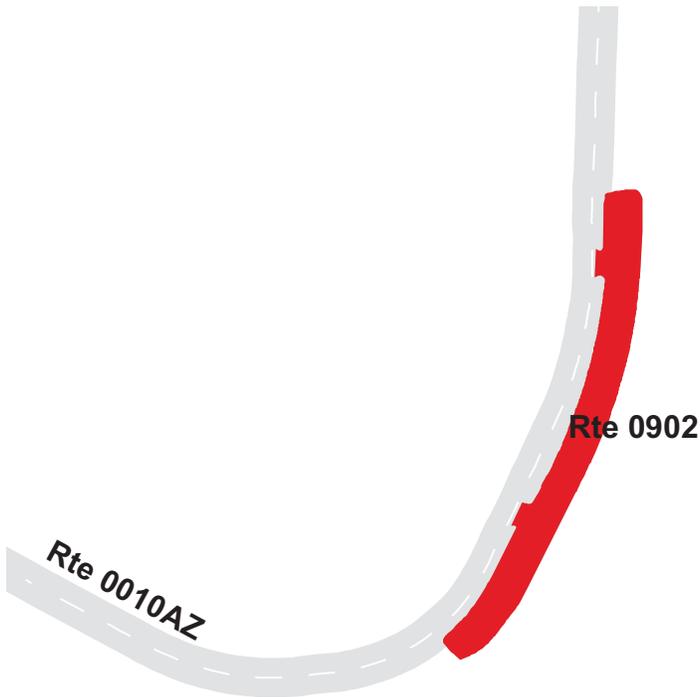
# BADLANDS NATIONAL PARK

## Route 0902

DOORS AND WINDOWS PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 2.60 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0902	PUBLIC	5/12/2008		121,894	2.10	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	5	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



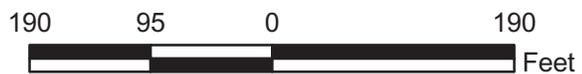
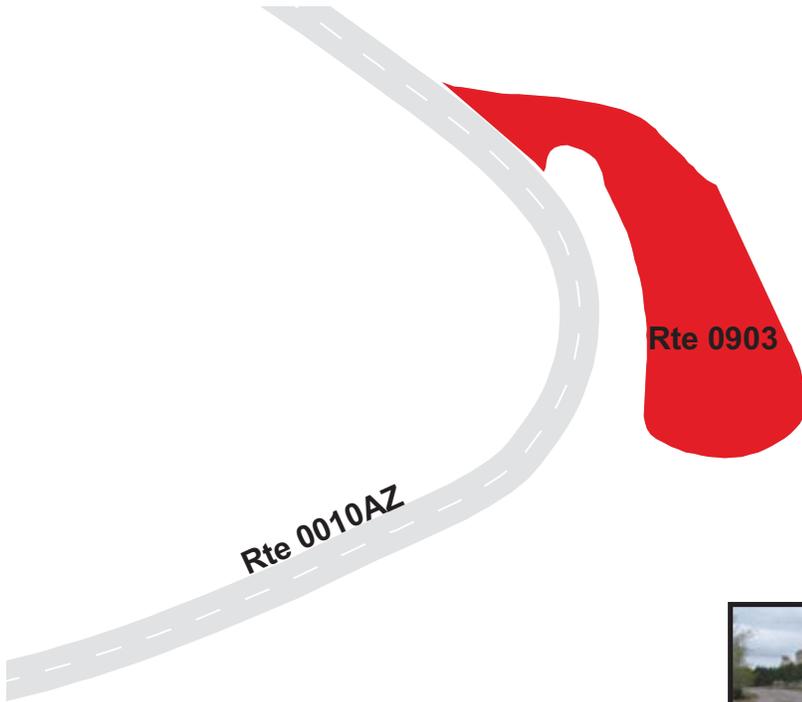
# BADLANDS NATIONAL PARK

## Route 0903

CLIFF SHELF NATURE TRAIL PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 4.19 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0903	PUBLIC	5/12/2008		21,038	0.36	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	1	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



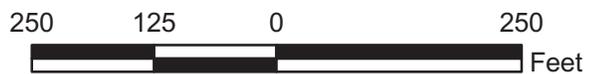
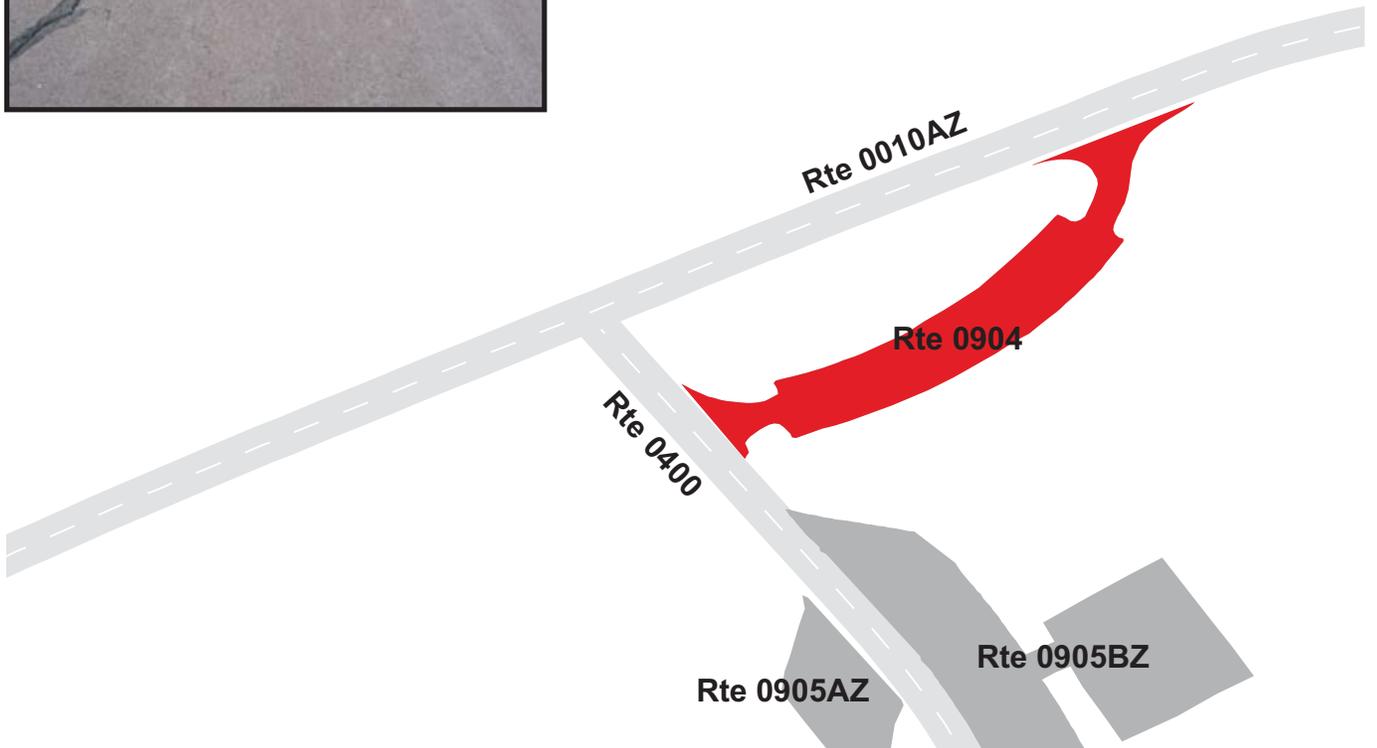
# BADLANDS NATIONAL PARK

## Route 0904

BEN REIFEL VISITOR CENTER PARKING  
 ADJACENT TO ROUTE 0010AZ AND ROUTE 0400

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0904	PUBLIC	5/12/2008		23,003	0.40	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	1	0	0	CONCRETE CURB AND GUTTER	CONCRETE CURB	POOR/45

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0905ZZ

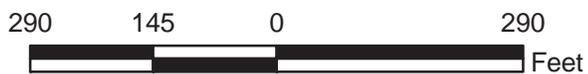
### RV PARKING AND REAR VISITOR CENTER PARKING

ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.06 (ON RIGHT AND LEFT)

Summary Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0905ZZ	PUBLIC	5/12/2008		66,499	1.15	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
1	0	0	0	NO CURB AND GUTTER	NO CURB	SUMMARY/75.44

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0905AZ

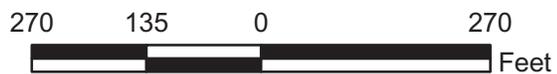
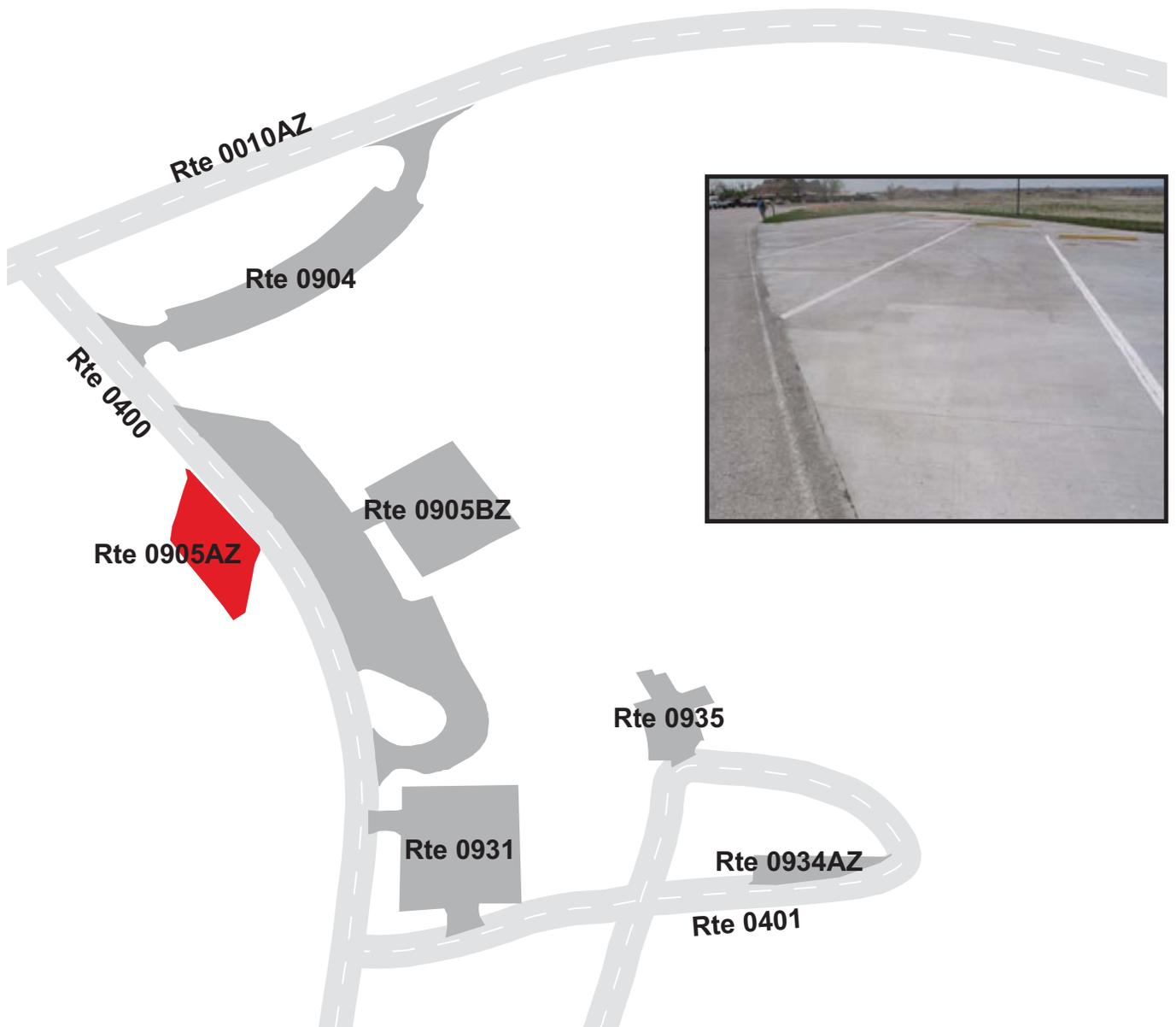
### RV PARKING

ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.06 (ON RIGHT)

Subcomponent Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0905AZ	PUBLIC	5/12/2008		9,531	0.16	CO
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0905BZ

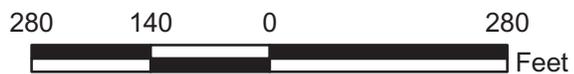
### REAR VISITOR CENTER PARKING

ADJACENT TO ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.09 (ON LEFT)

Subcomponent Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0905BZ	PUBLIC	5/12/2008		56,968	0.98	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
1	0	0	0	NO CURB AND GUTTER	NO CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

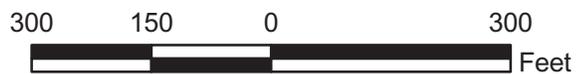
## Route 0906

### MAINTENANCE AREA PARKING

FROM ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.86 (ON RIGHT)  
TO PARKING

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0906	NONPUBLIC	5/12/2008		32,495	0.56	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	1	NO CURB AND GUTTER	NO CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0908

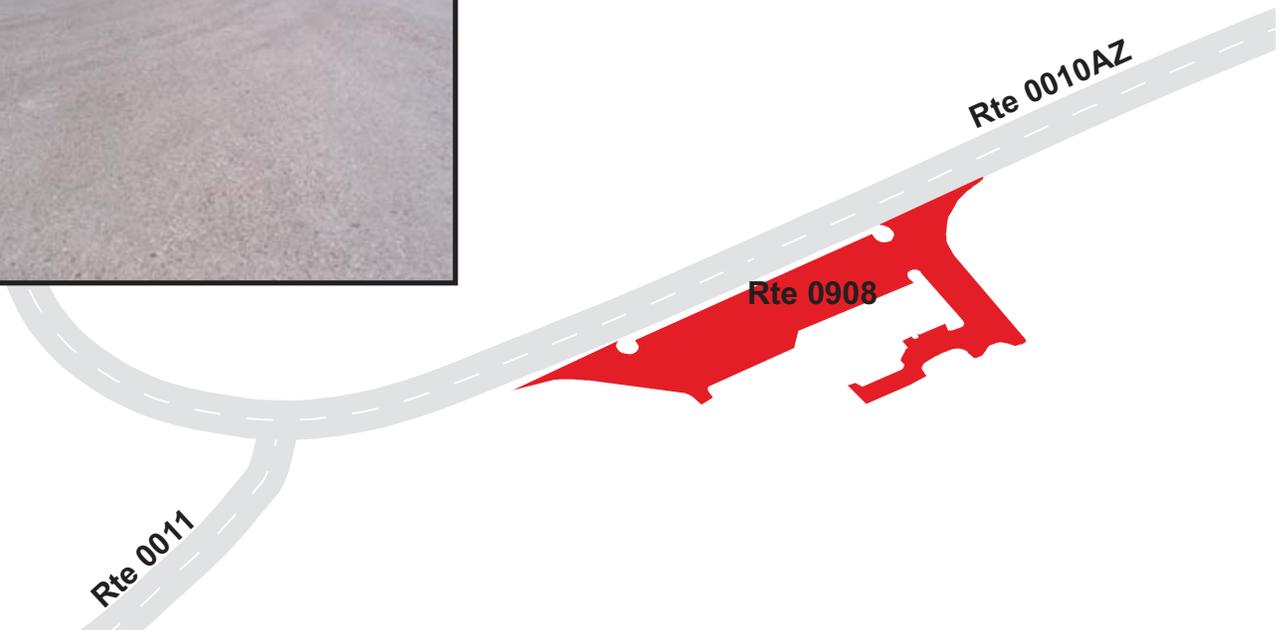
### CEDAR PASS LODGE PARKING

FROM ROUTE 0010AZ (BADLANDS LOOP (ROAD 240)) AT MP 4.97 (ON LEFT)

TO ROUTE 0010AZ (BADLANDS LOOP (ROAD 240)) AT MP 5.05 (ON LEFT)

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0908	PUBLIC	5/12/2008		57,828	1.00	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	2	0	1	CONCRETE CURB AND GUTTER	CONCRETE CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

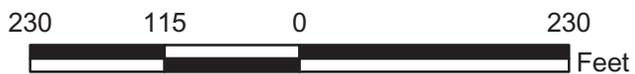
## Route 0909

### AMPHITHEATER PARKING

FROM ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A) AT MP 0.01 (ON LEFT)  
TO PARKING

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0909	PUBLIC	5/12/2008		18,023	0.31	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

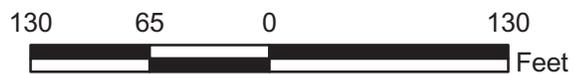
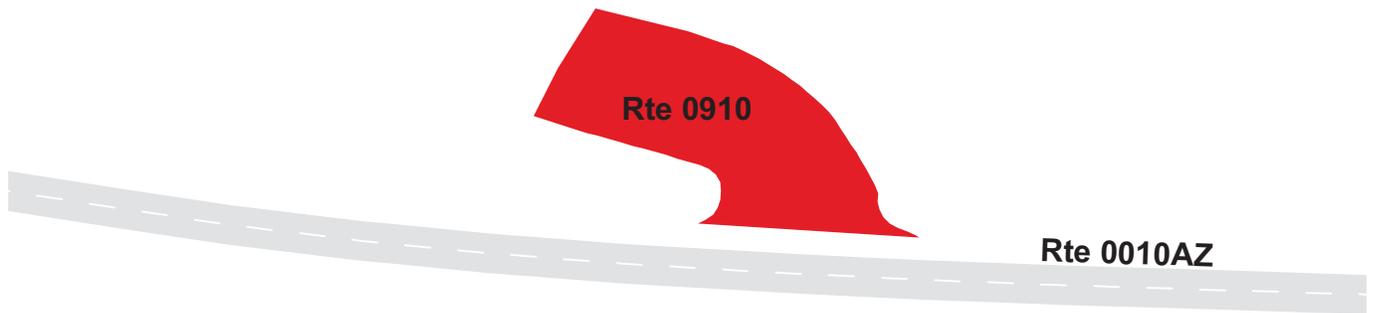
## Route 0910

### SADDLE PASS PARKING

ADJACENT TO ROUTE 0010AZ AT MP 6.85 ON RIGHT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0910	PUBLIC	5/12/2008		9,027	0.16	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

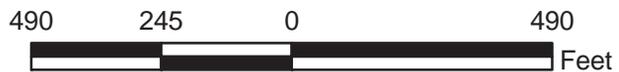
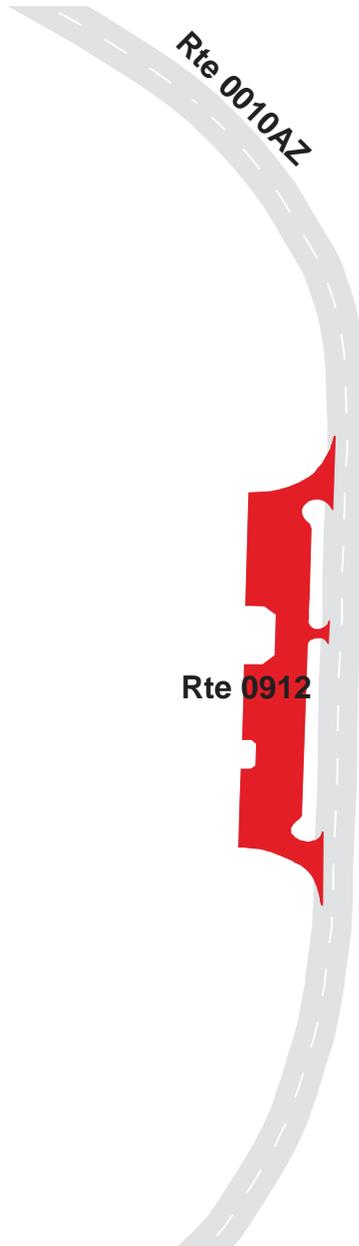
## Route 0912

### FOSSIL TRAIL PARKING

ADJACENT TO ROUTE 0010AZ AT MP 9.72 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0912	PUBLIC	5/12/2008		58,744	1.01	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	2	0	0	CONCRETE CURB AND GUTTER	CONCRETE & WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0913

WHITE RIVER VALLEY OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 11.91 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0913	PUBLIC	5/12/2008		25,868	0.45	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

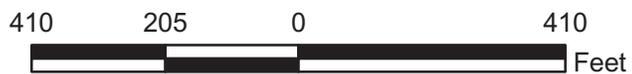
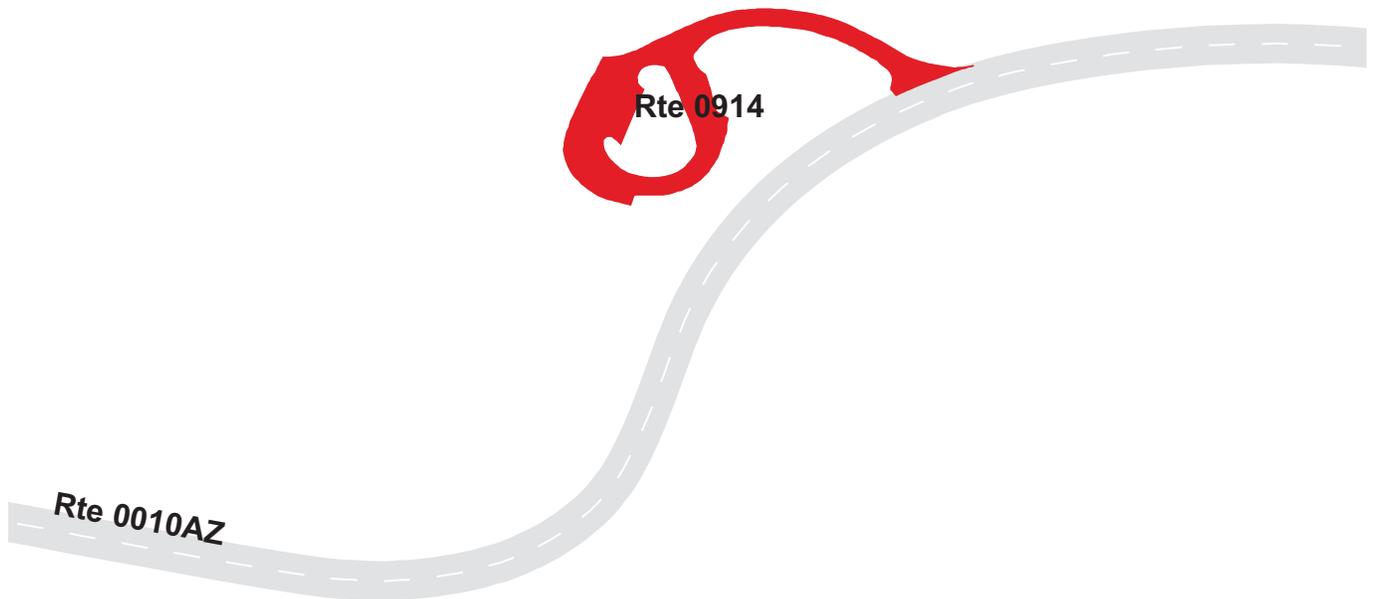
## Route 0914

### BIGFOOT PASS PICNIC AREA

ADJACENT TO ROUTE 0010AZ AT MP 12.70 ON RIGHT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0914	PUBLIC	5/12/2008		33,077	0.57	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
1	0	0	0	NO CURB AND GUTTER	WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



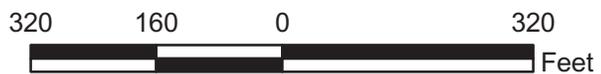
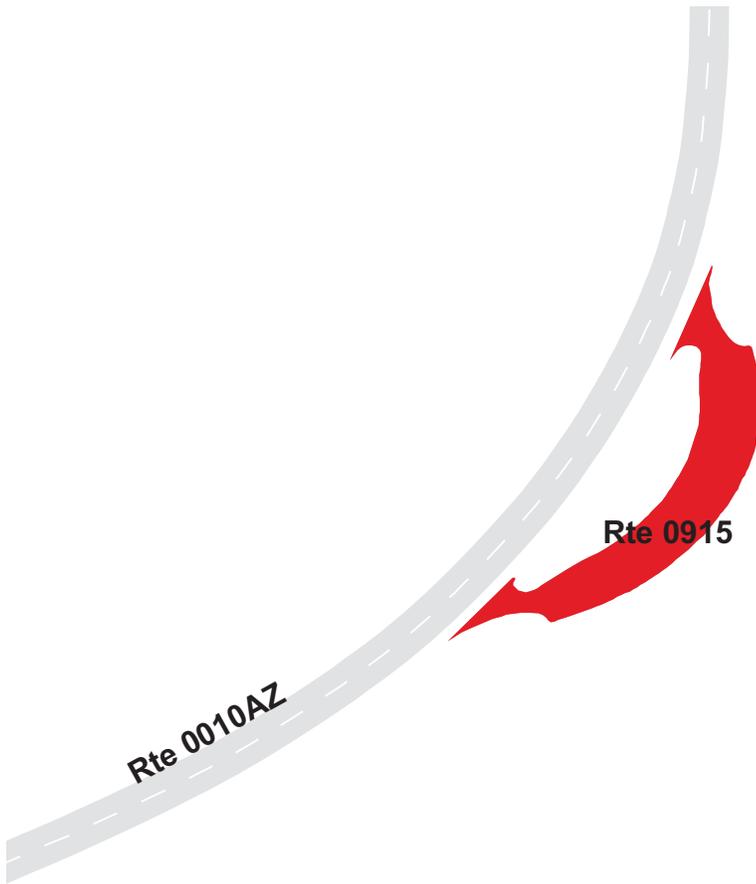
# BADLANDS NATIONAL PARK

## Route 0915

PANORAMA POINT OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 14.25 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0915	PUBLIC	5/12/2008		26,237	0.45	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



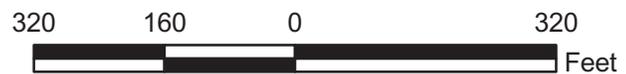
# BADLANDS NATIONAL PARK

## Route 0916

PRAIRIE WINDS OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 15.71 ON RIGHT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0916	PUBLIC	5/12/2008		19,535	0.34	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	POOR/45

\* Lane miles are based on 11' lane widths



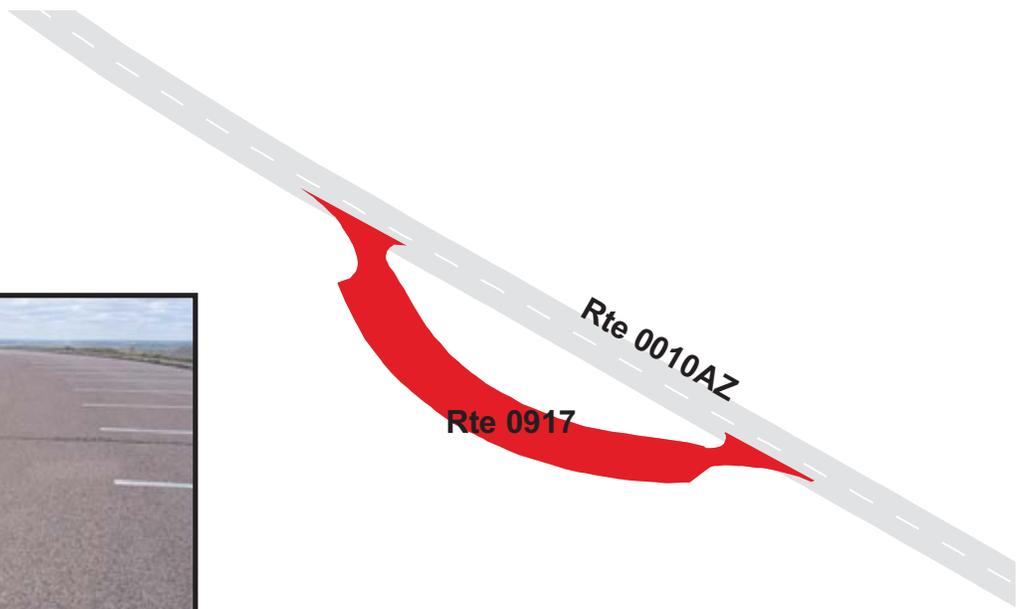
# BADLANDS NATIONAL PARK

## Route 0917

BURNS BASIN OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 18.39 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0917	PUBLIC	5/12/2008		25,537	0.44	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

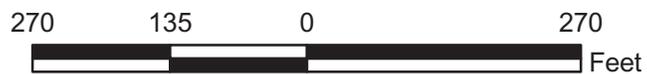
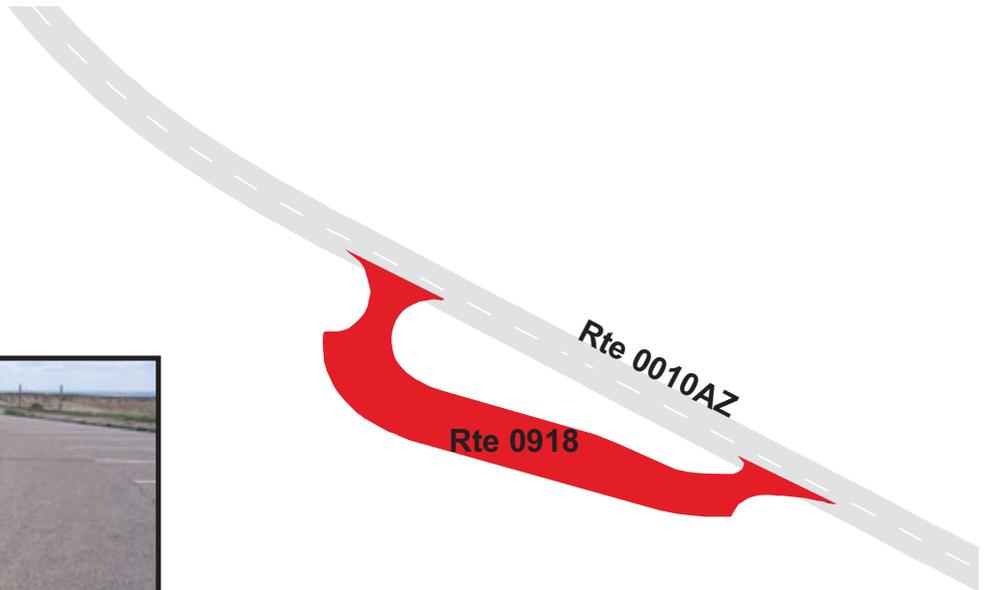
## Route 0918

### HOMESTEAD OVERLOOK PARKING

ADJACENT TO ROUTE 0010AZ AT MP 20.97 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0918	PUBLIC	5/12/2008		20,290	0.35	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	1	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



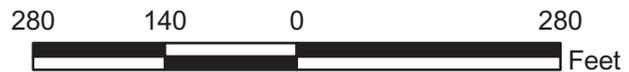
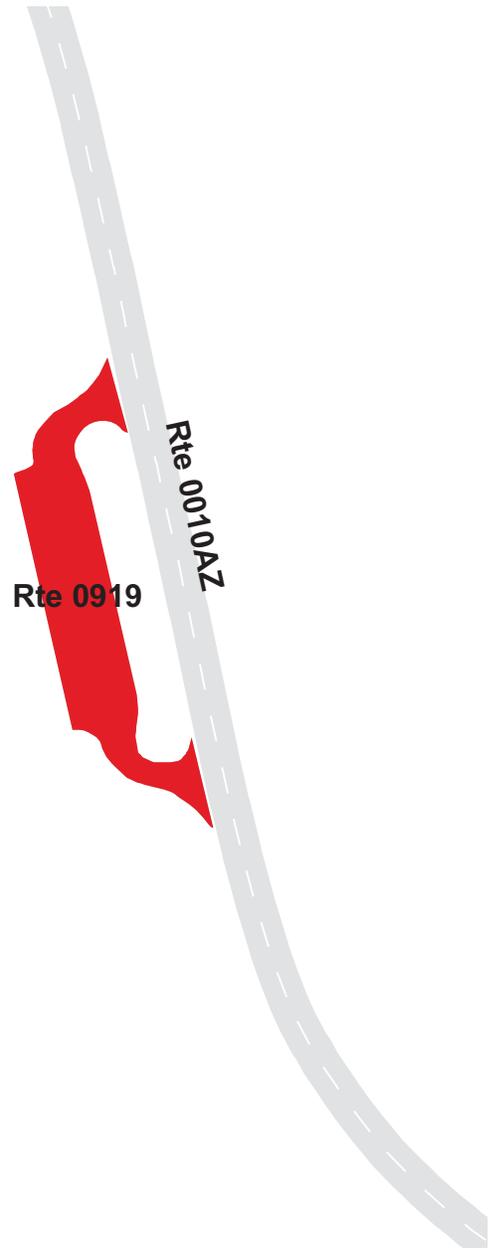
# BADLANDS NATIONAL PARK

## Route 0919

CONATA BASIN OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 22.75 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0919	PUBLIC	5/12/2008		22,029	0.38	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



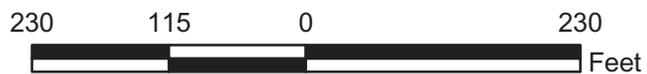
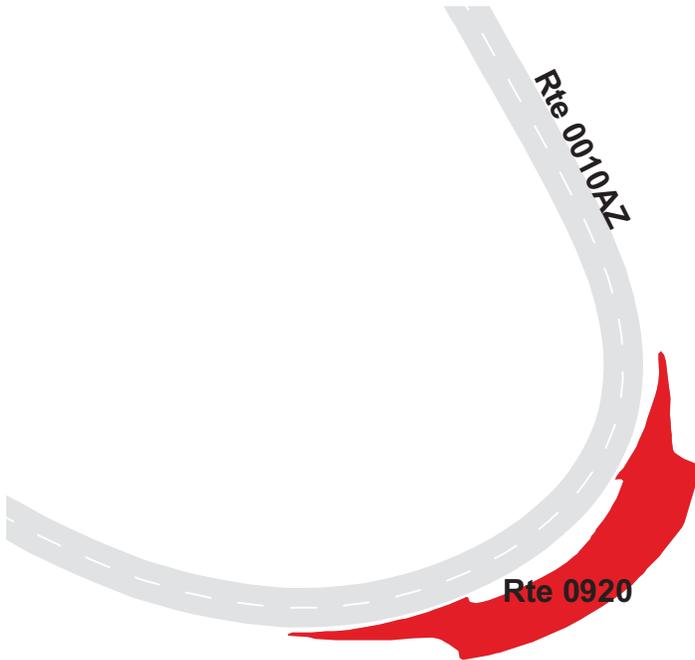
# BADLANDS NATIONAL PARK

## Route 0920

YELLOW MOUNDS OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 23.45 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0920	PUBLIC	5/12/2008		11,592	0.20	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	1	0	0	NO CURB AND GUTTER	WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



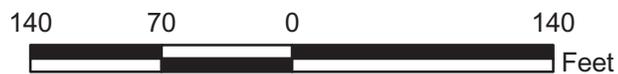
# BADLANDS NATIONAL PARK

## Route 0921

ANCIENT HUNTERS OVERLOOK PARKING  
 ADJACENT TO ROUTE 0010AZ AT MP 26.06 ON RIGHT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0921	PUBLIC	5/12/2008		8,843	0.15	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
1	1	0	0	NO CURB AND GUTTER	WOOD CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

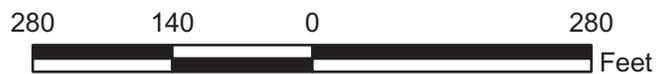
## Route 0922

### PINNACLES OVERLOOK PARKING

ADJACENT TO ROUTE 0010AZ AT MP 26.64 ON LEFT

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0922	PUBLIC	5/12/2008		33,396	0.58	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	WOOD CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

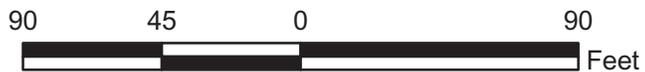
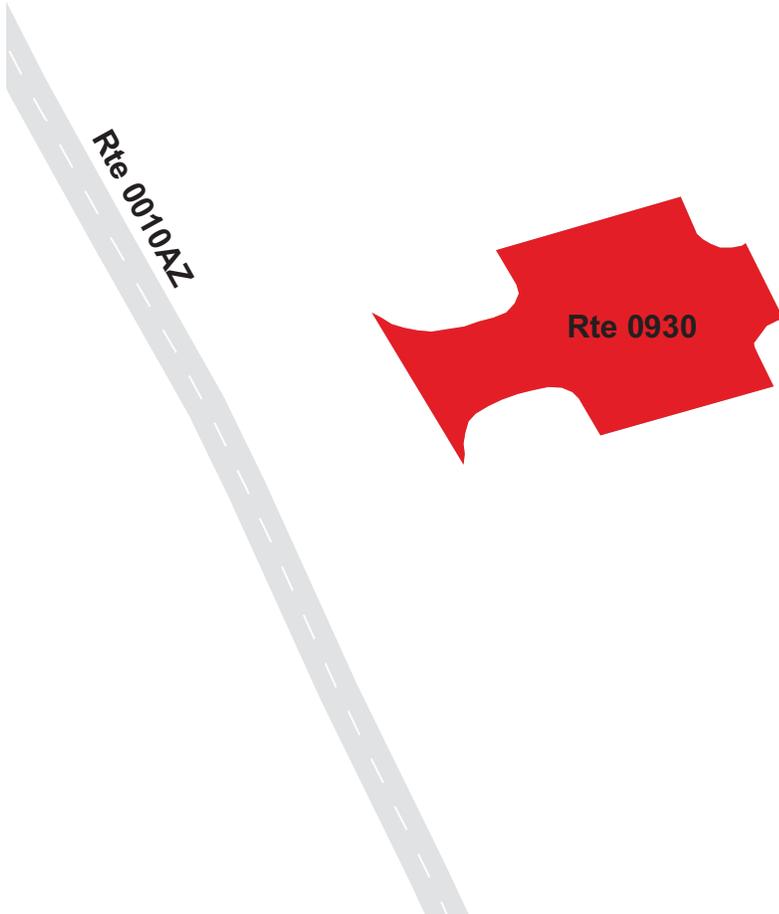
## Route 0930

NORTH ENTRANCE SUPPORT BUILDING PARKING

ADJACENT TO ROUTE 0010AZ (BADLANDS LOOP (ROAD 240)) AT MP 0.30 (ON LEFT)

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0930	NONPUBLIC	5/12/2008		4,220	0.07	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
1	1	0	0	CONCRETE CURB AND GUTTER	CONCRETE CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0931

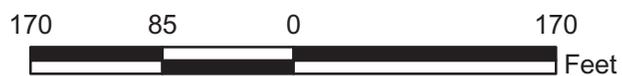
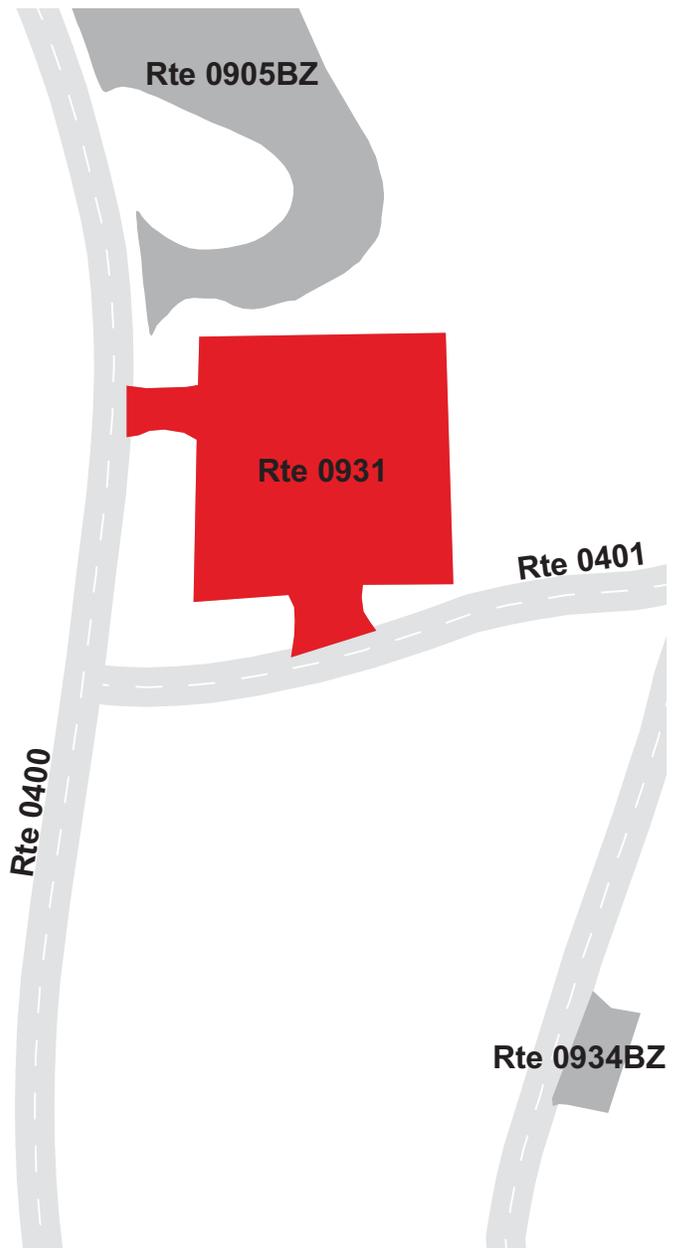
### VOLUNTEER RV PARKING

FROM ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.16 (ON LEFT)

TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.02 (ON LEFT)

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0931	PUBLIC	5/12/2008		21,963	0.38	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	EXCELLENT/97

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

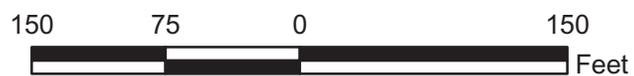
## Route 0932

### CEDAR PASS DUMP STATION PARKING

ADJACENT TO ROUTE 0214 (CEDAR PASS CAMPGROUND GROUP LOOP ROAD) AT MP 0.05 (ON RIGHT)

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0932	PUBLIC	5/12/2008		8,077	0.14	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	CONCRETE CURB AND GUTTER	NO CURB	EXCELLENT/97

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

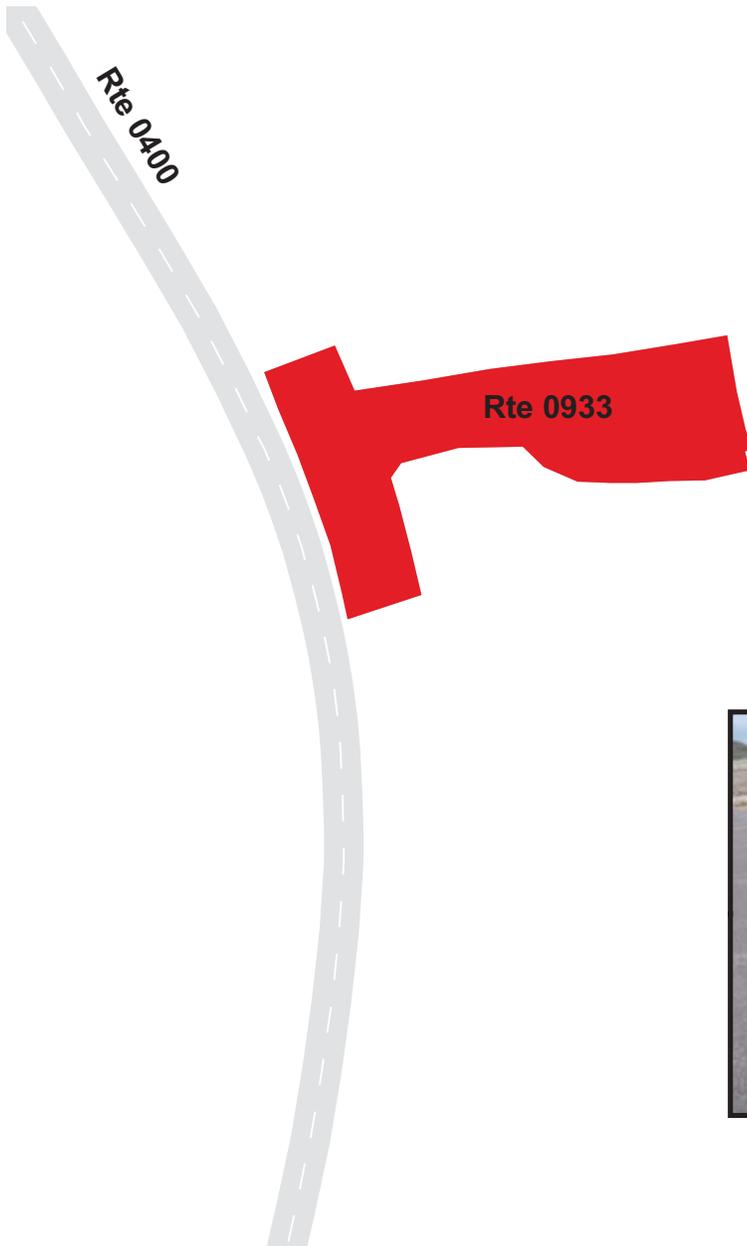
## Route 0933

### CEDAR PASS FIRE CACHE PARKING

FROM ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD) AT MP 0.41 (ON LEFT)  
TO PARKING

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0933	PUBLIC	5/12/2008		24,565	0.42	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
1	0	0	1	NO CURB AND GUTTER	NO CURB	EXCELLENT/97

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0934ZZ

### RESIDENCE AREA PARKING LOTS

FROM ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.09 (ON LEFT)

TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.29 (ON LEFT)

Summary Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0934ZZ	PUBLIC	5/12/2008		8,106	0.14	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	SUMMARY/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0934AZ

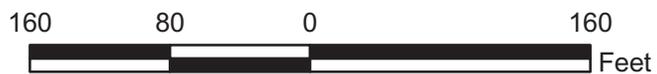
### RESIDENCE AREA PARKING A

ADJACENT TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.09 (ON LEFT)

Subcomponent Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0934AZ	PUBLIC	5/12/2008		3,985	0.07	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0934BZ

### RESIDENCE AREA PARKING B

ADJACENT TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.25 (ON LEFT)

Subcomponent Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0934BZ	PUBLIC	5/12/2008		1,810	0.03	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

## Route 0934CZ

### RESIDENCE AREA PARKING C

ADJACENT TO ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.29 (ON LEFT)

Subcomponent Record

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0934CZ	PUBLIC	5/12/2008		2,311	0.04	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

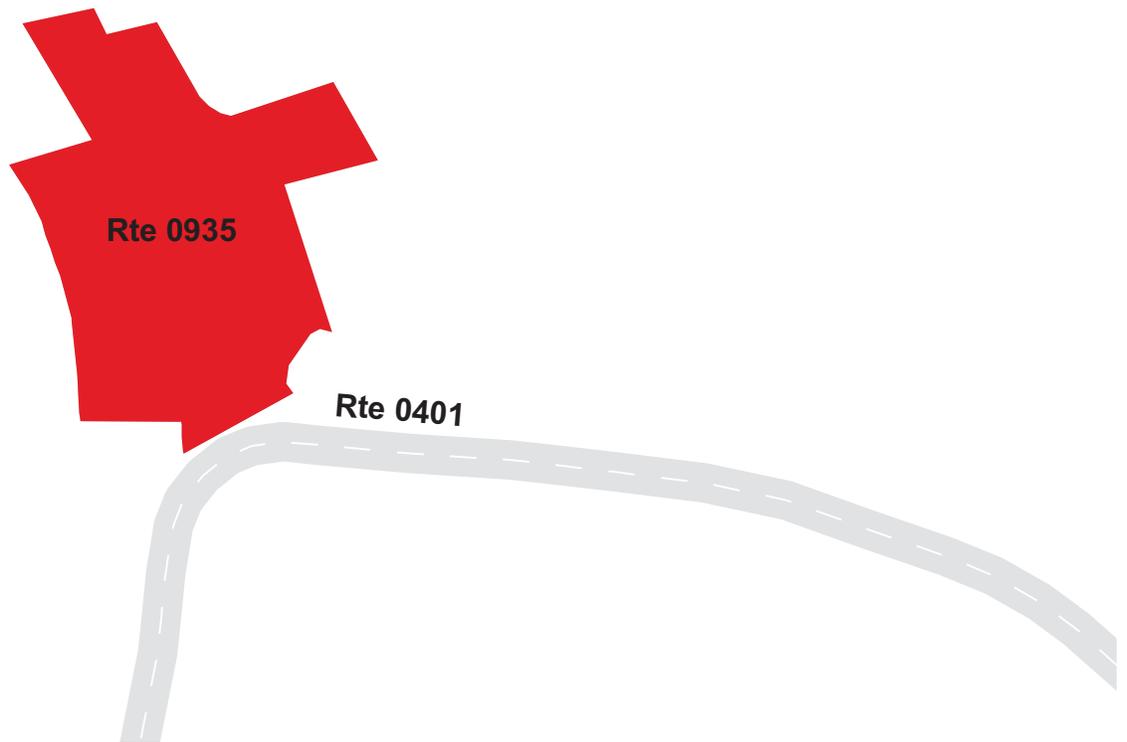
## Route 0935

### ADMINISTRATIVE PARKING

FROM ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING) AT MP 0.16 (ON RIGHT)  
TO PARKING

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0935	NONPUBLIC	5/12/2008		6,265	0.11	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	FAIR/73

\* Lane miles are based on 11' lane widths



# BADLANDS NATIONAL PARK

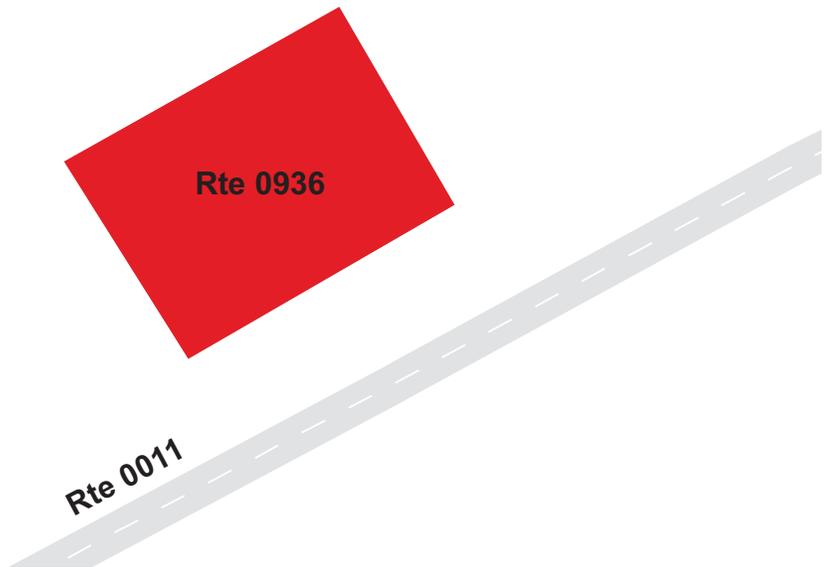
## Route 0936

### INTERIOR ENTRANCE BOOTH PARKING LOT

ADJACENT TO ROUTE 0011 (ENTRANCE ROAD (HIGHWAY 377)) AT MP 0.56 (ON RIGHT)

Route Number	Public / NonPublic	Date Visited		Area (sq ft)	Lane Miles *	Surface Type
0936	PUBLIC	10/14/2008		1,112	0.02	AS
Culverts	Drop Inlets	Gates	Fire Hydrants	Curb & Gutter	Curb	PCR
0	0	0	0	NO CURB AND GUTTER	NO CURB	GOOD/90

\* Lane miles are based on 11' lane widths



# Badlands National Park



## **Section 8**

### **Parkwide / Route Maintenance**

### **Features Summaries**

## BADL: PARKWIDE MAINTENANCE FEATURES SUMMARY

Notice: Drop Inlets along ARAN-driven routes were NOT marked by NPS nor were they inventoried by RIP. Culverts that lack a BIP assigned Structure Number along ARAN-driven routes were NOT marked by NPS nor were they inventoried by RIP. Culverts that have a BIP assigned Structure Number along ARAN-driven routes were marked by NPS and were inventoried by RIP. Culverts and Drop Inlets that are associated with Manually Rated Routes and Paved Parking Areas are included in the Cycle 4 counts. To view the Cycle 3 culvert and drop inlet inventory, please refer to the Cycle 3 RIP Report.

<b>FEATURE</b>	<b>LINEAR FEET</b>	<b>COUNT</b>
BARRIER	12,028	--
BOLLARD	11,473	--
BRIDGE	--	1
CABLE	0	--
CATTLE GUARD	--	3
CULVERT	--	5
CURB	50,276	--
DROP INLET	--	18
FIRE HYDRANT	--	9
GATE	--	5
GUARD/GUIDE RAIL	554	--
GUARD/GUIDE WALL	11,473	--
INTERSECTION	--	119
LOW WATER CROSSING	0	0
MILE MARKER	--	53
OVERPASS	--	0
OVERHEAD SIGN	--	0
PARK BOUNDARY	--	4
PAVED DITCH	53	--
PULLOUT	--	41
RAILROAD CROSSING	--	0
RETAINING WALL	0	0
SIGN	--	379
STATE BOUNDARY	--	0
TEMPORARY BARRIER	0	--
TRAFFIC LIGHT	--	6
TUNNEL	0	0
TURNOUT	0	--

## BADL: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0010ZZ BADLANDS LOOP ROADS	ROUTE 0011 ENTRANCE ROAD (HIGHWAY 377)	ROUTE 0203ZZ CEDAR PASS CAMPGROUND ROADS	ROUTE 0204 CONATA ROAD	ROUTE 0208 CONATA PICNIC AREA ROAD	ROUTE 0214 CEDAR PASS CAMPGROUND GROUP LOOP ROAD	UNIT
BARRIER	1,283	0	8,807	0	591	1,346	LINEAR FEET
BOLLARD	729	0	8,807	0	591	1,346	LINEAR FEET
BRIDGE	1	0	0	0	0	0	EACH
CABLE	0	0	0	0	0	0	LINEAR FEET
CATTLE GUARD	1	1	0	1	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	50,076	0	0	0	0	90	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
FIRE HYDRANT	0	0	0	0	0	0	EACH
GATE	2	0	2	0	0	1	EACH
GUARD/GUIDE RAIL	554	0	0	0	0	0	LINEAR FEET
GUARD/GUIDE WALL	729	0	8,807	0	591	1,346	LINEAR FEET
INTERSECTION	44	5	28	5	3	5	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	53	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	EACH
PARK BOUNDARY	2	1	0	1	0	0	EACH
PAVED DITCH	53	0	0	0	0	0	LINEAR FEET
PULLOUT	40	1	0	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	LINEAR FEET
SIGN	246	26	33	32	5	8	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TEMPORARY BARRIER	0	0	0	0	0	0	LINEAR FEET
TRAFFIC LIGHT	4	1	0	1	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	LINEAR FEET
TURNOUT	0	0	0	0	0	0	LINEAR FEET

Notice: Drop Inlets along ARAN-driven routes were NOT marked by NPS nor were they inventoried by RIP. Culverts that lack a BIP assigned Structure Number along ARAN-driven routes were NOT marked by NPS nor were they inventoried by RIP. Culverts that have a BIP assigned Structure Number along ARAN-driven routes were marked by NPS and were inventoried by RIP. To view the Cycle 3 culvert and drop inlet inventory for ARAN-driven routes, please refer to the Cycle 3 RIP Report.

## BADL: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0400 CEDAR PASS MAINTENANCE ACCESS ROAD	ROUTE 0401 RESIDENCE AREA ROAD AND PARKING	ROUTE 0407 PINNACLES RANGER STATION SERVICE ACCESS ROAD	UNIT
BARRIER	0	0	0	LINEAR FEET
BOLLARD	0	0	0	LINEAR FEET
BRIDGE	0	0	0	EACH
CABLE	0	0	0	LINEAR FEET
CATTLE GUARD	0	0	0	EACH
CULVERT	0	0	0	EACH
CURB	0	111	0	LINEAR FEET
DROP INLET	0	0	0	EACH
FIRE HYDRANT	1	5	0	EACH
GATE	0	0	0	EACH
GUARD/GUIDE RAIL	0	0	0	LINEAR FEET
GUARD/GUIDE WALL	0	0	0	LINEAR FEET
INTERSECTION	12	13	4	EACH
LOW WATER CROSSING	0	0	0	EACH
LOW WATER CROSSING	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	EACH
OVERHEAD SIGN	0	0	0	EACH
OVERPASS	0	0	0	EACH
PARK BOUNDARY	0	0	0	EACH
PAVED DITCH	0	0	0	LINEAR FEET
PULLOUT	0	0	0	EACH
RAILROAD CROSSING	0	0	0	EACH
RETAINING WALL	0	0	0	EACH
RETAINING WALL	0	0	0	LINEAR FEET
SIGN	26	0	3	EACH
STATE BOUNDARY	0	0	0	EACH
TEMPORARY BARRIER	0	0	0	LINEAR FEET
TRAFFIC LIGHT	0	0	0	EACH
TUNNEL	0	0	0	EACH
TUNNEL	0	0	0	LINEAR FEET
TURNOUT	0	0	0	LINEAR FEET

Notice: Drop Inlets along ARAN-driven routes were NOT marked by NPS nor were they inventoried by RIP. Culverts that lack a BIP assigned Structure Number along ARAN-driven routes were NOT marked by NPS nor were they inventoried by RIP. Culverts that have a BIP assigned Structure Number along ARAN-driven routes were marked by NPS and were inventoried by RIP. To view the Cycle 3 culvert and drop inlet inventory for ARAN-driven routes, please refer to the Cycle 3 RIP Report.

## **BADL: STRUCTURE LIST**

No data available for this section.

# Badlands National Park



## **Section 9**

### **Park Route Maintenance Features**

### **Road Logs**

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM PARK BOUNDARY AT NORTHEAST ENTRANCE
0.000	0.000	PARK BOUNDARY	N/A	
0.000	0.000	INTERSECTION	N/A	PAVED ROUTE (STATE HWY 240 (STATE MAINTAINED / NON NPS))
0.011	0.011	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.021	0.095	PULLOUT	RIGHT	
0.023	0.097	PULLOUT	LEFT	
0.083	0.083	SIGN	RIGHT	GUIDE, ENTERING BADLANDS NATIONAL PARK
0.084	0.084	SIGN	LEFT	GUIDE, LEAVING BADLANDS NATIONAL PARK
0.107	0.107	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
0.109	0.109	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.207	0.207	SIGN	RIGHT	WARNING, STOP AHEAD
0.207	0.207	SIGN	RIGHT	GUIDE, U.S. FEE AREA
0.212	0.262	CURB-AND-GUTTER	LEFT	
0.214	0.214	SIGN	LEFT	REGULATORY, GRAPHIC SIGN, NO TEXT
0.227	0.227	SIGN	RIGHT	GUIDE, LOCAL TRAFFIC USE RIGHT LANE
0.260	0.260	SIGN	RIGHT	REGULATORY, STOP
0.263	0.263	SIGN	LEFT	GUIDE, ENTRANCE FEES
0.263	0.263	TRAFFIC LIGHT	LEFT	
0.265	0.265	SIGN	N/A	GUIDE, ENTRANCE FEES
0.265	0.265	SIGN	N/A	GUIDE, NORTHEAST ENTRANCE STATION
0.265	0.265	TRAFFIC LIGHT	N/A	
0.271	0.295	CURB-AND-GUTTER	LEFT	
0.300	0.300	INTERSECTION	LEFT	ROUTE 0930 (NORTH ENTRANCE SUPPORT BUILDING PARKING)
0.304	0.336	CURB-AND-GUTTER	LEFT	
0.308	0.308	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
0.336	0.336	SIGN	RIGHT	WARNING, SLOW
0.348	0.348	INTERSECTION	RIGHT	ROUTE 0010BZ (NORTH EAST ENTRANCE TURNAROUND)
0.352	0.369	CURB-AND-GUTTER	RIGHT	
0.377	0.377	INTERSECTION	RIGHT	ROUTE 0010BZ (NORTH EAST ENTRANCE TURNAROUND)

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.379	0.423	CURB-AND-GUTTER	LEFT	
0.395	0.395	SIGN	RIGHT	GUIDE, VISITOR CENTER LODGE 5 CAMPGROUND
0.435	0.435	INTERSECTION	LEFT	ROUTE 0901 (BIG BADLANDS PARKING)
0.441	0.458	CURB-AND-GUTTER	LEFT	
0.442	0.458	CURB-AND-GUTTER	LEFT	
0.450	0.450	SIGN	RIGHT	GUIDE, BIG BADLANDS OVERLOOK
0.462	0.462	INTERSECTION	LEFT	ROUTE 0901 (BIG BADLANDS PARKING)
0.470	0.517	CURB-AND-GUTTER	LEFT	
0.517	0.517	SIGN	LEFT	REGULATORY, GRAPHIC SIGN, NO TEXT
0.562	0.562	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
0.629	0.629	SIGN	RIGHT	GUIDE, NO HUNTING OR SHOOTING
0.629	0.629	SIGN	RIGHT	GUIDE, NO OFF ROAD DRIVING
0.661	0.661	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
0.681	0.681	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
0.692	0.692	SIGN	RIGHT	GUIDE, DO NOT COLLECT FOSSILS, PLANTS OR ROCKS IN THE PARK
0.692	0.692	SIGN	RIGHT	REGULATORY, FIREARMS PROHIBITED
0.785	0.785	SIGN	RIGHT	REGULATORY, SPEED ZONE AHEAD
0.870	0.870	SIGN	RIGHT	GUIDE, PLEASE CAMP IN DESIGNATED AREAS
1.030	1.030	MILE MARKER	LEFT	
1.030	1.030	MILE MARKER	RIGHT	
2.035	2.035	MILE MARKER	LEFT	
2.035	2.035	MILE MARKER	RIGHT	
2.197	2.197	SIGN	RIGHT	REGULATORY, SPEED ZONE AHEAD
2.295	2.295	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
2.297	2.297	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
2.533	2.533	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD DOOR/WINDOW
2.596	2.596	INTERSECTION	LEFT	ROUTE 0902 (DOORS AND WINDOWS PARKING)
2.721	2.721	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
2.740	2.740	INTERSECTION	LEFT	ROUTE 0902 (DOORS AND WINDOWS PARKING)
2.747	2.747	SIGN	RIGHT	GUIDE, CASTLE TRAIL

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
2.747	2.747	SIGN	RIGHT	GUIDE, GRAPHIC SIGN, NO TEXT
2.776	2.776	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
2.824	2.824	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
3.028	3.028	MILE MARKER	RIGHT	
3.029	3.029	MILE MARKER	LEFT	
3.413	3.413	INTERSECTION	RIGHT	ROUTE 0205 (OLD NORTHEAST ROAD)
3.419	3.419	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
3.419	3.419	SIGN	RIGHT	GUIDE, OLD NE RD
3.419	3.419	SIGN	RIGHT	GUIDE, SD HWY 240
3.646	3.646	SIGN	RIGHT	WARNING, DANGER SLIDE AREA
3.646	3.646	SIGN	RIGHT	WARNING, NO PARKING NEXT 1500 FT.
3.693	3.693	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
3.693	3.693	SIGN	RIGHT	WARNING, HILL
3.737	3.737	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
3.744	3.744	SIGN	RIGHT	GUIDE, CEDAR PASS
3.744	3.744	SIGN	LEFT	GUIDE, CEDAR PASS
3.758	3.765	GUARD/GUIDE WALL	RIGHT	
3.779	3.779	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
3.822	3.822	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
3.865	3.865	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
3.875	3.875	SIGN	RIGHT	WARNING, WATCH FOR FALLING ROCK
4.017	4.017	MILE MARKER	LEFT	
4.017	4.017	MILE MARKER	RIGHT	
4.024	4.024	SIGN	RIGHT	WARNING, DANGER SLIDE AREA
4.024	4.024	SIGN	RIGHT	WARNING, NO PARKING NEXT 1500 FT.
4.120	4.120	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD CLIFF SHELF
4.120	4.120	SIGN	RIGHT	REGULATORY, NO TRAILERS OR TOWED VEHICLES IN OVERLOOK
4.185	4.185	INTERSECTION	LEFT	ROUTE 0903 (CLIFF SHELF NATURE TRAIL PARKING)
4.242	4.242	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD CLIFF SHELF

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
4.242	4.242	SIGN	RIGHT	REGULATORY, NO TRAILERS OR TOWED VEHICLES IN OVERLOOK
4.340	4.391	CURB	LEFT	
4.395	4.432	CURB	RIGHT	
4.442	4.461	CURB	RIGHT	
4.463	4.468	CURB	RIGHT	
4.470	4.480	CURB	RIGHT	
4.498	4.498	SIGN	RIGHT	GUIDE, VISITOR CENTER 1/4 MI. CEDAR PASS LODGE 3/8 MI. CAMPGROUND 1/2 MI.
4.523	4.523	SIGN	RIGHT	REGULATORY, SPEED ZONE AHEAD
4.637	4.637	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
4.658	4.658	SIGN	RIGHT	WARNING, 25 M.P.H.
4.658	4.658	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
4.684	4.684	SIGN	RIGHT	GUIDE, APPROACHING VISITOR CENTER CAMPGROUND 1/2 MILE AHEAD
4.701	4.701	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
4.740	4.747	CURB-AND-GUTTER	LEFT	
4.749	4.749	INTERSECTION	LEFT	ROUTE 0904 (BEN REIFEL VISITOR CENTER PARKING)
4.750	4.750	SIGN	RIGHT	GUIDE, TRAILER - BUS PARKING NEXT LEFT
4.795	4.795	SIGN	LEFT	GUIDE, BEN REIFEL VISITOR CENTER BADLANDS NATIONAL PARK
4.795	4.795	SIGN	RIGHT	GUIDE, BEN REIFEL VISITOR CENTER BADLANDS NATIONAL PARK
4.823	4.823	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
4.823	4.823	SIGN	RIGHT	GUIDE, BEN REIFEL RD
4.827	4.827	INTERSECTION	LEFT	ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD)
4.892	4.892	SIGN	RIGHT	GUIDE, TRAILER - BUS PARKING NEXT RIGHT
4.949	4.957	CURB-AND-GUTTER	LEFT	
4.966	4.966	INTERSECTION	LEFT	ROUTE 0908 (CEDAR PASS LODGE PARKING)
5.000	5.000	SIGN	LEFT	GUIDE, CEDAR PASS LODGE CABINS RESTAURANT GIFT SHOP RESTROOMS
5.000	5.000	SIGN	RIGHT	GUIDE, CEDAR PASS LODGE CABINS RESTAURANT GIFT SHOP RESTROOMS

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
5.025	5.025	MILE MARKER	LEFT	
5.025	5.025	MILE MARKER	RIGHT	
5.050	5.050	INTERSECTION	LEFT	ROUTE 0908 (CEDAR PASS LODGE PARKING)
5.051	5.073	PULLOUT	RIGHT	
5.062	5.062	SIGN	RIGHT	GUIDE, CEDAR PASS CAMPGROUND
5.062	5.062	SIGN	RIGHT	GUIDE, TOWN OF INTERIOR, 2 MI. BADLANDS LOOP ROAD I-90, VIA WALL 29 MI.
5.072	5.072	SIGN	RIGHT	GUIDE, TO 90 EXIT 131
5.117	5.117	INTERSECTION	LEFT	ROUTE 0011 (ENTRANCE ROAD (HIGHWAY 377))
5.135	5.135	SIGN	RIGHT	GUIDE, TO 90 EXIT 110
5.164	5.164	SIGN	RIGHT	GUIDE, TOWN OF INTERIOR, 2 MI. BADLANDS LOOP ROAD I-90, VIA CACTUS FLATS 9 MI.
5.177	5.177	GATE	N/A	
5.177	5.177	SIGN	N/A	REGULATORY, STOP
5.177	5.177	SIGN	N/A	REGULATORY, ROAD CLOSED
5.205	5.205	SIGN	RIGHT	GUIDE, CAMPGROUND CEDAR PASS LODGE VISITOR CENTER
5.264	5.264	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
5.307	5.307	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
5.316	5.316	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
5.372	5.372	SIGN	RIGHT	REGULATORY, REDUCED SPEED AHEAD
5.485	5.511	GUARD/GUIDE RAIL	RIGHT	
5.490	5.517	GUARD/GUIDE RAIL	LEFT	
5.535	5.540	CURB	LEFT	
5.535	5.577	PULLOUT	LEFT	
5.541	5.577	CURB	LEFT	
5.716	5.716	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
5.852	5.953	CURB	RIGHT	
5.984	6.013	CURB	RIGHT	
6.011	6.011	MILE MARKER	RIGHT	
6.012	6.012	MILE MARKER	LEFT	
6.014	6.049	CURB	RIGHT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
6.014	6.049	PULLOUT	RIGHT	
6.086	6.086	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
6.167	6.200	CURB	LEFT	
6.200	6.239	CURB	LEFT	
6.217	6.217	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
6.350	6.350	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
6.441	6.441	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
6.474	6.522	CURB	RIGHT	
6.523	6.547	CURB	RIGHT	
6.616	6.616	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
6.816	6.840	GUARD/GUIDE RAIL	RIGHT	
6.821	6.849	GUARD/GUIDE RAIL	LEFT	
6.829	6.834	BRIDGE	N/A	A STRUCTURE NUMBER HAS NOT BEEN ASSIGNED TO THIS BRIDGE
6.847	6.847	INTERSECTION	RIGHT	ROUTE 0910 (SADDLE PASS PARKING)
6.857	6.857	SIGN	LEFT	GUIDE, SADDLE PASS TRAILHEAD
6.857	6.857	SIGN	RIGHT	GUIDE, SADDLE PASS TRAILHEAD
7.029	7.029	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
7.284	7.284	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
7.341	7.348	CURB	RIGHT	
7.348	7.413	CURB	RIGHT	
7.804	7.839	CURB	LEFT	
7.827	7.862	CURB	RIGHT	
7.900	7.963	GUARD/GUIDE WALL	RIGHT	
7.908	7.963	CURB	RIGHT	
7.908	7.963	PULLOUT	RIGHT	
8.001	8.001	MILE MARKER	LEFT	
8.001	8.001	MILE MARKER	RIGHT	
8.009	8.067	CURB	RIGHT	
8.195	8.281	CURB	LEFT	
8.436	8.436	INTERSECTION	LEFT	ROUTE 0207 (WEST INTERIOR ROAD)

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
8.468	8.524	CURB	RIGHT	
8.525	8.585	CURB	RIGHT	
8.596	8.739	CURB	LEFT	
9.028	9.180	CURB	RIGHT	
9.031	9.031	MILE MARKER	LEFT	
9.031	9.031	MILE MARKER	RIGHT	
9.147	9.180	CURB	LEFT	
9.182	9.577	CURB	LEFT	
9.184	9.580	CURB	RIGHT	
9.186	9.186	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
9.240	9.301	PULLOUT	LEFT	
9.240	9.580	PULLOUT	RIGHT	
9.367	9.428	PULLOUT	LEFT	
9.567	9.567	SIGN	LEFT	GUIDE, NORBECK PASS
9.567	9.567	SIGN	RIGHT	GUIDE, NORBECK PASS
9.580	9.706	CURB	LEFT	
9.588	9.588	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
9.588	9.588	SIGN	RIGHT	WARNING, HILL
9.644	9.644	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
9.666	9.666	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD FOSSIL TRAIL
9.722	9.722	INTERSECTION	LEFT	ROUTE 0912 (FOSSIL TRAIL PARKING)
9.730	9.761	CURB	RIGHT	
9.732	9.800	CURB	LEFT	
9.762	9.762	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
9.802	9.802	SIGN	RIGHT	GUIDE, CASTLE TRAIL
9.808	9.848	CURB	LEFT	
9.819	9.819	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
9.853	9.853	INTERSECTION	LEFT	ROUTE 0912 (FOSSIL TRAIL PARKING)
9.869	9.869	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
9.939	9.939	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD FOSSIL TRAIL

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
10.024	10.024	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
10.045	10.045	MILE MARKER	LEFT	
10.045	10.045	MILE MARKER	RIGHT	
10.948	10.983	PULLOUT	RIGHT	
10.969	11.007	PULLOUT	LEFT	
11.058	11.058	MILE MARKER	LEFT	
11.058	11.058	MILE MARKER	RIGHT	
11.464	11.497	PULLOUT	RIGHT	
11.718	11.771	CURB	LEFT	
11.845	11.845	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
11.913	11.913	INTERSECTION	LEFT	ROUTE 0913 (WHITE RIVER VALLEY OVERLOOK PARKING)
11.917	11.982	GUARD/GUIDE WALL	LEFT	
11.951	11.951	SIGN	LEFT	GUIDE, WHITE RIVER VALLEY OVERLOOK
11.951	11.951	SIGN	RIGHT	GUIDE, WHITE RIVER VALLEY OVERLOOK
11.958	12.002	CURB	RIGHT	
11.986	11.986	INTERSECTION	LEFT	ROUTE 0913 (WHITE RIVER VALLEY OVERLOOK PARKING)
12.048	12.048	MILE MARKER	LEFT	
12.048	12.048	MILE MARKER	RIGHT	
12.058	12.058	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
12.264	12.428	CURB	RIGHT	
12.595	12.595	SIGN	RIGHT	WARNING, HILL
12.595	12.595	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
12.630	12.630	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD PICNIC AREA
12.633	12.922	PULLOUT	LEFT	
12.637	12.990	CURB	LEFT	
12.674	12.674	SIGN	RIGHT	GUIDE, BIGFOOT PASS PICNIC AREA
12.675	12.675	SIGN	LEFT	GUIDE, BIGFOOT PASS PICNIC AREA
12.696	12.696	INTERSECTION	RIGHT	ROUTE 0914 (BIGFOOT PASS PICNIC AREA)
12.706	13.053	CURB	RIGHT	
12.764	12.764	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD PICNIC AREA

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
12.922	12.922	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
13.070	13.070	MILE MARKER	LEFT	
13.070	13.070	MILE MARKER	RIGHT	
13.219	13.445	CURB	RIGHT	
13.271	13.271	SIGN	LEFT	WARNING, UNABLE TO READ FROM VIDEO
13.405	13.791	CURB	LEFT	
13.410	13.695	PULLOUT	LEFT	
13.437	13.437	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
13.445	13.731	PULLOUT	RIGHT	
13.447	13.729	CURB	RIGHT	
13.649	13.649	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
13.764	13.764	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
13.764	13.764	SIGN	RIGHT	WARNING, HILL
13.823	13.823	SIGN	RIGHT	WARNING, UNABLE TO READ FROM VIDEO
13.845	13.845	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
13.845	13.845	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
13.845	13.845	SIGN	RIGHT	GUIDE, HIGHWAY 240
13.849	13.849	INTERSECTION	RIGHT	ROUTE 0211 (UPPER BIGFOOT ROAD)
14.078	14.078	MILE MARKER	RIGHT	
14.079	14.079	MILE MARKER	LEFT	
14.189	14.189	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
14.253	14.253	INTERSECTION	LEFT	ROUTE 0915 (PANORAMA POINT OVERLOOK PARKING)
14.292	14.292	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
14.292	14.292	SIGN	RIGHT	GUIDE, PANORAMA POINT OVERLOOK
14.326	14.326	INTERSECTION	LEFT	ROUTE 0915 (PANORAMA POINT OVERLOOK PARKING)
14.396	14.396	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
15.057	15.057	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
15.090	15.090	MILE MARKER	RIGHT	
15.091	15.091	MILE MARKER	LEFT	
15.643	15.643	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
15.707	15.707	INTERSECTION	RIGHT	ROUTE 0916 (PRAIRIE WINDS OVERLOOK PARKING)
15.745	15.745	SIGN	LEFT	GUIDE, PRAIRIE WIND OVERLOOK
15.745	15.745	SIGN	RIGHT	GUIDE, PRAIRIE WIND OVERLOOK
15.777	15.777	INTERSECTION	RIGHT	ROUTE 0916 (PRAIRIE WINDS OVERLOOK PARKING)
15.845	15.845	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
16.107	16.107	MILE MARKER	LEFT	
16.107	16.107	MILE MARKER	RIGHT	
17.115	17.115	MILE MARKER	LEFT	
17.115	17.115	MILE MARKER	RIGHT	
17.822	17.853	CURB	LEFT	
18.110	18.138	CURB	LEFT	
18.124	18.124	MILE MARKER	LEFT	
18.124	18.124	MILE MARKER	RIGHT	
18.331	18.331	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
18.391	18.391	INTERSECTION	LEFT	ROUTE 0917 (BURNS BASIN OVERLOOK PARKING)
18.434	18.434	SIGN	LEFT	GUIDE, BURNS BASIN OVERLOOK
18.434	18.434	SIGN	RIGHT	GUIDE, BURNS BASIN OVERLOOK
18.472	18.472	INTERSECTION	LEFT	ROUTE 0917 (BURNS BASIN OVERLOOK PARKING)
18.545	18.545	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
18.673	18.733	CURB	LEFT	
18.717	18.717	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
18.852	18.852	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
18.879	18.879	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
18.899	18.899	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
18.941	18.941	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
18.957	18.957	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
19.072	19.098	CURB	LEFT	
19.112	19.134	CURB	LEFT	
19.139	19.139	MILE MARKER	LEFT	
19.139	19.139	MILE MARKER	RIGHT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
19.322	19.462	CURB	LEFT	
19.323	19.463	CURB	RIGHT	
19.558	19.558	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
19.617	19.617	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
19.669	19.669	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
19.718	19.718	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
19.761	19.761	INTERSECTION	RIGHT	ROUTE 0210 (QUINN ROAD)
19.795	19.795	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
19.906	19.954	CURB	LEFT	
19.987	19.987	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
19.987	19.987	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
20.139	20.139	MILE MARKER	RIGHT	
20.140	20.140	MILE MARKER	LEFT	
20.311	20.412	CURB	LEFT	
20.412	20.459	CURB	LEFT	
20.557	20.583	CURB	LEFT	
20.707	20.766	CURB	LEFT	
20.892	20.903	CURB	LEFT	
20.902	20.902	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
20.965	20.965	INTERSECTION	LEFT	ROUTE 0918 (HOMESTEAD OVERLOOK PARKING)
20.967	20.967	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
20.997	20.997	SIGN	LEFT	GUIDE, HOMESTEAD OVERLOOK
20.998	20.998	SIGN	RIGHT	GUIDE, HOMESTEAD OVERLOOK
21.026	21.026	INTERSECTION	LEFT	ROUTE 0918 (HOMESTEAD OVERLOOK PARKING)
21.093	21.093	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
21.095	21.115	CURB	RIGHT	
21.154	21.154	MILE MARKER	RIGHT	
21.155	21.155	MILE MARKER	LEFT	
21.304	21.375	CURB	LEFT	
21.475	21.508	CURB	LEFT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
21.579	21.676	CURB	LEFT	
22.042	22.042	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
22.155	22.155	MILE MARKER	RIGHT	
22.155	22.155	MILE MARKER	LEFT	
22.334	22.412	CURB	LEFT	
22.555	22.555	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
22.556	22.556	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
22.690	22.690	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
22.751	22.751	INTERSECTION	LEFT	ROUTE 0919 (CONATA BASIN OVERLOOK PARKING)
22.795	22.795	SIGN	LEFT	GUIDE, CONATA BASIN OVERLOOK
22.796	22.796	SIGN	RIGHT	GUIDE, CONATA BASIN OVERLOOK
22.832	22.832	INTERSECTION	LEFT	ROUTE 0919 (CONATA BASIN OVERLOOK PARKING)
22.855	22.898	CURB	LEFT	
22.903	22.903	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
23.015	23.015	SIGN	RIGHT	WARNING, 25 M.P.H.
23.015	23.015	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
23.043	23.087	PULLOUT	RIGHT	
23.067	23.067	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
23.067	23.067	SIGN	RIGHT	WARNING, HILL
23.096	23.096	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
23.138	23.194	CURB	LEFT	
23.138	23.194	PULLOUT	LEFT	
23.153	23.153	SIGN	LEFT	GUIDE, DILLON PASS
23.153	23.153	SIGN	RIGHT	GUIDE, DILLON PASS
23.167	23.167	MILE MARKER	LEFT	
23.167	23.167	MILE MARKER	RIGHT	
23.169	23.190	PULLOUT	RIGHT	
23.180	23.256	CURB	RIGHT	
23.223	23.412	CURB	LEFT	
23.274	23.412	PULLOUT	LEFT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
23.354	23.539	CURB	RIGHT	
23.389	23.389	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
23.453	23.453	INTERSECTION	LEFT	ROUTE 0920 (YELLOW MOUNDS OVERLOOK PARKING)
23.471	23.471	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
23.471	23.471	SIGN	RIGHT	GUIDE, YELLOW MOUNDS OVERLOOK
23.489	23.489	INTERSECTION	LEFT	ROUTE 0920 (YELLOW MOUNDS OVERLOOK PARKING)
23.526	23.539	PULLOUT	RIGHT	
23.531	23.572	PULLOUT	LEFT	
23.531	23.571	CURB	LEFT	
23.577	23.577	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
23.670	23.670	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
23.687	23.712	PULLOUT	LEFT	
23.701	23.701	SIGN	RIGHT	GUIDE, CONATA ROAD PICNIC AREA 1/2 HIGHWAY 44 9
23.714	23.714	GATE	N/A	
23.714	23.714	SIGN	N/A	REGULATORY, ROAD CLOSED
23.714	23.714	SIGN	N/A	REGULATORY, STOP
23.756	23.756	INTERSECTION	LEFT	ROUTE 0204 (CONATA ROAD)
23.821	23.821	SIGN	RIGHT	GUIDE, CONATA ROAD PICNIC AREA 1/2 HIGHWAY 44 9
23.851	23.851	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
23.878	23.916	CURB	LEFT	
24.082	24.362	CURB	LEFT	
24.171	24.171	MILE MARKER	LEFT	
24.172	24.172	MILE MARKER	RIGHT	
24.328	24.328	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
24.358	24.401	CURB	RIGHT	
24.402	24.523	CURB	RIGHT	
24.402	24.523	PULLOUT	RIGHT	
24.402	24.533	PULLOUT	LEFT	
24.405	24.701	CURB	LEFT	
24.500	24.500	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
24.599	24.653	PULLOUT	LEFT	
24.601	24.651	CURB	RIGHT	
24.601	24.651	PULLOUT	RIGHT	
24.700	24.794	CURB	RIGHT	
24.744	24.785	CURB	LEFT	
24.744	24.785	PULLOUT	LEFT	
24.815	24.865	CURB	RIGHT	
24.815	24.865	PULLOUT	RIGHT	
24.845	24.880	CURB	LEFT	
24.845	24.880	PULLOUT	LEFT	
24.898	24.952	CURB	RIGHT	
24.947	24.957	PAVED DITCH	RIGHT	
25.047	25.104	PULLOUT	LEFT	
25.047	25.149	CURB	LEFT	
25.069	25.069	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.167	25.167	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.175	25.175	MILE MARKER	RIGHT	
25.175	25.175	MILE MARKER	LEFT	
25.185	25.185	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.226	25.283	CURB	LEFT	
25.231	25.231	SIGN	RIGHT	WARNING, WATCH FOR FALLING ROCK
25.262	25.262	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.312	25.433	CURB	RIGHT	
25.312	25.433	PULLOUT	RIGHT	
25.345	25.345	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.385	25.446	CURB	LEFT	
25.407	25.407	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.493	25.521	PULLOUT	RIGHT	
25.493	25.521	CURB	RIGHT	
25.527	25.653	CURB	LEFT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
25.577	25.646	CURB	RIGHT	
25.601	25.601	SIGN	RIGHT	WARNING, WATCH FOR FALLING ROCK
25.623	25.623	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
25.647	25.692	CURB	RIGHT	
25.655	25.838	CURB	LEFT	
25.700	25.770	CURB	RIGHT	
25.742	25.772	PULLOUT	RIGHT	
25.781	25.816	PULLOUT	RIGHT	
25.785	25.849	CURB	RIGHT	
25.861	25.940	CURB	RIGHT	
25.925	26.058	PULLOUT	LEFT	
25.925	26.058	CURB	LEFT	
26.002	26.002	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
26.014	26.051	CURB	RIGHT	
26.058	26.058	INTERSECTION	RIGHT	ROUTE 0921 (ANCIENT HUNTERS OVERLOOK PARKING)
26.076	26.076	SIGN	LEFT	GUIDE, ANCIENT HUNTERS OVERLOOK
26.077	26.077	SIGN	RIGHT	GUIDE, ANCIENT HUNTERS OVERLOOK
26.091	26.091	INTERSECTION	RIGHT	ROUTE 0921 (ANCIENT HUNTERS OVERLOOK PARKING)
26.111	26.181	CURB	RIGHT	
26.131	26.131	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.145	26.276	CURB	LEFT	
26.174	26.174	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
26.177	26.177	MILE MARKER	LEFT	
26.178	26.178	MILE MARKER	RIGHT	
26.203	26.203	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
26.204	26.204	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.232	26.232	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
26.233	26.233	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.254	26.430	PULLOUT	RIGHT	
26.263	26.521	CURB	RIGHT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
26.307	26.307	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
26.307	26.307	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.331	26.331	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.332	26.332	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
26.388	26.388	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
26.388	26.388	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.409	26.409	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
26.409	26.409	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.433	26.633	CURB	LEFT	
26.486	26.539	PULLOUT	LEFT	
26.523	26.574	CURB	RIGHT	
26.547	26.547	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.574	26.574	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
26.605	26.605	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
26.605	26.605	SIGN	RIGHT	WARNING, HILL
26.637	26.697	CURB	RIGHT	
26.639	26.639	INTERSECTION	LEFT	ROUTE 0922 (PINNACLES OVERLOOK PARKING)
26.680	26.680	SIGN	RIGHT	GUIDE, PINNACLES OVERLOOK
26.680	26.680	SIGN	LEFT	GUIDE, PINNACLES OVERLOOK
26.695	26.787	PULLOUT	RIGHT	
26.702	26.732	CURB	RIGHT	
26.711	26.711	INTERSECTION	LEFT	ROUTE 0922 (PINNACLES OVERLOOK PARKING)
26.730	26.733	GUARD/GUIDE WALL	LEFT	
26.736	26.786	CURB	RIGHT	
26.785	26.785	SIGN	RIGHT	GUIDE, VIEWPOINT AHEAD
26.798	26.798	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
26.801	26.801	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
26.807	26.923	CURB	LEFT	
27.023	27.207	CURB	RIGHT	
27.034	27.034	SIGN	RIGHT	GUIDE, SAGE CREEK RIM ROAD WALL 8

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
27.089	27.089	INTERSECTION	LEFT	ROUTE 0201 (SAGE CREEK RIM ROAD)
27.148	27.148	SIGN	RIGHT	GUIDE, SAGE CREEK RIM ROAD VISITOR CENTER-LODGE 24
27.191	27.191	MILE MARKER	RIGHT	
27.191	27.191	MILE MARKER	LEFT	
27.213	27.213	SIGN	RIGHT	GUIDE, PLEASE CAMP IN DESIGNATED AREAS
27.371	27.371	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
27.371	27.371	SIGN	RIGHT	WARNING, SLIPPERY WHEN WET
27.399	27.399	SIGN	RIGHT	REGULATORY, REDUCED SPEED AHEAD
27.410	27.410	SIGN	RIGHT	GUIDE, LODGE CAMPGROUND 24 VISITOR CENTER
27.460	27.460	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
27.460	27.460	SIGN	RIGHT	REGULATORY, SPEED LIMIT 45
27.484	27.514	PULLOUT	LEFT	
27.491	27.491	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
27.501	27.501	SIGN	RIGHT	REGULATORY, FIREARMS PROHIBITED
27.501	27.501	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
27.501	27.501	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
27.510	27.510	SIGN	RIGHT	WARNING, SLOW
27.547	27.547	SIGN	RIGHT	GUIDE, PINNACLES RANGER STATION
27.548	27.548	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
27.558	27.558	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
27.578	27.578	TRAFFIC LIGHT	N/A	
27.578	27.578	TRAFFIC LIGHT	N/A	
27.582	27.582	SIGN	LEFT	GUIDE, ENTRANCE FEES
27.582	27.582	SIGN	N/A	GUIDE, ENTRANCE FEES
27.582	27.582	SIGN	N/A	GUIDE, PINNACLES ENTRANCE STATION
27.585	27.585	SIGN	RIGHT	GUIDE, WALL 8 MI
27.652	27.652	SIGN	RIGHT	WARNING, STOP AHEAD
27.664	27.664	INTERSECTION	RIGHT	ROUTE 0407 (PINNACLES RANGER STATION SERVICE ACCESS ROAD)
27.762	27.762	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
27.762	27.762	SIGN	RIGHT	GUIDE, U.S. FEE AREA

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010AZ: BADLANDS LOOP (ROAD 240)

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<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
27.807	27.807	SIGN	LEFT	GUIDE, LEAVING BADLANDS NATIONAL PARK
27.807	27.807	SIGN	RIGHT	GUIDE, ENTERING BADLANDS NATIONAL PARK
27.816	27.863	PULLOUT	LEFT	
27.876	27.876	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
27.920	27.920	CATTLE GUARD	N/A	
27.920	27.920	PARK BOUNDARY	N/A	
27.920	27.920	INTERSECTION	N/A	PAVED ROUTE (STATE HWY 240 (STATE MAINTAINED / NON NPS))
27.920	27.920	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
27.920	27.920	MILE MARKER	LEFT	
27.920	27.920	ROUTE END	N/A	TO PARK BOUNDARY AT NORTHWEST/PINNACLES ENTRANCE

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0011: ENTRANCE ROAD (HIGHWAY 377)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010AZ
0.000	0.000	SIGN	RIGHT	REGULATORY, STOP
0.000	0.000	SIGN	N/A	GUIDE, VISITOR CENTER
0.000	0.000	SIGN	N/A	GUIDE, BADLANDS LOOP ROAD
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.025	0.025	SIGN	RIGHT	GUIDE, 377
0.025	0.025	SIGN	RIGHT	GUIDE, TO 44 RAPID CITY
0.060	0.060	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.065	0.065	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
0.073	0.073	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.075	0.075	SIGN	RIGHT	GUIDE, CEDAR PASS CAMPGROUND
0.075	0.075	SIGN	LEFT	GUIDE, CEDAR PASS CAMPGROUND
0.132	0.132	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
0.134	0.134	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
0.206	0.206	SIGN	RIGHT	GUIDE, PLEASE CAMP IN DESIGNATED AREAS
0.327	0.327	SIGN	RIGHT	GUIDE, DO NOT COLLECT FOSSILS, PLANTS OR ROCKS IN THE PARK
0.327	0.327	SIGN	RIGHT	REGULATORY, FIREARMS PROHIBITED
0.429	0.429	SIGN	RIGHT	GUIDE, NO HUNTING OR SHOOTING
0.429	0.429	SIGN	RIGHT	GUIDE, NO OFF ROAD DRIVING
0.482	0.482	SIGN	RIGHT	WARNING, SLOW
0.495	0.607	PULLOUT	LEFT	
0.548	0.548	TRAFFIC LIGHT	LEFT	
0.551	0.551	SIGN	LEFT	GUIDE, ENTRANCE FEES
0.551	0.551	SIGN	LEFT	GUIDE, INTERIOR ENTRANCE STATION
0.562	0.562	INTERSECTION	RIGHT	ROUTE 0936 (INTERIOR ENTRANCE BOOTH PARKING LOT)
0.606	0.606	SIGN	RIGHT	GUIDE, U.S. FEE AREA
0.606	0.606	SIGN	RIGHT	WARNING, SLOW
0.628	0.628	SIGN	RIGHT	GUIDE, LOCAL TRAFFIC USE RIGHT LANE STOP TO BE ACKNOWLEDGED

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0011: ENTRANCE ROAD (HIGHWAY 377)

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.644	0.644	SIGN	RIGHT	REGULATORY, BUCKLE UP
0.644	0.644	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
0.666	0.666	SIGN	LEFT	GUIDE, ENTERING BADLANDS NATIONAL PARK
0.666	0.666	SIGN	RIGHT	GUIDE, ENTERING BADLANDS NATIONAL PARK
0.690	0.690	CATTLE GUARD	N/A	
0.690	0.690	INTERSECTION	N/A	PAVED ROUTE (STATE HWY 377 (STATE MAINTAINED / NON NPS))
0.690	0.690	PARK BOUNDARY	N/A	
0.690	0.690	ROUTE END	N/A	TO PARK BOUNDARY AT INTERIOR ENTRANCE

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0203AAZ: CEDAR PASS CAMPGROUND ROAD AA

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ AT MP 0.20
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.000	0.000	INTERSECTION	N/A	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.003	0.003	SIGN	LEFT	GUIDE, DO NOT ENTER
0.005	0.005	SIGN	LEFT	GUIDE, ONE WAY
0.005	0.072	GUARD/GUIDE WALL	LEFT	
0.005	0.130	GUARD/GUIDE WALL	RIGHT	
0.007	0.007	SIGN	RIGHT	GUIDE, SITES 82 - 96
0.075	0.130	GUARD/GUIDE WALL	LEFT	
0.130	0.130	SIGN	RIGHT	GUIDE, ONE WAY
0.130	0.130	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.130	0.130	INTERSECTION	RIGHT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.130	0.130	ROUTE END	N/A	TO ROUTE 0203AZ AT MP 0.40

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0203AZ: CEDAR PASS CAMPGROUND ROAD LOOP A

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FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0011 AT MP .07 ON LEFT
0.000	0.000	INTERSECTION	LEFT	ROUTE 0011 (ENTRANCE ROAD (HIGHWAY 377))
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0011 (ENTRANCE ROAD (HIGHWAY 377))
0.004	0.004	SIGN	RIGHT	REGULATORY, STOP
0.008	0.008	INTERSECTION	LEFT	ROUTE 0909 (AMPHITHEATER PARKING)
0.009	0.009	SIGN	RIGHT	GUIDE, AMPHITHEATER PARKING
0.010	0.010	SIGN	LEFT	GUIDE, AMPHITHEATER PARKING
0.010	0.010	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.023	0.023	SIGN	LEFT	GUIDE, GRAPHIC SIGN, NO TEXT
0.033	0.033	INTERSECTION	LEFT	ROUTE 0214 (CEDAR PASS CAMPGROUND GROUP LOOP ROAD)
0.052	0.052	SIGN	RIGHT	REGULATORY, STOP
0.056	0.056	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.060	0.060	INTERSECTION	LEFT	ROUTE 0214 (CEDAR PASS CAMPGROUND GROUP LOOP ROAD)
0.085	0.085	INTERSECTION	LEFT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.092	0.092	SIGN	LEFT	GUIDE, BUTTE LOOP
0.094	0.094	GATE	N/A	
0.099	0.099	SIGN	RIGHT	GUIDE, NO CAMPFIRES
0.115	0.115	SIGN	RIGHT	WARNING, SLOW CHILDREN
0.141	0.196	GUARD/GUIDE WALL	LEFT	
0.154	0.463	GUARD/GUIDE WALL	RIGHT	
0.185	0.185	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.198	0.198	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.200	0.200	INTERSECTION	LEFT	ROUTE 0203AAZ (CEDAR PASS CAMPGROUND ROAD AA)
0.203	0.203	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.207	0.207	SIGN	RIGHT	GUIDE, SITES 40 - 81
0.209	0.395	GUARD/GUIDE WALL	LEFT	
0.209	0.209	SIGN	LEFT	GUIDE, ONE WAY
0.397	0.397	INTERSECTION	LEFT	ROUTE 0203AAZ (CEDAR PASS CAMPGROUND ROAD AA)
0.402	0.539	GUARD/GUIDE WALL	LEFT	
0.407	0.407	SIGN	RIGHT	GUIDE, ONE WAY

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0203AZ: CEDAR PASS CAMPGROUND ROAD LOOP A

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<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.469	0.535	GUARD/GUIDE WALL	RIGHT	
0.540	0.540	INTERSECTION	LEFT	ROUTE 0203AAZ (CEDAR PASS CAMPGROUND ROAD AA)
0.540	0.540	INTERSECTION	N/A	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.540	0.540	INTERSECTION	RIGHT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.540	0.540	ROUTE END	N/A	TO END OF LOOP

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0203BAZ: CEDAR PASS CAMPGROUND ROAD BA

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203BZ AT MP 0.11
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.006	0.014	GUARD/GUIDE WALL	LEFT	
0.006	0.064	GUARD/GUIDE WALL	RIGHT	
0.016	0.030	GUARD/GUIDE WALL	LEFT	
0.031	0.031	SIGN	LEFT	GUIDE, GRAPHIC SIGN, NO TEXT
0.031	0.031	SIGN	LEFT	GUIDE, HANDICAP ONLY
0.036	0.046	GUARD/GUIDE WALL	LEFT	
0.052	0.063	GUARD/GUIDE WALL	LEFT	
0.067	0.067	INTERSECTION	LEFT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.067	0.067	INTERSECTION	RIGHT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.070	0.070	ROUTE END	N/A	TO ROUTE 0203BZ AT MP 0.30

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0203BZ: CEDAR PASS CAMPGROUND ROAD LOOP B

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.006	0.006	SIGN	RIGHT	GUIDE, AGATE LOOP
0.007	0.007	GATE	N/A	
0.011	0.011	SIGN	RIGHT	GUIDE, NO CAMPFIRES
0.014	0.068	GUARD/GUIDE WALL	RIGHT	
0.016	0.087	GUARD/GUIDE WALL	LEFT	
0.017	0.017	SIGN	RIGHT	GUIDE, SITES 1 - 39
0.024	0.024	SIGN	RIGHT	WARNING, SLOW CHILDREN
0.050	0.050	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.067	0.067	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.073	0.078	GUARD/GUIDE WALL	RIGHT	
0.083	0.121	GUARD/GUIDE WALL	RIGHT	
0.088	0.088	INTERSECTION	LEFT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.091	0.091	SIGN	LEFT	GUIDE, ONE WAY
0.092	0.099	GUARD/GUIDE WALL	LEFT	
0.104	0.110	GUARD/GUIDE WALL	LEFT	
0.109	0.109	INTERSECTION	LEFT	ROUTE 0203BAZ (CEDAR PASS CAMPGROUND ROAD BA)
0.109	0.109	SIGN	LEFT	GUIDE, SITES 31 - 39
0.114	0.123	GUARD/GUIDE WALL	LEFT	
0.126	0.170	GUARD/GUIDE WALL	RIGHT	
0.127	0.127	SIGN	RIGHT	GUIDE, SITES 6 - 30
0.129	0.294	GUARD/GUIDE WALL	LEFT	
0.146	0.146	SIGN	RIGHT	GUIDE, HANDICAP ONLY
0.146	0.146	SIGN	RIGHT	GUIDE, GRAPHIC SIGN, NO TEXT
0.157	0.157	SIGN	RIGHT	GUIDE, VOLUNTEER CAMPGROUND HOST
0.172	0.304	GUARD/GUIDE WALL	RIGHT	
0.299	0.301	GUARD/GUIDE WALL	LEFT	
0.303	0.303	INTERSECTION	LEFT	ROUTE 0203BAZ (CEDAR PASS CAMPGROUND ROAD BA)

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0203BZ: CEDAR PASS CAMPGROUND ROAD LOOP B

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.306	0.313	GUARD/GUIDE WALL	RIGHT	
0.308	0.318	GUARD/GUIDE WALL	LEFT	
0.317	0.328	GUARD/GUIDE WALL	RIGHT	
0.322	0.328	GUARD/GUIDE WALL	LEFT	
0.330	0.330	INTERSECTION	LEFT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.330	0.330	INTERSECTION	RIGHT	ROUTE 0203BZ (CEDAR PASS CAMPGROUND ROAD LOOP B)
0.330	0.330	ROUTE END	N/A	TO END OF LOOP

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0204: CONATA ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010AZ AT MP 23.76 ON LEFT
0.000	0.000	SIGN	N/A	GUIDE, WALL 11-90 11 INTERIOR 19
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.004	0.004	SIGN	RIGHT	REGULATORY, STOP
0.058	0.058	SIGN	RIGHT	GUIDE, CONATA ROAD
0.073	0.073	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
0.105	0.105	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
0.202	0.202	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.458	0.458	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.492	0.492	SIGN	RIGHT	GUIDE, CONATA PICNIC AREA
0.563	0.563	SIGN	RIGHT	GUIDE, PIG DIG PARKING
0.593	0.593	INTERSECTION	RIGHT	ROUTE 0208 (CONATA PICNIC AREA ROAD)
0.638	0.638	SIGN	RIGHT	GUIDE, PIG DIG PARKING
0.661	0.661	SIGN	RIGHT	GUIDE, CONATA PICNIC AREA
0.748	0.748	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.764	0.764	SIGN	RIGHT	GUIDE, PIG DIG PARKING
0.766	0.766	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.766	0.766	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.780	0.780	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.790	0.790	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.795	0.795	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.811	0.811	SIGN	LEFT	WARNING, GRAPHIC SIGN, NO TEXT
1.005	1.005	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
1.464	1.464	SIGN	RIGHT	REGULATORY, FIREARMS PROHIBITED
1.464	1.464	SIGN	RIGHT	GUIDE, DO NOT COLLECT FOSSILS, PLANTS OR ROCKS IN THE PARK
1.483	1.483	SIGN	RIGHT	GUIDE, NO OFF ROAD DRIVING
1.483	1.483	SIGN	RIGHT	GUIDE, NO HUNTING OR SHOOTING
1.522	1.522	SIGN	RIGHT	WARNING, SLOW
1.559	1.559	TRAFFIC LIGHT	LEFT	

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0204: CONATA ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
1.562	1.562	SIGN	RIGHT	GUIDE, CONATA ENTRANCE STATION
1.564	1.564	SIGN	RIGHT	GUIDE, ENTRANCE FEES
1.600	1.600	SIGN	RIGHT	GUIDE, U.S. FEE AREA
1.600	1.600	SIGN	RIGHT	WARNING, SLOW
1.620	1.620	SIGN	LEFT	GUIDE, ENTERING BADLANDS NATIONAL PARK
1.621	1.621	SIGN	RIGHT	GUIDE, ENTERING BADLANDS NATIONAL PARK
1.636	1.636	SIGN	RIGHT	GUIDE, PAY ENTRANCE FEE 300 AHEAD
1.639	1.639	INTERSECTION	RIGHT	UNPAVED ROUTE (UTILITY LINE ACCESS ROAD)
1.645	1.645	CATTLE GUARD	N/A	
1.650	1.650	PARK BOUNDARY	N/A	
1.650	1.650	INTERSECTION	N/A	UNPAVED ROUTE (CONATA BASIN ROAD (STATE MAINTAINED / NON NPS))
1.650	1.650	ROUTE END	N/A	TO PARK BOUNDARY AT CATTLE GUARD/END OF PAVEMENT

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0208: CONATA PICNIC AREA ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0204
0.000	0.000	INTERSECTION	LEFT	ROUTE 0204 (CONATA ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0204 (CONATA ROAD)
0.006	0.006	SIGN	RIGHT	REGULATORY, STOP
0.047	0.065	GUARD/GUIDE WALL	RIGHT	
0.048	0.048	SIGN	RIGHT	GUIDE, NO CAMPFIRES
0.048	0.048	SIGN	RIGHT	GUIDE, NO CAMPING
0.066	0.077	GUARD/GUIDE WALL	RIGHT	
0.078	0.110	GUARD/GUIDE WALL	RIGHT	
0.111	0.149	GUARD/GUIDE WALL	RIGHT	
0.132	0.132	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.135	0.148	GUARD/GUIDE WALL	LEFT	
0.210	0.210	INTERSECTION	N/A	ROUTE 0208 (CONATA PICNIC AREA ROAD)
0.210	0.210	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
0.210	0.210	ROUTE END	N/A	TO END OF PAVEMENT AT TRAILHEAD

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0214: CEDAR PASS CAMPGROUND GROUP LOOP ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0203AZ AT MP 0.06
0.000	0.000	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.005	0.005	GATE	N/A	
0.005	0.005	SIGN	N/A	REGULATORY, GRAPHIC SIGN, NO TEXT
0.008	0.008	SIGN	RIGHT	GUIDE, GROUP LOOP DUMP STATION GROUP CAMPING BY RESERVATION ONLY
0.015	0.015	SIGN	RIGHT	GUIDE, NO CAMPFIRE
0.020	0.020	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.022	0.067	GUARD/GUIDE WALL	LEFT	
0.048	0.052	CURB-AND-GUTTER	RIGHT	
0.049	0.049	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.050	0.050	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.052	0.065	CURB-AND-GUTTER	RIGHT	
0.054	0.054	INTERSECTION	RIGHT	ROUTE 0932 (CEDAR PASS DUMP STATION PARKING)
0.064	0.064	SIGN	RIGHT	GUIDE, CLEAN WATER
0.070	0.135	GUARD/GUIDE WALL	LEFT	
0.084	0.138	GUARD/GUIDE WALL	RIGHT	
0.138	0.148	GUARD/GUIDE WALL	LEFT	
0.140	0.188	GUARD/GUIDE WALL	RIGHT	
0.150	0.183	GUARD/GUIDE WALL	LEFT	
0.293	0.293	SIGN	LEFT	GUIDE, DO NOT ENTER
0.300	0.300	INTERSECTION	LEFT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.300	0.300	INTERSECTION	RIGHT	ROUTE 0203AZ (CEDAR PASS CAMPGROUND ROAD LOOP A)
0.300	0.300	ROUTE END	N/A	TO ROUTE 0203AZ AT MP 0.03

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0400: CEDAR PASS MAINTENANCE ACCESS ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010AZ AT MP 4.83 ON LEFT
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.008	0.008	SIGN	RIGHT	REGULATORY, STOP
0.011	0.011	SIGN	RIGHT	REGULATORY, NO PARKING BETWEEN SIGNS
0.020	0.020	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.022	0.022	INTERSECTION	LEFT	ROUTE 0904 (BEN REIFEL VISITOR CENTER PARKING)
0.027	0.027	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.039	0.039	FIRE HYDRANT	RIGHT	
0.045	0.045	SIGN	RIGHT	REGULATORY, NO PARKING BETWEEN SIGNS
0.047	0.047	SIGN	RIGHT	GUIDE, VISITOR PARKING BUS PARKING
0.053	0.053	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.063	0.063	INTERSECTION	RIGHT	ROUTE 0905AZ (RV PARKING)
0.088	0.088	INTERSECTION	LEFT	ROUTE 0905BZ (REAR VISITOR CENTER PARKING)
0.143	0.143	INTERSECTION	LEFT	ROUTE 0905BZ (REAR VISITOR CENTER PARKING)
0.150	0.150	SIGN	RIGHT	GUIDE, SERVICE ROAD NO EXIT
0.155	0.155	SIGN	LEFT	GUIDE, UNABLE TO READ FROM VIDEO
0.158	0.158	INTERSECTION	LEFT	ROUTE 0931 (VOLUNTEER RV PARKING)
0.192	0.192	INTERSECTION	LEFT	ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING)
0.194	0.194	SIGN	RIGHT	GUIDE, RANGER STATION NPS RESIDENCES MAINTENANCE SHOP
0.197	0.197	SIGN	RIGHT	GUIDE, BEN REIFEL RD
0.197	0.197	SIGN	LEFT	GUIDE, BEN REIFEL RD
0.204	0.204	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.204	0.204	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
0.233	0.233	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.234	0.234	SIGN	RIGHT	REGULATORY, WEST RIVER
0.396	0.396	SIGN	RIGHT	GUIDE, MAINTENANCE SHOP FIRE CACHE RESOURCE MANAGEMENT MUSEUM STORAGE
0.413	0.413	INTERSECTION	LEFT	ROUTE 0933 (CEDAR PASS FIRE CACHE PARKING)
0.613	0.613	SIGN	LEFT	GUIDE, CLEAN OUTS

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0400: CEDAR PASS MAINTENANCE ACCESS ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.613	0.613	SIGN	LEFT	GUIDE, WARNING BURIED POWER CABLES
0.690	0.690	SIGN	LEFT	GUIDE, WARNING BURIED POWER CABLES
0.690	0.690	SIGN	LEFT	GUIDE, CLEAN OUTS
0.727	0.727	SIGN	LEFT	GUIDE, CLEAN OUTS
0.727	0.727	SIGN	LEFT	GUIDE, WARNING BURIED POWER CABLES
0.825	0.825	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.843	0.843	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
0.863	0.863	INTERSECTION	RIGHT	ROUTE 0906 (MAINTENANCE AREA PARKING)
0.867	0.867	INTERSECTION	LEFT	UNPAVED ROUTE (WATER TOWER ACCESS)
0.878	0.878	SIGN	RIGHT	REGULATORY, YIELD
0.880	0.880	INTERSECTION	N/A	UNPAVED ROUTE
0.880	0.880	ROUTE END	N/A	TO COUNTY MAINTENANCE AT ROUTE 0906

# BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0401: RESIDENCE AREA ROAD AND PARKING

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0400 AT MP 0.19 ON LEFT
0.000	0.000	INTERSECTION	LEFT	ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0400 (CEDAR PASS MAINTENANCE ACCESS ROAD)
0.022	0.022	INTERSECTION	LEFT	ROUTE 0931 (VOLUNTEER RV PARKING)
0.047	0.047	FIRE HYDRANT	RIGHT	
0.056	0.056	INTERSECTION	RIGHT	ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING)
0.061	0.061	INTERSECTION	LEFT	ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING)
0.089	0.089	INTERSECTION	LEFT	ROUTE 0934AZ (RESIDENCE AREA PARKING A)
0.131	0.131	FIRE HYDRANT	LEFT	
0.158	0.158	FIRE HYDRANT	RIGHT	
0.163	0.163	INTERSECTION	RIGHT	ROUTE 0935 (ADMINISTRATIVE PARKING)
0.192	0.192	INTERSECTION	LEFT	ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING)
0.198	0.198	INTERSECTION	RIGHT	ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING)
0.233	0.233	INTERSECTION	LEFT	UNPAVED ROUTE (UTILITY ROAD)
0.252	0.252	FIRE HYDRANT	RIGHT	
0.253	0.253	INTERSECTION	LEFT	ROUTE 0934BZ (RESIDENCE AREA PARKING B)
0.262	0.283	CURB-AND-GUTTER	LEFT	
0.289	0.289	FIRE HYDRANT	RIGHT	
0.291	0.291	INTERSECTION	LEFT	ROUTE 0934CZ (RESIDENCE AREA PARKING C)
0.300	0.300	INTERSECTION	N/A	ROUTE 0401 (RESIDENCE AREA ROAD AND PARKING)
0.300	0.300	ROUTE END	N/A	TO END OF PAVEMENT

## BADL: ROUTE MAINTENANCE FEATURES ROAD LOG

### ROUTE 0407: PINNACLES RANGER STATION SERVICE ACCESS ROAD

**Notice:** Culverts and drop inlets were NOT marked by NPS nor inventoried by RIP in Cycle 4, therefore no culverts or drop inlets are reported in any Road Log. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7) and Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010AZ AT MP 27.66 ON RIGHT
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010AZ (BADLANDS LOOP (ROAD 240))
0.004	0.004	SIGN	RIGHT	REGULATORY, STOP
0.009	0.009	SIGN	RIGHT	GUIDE, AUTHORIZED PERSONNEL ONLY
0.037	0.037	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.098	0.098	INTERSECTION	LEFT	ROUTE 0407 (PINNACLES RANGER STATION SERVICE ACCESS ROAD)
0.100	0.100	INTERSECTION	N/A	ROUTE 0924 (PINNACLES ENTRANCE AND RANGER STATION PARKING)
0.100	0.100	ROUTE END	N/A	TO RANGER STATION UNPAVED PARKING

# Badlands National Park



## **Section 10 Appendix**

## **APPENDIX A: GLOSSARY OF TERMS AND ABBREVIATIONS**

<b>TERM OR ABBREVIATION</b>	<b>DESCRIPTION OR DEFINITION</b>
AADT	(Annual Average Daily Traffic) The estimate of typical daily traffic on a road segment for all days of the week over the period of one year.
CRS	Condition Rating Sheets. (Section 5)
Excellent	Excellent rating with an index value of 95 or greater
Fair	Fair rating with an index value from 61 to 84
Func. Class	Functional Classification (see Route ID, Section 4)
Good	Good rating with an index value from 85 to 94
IRI	International Roughness Index
Lane Width	Width from road centerline to fogline, or from centerline to edge-of-pavement when no fogline exists
MRR	Manually Rated Route
N/A	Not Applicable
NC	Not Collected
Paved Width	Width from edge-of-pavement to edge-of-pavement
PCR	Pavement Condition Rating (Appendix B, Section 10)
Poor	Poor Rating with an index value of 60 or less
RCI	Roughness Condition Index
SADT	(Seasonal Annual Daily Traffic) The AADT adjusted to represent just the period of the year containing 80 percent of the total annual traffic.
SCR	Surface Condition Rating (Appendix B, 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 0 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 occur 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.

### **Calculation of Index Values**

**Note:** Index values < 0 default to 0. Index values > 100 default to 100.

For all indices, a higher value indicates a better road condition, and a lower value indicates a poorer road condition.

All severity protocols are taken from the SHRP Distress Identification Manual.

#### **Condition Ranges for all Indices**

Excellent	>=95
Good	>=85 and <95
Fair	>60 and <85
Poor	<=60

#### **Alligator Crack Index**

$$AC\_INDEX = 100 - 40 * [(\%LOW / 70) + (\%MED / 30) + (\%HI / 10)]$$

Where :

The values %LOW, %MED and %HI describe the percent of the total WX measured area that is affected by alligator cracking of each severity level. These values range from  $\geq 0$  to  $\leq 100$ .

$\%LOW$  = (Total square area WX measured low severity alligator cracking) / (Section length \* WX measured lane width)

$\%MED = (\text{Total square area WX measured medium severity alligator cracking}) / (\text{Section length} * \text{WX measured lane width})$

$\%HI = (\text{Total square area WX measured high severity alligator cracking}) / (\text{Section length} * \text{WX measured lane width})$

The denominators 70, 30, and 10 are the maximum allowable extents for the numerator value in the same units. For example, low severity alligator cracking totaling 70% of the measured section area would alone fail that section of road for this index.

The threshold for failure for this index is  $AC\_INDEX = 60$ .

#### Severity Levels:

Low severity alligator cracking describes an area of cracks with no or only a few connecting cracks; cracks are not spalled (cracked, broken, chipped, frayed along the cracks); pumping (water seepage from beneath the pavement through the cracks) is not evident. Any sealed alligator cracks are low severity alligator cracks, as long as the sealant is still in good condition. If the sealant has reopened, and the crack is visible and can be measured, the crack severity is assigned according to that measurement.

Medium severity alligator cracking describes an area of interconnected cracks forming a complete pattern; cracks may be slightly spalled; pumping is not evident.

High severity alligator cracking describes an area of moderately or severely spalled interconnected cracks forming a complete pattern; pieces may move when subjected to traffic; pumping may be evident.

#### Longitudinal Crack Index

$LC\_INDEX = 100 - 40 * [(\%LOW / 350) + (\%MED / 200) + (\%HI / 75)]$

#### Where:

The values %LOW, %MED and %HI describe the length of longitudinal cracking of each severity as a percent of the section length. These values are  $\geq 0$  and can exceed 100.

$\%LOW = (\text{Total linear feet WX measured low severity longitudinal cracking}) / (\text{Section length in linear feet})$

$\%MED = (\text{Total linear feet WX measured medium severity longitudinal cracking}) / (\text{Section length in linear feet})$

$\%HI = (\text{Total linear feet WX measured high severity longitudinal cracking}) / (\text{Section length in linear feet})$

The denominators 350, 200, and 75 are the maximum allowable extents for the numerator value in the same units. For example, medium severity longitudinal cracking with a total length that is 200% of the length of the section would alone fail that section of road for this index.

The threshold for failure for this index is  $LC\_INDEX = 60$ .

#### Severity Levels:

Low severity longitudinal cracks have a mean width  $\leq 1/4''$ , or are sealed cracks of indeterminate width whose sealant material is in good condition.

Medium severity longitudinal cracks have a mean width  $> 1/4''$  and  $\leq 3/4''$ .

High severity longitudinal cracks have a mean width  $> 3/4''$ .

### Transverse Crack Index

$$TC\_INDEX = 100 - \{[20 * ((LOW / 15.1) + (MED / 7.5))] + [40 * (HI / 1.9)]\}$$

Where:

The values **LOW**, **MED** and **HI** describe a count of the total number of transverse cracks of each severity level, where one transverse crack unit is equal to the WX measured lane width. These values are  $\geq 0$ .

**LOW** = (Total linear feet WX measured low severity transverse cracking) / (WX measured lane width)

**MED** = (Total linear feet WX measured medium severity transverse cracking) / (WX measured lane width)

**HI** = (Total linear feet WX measured high severity transverse cracking) / (WX measured lane width)

The denominators **15.1**, **7.5**, and **1.9** are the maximum allowable extents for the numerator value in the same units. For example, high severity transverse cracking with a total length that amounts to 1.9 times the WX measured lane width would alone fail that section of road for this index.

The threshold for failure for this index is  $TC\_INDEX = 60$ .

Severity Levels:

Low severity transverse cracks have a mean width  $\leq 1/4$ " , or are sealed cracks of indeterminate width whose sealant material is in good condition.

Medium severity transverse cracks have a mean width  $> 1/4$ " and  $\leq 3/4$ " .

High severity transverse cracks have a mean width  $> 3/4$ " .

### Patching Index

$$PATCH\_INDEX = 100 - 40 * (%PATCHING / 80)$$

Where:

The value **%PATCHING** describes the percent of the total WX measured area that is affected by patching. This value ranges from  $\geq 0$  to  $\leq 100$ .

**%PATCHING** = (Total area WX measured patching) / (Section length \* WX measured lane width)

The denominator **80** is the maximum allowable extent for the numerator value in the same units. Patching totaling 80% or more of the measured section area fails a section of road for this index.

The threshold for failure for this index is  $PATCH\_INDEX = 60$ .

There are no severity levels for patching.

### Rutting Index

$$RUT\_INDEX = 100 - 40 * [(%LOW / 160) + (%MED / 80) + (%HI / 40)]$$

Where:

10 ARAN rut depth measurements are taken per full .02 section for each of 2 wheel paths (left and right), resulting in a total of 20 measurements taken for both wheel paths. The values %LOW, %MED and %HI describe the number of ARAN rut depth measurements of both wheel paths in the section whose values are of each severity level, calculated as a percentage of the total number of ARAN rut depth measurements taken for a single wheel path in the section. These values range from  $\geq 0$  to  $\leq 200$ .

%LOW = (Total number of ARAN measured low severity ruts in section for both wheel paths) / (Total number of ARAN rut measurements in section for a single wheel path)

%MED = (Total number of ARAN measured medium severity ruts in section for both wheel paths) / (Total number of ARAN rut measurements in section for a single wheel path)

%HI = (Total number of ARAN measured high severity ruts in section for both wheel paths) / (Total number of ARAN rut measurements in section for a single wheel path)

The denominators 160, 80, and 40 are the maximum allowable extents for the numerator value in the same units. For example, low severity ruts recorded in 16 of the 20 total readings (or 160% of a full wheel path's worth of readings) for a full .02 section would fail that section for this index.

The threshold for failure for this index is RUT\_INDEX = 60.

Severity Levels:

Ruts with an ARAN measured depth  $< 0.20''$  are not included in the distress calculations.

Low severity ruts have an ARAN measured depth  $\geq 0.20''$  and  $\leq 0.49''$ .

Medium severity ruts have an ARAN measured depth  $\geq 0.50''$  and  $\leq 0.99''$ .

High severity ruts have an ARAN measured depth  $\geq 1.00''$ .

### **Roughness Condition Index**

$$RCI = 32 * [5 * (2.718282 ^ (-0.0041 * AVG IRI))]$$

Where:

The value AVG IRI describes the average value of the Left IRI and Right IRI measurements for the section. This value can range from approximately 40 to over 1000.

$$AVG IRI = (ARAN \text{ measured Left IRI} + ARAN \text{ measured Right IRI}) / 2$$

There is no applicable threshold for failure for this index.

NOTE: Collection of roughness data is dependent 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.

### **Surface Condition Rating Index**

$$SCR = 100 - [(100 - AC\_INDEX) + (100 - LC\_INDEX) + (100 - TC\_INDEX) + (100 - PATCH\_INDEX) + (100 - RUT\_INDEX)]$$

Where:

See above for determinations of [AC\\_INDEX](#), [LC\\_INDEX](#), [TC\\_INDEX](#), [PATCH\\_INDEX](#) and [RUT\\_INDEX](#).

The threshold for failure for this index is  $SCR = 60$ .

### **Pavement Condition Rating Index Asphaltic Concrete Pavement (AS)**

$$PCR = (0.60 * SCR) + (0.40 * RCI)$$

Where:

See above for determinations of [SCR](#) and [RCI](#).

The values [0.60](#) and [0.40](#) function as weights within the formula.

If [SCR](#) equals zero (which means that the road surface condition is very poor), then the formula simply reduces to:  $PCR = 0.40 * RCI$ .

If [RCI](#) equals zero (which means that this value was not available for some reason), then the formula becomes:  $PCR = SCR$ .

The threshold for failure for this index is  $PCR = 60$ .

### **Pavement Condition Rating Index Portland Cement Concrete Pavement (CO)**

$$\text{Concrete PCR} = -0.0012(IRI^2) + 0.0499(IRI) + 99.542$$

Where:

The threshold for failure for this index is  $PCR = 60$ .

### **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**

Under Construction 100

Excellent 97

Good 90

Fair 73

Poor 45

## **APPENDIX C: GENERAL INFORMATION ON RIP SYSTEMS**

### **DMI (Distance Measuring Instrument)**

The DMI (Distance Measuring Instrument) obtains road length measurements that are highly accurate (to 0.001 miles). The DMI is connected to the outside of the rear wheel on the driver's side, and is wired into the antilock braking system (ABS). The number of pulses recorded for each wheel rotation by the ABS is registered by the DMI, which transmits a measurement of distance traveled to the processing computers in the ARAN. The DMI distance measurements are the foundation to which all the other subsystems are tied.

### **Digital Image Information**

All images collected in Cycle 4 are digital images in .jpg format. These images provide adequate resolution for identifying sign and feature inventories and pavement evaluations. The images can be viewed with an interactive software program called VisiData. Each park will receive a copy of the VisiData program. Cycle 4 data, as well as Cycle 3 data, can be viewed using the Visi-Data software program. This program is a 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 looking for. Associated digital right-of-way images from either the LAN, USB port, individual DVD can be presented along with GPS locations.

### **Right-of-way (ROW) Video**

Three digital cameras are mounted above the vehicle's windshield that point directly forward and slightly to the left and right. These cameras each collect one image every 0.002 miles (10.56 feet) in the primary-direction lane, to give a panoramic field-of-view of about 160 degrees. (Forward-facing video from the center camera only is collected in the opposite-direction lane of travel.)

If data collection speed exceeds 35-40 mph, the network and storage computers may become overwhelmed and may begin to drop individual video frames. Occasional common video quality issues include sun glare and rapid changes between sunlight and shadow. The camera system is equipped with auto risers that sometimes cannot adjust quickly enough to collect optimal video images.

<b>FHWA ARAN CAMERA SPECIFICATIONS</b>	
<b>Forward-Facing Cameras (ROW)</b>	
Focal length	10 mm
Chip size	8.71mm X 6.90mm
Naming convention of each image	chainage.jpg
Image resolution	1300 X 1030
Image pixel size	depends on distance
Relative position of the GPS unit to each camera	2.104 meters from front-center rutbar to camera
<i>The ARAN has a lever arm setting which tells the POS system where the center of the rutbar is with respect to the GPS antennas.</i>	

### **Pavement Video**

Pavement video images are collected by the data collection vehicle to use in later analysis to determine extents and severities of different types of pavement distress. The pavement in the primary-direction road lane is filmed continuously by two analog cameras attached to booms extended from the rear of the ARAN on the left and right sides. Strobe lights fire synchronously with the opening of the camera shutters to eliminate shadows and motion blur. The images from the two cameras overlap, and are stitched together in real time to create a continuous strip image of the pavement in the primary direction lane. This strip has a maximum width of 3.0 meters (actual width depends on pavement camera calibration) and is sectioned for ease of file management every 0.010 miles (52.8 feet).

The cameras both have a resolution of 640 x 480, making the threshold of visible pavement cracks about 3 mm. Because the cameras are triggered by time and not distance traveled, this subsystem requires a minimum operating speed of 6 mph, otherwise images are taken on top of one another and result in checkered or black pavement video.

<b>FHWA ARAN CAMERA SPECIFICATIONS</b>	
<b>Pavement Cameras</b>	
Image Pixel size	3.135 mm /side
Image Resolution	640 X 480
Area that images cover	1.5 m X 1.2 m
Full color or grayscale	grayscale
Vehicle speed limitations	80km/h
Aperture setting	Auto-iris
Exposure setting	1/50000

### **FHWA ARAN GPS & Inertial System**

GPS is collected by a NovAtel MiLlennium, 12 channel, dual frequency L1/L2, DGPS ready receiver with a MiLlennium 502 GPS antenna. An OmniStar 3000 LR provides real-time differential correction. An Applanix POS/LV is the inertial system that fills in when GPS is unavailable. The antenna is mounted in the center of the roof, slightly toward the rear of the vehicle, but a lever arm is applied to place the operational location of GPS recording at the center of the rutbar on the front bumper of the vehicle. Expected accuracy under ideal conditions is sub meter.

### **GPS Collected on Manually Rated Routes**

Parking areas and roads that are not fully drivable with the ARAN data collection vehicle are collected manually by field technicians. GPS is collected for these routes using GPS field data collection utilizes Trimble ProXRS or ProXH Receivers matched with Trimble TSC1 or Ranger handheld Data Loggers, connected to Trimble Hurricane Antennas giving sub meter accuracy in ideal conditions. This collection equipment has varied as technology has improved over the years of RIP data collection. Some GPS files collected as early as 1998 have been verified for accuracy and perpetuated through the current cycle of data collection.

### **GPS SHAPEFILES**

<b>Type of Route and Collection Shape Filename</b>		
Roads driven by ARAN	Line	park_road_04.dbf/.shp/.shx
Parking Areas	Polygon	park_pkg_04.dbf/.shp/.shx
Roads Manually Rated as Lines (not in every park)	Line	park_mrl_04.dbf/.shp/.shx
Roads Manually Rated as Polygons (not in every park)	Polygon	park_mrp_04.dbf/.shp/.shx

- Datum for all GPS shapefiles is LL\_WGS84\_DD (Latitude Longitude \_World Geodetic Survey 1984\_Decimal Degrees)
- In filename, “park” is NPS four-letter alphabetic code.
- The source for route data required for data processing and report production is the PARK\_RouteInfo.mdb.

### **Condition Photos Taken of Manually Rated Roads**

One or more digital photos are taken by Canon Power Shot G2 4.0 Mega Pixel digital camera for each manually rated route in a National Park. They are stored in .jpg format named with the four-letter NPS park alphabetic code, route number, and the photo number assigned by the camera. For example, YOSE\_0900\_4434.jpg is the filename of the photo named 4434 by the camera that was taken of Yosemite National Park route 0900.

### **Scenic Photos**

Scenic photos are taken by Canon Power Shot G2 4.0 Mega Pixel digital camera throughout each park and are named with the four-letter NPS park alphabetic code and the count of the photo taken in that park. For example, GRCA003.jpg is the filename of the third scenic photo taken in Grand Canyon National Park. The number of scenic photos provided will vary between parks.

## **APPENDIX D: METADATA**

### **FHWA – NPS Road Inventory Program Cycle 4 Metadata**

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**

- MUTCD based on contents & colors of sign, not on size
- Database records that show a Portland Cement Concrete (CO) surface type sometimes include distress index values that seem to show a perfect roadway. Condition assessments on concrete pavements are not conducted for Alligator Cracking, Transverse or Longitudinal Cracking, Patching, or Rutting. Perfect values for concrete road sections for these indexes are default values and do not represent a condition assessment of the concrete surfaces.
- 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\_Tenth 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.

- Roadway Data is collected in intervals of 0.010 miles (52.8feet) constituting a “station”.
- Most roadway features are collected relative to the primary direction lane of a roadway, using the primary-direction video and mileage. Signs and Mile Markers are the only features collected using the opposite-direction video with mileage location referenced to the primary direction lane of the roadway.
- Route\_GPS table contains GPS positional information collected by the ARAN and post processed with Applanix POSPac Land 5.0 post-processing software. No manual adjustments have occurred on this table.
- Modifications to the Park\_ROAD\_04.dbf/.shp/.shx files may have been necessary for report esthetics.
- Modifications to the Park\_PKG\_04.dbf/.shp/.shx files may have been necessary for report esthetics.
- Cycle 4 utilizes the Microsoft Office 2003 suite of products and Crystal Reports XI for document and data file generation and reporting.
- All PDF files are in Adobe Acrobat 7.0 Professional format.
- All ArcGIS files are created using ESRI Version 9.x software.
- Thumbnail images are created at 1/10 original image size for Right-of-Way and Pavement Images.
- FHWA is investigating the rutting methodology and calculated values it currently reports. Equipment limitations and analysis methods may be over reporting, low severity rutting.

### Key to Notes in Tables

(1): Note that only one value fits in field, so even if this value varies throughout the route, only predominant value is recorded here.

(2): Shoulder width is measured at route start and every half-mile along the route in the primary direction. Width is the entire width of the drivable shoulder, regardless of the presence or absence of pavement, from the fog line to the shoulder hinge point, or if no fog line exists, from the edge of pavement to the hinge point. Identification of shoulder hinge point can be problematic using video analysis. Some paved ditches may be mistakenly recorded as shoulders where the shoulder hinge point and change in slope are not easily distinguished from the video.

(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.

(5): Condition assessments on concrete (PCC) pavements are not conducted for Alligator Cracking, Transverse or Longitudinal Cracking, Patching, or Rutting. Perfect values for concrete road sections for these indexes are default values and do not represent a condition assessment of the concrete surfaces.

(6): 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 resolutions. 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
1	RIP_CYCLE	XX	4, for data collection cycle 4	Route ID Meeting	FHWA Determination	100% Referenced to other tables
2	STATE	XX	State where route is located	Route ID Meeting	Park Input / FHWA Determination	100%, Referenced to other tables (1)
3	PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	100%, Referenced to other tables
4	PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	100%, Referenced to other tables
5	RTE_NO	9999XXX	Route number	Route ID Meeting	Park Input / FHWA Classification	100%, Referenced to other tables
6	RTE_NAME	(Text)	Route name	Route ID Meeting	Park Input	100%, Referenced to other tables. 100 characters fit in field
7	FUNCT_CLASS	X	Route functional classification	Route ID Meeting	Park Input / FHWA Classification	100%, Referenced to other tables
8	DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input / FHWA Determination	100%,
9	BEG_MP_EST	999.999 (miles)	Estimated starting MP	Route ID Meeting	Park Input / FHWA Determination	Estimated before data collected
10	END_MP_EST	999.999 (miles)	Estimated ending MP	Route ID Meeting	Park Input / FHWA Determination	Estimated before data collected
11	RTE_LENGTH	999.999 (miles)	Collected route length	ARAN Data Collection	Automatic Output	100%
12	FROM_DESC	(Text)	Beginning terminus of route	Route ID Meeting	Park Input / FHWA Determination	100% Referenced to other tables
13	TO_DESC	(Text)	Ending terminus of route	Route ID Meeting	Park Input / FHWA Determination	100% Referenced to other tables
14	NO_LANES	X	Number of lanes in route	ARAN Data Collection	Survey Crew Input	Untested. (1)
15	SURF_TYPE	XX	Surface type of route	ARAN Data Collection	Survey Crew Input	100%, Referenced to other tables (1)
16	COMP_DIR	XX	Compass direction of route's primary lane (nearest cardinal direction)	Route ID Meeting	Park Input / FHWA Determination	Untested
17	COMMENTS	(Text)	Special information, if any	Contractor Post-processing	Contractor Input	Untested
18	FILENAME	(Text)	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
19	SECTION	(Text)	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%

20	FKEY	9999999	Unique record ID	Contractor Post-processing	Database Processing	100%
21	DATE	MM/DD/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
22	BEG_MP	999.999 (miles)	Beginning MP collected	ARAN Data Collection	Automatic Output	100% (3)
23	END_MP	999.999 (miles)	Ending MP collected	ARAN Data Collection	Automatic Output	100% (3)

**PMS\_FEATURE Table Metadata:**

	<b>FIELD</b>	<b>FORMAT</b>	<b>EXPECTED VALUE</b>	<b>SOURCE</b>	<b>VALIDATION</b>	<b>EXPECTED ACCURACY</b>
1	RIP_CYCLE	XX	4, for data collection cycle 4	Route ID Meeting	FHWA Determination	100% Referenced to other tables
2	STATE	XX	State where route is located	Route ID Meeting	Park Input / FHWA Determination	Untested (1)
3	PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	100% Referenced to other tables
4	PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	100% Referenced to other tables
5	RTE_NO	9999XXX	Route number	Route ID Meeting	Park Input / FHWA Classification	100% Referenced to other tables
6	FMSS_EQUIP	XXXXXXXX	Facility Management Software System Equipment number	NPS FMSS application	NPS References	Untested
7	FUNCT_CLASS	X	Route functional class	Route ID Meeting	Park Input / FHWA Classification	100% Referenced to other tables
8	DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input / FHWA Determination	100%
9	MP	999.999 (miles)	Feature location along route	ARAN Data Collection/Contractor Post-processing	Video Analysis	<=0.001 mile
10	BEG_MP	999.999 (miles)	Feature Beginning location along route	Contractor Post-processing	Video Analysis	<=0.001 mile
11	END_MP	999.999 (miles)	Feature Ending location along route	Contractor Post-processing	Video Analysis	<=0.001 mile
12	FEATURE_LENGTH	999.99 (Feet)	Linear Feature Length	Contractor Post-processing	Database Processing	100%
13	EVENT	XXXX	Event category of feature	Contractor Post-processing	Video Analysis	Untested
14	EVENT_CODE	XXXX	Event sub-category of feature	Contractor Post-processing	Video Analysis	Untested
15	FEATURE_TYPE	(Text)	Feature designation: LINEAR or POINT	Contractor Post-processing	Video Analysis	Untested
16	EVENT_DESC	(Text)	Description of feature/contents of sign	Contractor Post-processing	Video Analysis	Untested
17	MUTCD	(Text)	MUTCD Code of Sign	Contractor Post-processing	Database Processing	95%
18	CONDITION	“N/A”	Sign condition. N/A. Not to be populated	Contractor Post-processing	Video Analysis	Values inaccurate, defaulted to “N/A”
19	COMMENT	(Text)	Sign label, intersecting route, etc.	Contractor Post-processing	Database Processing	Untested
20	OFFSET	“N/A”	Offset from Road Edge. N/A. Not to be populated	Contractor Post-processing	Database Processing	Values inaccurate, defaulted to “N/A”

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
21	SIDE	(Text)	Side of route relative to lane driven	Contractor Post-processing	Video Analysis	95%
22	STR_NUMBER	(Text)	FHWA bridge structure number	FHWA Post-processing	Database Processing	Untested
23	BARR_MAT	(Text)	Barrier Material Type	Contractor Post-processing	Video Analysis	Untested
24	BARR_TYPE	(Text)	Barrier Type	Contractor Post-processing	Video Analysis	Untested
25	BARR_POST_MAT	(Text)	Barrier Post Materials	Contractor Post-processing	Video Analysis	Untested
26	BARR_BEG_TERM	(Text)	Barrier Approach Treatment	Contractor Post-processing	Video Analysis	Untested
27	BARR_END_TERM	(Text)	Barrier End Treatment	Contractor Post-processing	Video Analysis	Untested
28	CURB_MAT	(Text)	Curb Material Type	Contractor Post-processing	Video Analysis	Untested
29	PAVED_DITCH_MAT	(Text)	Paved Ditch Material Type	Contractor Post-processing	Video Analysis	Untested (2)
30	GATE_MAT	(Text)	Gate Material Type	Contractor Post-processing	Video Analysis	Untested
31	GATE_STYLE	(Text)	Gate Style	Contractor Post-processing	Video Analysis	Untested
32	BEG_GPS_LAT	999.999999	GPS Latitude Co-ordinate (decimal degrees)	Contractor Post-processing	Video Analysis	<= 3.00 feet
33	BEG_GPS_LON	-999.999999	GPS Longitude Co-ordinate (-decimal degrees)	Contractor Post-processing	Video Analysis	<= 3.00 feet
34	BEG_GPS_ELEV	99999.9	GPS Elevation Feet	Contractor Post-processing	Video Analysis	Untested
35	BEG_GPS_MODE	(Text)	GPS Satellite Mode	Contractor Post-processing	Video Analysis	Untested
36	END_GPS_LAT	999.999999	GPS Latitude Co-ordinate (decimal degrees)	Contractor Post-processing	Video Analysis	<= 3.00 feet
37	END_GPS_LON	-999.999999	GPS Longitude Co-ordinate (-decimal degrees)	Contractor Post-processing	Video Analysis	<= 3.00 feet
38	END_GPS_ELEV	99999.9	GPS Elevation Feet	Contractor Post-processing	Video Analysis	Untested
39	END_GPS_MODE	(Text)	GPS Satellite Mode	Contractor Post-processing	Video Analysis	Untested
40	DATUM	(Text)	LL_WGS84_DD	Contractor Post-processing	Database Processing	100%
41	VIDEO	<Park>C04VID<#>	Removable USB video hard drive number	Contractor Post-processing	Database Processing	Untested
42	IMAGE	(Text)	Filename of .jpg image showing feature	Contractor Post-processing	Automatic Output	Untested
43	DATE	MM/DD/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
44	FILENAME	(Text)	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
45	SECTION	(Text)	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
46	FKEY	(Numeric)	Unique record ID	Contractor Post-processing	Database Processing	100%
47	VISI_FROM	999999 (millimiles)	Raw MP of first video frame showing feature	Contractor Post-processing	Database Processing	Untested
48	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
49	IDKEY	(Text)	Unique record ID used by VisiData	Contractor Post-processing	Database Processing	Untested
50	MP_REF	(Text)	Range of mileage to play in VisiData	Contractor Post-processing	Database Processing	Untested

List of Roadway Features						
#	EVENT	EVENT_CODE	FEATURE_TYPE	EVENT_DESC	STRUCTURE #	COLLECTED BY
1	BRIDGE	BRDG	LINEAR	BRIDGE	ALWAYS	ARAN
2	CATTLE GUARD	CGD	POINT	CATTLE GUARD	-	VIDEO RATING
3	CONSTRUCTION	CNST	LINEAR	CONSTRUCTION WORK ZONE	-	ARAN
4	CULVERT	CUL	POINT	CULVERT	SOMETIMES	ARAN
5	CURB	CRBL	LINEAR	CURB ON LEFT	-	VIDEO RATING
	""	CRBR	LINEAR	CURB ON RIGHT	-	VIDEO RATING
6	CURB-AND-GUTTER	CAGL	LINEAR	CURB-AND-GUTTER ON LEFT	-	VIDEO RATING
	""	CAGR	LINEAR	CURB-AND-GUTTER ON RIGHT	-	VIDEO RATING
7	DROP INLET	DINL	POINT	DROP INLET ON LEFT	-	ARAN
	""	DINR	POINT	DROP INLET ON RIGHT	-	ARAN
8	GATE	GATE	POINT	GATE	-	VIDEO RATING
9	FIRE HYDRANT	FHDL	POINT	FIRE HYDRANT ON LEFT	-	VIDEO RATING
	""	FHDR	POINT	FIRE HYDRANT ON RIGHT	-	VIDEO RATING
10	GUARD/GUIDE WALL	GGWL	LINEAR	GUARD/GUIDE WALL ON LEFT	-	VIDEO RATING
	""	GGWR	LINEAR	GUARD/GUIDE WALL ON RIGHT	-	VIDEO RATING
11	GUARD/GUIDE RAIL	GGRL	LINEAR	GUARD/GUIDE RAIL ON LEFT	-	VIDEO RATING
	""	GGRR	LINEAR	GUARD/GUIDE RAIL ON RIGHT	-	VIDEO RATING
12	INTERSECTION	INTL	POINT	INTERSECTION ON LEFT	-	ARAN
	""	INTR	POINT	INTERSECTION ON RIGHT	-	ARAN
	""	INTN	POINT	INTERSECTION SIDE N/A	-	ARAN

13	LANE DEVIATION	LADV	LINEAR	LANE DEVIATION	-	ARAN
14	LOW WATER CROSSING	LWCR	LINEAR	LOW WATER CROSSING	SOMETIMES	VIDEO RATING
15	MILE MARKER	MML	POINT	MILE MARKER ON LEFT	-	VIDEO RATING
	""	MMR	POINT	MILE MARKER ON RIGHT	-	VIDEO RATING
16	OVERPASS	OPV	POINT	OVERPASS VEHICULAR	SOMETIMES	ARAN
	""	OPP	POINT	OVERPASS PEDESTRIAN	SOMETIMES	ARAN
	""	OPRX	POINT	OVERPASS RAILROAD CROSSING	SOMETIMES	ARAN
17	PARK BOUNDARY	PRK	POINT	PARK BOUNDARY	-	ARAN
18	PAVED DITCH	PVDL	LINEAR	PAVED DITCH ON LEFT	-	VIDEO RATING
	""	PVDR	LINEAR	PAVED DITCH ON RIGHT	-	VIDEO RATING
19	PULLOUT	PLOL	LINEAR	PULLOUT ON LEFT	-	VIDEO RATING
	""	PLOR	LINEAR	PULLOUT ON RIGHT	-	VIDEO RATING
20	RAILROAD CROSSING	RRX	POINT	RAILROAD CROSSING	-	VIDEO RATING
21	RETAINING WALL	RTWL	LINEAR	RETAINING WALL ON LEFT	-	VIDEO RATING
	""	RTWR	LINEAR	RETAINING WALL ON RIGHT	-	VIDEO RATING
22	ROUTE BEGIN	RBEG	POINT	ROUTE BEGIN	-	ARAN
23	ROUTE END	REND	POINT	ROUTE END	-	ARAN
24	SIGN	REGU, WARN, GUID, UNKN	POINT	DOCUMENT CONTENTS OF SIGN. (WHAT THE SIGN SAYS) FOR GRAPHICS ONLY SIGNS POPULATED WITH ("GRAPHIC SIGN, NO TEXT") FOR UNREADABLE TEXT POPULATED WITH ("UNABLE TO READ FROM VIDEO")	-	VIDEO RATING
25	STATE BOUNDARY	STB	POINT	STATE BOUNDARY	-	ARAN
26	TRAFFIC LIGHT	TRF	POINT	TRAFFIC LIGHT	-	VIDEO RATING
27	TUNNEL	TUN	LINEAR	TUNNEL	ALWAYS	ARAN

**PMS\_20, PMS\_MILE, & PMS\_TENTH Tables Metadata:**

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
1	RIP_CYCLE	XX	4, for RIP data collection Cycle 4	Route ID Meeting	FHWA Determination	100% Referenced to other tables
2	STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested. (1)
3	PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	100% Referenced to other tables
4	PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	100% Referenced to other tables
5	RTE_NO	9999XXX	Route number	Route ID Meeting	Park Input/FHWA Classification	100% Referenced to other tables
6	FUNCT_CLASS	X	Route functional class	Route ID Meeting	Park Input/FHWA Classification	100% Referenced to other tables
7	DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	100%
8	BEG_MP	999.999 (miles)	MP at start of road interval described by database record	Contractor Post-processing	Database Processing	100% (3)
9	END_MP	999.999 (miles)	MP at end of road interval described by database record	Contractor Post-processing	Database Processing	100% (3)
10	INT_LENGTH	999.9 (ft)	Length of road interval as aggregated for data table	Contractor Post-processing	Database Processing	100%
11	RTE_LENGTH	999.999 (miles)	Collected route length	ARAN Data Collection	Automatic Output	100% (3)
12	NO_LANES	99	Number of lanes in route	ARAN Data Collection	Survey Crew Input	Untested. (1)
13	LANE_NO	99	Data collection lane	Contractor Post-processing	Database Processing	Untested
14	D_LANE_WIDTH	99.999 (ft)	WiseCrax (crack detection software) analysis width	Contractor Post-processing	Automatic Output	Untested
15	LANE_WIDTH	99.9 (ft)	Width of lane	Contractor Post-processing	Video Analysis	95%, <=1.0 foot
16	PAVE_WIDTH	99.9 (ft)	Full pavement width	Contractor Post-processing	Video Analysis	95%, <=1.0 foot
17	SHLD_WIDTH_L	99.9 (ft)	Left shoulder width	Contractor Post-processing	Video Analysis	95%, <=1.0 foot (2)
18	SHLD_WIDTH_R	99.9 (ft)	Right shoulder width	Contractor Post-processing	Video Analysis	95%, <=1.0 foot (2)
19	SHLD_COND_L	N/A	N/A. Intended to be Left shoulder condition	ARAN Data Collection	Survey Crew Input	Values inaccurate, defaulted to "N/A"
20	SHLD_COND_R	N/A	N/A. Intended to be Right shoulder condition	ARAN Data Collection	Survey Crew Input	Values inaccurate, defaulted to "N/A"
21	DRAIN_COND_L	N/A	N/A. Intended to be Left drainage condition	ARAN Data Collection	Survey Crew Input	Values inaccurate, defaulted to "N/A"
22	DRAIN_COND_R	N/A	N/A. Intended to be Right drainage condition	ARAN Data Collection	Survey Crew Input	Values inaccurate, defaulted to "N/A"

	<b>FIELD</b>	<b>FORMAT</b>	<b>EXPECTED VALUE</b>	<b>SOURCE</b>	<b>VALIDATION</b>	<b>EXPECTED ACCURACY</b>
23	SURF_TYPE	XX	Surface type of route	ARAN Data Collection	Survey Crew Input	Untested. (1)
24	PCR	999	Pavement Condition Rating	Contractor Post-processing	Database Processing	100% for calculation (6)
25	RCI	999	Roughness Condition Index; -1 if invalid IRI	Contractor Post-processing	Database Processing	100% for calculation
26	SCR	999	Surface Condition Rating	Contractor Post-processing	Database Processing	100% for calculation (5) (6)
27	IRI_AVG	999.9 (inches/mile)	Average IRI	Contractor Post-processing	Database Processing	Untested
28	IRI_SD	999.9 (inches/mile)	IRI standard deviation	Contractor Post-processing	Database Processing	Untested
29	IRI_L	999.9 (inches/mile)	Left wheel path IRI	ARAN Data Collection	Automatic Output	Untested
30	IRI_R	999.9 (inches/mile)	Right wheel path IRI	ARAN Data Collection	Automatic Output	Untested
31	IRI_FLAG	0 or -1	-1 if invalid IRI data	Contractor Post-processing	Database Processing	Untested
32	RUT_INDEX	999	Rut index	Contractor Post-processing	Database Processing	100% for calculation (5)
33	RUT_AVG	99.99 (inches)	Average rut depth of both wheelpaths	Contractor Post-processing	Database Processing	Untested (5)
34	RUT_MAX	99.99 (inches)	Maximum rut depth of both wheelpaths	Contractor Post-processing	Database Processing	Untested (5)
35	RUT_SD	9.9	Rut depth standard deviation	Contractor Post-processing	Database Processing	Untested (5)
36	RUT_LOW	999 (%)	Percent of low severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (5)
37	RUT_MED	999 (%)	Percent of medium severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (5)
38	RUT_HI	999 (%)	Percent of high severity ruts (on a 0-200% scale) in both wheelpaths	Contractor Post-processing	Database Processing	Untested (5)
39	XFALL	999.9 (% slope)	Cross fall at start of road interval	ARAN Data Collection	Automatic Output	Untested
40	GRADE	999.9 (% slope)	Grade at start of road interval	ARAN Data Collection	Automatic Output	Untested
41	AC_INDEX	999	Alligator cracking index	Contractor Post-processing	Database Processing	100% for calculation (5) (6)
42	AC_LOW	999.9999 (%)	Percent of WiseCrax measured lane area with low-severity alligator cracking	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
43	AC_MED	999.9999 (%)	Percent of WiseCrax measured lane area with medium-severity alligator cracking	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
44	AC_HI	999.9999 (%)	Percent of WiseCrax measured lane area with high-severity alligator	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
			cracking			
45	LC_INDEX	999	Longitudinal cracking index	Contractor Post-processing	Database Processing	100% for calculation (5) (6)
46	LC_LOW	999.99 (%)	Low-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
47	LC_MED	999.99 (%)	Medium-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
48	LC_HI	999.99 (%)	High-severity longitudinal cracking in lane as a percentage of road interval length	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
49	TC_INDEX	999	Transverse cracking index	Contractor Post-processing	Database Processing	100% for calculation (5) (6)
50	TC_LOW	999.99 (cracks)	Count of low-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
51	TC_MED	999.99 (cracks)	Count of medium-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
52	TC_HI	999.99 (cracks)	Count of high-severity transverse cracks, where one crack unit equals the WiseCrax measured lane width	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
53	PATCH_INDEX	999	Patching index	Contractor Post-processing	Database Processing	100% for calculation (5) (6)
54	PATCHING	999.9999 (%)	Percent of WiseCrax measured lane area affected by patching	Contractor Post-processing	Pavement Video Analysis	As a Computed 95% Confidence Level (5) (6)
55	GPS_LAT	999.999999	Latitude coordinate	ARAN Data Collection	Automatic Output	<= 3.00 feet
56	GPS_LON	-999.999999	Longitude coordinate	ARAN Data Collection	Automatic Output	<= 3.00 feet
57	GPS_ELEV	99999.9	Elevation	ARAN Data Collection	Automatic Output	Untested
58	GPS_MODE	XXX	GPS Satellite Mode during collection	ARAN Data Collection	Automatic Output	Untested
59	DATUM	(Text)	LL_WGS84_DD	ARAN Data Collection	Database Processing	100%
60	VIDEO	<Park>C04VID<#>	Removable USB video hard	Contractor Post-processing	Database Processing	Untested

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
			drive number			
61	IMAGE	(Text)	Filename of .jpg image showing road interval	Contractor Post-processing	Automatic Output	Untested
62	SPEED	999 (miles/hour)	Average ARAN speed during data collection	ARAN Data Collection	Automatic Output	Untested
63	BRIDGE_FLAG	0 or 1	Flag indicating presence of bridge in interval	ARAN Data Collection	Survey Crew Input	Untested
64	CONSTR_FLAG	0 or 1	Flag indicating construction in interval	ARAN Data Collection	Survey Crew Input	Untested
65	LANEDEV_FLAG	0 or 1	Flag indicating lane deviation in interval	ARAN Data Collection	Survey Crew Input	Untested
66	DATE	MM/DD/YY	Data collection date	ARAN Data Collection	Automatic Output	100%
67	NODISTRESS	0 OR 1	Flag indicating absence of pavement distress	Contractor Post-processing	Database Processing	100%
68	FILENAME	(Text)	Filename of raw data files	ARAN Data Collection	Automatic Output	100%
69	SECTION	(Text)	Route section ID	Route ID Meeting/ARAN Data Collection	Survey Crew Input/Automatic Output	100%
70	FKEY	(Numeric)	Unique record ID	Contractor Post-processing	Database Processing	100%
71	CONTRACTOR1	(Numeric)	Raw MP of first video frame in section	Contractor Post-processing	Database Processing	Untested
72	CONTRACTOR2	(Numeric)	Raw MP of last video frame in section	Contractor Post-processing	Database Processing	Untested
73	CONTRACTOR3	(Text)	Unique record ID used by VisiData	Contractor Post-processing	Database Processing	Untested
74	CONTRACTOR4	(Text)	Range of mileage to play in VisiData	Contractor Post-processing	Database Processing	Untested

**ROUTE\_GPS table metadata:**

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
1	RIP_CYCLE	XX	4, for RIP data collection Cycle 4	Route ID Meeting	FHWA Determination	100% referenced to other tables
2	STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested
3	PARK_ALPHA	XXXX	Park alpha code	Route ID Meeting	NPS References	100% Referenced to other tables
4	PARK_NO	XXXX	Park numeric code	Route ID Meeting	NPS References	100% Referenced to other tables
5	RTE_NO	9999XXX	Route number	Route ID Meeting	Park Input/FHWA Classification	100% Referenced to other tables
6	FUNCT_CLASS	X	Route functional classification	Route ID Meeting	Park Input/FHWA Classification	100% Referenced to other tables
7	RTE_NAME	(Text)	Route name	Route ID Meeting	Park Input	100% Referenced to other tables . 100 characters fit in field
8	LANE_NUMBER	99	Data collection lane	Contractor Post-processing	Database Processing	Untested
9	DIRECTION	XXX	Survey lane: PRI (primary) or OPP (opposite)	Route ID Meeting	Park Input/FHWA Determination	Untested
10	MP	999.999	Mile Post (at 0.01 record)	ARAN Data Collection, Contractor Post-processing	Survey Crew Input/GPS Processing	Untested (3)
11	GPS_LAT	999.999999	GPS Latitude Co-ordinate (decimal degrees)	ARAN Data Collection, Contractor Post-processing	Automatic Output	<= 3.00 feet
12	GPS_LON	-999.999999	GPS Longitude Co-ordinate (-decimal degrees)	ARAN Data Collection, Contractor Post-processing	Automatic Output	<= 3.00 feet
13	GPS_ELEV	99999.9	Elevation	ARAN Data Collection, Contractor Post-processing	Automatic Output	Untested
14	GPS_MODE	XXX	GPS Satellite Mode during collection	ARAN Data Collection, Contractor Post-processing	Automatic Output	Untested
15	XFALL	999.9	Cross Fall: % Slope at GPS Location (Caution, Data not Validated)	ARAN Data Collection, Contractor Post-processing	Automatic Output	Untested
16	GRADE	999.9	Grade: % Slope at GPS Location (Caution, Data not Validated)	ARAN Data Collection, Contractor Post-processing	Automatic Output	Untested
17	HEADING	999.9	Heading Relative to True North	ARAN Data Collection	Automatic Output	Untested
18	DATUM	(Text)	LL_WGS84_DD	ARAN Data Collection	Database Processing	Untested
19	FILENAME	(Text)	Filename of raw data files	ARAN Data Collection	Automatic Output	Untested
20	FKEY	9999999	Unique record ID	Contractor Post-processing	Database Processing	Untested

21	DATE	MM/DD/YY	ARAN Data Collection Date	ARAN Data Collection	Automatic Output	Untested
22	COMMENT	(Text)	Source of Any Digitized Data	ARAN Data Collection	Database Processing	Untested
23	CONTRACTOR1	(Numeric)	Visi_from	Contractor Post-processing	Database Processing	Untested
24	CONTRACTOR2	(Numeric)	Visi_to	Contractor Post-processing	Database Processing	Untested
25	CONTRACTOR3	(Text)	Visi_dir (ipdated to chapter 1)	Contractor Post-processing	Database Processing	Untested
26	CONTRACTOR4	(Text)	Comments/exceptions	Contractor Post-processing	Database Processing	Untested

**FHWA "Route ID Program" Database**  
**Database Name: ROUTEINFO.mdb**  
**Table Name: ROUTE\_ID**

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
1	ROUTE_IDENT	XXXX-9999XXX	The Park's Alpha Code + "-" + RTE_NO (below).	Route ID Meeting	Automatic Output	100%, Reference source for all tables
2	RIP_CYCLE	99	4, for RIP data collection Cycle 4	Route ID Meeting	FHWA Determination	100%, Reference source for all tables
3	PARK_ALPHA	XXXX	Park Alpha Code	Route ID Meeting	NPS References	100%, Reference source for all tables
4	GROUP_ALPHA	XXXX	Group Alpha Code	Route ID Meeting	NPS References	100%, Reference source for all tables
5	PARK_NO	9999	Park Numeric Code	Route ID Meeting	NPS References	100%, Reference source for all tables
6	PARK_NAME	(text)	NPS Name of Park	Route ID Meeting	NPS References	100%, Reference source for all tables
7	RTE_NO	9999XXX	Route Number	Route ID Meeting	Park Input	100%, Reference source for all tables
8	RTE_NAME	(Text)	Route Name	Route ID Meeting	Park Input	100%, Reference source for all tables
9	FROM_DESC	(Text)	Beginning terminus of route	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
10	TO_DESC	(Text)	Ending terminus of route	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
11	INSP_DATE	MM/DD/YYYY	Collection Date	ARAN Data Collection	FHWA Determination	100%, Reference source for all tables
12	FUNCT_CLASS	XX	Functional Class	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
13	STATE	XX	State where route is located	Route ID Meeting	Park Input/FHWA Determination	Untested (1)
14	STATE2	XX	Additional State Park Route traverses	Route ID Meeting	Park Input/FHWA Determination	Untested (1)
15	FMSS_NO	(Text)	NPS's Facility Management Software System (FMSS) Asset number	Route ID Meeting	Park Input	100%, Reference source for all tables
16	FMSS_SUR_EQP	(Text)	FMSS Surface Equipment Number	Route ID Meeting	Park Input	Untested
17	M_DISTRICT	(Text)	Park Maintenance District Route resides in	Route ID Meeting	Park Input	100%, Reference source for all tables (1)
18	TOPOGRAPHY	(Text)	Predominate Terrain condition for	Route ID Meeting	FHWA Determination	100%, Reference source for all

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
			Route. (FLAT, ROLLING, MOUNTAINOUS, or URBAN)			tables (1)
19	POSTED_SPEED	99	Posted Speed Limit for Route (Value is Predominate Speed Limit along Route)	Route ID Meeting	Park Input/FHWA Determination	Untested (1)
20	ARAN_ROUTE	XXX	Yes/No	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
21	PARKING_AREA	XXX	Yes/No	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
22	CONCESSION	XXX	Yes/No	Route ID Meeting	Park Input	100%, Reference source for all tables
23	PAVED_MI	999.999	Paved mileage (to the nearest 0.001)	ARAN Data Collection	Automatic Output	100%, Reference source for all tables
24	UNPAVED_MI	999.999	Unpaved mileage (to the nearest 0.001)	Route ID Meeting	Automatic Output	100%, Reference source for all tables
25	RTE_LENGTH	999.999	Official Route Length	Contractor Post-processing	Automatic Output	100%, Reference source for all tables
26	SURF_TYPE	XX	Surface type (PAVED: AS (asphalt, includes composite), CO (concrete), BR (brick/pavers), CB (cobblestone), OT (other))	Route ID Meeting	Survey Crew Input	100%, Reference source for all tables (1)
27	UNPAVED	XXXX	Unpaved Route (Yes/No/Both)	Route ID Meeting	Automatic Output	100%, Reference source for all tables
28	UNPAVED_CAT	XXX	Unpaved Road Category	Route ID Meeting	Automatic Output	Untested
29	CURB	(Text)	Parking Area with Curb around perimeter.	Route ID Meeting	Park Input/FHWA Determination	Untested
30	CURB_GUTTER	(Text)	Parking Area with Curb and Gutter around perimeter.	Route ID Meeting	Park Input/FHWA Determination	Untested
31	ADJ_ROUTE	9999XXX	Route number	Route ID Meeting	Automatic Output	100%, Reference source for all tables
32	USER_ACCESS	(Text)	Access Designation for Parking	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
33	PHOTO_NO	(Text)	Photo or Image	Route ID Meeting	Survey Crew Input	100%, Reference source for all tables
34	PLOT_SIZE	(Text)	Unpaved Parking Area Size	Route ID Meeting	Automatic Output	100%, Reference source for all tables
35	SQ_FEET	999.999	Route Square Footage	Contractor Post-processing	Automatic Output	100%, Reference source for all tables
36	M_RATING	(Text)	Manual Rating	Route ID Meeting	Automatic Output	100%, Reference source for all tables

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
37	SQ_YARDS	999.999	Route Square Yardage	Contractor Post-processing	Automatic Output	100%, Reference source for all tables
38	LANES	XX	Route travel lanes	Route ID Meeting	Automatic Output	Untested (1)
39	PAVE_WIDTH	999.99	Pavement Width (Weighted average)	RIP Post-processing	Automatic Output	100% Referenced to other tables
40	LANE_MILES	999.999	Route Equivalent Lane Miles	RIP Post-processing	Automatic Output	100%, Reference source for all tables
41	AREA_MAP	(Text)	1 or 2-digit number	Contractor Post-processing	FHWA/Contractor Input	100%, Reference source for all tables
42	REMARKS	(Memo)	General remarks on Park route and data collection operations.	Contractor Post-processing	FHWA/Contractor Input	Untested
43	SUMMARY_REC	XXXX-9999XXX	ROUTE_IDENT of summary Park Asset	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
44	NPS_REGION	(Text)	Park Region	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
45	DIVISION	(Text)	FHWA Division	Route ID Meeting	Park Input/FHWA Determination	100%, Reference source for all tables
46	PCR	999.99	Route Weighted Average PCR value	RIP Post-processing	Automatic Output	100% Referenced to other tables
47	SCR	999.99	Route Weighted Average SCR value	RIP Post-processing	Automatic Output	100% Referenced to other tables
48	AADT	999	Average Adjusted Daily Traffic	RIP	Automatic Output	Untested
49	SADT	999	Seasonal Adjusted Daily Traffic	RIP	Automatic Output	Untested
50	ADT_DATE	MM/DD/YYYY	Traffic Date of Collection	RIP	Automatic Output	Untested
51	BEG_LAT	999.999999	Route Begin GPS Latitude Coordinate (decimal degrees)	ARAN Data Collection	Automatic Output	<= 3.00 feet, Referenced from other tables
52	BEG_LON	-999.999999	Route Begin GPS Longitude Coordinate (-decimal degrees)	ARAN Data Collection	Automatic Output	<= 3.00 feet, Referenced from other tables
53	BEG_ELEV	99999.9	Route Begin Elevation	ARAN Data Collection	Automatic Output	100% Referenced to other tables
54	BEG_MODE	XXX	Route Begin GPS Satellite Mode during collection	ARAN Data Collection	Automatic Output	100% Referenced to other tables
55	END_LAT	999.999999	Route End GPS Latitude Coordinate (decimal degrees)	ARAN Data Collection	Automatic Output	<= 3.00 feet, Referenced from other tables

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
56	END_LON	-999.999999	Route End GPS Longitude Co-ordinate (-decimal degrees)	ARAN Data Collection	Automatic Output	<= 3.00 feet, Referenced from other tables
57	END_ELEV	99999.9	Route End Elevation	ARAN Data Collection	Automatic Output	100% Referenced to other tables
58	END_MODE	XXX	Route End GPS Satellite Mode during collection	ARAN Data Collection	Automatic Output	100% Referenced to other tables
59	DATUM	(Text)	LL_WGS84_DD	ARAN Data Collection	Automatic Output	100% Referenced to other tables
60	CHILD_ROUTE	XXX	Yes/No	Route ID Meeting	Automatic Output	100% Reference source for all tables
61	CULVERT_CNT	999	Route Culvert Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
62	DROP_INLET_CNT	999	Route Drop Inlet Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
63	GATE_CNT	999	Route Gate Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
64	TRAFLIGHT_CNT	999	Route Traffic Light Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
65	SIGN_CNT	999	Route Sign Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
66	LWCROSS_CNT	999	Route Low Water Crossing Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
67	BRIDGE_CNT	999	Route Bridge Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
68	TUNNEL_CNT	999	Route Tunnel Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
69	PULLOUT_CNT	999	Route Pullout Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
70	INTERSEC_CNT	999	Route Intersection Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
71	ST_BNDRY_CNT	999	Route State Boundary Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
72	PRK_BNDRY_CNT	999	Route Park Boundary Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
73	RETWALL_CNT	999	Route Retaining Wall Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
74	RR_CROSS_CNT	999	Route RR Crossing Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
75	CATTLE_CNT	999	Route Cattle Guard Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
76	OVHDSIGN_CNT	999	Route Overhead Sign Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
77	MILEMARK_CNT	999	Route Mile Marker Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
78	FHYD_CNT	999	Route Fire Hydrant Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
79	OVERPASS_CNT	999	Route Overpass Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
80	CABLE_TLNG	9999.999 (ft)	Route Total Length Cable Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
81	GDRAIL_TLNG	9999.999 (ft)	Route Total Length Guard/Guide Rail Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
82	GDWALL_TLNG	9999.999 (ft)	Route Total Length Guard/Guide Wall Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
83	TEMP_BARR_TLNG	9999.999 (ft)	Route Total Length Temporary Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
84	BOLLARD_TLNG	9999.999 (ft)	Route Total Length Bollard Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
85	BARRIER_TLNG	9999.999 (ft)	Route Total Length All Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
86	CURB_TLNG	9999.999 (ft)	Route Total Length Curbing (excludes Parking Areas)	RIP Post-processing	Automatic Output	100% Referenced to other tables
87	LWCROSS_TLNG	9999.999 (ft)	Route Total Length Low Water Crossings	RIP Post-processing	Automatic Output	100% Referenced to other tables
88	PAVDITCH_TLNG	9999.999 (ft)	Route Total Length Paved Ditch	RIP Post-processing	Automatic Output	100% Referenced to other tables (2)
89	TURNOUT_TLNG	9999.999 (ft)	Route Total Length Turnouts	RIP Post-processing	Automatic Output	100% Referenced to other tables
90	LANE_NUMBER	99	Number of Lane Tested	RIP Post-processing	Automatic Output	100% Referenced to other tables
91	LOCAL_FACTOR	9.9999	Park Location Factor	NPS Partner	Automatic Output	100% Reference source for all tables
92	E_ZONE	XXX	Route Environmental Zone	FHWA HPMA	Automatic Output	100% Reference source for all tables
93	PAVEMENT_DM	\$99,999,999.99	Pavement Deferred Maintenance	FHWA HPMA	Automatic Output	100% Reference source for all tables
94	CRV	\$99,999,999.99	Current Replacement Value	RIP Post-processing	Automatic Output	100% Reference source for all tables

Database Name: ROUTEINFO.mdb

Table Name: PARK\_TOTALS

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
1	RIP_CYCLE	99	4, for RIP data collection Cycle 4	Route ID Meeting	FHWA Determination	100% Referenced to other tables
2	PARK_ALPHA	XXXX	Park Alpha Code	Route ID Meeting	FHWA Determination	100% Referenced to other tables
3	GROUP_ALPHA	XXXX	Group Alpha Code	Route ID Meeting	NPS References	100% Referenced to other tables
4	PARK_NO	9999	Park Numeric Code	Route ID Meeting	NPS References	100% Referenced to other tables
5	PARK_NAME	XXXX	NPS Name of Park	Route ID Meeting	NPS References	100% Referenced to other tables
6	INSP_DATE	MM/DD/YYYY	Date that data was collected in the park (completion date).	Route ID Meeting and ARAN Data Collection	FHWA Determination	100% Referenced to other tables
7	NPS_REGION	XXXX	Park Region	Route ID Meeting	Park Input	100% Referenced to other tables
8	DIVISION	XXXX	FHWA Division	Route ID Meeting	FHWA Determination	100% Referenced to other tables
9	T_PAVED_MI	999.999	Total Park Paved Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
10	T_UNPAVED_MI	999.999	Total Park Unpaved Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
11	T_ROUTE_MILES	999.999	Total Park Route Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
12	T_ARAN_DRIVEN	999.999	Total Park ARAN Driven Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
13	T_ARAN_LMILES	999.999	Total Park ARAN Lane Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
14	T_CONCESS_PAVED	999.999	Total Park Concession Paved Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
15	T_CONCESS_UNPAVED	999.999	Total Park Concession Unpaved Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
16	T_PRK_PAVEDSQFT	999.999	Total Park Parking Paved Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables
17	T_PRK_UNPAVEDSQFT	999.999	Total Park Parking Unpaved Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables
18	T_CPRK_PAVEDSQFT	999.999	Total Park Concession Parking Paved Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables

	<b>FIELD</b>	<b>FORMAT</b>	<b>EXPECTED VALUE</b>	<b>SOURCE</b>	<b>VALIDATION</b>	<b>EXPECTED ACCURACY</b>
19	T_CPRK_UNPAVEDSQFT	999.999	Total Park Concession Parking Unpaved Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables
20	T_PARKING_SQFT	999.999	Total Park Parking Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables
21	T_PARKING_LMILES	999.999	Total Park Parking Equivalent Lane Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
22	T_MRR_SQFT	999.999	Total Park Manually Rated Road Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables
23	T_CMRR_SQFT	999.999	Total Park Concession Manually Rated Road Square Feet	RIP Post-processing	Automatic Output	100% Referenced to other tables
24	T_MRR_LMILES	999.999	Total Park Manually Rated Road Equivalent Lane Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
25	T_LMILES	999.999	Total Park Lane Miles	RIP Post-processing	Automatic Output	100% Referenced to other tables
26	T_CULVERT_CNT	999	Total Park Culvert Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
27	T_DROP_INLET_CNT	999	Total Park Drop Inlet Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
28	T_GATE_CNT	999	Total Park Gate Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
29	T_TRAFLIGHT_CNT	999	Total Park Traffic light Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
30	T_SIGN_CNT	999	Total Park Sign Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
31	T_LWCROSS_CNT	999	Total Park Low Water Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
32	T_BRIDGE_CNT	999	Total Park Bridge Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
33	T_TUNNEL_CNT	999	Total Park Tunnel Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
34	T_PULLOUT_CNT	999	Total Park Pullout Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
35	T_INTERSEC_CNT	999	Total Park Intersections Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
36	T_ST_BNDRY_CNT	999	Total Park State Boundaries Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
37	T_PRK_BNDRY_CNT	999	Total Park Boundaries Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
38	T_RETWALL_CNT	999	Total Park Retaining Wall Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
39	T_RR_CROSS_CNT	999	Total Park RR Crossing Count	RIP Post-processing	Automatic Output	100% Referenced to other

	FIELD	FORMAT	EXPECTED VALUE	SOURCE	VALIDATION	EXPECTED ACCURACY
						tables
40	T_CATTLE_CNT	999	Total Park Cattle Guard Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
41	T_OVHDSIGN_CNT	999	Total Park Overhead Sign Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
42	T_MILEMARK_CNT	999	Total Park Mile Marker Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
43	T_FHYD_CNT	999	Total Park Fire Hydrant Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
44	T_OVERPASS_CNT	999	Total Park Overpass Count	RIP Post-processing	Automatic Output	100% Referenced to other tables
45	T_CABLE_TLNG	9999.999 (ft)	Total Length Park Cable Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
46	T_GDRAIL_TLNG	9999.999 (ft)	Total Length Park Guard/Guide Rail Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
47	T_GDWALL_TLNG	9999.999 (ft)	Total Length Park Guard/Guide Wall Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
48	T_TEMP_BARR_TLNG	9999.999 (ft)	Total Length Park Temporary Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
49	T_BOLLARD_TLNG	9999.999 (ft)	Total Length Park Bollard Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
50	T_BARRIER_TLNG	9999.999 (ft)	Total Length All Park Barriers	RIP Post-processing	Automatic Output	100% Referenced to other tables
51	T_CURB_TLNG	9999.999 (ft)	Total Length Park Curbing	RIP Post-processing	Automatic Output	100% Referenced to other tables
52	T_LWCROSS_TLNG	9999.999 (ft)	Total Length Park Low Water Crossings	RIP Post-processing	Automatic Output	100% Referenced to other tables
53	T_PAVDITCH_TLNG	9999.999 (ft)	Total Length Park Paved Ditches	RIP Post-processing	Automatic Output	100% Referenced to other tables (2)
54	T_TURNOUT_TLNG	9999.999 (ft)	Total Length Park Turnouts	RIP Post-processing	Automatic Output	100% Referenced to other tables
55	PARK_PCR	99.99	Overall Park PCR Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
56	PARK_RCI	99.99	Overall Park RCI Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
57	PARK_SCR	99.99	Overall Park SCR Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
58	PARK_RUT_INDEX	99.99	Overall Park Rutting Index Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
59	PARK_AC_INDEX	99.99	Overall Park Alligator Cracking Index Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables

	<b>FIELD</b>	<b>FORMAT</b>	<b>EXPECTED VALUE</b>	<b>SOURCE</b>	<b>VALIDATION</b>	<b>EXPECTED ACCURACY</b>
60	PARK_LC_INDEX	99.99	Overall Park Longitudinal Cracking Index Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
61	PARK_TC_INDEX	99.99	Overall Park Transverse Cracking Index Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
62	PARK_PATCH_INDEX	99.99	Overall Park Patching Index Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables
63	PARK_CONC_PCR	99.99	Overall Park Concession PCR Rating	RIP Post-processing	Automatic Output	100% Referenced to other tables

# Business Practices for Route Numbering and Roadway Asset Identification

## **Introduction and Background:**

Beginning in November 2006, inventory and condition information gathered by the Federal Highway Administration (FHWA) has been stored in FMSS to enable NPS to report Deferred Maintenance (DM) and Current Replacement Value (CRV) for NPS paved roads, paved parking areas, bridges, and tunnels. The NPS Roads Working Group (RWG) has been tasked with developing and implementing the procedures necessary to transfer DM and CRV from FHWA's databases to NPS' Facility Management Software System (FMSS).

Current business practices for roadway definition in national parks involve face-to-face meetings between FHWA personnel and individual park staff known as "Route ID" meetings. These meetings have been ongoing for several years and have been performed within the context of the Road Inventory Program (RIP) executed mainly by FHWA. The primary focus of these meetings has been on defining roadway static information such as route names, numbers, functional class, etc. The FHWA personnel are the primary individuals responsible for implementing the RIP and the route ID meetings are an integral and fundamental part of that process. The RIP process provides route numbers for each individual road and parking area in each park. After the route ID meetings establish a given park's roadway asset base, various types of condition and inventory data are collected either manually or with a data collection van that drives each individual road with an individual route number.

The FMSS requires asset numbers as unique identifiers for all asset types including roadways. **The current practice is that all roadways that are assigned a route number at route ID, also are defined as assets and therefore also receive an FMSS asset number** (Route names and functional classes are also collaboratively assigned during the face-to-face route ID meetings). This practice began midway through the third RIP data collection cycle (ending in 2003) and was further reinforced during an asset alignment process conducted in the summer of 2006. The alignment process ensured that each route number in RIP and each asset number in FMSS were matched to the correct road and parking area.

## **Issue Statement:**

As a result of various pre-existing business practices associated with the RIP, which predates FMSS by several years, route numbers are assigned for routes that are often very small. In tandem with the current business practice that all routes with route numbers are considered assets, this has caused a proliferation of asset numbers within FMSS. Over the past year, the RWG has learned that this business practice has significantly increased time and resources that parks must dedicate to administering FMSS data entry and management. This additional work effort is due to the fact that tying FMSS asset records to the more detailed, granular RIP route numbers has generated numerous new assets that require additional database and work order management. This has led to a situation where assets are not being defined the way they are managed.

The following proposed practices seek to create an asset definition process that is dictated by to how road assets are managed at the park level, not according to the pre-existing practices used in RIP for collecting detailed road information. RIP practices assign route numbers mainly based on how data are collected and driven with a data collection device. These procedures will disassociate the driving of roads with the data collection van from the process of assigning them asset status. **The end goal is to only assign asset numbers based on how parks manage their facilities within guidelines set up within FMSS and herein.** Driving the road with the data collection van allows for the collection of higher quality data as well as the ability to view road segments with video viewing software (Visidata). By de-linking driving the roads with the assignment of “asset status”, we are able to get the best quality data without the proliferation of assets that has serious negative ramifications for managing roadways in parks using asset management tools.

**Proposed Actions:**

1. Make a distinction within the route number field in the RIP database between those route numbers that represent assets, those that are subcomponents of assets and those that are groups of sub-components. The route number field in the RIP database will be expanded from 6 to 7 characters. The additional character will denote the asset status of the route in question. Combined routes will be designated with a double “zz”, while subcomponents will be designated with one “z”. Whenever possible, a combined route should use the lowest route number to be combined as the combined route number.
2. Only show assets, whether a group of subcomponents or a single component, on the Route ID report. Assets that are composed of subcomponents will have “zz” in the route number. Individual routes will have no additional characters in the route number. Subcomponents (designated in RIP with a “z”) will not be listed on the route ID report. Only assign asset numbers to those routes listed on the route ID report.
3. Provide a separate reporting function (other than the Route ID report) to identify and display information for route numbers not representing assets. Specific reporting requirements and format TBD.
4. Add a new field to the RIP database to indicate the “asset status” of a route number. The flag will have three possible values:
  - a. Asset with no subcomponents.
  - b. Asset with subcomponents.
  - c. Non-asset (i.e. subcomponent).

Both a change in the route number and a new “asset ID” field in the RIP database are recommended. It is easier to perform queries and other database manipulations using a separate field instead of a character within the route number field. The character in the route number field allows for rapid identification of the asset status of a road without having to access the database as a whole. Even though non-asset routes will not be included in the route ID report (the primary location for parks to view road information in RIP), there are many other reports as well as the Visidata application where the route number is

displayed. In these cases, the character in the route number will clearly identify the asset status of the roadway.

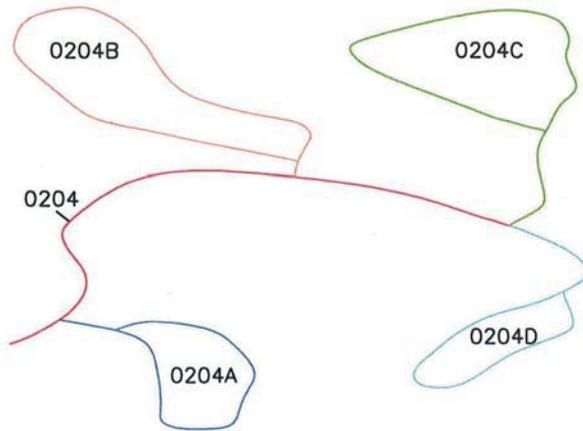
5. Focus asset definition practices on NPS asset management needs. Create roadway assets based on how parks manage these assets within the following guidelines:
  - a. Individual road segments (asset subcomponents) may be combined into a single asset. **Note that all the attributes of individual subcomponents (paved area, equipment, work orders, etc) will be included in the combined asset.**
  - b. In general, combination should be used in complex circulatory environments such as campground areas, housing and other administrative areas, maintenance areas, etc.
  - c. Public and non-public segments may not be combined.
  - d. Segments with differing functional classes may not be combined.
  - e. Discrete parking areas may be combined into a single asset where they service the same facility or resource and are within walking distance of each other.
  - f. Parking areas and roads may not be combined. This includes short road segments that may be near or adjacent to parking areas. See 5h below for exceptions to this.
  - g. Where the primary purpose of a road is to provide access to a parking area, and that road segment is approximately 0.25 miles in length or shorter, the access road should be considered part of the parking area (Note that this is an existing RIP business practice).
  - h. Particularly long routes may be divided into multiple assets based on how a park manages the roadway network. This should not be confused with the use of sub-components listed in 5a.
  - i. Roads that are actively managed by concession operations may not be combined with those managed by the NPS.

**Discussion:**

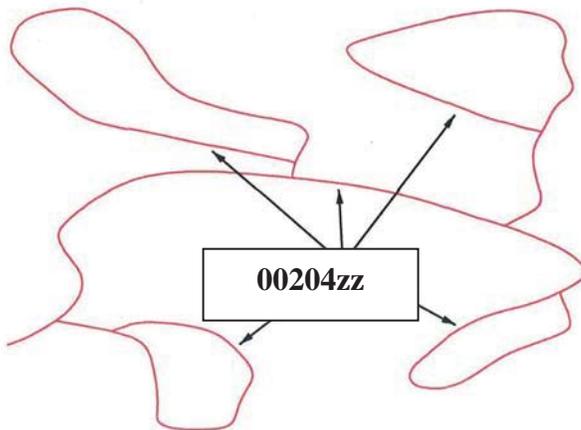
The first four items listed above are actions required by FHWA RIP to allow for the adoption of the practices shown in 5a-i. The following will provide additional direction and examples for guidelines listed.

Individual road segments (asset subcomponents) may be combined into a single asset. Where previous route ID practices have generated more assets (routes) than are practical from an asset management standpoint, small, discrete road lengths may be designated as asset subcomponents and then combined into a larger single asset. A subcomponent is NOT an FMSS term. Subcomponents will be used in RIP to indicate which routes are small, drivable individual road segments and which routes may include these segments. Once a piece of road is designated a subcomponent of another route, it will no longer have any individual identity in FMSS. Only those routes listed on the RIP Route ID report will have asset numbers in FMSS. As stated in business rule 2 above, subcomponents will not be listed on the route ID. The quantity information (length, area) will be included into the larger route of which they are a part. See Figures 1 and 2 for an example of how existing assets may be combined using subcomponents. Note that

subcomponents will have an identity in the RIP database and, if driven by RIP team, may be referenced in RIP reports, Visidata, or other RIP documentation.



**Figure 1: Campground with five routes and five assets**



**Figure 2: Campground with all loops combined into one route and one asset. This has eliminated four assets.**

In general, combination should occur in complex circulatory environments such as campground areas, housing and other administrative areas, maintenance areas, etc.

Typically these complex situations are where too many assets have been used to define roadways. Combining simple “point A to point B” roads that are clearly defined and provide access to different facilities or locations may not be done.

Public and non-public segments may not be combined. Roads that are posted as closed to the public or are intended as administrative access only (maintenance areas, housing areas, fire roads, etc) can not be combined with roads open to the public.

Segments with differing functional classes may not be combined. The roadway functional class is found on the Route ID report. Functional class indicates the type of circulatory function a given road provides. Functional class is used in a variety of applications (engineering, safety, funding) so it is important to maintain the correct functional class attributes of individual roads/assets. There are some cases where functional class was erroneously assigned in prior Route ID meetings such as where campground loops have a different functional class than the campground road. Functional classes of individual roads may be modified to correct discrepancies. The functional class definitions may not be modified.

Discrete parking areas may be combined into a single asset where they service the same facility or resource and are within walking distance of each other. These combined areas should be maintained as one asset. There are many instances where small (5-10 space), discrete parking areas have been separated into individual assets even though they provide parking for the same area or facility. These may be combined into a single asset. Figures 3 and 4 shows examples of combining parking areas.

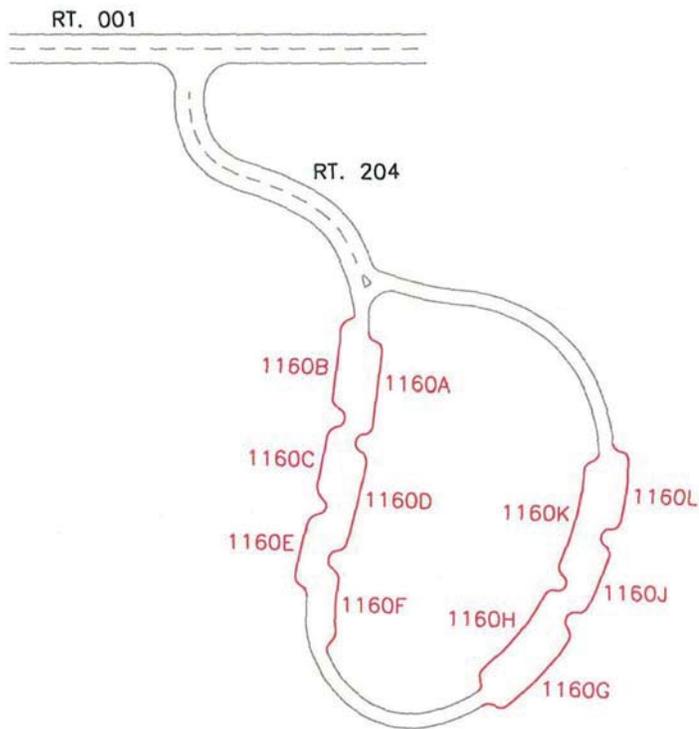


Figure 3: Parking with access route 204 and multiple parking areas (1160 A-L). Currently, this parking area is 12 routes and 12 assets ( one 1100 asset and 11 1300 assets).

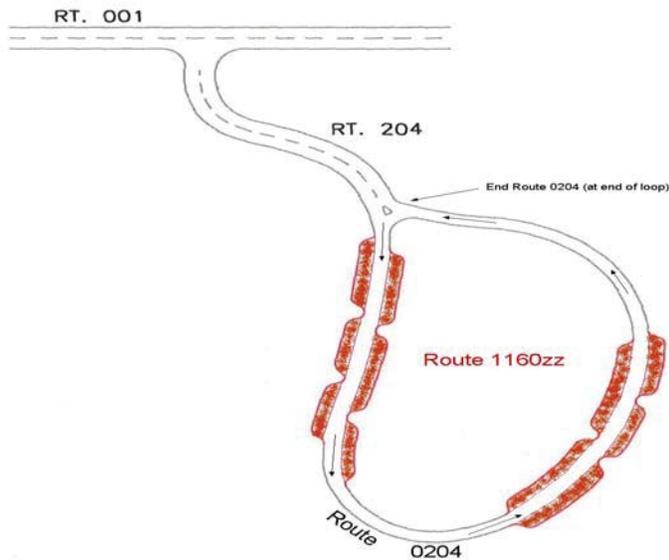
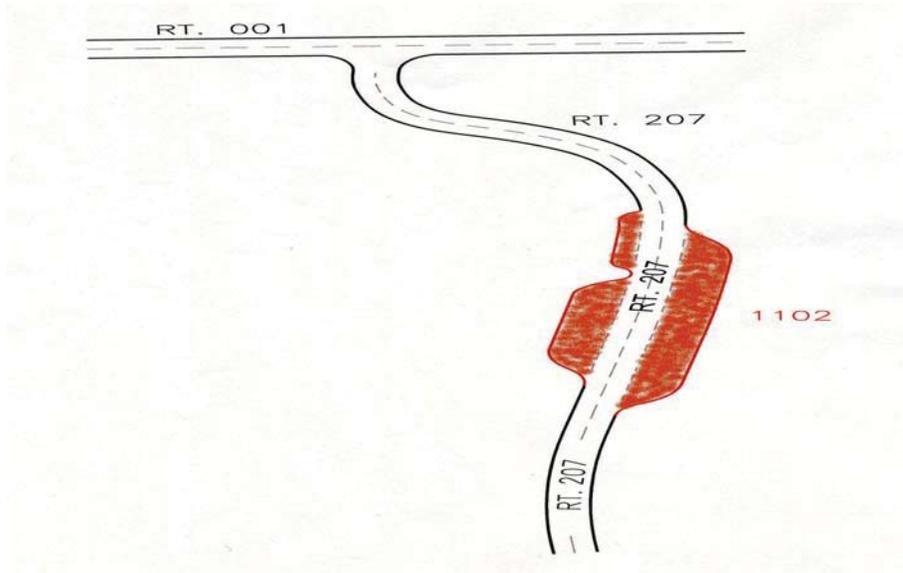


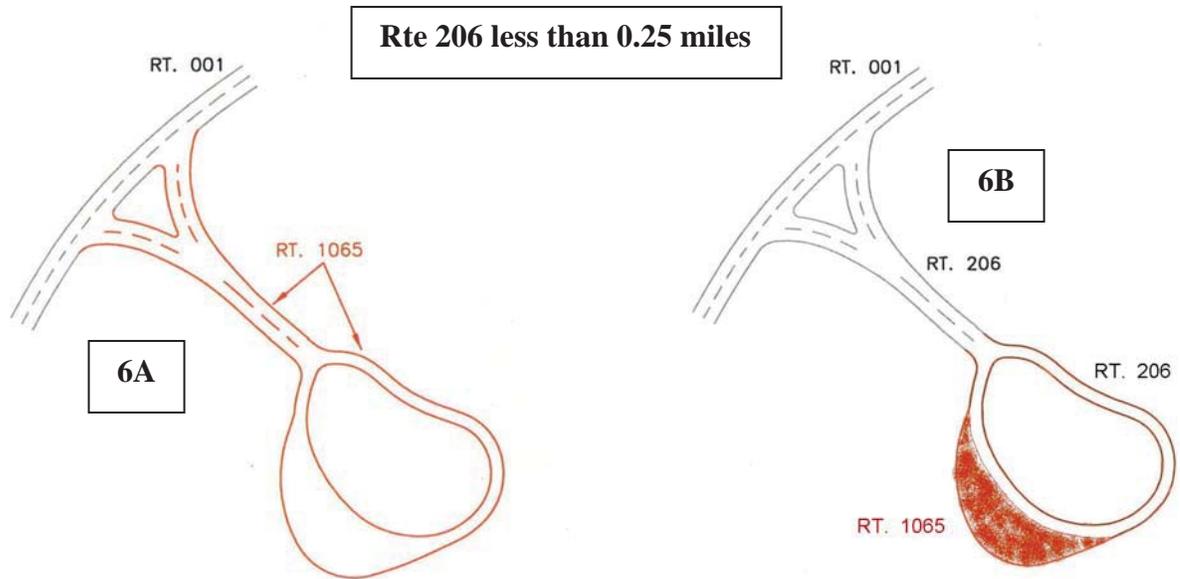
Figure 4: Parking with access route 204 and one parking area 1160zz. Route 204 is assumed longer than 0.25 miles. There are now 2 assets (one 1100 asset, one 1300 asset) instead of 12.

Parking areas and roads may not be combined. Parking areas and roads are tracked as separate asset types (1300 vs. 1100) in FMSS and as such should not be combined except in situations described by 5g. In Figure 5, Route 207 is a spur road from the main route running through parking area 1102. Since the spur road continues through and beyond the parking area, it will remain a separate route.



**Figure 5: Parking with access route 207 running through and continuing beyond parking 1102. This access route cannot be considered a part of the parking area and two routes and two assets continue to exist.**

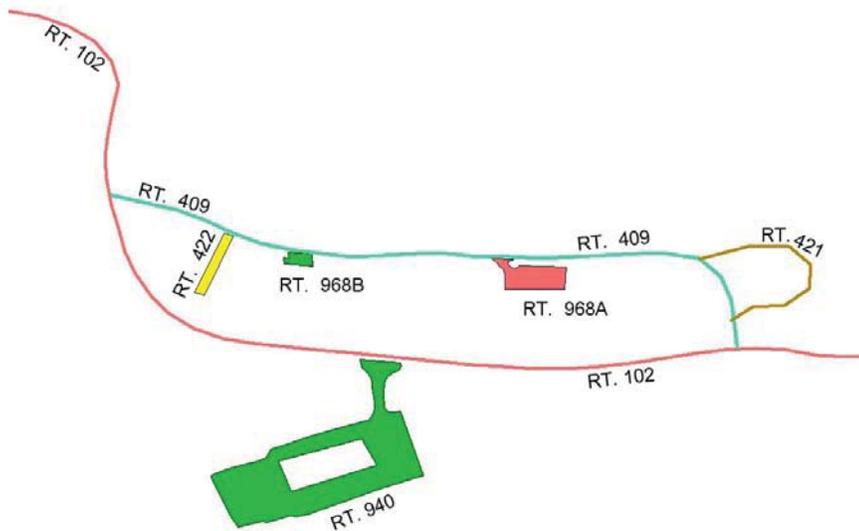
Where the primary purpose of a road is to provide access to a parking area, and that road segment is less than 0.25 miles in length, the access road should be considered part of the parking area. See Figures 8. Where a road continues on past a parking area to another facility or destination, even if it is less than 0.25 miles to the initial parking area, the road and parking area may not be combined.



**Figure 6:** Since the access route is less than .25 miles in length and the only use of the access is to the parking, one route for both the access and the parking area can be established.

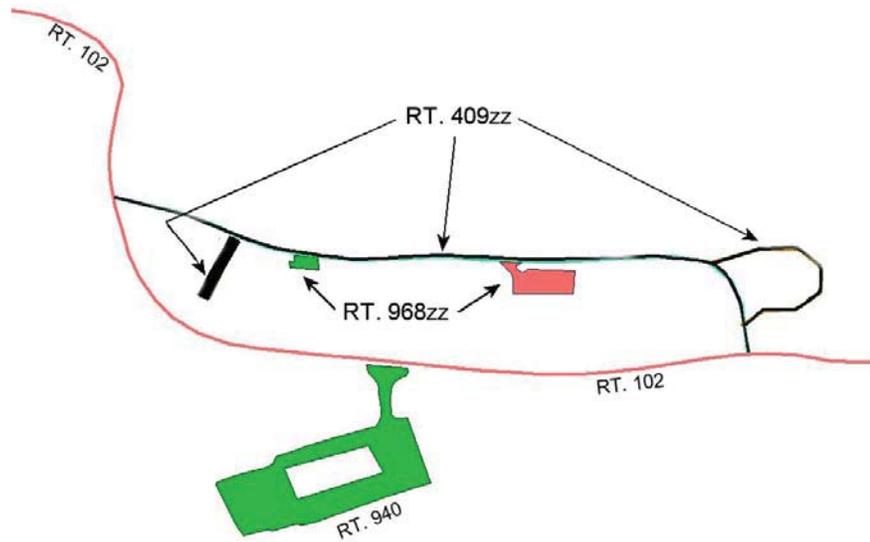
Particularly long routes may be divided into multiple assets based on how a park manages the roadway network. This should not be confused with the use of sub-components listed in 5a. Routes like the Blue Ridge Parkway or the Yellowstone Grand Loop may not lend themselves to management as a single asset by virtue of their length. Often management districts are created for sections of these routes and maintenance activities occur primarily within these districts. Parks may break routes up into separate assets during the Route ID process if the road is managed as discrete sections. This should only be done for very long roads.

The following example illustrates a complex road system and how the proposed business practice and several of the guidelines could be applied to create fewer assets that are consistent with local management.



**Figure 7 – Current Housing area access configuration. Route 409 is less than 0.25 miles long.**

The area serviced by Routes 409, 421, 422, 968A, and 968B is all employee housing. Route 940 provides access to visitor services and not to the housing area. Routes may be combined to create assets that reflect local management. Routes 409, 421, and 422 are all the same functional class, provide access to one type of activity (housing) and are all posted as non-public. These routes may be combined. They should not be combined with any parking areas even though they are all less than 0.25 miles long. This is because their main function is not to provide access to parking. Routes 968A and B provide parking for access to the same facility (housing). Even though these discrete areas may provide parking to different housing units, it's reasonable to manage them as a single asset. They may also be combined.



**Figure 8 – Combined housing area access configuration – Parking and road assets combined to eliminate 3 assets.**