

The Road Inventory
of
American Memorial Park
AMME – 8780



national park service







Road Inventory Program

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



American Memorial Park in Saipan





TABLE OF CONTENTS

SECTION		<u>PAGE</u>
1.	INTRODUCTION	1 - 1
2.	PARK SUMMARY INFORMATION National Park Summaries Cost to Improve Based on Historical and Estimated Data Paved Route Miles and Percentages by Functional Class and PCR	2-1 2-2 2-3
3.	PARK SUMMARY MAPS Route Location Key Map Route Condition Key Map – PCR Mile by Mile	3 – 1 3 – 3
4.	PARK ROUTE INVENTORY Route Identification Lists (Numeric and Alphabetic)	4 – 1
5.	PAVED ROUTE CONDITION RATING SHEETS	5 – 1
6.	MANUALLY RATED PAVED ROUTE CONDITION RATING SHEETS	6 – 1
7.	PARKING LOT CONDITION RATING SHEETS Paved parking Areas	7 – 1
8.	PARKWIDE / ROUTE MAINTENANCE FEATURES SUMMARY	8 – 1
9.	PARK ROUTE MAINTENANCE FEATURES ROAD LOG	9 – 1
10.	APPENDIX A. Glossary of Terms and Abbreviations B. Description of Rating System C. Digital Image Information D. Metadata	10 - 1 10 - 3 10 - 7 10 - 8

INTRODUCTION

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

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

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

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

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

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

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

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

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

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

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

FHWA RIP Coordinator:

James A. Amenta FHWA/EFLHD Technical Services, HTS-15 21400 Ridgetop Circle Sterling, VA 20166 (703) 404-6366

AMERICAN MEMORIAL PARK Summaries

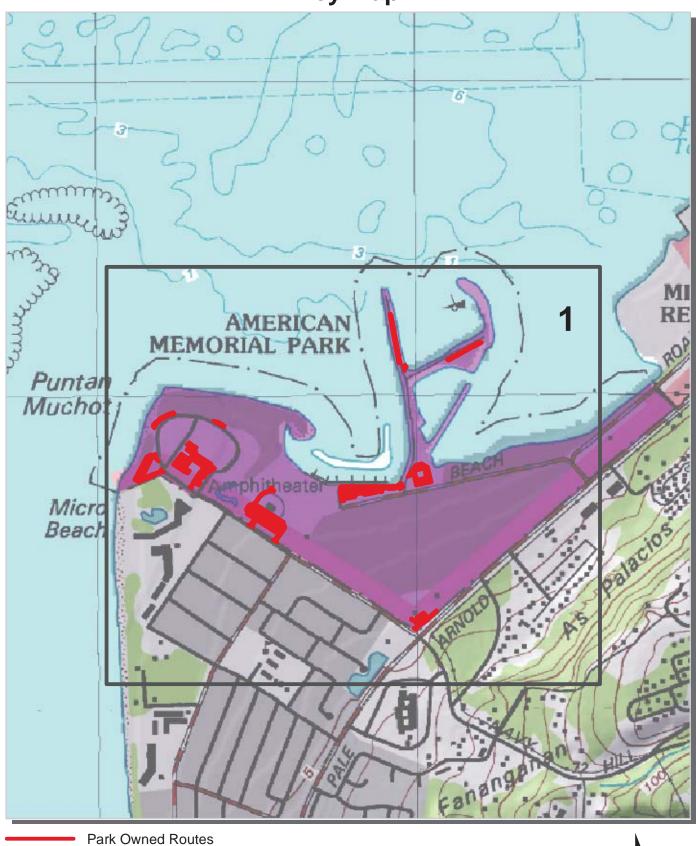
Overall Park Mileage Summary

PARK TOTAL SUMMARY ITEMS	TOTAL	DATE
Paved ARAN Driven Route Miles	0.00	
Unpaved Estimated Route Miles	1.39	1/0/1900
Paved ARAN and Unpaved Route Miles	1.39	
Paved ARAN Driven Lane Miles	0.00	
Paved MRR Lane Miles	2.45	1/0/1900
Parking Lot Lane Miles	3.78	1/0/1900
Total Paved Lane Miles	6.23	

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

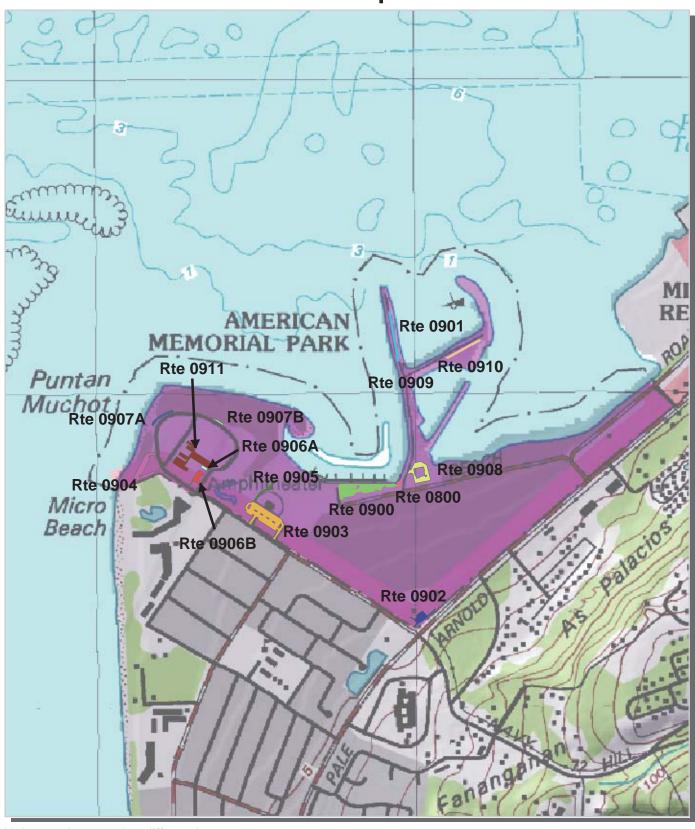
Unpaved Route Miles are estimates, they have not been inventoried by the Roadway Inventory Program (RIP)

American Memorial Park Route Location Key Map

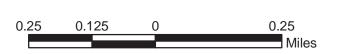


0.25 0.125 0 0.25 Miles

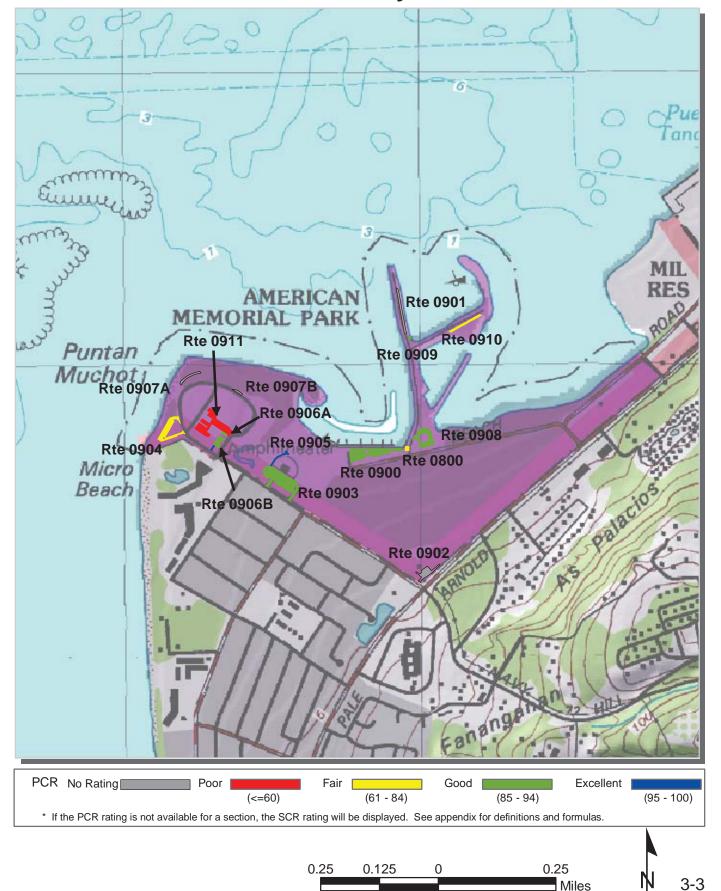
American Memorial Park Route Location Area Map 1



Unique colors used to differentiate routes



American Memorial Park Route Condition Key Map PCR - Mile by Mile



NPS/RIP Route ID Report

(Numerical By Route #)

Page 1 of 2

Shading Color Key: Red text denotes approx. mileage

AMME

White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Purple =

Blue = All Paved Parking Areas

Grey = Paved Routes, ARAN not Driven

Red =

Green = All Unpaved Parking Areas

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

AMERICAN MEMORIAL PARK

Rte.	FMSS		Route De	scription	Davisi	Un-	Des	Euro	Dto	Manual	Surf
#	Asset #	Route Name	From	То	Paved Miles	Paved Miles	Rte. Lgth	Func. Class	Rte. Lanes	Rated SQ/FT	Surf. Type
0010	70462	MICRO BEACH LOOP ROAD	FROM MICRO BEACH ROAD AT PARK BOUNDRY	ТО	0.10	0.31	0.41	2	2	11,151	СО
0100	70422	BEACH ROAD	FROM INDUSTRY ROAD	TO MARINA PARKING	0.47	0.00	0.47	2	2	54,944	AS
0200		MICRO BEACH ACCESS	FROM ROUTE 0010	TO ROUTE 0010	0.13	0.00	0.13	3	2	13,622	AS
0201		MARINA LANE (OUTER COVE ROAD)	ADJACENT TO ROUTE 0100		0.37	0.00	0.37	3	2	41,026	AS
0202		BASIN PLACE (EAST OUTER COVE ROAD)	ADJACENT TO ROUTE 0201		0.19	0.00	0.19	3	2	19,853	AS
0400	84914	WETLANDS AREA OLD MAINTENANCE ROAD	ADJACENT TO MICRO BEACH ROAD		0.03	0.08	0.11	5	1	1,742	AS
0700	84914	ROAD WA UNPAVED MAINTENANCE ROAD	FROM	ТО	0.00	1.00	1.00	ZZ		0	GR
0800		BOAT LAUNCH	ADJACENT TO ROUTE 0201		0.00	0.00	0.00	9	0	2,135	AS
0900	70423	MARINA AREA PAVED PARKING	FROM ROUTE 0100	TO ROUTE 0800	0.00	0.00	0.00	9	0	44,381	AS
0901		MARINA COVE PARKING	ADJACENT TO ROUTE 0201		0.00	0.00	0.00	9	0	10,814	GR
0902	70440	WETLANDS AREA UNPAVED TENNIS COURTS PARKING	ADJACENT TO MICRO BEACH ROAD		0.00	0.00	0.00	9	0	14,489	ОТ
0903	70451	AMPHITHEATER PARKING	FROM MICRO BEACH ROAD	TO MICRO BEACH ROAD	0.00	0.00	0.00	9	0	59,456	СО
0904	70461	MICRO BEACH PAVILLION PARKING	FROM ROUTE 0010	TO ROUTE 0010	0.00	0.00	0.00	9	0	24,807	AS
0905		ADMINSTRATIVE OFFICES PARKING	ADJACENT TO ROUTE 0903		0.00	0.00	0.00	9	0	3,876	СО
0906A		MAINTENANCE PUBLIC PARKING	ADJACENT TO ROUTE 0911		0.00	0.00	0.00	9	0	2,108	СО
0906B		MAINTENANCE YARD	FROM MICRO BEACH ROAD	TO PARKING	0.00	0.00	0.00	9	0	8,470	AS
0907A		MICRO BEACH PARKING A	ADJACENT TO ROUTE 0010		0.00	0.00	0.00	9	0	5,828	GR
0907B		MICRO BEACH PARKING B	ADJACENT TO ROUTE 0010		0.00	0.00	0.00	9	0	2,197	GR
0908		POLICE STATION	ADJACENT TO ROUTE 0201		0.00	0.00	0.00	9	0	23,931	AS
0909		COVE HANDI CAPPED PARKING	ADJACENT TO ROUTE 0201		0.00	0.00	0.00	9	0	932	AS
0910		COVE EAST PARKING	ADJACENT TO ROUTE 0202		0.00	0.00	0.00	9	0	7,651	AS
0911		MICRO BEACH OVERFLOW PARKING	FROM ROUTE 0010		0.00	0.00	0.00	9	0	43,675	СО
5600		MICRO BEACH ROAD	FROM MIDDLE ROAD	TO ROUTE 0010	0.10	0.00	0.10	8	2	0	AS
				Totals	1.39	1.39	2.77			397,088	

Road Inventory Program

NPS/RIP Route ID Report

(Numerical By Route #)

Page 2 of 2

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

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Grey = Paved Routes, ARAN not Driven

Red =

Green = All Unpaved Parking Areas

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

Purple =

General Park Road Functional Classification Table

- Class 1 Principal Park Road/Rural Parkway (Public Roads) Roads which constitute the main access route, circulatory tour, or thoroughfare for park visitors. Route Numbers 1 99. Note: Rural parkways (e.g. Natchez Trace) are numbered 1 9. State Routes Invetoried for Park. Route Numbers 5000-5999
- Class 2 Connector Park Road (Public Roads) Roads which provide access within a park to areas of scenic, scientific, recreational or cultural interest, such as overlooks, campgrounds, etc. Route Numbers 100-199.
- Class 3 Special Purpose Park Road (Public Roads) Roads which provide circulation within public areas, such as campgrounds, picnic areas, visitor center complexes, concessionaire facilities, etc. These roads generally serve low-speed traffic and are often designed for one-way circulation. Route Numbers 200-299.
- Class 4 Primitive Park Roads (Public Roads) Roads which provide circulation through remote areas and/or access to primitive campgrounds and undeveloped areas. These roads frequently have no minimum design standards and their use may be limited to specially equipped vehicles. Route Numbers 200-299.

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

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

 Note: Functional Classes 5 and 6 have the same route numbers because historically they were numbered

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.
- Class 9 Boat Ramp (Public and Administrative) Route Numbers 800-899.
 Parking Area (Public and Administrative) Route Numbers 900-1999.

******** A park road system contains those roads within or giving access to a park or other unit of the NPS which are administered by the NPS, or by the Service in cooperation with other agencies. The assignment of a functional classification (FC) to a park

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

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

road is not based on traffic volumes or design speed, but on the intended use or function of that road or route.

Surface Type Abbreviations:

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

Paved Route Condition Rating Sheets

No roads were driven with the ARAN vehicle in Cycle 3

MICRO BEACH LOOP ROAD FROM MICRO BEACH ROAD AT PARK BOUNDRY

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0010	0.10	22.00	11151	0.19	POOR / 45	СО

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





BEACH ROAD FROM INDUSTRY ROAD

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0100	0.47	22.00	54944	0.95	FAIR / 73	AS

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



Industry Rd

MICRO BEACH ACCESS FROM ROUTE 0010

Rou	:e	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
020)	0.13	20.00	13622	0.23	POOR / 45	AS

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





MARINA LANE (OUTER COVE ROAD) ADJACENT TO ROUTE 0100

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0201	0.37	21.00	41026	0.71	GOOD / 90	AS

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



Industry Rd

BASIN PLACE (EAST OUTER COVE ROAD) ADJACENT TO ROUTE 0201

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0202	0.19	20.00	19853	0.34	GOOD / 90	AS

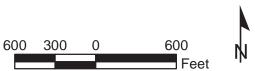
^{*} Lane miles are based on 11' lane widths



Rte 0100

Industry Rd

Rte 0400 Micro Beach Rd



WETLANDS AREA OLD MAINTENANCE ROAD ADJACENT TO MICRO BEACH ROAD

Route	Length (mi)	Width (ft)	Area (sq ft)	Lane Miles *	Condition / PCR	Surface Type
0400	0.03	11.00	1742	0.03	POOR / 45	AS

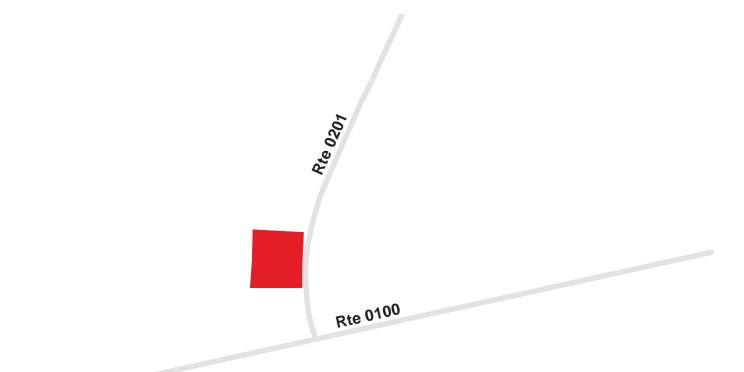
^{*} Lane miles are based on 11' lane widths



BOAT LAUNCH ADJACENT TO ROUTE 0201

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0800	PUBLIC	12/14/2003	2135	0.04	AS	FAIR / 73

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





MARINA AREA PAVED PARKING FROM ROUTE 0100

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0900	PUBLIC	12/14/2003	44381	0.76	AS	GOOD / 90

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









MARINA COVE PARKING ADJACENT TO ROUTE 0201

Ĭ		Public /	Date		Lane	Surface	
١	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0901	PUBLIC	12/16/2003	10814	0.19	GR	N/A

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



150 75

150

WETLANDS AREA UNPAVED TENNIS COURTS PARKING ADJACENT TO MICRO BEACH ROAD

Ĭ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
ľ	0902	PUBLIC	12/14/2003	14489	0.25	OT	N/A

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



Micro Beach Rd

150





AMPHITHEATER PARKING FROM MICRO BEACH ROAD

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0903	PUBLIC	12/14/2003	59456	1.02	CO	GOOD / 90

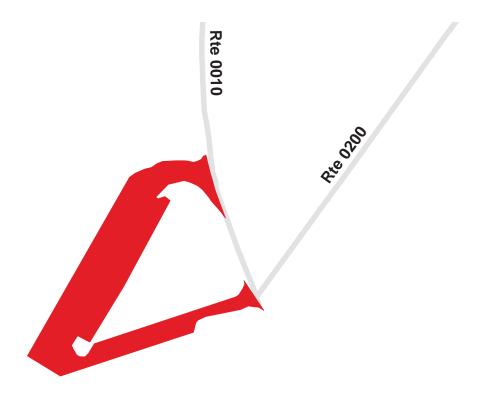
^{*} Lane miles are based on 11' lane widths



MICRO BEACH PAVILLION PARKING FROM ROUTE 0010

ľ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0904	PUBLIC	12/15/2003	24807	0.43	AS	FAIR / 73

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



150

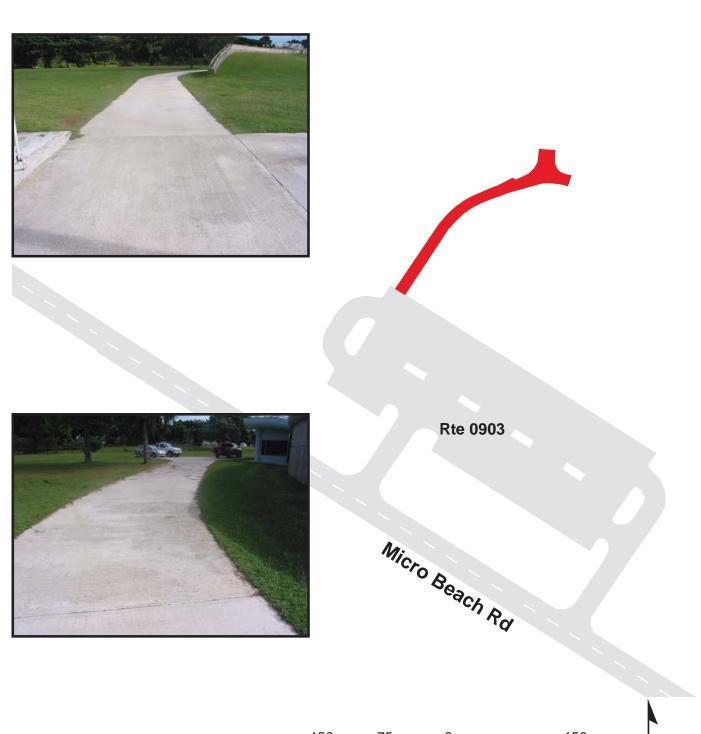




ADMINSTRATIVE OFFICES PARKING ADJACENT TO ROUTE 0903

ſ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0905	NONPUBLIC	12/14/2003	3876	0.07	CO	EXCELLENT / 97

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

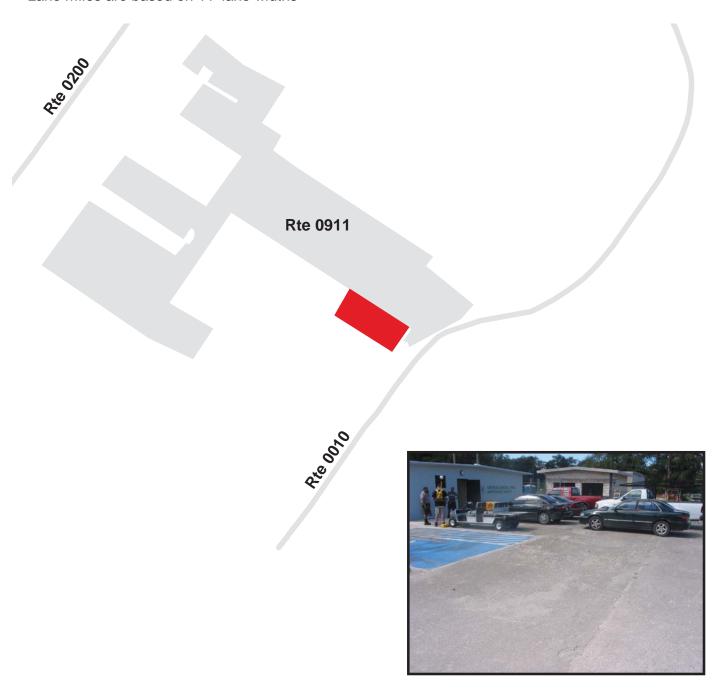


AMERICAN MEMORIAL PARK Route 0906A

MAINTENANCE PUBLIC PARKING ADJACENT TO ROUTE 0911

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0906A	PUBLIC	12/14/2003	2108	0.04	CO	GOOD / 90

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



AMERICAN MEMORIAL PARK Route 0906B

MAINTENANCE YARD FROM MICRO BEACH ROAD

ſ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0906B	NONPUBLIC	12/14/2003	8470	0.15	AS	GOOD / 90

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





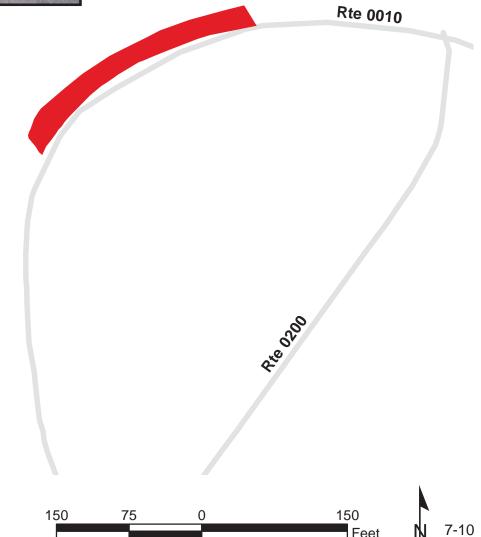
AMERICAN MEMORIAL PARK Route 0907A

MICRO BEACH PARKING A ADJACENT TO ROUTE 0010

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0907A	PUBLIC	12/15/2003	5828	0.10	GR	N/A

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





AMERICAN MEMORIAL PARK Route 0907B

MICRO BEACH PARKING B ADJACENT TO ROUTE 0010

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0907B	PUBLIC	12/15/2003	2197	0.04	GR	N/A

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







POLICE STATION ADJACENT TO ROUTE 0201

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0908	NONPUBLIC	12/15/2003	23931	0.41	AS	GOOD / 90

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



150

COVE HANDI CAPPED PARKING ADJACENT TO ROUTE 0201

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0909	PUBLIC	12/16/2003	932	0.02	AS	GOOD / 90

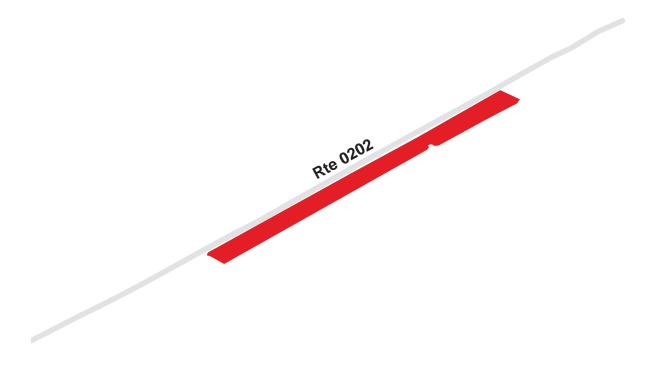
^{*} Lane miles are based on 11' lane widths



COVE EAST PARKING ADJACENT TO ROUTE 0202

	Public /	Date		Lane	Surface	
Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
0910	PUBLIC	12/16/2003	7651	0.13	AS	FAIR / 73

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

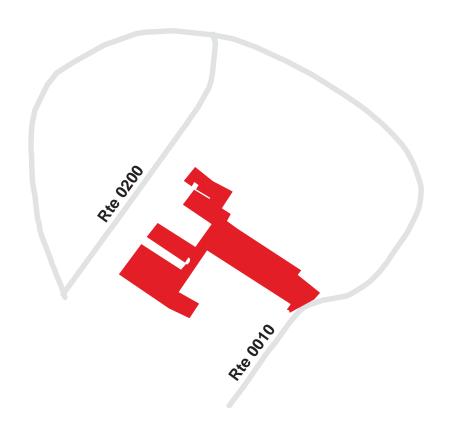




MICRO BEACH OVERFLOW PARKING FROM ROUTE 0010

ſ		Public /	Date		Lane	Surface	
	Route	NonPublic	Visited	Area (sq ft)	Miles *	Type	Condition / PCR
	0911	PUBLIC	12/14/2003	43675	0.75	CO	POOR / 45

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







7-15

Parkwide / Route Maintenance Features Summary

No roads were driven with the ARAN vehicle in Cycle 3, therefore no maintenance features were collected

Park Route Maintenance Features Road Log

No roads were driven with the ARAN vehicle in Cycle 3, therefore no maintenance features were collected

APPENDIX A: GLOSSARY OF TERMS AND ABBREVIATIONS

TERM OR

ABBREVIATION DESCRIPTION OR DEFINITION

8780 Numeric Code for American Memorial Park

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

period comprising 80% of annual visitation

AMME Alpha Code for American Memorial Park

CRS Condition Rating Sheets. (Section 5)

Drainage Condition

Rating

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

Excellent rating with an index value of 95 or greater

Fair Fair rating with an index value between 61 and 84

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

Good Good rating with an index value between 85 and 94

IRI International Roughness Index

Lane Width

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

when no fogline exists

MRR Manually Rated Route

NA Not Applicable

NC Not Collected

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

PCR Pavement Condition Rating (see Section 10)

Poor Poor Rating with an index value of 60 or less

RCI Roughness Condition Index

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

"season"

SCR Surface Condition Rating (see Section 10)

Shoulder Condition

Rating

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

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

hinge point

APPENDIX B: DESCRIPTION OF RATING SYSTEM

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

Data is collected on the following distresses and conditions:

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

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

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

Rating Index Formulas

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

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

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

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

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

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

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

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

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

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

Parking Lot and Manually Rated Road Condition Rating

Surface Condition Distresses- Chip Seal:

Raveling – loss of surface rock chips revealing previous surface

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

Rutting

Potholes/Patching

Ratings - Chip Seal:

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

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

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

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

Surface Condition - Asphalt:

Cracking of any type

Rutting

Potholes/Patching

Ratings - Asphalt:

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

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

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

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

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

Excellent 97

Good 90

Fair 73

Poor 45

Drainage Condition Rating Definitions

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

25% or less is estimated to correct drainage deficiencies.

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

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

deficiencies.

Drainage Condition Rating Criteria

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

Good Drainage

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

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

Poor Drainage

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

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

Shoulder Condition Rating Definitions

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

functional.

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

to be replaced.

Shoulder Rating Criteria

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

Good Shoulders

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

Poor Shoulder

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

APPENDIX C: DIGITAL IMAGE INFORMATION

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

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

APPENDIX D: METADATA

ARAN ROUTE GPS DATA

Background information of route spatial data.

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

Data Collection Device:

Vehicle Information: Ford Van

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

receiver w/MiLLennium 502 GPS antenna and OmniSTAR System 3000

LR

Inertial System: Applanix POS LV

Accuracy: Expected ground accuracy is 1 meter *

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

Geographic Datum: WGS 1984

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

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

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

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

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

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

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

Specific Caveats

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

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

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

Key to Notes in Tables

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

Access Database Metadata

Master Table Metadata:

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

PMS_Feature Table Metadata:

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

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

PMS_20, PMS_Mile & PMS_Visidata Tables Metadata:

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

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

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

Cycle 3 Shapefile Metadata

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

All shapefiles have the following spatial characteristics:

Geographic_Coordinate_Units: Decimal degrees Spheroid: WGS 1984

amme_mrl_03_map Page 1 of 4

amme_mrl_03_map

Metadata also available as

Metadata:

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

```
Identification_Information:
```

Citation:

Citation_Information:

Originator: Eastern Federal Lands Highway Division

Publication_Date: Published Materials

Title: amme_mrl_03_map

Geospatial_Data_Presentation_Form: vector digital data

Online_Linkage: Not Available

Description:

Abstract: Copy of Manually Rated Roads - Lines

Purpose: Road Inventory Program

Supplemental_Information:

This shapefile is a copy of the source manually rated lines shapefile. The features are edited as needed for graphic purposes.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 12/14/2003

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: As per RIP cycle

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: 145.716769 East_Bounding_Coordinate: 145.728987 North_Bounding_Coordinate: 15.221928 South_Bounding_Coordinate: 15.214709

Keywords:

Theme:

Theme_Keyword_Thesaurus: AMME

Theme_Keyword: AMME

Access_Constraints: None

Use_Constraints: Redistribution needs permission from EFLHD/NPS *Point_of_Contact: Contact_Information:* Contact_Person_Primary: Contact_Person: Dan VanGilder Contact Organization: EFLHD Contact_Position: GIS Coordinator Contact_Address: *Address_Type:* mailing and physical address Address: 21400 Ridgetop Circle City: Sterling State_or_Province: Virginia Postal Code: 20166 Country: United States Contact_Voice_Telephone: 703-404-6361 Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov *Native_Data_Set_Environment:* Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
 Attribute_Accuracy:
 Attribute_Accuracy_Report: Good
 Completeness_Report: Complete for parking areas
 Lineage:
 Source_Information:
 Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
 SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: String
 Point_and_Vector_Object_Count: 8

Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
 Geographic:
 Latitude_Resolution: 0.000000
 Longitude_Resolution: 0.000000
 Geographic_Coordinate_Units: Decimal degrees
 Geodetic_Model:
 Horizontal_Datum_Name: North American Datum of 1927
 Ellipsoid_Name: Clarke 1866

Semi-major_Axis: 6378206.400000

amme_mrl_03_map Page 3 of 4

Denominator_of_Flattening_Ratio: 294.978698

```
Entity_and_Attribute_Information:
     Detailed Description:
           Entity_Type:
                 Entity_Type_Label: amme_mrl_03_map
                 Entity_Type_Definition_Source: GPS
           Attribute:
                 Attribute_Label: FID
                 Attribute_Definition: Internal feature number.
                 Attribute Definition Source: ESRI
                 Attribute_Domain_Values:
                       Enumerated_Domain:
                       Unrepresentable_Domain:
                             Sequential unique whole numbers that are automatically generated.
           Attribute:
                 Attribute_Label: Shape
                 Attribute_Definition: Feature geometry.
                 Attribute_Definition_Source: ESRI
                 Attribute_Domain_Values:
                       Unrepresentable_Domain: Coordinates defining the features.
           Attribute:
                 Attribute_Label: PARK_ALPHA
                 Attribute_Definition: Park alpha code
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE_NO
                 Attribute_Definition: Route Number
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE_NAME
                 Attribute_Definition: Route Name
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute Label: SURF TYPE
                 Attribute Definition: Route Section ID
                 Attribute_Definition_Source: Route ID Meeting / ARAN Data Collection
           Attribute:
                 Attribute Label: CONDITION
                 Attribute Definition: Surface type of route
                 Attribute_Definition_Source: ARAN Data Collection
           Attribute:
                 Attribute_Label: PHOTOS
                 Attribute_Definition: Condition rating
                 Attribute_Domain_Values:
           Attribute:
                 Attribute Label: COMMENT
                 Attribute_Definition: Field comment
           Attribute:
```

amme_mrl_03_map Page 4 of 4

Attribute_Label: WIDTH

Attribute_Definition: Date of GPS Collection

Attribute:

Attribute_Label: GPS_DATE

Attribute:

Attribute Label: DATAFILE

Attribute_Definition: Width of the paved area

Attribute:

Attribute_Label: GPS_3DLENG

Attribute_Definition: Calculated paved miles

Attribute:

Attribute_Label: PAVED_MI

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Transfer_Size: 0.037

Metadata_Reference_Information:

Metadata_Date: 20060124

Metadata Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder Contact Position: GIS Coordinator

Contact Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata Time Convention: local time

Metadata Extensions:

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

Profile_Name: ESRI Metadata Profile

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amme_mrl_03 Page 1 of 4

amme_mrl_03

Metadata also available as

Metadata:

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

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: Eastern Federal Lands Highway Division
                 Publication_Date: Published Materials
                 Title: amme mrl 03
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: Manually Rated Roads - Lines
           Purpose: Road Inventory Program
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                      Calendar_Date: 12/14/2003
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: As per RIP cycle
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: 145.716769
                 East_Bounding_Coordinate: 145.728987
                 North_Bounding_Coordinate: 15.221928
                 South_Bounding_Coordinate: 15.214709
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: AMME
                 Theme_Keyword: AMME
     Access Constraints: None
     Use_Constraints: Redistribution needs permission from EFLHD/NPS
     Point_of_Contact:
           Contact_Information:
```

amme_mrl_03 Page 2 of 4

Contact_Person_Primary:

Contact_Person: Dan VanGilder Contact_Organization: EFLHD Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Native_Data_Set_Environment:

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

8.3.0.800

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report: Good

Completeness_Report: Complete for parking areas

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: String

Point_and_Vector_Object_Count: 8

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866 Semi-major Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

amme_mrl_03 Page 3 of 4

```
Entity_and_Attribute_Information:
     Detailed_Description:
           Entity_Type:
                 Entity_Type_Label: amme_mrl_03
                 Entity_Type_Definition_Source: GPS
           Attribute:
                 Attribute_Label: FID
                 Attribute_Definition: Internal feature number.
                 Attribute_Definition_Source: ESRI
                 Attribute_Domain_Values:
                       Enumerated_Domain:
                       Unrepresentable_Domain:
                             Sequential unique whole numbers that are automatically generated.
           Attribute:
                 Attribute_Label: Shape
                 Attribute_Definition: Feature geometry.
                 Attribute_Definition_Source: ESRI
                 Attribute_Domain_Values:
                       Unrepresentable_Domain: Coordinates defining the features.
           Attribute:
                 Attribute_Label: PARK_ALPHA
                 Attribute_Definition: Park alpha code
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE NO
                 Attribute_Definition: Route Number
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE_NAME
                 Attribute_Definition: Route Name
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: SURF_TYPE
                 Attribute_Definition: Route Section ID
                 Attribute_Definition_Source: Route ID Meeting / ARAN Data Collection
           Attribute:
                 Attribute_Label: CONDITION
                 Attribute_Definition: Surface type of route
                 Attribute_Definition_Source: ARAN Data Collection
           Attribute:
                 Attribute_Label: PHOTOS
                 Attribute Definition: Condition rating
                 Attribute_Domain_Values:
           Attribute:
                 Attribute Label: COMMENT
                 Attribute_Definition: Field comment
           Attribute:
                 Attribute_Label: WIDTH
                 Attribute Definition: Date of GPS Collection
           Attribute:
                 Attribute_Label: GPS_DATE
```

amme_mrl_03 Page 4 of 4

Attribute:

Attribute_Label: DATAFILE

Attribute_Definition: Width of the paved area

Attribute:

Attribute_Label: GPS_3DLENG

Attribute_Definition: Calculated paved miles

Attribute:

Attribute_Label: PAVED_MI

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Transfer_Size: 0.037

Metadata_Reference_Information:

Metadata_Date: 20060124

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder

Contact_Position: GIS Coordinator

Contact Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata Extensions:

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

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Tue Jan 24 14:14:22 2006

amme_pkg_03_map Page 1 of 4

amme_pkg_03_map

Metadata also available as

Metadata:

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

```
Identification_Information:
```

Citation:

Citation_Information:

Originator: Eastern Federal Lands Highway Division

Publication_Date: Unknown Title: amme_pkg_03_map

Geospatial_Data_Presentation_Form: vector digital data

Online_Linkage: Not Available

Description:

Abstract: Copy of Parking Areas Purpose: Road Inventory Program

Supplemental_Information:

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

needed for graphic purposes.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 12/14/2003

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: As per RIP cycle

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: 145.716187 East_Bounding_Coordinate: 145.726114 North_Bounding_Coordinate: 15.221814 South_Bounding_Coordinate: 15.212767

Keywords:

Theme:

Theme_Keyword_Thesaurus: AMME

Theme_Keyword: AMME

Access_Constraints: None

Use_Constraints: Redistribution needs permission from EFLHD/NPS *Point_of_Contact: Contact_Information:* Contact_Person_Primary: Contact_Person: Dan VanGilder Contact Organization: EFLHD Contact_Position: GIS Coordinator Contact_Address: *Address_Type:* mailing and physical address Address: 21400 Ridgetop Circle City: Sterling State_or_Province: Virginia Postal Code: 20166 Country: United States Contact_Voice_Telephone: 703-404-6361 Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov *Native_Data_Set_Environment:* Microsoft Windows 2000 Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 8.3.0.800

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: Good
Completeness_Report: Complete for parking areas
Lineage:
Source_Information:
Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
 SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: G-polygon
 Point_and_Vector_Object_Count: 16

Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
 Geographic:
 Latitude_Resolution: 0.000000
 Longitude_Resolution: 0.000000
 Geographic_Coordinate_Units: Decimal degrees
 Geodetic_Model:
 Horizontal_Datum_Name: North American Datum of 1927
 Ellipsoid_Name: Clarke 1866
 Semi-major_Axis: 6378206.400000

amme_pkg_03_map Page 3 of 4

Denominator_of_Flattening_Ratio: 294.978698

```
Entity_and_Attribute_Information:
     Detailed Description:
           Entity_Type:
                 Entity_Type_Label: amme_pkg_03_map
           Attribute:
                 Attribute_Label: FID
                 Attribute_Definition: Internal feature number.
                 Attribute_Definition_Source: ESRI
                 Attribute_Domain_Values:
                       Unrepresentable_Domain:
                             Sequential unique whole numbers that are automatically generated.
           Attribute:
                 Attribute_Label: Shape
                 Attribute_Definition: Feature geometry.
                 Attribute_Definition_Source: ESRI
                 Attribute Domain Values:
                       Unrepresentable_Domain: Coordinates defining the features.
           Attribute:
                 Attribute_Label: PARK_ALPHA
                 Attribute_Definition: Park alpha code
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute Label: RTE NO
                 Attribute_Definition: Route number
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute_Label: RTE_NAME
                 Attribute_Definition: Route name
                 Attribute_Definition_Source: Route ID Meeting
           Attribute:
                 Attribute Label: FEATURE
           Attribute:
                 Attribute Label: SURF TYPE
                 Attribute_Definition: Surface type of route
                 Attribute_Domain_Values:
           Attribute:
                 Attribute Label: CONDITION
                 Attribute_Definition: Condition rating for route
           Attribute:
                 Attribute_Label: PHOTOS
                 Attribute_Definition: Photo filename associated with feature
           Attribute:
                 Attribute_Label: COMMENT
                 Attribute_Definition: Field comment
           Attribute:
                 Attribute_Label: GPS_DATE
                 Attribute_Definition: Date of GPS collection
```

amme_pkg_03_map Page 4 of 4

Attribute:

Attribute_Label: DATAFILE

Attribute:

Attribute_Label: SQ_FT

Attribute_Definition: Feature area in square feet

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

 $Digital_Transfer_Information:$

Transfer_Size: 0.018

Metadata_Reference_Information:

Metadata_Date: 20060124

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder

Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

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

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata Extensions:

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

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Tue Jan 24 14:15:14 2006

amme_nonnps Page 1 of 4

amme_nonnps

Metadata also available as

Metadata:

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

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: The TSR Group
                 Publication_Date: 2005
                 Title: amme nonnps
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: non-NPS roads
           Purpose: Road Inventory Program
           Supplemental_Information:
                 Data created by The TSR Group from heads-up digitizing of roads representing non-
                 NPS roads for graphic purposes
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                      Calendar_Date: 2005
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: As per RIP cycle
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: 145.716987
                 East_Bounding_Coordinate: 145.738473
                 North_Bounding_Coordinate: 15.225195
                 South_Bounding_Coordinate: 15.211613
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: AMME
                 Theme_Keyword: AMME
     Access_Constraints: None
```

amme_nonnps Page 2 of 4

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

Data_Quality_Information:
 Attribute_Accuracy:
 Attribute_Accuracy_Report: Good
 Completeness_Report: Complete for non-NPS roads
 Lineage:
 Source_Information:
 Type_of_Source_Media: Heads-up digitized

8.3.0.800

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
 SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: String
 Point_and_Vector_Object_Count: 11

Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
 Geographic:
 Latitude_Resolution: 0.000000
 Longitude_Resolution: 0.000000
 Geographic_Coordinate_Units: Decimal degrees
 Geodetic_Model:
 Horizontal_Datum_Name: North American Datum of 1927
 Ellipsoid Name: Clarke 1866

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

Denominator_of_Flattening_Ratio: 294.978698

```
Entity_and_Attribute_Information:
     Detailed_Description:
           Entity_Type:
                 Entity_Type_Label: amme_nonnps
           Attribute:
                 Attribute_Label: FID
                 Attribute_Definition: Internal feature number.
                 Attribute_Definition_Source: ESRI
                 Attribute Domain Values:
                       Unrepresentable_Domain:
                             Sequential unique whole numbers that are automatically generated.
           Attribute:
                 Attribute_Label: Shape
                 Attribute_Definition: Feature geometry.
                 Attribute_Definition_Source: ESRI
                 Attribute Domain Values:
                       Unrepresentable_Domain: Coordinates defining the features.
           Attribute:
                 Attribute Label: Id
                 Attribute_Definition: Name of road if available
           Attribute:
                 Attribute_Label: Name
Distribution_Information:
     Resource_Description: Downloadable Data
     Standard_Order_Process:
           Digital_Form:
                 Digital_Transfer_Information:
                       Transfer_Size: 0.008
Metadata_Reference_Information:
     Metadata_Date: 20060209
     Metadata Contact:
           Contact_Information:
                 Contact_Organization_Primary:
                       Contact_Organization: EFLHD Sterling
                       Contact_Person: Dan VanGilder
                 Contact Position: GIS Coordinator
                 Contact_Address:
                       Address_Type: mailing and physical address
                       Address: 21400 Ridgetop Circle
                       City: Sterling
```

State_or_Province: Virginia

amme_nonnps Page 4 of 4

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata_Extensions:

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

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Thu Feb 09 16:47:52 2006

amme_pkg_03 Page 1 of 4

$amme_pkg_03$

Metadata also available as

Metadata:

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

```
Identification_Information:
     Citation:
           Citation_Information:
                 Originator: Eastern Federal Lands Highway Division
                 Publication_Date: Unknown
                 Title: amme pkg 03
                 Geospatial_Data_Presentation_Form: vector digital data
                 Online_Linkage: Not Available
     Description:
           Abstract: Parking Areas
           Purpose: Road Inventory Program
     Time_Period_of_Content:
           Time_Period_Information:
                 Single_Date/Time:
                      Calendar_Date: 12/14/2003
           Currentness_Reference: ground condition
     Status:
           Progress: Complete
           Maintenance_and_Update_Frequency: As per RIP cycle
     Spatial_Domain:
           Bounding_Coordinates:
                 West_Bounding_Coordinate: 145.716187
                 East_Bounding_Coordinate: 145.726114
                North_Bounding_Coordinate: 15.221814
                 South_Bounding_Coordinate: 15.212767
     Keywords:
           Theme:
                 Theme_Keyword_Thesaurus: AMME
                 Theme_Keyword: AMME
     Access Constraints: None
     Use_Constraints: Redistribution needs permission from EFLHD/NPS
     Point_of_Contact:
           Contact_Information:
```

amme_pkg_03 Page 2 of 4

Contact_Person_Primary:

Contact_Person: Dan VanGilder Contact_Organization: EFLHD Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Native_Data_Set_Environment:

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

8.3.0.800

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report: Good

Completeness_Report: Complete for parking areas

Lineage:

Source_Information:

Type_of_Source_Media: GPS

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector *Point_and_Vector_Object_Information:*

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon

Point_and_Vector_Object_Count: 16

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000000 Longitude_Resolution: 0.000000

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927

Ellipsoid_Name: Clarke 1866 Semi-major_Axis: 6378206.400000

Denominator_of_Flattening_Ratio: 294.978698

amme_pkg_03 Page 3 of 4

Entity_and_Attribute_Information: Detailed_Description: Entity_Type: Entity_Type_Label: amme_pkg_03 Attribute: Attribute Label: FID Attribute_Definition: Internal feature number. Attribute_Definition_Source: ESRI Attribute_Domain_Values: *Unrepresentable_Domain:* Sequential unique whole numbers that are automatically generated. Attribute: Attribute Label: Shape Attribute_Definition: Feature geometry. Attribute_Definition_Source: ESRI Attribute Domain Values: *Unrepresentable_Domain:* Coordinates defining the features. Attribute: Attribute_Label: PARK_ALPHA Attribute_Definition: Park alpha code Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: RTE_NO *Attribute_Definition:* Route number Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: RTE_NAME Attribute_Definition: Route name Attribute_Definition_Source: Route ID Meeting Attribute: Attribute_Label: FEATURE Attribute: Attribute_Label: SURF_TYPE Attribute_Definition: Surface type of route Attribute Domain Values: Attribute: Attribute_Label: CONDITION Attribute_Definition: Condition rating for route Attribute: *Attribute_Label:* PHOTOS Attribute_Definition: Photo filename associated with feature Attribute: Attribute_Label: COMMENT Attribute_Definition: Field comment Attribute: Attribute_Label: GPS_DATE Attribute_Definition: Date of GPS collection Attribute: Attribute Label: DATAFILE Attribute: *Attribute_Label:* SQ_FT

amme_pkg_03 Page 4 of 4

Attribute_Definition: Feature area in square feet

Distribution_Information:

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital Form:

 $Digital_Transfer_Information:$

Transfer_Size: 0.018

Metadata_Reference_Information:

Metadata_Date: 20060124

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: EFLHD Sterling

Contact_Person: Dan VanGilder

Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing and physical address

Address: 21400 Ridgetop Circle

City: Sterling

State_or_Province: Virginia

Postal_Code: 20166 Country: United States

Contact_Voice_Telephone: 703-404-6361

Contact_Electronic_Mail_Address: dvangilder@fhwa.dot.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata Extensions:

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

Profile_Name: ESRI Metadata Profile

Generated by mp version 2.7.33 on Tue Jan 24 14:14:58 2006