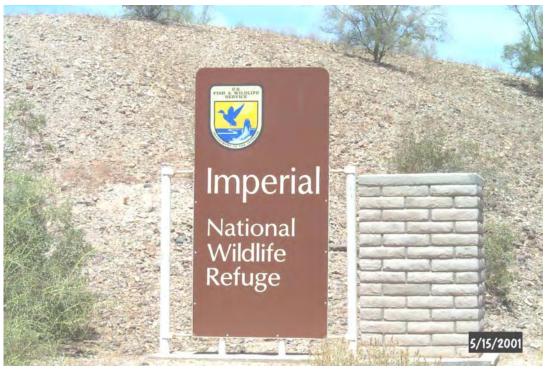
The Road Inventory of Imperial National Wildlife Refuge Yuma, AZ





Prepared By: Federal Highway Administration Central Federal Lands Highway Division April 2008



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INTRODUCTION

The Transportation Equity Act for the 21st Century (Public Law 105-178) created the Refuge Roads Program. Refuge roads are those public roads that provide access to or within a unit of the National Wildlife Refuge System and for which title and maintenance responsibility is vested in the United States Government. Funds from the Highway Trust Fund are available for refuge roads and can be used by the station to pay the cost of:

- (a) Maintenance and improvements of refuge roads.
- (b) Maintenance and improvements of:
 - (1) Adjacent vehicle parking areas
 - (2) Provision for pedestrians and bicycles and
 - (3) Construction and reconstruction of roadside rest areas that are located in or adjacent to wildlife refuges
- (c) Administrative costs associated with such maintenance and improvements.

The funds available for refuge roads are to be disbursed based on the relative needs of the various refuges in the National Wildlife Refuge System, and taking into consideration:

- (a) The comprehensive conservation plan for each refuge;
- (b) The need for access as identified through land use planning; and
- (c) The impact of land use planning on existing transportation facilities.

To determine the relative needs of the U.S. Fish and Wildlife Service, the Federal Highway Administration (FHWA) was asked to inventory all public access roads and parking lots and provide a condition assessment of each. In 2008 the inventory was expanded to include administrative (service use only) roads in addition to public access roads. An FHWA representative meets with refuge personnel to identify route segments and assign route numbers and functional classifications (See Appendix) for each route. All roads and parking lots are mapped using Trimble GPS units and visually assessed for condition using the RSL method of evaluation developed at Utah State University (See Appendix). Culverts, Gates, Guardrails and Low Water Crossings are also mapped and inspected for any obvious defects.

An estimate is provided, in year 2008 dollars, based on the condition determined by the rating system. Estimates are based upon data and location factors from the 2008 RS Means Heavy Construction Cost Data 22nd Annual Edition. Cost estimates should be evaluated on a case-by-case basis when being used for programming purposes.

In addition to this report, the FHWA will furnish the condition ratings of each route and segment to the Fish and Wildlife Service in a Microsoft Access database so the data can be included in their Real Property Inventory.

Imperial

Summaries

Route Miles and Percentages by Functional Class and Condition

	Condition Rating (Based on RSL)*											
	Excellent		Good		Fair		Poor		Failed		TOTAL	
F. C.	MILES	%	MILES	%	MILES	%	MILES	%	MILES	%	MILES	
I	3.32	53.4%	2.90	46.6%							6.23	
II	1.16	62.2%	0.44	23.3%					0.27	14.6%	1.87	
III												
IV												
٧	5.09	41.1%	3.72	30.1%	3.15	25.4%	0.42	3.4%			12.37	
Totals	9.57	46.8%	7.06	34%	3.15	15.4%	0.42	2.0%	.27	1.3%	20.47	

^{*}For a description of condition ratings for the various surface types see the Appendix.

Route Miles and Percentages by Surface Type and Condition

	Paved Condition Rating [Condition(RSL)]										
	Excellen	it (19-20)	Good (13-18)	Fair (Fair (7-12)		Poor (1-6)		Failed (0)	
S. T.	MILES	%	MILES	%	MILES	%	MILES	%	MILES	%	MILES
AS			0.13	100.0%							0.13
СО											
Totals			0.13	100%							0.13

	Unpaved Condition Rating [Condition(RSL)]										
	Excellent (8-10)		Good (5-7)		Fair (3-4)		Poor (1-2)		Failed (0)		TOTAL
S. T.	S. T. MILES %		MILES	%	MILES	%	MILES	%	MILES %		MILES
GR	9.15	64.2%	5.09	35.8%							14.24
NA	0.43	7.7%	1.27	23.0%	3.15	56.9%	0.42	7.5%	0.27	4.9%	5.40
PR			0.7	100%							0.7
Totals	9.57	46.8%	7.06	34.5%	3.15	15.4%	0.42	2.0%	0.27	1.3%	20.34

Square Footage (Parking Areas)

	Condition Rating											
	Excellent		Good		Fa	Fair		Poor		led	Total	
	Square		Square		Square		Square		Square		Square	
S. T.	Feet	%	Feet	%	Feet	%	Feet	%	Feet	%	Feet	
AS			7273	100%							7273	
СО												
GR	6924	3.7%	110732	59.0%	70131	37.3%					187787	
NA			4733	22.1%	8253	38.5%	8476	39.5%			21462	
PR	_											
Totals	6924	3.2%	122738	56.7%	78384	36.2%	8476	3.9%			216522	

Imperial

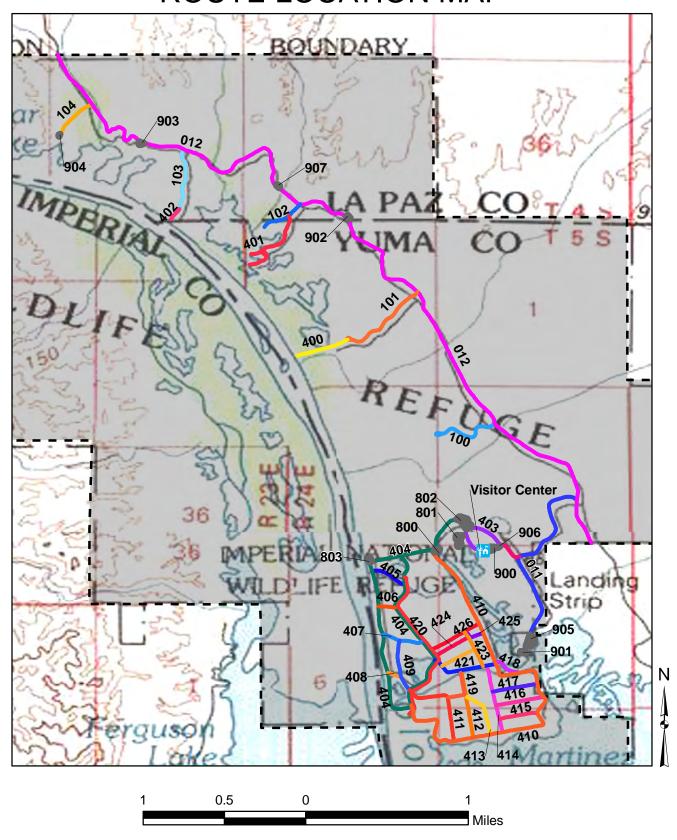
Summaries

Route Miles and Percentages by Use Type and Condition

			Road Co	ndition	Rating: Pu	blic/Adm	inistrative	Use				PERCENT
	Excellent		Good		Fair		Poor		Failed		TOTAL	TOTAL
USE TYPE	MILES	%	MILES	%	MILES	%	MILES	%	MILES	%	MILES	MILES
Public (FC I-III)	4.49	55.4%	3.34	41%					0.27	3.4%	8.10	40%
Admin (FC IV-V)	5.09	41.1%	3.72	30.1%	3.15	25.4%	0.42	3.4%			12.37	60%
Totals	9.57	46.8%	7.06	34%	3.15	15.4%	0.42	2.0%	.27	1.3%	20.47	

	Parking Condition Rating											
	Excel	lent	God	od	Fair		Pod	or	Failed		Total	TOTAL
	Square Square				Square	Square Square			Square		Square	SF
USE TYPE	Feet	%	Feet	%	Feet	%	Feet	%	Feet	%	Feet	
Public			88256	89.3%	2065	2.1%	8476	8.6%			98797	46%
Admin	6924	5.9%	34482	29%	76319	64.8%					117725	54%
Totals	6924	3.2%	122738	56.7%	78384	36.2%	8476	3.9%			216522	

IMPERIAL NATIONAL WILDLIFE REFUGE ROUTE LOCATION MAP



Imperial - 22560 - ROUTE IDENTIFICATION LIST (NUMERIC)

Shading Color Key:

White = Paved Routes

Yellow = Unpaved Routes

RTE#	Asset Number	ROUTE NAME	RTE MI	ROUTE DESCRIPTION	PAVED MI	UN- PAVED MI	LANES	FC
010	10009869	Visitor Center Entrance Road	0.17	From Meers Point Road (Route 011) to Visitor Center Parking (Route 900)	-	0.17	2	1
011	10009927	Meers Point Road	1.22	From Red Cloud Mine Road (Route 012) to Meers Point Parking (Route 901)	0.13	1.10	2	1
012	10009928	Red Cloud Mine Road	4.83	From Southern end of refuge boundary Northern end of refuge boundary	-	4.83	2	1
100	10009925	Palo Verde Point Road	0.44	From Red Cloud Mine Road (Route 012) to end of route	-	0.44	1	2
101	10009924	Mesquite Point Road	0.54	From Red Cloud Mine Road (Route 012) to Mesquite Point Administrative Road (Route 400)	1	0.54	1	2
102	10009923	Ironwood Point Road	0.24	From Red Cloud Mine Road (Route 012) to end of route	-	0.24	1	2
103	10009922	Smoketree Point Road	0.38	From Red Cloud Mine Road (Route 012) to Smoketree Point Administrative Road (Route 402)	-	0.38	1	2
104	10009926	Clear Lake Parking Road	0.27	From Red Cloud Mine Road (Route 012) to Clear Lake Parking (Route 904)	-	0.27	1	2
400	10009924	Mesquite Point Administrative Road	0.28	From Mesquite Point Road (Route 101) to end of route	-	0.28	1	5
401	10009923	Ironwood Point Administrative Road	0.55	From Ironwood Point Road (Route 102) to boat launch	-	0.55	1	5
402	10009922	Smoketree Point Administrative Road	0.08	From Smoketree Point Road (Route 103) to end of route	-	0.08	1	5
403	10009869	Headquarters Complex Administrative Road	0.47	From Visitor Center Entrance Road (Route 010) to end of loop at Visitor Center Entrance Road (Route 010)	-	0.47	2	5
404	10009933	Farm Field West Access Loop	2.74	From Headquarters Complex Administrative Road (Route 403) to end of loop	-	2.74	2	5
405	10009933	Farm Field Pond 1 Access Road	0.19	From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Perimeter 1 Administrative Road (Route 404)	-	0.19	2	5
406	10009933	Farm Field Pond 2 Access Road	0.09	From Farm Field West Access Loop (Route 404) to Farm Field West Access Loop (Route 404)	-	0.09	2	5
407	10009933	Farm Field Pond 3 Access Road	0.22	From Farm Field West Access Loop (Route 404) to Farm Field West Access Loop (Route 404) From Farm Field Perimeter 1 Admin. Road (Route 404) to Farm Field Perimeter 1 Admin. Road (Route 404)	-	0.22	2	5
408	10009933	Farm Field Pond 4 Access Road	0.07	From Farm Field West Access Loop (Route 404) to Farm Field West Access Loop (Route 404) From Farm Field Perimeter 1 Admin Road (Route 404) to Farm Field Pond 5 Administrative Road (Route 409)	-	0.07	2	5
409	10009933	Farm Field Pond 5 Access Road	0.32	From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Pond 3 Administrative Road (Route 407)	-	0.32	2	5
410	10009933	Farm Field East Access Road	2.30	From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Perimeter 1 Administrative Road (Route 404)	-	2.30	2	5
411	10009933	Farm Field Pond 13 Access Road	0.50	From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Perimeter 2 Administrative Road (Route 410)	-	0.50	1	5

Imperial - 22560 - ROUTE IDENTIFICATION LIST (NUMERIC)

Shading Color Key:

White = Paved Routes

Yellow = Unpaved Routes

RTE#	Asset Number	ROUTE NAME	RTE MI	ROUTE DESCRIPTION	PAVED MI	UN- PAVED MI	LANES	FC
412	10009933	Farm Field Pond 14 Access Road	0.42	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Perimeter Connector Administrative Road (Route 421)	-	0.42	1	5
413	10009933	Farm Field Pond 15 Access Road	0.28	From Farm Field Pond 14 Administrative Road (Route 412) to Farm Field Perimeter 2 Administrative Road (Route 410)	ı	0.28	1	5
414	10009933	Farm Field Pond 20C Access Road	0.41	From Farm Field Perimeter 2 Administrative Road (Route 410) to end or route	-	0.41	1	5
415	10009933	Farm Field Pond 16 Access Road	0.20	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 20C Administrative Road (Route 414)	ı	0.20	1	5
416	10009933	Farm Field Pond 17 Access Road	0.25	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 20C Administrative Road (Route 414)	i	0.25	1	5
417	10009933	Farm Field Pond 18 Access Road	0.24	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 20C Administrative Road (Route 414)	-	0.24	1	5
418	10009933	Farm Field East Cut-Across Road	0.15	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Perimeter 2 Administrative Road (Route 410)	-	0.15	2	5
419	10009933	Farm Field Unit 11 Access Road	0.22	From Farm Field Unit 11 Administrative Road (Route 419) to end of route	-	0.22	1	5
420	10009933	Farm Field Wildlife Corridor Access Road	1.00	From Farm Field Perimeter 1 Administrative Road (Route 404) to end of route	1	1.00	1	5
421	10009933	Farm Field Perimeter Connector Road	0.36	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Perimeter 1 Administrative road (Route 404) (Route 404)	-	0.36	1	5
422	10009933	Farm Field Pond 9 Access Road	0.20	From Farm Field Perimeter Connector Administrative Road (Route 421) to Farm Field Pond 21 Administrative Road (Route 423)	ı	0.20	1	5
423	10009933	Farm Field Pond 21 Access Road	0.23	From Farm Field Perimeter Connector Administrative Road (Route 421) to Farm Field Pond 7 Administrative Road (Route 426)	-	0.23	1	5
424	10009933	Farm Field Pond 8 Access Road	0.20	From Farm Field Wildlife Corridor Access Administrative Road (Route 420) to Farm Field Pond 21 Administrative Road (Route 423)	-	0.20	2	5
425	10009933	Farm Field Pond 21 Spur Road	0.12	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 7 Administrative Road (Route 426)	-	0.12	2	5
426	10009933	Farm Field Pond 7 Access Road	0.29	From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Wildlife Corridor Access Administrative Road (Route 420)	-	0.29	1	5

Imperial - 22560 - ROUTE IDENTIFICATION LIST (PARKING)

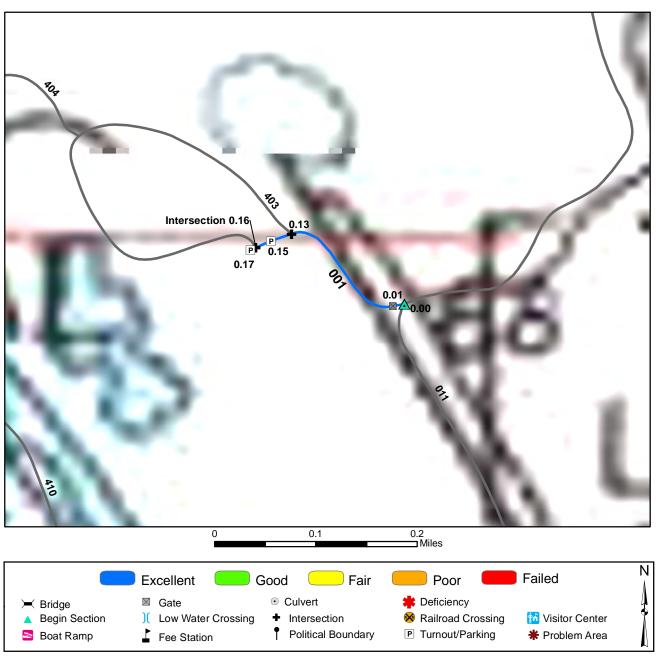
Shading Color Key:

Green = Unpaved Parking Lots
Blue = Paved Parking Lots

RTE#	ASSET NUMBER	ROUTE NAME	RTE SQFT	ROUTE DESCRIPTION	PAVED SQFT	UN- PAVED SQFT
800		Administrative Parking 1	6924		-	6924
801	10009917	Shop Parking	34482		-	34482
802	10009919	Equipment Parking	68066		-	68066
803		Gauging Station Parking	8253		-	8253
900	10009912	Visitor Center Parking	21656		-	21656
901		Meers Point Parking	7273		7273	-
902	10009920	Painted Desert Trail Parking	6896		-	6896
903		Hunt Zone Parking	7456		-	7456
904	10009921	Clear Lake Parking	1020		-	1020
905	10009916	Meers Point Boat Ramp Parking	47698		-	47698
906		Pupfish Parking	2065		-	2065
907		Red Cloud Road Parking	4733		-	4733

CHANGES TO THE FISH AND WILDLIFE SERVICE ROAD INVENTORY REPORT Imperial - 25560

Rou	ites added	to previous inventory:			No routes added to previous inventory.
	Rte#	Rte Name			-
1.			Rte Desc:		
			Reason for A	Addition:	
2.			Rte Desc:		
			Reason for A	Addition:	
3.			Rte Desc:		
J.			Reason for Addition:		
SOLI	tes remov	ed from previous invento	rv-		No routes removed from previous inventory.
	Rte #	Rte Name			
1			Rte Desc:		
1.			Reason for F	Removal:	
2.			Rte Desc:		
۷.			Reason for F	Removal:	
3.			Rte Desc:		
J .			Reason for F	Removal:	
Rou	tes modifi	ed from previous invento	rv:		No routes modified from previous inventory.
	Rte#	Rte Name			
1.			Rte Desc:		
'-			Modification:	:	
2.			Rte Desc:		
۷.			Modification:	:	
3.			Rte Desc:		
J .			Modification:	:	
Con	nments:				

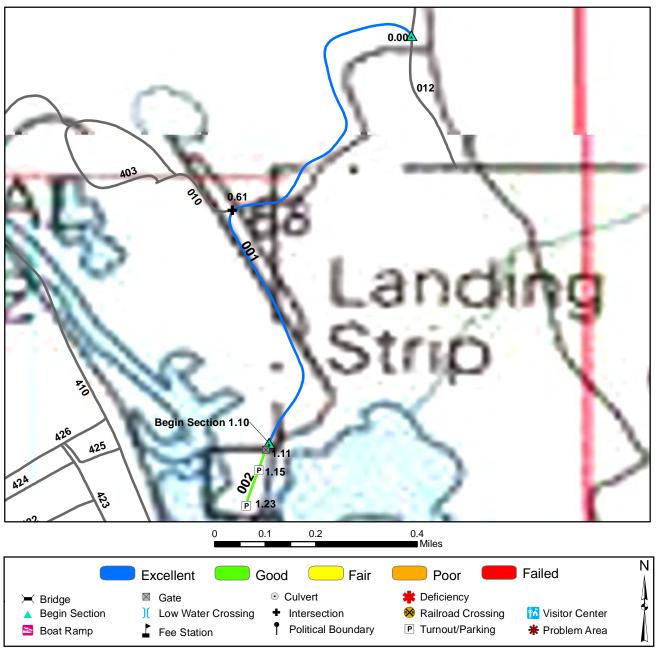


ROUTE: 010 Visitor Center Entrance Road TOTAL LENGTH: 0.17 Miles

ASSET: 10009869

RTE DESCRIPTION: From Meers Point Road (Route 011) to Visitor Center Parking (Route 900)

Section Number Section Length (miles) Inspection Date	001 0.17 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 35		
Roadway Condition Information			
Condition Remaining Service Life (years) Cost Estimate CRV	Excellent 8 \$0 \$136900		

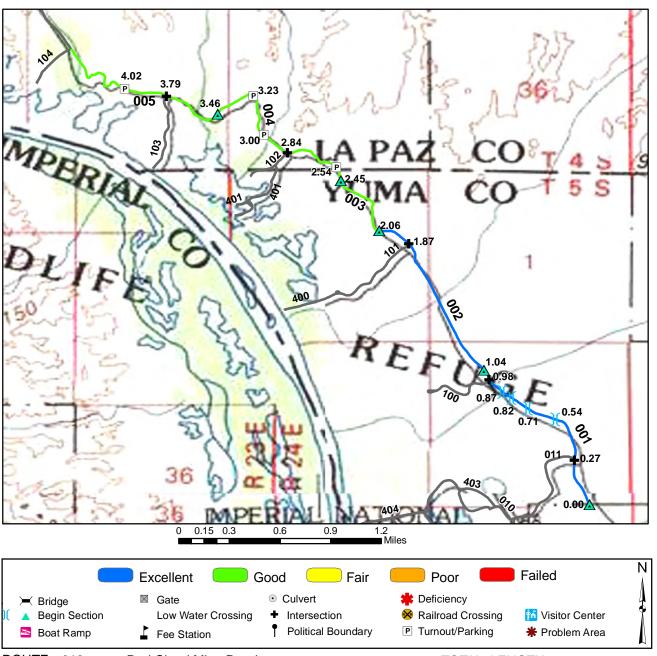


ROUTE: 011 Meers Point Road TOTAL LENGTH: 1.22 Miles

ASSET: 10009927

RTE DESCRIPTION: From Red Cloud Mine Road (Route 012) to Meers Point Parking (Route 901)

Section Number Section Length (miles) Inspection Date	001 1.10 4/1/2008	002 0.13 4/1/2008		
Section Information				
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 20	Asphalt 2 24		
Roadway Condition Information				
Condition Remaining Service Life (years) Cost Estimate CRV	Excellent 9 \$0 \$890100	Good 14 \$3000 \$182800		

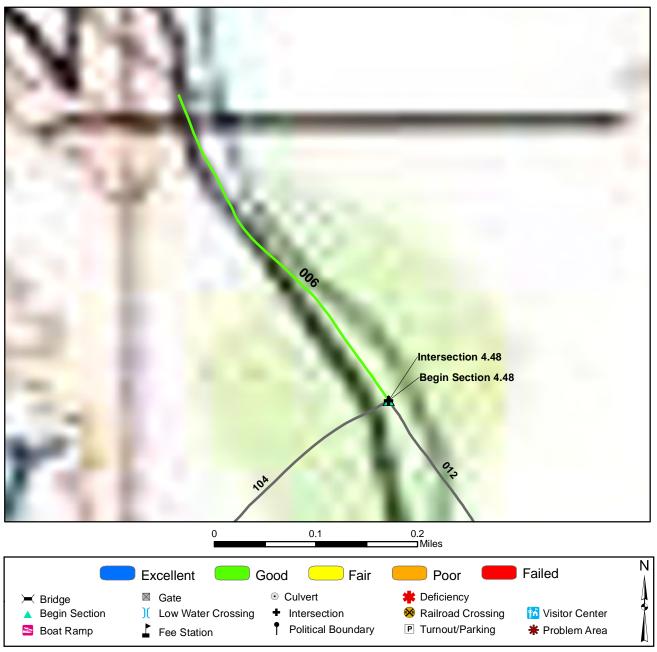


ROUTE: 012 Red Cloud Mine Road TOTAL LENGTH: 4.83 Miles

ASSET: 10009928

RTE DESCRIPTION: From Southern end of refuge boundary to Northern end of refuge boundary

Section Number Section Length (miles) Inspection Date	001	002	003	004	005
	1.04	1.02	0.39	1.01	1.02
	4/1/2008	4/1/2008	4/1/2008	4/1/2008	4/1/2008
Section Information					
Surface Type	Gravel	Gravel	Gravel	Gravel	Gravel
Number of Lanes	2	2	2	2	2
Roadway Width (feet)	22	22	22	16	16
Roadway Condition Information					
Condition Remaining Service Life (years) Cost Estimate CRV	Excellent	Excellent	Good	Good	Good
	8	8	7	7	7
	\$0	\$0	\$800	\$1900	\$2000
	\$843400	\$829500	\$321000	\$816900	\$831800

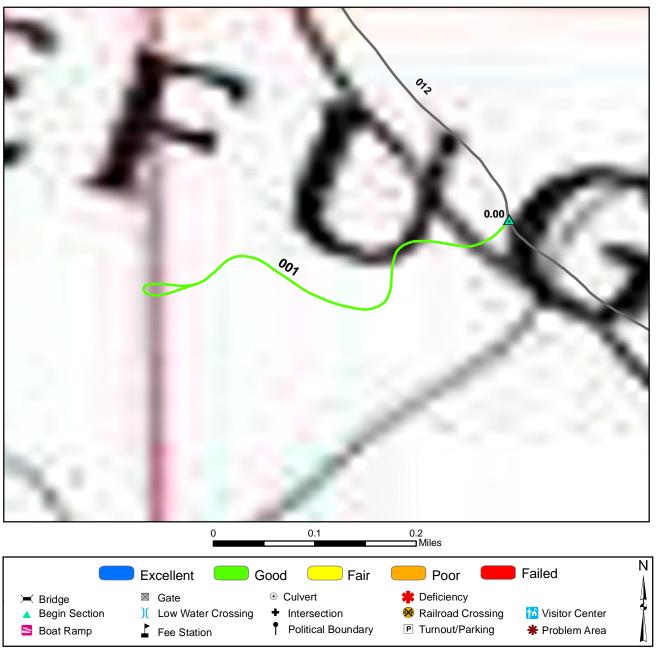


ROUTE: 012 Red Cloud Mine Road TOTAL LENGTH: 4.83 Miles

ASSET: 10009928

RTE DESCRIPTION: From Southern end of refuge boundary Northern end of refuge boundary

Section Number Section Length (miles) Inspection Date	006 0.35 4/1/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 16		
Roadway Condition Information			
Condition	Good		
Remaining Service Life (years)	7 \$700		
Cost Estimate CRV	\$285600		

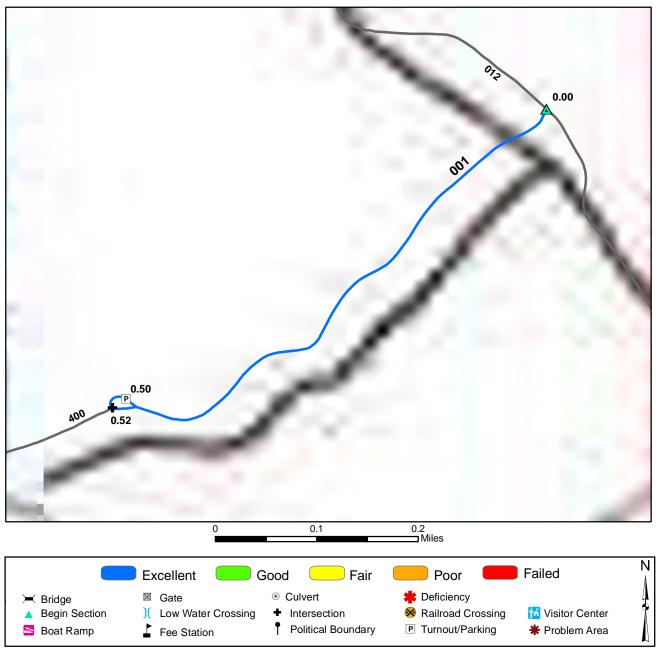


ROUTE: 100 Palo Verde Point Road TOTAL LENGTH: 0.44 Miles

ASSET: 10009925

RTE DESCRIPTION: From Red Cloud Mine Road (Route 012) to end of route

Section Number Section Length (miles) Inspection Date	001 0.44 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 1 12		
Roadway Condition Information			
Condition Remaining Service Life (years) Cost Estimate CRV	Good 7 \$800 \$354000		

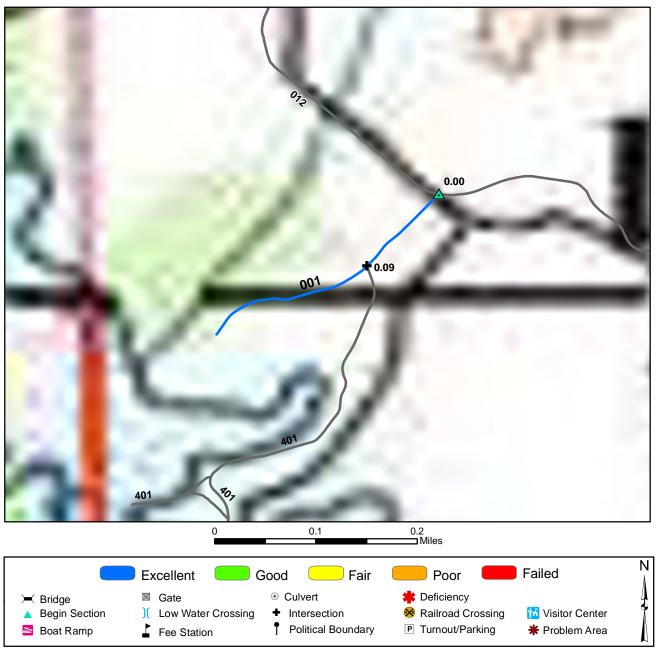


ROUTE: 101 Mesquite Point Road TOTAL LENGTH: 0.54 Miles

ASSET: 10009924

RTE DESCRIPTION: From Red Cloud Mine Road (Route 012) to Mesquite Point Administrative Road (Route 400)

Section Number Section Length (miles) Inspection Date	001 0.54 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 1 12		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0 \$439500		
CRV	φ439300		

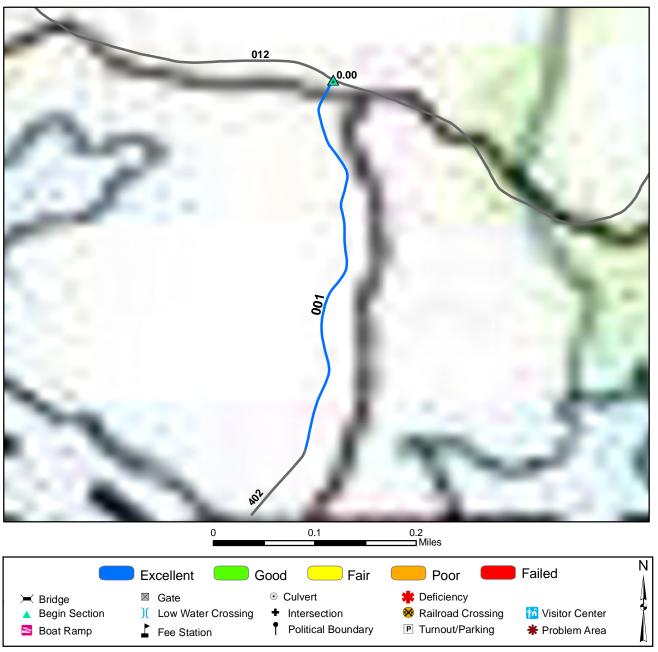


ROUTE: 102 Ironwood Point Road TOTAL LENGTH: 0.24 Miles

ASSET: 10009923

RTE DESCRIPTION: From Red Cloud Mine Road (Route 012) to end of route

Section Number Section Length (miles) Inspection Date	001 0.24 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 1 12		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0		
CRV	\$197400		

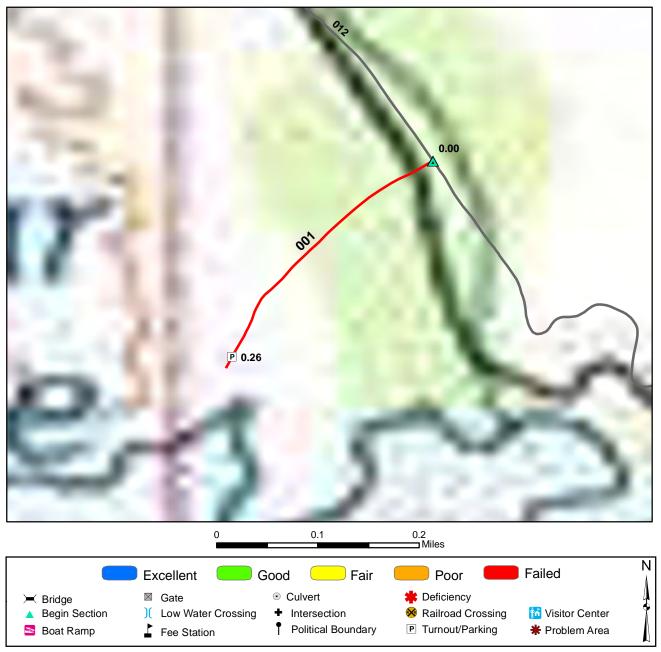


ROUTE: 103 Smoketree Point Road TOTAL LENGTH: 0.38 Miles

ASSET: 10009922

RTE DESCRIPTION: From Red Cloud Mine Road (Route 012) to Smoketree Point Administrative Road (Route 402)

Section Number Section Length (miles) Inspection Date	001 0.38 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 1 10		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0 \$309100		
CRV	\$309100		

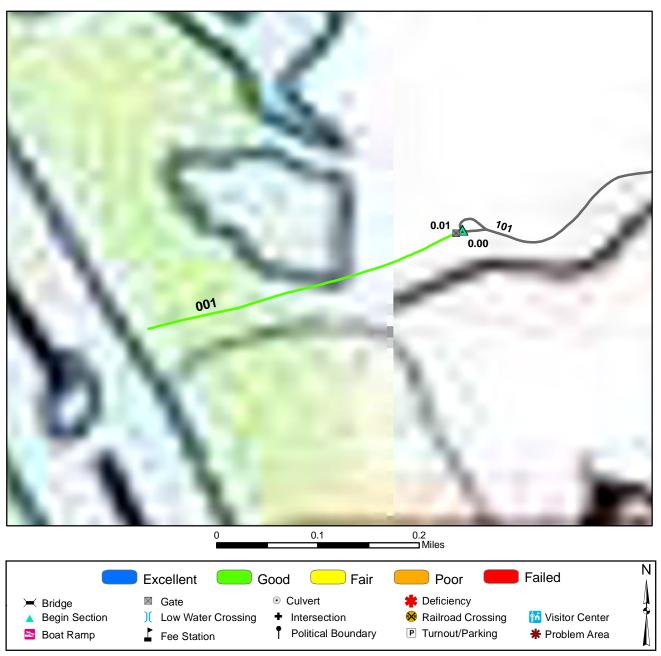


ROUTE: 104 Clear Lake Parking Road TOTAL LENGTH: 0.27 Miles

ASSET: 10009926

RTE DESCRIPTION: From Red Cloud Mine Road (Route 012) to Clear Lake Parking (Route 904)

Section Number Section Length (miles) Inspection Date	001 0.27 4/1/2008		
Section Information Surface Type Number of Lanes Roadway Width (feet)	Native 1 12		
Roadway Condition Information Condition Remaining Service Life (years) Cost Estimate CRV	Failed 0 \$39500 \$114700		

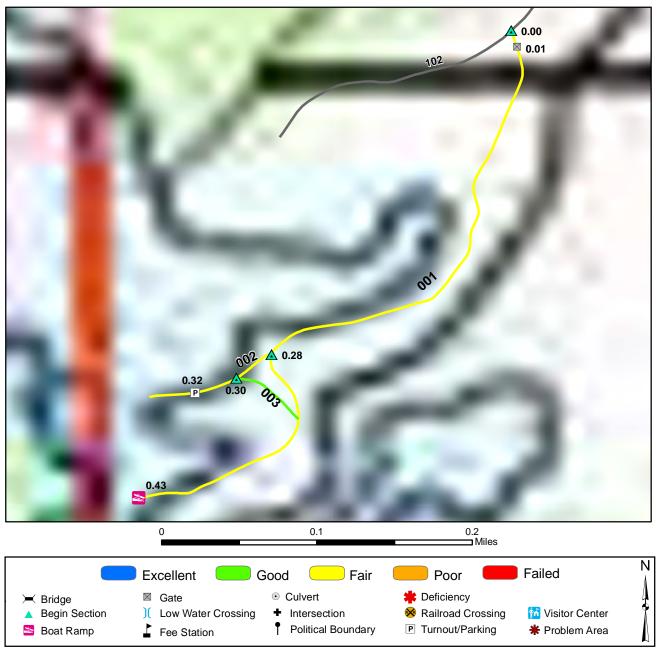


ROUTE: 400 Mesquite Point Administrative Road TOTAL LENGTH: 0.28 Miles

ASSET: 10009924

RTE DESCRIPTION: From Mesquite Point Road (Route 101) to end of route

Section Number Section Length (miles) Inspection Date	001 0.28 4/2/2008		
Section Information			
Surface Type	Primitive		
Number of Lanes Roadway Width (feet)	1 8		
	C		
Roadway Condition Information			
Condition	Good		
Remaining Service Life (years)	7		
Cost Estimate	\$100		
CRV	\$0		

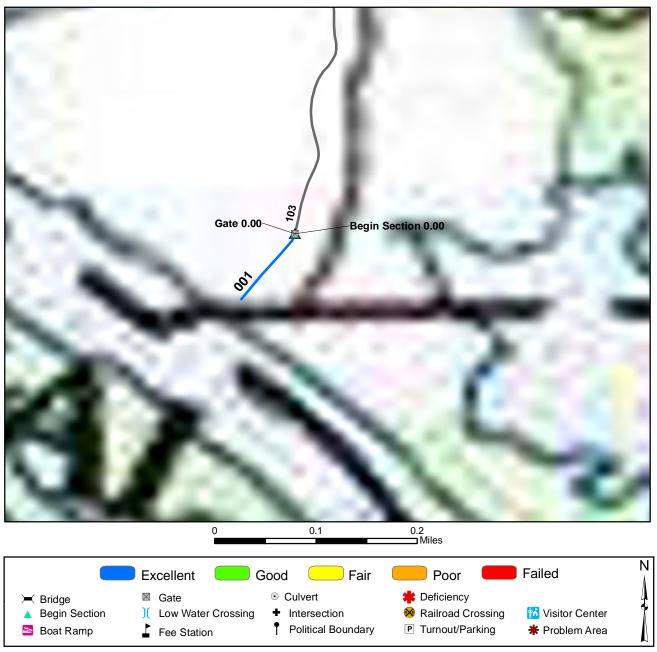


ROUTE: 401 Ironwood Point Administrative Road TOTAL LENGTH: 0.55 Miles

ASSET: 10009923

RTE DESCRIPTION: From Ironwood Point Road (Route 102) to boat launch

Section Number Section Length (miles) Inspection Date	001 0.44 4/2/2008	002 0.07 4/2/2008	003 0.04 4/2/2008	
Section Information				
Surface Type Number of Lanes Roadway Width (feet)	Native 1 10	Native 1 10	Native 1 10	
Roadway Condition Information				
Condition Remaining Service Life (years)	Fair 4	Fair 3	Good 7	
Cost Estimate CRV	\$1100 \$183500	\$200 \$31200	\$100 \$18700	

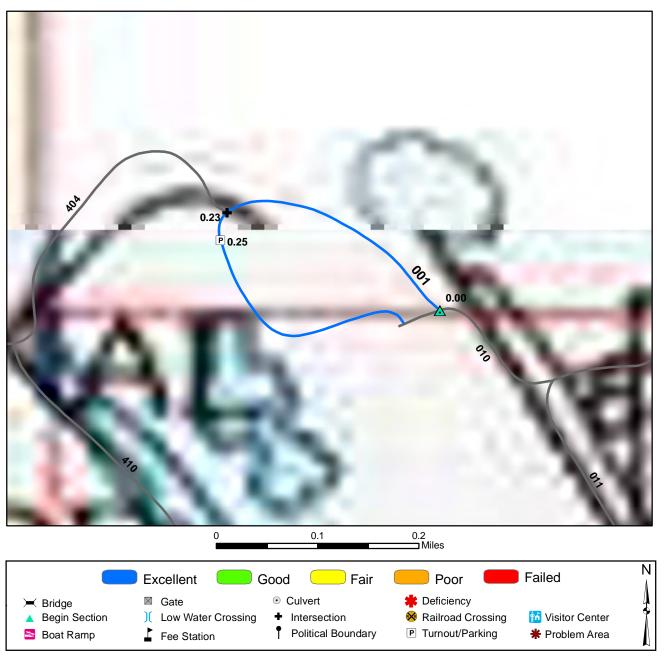


ROUTE: 402 Smoketree Point Administrative Road TOTAL LENGTH: 0.08 Miles

ASSET: 10009922

RTE DESCRIPTION: From Smoketree Point Road (Route 103) to end of route

Section Number Section Length (miles) Inspection Date	001 0.08 4/2/2008		
Section Information			
Surface Type	Gravel		
Number of Lanes	1		
Roadway Width (feet)	10		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0		
CRV	\$64600		

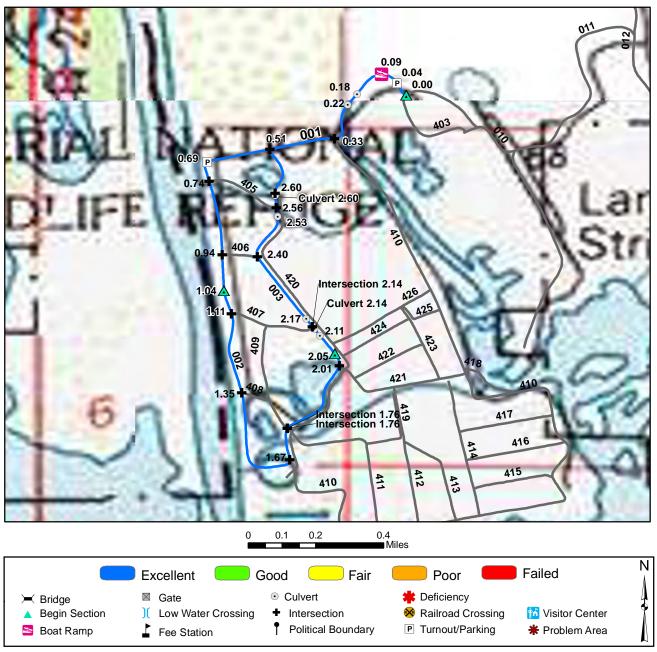


ROUTE: 403 Headquarters Complex Administrative Road TOTAL LENGTH: 0.47 Miles

ASSET: 10009869

RTE DESCRIPTION: From Visitor Center Entrance Road (Route 010) to end of loop at Visitor Center Entrance Road (Route 010)

Section Number Section Length (miles) Inspection Date	001 0.47 4/2/2008		
Section Information			
Surface Type	Gravel		
Number of Lanes	2		
Roadway Width (feet)	30		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0 \$202700		
CRV	\$382700		

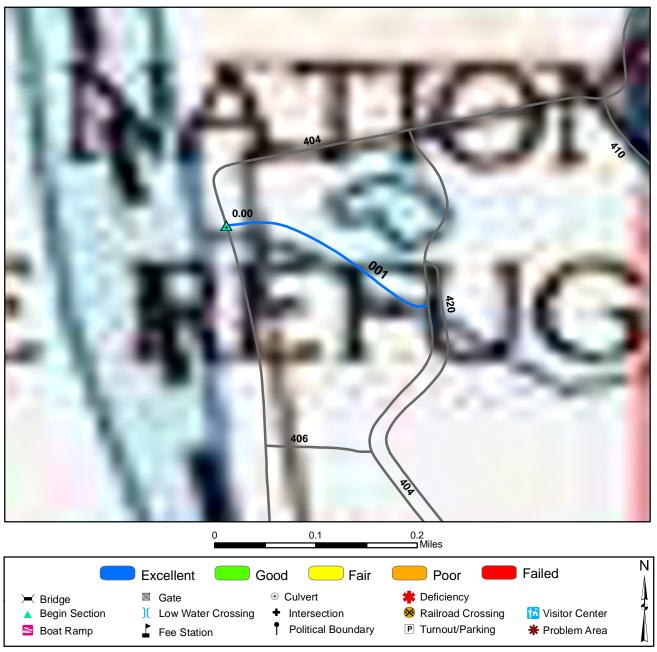


ROUTE: 404 Farm Field West Access Loop TOTAL LENGTH: 2.74 Miles

ASSET: 10009933

RTE DESCRIPTION: From Headquarters Complex Administrative Road (Route 403) to end of loop

Section Number Section Length (miles) Inspection Date	001 1.04 4/2/2008	002 1.00 4/2/2008	003 0.69 4/2/2008	
Section Information				
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 24	Gravel 2 24	Gravel 2 24	
Roadway Condition Information				
Condition	Excellent	Excellent	Excellent	
Remaining Service Life (years)	8 \$0	8 \$0	8 \$0	
Cost Estimate CRV	\$847400	\$814700	\$561200	

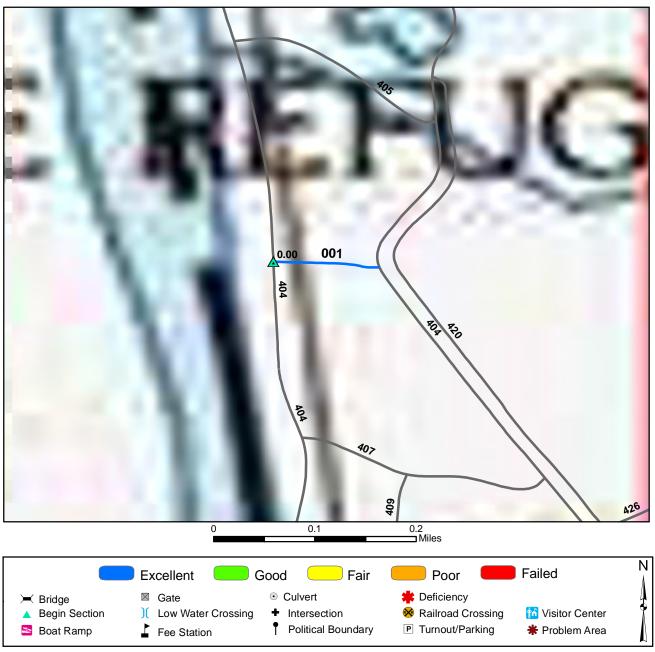


ROUTE: 405 Farm Field Pond 1 Access Road TOTAL LENGTH: 0.19 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Perimeter 1 Administrative Road (Route 404)

Section Number Section Length (miles) Inspection Date	001 0.19 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 24		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate CRV	\$0 \$158200		
CKV	Ψ100200		

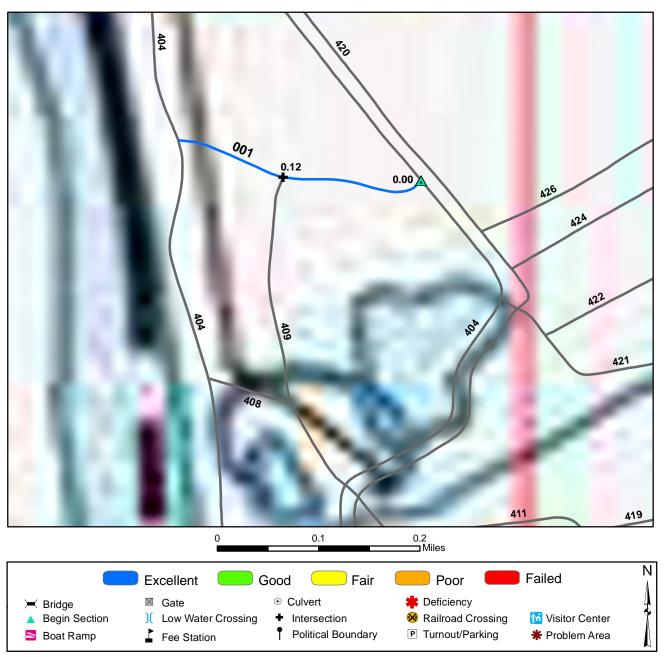


ROUTE: 406 Farm Field Pond 2 Access Road TOTAL LENGTH: 0.09 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field West Access Loop (Route 404) to Farm Field West Access Loop (Route 404)

Section Number Section Length (miles) Inspection Date	001 0.09 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 24		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0 \$71800		
CRV	φ/ 1000		

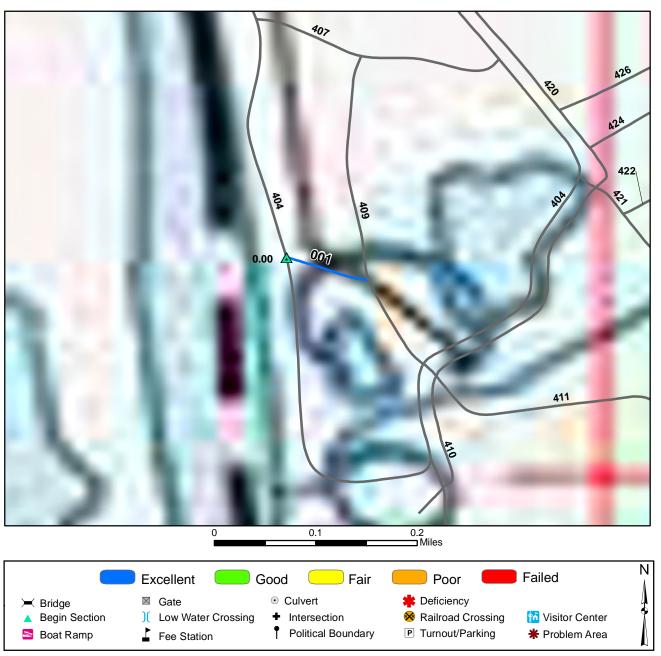


ROUTE: 407 Farm Field Pond 3 Access Road TOTAL LENGTH: 0.22 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field West Access Loop (Route 404) to Farm Field West Access Loop (Route 404)
From Farm Field Perimeter 1 Admin. Road (Route 404) to Farm Field Perimeter 1 Admin. Road (Route 404)

001 0.22 4/2/2008				
Gravel 2 24				
Excellent				
8				
\$175200				
	0.22 4/2/2008 Gravel 2 24 Excellent 8 \$0	0.22 4/2/2008 Gravel 2 24 Excellent 8 \$0	0.22 4/2/2008 Gravel 2 24 Excellent 8 \$0	0.22 4/2/2008 Gravel 2 24 Excellent 8 \$0

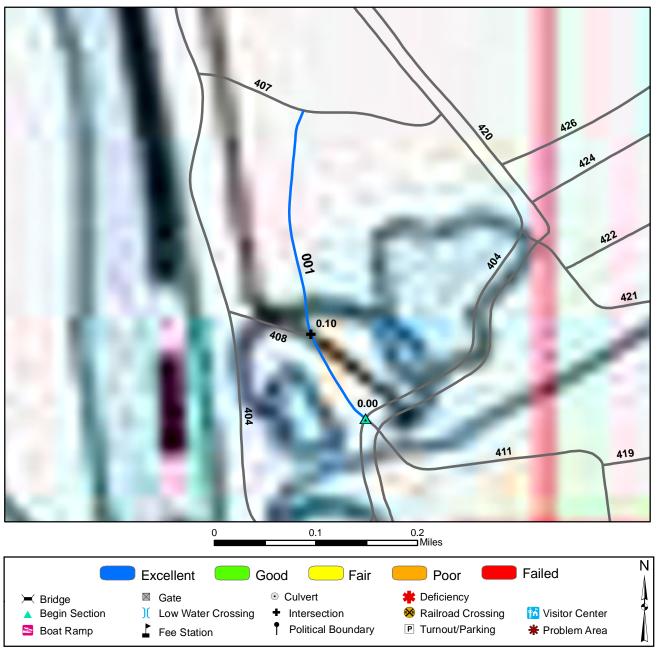


ROUTE: 408 Farm Field Pond 4 Access Road TOTAL LENGTH: 0.07 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field West Access Loop (Route 404) to Farm Field West Access Loop (Route 404)
From Farm Field Perimeter 1 Admin. Road (Route 404) to Farm Field Pond 5 Administrative Road (Route 409)

Section Number Section Length (miles) Inspection Date	001 0.07 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 24		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate CRV	\$0 \$58600		

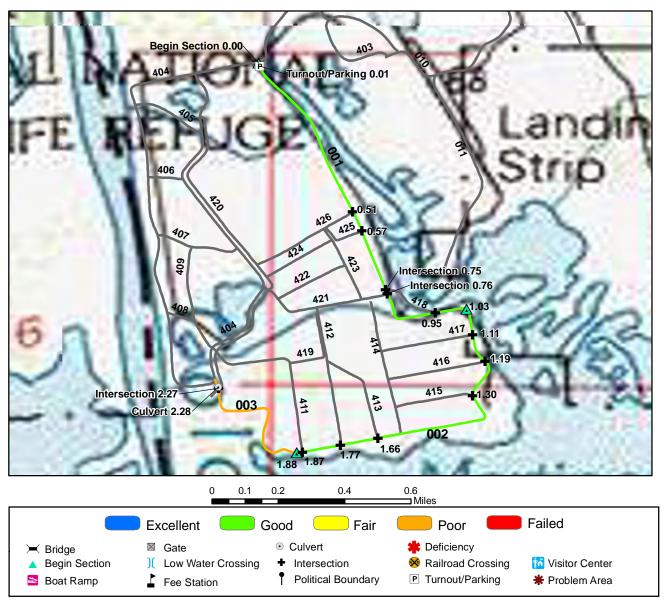


ROUTE: 409 Farm Field Pond 5 Access Road TOTAL LENGTH: 0.32 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Pond 3 Administrative Road (Route 407)

Section Number Section Length (miles) Inspection Date	001 0.32 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 24		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0 \$258800		
CRV	ψ230000		

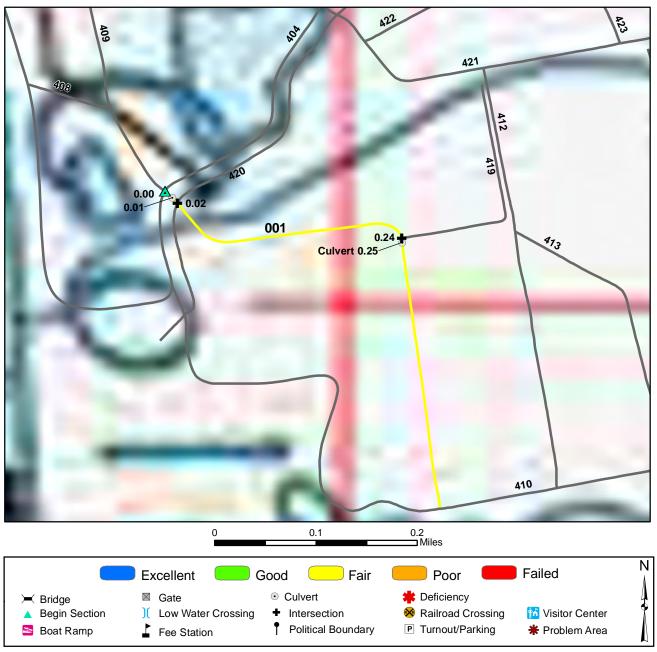


ROUTE: 410 Farm Field East Access Road TOTAL LENGTH: 2.30 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Perimeter 1 Administrative Road (Route 404)

Section Number Section Length (miles) Inspection Date	001 1.03 4/2/2008	002 0.85 4/2/2008	003 0.42 4/2/2008	
Section Information				
Surface Type Number of Lanes Roadway Width (feet)	Gravel 2 24	Gravel 2 20	Native 1 14	
Roadway Condition Information				
Condition Remaining Service Life (years) Cost Estimate CRV	Good 6 \$2000 \$840200	Good 7 \$1600 \$690100	Poor 2 \$15400 \$175300	

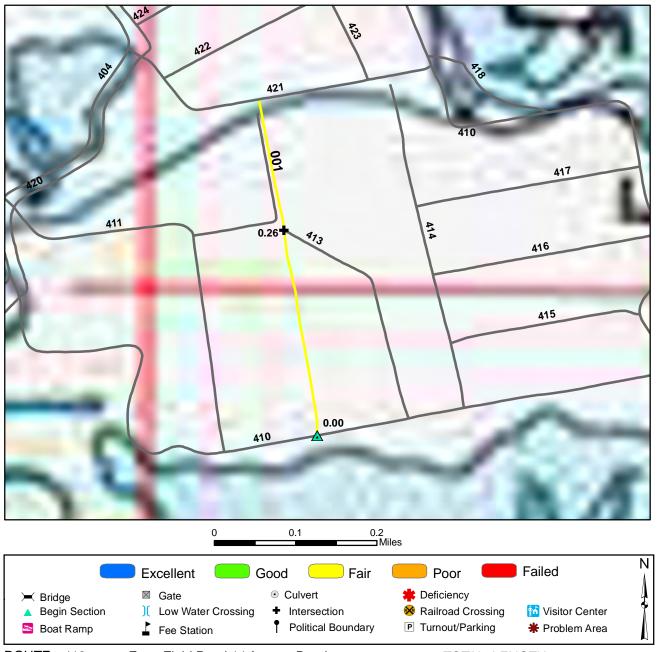


ROUTE: 411 Farm Field Pond 13 Access Road TOTAL LENGTH: 0.50 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 1 Administrative Road (Route 404) to Farm Field Perimeter 2 Administrative Road (Route 410)

Section Number Section Length (miles) Inspection Date	001 0.50 4/2/2008		
Section Information			
Surface Type	Native		
Number of Lanes	1		
Roadway Width (feet)	12		
Roadway Condition Information			
Condition	Fair		
Remaining Service Life (years)	3		
Cost Estimate	\$1300		
CRV	\$208600		

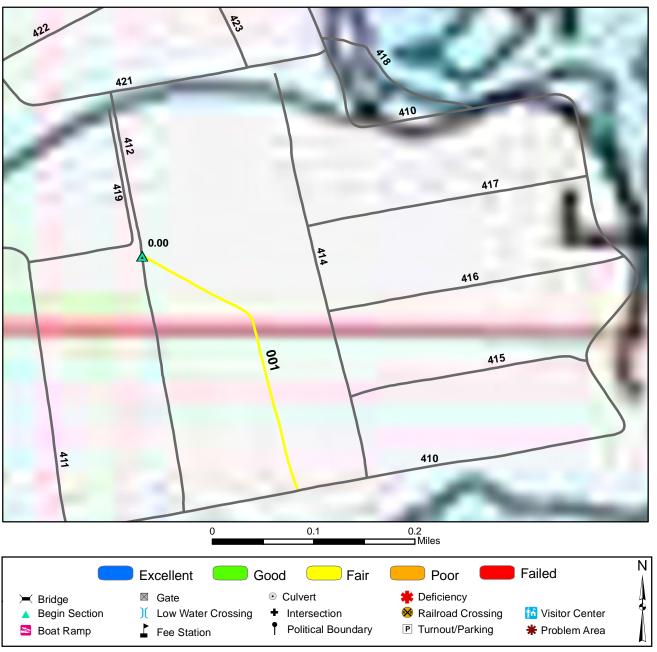


ROUTE: 412 Farm Field Pond 14 Access Road TOTAL LENGTH: 0.42 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Perimeter Connector Administrative (Route 421)

Section Number Section Length (miles) Inspection Date	001 0.42 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 10		
Roadway Condition Information			
Condition	Fair		
Remaining Service Life (years) Cost Estimate	3 \$1100		
CRV	\$175900		

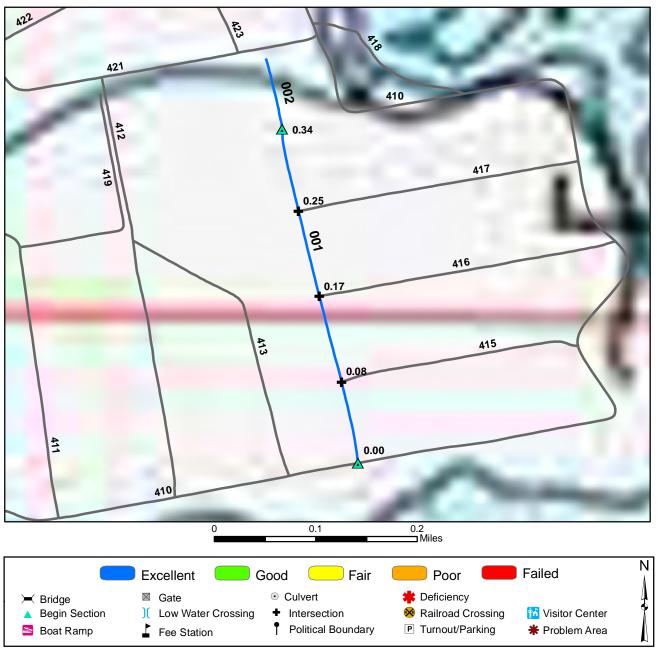


ROUTE: 413 Farm Field Pond 15 Access Road TOTAL LENGTH: 0.28 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Pond 14 Administrative Road (Route 412) to Farm Field Perimeter 2 Administrative Road (Route 410)

Section Number Section Length (miles) Inspection Date	001 0.28 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 12		
Roadway Condition Information			
Condition	Fair		
Remaining Service Life (years)	3		
Cost Estimate	\$700		
CRV	\$119600		

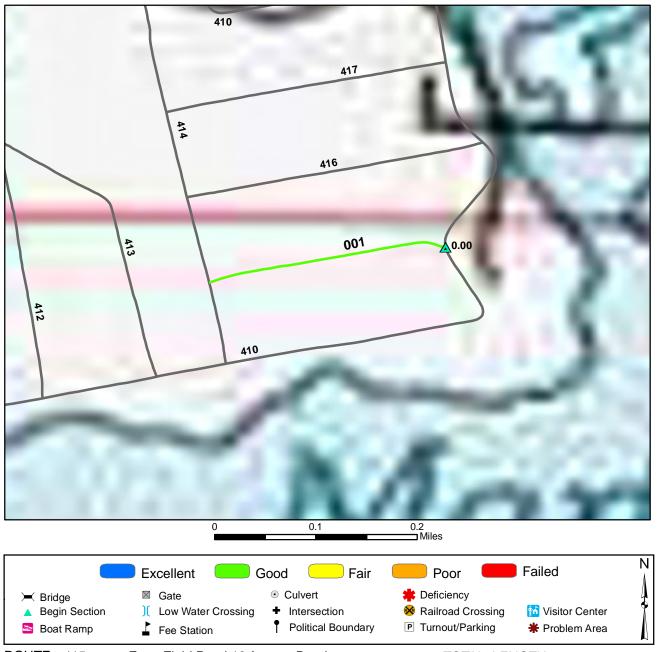


ROUTE: 414 Farm Field Pond 20C Access Road TOTAL LENGTH: 0.41 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to end of route

Section Number Section Length (miles) Inspection Date	001 0.33 4/2/2008	002 0.07 4/2/2008		
Section Information				
Surface Type Number of Lanes Roadway Width (feet)	Gravel 1 12	Native 1 8		
Roadway Condition Information				
Condition Remaining Service Life (years) Cost Estimate CRV	Excellent 8 \$0 \$272300	Excellent 8 \$0 \$29800		

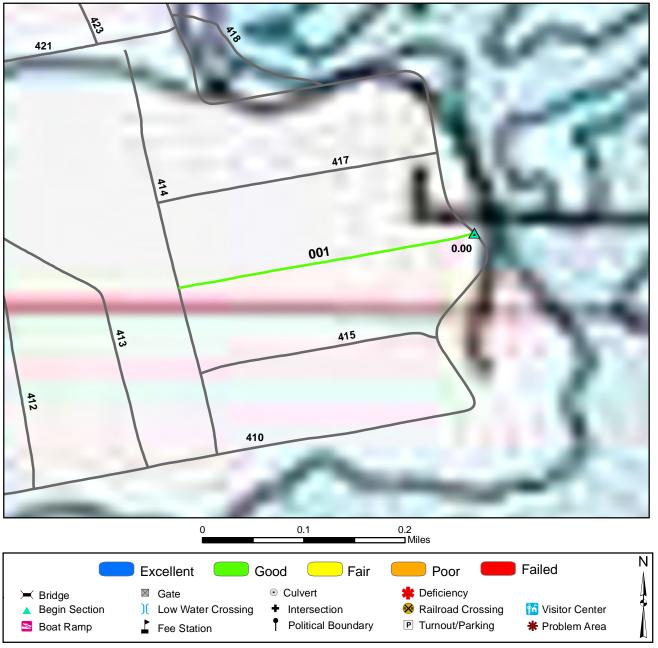


ROUTE: 415 Farm Field Pond 16 Access Road TOTAL LENGTH: 0.20 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 20C Administrative Road (Route 414)

Section Number Section Length (miles) Inspection Date	001 0.20 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Primitive 1 14		
Roadway Condition Information			
Condition	Good		
Remaining Service Life (years)	7		
Cost Estimate	\$100 \$0		
CRV	ΨΟ		

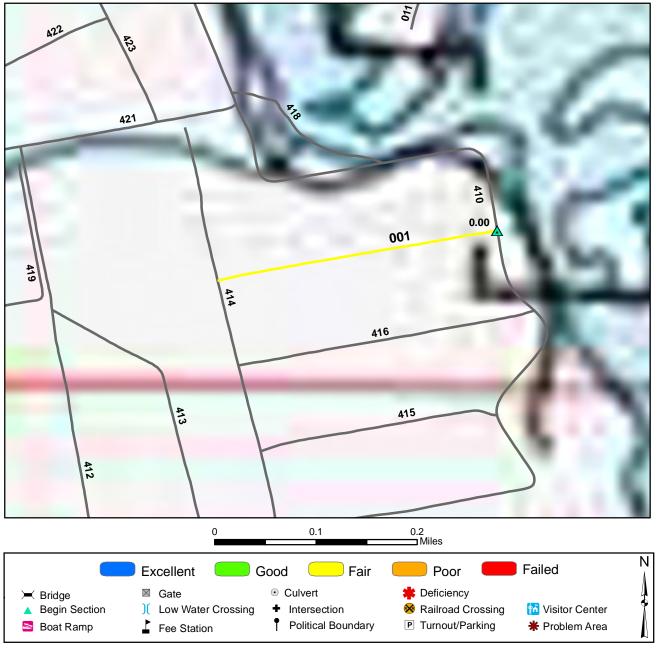


ROUTE: 416 Farm Field Pond 17 Access Road TOTAL LENGTH: 0.25 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 20C Administrative Road (Route 414)

Section Number Section Length (miles) Inspection Date	001 0.25 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 10		
Roadway Condition Information			
Condition Remaining Service Life (years)	Good 5		
Cost Estimate CRV	\$500 \$105800		

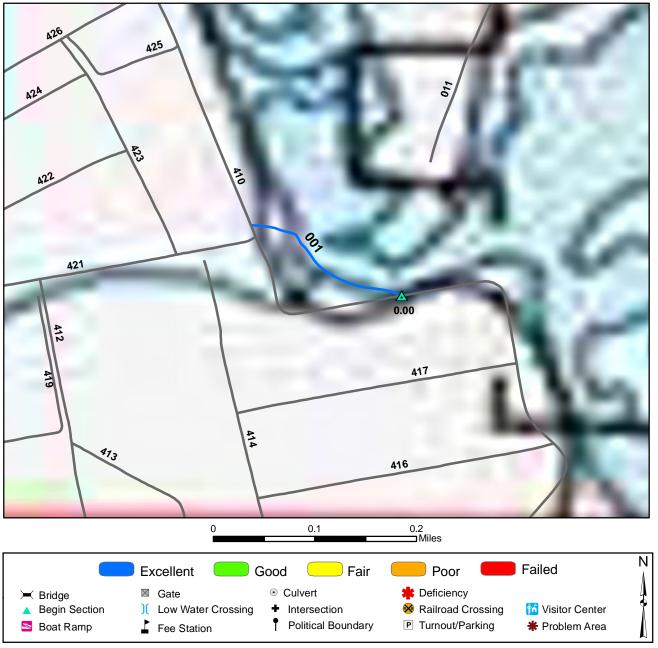


ROUTE: 417 Farm Field Pond 18 Access Road TOTAL LENGTH: 0.24 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 20C Administrative Road (Route 414)

Section Number Section Length (miles) Inspection Date	001 0.24 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 10		
Roadway Condition Information			
Condition	Fair		
Remaining Service Life (years)	3		
Cost Estimate	\$600 \$99700		
CRV	ψοστου		

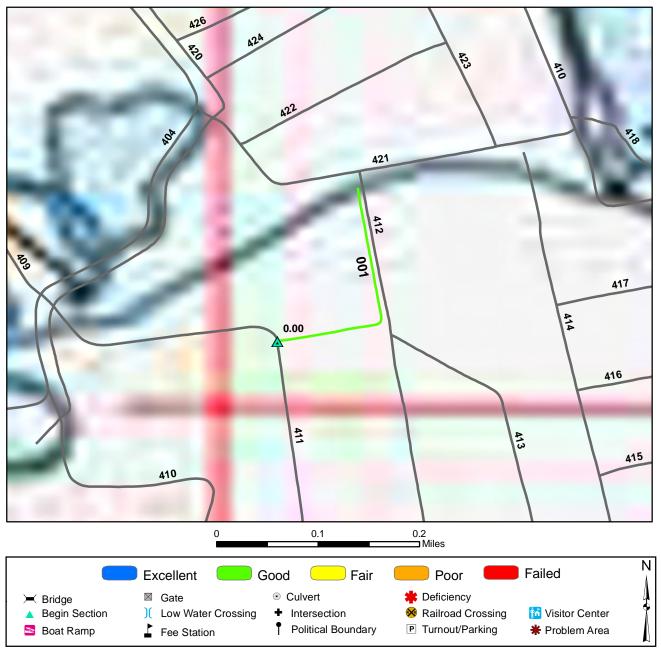


ROUTE: 418 Farm Field East Cut-Across Road TOTAL LENGTH: 0.15 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Perimeter 2 Administrative Road (Route 410)

001 0.15 4/2/2008				
Gravel 2 18				
Excellent				
8				
\$122900				
	0.15 4/2/2008 Gravel 2 18 Excellent 8 \$0	0.15 4/2/2008 Gravel 2 18 Excellent 8 \$0	0.15 4/2/2008 Gravel 2 18 Excellent 8 \$0	0.15 4/2/2008 Gravel 2 18 Excellent 8 \$0

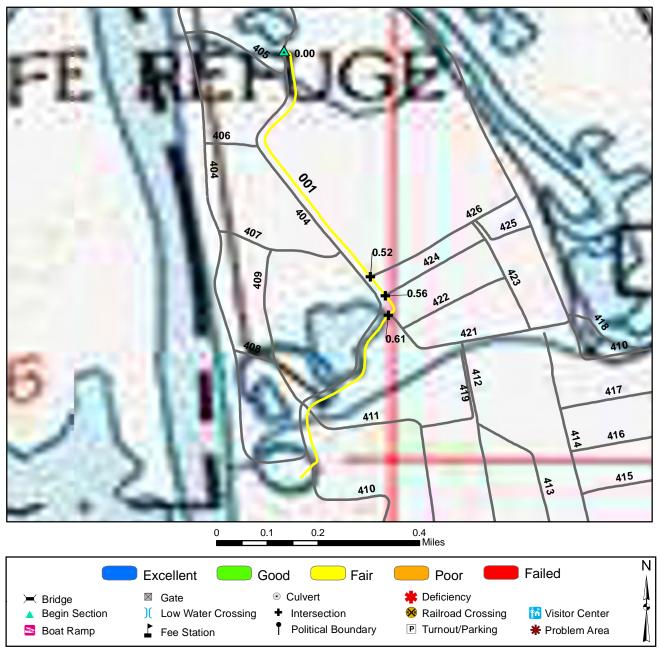


ROUTE: 419 Farm Field Unit 11 Access Road TOTAL LENGTH: 0.22 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Unit 11 Administrative Road (Route 419) to end of route

Section Number Section Length (miles) Inspection Date	001 0.22 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Primitive 1 10		
Roadway Condition Information			
Condition Remaining Service Life (years) Cost Estimate CRV	Good 5 \$100 \$0		

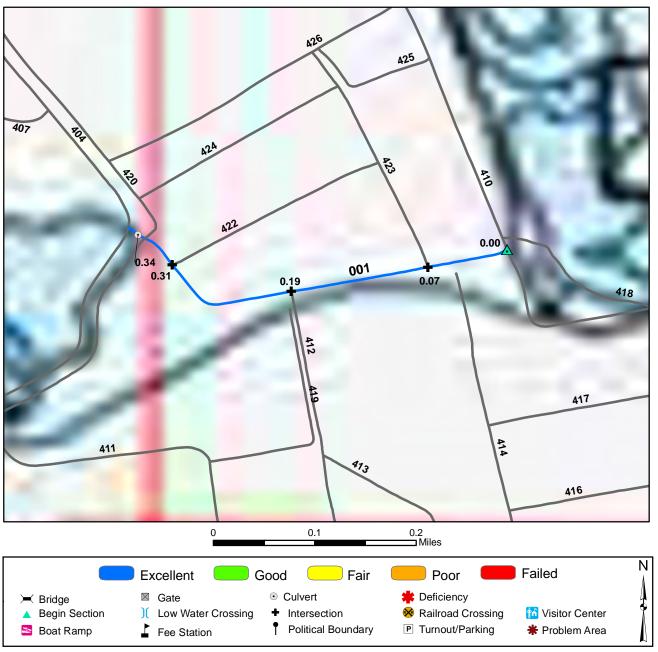


ROUTE: 420 Farm Field Wildlife Corridor Access Road TOTAL LENGTH: 1.00 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 1 Administrative Road (Route 404) to end of route

Section Number Section Length (miles) Inspection Date	001 1.00 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 12		
Roadway Condition Information			
Condition	Fair		
Remaining Service Life (years)	3		
Cost Estimate	\$2500 \$420700		
CRV	φ 4 20700		

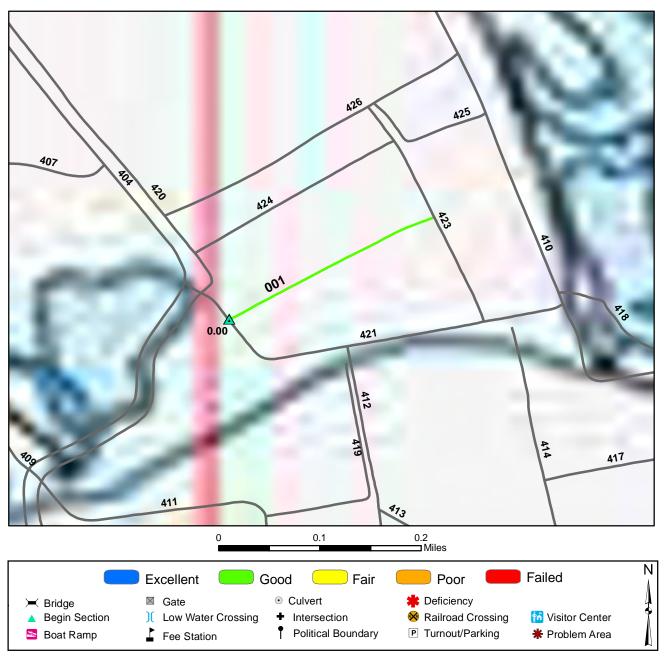


ROUTE: 421 Farm Field Perimeter Connector Road TOTAL LENGTH: 0.36 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Perimeter 1 Administrative road (Route 404)

Section Number Section Length (miles) Inspection Date	001 0.36 4/2/2008		
Section Information			
Surface Type	Native		
Number of Lanes	1		
Roadway Width (feet)	12		
Roadway Condition Information			
Condition	Excellent		
Remaining Service Life (years)	8		
Cost Estimate	\$0		
CRV	\$149900		

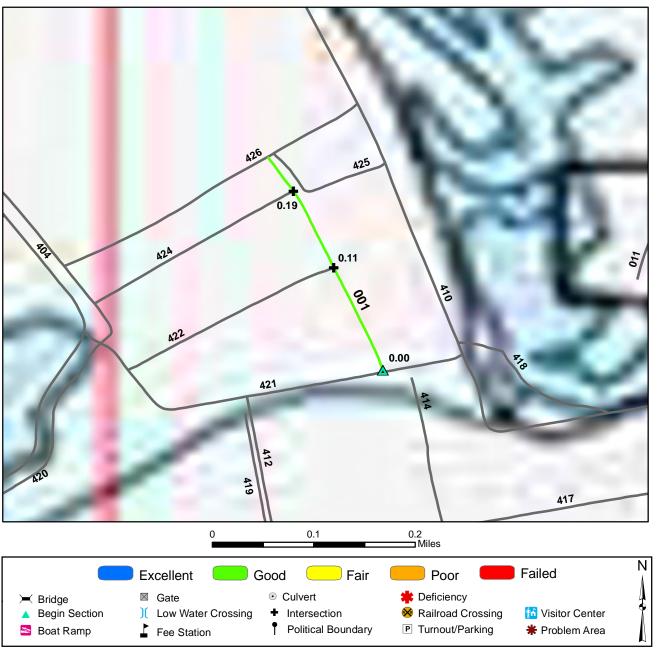


ROUTE: 422 Farm Field Pond 9 Access Road TOTAL LENGTH: 0.19 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter Connector Administrative Road (Route 421) to Farm Field Pond 21 Administrative Road (Route 423)

Section Number Section Length (miles) Inspection Date	001 0.20 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 10		
Roadway Condition Information			
Condition Remaining Service Life (years) Cost Estimate CRV	Good 6 \$400 \$83400		

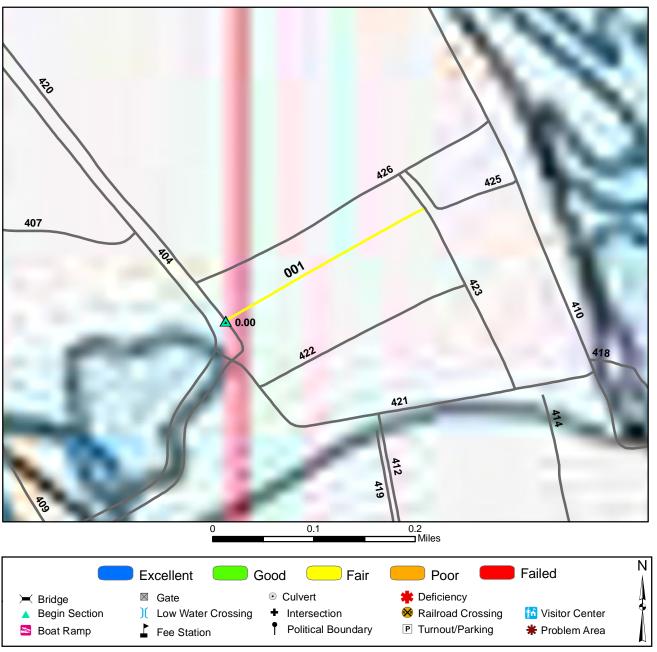


ROUTE: 423 Farm Field Pond 21 Access Road TOTAL LENGTH: 0.23 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter Connector Administrative Road (Route 421) to Farm Field Pond 7 Administrative Road (Route 426)

Section Number Section Length (miles) Inspection Date	001 0.23 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 12		
Roadway Condition Information			
Condition	Good		
Remaining Service Life (years)	7		
Cost Estimate CRV	\$500 \$98000		
CRV	φ90000		

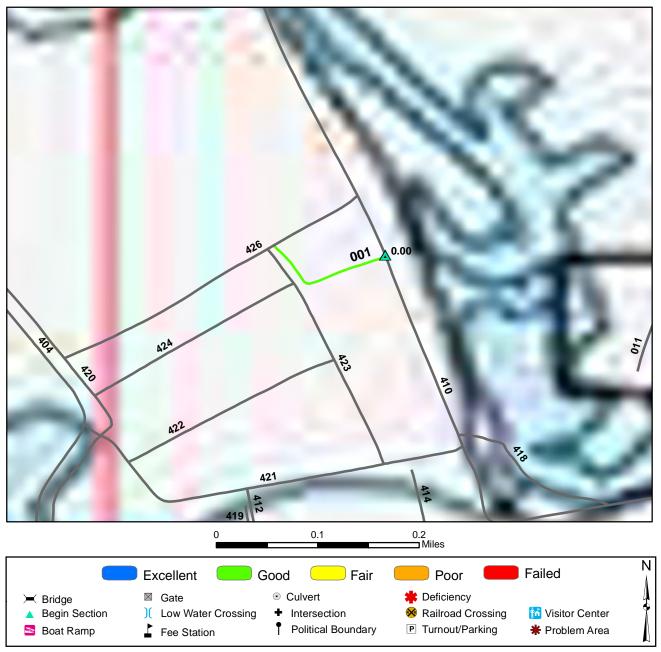


ROUTE: 424 Farm Field Pond 8 Access Road TOTAL LENGTH: 0.20 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Wildlife Corridor Access Administrative Road (Route 420) to Farm Field Pond 21 Administrative Road (Route 423)

Section Number Section Length (miles) Inspection Date	001 0.20 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 2 16		
Roadway Condition Information			
Condition	Fair		
Remaining Service Life (years)	3		
Cost Estimate	\$500 \$83600		
CRV	φοσουυ		

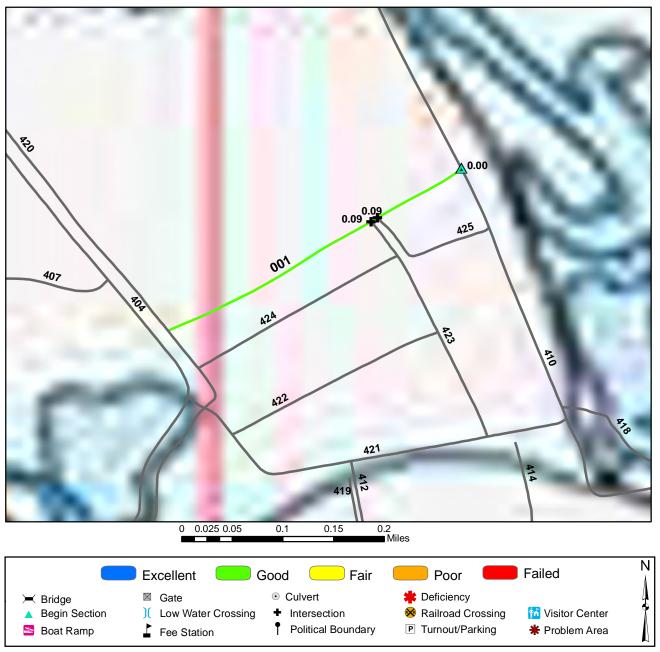


ROUTE: 425 Farm Field Pond 21 Spur Road TOTAL LENGTH: 0.12 Miles

ASSET: 10009933

RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Pond 7 Administrative Road (Route 426)

Section Number Section Length (miles) Inspection Date	001 0.12 4/2/2008		
Section Information			
Surface Type Number of Lanes	Native 2		
Roadway Width (feet)	16		
Roadway Condition Information			
Condition	Good		
Remaining Service Life (years)	5		
Cost Estimate	\$200		
CRV	\$49700		



ROUTE: 426 Farm Field Pond 7 Access Road TOTAL LENGTH: 0.29 Miles

ASSET: 10009933

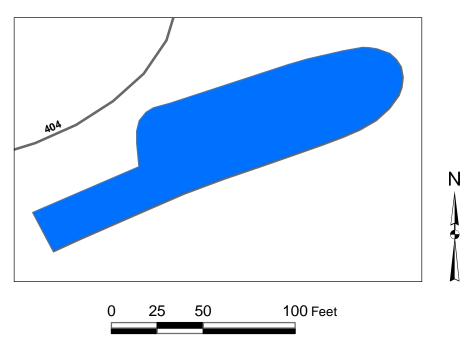
RTE DESCRIPTION: From Farm Field Perimeter 2 Administrative Road (Route 410) to Farm Field Wildlife Corridor Access Administrative Road (Route 420)

Section Number Section Length (miles) Inspection Date	001 0.29 4/2/2008		
Section Information			
Surface Type Number of Lanes Roadway Width (feet)	Native 1 12		
Roadway Condition Information			
Condition	Good		
Remaining Service Life (years)	5		
Cost Estimate	\$600		
CRV	\$122600		

Route 800: Administrative Parking 1

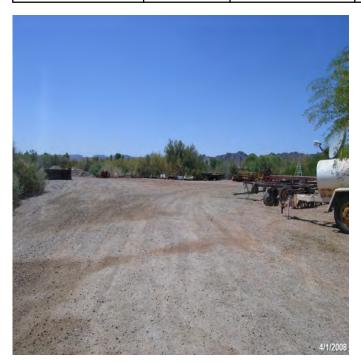
Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
	4/2/2008	Gravel	6924	Excellent	\$0



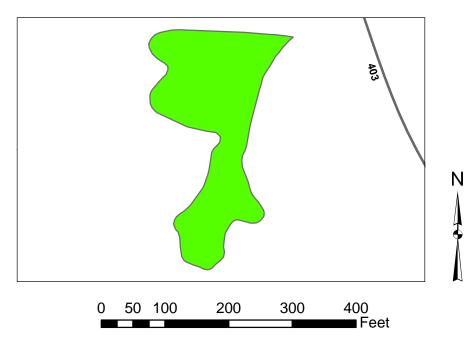


Route 801: Shop Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
10009917	4/1/2008	Gravel	34482	Good	\$6100





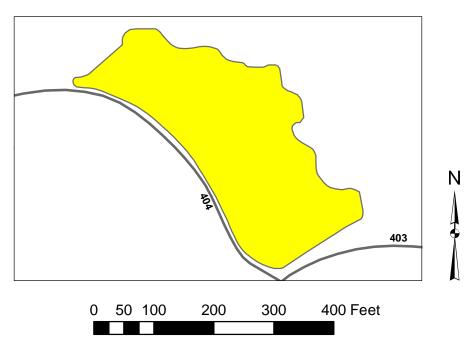


Route 802: Equipment Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
10009919	4/2/2008	Gravel	68066	Fair	\$21200



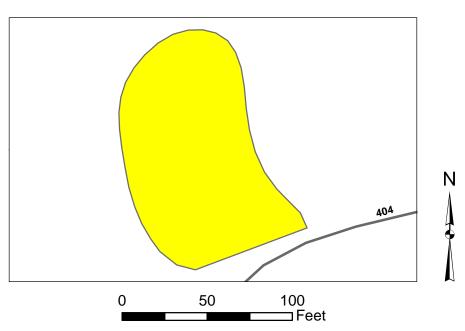




Route 803: Gauging Station Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
	4/2/2008	Native	8253	Fair	\$2600



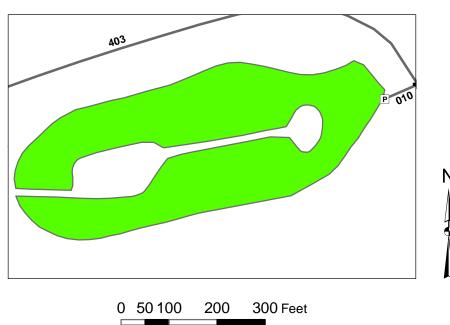


Route 900: Visitor Center Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
10009912	4/1/2008	Gravel	21656	Good	\$3800



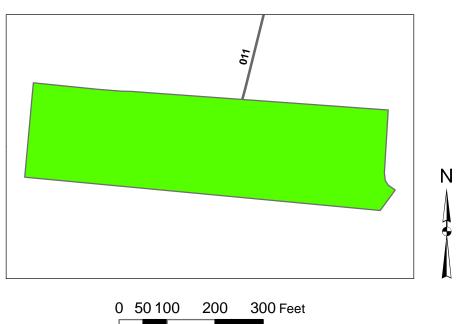




Route 901: Meers Point Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
	4/1/2008	Asphalt	7273	Good	\$1600

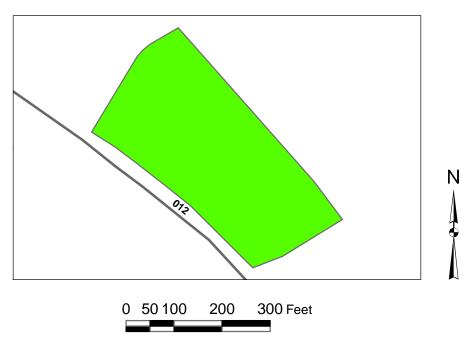




Route 902: Painted Desert Trail Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
10009920	4/1/2008	Gravel	6896	Good	\$1200

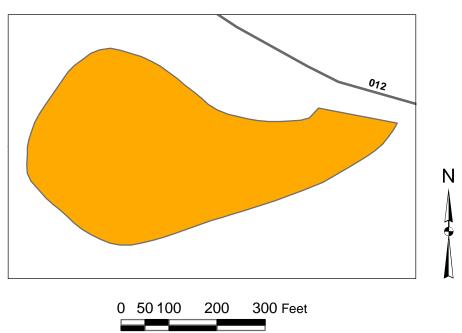




Route 903: Hunt Zone Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
	4/2/2008	Native	7456	Poor	\$7100



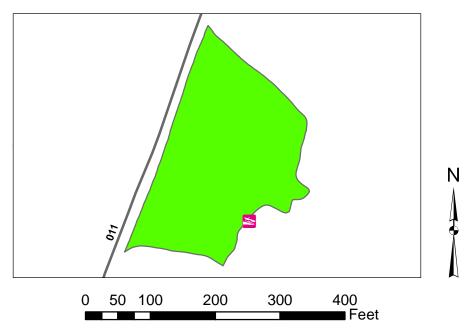


Route 905: Meers Point Boat Ramp Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
10009916	4/1/2008	Gravel	47698	Good	\$8400



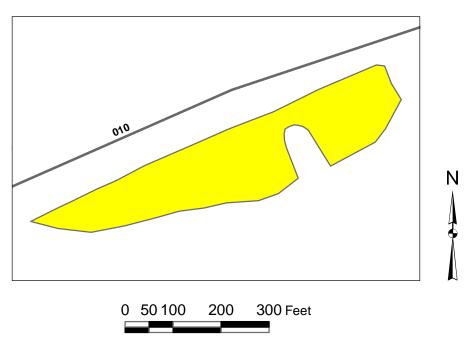




Route 906: Pupfish Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
	4/2/2008	Gravel	2065	Fair	\$600

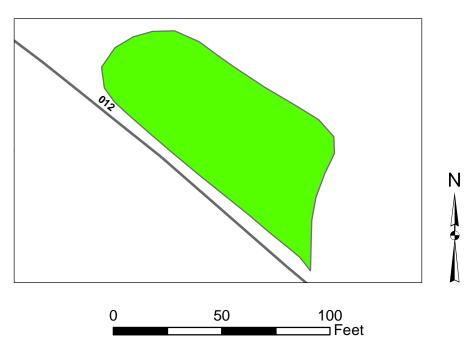




Route 907: Red Cloud Road Parking

Asset Number	Date Visited	Surface Type	Area (sq ft)	Condition	Cost to Improve
	4/2/2008	Native	4733	Good	\$800





Rte #	Milepost	NBIS#	Sufficiency Rating	Functionally Obsolete	Structurally Deficient
No bridges to report					

ROUTE NUMBER: 010 ROUTE NAME: Visitor Center Entrance Road



Photo # 2855 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 011 ROUTE NAME: Meers Point Road



Photo # 2823 - MP 1.10 - Begin Section 002

ROUTE NUMBER: 012 ROUTE NAME: Red Cloud Mine Road



Photo # 2828 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 012 ROUTE NAME: Red Cloud Mine Road



Photo # 2830 - MP 1.04 - Begin Section 002

ROUTE NUMBER: 012 ROUTE NAME: Red Cloud Mine Road



Photo # 2831 - MP 2.06 - Begin Section 003

ROUTE NUMBER: 012 ROUTE NAME: Red Cloud Mine Road



Photo # 2832 - MP 2.45 - Begin Section 004

ROUTE NUMBER: 012 ROUTE NAME: Red Cloud Mine Road



Photo # 2833 - MP 3.46 - Begin Section 005

ROUTE NUMBER: 012 ROUTE NAME: Red Cloud Mine Road



Photo # 2834 - MP 4.48 - Begin Section 006

ROUTE NUMBER: 100 ROUTE NAME: Palo Verde Point Road



Photo # 2854 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 101 ROUTE NAME: Mesquite Point Road



Photo # 2852 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 102 ROUTE NAME: Ironwood Point Road



Photo # 2847 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 103 ROUTE NAME: Smoketree Point Road



Photo # 2842 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 104 ROUTE NAME: Clear Lake Parking Road



Photo # 2841 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 400 ROUTE NAME: Mesquite Point Administrative Road



Photo # 2853 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 401 ROUTE NAME: Ironwood Point Administrative Road



Photo # 2848 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 401 ROUTE NAME: Ironwood Point Administrative Road



Photo # 2850 - MP 0.28 - Begin Section 002

ROUTE NUMBER: 401 ROUTE NAME: Ironwood Point Administrative Road



Photo # 2851 - MP 0.30 - Begin Section 003

ROUTE NUMBER: 402 ROUTE NAME: Smoketree Point Administrative Road



Photo # 2843 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 403 ROUTE NAME: Headquarters Complex Administrative Road



Photo # 2856 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 404 ROUTE NAME: Farm Field West Access Loop



Photo # 2861 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 404 ROUTE NAME: Farm Field West Access Loop



Photo # 2871 - MP 1.04 - Begin Section 002

ROUTE NUMBER: 404 ROUTE NAME: Farm Field West Access Loop



Photo # 2872 - MP 2.05 - Begin Section 003

ROUTE NUMBER: 405 ROUTE NAME: Farm Field Pond 1 Access Road



Photo # 2865 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 406 ROUTE NAME: Farm Field Pond 2 Access Road



Photo # 2880 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 407 ROUTE NAME: Farm Field Pond 3 Access Road



Photo # 2881 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 408 ROUTE NAME: Farm Field Pond 4 Access Road



Photo # 2882 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 409 ROUTE NAME: Farm Field Pond 5 Access Road



Photo # 2883 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 410 ROUTE NAME: Farm Field East Access Road



Photo # 2910 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 410 ROUTE NAME: Farm Field East Access Road



Photo # 2911 - MP 1.03 - Begin Section 002

ROUTE NUMBER: 410 ROUTE NAME: Farm Field East Access Road



Photo # 2912 - MP 1.88 - Begin Section 003

ROUTE NUMBER: 411 ROUTE NAME: Farm Field Pond 13 Access Road



Photo # 2887 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 412 ROUTE NAME: Farm Field Pond 14 Access Road



Photo # 2890 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 413 ROUTE NAME: Farm Field Pond 15 Access Road



Photo # 2891 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 414 ROUTE NAME: Farm Field Pond 20C Access Road



Photo # 2892 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 414 ROUTE NAME: Farm Field Pond 20C Access Road



Photo # 2893 - MP 0.34 - Begin Section 002

ROUTE NUMBER: 415 ROUTE NAME: Farm Field Pond 16 Access Road



Photo # 2894 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 416 ROUTE NAME: Farm Field Pond 17 Access Road



Photo # 2895 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 417 ROUTE NAME: Farm Field Pond 18 Access Road



Photo # 2896 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 418 ROUTE NAME: Farm Field East Cut-Across Road



Photo # 2897 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 419 ROUTE NAME: Farm Field Unit 11 Access Road



Photo # 2906 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 420 ROUTE NAME: Farm Field Wildlife Corridor Access Road



Photo # 2909 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 421 ROUTE NAME: Farm Field Perimeter Connector Road



Photo # 2898 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 422 ROUTE NAME: Farm Field Pond 9 Access Road



Photo # 2904 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 423 ROUTE NAME: Farm Field Pond 21 Access Road



Photo # 2905 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 424 ROUTE NAME: Farm Field Pond 8 Access Road



Photo # 2901 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 425 ROUTE NAME: Farm Field Pond 21 Spur Road



Photo # 2902 - MP 0.00 - Begin Route at Begin Section

ROUTE NUMBER: 426 ROUTE NAME: Farm Field Pond 7 Access Road



Photo # 2903 - MP 0.00 - Begin Route at Begin Section

Accident Summary

Number of Accidents Reported	Timespan of Accidents	Injuries	Fatalities
0	No Accidents to Report	0	0

APPENDIX

	FWS ROAD FUNCTIONAL CLASSIFICATION
Class I	Principal Refuge Road (Public Roads) - Routes that constitute the main access
	route, main auto tour route, or thoroughfare for refuge visitors. These routes are
	accessible by 2WD vehicles. Routes are numbered from 10 to 99.
Class II	Connector Refuge Road (Public Roads) - Routes that provide circulation within
	the refuge. These routes can also provide access to areas of scenic, scientific,
	recreational or cultural interest, such as overlooks, campgrounds, education
	centers, etc. These routes are accessible by 2WD vehicles. Routes are numbered
	from 100 to 199.
Class III	Special Purpose Refuge Road (Public Roads) - Roads that provide circulation
	within special use areas such as campgrounds or public concessionaire facilities
	or access to remote areas of the refuge. These routes may not be 2WD accessible.
	Routes are numbered from 200 to 299
Class IV	Administrative Access Road (Administrative Roads) - Routes intended for access
	to administrative developments or structures such as maintenance offices,
	employee quarters, or utility areas. These routes are accessible by 2WD vehicles.
	These routes may restrict access to the general public. Routes are numbered from
	300 to 399.
Class V	Restricted Road (Administrative Roads) - Routes normally closed to the public,
	such as maintenance roads, service roads, patrol roads, and fire breaks. These
	routes may be open to the public for a short period of time for a special use, such
	as hunting access. These routes may not be 2WD accessible. Routes are
	numbered from 400 to 499.

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

DESCRIPTION OF RATING SYSTEM

Rating Data is collected on four different surface types: Asphalt, Concrete, Gravel, and Native. The Utah LTAP Center's Remaining Service Life (RSL) system is used for all surface types. The RSL system is based on the Strategic Highway Research Program's (SHRP) Distress Identification Manual.

Asphalt Rating System

Data is collected on the following distresses and conditions:

- **Fatigue Cracking** Interconnected cracks forming small irregular shapes.
- **Longitudinal Cracking** Cracks running parallel with the roadway, in the direction of traffic.
- **Transverse Cracking** Cracks perpendicular to the roadway, going across the lane or lanes.
- **Block Cracking** Interconnected cracks forming large blocks.
- **Edge Cracking** Cracks running along the edge of the pavement surface.
- **Patches** Original surface repaired with new asphalt patch material.
- **Potholes** Holes or depressions in the pavement.
- **Rutting** surface depressions in the wheel paths.
- **Roughness** Evenness of pavement for serviceability.
- **Drainage** Ability of the road surface to drain water based on proper slope.

A Condition Rating value is calculated for each homogenous pavement section, and can be up to 1 mile in length.

Rating Index Formula

Fatigue, longitudinal, transverse, block, and edge cracking, along with patching and potholes are rated on a 0 - 9 scale (0 = no distress, 9 = maximum distress). The rating given is based on the extent and the severity of the distress. Rutting, roughness, and drainage are rated on a 0 - 3 scale (0 = excellent, 3 = poor). Each distress type has given Remaining Service Life (RSL) values (in years) based on the rating for that particular distress. The distress with the rating resulting in the lowest RSL value is considered to be the governing distress. That value is then assigned as the RSL of the road segment.

Concrete Rating System

Data is collected on the following distresses and conditions:

- **Spalling of Joints** Chipping, breaking, or cracking of slab edges
- **Joint Seal Damage** Any damage or condition that enables materials or water to infiltrate into the joint from the surface.
- **Corner Breaks** A portion of the slab separated by a crack that intersects the adjacent transverse and longitudinal joints, forming approximately a 45° angle to the direction.
- **Broken Slabs** Faulting and/or cracking localized to individual slabs.
- **Faulting** Difference in elevation across a crack or joint.
- **Longitudinal Cracking** Cracks in the pavement running parallel to road.

- **Transverse Cracking** Cracks in the pavement running perpendicular to the direction of traffic.
- **Patch Deterioration** Faulting, settling, or cracking of previously placed patch
- **Map Cracking** A series of cracks that extend only into the upper surface of the Slab

A Condition Rating value is calculated for each homogenous pavement section, and can be up to 1 mile in length.

Rating Index Formula

The rating procedure for concrete pavement is the same as that for asphalt pavement described previously. Each of the distresses described above are rated on the same 0-9 scale. The governing distress is then determined and the RSL associated with that distress is assigned to the road segment.

Gravel and Native Rating System

Data is collected on the following distresses and conditions:

- **Cross Section (Crown)** Roadway built so that the center is higher than the shoulder, to prevent water from pooling on roadway.
- **Roadside Drainage** Roadside ditches and culverts to handle water flow and prevent pooling on the roadside.
- **Corrugations** (Washboarding) Small trenches or holes developing perpendicular to the roadway.
- **Potholes** Holes or depressions in the roadway.
- **Rutting** Depressions running parallel with the roadway, in the wheelpaths.
- Dust Amount of dust caused by traffic.
- **Loose Aggregate (Gravel Only)** Loose gravel, typically piled up on the roadway edges or centerline.

A Condition Rating value is calculated for each homogenous pavement section, and can be up to 1 mile in length.

Rating Index Formula

The rating procedure for unpaved roads is the same as that for asphalt and concrete pavements described previously. Of the distresses described above, corrugations, potholes, rutting, and loose aggregate are rated on the same 0-9 scale previously mentioned. Cross section, roadside drainage, and dust are rated on the same 0-3 scale described for asphalt pavement. The governing distress is then determined and the RSL associated with that distress is assigned to the road segment.

Condition Descriptions by Surface Type

The following definitions are used to describe pavement condition for the various surface types. These are general guidelines for condition indications.

Asphalt

Excellent – Recently constructed or overlaid road where construction or overlay was performed correctly- No maintenance required. RSL = 19-20 years.

 \mathbf{Good} – Low extent longitudinal and transverse cracks. All cracks are 1/4" or less with little or no crack erosion. Patches are in good condition and applied correctly. Routine Maintenance recommended. RSL = 13-18 years.

Fair - Roads are in good structural condition with little or no fatigue cracking. Longitudinal, transverse, and edge cracking is at medium extent and severity. Block cracking is not extensive. Any patches are in good condition. Preventative maintenance recommended. RSL = 7-12 years.

Poor - Road beginning to show signs of structural distress. Fatigue cracking is medium to high extent and medium severity. Cracking will be severe. Surface may have severe block cracking and show. Patches are in fair to poor condition. There is moderate distortion or rutting and occasional potholes. Rehabilitation recommended. RSL = 1-6 years.

Failed - Road is severely deteriorated. Signs of structural failure appear along with severe and extensive fatigue cracking, distortion, potholes, or extensive patches in poor condition. Reconstruction recommended. RSL = 0 years.

Concrete

Excellent - New pavement. No maintenance required. RSL = 19-20 years

Good - First signs of transverse cracking, patch or repair, more extensive pop-outs, or scaling. Sealing or routine maintenance recommended. RSL = 13-18 years.

Fair – Pavement has join or crack spalling, and/or faulting, along with cracking at corners with broken pieces. Any Patches are in fair condition and faulting is at a minimum. Preventative maintenance recommended. RSL = 7-12 years.

Poor - Joints and cracks are open 1 inch, spalled, or patched. Faulting is more severe. Rehabilitation recommended. RSL = 1-6 years.

Failed - Most slabs have failed structurally, and faulting is severe. Reconstruction recommended. RSL = 0 years.11-9

The following table shows the relationship between RSL and condition.

SUBJECTIVE CONDITION RATING FOR REMAINING SERVICE LIFE											
(Asphalt and Concrete Pavements)											
	FAILED	POOR		FAIR		GOOD		EXCELLENT			
RSL Years	0	1-3	4-6	7-9	10-12	13-15	16-18	19-20			

Gravel and Native

Note - Native surfaces do not have a gravel layer.

Excellent - Newly constructed road that has been constructed properly with proper crown, drainage and gravel layer. Little or no distress. No maintenance recommended. RSL = 8-10 years.

Good - Crown, drainage provisions, and gravel layer are in good condition. Distress limited to traffic effects such as dust, loose aggregate, and low severity corrugations (wash boarding). RSL = 5-7 years.

Fair - Adequate drainage and crown through majority of roadway. Crown repair, ditch improvement may be necessary. Road has more severe corrugations and potholes. Preventative maintenance recommended. RSL = 3-4 years.

Poor - Travel at slow speeds is necessary. Additional gravel layer needed to carry traffic. Poor crown. Ditching is inadequate and rutting is extensive and severe. Rehabilitation recommended. RSL = 1-2 years.

Failed - Travel is difficult, and road may be closed at times. Rutting and Corrugations are very severe. Total Reconstruction of road is recommended. RSL = 0 years.

The following table shows the RSL values for gravel and native roads in terms of excellent, good, fair, poor, and failed condition.

SUBJECTIVE CONDITION RATING FOR REMAINING SERVICE LIFE										
(Gravel and Native Surfaces)										
	FAILED	POOR	FAIR	GOOD	EXCELLENT					
RSL Years	0	1-2	3-4	5-7	8-10					