MICHIGAN AIRPORT DEVELOPMENT AID PROGRAM PACKAGE

BOIS BLANC ISLAND AIRPORT

Bois Blanc Island, Michigan

Fiscal Years 2012 - 2017

Submitted By: Bois Blanc Township

Date: July 18, 2011

MAP Meeting Date: October 4, 2011

Revision Date: December 9, 2011



MICHIGAN STATE BLOCK GRANT PROGRAM FIVE-YEAR AIRPORT CAPITAL IMPROVEMENT PROGRAM (CIP) FY-2012* to FY-2017

	*ACIP includes current development year (2012 already programmed - minor changes acceptable)										
Airport Name:	Bois Blanc Island Airport										Date prepared: 7/21/2011 Revised 12/08/11
Associated City:	Bois Blanc Island										Prepared By: QoE Consulting
Sponsor:	Bois Blanc Township										Sponsor email address & phone: <u>brentsharpe@hotmail.com</u>
Airport Identifier:	6Y1										FINAL ACIP due to MDOT AERO: no later than 12/15/11
Development	D : (D : (Shown on ALP?	ACIP	NPIAS	Federal	Federal	Federal	State	Local	Total	
Year	Project Description	(Yes or No)	Code**	Priority Rating**	Entitlements	Apportionment	Discretionary				Remarks/Item Justification - Provide as much detail as possible.
	Carryover funds				357,667						Carryover to assist in funding future projects
2012	Land Acquisition	Yes	ST/LA/SZ	41	277,400	0		7,300	7,300	292,000	Land needed for Rwy 10 NPIA and to relocate Lime Kiln Pt Road
2012	Phase 1 Clearing approaches & road relocation	Yes	ST/OT/OB	44	66,017	294,983		9,500	9,500	380,000	Clearing for NPI approach and road relocation
2012	SRE - Plow Truck	No	ST/EQ/SN	44	150,000	0		3,947	3,947	157,895	Plow truck is needed to keep the pavement clear and operational in the winter
2012	Crack sealing	Yes	RE/RW/IM	66	14,250	0		375	375	15,000	Routine crack sealing program
2012	Carryover funds				0			0	0	0	Carryover to assist in funding future projects
2013	Phase 2 Clearing - primary surface		ST/OT/OB	44	150,000	11,500		4,250	4,250	170,000	Primary surface for NPI approach needs to be cleared of trees and ground lowered
2013	Design Relocate Lime Kiln Pt. Road (1900 +/- x 24')	Yes	ST/OT/OB	44	0	57,000		1,500	1,500	60,000	Move road out of primary surface & obtain 15' clearance over the road in runway 10 approach
2013	Carryover funds				0			0	0	0	Carryover to assist in funding future projects
2014	Relocate Lime Kiln Pt. Road (1900 +/- x 24')	Yes	ST/OT/OB	44	150,000	353,500		13,250	13,250	530,000	Move road out of primary surface & obtain 15' clearance over the road in runway 10 approach
2015	SRE - Snow Blower	No	ST/EQ/SN	44	150,000			3,947	3,947	157,895	Needed to assist in keeping the pavements clear and operational in the winter
2016	Crack sealing & paint marking	Yes	RE/RW/IM	66	20,900			550	550	22,000	Routine paint marking and crack sealing program
2016	Carryover funds				279,100			0	0	0	Carryover to assist in funding future projects
2017	Carryover funds				429,100			0	0	0	Carryover to assist in funding future projects
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^{**}In accordance with FAA Order 5100.39A, Appendix 6 - Fields need to be completed



TEN-YEAR DEVELOPMENT PLAN 2012 - 2017

AIRPORT: Bois Blanc Island Airport

LOCATION:	Bois Blanc Island, N	Michigan
-	12/9/2011	page 1 of 2

2012 - 2017	I FLAN	12/9/2011 page 1 of 2					
DEVELOPMENT YEAR	DEVELOPMENT ITEM		ITEM COST		F - Total Fed AIP Dollars S - Total State Dollars L - Total Local Dollars T - Total Dollars for Year		
	Land Acquisition	FSL	292,000	F	\$802,650		
2012	Phase 1 Clearing - Approaches & Road Relocation Area	FSL	380,000	S	\$21,122		
	SRE - Plow Truck	FSL	157,895	L	\$21,122		
	Crack Seal	FSL	15,000				
				T	\$844,895		
				F	\$218,500		
2013	Phase 2 Clearing - Primary Surface	FSL	170,000	S	\$5,750		
	Design - Relocate Lime Kiln Pt. Road	FSL	60,000	L	\$5,750		
				_			
				T	\$230,000		
				F	\$503,500		
2014	Relocate Lime Kiln Pt. Road (1900' +/- x 24')	FSL	530,000	S	\$13,250		
				L	\$13,250		
				Т	\$530,000		
				F	\$150,000		
2015	SRE - Snowblower	FSL	157,895	S	\$3,947		
				L	\$3,947		
				Т	\$157,895		
2015				F	\$20,900		
2016	Crack Sealing & Paint Marking	FSL	22,000	S	\$550		
				L	\$550		
				Т	\$22,000		
2017	_			F	\$0		
2017	Carry over year	FSL	0	S	\$0		
				L	\$0		
				Т	\$0		

TOTAL: \$1,784,790

FEDERAL: \$1,695,551

STATE: \$44,620

LOCAL: \$44,620



ITEM:	Bois Blanc Island Airport			_ FUNDING	G YEAR:	
	Land to meet fee	deral standa	ırds	_	Local Plan:	2011
				_	Itg. Decision:	
	(One item per sh	neet, show p	oavement	- lengths and widths)		
ITEM IS	ON ALP?	Yes_	X	ESTIMA	TED COST:	
		No_		Total:	\$292,000	
AERO Ap	proval Date: <u>Jan</u>	uary 8, 200	9	Federal:	277,400	
				State:	7,300	
				Local:	7,300	

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

As part of a continuing effort to meet federal standards, the airport is programming this project to acquire land that will be needed to meet federal (FAA) standards. The land will be needed for the future runway 10 Nonprecision Instrument Approach (NPIA) and the relocation of Lime Kiln Pt. Road on the south side. Three parcels of land need to be acquired for the BRL which can also be used for the road relocation. An easement will be needed for the runway 10, 20:1 NPI approach. The fee parcel acquisition tax identification numbers are; # 034-015-00, 034-015-40, 034-015-30 and Shannon Easements. A cabin and house trailer will need to be removed and the water wells closed.



AIRPORT: Bois Blanc Island Airport	FINAL DESIGN
LOCATION: Bois Blanc Island, MI	PROJECT PROGRM'G
PROJECT:	FEASIBILITY STUDY
CONTRACT:	x STATE PLANNING
DATE: June 23, 2009 Revised 12/08/11	BASED ON FY 2009 DOLLARS

ENGINEERING COST ESTIMATE

WORK DESCRIPTION: Purchase land to meet federal standards

		TOTAL	UNIT	TOTAL
ITEM DESCRIPTION	UNIT	QTY.	PRICE	AMOUNT
Land acquisition (4 parcels)	ls	1	200,000	
Easement	ls	1	15,000	
Remove structures	ls	1	31,000	31,000
				0
miscellaneous	ls	1	15,000	15,000
				0
CONSTRUCTION SUBTOTAL:				261,000
CONSTRUCTION SUBTOTIVE.				201,000
engineering, administration	ls	1		31,000
				21,000
		TOTAL:	1	292,000

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ITEM: Bois Blanc Island Airport	FUNDING YEAR:
Phase 1 Clearing - approaches and	Local Plan: 2012
road relocation area	Mtg. Decision:
(One item per sheet, show pavement length	as and widths)
ITEM IS ON ALP? Yes X	ESTIMATED COST:
No	Total: \$380,000
AERO Approval Date: January 8, 2009	Federal: 361,000
	State: 9,500
	Local: 9.500

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

Clearing of the 20:1 non-precision instrument approaches is required prior to the approaches being developed. The approaches to the runway is critical during the winter and early spring when the airport is the only way onto and off of the island. The runway 10 end is displaced. Trees have been cleared to the end of the existing easement. The new easement/clearing will include clearing 85'+ high trees. Trees in the transitional surface along the approach area are not included at this time. The primary surface will increase to 500' wide with the non-precision approaches and are being programmed to be cleared in 2013. Clearing of the 7:1 side slopes along the runway is not planned to be cleared due to funding constraints.



AIRPORT: Bois Blanc Island Airport	FINAL DESIGN
LOCATION: Bois Blanc Island, MI	PROJECT PROGRM'
PROJECT:	FEASIBILITY STUD
CONTRACT:	x STATE PLANNING
DATE: June 23, 2009	BASED ON FY 2011 DOLLARS

REVISED: July 21, 2010 & July 11, 2011

ENGINEERING COST ESTIMATE

WORK DESCRIPTION: Phase 1 clearing - approaches & road relocation area

		TOTAL	UNIT	TOTAL
ITEM DESCRIPTION	UNIT	QTY.	PRICE	AMOUNT
mobilization and general conditions	1s	1	20,000	20,000
safety and security	ls	1	5,000	5,000
clearing and grubbing 20: NPI approach	ac	30	8,000	240,000
clearing and grubbing 500' wide primary surface	ac	0	8,000	0
clearing and grubbing 7:1 side slope 35' allowable N side 15' S side	ac	0	8,000	0
turfing and mulching	ac	20	1,100	22,000
grade/lower primary surface	1s	0	25,000	0
miscellaneous	ls	1	17,000	17,000
70ac +/- additional clearing needed to clear 7:1 side slope for 85' trees				
CONSTRUCTION SUBTOTAL:				304,000
engineering, administration	ls	1		76,000
		TOTAL:		380,000



MAP ITEM SHEET -- Pg. <u>1</u> of <u>1</u> MDOT -- BUREAU OF AERONAUTICS

ITEM: Bois Blanc Islan	nd Airport	FUNDING YEAR:
SRE - Truck wi	th plow	Local Plan: 2012
		Mtg. Decision:
(One item per sl	neet, show pavement lengths and	l widths)
ITEM IS ON ALP?	Yes	ESTIMATED COST:
	No <u>X</u>	Total: \$157,895
AERO Approval Date: Jan	uary 8, 2009	Federal: 150,000
		State: 3,947
		Local: 3,947

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

Bois Blanc Island, being located in Lake Huron just east of the Straits of Mackinac, is subject to considerable snowfall. With a newly paved runway, taxiway and apron, it is essential Airport Management have adequate equipment at hand to maintain the pavements during the winter. The purchase of a truck with a plow will assure the pavements are kept open and operational during the winter.



ITEM: Crack Seal Runway ,Taxiway & Apron	FUNDING YEAR:
	Local Plan: 2012
	Mtg. Decision:
(One item per sheet, show pavement lengths and w	idths)
ITEM IS ON ALP? Yes	ESTIMATED COST:
No X	Total:\$15,000
FAA Approval Date: January 8, 2009	Federal: 14,250
	State: <u>375</u>
	Local: 375

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

To maintain and prolong the pavement and safety of the airport users.



ITEM: Bois Blanc Island Airport	FUNDING YEAR:
Phase 2 Clearing - primary surface	Local Plan: 2013
	Mtg. Decision:
(One item per sheet, show pavement length	ths and widths)
ITEM IS ON ALP? Yes X	ESTIMATED COST:
No	Total: \$170,000
AERO Approval Date: January 8, 2009	Federal: 161,500
	State: 4,250
	Local: 4.250

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

The primary surface will increase to 500' wide with the non-precision approaches and are being programmed to be cleared at this time. An area on the north side of the runway will also require lowing the existing ground in the primary. Clearing of the 7:1 side slopes along the runway is not planned to be cleared due to funding constraints.



BASED ON FY 2011 DOLLARS

AIRPORT: Bois Blanc Island Airport	FINAL DESIGN
LOCATION: Bois Blanc Island, MI	PROJECT PROGRM'G
PROJECT:	FEASIBILITY STUDY
CONTRACT:	x STATE PLANNING

REVISED: July 21, 2010 & July 11, 2011

DATE: June 23, 2009

ENGINEERING COST ESTIMATE

WORK DESCRIPTION: Phase 2 clearing - primary surface

	1	TOTAL	UNIT	TOTAL
ITEM DESCRIPTION	UNIT	QTY.	PRICE	AMOUNT
112.12.22.20.111.11011	1 01,111	Q I I I	11402	11110 0111
mobilization and general conditions	ls	1	20,000	20,000
safety and security	ls	1	5,000	
clearing and grubbing 20: NPI approach	ac	0	8,000	
clearing and grubbing 500' wide primary surface	ac	8	8,000	64,000
clearing and grubbing 7:1 side slope 35' allowable N side 15' S side	ac	0	8,000	
turfing and mulching	ac	5	1,100	
grade/lower primary surface	1s	1	25,000	25,000
miscellaneous	ls	1	16,000	16,000
70ac +/- additional clearing needed to clear 7:1 side slope for 85' trees				
CONSTRUCTION SUBTOTAL:				135,500
engineering, administration	ls	1		34,500
		TOTAL:		170,000



ITEM: Bois Blanc Island Airport	FUNDING YEAR:
Design - Relocate Lime Klin Pt. Road	Local Plan: 2013
(1900'+/- x 24')	Mtg. Decision:
(One item per sheet, show pavement leng	gths and widths)
ITEM IS ON ALP? Yes X	ESTIMATED COST:
No	Total: \$60,000
AERO Approval Date: January 8, 2009	Federal: <u>57,000</u>
	State: 1,500
	Local: 1.500

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

Runway 10/28 was extended and paved in the summer of 2005. An airport layout plan meeting federal standards has been approved. A 20:1 Non-Precision Approach is planned to each end of runway 10/28. The primary surface will than be 500' wide. Lime Kiln Pt. Road will need to be relocated south out of this future primary surface and 7:1 backslope. Land being proposed to be purchased in 2011 will be needed for this relocation. 1900+/- feet of road relocation is being proposed. This project would provide the design for the road relocation in 2012.



MAP ITEM SHEET -- Pg. <u>1</u> of <u>1</u> MDOT -- BUREAU OF AERONAUTICS

ITEM: Bois Blanc Island Airport	FUNDING YEAR:
Relocate Lime Klin Pt. Road	Local Plan: 2014
(1900'+/- x 24')	Mtg. Decision:
(One item per sheet, show pavement leng	gths and widths)
ITEM IS ON ALP? Yes X	ESTIMATED COST:
No	Total: <u>\$530,000</u>
AERO Approval Date: January 8, 2009	Federal:503,500
	State: 13,250
	Local: 13.250

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

Runway 10/28 was extended and paved in the summer of 2005. An airport layout plan meeting federal standards has been approved. A 20:1 Non-Precision Approach is planned to each end of runway 10/28. The primary surface will than be 500' wide. Lime Kiln Pt. Road will need to be relocated south out of this future primary surface and 7:1 back slope. Land being proposed to be purchased in 2011 will be needed for this relocation. 1900+/- feet of road relocation is being proposed.



LOCATION: Bois Blanc Island, Michigan AIRPORT: Bois Blanc Island Airport

PROJECT: CONTRACT:

DATE: June 23, 2009 REVISED: August 11, 2010

ENGINEERING ESTIMATE

WORK DESCRIPTION: Relocate Lime Klin Pt. Road (1900'+/- x 24')

__ FINAL DESIGN
___PROJECT PROGRAMMING
___ FEASIBILITY STUDY
X STATE PLANNING
BASED ON FY 2011 DOLLARS

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT	TOTAL
TI LIVI NO.	THEM BESCKIF HON	CIVIT	QII	COST	COST
1000400	Mobilization and general conditions	Is	1	100,000.00	100,000.00
1000410	Safety and security	Is	1	6,000.00	6,000.00
1510416	Clearing and grubbing	acre	2.0	8,000.00	16,000.00
1510455	Removing isolated trees, under 8"	each	50	100.00	5,000.00
1510460	Removing stumps, under 8"	ea	20	60.00	1,200.00
1520410	Unclassified excavation	cyd	7,100	10.00	71,000.00
1520430	Open ditch excavation	cyd	1,000	15.00	15,000.00
1520456	Borrow excavation, furnished by contractor from				
	off-site location, misc. cip	cyd	1,500	20.00	30,000.00
1540515	Subbase course, material as specified, compacted measure	cyd	2,800	18.00	50,400.00
2080545	Aggregate base course, material as specified,				0.00
	compacted in place	cyd	1,300	50.00	65,000.00
7010700	Corrugated steel pipe 12",(0.064")	lft	200	25.00	5,000.00
7010940	Galvanized steel end section for 12" CSP	each	8	350.00	2,800.00
8007001	Misc. silt fence	lft	1,900	8.00	15,200.00
8007060	Misc. Permits	dlrs	2,500	1.00	2,500.00
9010540	Seeding with mixture and rate as specified	acre	3.5	3,000.00	10,500.00
9087012	Misc. mulching as specified	acre	3.5	3,000.00	10,500.00
	Misc.	ls	1	54,100.00	54100.00

BY:	DATE:	CONSTRUCTION TOTAL =	\$460,200.00
		Construction Eng & Admin	\$69,800.00
		TOTAL	\$530.000.00



ITEM: Bois Blanc Islan	d Airport	FUNDING YEAR:
SRE - Snowblow	ver	Local Plan: 2015
		Mtg. Decision:
(One item per sh	eet, show pavement lengths and	l widths)
ITEM IS ON ALP?	Yes	ESTIMATED COST:
	No X	Total: \$157,895
AERO Approval Date: Janu	uary 8, 2009	Federal: 150,000
		State: 3,947
		Local: 3 947

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

Bois Blanc Island, being located in Lake Huron just east of the Straits of Mackinac, is subject to considerable snowfall. With a newly paved runway, taxiway and apron, it is essential Airport Management have adequate equipment at hand to maintain the pavements during the winter. The purchase of a snowblower will assure the pavements are kept open and operational during the winter.



ITEM: Crack Seal & Paint Runway and	FUNDING YEAR:
Taxiways	Local Plan: 2016
	Mtg. Decision:
(One item per sheet, show pavement lengths ar	nd widths)
ITEM IS ON ALP? Yes	ESTIMATED COST:
No X	Total: \$22,000
FAA Approval Date: January 8, 2009	Federal: 20,900
	State: <u>550</u>
	Local: 550

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

To maintain and prolong the pavement and safety of the airport users.

- **Phase 1 Clearing**
- **Phase 2 Clearing**
- Design Relocated Lime Kiln Pt. Road (1900' +/- x 24') 2013
- Relocate Lime Kiln Pt. Road (1900' +/- x 24')

AIRPORT DEVELOPMENT PLAN

BOIS BLANC ISLAND AIRPORT BOIS BLANC ISLAND, MICHIGAN