

*“Menominee – Where the best of Michigan Begins”*

## MENOMINEE COUNTY BOARD OF COMMISSIONERS

*Menominee County Courthouse  
839 10<sup>th</sup> Avenue  
Menominee, MI 49858  
www.menomineecounty.com*

*Jason Carviou – County Administrator  
Sherry DuPont – Administrative Assistant  
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### **Committee of the Whole**

*Wednesday, January 8, 2020 – 1:00 PM  
Menominee County Courthouse – Courtroom B  
839 10<sup>th</sup> Avenue Menominee, MI 49858  
(906) 863-7779*

- A. Call to Order
- B. Pledge of Allegiance
- C. Roll Call (Piche, Cech, Gromala, Lang, Phelps, Schei, Prestin, Hafeman, & Johnson)
- D. Approval of the Agenda
- E. Public Comment (*Statements, Not Debate, Limited to 5 Minutes on Agenda Items Only*)
- F. Business
  - Mead & Hunt – Airport Layout Plan Presentation
  - Public Participation/Comments
  - Commissioner Discussion
- G. Public Comment (*limited to 5 minutes*)
- H. Commissioner Comment
- I. Adjourn

**Menominee Regional Airport  
Airport Layout Plan (ALP) Update**

**Menominee County Board of Commissioners  
Committee of the Whole Meeting  
January 8, 2020**

**Mead&Hunt**

**Agenda**

- Review Advisory Committee
- Why is an ALP Required and Why is MNM Important?
- Review Advisory Committee
- Review of Background Data
- Proposed Alternatives
- Next Steps
- Questions

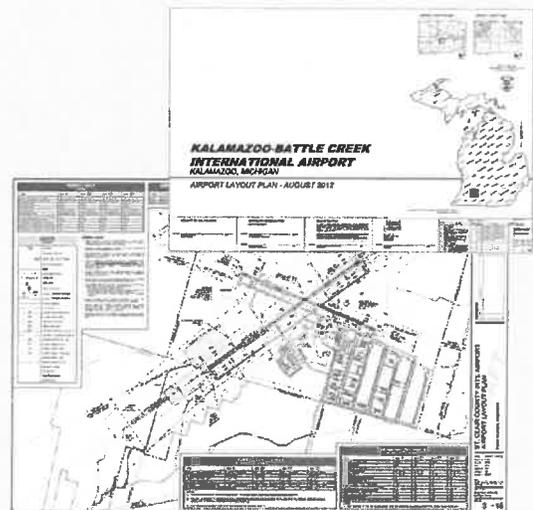
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## What is an Airport Layout Plan (ALP) & Why is it Needed?

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### What is an Airport Layout Plan?

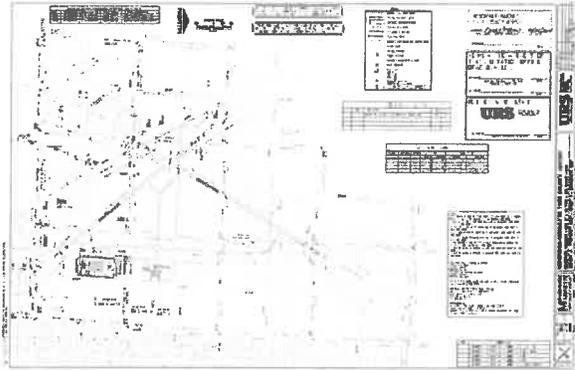
- Airport Layout Plan (ALP)
  - Graphic set of drawings
  - Visual representation of the existing and future development
  - Often has an analysis process to look at alternatives for development
  - Narrative report to summarize process and findings
  - Follows new FAA SOP 2.0



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## Exhibit 'A' Property Map

- Now part of an ALP as the Property Plan
- FAA SOP 3.0
- Historical summary of property
- Property is federally obligated:
  - Once shown on an Exhibit 'A'



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## Why is an ALP necessary?

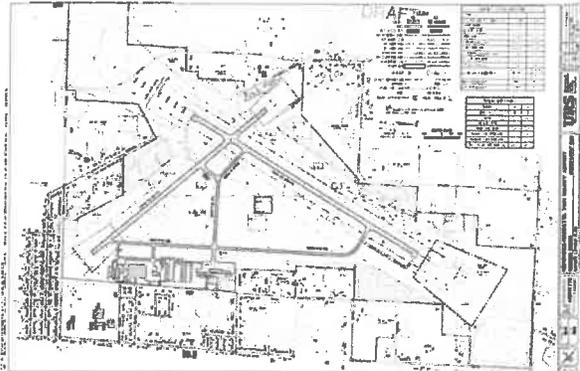
Short Answer: Grant Assurances

- As a federal obligated airport, over 30 Grant Assurances covering a wide range of topics apply to the way you operate the airport
- Sample assurances include:
  - Rates & Fees
  - Fair Access
  - **Planning & Design Standards**
  - **Maintenance of Pavements**
  - **Clear Approaches & Compatible Land Use**
  - Obligation for Use

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## Planning & Design Assurances Current ALP and Exhibit 'A' Property Map

- 2003 – current ALP on file
- 2011 – update initiated but never completed.
  - Information is out of date
    - Based aircraft
    - Critical aircraft
    - Design standards
    - Obstruction information

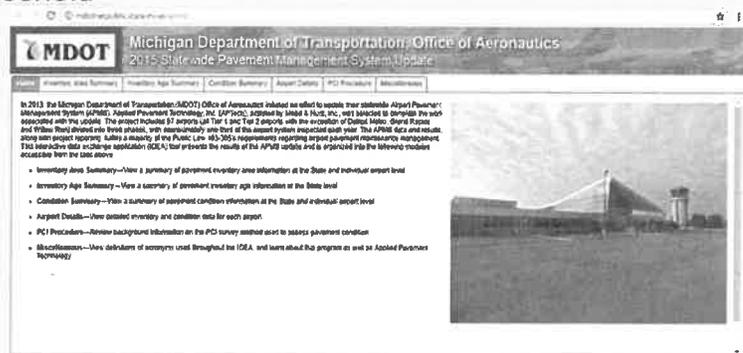


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## Maintenance of Pavement Assurances – MDOT Statewide Pavement Management System (APMS)

- Scale is 1 to 100
  - 100 new pavement
  - 70 typical rehabilitation threshold
  - 0 is failed pavement

PCI Inspection 2018:  
RWY 14/32 = 53 (crosswind)  
RWY 3/21 = 48 (primary)

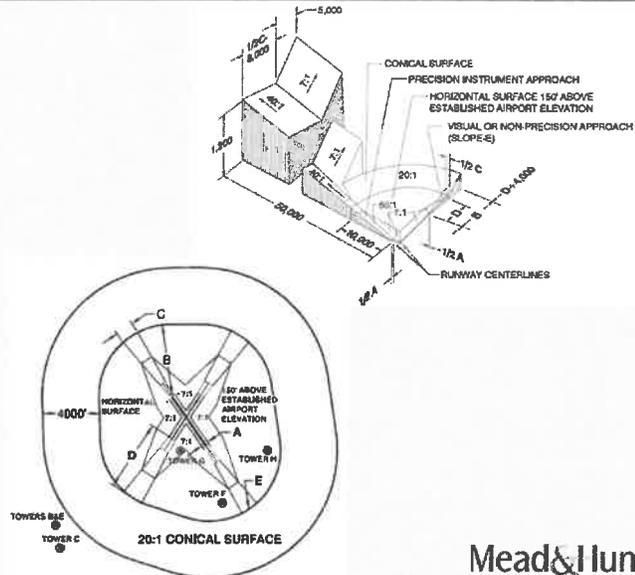


Developed by  applied pavement technology

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## Clear Approach Assurances FAR Part 77 Surfaces

- Runway Protection Zone (RPZ)
- Approach Surface
- Horizontal Surface
- Conical Surface
  
- Think of a football stadium

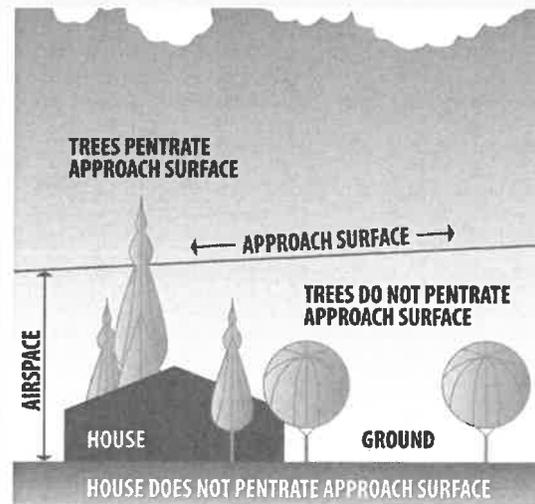


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## Example of an Approach Surface

- Ratio of approach slopes vary:
  - 20:1 Visual
  - 34:1 Non-precision
  - 50:1 Precision
  
- 40:1 Departure surface
- PAPI/VASI Obstacle Clearance Surface

MNM has all of these surfaces that need to be considered.



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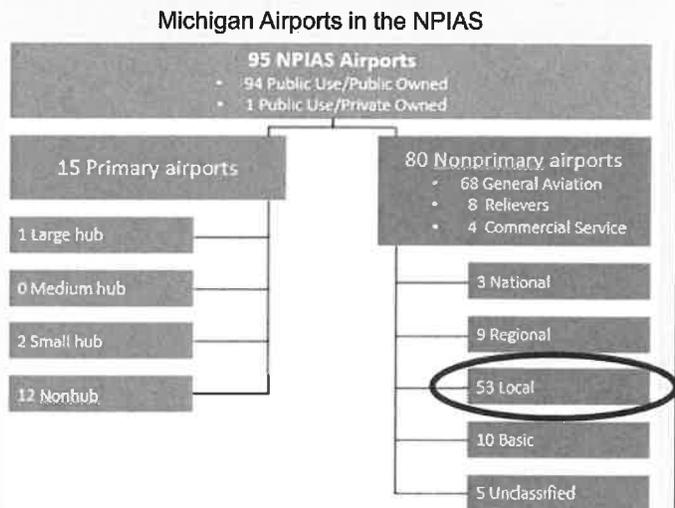
## Why is Menominee Regional Airport Important?

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### NPIAS – National Plan of Integrated Airport Systems

- Over 3,000 airports nationally listed in the NPIAS
- 95 in Michigan listed in the NPIAS out of 226 public-use airports in Michigan
- Inclusion in NPIAS makes an airport eligible for federal funds

MNM classified as LOCAL



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## NPIAS – National Plan of Integrated Airport Systems – ASSET Classifications

National	Regional	Local	Basic
<ul style="list-style-type: none"> <li>5,000+ instrument operations, 11+ based jets, 20+ international flights, or 500+ interstate departures; or</li> <li>10,000+ enplanements and at least 1 charter enplanement by a large certificated air carrier, or</li> <li>500+ million pounds of landed cargo weight</li> </ul>	<ul style="list-style-type: none"> <li>Metropolitan Statistical Area (Metro or Micro) and 10+ domestic flights over 500 miles, 1,000+ instrument operations, 1+ based jet, or 100+ based aircraft; or</li> <li>The airport is located in a metropolitan or micropolitan statistical area, and the airport meets the definition of commercial service</li> </ul>	<ul style="list-style-type: none"> <li>10+ instrument operations and 15+ based aircraft, or</li> <li>2,500+ passenger enplanements</li> </ul>	<ul style="list-style-type: none"> <li>10+ based aircraft; or 4+ based helicopters; or</li> <li>The airport is located 30+ miles from the nearest NPIAS airport; or</li> <li>The airport is identified and used by the U.S. Forest Service, or U.S. Marshals, or U.S. Customs and Border Protection (designated, international, or landing rights), or U.S. Postal Service (air stops), or has Essential Air Service; or</li> <li>The airport is a new or replacement facility activated after January 1, 2001; and</li> <li>Publicly owned or privately owned and designated as a reliever with a minimum of 90 based aircraft</li> </ul>

MNM listed 31 based aircraft at start of 2019  
 Listing 33 based aircraft as of Dec. 6, 2019

Source: FAA General Aviation Airports: A National Asset, 2012

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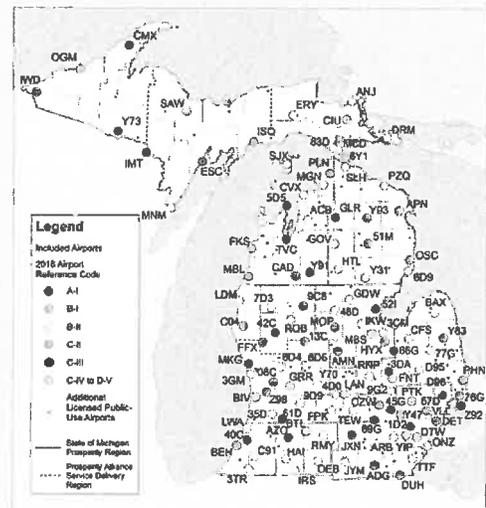
## Michigan Aviation System Plan (MASP) 2017

- Classifies Airport
  - Tier 1, Tier 2 and Tier 3
- Identifies service targets such as:
  - Business Centers
  - Population Centers
  - Tourist Centers
  - Remote Access

MNM is Tier 1 overall with C-II design standards

- Tier 1
  - Population Center
  - Business Center
  - Land Coverage
- Tier 2
  - Tourism Center
  - Regional Capacity
  - NPIAS – GA
- Tier 3
  - General Population
  - Isolated Areas

State totals:  
 Tier 1 airports = 86  
 Tier 2 airports = 28  
 Tier 3 Airports = 112



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## What was Reviewed as Part of the ALP Project?

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## ALP Update has utilized an Advisory Committee

- Committee has met 3 times since January to review data presented
- Members:
  - Gerald Piche
  - William Cech
  - Steve Gromala
  - Jason Carviou
  - Jeff LaFleur
  - Jacqueline Bourdreau
  - Nancy Douglas
  - Bethany Skorik
  - William Taylor
  - Krist Atanatoff
  - Mark Yankovich
  - Peter Granquist
  - Will Carne
  - George Sporie
  - Tony Graff

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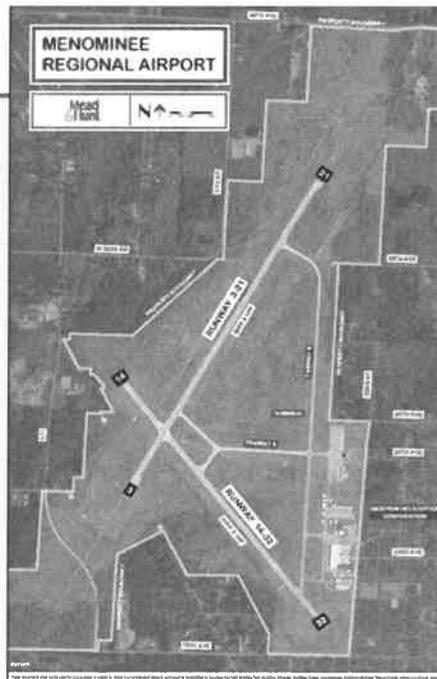
## Scope of Work for ALP Update

- Task 1: Study Design
- Task 2: Project Management, Coordination and Communication
- Task 3: Sponsor Involvement
- Task 4: Data Collection / Inventory
- Task 5: Projections of Aviation Operations
- Task 6: Facility Requirements
- Task 7: Alternatives Analysis
- Task 8: Environmental Overview
- Task 9: Airport Layout Plan Set
- Task 10: Documentation
- Task 11: MDOT/FAA Reviews

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## Data Collection/Inventory Mapping

- Aerial Imagery
- Mapping
- LiDAR Obstruction Assessment



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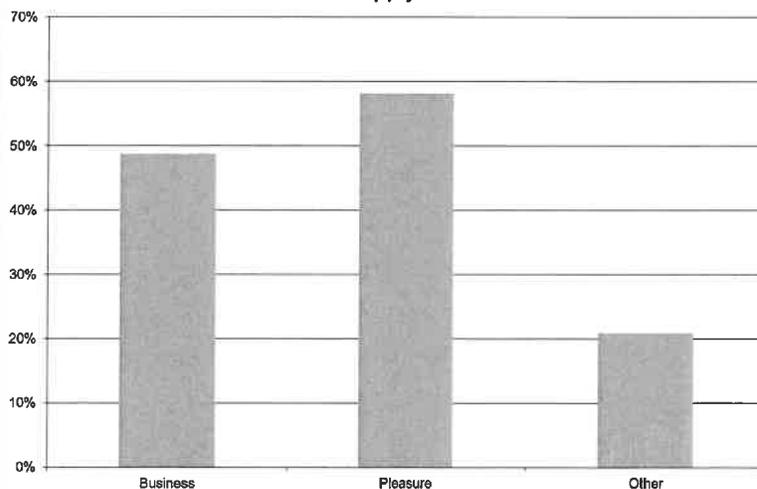
## Data Collection/Inventory User Survey Findings

- Conducted a User Survey
  - Local and Itinerant users
  - 55 responses
  - Responses collected in late 2018/early 2019

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## Data Collection/Inventory User Survey – 55 responses

Why are you using the airport? Please select all that apply.

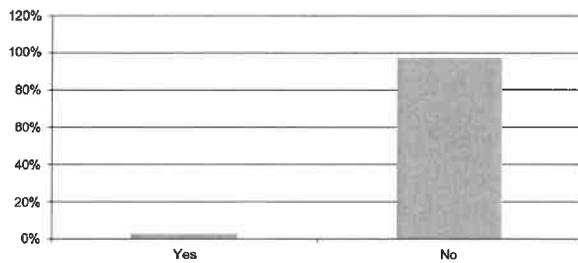


Answer Choices	Responses
Business	49% 21
Pleasure	58% 25
Other	21% 9

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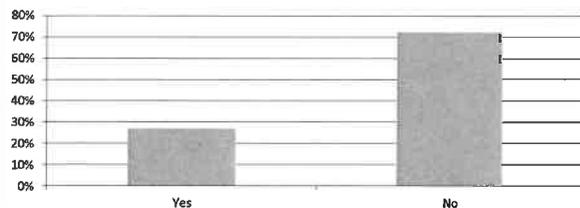
## Data Collection/Inventory User Survey – 55 responses

Would your operations at MNM change if Runways 3/21 (primary) or 14/32 were extended? If yes, explain:



Answer Choices	Responses
Yes	3%   1
No	97%   36

Would your operations change at MNM if Runway 14/32 (crosswind) were shortened? If yes, please explain and list the shortened runway length that would affect your use of MNM.

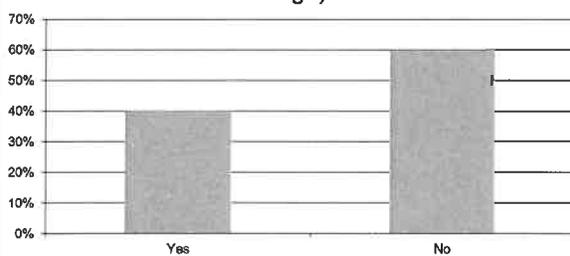


Answer Choices	Responses
Yes	27%   9
No	73%   24

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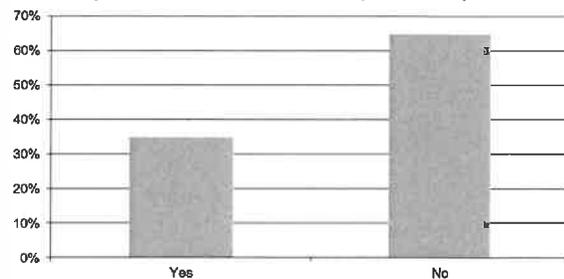
## Data Collection/Inventory User Survey – 55 responses

Are concessions being made to operate at MNM? If so, please explain (fuel, pax, cargo):



Answer Choices	Responses
Yes	40%   12
No	60%   18

Do crosswind conditions affect your operations at MNM? If so, please explain

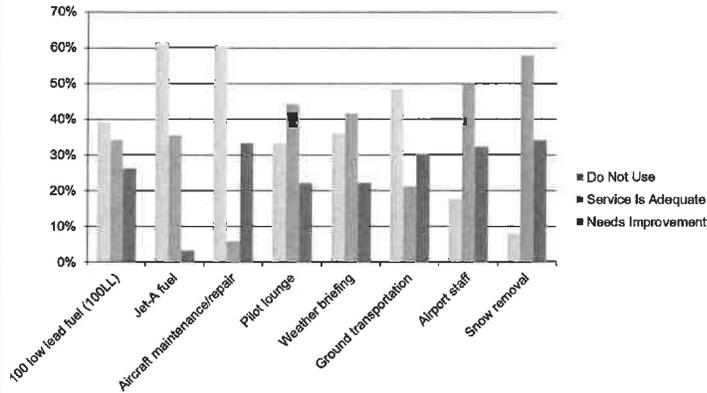


Answer Choices	Responses
Yes	35%   14
No	65%   26

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## Data Collection/Inventory User Survey – 55 responses

Please indicate which of the following services you use at MNM and indicate if they meet your needs.

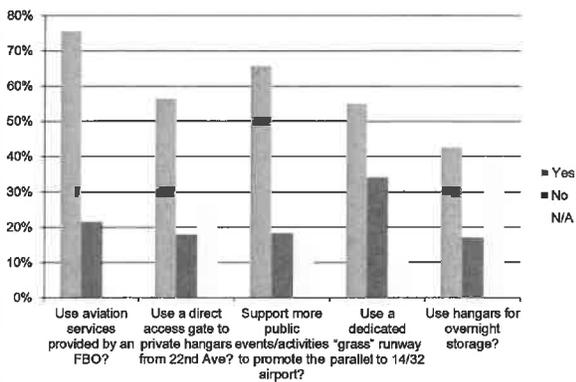


	Do not use		Service is adequate		Need improvements		Total
100 low lead fuel (100LL)	39%	15	34%	13	26%	10	38
Jet-A fuel	61%	19	35%	11	3%	1	31
Aircraft maintenance/repair	61%	20	6%	2	33%	11	33
Pilot lounge	33%	12	44%	16	22%	8	36
Weather briefing	36%	13	42%	15	22%	8	36
Ground transportation	48%	16	21%	7	30%	10	33
Airport staff	18%	6	50%	17	32%	11	34
Snow removal	8%	3	58%	22	34%	13	38

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## Data Collection/Inventory User Survey – 55 responses

If made available, would you:



	Yes		No		N/A		Total
Use aviation services provided by an FBO?	76%	28	22%	8	3%	1	37
Use a direct access gate to private hangars from 22nd Ave?	56%	22	18%	7	26%	10	39
Support more public events/activities to promote the airport?	66%	25	18%	7	16%	6	38
Use a dedicated "grass" runway parallel to 14/32	55%	21	34%	13	11%	4	38
Use hangars for overnight storage?	43%	15	17%	6	40%	14	35

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## Data Collection/Inventory Key Takeaways for ALP

- Additional runway length is not necessary
- Crosswinds do affect some users – mostly the smaller aircraft
- Reducing Rwy 14/32 length wouldn't impact majority of users
- Need for defined access off of 22<sup>nd</sup> Ave. to hangar area
- Need for additional hangar space/overnight storage

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## Data Collection/Inventory Critical Aircraft and Aircraft Reference Codes

- **Critical Aircraft**
  - Largest/most demanding aircraft operating into/out of an airport on an annual basis
  - 500 operations is the required threshold
    - 500 operations can be by a single type of aircraft, or
    - 500 operations by a family of aircraft, which gets represented by a single aircraft on the ALP
- **Aircraft Reference Codes**
  - Method that FAA uses to classify aircraft that impacts/guides airport development

Aircraft Approach Category (AAC)		Aircraft Design Group (ADG)		
Category	Approach Speed	Group	Wingspan	Tail Height
A	Approach speed less than 91 knots	I	Less than 49 feet	Less than 20 feet
B	Approach speed 91 knots or more but less than 121 knots	II	49 – < 79 feet	20 – < 30 feet
C	Approach speed 121 knots or more but less than 141 knots	III	79 – < 118 feet	30 – < 45 feet
D	Approach speed 141 knots or more but less than 166 knots	IV	118 – < 171 feet	45 – < 60 feet
E	Approach speed 166 knots or more	V	171 – < 214 feet	60 – < 66 feet
		VI	214 – < 262 feet	66 – < 80 feet

Source: FAA Advisory Circular (AC) 150/5300-13A Change 1 *Airport Design*

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## Data Collection/Inventory Traffic Flow Management System Counts (TFMSC) 2018 Data

- Only IFR flights included

\*Indicates Required Runway Length was found in the Operating Manual (all others found in other resources such as company website or advertising brochure).

Aircraft	AAC	ADG	Departures	Arrivals	Total Operations	Required Rwy Length
BE99 - Beech Airliner 99	B	I	592	592	1,184	2,400*
AC95 - Gulfstream Jetprop Commander 1000	B	II	1	1	2	3,850
B350 - Beech Super King Air 350	B	II	4	4	8	3,300
BE20 - Beech 200 Super King	B	II	10	10	20	2,200*
BE30 - Raytheon 300 Super King Air	B	II	2	2	4	4,817*
C208 - Cessna 208 Caravan	B	II	1	1	2	1,965*
C25B - Cessna Citation CJ3	B	II	1	1	2	3,690*
C441 - Cessna Conquest	B	II	3	3	6	2,400
C550 - Cessna Citation II/Bravo	B	II	3	3	6	4,420*
C560 - Cessna Citation V/Ultra/Encore	B	II	10	10	20	4,050*
C56X - Cessna Excel/XLS	B	II	12	12	24	3,560*
C680 - Cessna Citation Sovereign	B	II	2	2	4	3,990*
C68A - Cessna Citation Latitude	B	II	2	2	4	3,580*
E55P - Embraer Phenom 300	B	II	8	8	16	4,775*
F27H - Dassault Falcon 2000	B	II	7	7	14	4,325
H25B - BAe HS 125/700-800/Hawker 800	C	I	1	1	2	5,030*
LJ45 - Bombardier Learjet 45	C	I	2	2	4	5,470*
CL30 - Bombardier (Canadair) Challenger 300	C	II	2	2	4	5,920*
CL35 - Bombardier Challenger 350	C	II	1	1	2	4,835
G280 - Gulfstream G280	C	II	1	1	2	4,750
C130 - Lockheed 130 Hercules	C	IV	1	1	2	6,300
F22 - Boeing Raptor F22	D	I	2	2	4	N/A
LJ35 - Bombardier Learjet 35/36	D	I	2	2	4	4,224
GLF4 - Gulfstream IV/G400	D	II	3	3	6	5,600*
GLF5 - Gulfstream V/G500	D	III	5	5	10	5,300*

## Data Collection/Inventory TFMSC Data – Critical Aircraft

AAC	ADG	Total Operations Per Category		% of Total	
A	I	345		18.66%	
A	II	76		4.11%	
B	I	1255		67.87%	
B	II	128		6.92%	
C	I	6		0.32%	
C	II	8		0.43%	
C	IV	1		0.05%	
D	I	6		0.32%	
D	II	6		0.32%	
D	III	10		0.54%	
n/a	n/a	8		0.43%	
AAC	Total Operations Per Category	% of Total	ADG	Total Operations Per Category	% of Total
A	421	22.77%	I	1,612	87.18%
B	1383	74.80%	II	218	11.79%
C	15	0.81%	III	10	0.54%
D	22	1.19%	IV	1	0.05%
n/a	8	0.43%	n/a	8	0.43%

TFMSC reports approximately 1,850 operations of an estimated 7,900 in 2018 (~ 23%)

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## Data Collection/Inventory Review of Survey Findings



- **B-I = Critical Aircraft**
  - Beech 99
  - Approximately 2,400' Rwy length
- **B-II = Minimum Design**
  - Cessna Excel/XLS & Citation V
  - Approximately 3,560' & 4,050' Rwy length
- **C-II = Current Airport Reference Code**
  - Challenger 300 (CL 30/CL35)
  - Approximately 4,835' – 5,920' Rwy length
  - MASP Tier 1 goal

Future Airport Reference Code Rwy 3/21: C-II

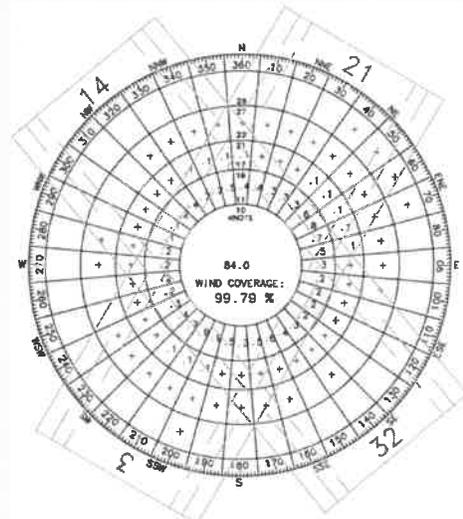
Aircraft Type	Aircraft Approach Category	Airplane Design Group	Departures	Arrivals	Total Operations
Beech 99	B	I	500	500	1,000
Cessna 172	A	I	472	472	944
Cessna 180	A	I	406	406	812
Piper PA-31	A	I	270	270	540
Cessna 182	A	I	100	100	200
Enstrom Helicopters*	Helicopter	Helicopter	100	100	200*
Beech Baron	A	I	70	70	140
Vans RV-6A	A	I	70	70	140
Cessna 182	A	I	56	56	112
Beech Bonanza	A	I	50	50	100
Ercoupe 415C	A	I	50	50	100
Pittacus PC-12	A	II	50	50	100
Cessna Excel / XLS	B	II	45	45	90
Beech King Air 200	B	II	40	40	80
Cessna 140	A	I	35	35	70
Velocity 175RG	A	I	35	35	70
Enstrom FL8F	Helicopter	Helicopter	30	30	60
Flight Design CTSW	A	I	30	30	60
Stearry LSX	A	I	30	30	60
Aeronca 23B	A	I	27	27	54
Piper PA-32	A	I	27	27	54
Cessna Citation V	B	II	25	25	50
Enstrom 480B	Helicopter	Helicopter	20	20	40
Cessna Citation Ultra	B	II	15	15	30
Cessna 170	A	I	12	12	24
Dassault Falcon 2000LXS	B	II	12	12	24
Piper J3C-65	A	I	10	10	20
Piper PA-24	A	I	10	10	20
Piper PA-28	A	I	10	10	20
Vans RV-8	A	I	10	10	20
Diamond DA-40	A	I	7	7	14
Learjet 35	D	I	7	7	14
Learjet 60	C	I	4	4	8
Cessna Citation Latitude	B	II	3	3	6
Embraer Phenom 300	B	II	3	3	6
Vulcanair P68	A	I	4	4	8

## Data Collection/Inventory Wind Data

- FAA Criteria is 95% Coverage on a single runway
- 3 scenarios are reviewed:
  - All weather, VFR and IFR
- 4 crosswind speed categories
  - 10.5 kts, 13 kts, 16 kts, 20 kts

RDC	Allowable Crosswind Component
A-I and B-I *	10.5 knots
A-II and B-II	13 knots
A-III, B-III, C-I through D-III D-I through D-III	16 knots
A-IV and B-IV, C-IV through C-VI, D-IV through D-VI	20 knots
E-I through E-VI	20 knots

\* Includes A-I and B-I small aircraft.



## Data Collection/Inventory Wind Data – All Weather

All Weather Crosswind (in knots)	Percent Wind Coverage			
	Runway 3	Runway 21	Runway 14	Runway 32
10.5	67.25%	71.54%	66.16%	71.60%
	95.62%			91.86%
		98.68%		
13	69.14%	72.57%	68.83%	73.49%
	98.30%			95.44%
		99.70%		
16	70.17%	73.26%	71.54%	75.24%
	99.74%			98.76%
		99.94%		
20	70.35%	73.36%	72.39%	75.70%
	99.97%			99.71%
		99.99%		

Note: Single runway end coverages calculated with a 3 knot tailwind

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## Data Collection/Inventory Wind Data - VFR

VFR Crosswind (in knots)	Percent Wind Coverage			
	Runway 3	Runway 21	Runway 14	Runway 32
10.5	67%	72%	65.41%	72.23%
	95.76%			92.28%
		98.81%		
13	68.41%	73.39%	68.03%	74.07%
	98.40%			95.80%
		99.78%		
16	69.39%	74.07%	70.66%	75.75%
	99.78%			99.00%
		99.97%		
20	69.54%	74.16%	71.37%	76.14%
	99.98%			99.80%
		100.00%		

Note: Single runway end coverages calculated with a 3 knot tailwind

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## Data Collection/Inventory Wind Data - IFR

- This indicates a crosswind runway is only justified:
  - when the airport is operating in IFR conditions
  - for the smallest aircraft users (B-I and below)
  - less than 1% (0.71%) of the time.

IFR Crosswind (in knots)	Percent Wind Coverage			
	Runway 3	Runway 21	Runway 14	Runway 32
10.5	73.24%	63.20%	72.47%	65.29%
	94.29%		87.64%	
	97.42%			
13	75.59%	64.20%	75.80%	67.75%
	97.33%		92.06%	
	99.03%			
16	77.14%	65.01%	79.33%	70.28%
	99.31%		96.52%	
	99.70%			
20	77.61%	65.21%	81.40%	71.42%
	99.87%		98.86%	
	99.93%			

Note: Single runway end coverages calculated with a 3 knot tailwind

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## Runway Evaluation

- FAA Criteria
  - Wind Coverage
  - Advisory Circular Requirements
  - AIP Handbook
    - Primary vs. Crosswind



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## Runway Evaluation Airport Improvement Program Handbook Criteria

- **Primary Runway**
  - Target 95% wind coverage
  - Usually the longest runway
  - Usually has the best approaches
- **Crosswind runway**
  - Fills 95% wind coverage gap, if necessary
- **Secondary runway**
  - Fills capacity needs – typically 90,000 operations



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## Runway Evaluation What This Means

- **Runway (Rwy 3/21) - Primary**
  - Meets 95% wind coverage at VFR and All Weather
    - Only 1% off for IFR
  - Existing length exceeds all critical aircraft needs
  - Use AC graph at 90% useful load (6,100')
- **Runway (Rwy 14/32)**
  - **Crosswind Runway**
    - Only qualified for crosswind at 10kts or less in IFR conditions
    - Likely 3,200' runway length or less
    - May create runway intersection issue if Rwy 3/21 is shifted
  - **Secondary Runway**
    - No capacity issues to justify as a secondary runway

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## Runway Evaluation Advisory Circular Requirements

- Criteria for Crosswind
  - Runway length for aircraft weighing 12,500 pounds or less:
    - For 100% - 3,200 feet
- Criteria for Primary
  - Runway length for 75% of fleet
    - At 60% useful load – 4,700 feet
    - At 90% useful load – 6,100 feet

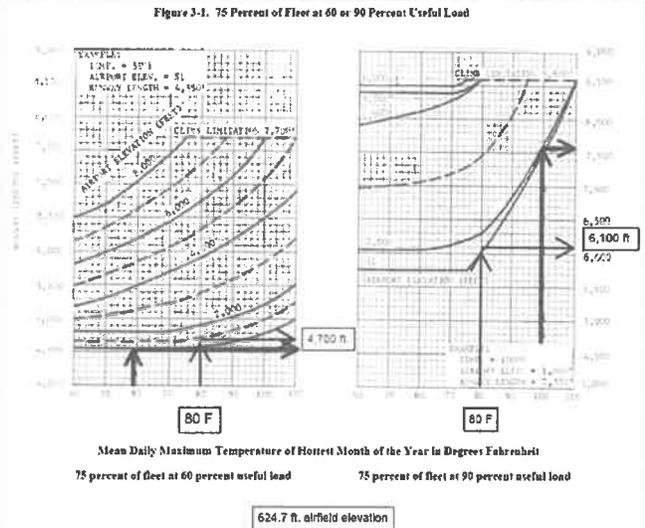


Figure 3-1 from FAA AC 150/5325-4B – Runway Length Requirements for Airport Design

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## Runway Evaluation Key Takeaways

- FAA Criteria
  - Wind Coverage
    - Less than 1% wind coverage justifies Runway 14/32
  - Advisory Circular Requirements
    - Primary Runway 6,100 feet
    - Crosswind Runway 3,200 feet
  - AIP Handbook
    - Primary vs. Crosswind
      - Primary justified
      - Crosswind justified with 1% at 3,200 feet
      - Secondary runway not justified



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## Environmental Overview

- Approximately 30 categories were reviewed, in a very cursory nature to assess items that may impact development
- Primary item is existing wetlands on the field.
- Field delineation was NOT conducted as part of this study.



## Alternatives Analysis

- Primary Runway
  - Maintain "as-is" at 5,999' x 100'
  - Construct full Parallel Taxiway at 400' separation to obtain lower approach minimums
- Crosswind Runway
  - No Build – Rehab in place at 5,000'
  - Alternative 1 – 3,200' Runway Anchored at Runway 32 End
  - Alternative 2 – 3,200' Runway Anchored at Runway 14 End
  - Alternative 3 – 3,200' Runway Shifted Between Both Runway Ends
  - Alternative 4 – Cease Use
- Building Area

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### Crosswind Runway

No Build – 5,100' x 100' Rwy 13/32 – short term option



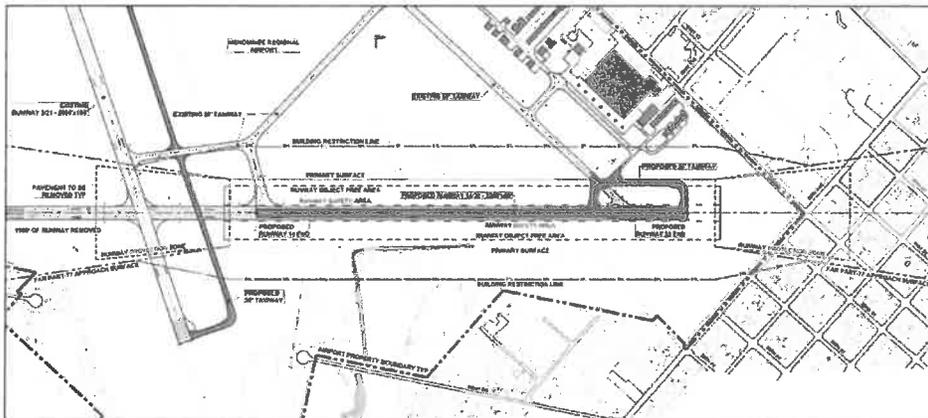
Maintain as-is while pavement holds, especially during rehabilitation of Runway 3/21

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### Crosswind Alternative 1 – 3,200' Runway Anchored at Runway 32 End

CROSSWIND RUNWAY ALTERNATIVE

1



PROPOSED 3200' RUNWAY ANCHORED AT RUNWAY 32 END

Alternative Dismissed by Advisory Committee

Creates non-intersecting runways which is discouraged.

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MENOMINEE REGIONAL AIRPORT - MENOMINEE, MI

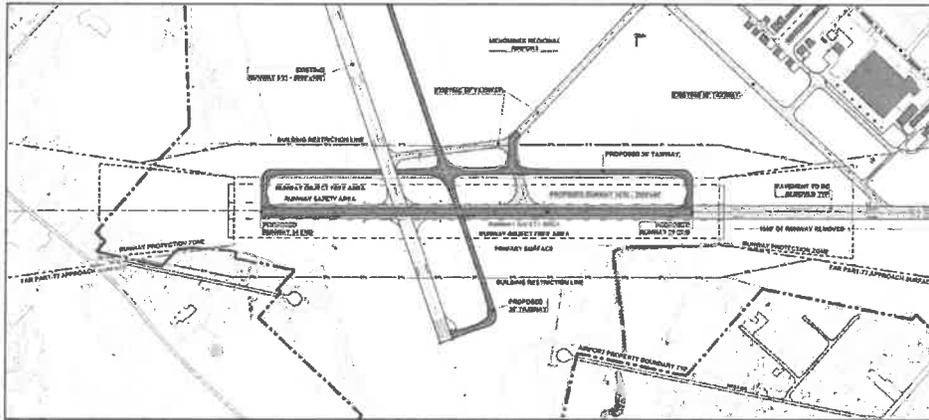
North arrow and scale bar.

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## Crosswind Alternative 2 – 3,200' Runway Anchored at Runway 14 End

CROSSWIND RUNWAY ALTERNATIVE

2



**PROPOSED 3200' RUNWAY ANCHORED AT RUNWAY 14 END**

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MENDONNEE REGIONAL AIRPORT - MENDONNEE, MI

SCALE 1" = 100'

Maintains intersecting runways.

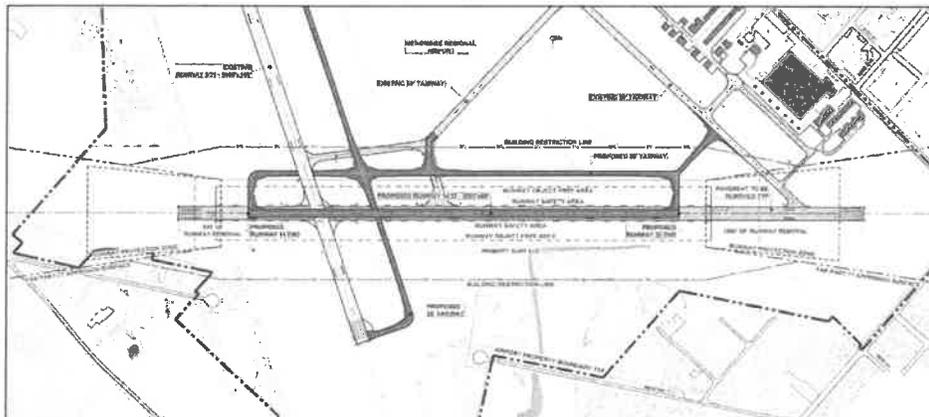
Shifts Rwy 32 RPZ onto airport property.

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## Crosswind Alternative 3 – 3,200' Runway Shifted Between Both Runway Ends

CROSSWIND RUNWAY ALTERNATIVE

3



**PROPOSED 3200' RUNWAY SHIFTED BETWEEN BOTH RUNWAY ENDS**

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MENDONNEE REGIONAL AIRPORT - MENDONNEE, MI

SCALE 1" = 100'

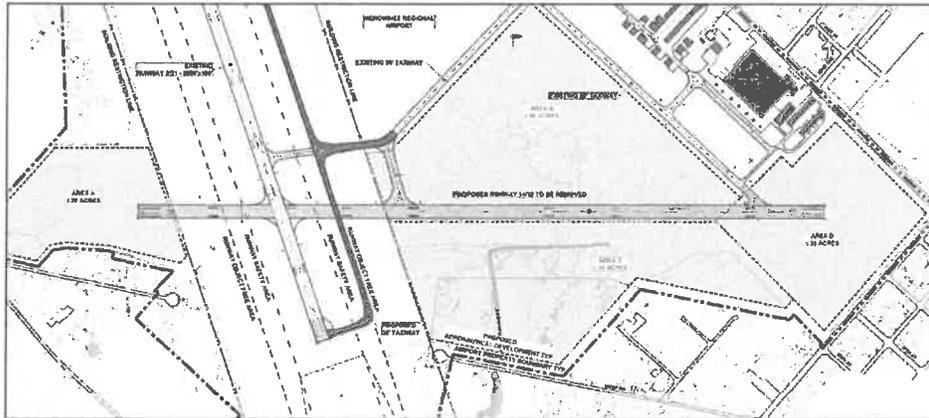
Alternative Dismissed by Advisory Committee mainly due to costs.

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## Crosswind Alternative 4 – Cease Use

CROSSWIND RUNWAY ALTERNATIVE

4



**PROPOSED CEASE USE OF RUNWAY 14/32**

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MENOMINEE REGIONAL AIRPORT • MENOMINEE, WI

SCALE: 1"=200'

Acres available for development if runway removed:

Area A: ±20 acres

Area B: ±58 acres

Area C: ±44 acres

Area D: ±28 acres

Total: ±150 acres

Use would most likely need to be aeronautical or industrial in nature.

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## Proposed Alternatives

Alternative	Cost w/o obstruction removal or land acquisition	Runway/Runway Intersection	Approach Changes
No Build	\$3,460,000	Back Taxi to Rwy 14	N/A
Alternative 1	\$4,320,000	Rwy 3/21 in Rwy 14/32 RPZ	Minimal acquisition
Alternative 2	\$5,670,000	Adequate Rwy/Rwy spacing	Moderate acquisition
Alternative 3	\$6,070,000	Minimal Rwy/Rwy spacing	Moderate acquisition
Alternative 4	\$0	N/A	N/A

No Build is short-mid term option until rehabilitation is necessary

Alt. 2 keeps a crosswind runway at the airport – could likely be constructed without the full parallel taxiway or a phased taxiway which could reduce the costs shown above.

Alt. 4 removes the option of a crosswind runway at the airport – could provide approx. 150 area for various development – a land release would be required to use for anything other than aeronautical uses

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## Next Steps in ALP Process (cont.)

- Finalize the ALP set once based upon the direction from the Board of Commissioners
- Submit for MDOT AERO review
  - Revise as necessary based upon comments
- Submit to MDOT AERO to process with FAA for airspace review
- Finalize once FAA Airspace Letter is received.

MDOT AERO and FAA process can take up to 12-16 months.

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## What Happens Concurrently?

- Capital Improvement Planning Process
  - 2020/2021/2022 Focus on On-Airport Tree Clearing
    - Predominately locally funded but could be a federal project IF we can prove federal funds have ever been used in the area
    - May require an environmental document due to amount of clearing & easement acquisition
  - 2021 Crack Sealing and Paint marking
    - Both Runway 3/21 and 14/32 to help extend their use
  - 2022 Begin Design for Rehabilitation of Runway 3/21
    - Maintain Runway 14/32 to support operation of the airport while Runway 3/21 is rehabilitated
  - 2023 Rehabilitation of Runway 3/21
    - Would likely require FAA Discretionary Funds which will take time to obtain due to the programming cycle.

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## Funding Sources

- Federal Funds
  - Non-Primary Entitlements (NPE) (GA Airports)
    - Typically \$150,000 annually
    - Funds must be matched: 90% federal/ 5% state/ 5% local
  - State Apportionment (at MDOT discretion)
  - Discretionary (FAA & MDOT discretion)
- State Funds – limited due to budget constraints
- Local Funds – must match federal/state funds

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## Current MNM Federal Funding Available

- Funds must be matched:
  - 90% federal – 5% state – 5% local
- FY 17 NPE - \$ 137,790 (90%)
- FY 18 NPE - \$ 150,000 (90%)
- FY 19 NPE - \$ 150,000 (90%)
- Total currently available with all matches = \$486,433
  - Federal \$ 437,790    State \$24,321    Local \$24,321
- FY 20 NPE – \$150,000 federal likely available late summer 2020

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