

# Forest Lake Airport (25D) Airport Master Plan Study

**Update Meeting #1**  
**December 4, 2019**

 **Forest Lake**  
AS GOOD AS IT SOUNDS


 **BOLTON  
& MENK**  
Real People. Real Solutions.


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## Master Plan Study Process

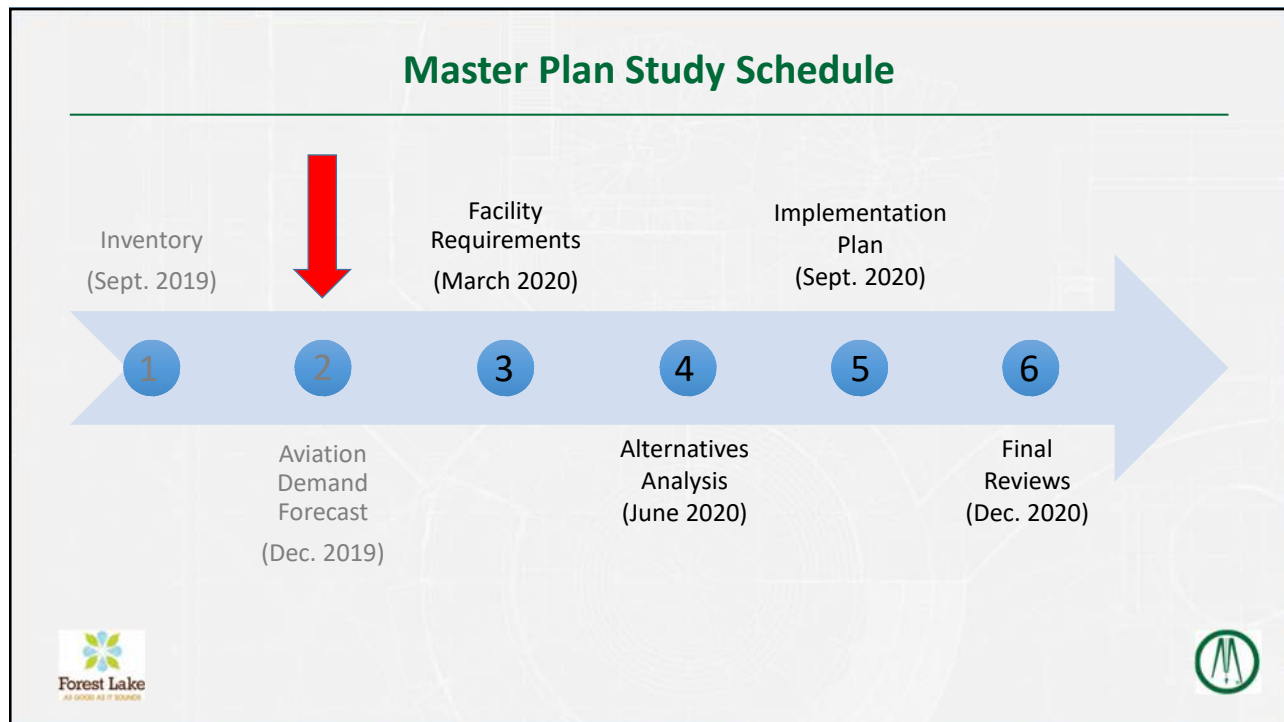
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- 1. INVENTORY**
  - a. Collect information on existing facilities and the built and natural environment to establish a baseline for the study
- 2. AVIATION DEMAND FORECAST**
  - a. Establish the baseline aviation activity forecast
  - b. Develop reasonable assessment of future activity forecast and based aircraft
- 3. FACILITY REQUIREMENTS**
  - a. Identify future facility needs to meet future demand of airport users
  - b. Identify upgrade or replacement of existing facilities which may deteriorate
- 4. ALTERNATIVES ANALYSIS**
  - a. Identify options for future airport development to meet future needs
  - b. Review feasibility, environmental, and financial impact for each alternative developed
  - c. Selected preferred alternative for development of ALP
- 5. IMPLEMENTATION PLAN**
  - a. Develop CIP for implementation of preferred alternative
  - b. Identify funding opportunities and review financial feasibility of the airport
- 6. STUDY REPORT AND ALP REVIEW**
  - a. Prepare the final Master Plan Report and Airport Layout Plan for City and MnDOT Aeronautics review and approval

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### Meeting Agenda

- Summary of Airport Inventory
- Summary of User Survey Results
- Based Aircraft Forecast
- Aviation Activity Forecast
- Critical Design Aircraft
- Begin Facility Requirements Discussion

A photograph of a small, single-story white building with a grey roof, likely an airport terminal or office. The building has a sign on the front that reads "Dunkin' Donuts" and "Forest Lake Municipal Airport". A red and white striped tower is visible in the background.

Logos for Forest Lake and a circular logo with a stylized 'M' are located at the bottom left and right of the slide respectively.

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## Airport Inventory

- 27 Current Hangars
- 37 Based Aircraft
- AvGAS Fuel Available
- Six Grass Tie-Down Spots Available
- Four Hangar Lots Currently Not Built Out
  - FBO Hangar Under Construction
  - Land is Leased on Others
- Runway 13/31 2,700' x 75' Visual Only
  - No Approaches



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## User Survey Summary

- 111 User Survey Responses
- 28 of 37 based aircraft responded (note some tenants base multiple aircraft at 25D)
- 32 responded would base at 25D if adequate facilities existed
- 69 responded Runway 13/31 length is adequate; 27 responded length is inadequate
- 14 responded they made made load concessions
- Would approaches increase your ability to use 25D? 30 yes 66 no

### SUMMARY

- Need for additional hangar space
- Facilities are adequate for flying public (fuel, terminal, ground service)
- Runway length is adequate but 3,000' would help



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## Business User Survey Summary

- 5 Business User Survey Responses
- 2/5 responded they currently use 25D for business purposes
- 3 no responses stated due to inadequate runway length and no transient hangar facility
- 3 responded they would base their aircraft at 25D if hangar facilities existed

### SUMMARY

- Need for additional hangar space
- Longer runway would allow more aircraft to base
- Approaches would help during IFR conditions



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## Based Aircraft Forecast

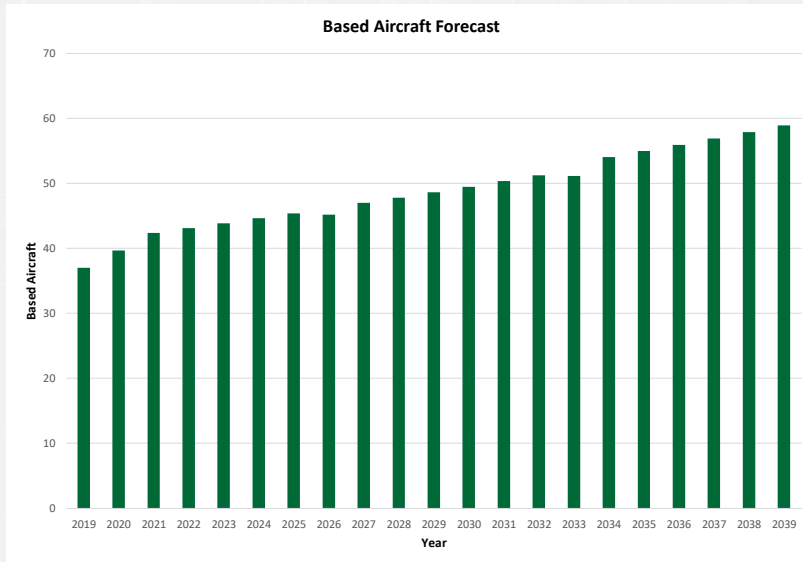
SASP Based Aircraft					
Nearby Airports to 25D	Base Year 2010	2012-2015	2016-2020	2021-2030	Annual Growth Rate
Glencoe (GYL)	35	38	41	45	1.26%
Princeton (PNM)	47	54	58	69	1.94%
Bufflao (CFE)	65	74	82	97	2.02%
Cambridge (CBG)	46	53	58	73	2.34%
Rush City Regional (ROS)	59	67	72	84	1.78%
				<b>Average</b>	<b>1.87%</b>
Forest Lake	34	37	41	47	1.63%

25D Hangar Growth Since Paving							
Year	2013	2014	2015	2016	2017	2018	Growth Rate
Hangars	14	16	17	17	19	24	11.382%



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## Based Aircraft Forecast



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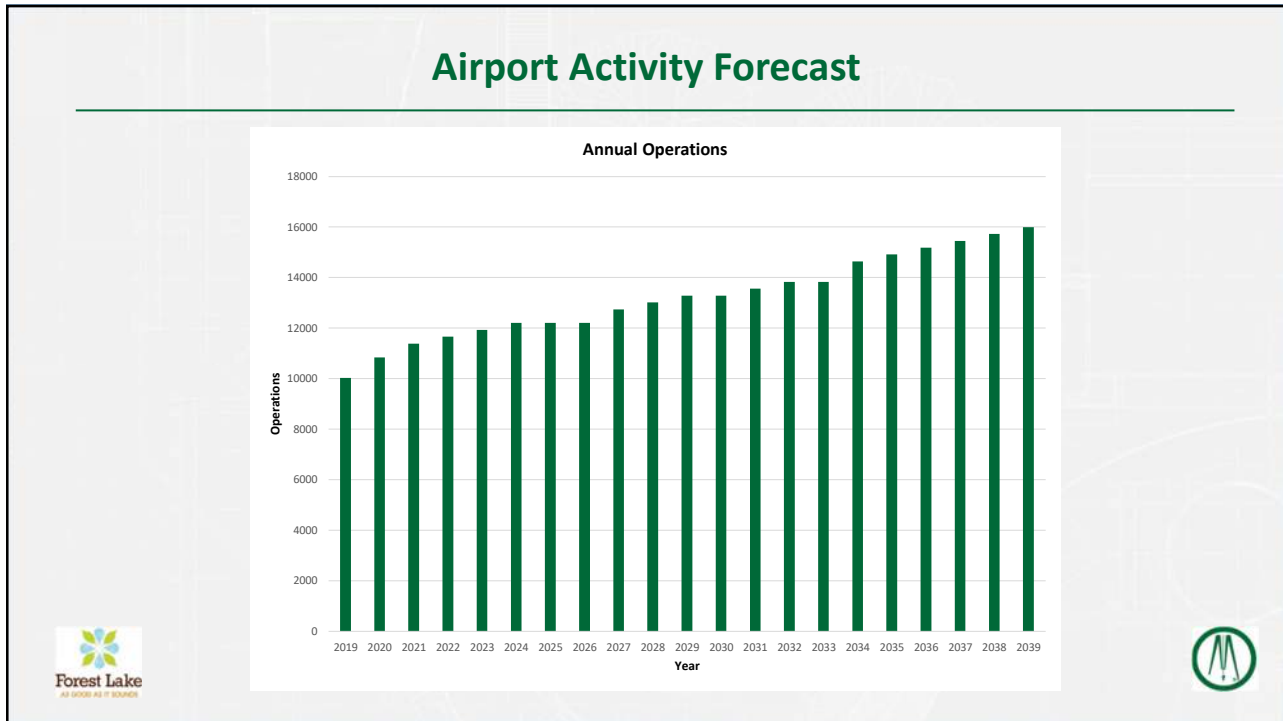
## Airport Activity Forecast

Nearby Airports to 25D	Operations				Annual Growth Rate
	Base Year 2010	2012-2015	2016-2020	2021-2030	
Glencoe (GYL)	10,615	11,451	12,143	15,327	1.85%
Princeton (PNM)	12,300	13,535	14,693	19,486	2.33%
Buffalo (CFE)	22,733	25,122	27,625	37,347	2.51%
Cambridge (CBG)	17,122	19,653	21,919	29,169	2.70%
Rush City Regional (ROS)	22,063	24,297	26,264	34,796	2.30%
<b>Average</b>					<b>2.34%</b>
<b>Forest Lake</b>	<b>9,210</b>	<b>9,990</b>	<b>10,873</b>	<b>14,398</b>	<b>2.26%</b>

Nearby Airports to 25D	OPBA				Annual Growth Rate
	Base Year 2010	2012-2015	2016-2020	2021-2030	
Glencoe (GYL)	303	301	296	341	0.58%
Princeton (PNM)	262	251	253	282	0.38%
Buffalo (CFE)	350	339	337	385	0.48%
Cambridge (CBG)	372	371	378	400	0.36%
Rush City Regional (ROS)	374	363	365	414	0.51%
<b>Average</b>					<b>0.46%</b>
<b>Forest Lake</b>	<b>271</b>	<b>270</b>	<b>265</b>	<b>306</b>	<b>0.62%</b>



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### Critical Design Aircraft

- Critical Design Aircraft at 25D is currently A-I
- Protect for B-II in future

FAA Aircraft Approach Category		
Category	Approach Speed (knots)	Example Aircraft Type
A	< 91	Cessna 172, Piper Warrior
B	91 - < 121	Beech King Air, Cessna Citation I & II
C	121 - < 141	Learjet 35, Gulfstream 550, B-737
D	141 - < 166	B-757, B-747, B-777

FAA Aircraft Design Group (ADG)			
Group	Wingspan (feet)	Tail Height (feet)	Example Aircraft Type
I	< 49	< 20	Beech Baron 58, Cessna 172
II	49 - < 79	20 - < 30	Beech King Air, Cessna Citation Series
III	79 - < 118	30 - < 45	B-737, DC-9, CRJ-900
IV	118 - < 171	45 - < 60	A-300, B-757, B-767
V	171 - < 214	60 - < 66	B-747, B-777
VI	214 - < 262	66 - < 80	Lockheed C-5, A-380

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## Critical Design Aircraft



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## Facility Requirements

- Demand for Hangars
  - Public, Private, or Both?
  - Bay or T-Hangars?
  - Sizes?
- Runway 13/31 Extension
  - Future 3,000’?
  - Ultimate 3,300’?
  - Anything longer not cost feasible
- Approaches to Runway 13/31
  - RNAV (GPS)
- Jet A/MOGAS Fuel?



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## Next Steps

- Review Draft Inventory and Forecast Chapter
- Submit Forecast to MnDOT for Review and Approval
- Analyze Facility Requirements – Develop Alternatives
- 2nd Master Plan Update meeting at March 4, 2020 Airport Commission Meeting



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## Questions?

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