

Mobridge Municipal Airport

Airport Master Plan Kickoff Meeting – September 12, 2024



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Agenda

- Introductions
- Airport Planning
- Roles & Responsibilities
- Existing Conditions
- Key Issues
- Open Discussion



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Introductions

- Project Team
 - Aviation Planner – Kent Penney & Amber Channel
 - Airport Engineer – Charlie Baker
- City of Mobridge
- Agencies Involved
 - FAA – Travis Schmit, Brian Schuck
 - SD DOT Aeronautics – Jon Becker
- Planning Advisory Committee
 - Heather Beck – City of Mobridge
 - Brady Fuhler – Airport Manager
 - Kyle Jensen – City Council
 - Michele Harrison – Economic Development
 - John Jayoub – Mobridge Regional Hospital
 - Jeff Jackson – Premier Management Co



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Airport Planning



"Road Map" for meeting
aviation needs



Preserves flexibility to
respond to future demands



Allows airport to cost-
effectively keep pace with
aviation growth



Considers environmental and
socioeconomic impact of
development



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Why is Airport Planning needed now?

Airport Master Planning Study Objectives

- Evaluate runway wind coverage
- Update airport layout to current design standards
- Restore night time instrument approaches to Runway 12
- Accommodate larger aircraft
- Alternatives for hangar development area
- ARFF capabilities

Last Airport Layout
Plan approved in 2015

ALP brought to current
FAA design standards



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Components of a Master Plan



AIRPORT MASTER
PLAN NARRATIVE
REPORT



AIRPORT LAYOUT
PLAN



RUNWAY SAFETY
AREA INVENTORY



EXHIBIT A/
AIRPORT
PROPERTY MAP



AERONAUTICAL
SURVEY



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Roles & Responsibilities

KLJ Planning Team

- Manage Study, Complete Technical Work, Provide Analysis and Recommendations

Master Plan Advisory Committee

- Identify Wants & Needs
- Ask Questions & Review Analysis
- Provide Feedback & Recommendations

City of Mobridge

- Provide Guiding Principles, Make Decision(s), Review and Approve Planning Documents & ALP

FAA / SD DOT Aeronautics

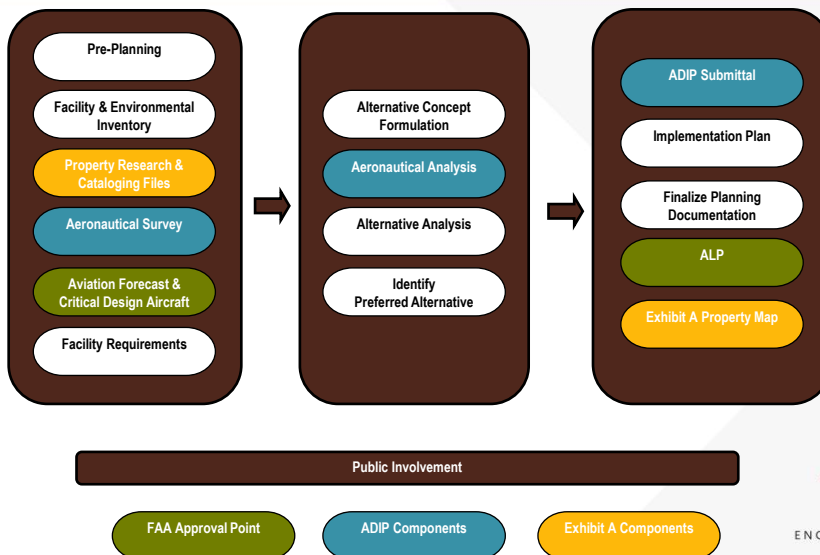
- Provide Technical Guidance, Approve Aviation Forecasts, Review Airport Plan, Approve ALP



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Project Workflow



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Existing Airfield

- Currently Design Group A/B-II
- Paved Runway 12-30
 - GPS Approach both ends
 - 1 mile visibility
 - 600' ceiling
 - 2-light PAPI
- Turf Runway 17-35
- Automated Surface Observation System (ASOS)



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Wind Analysis

ALL-WEATHER WIND COVERAGE				
CONFIGURATION	CROSSWIND COMPONENT			
	10.5 KNOTS	13 KNOTS	16 KNOTS	20 KNOTS
RUNWAY 12-30	92.67%	96.90%	99.03%	-
RUNWAY 17-35	88.29%	93.95%	-	-
COMBINED	98.32%	99.36%	99.03%	-

SOURCE: KMBG ASOS (2013-2022, HOURLY) FROM NATIONAL CLIMATIC DATA CENTER
86,117 TOTAL OBSERVATIONS

INSTRUMENT FLIGHT RULES (IFR) WIND COVERAGE				
CONFIGURATION	CROSSWIND COMPONENT			
	10.5 KNOTS	13 KNOTS	16 KNOTS	20 KNOTS
RUNWAY 12-30	85.23%	92.64%	96.82%	-
RUNWAY 17-35	-	-	-	-
COMBINED	85.23%	92.64%	96.82%	-

SOURCE: KMBG ASOS (2013-2022, HOURLY) FROM NATIONAL CLIMATIC DATA CENTER
5,573 TOTAL OBSERVATIONS
IFR = VISIBILITY LOWER THAN 3 MILES OR CEILING LOWER THAN 1,000 FEET

95% Desirable Wind Coverage

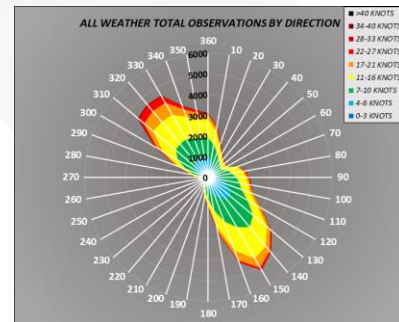


Table B-1. Allowable Crosswind Component per Runway Design Code (RDC)

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

Note: * Includes A-I and B-I small aircraft.

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Instrument Conditions

- Airport is accessible 97.8% of the time (93.5% VMC, 4.3% Usable IMC)
- 83% of IFR conditions occur between 1am and 10am
 - 42% between 1am and 6am
 - 41% between 7am and 10am

Weather Condition	Percentage	Days Per Year	Hours Per Year
VMC	93.53%	341.4	8,193
Usable IMC	4.29%	15.7	376
Usability	97.82%	357.1	8,569
Below Weather Minimums	2.18%	7.9	191
Total	100.00%	365.0	8,760



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Terminal Area

- Apron
 - 12,600 SY
 - 3 asphalt tiedowns (ADG-I)
 - 4 concrete tiedowns (ADG-I)
- 12 hangars / units
- Terminal & SRE buildings
- Fuel, underground tanks
 - Jet A and 100LL



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Based Aircraft & Operations

- Based Aircraft
 - 16 single engine aircraft
- Operations
 - 1,542 total itinerant
 - 4,000 total local
 - 5,542 Total operations
- FAA Change in Use of Forecasts



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Data gathered from FAA 2021 TAF & Based Aircraft Inventory

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Critical Design Aircraft

Aircraft Approach Category B

- Represents speed that aircraft approaches runway
- 91 to 121 Kts

Airplane Design Group II

- Represents wingspan and height of aircraft
- 49' to 79' wingspan

Taxiway Design Group 2A

- Represents pavement width and turning clearance needed by aircraft
- Main Gear Width – 15' to 20'
- Cockpit to Main Gear – 20' to 40'



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Based on Cargo Aircraft

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Annual Activity

Aircraft	AAC	ADG	Annual Operations
Beechcraft 1900	B	II	500
Pilatus PC-12	A	II	158
Beechcraft B200	B	II	82
Cessna 414A	B	I	30
Cirrus SR-22T	A	I	28
Beechcraft 90	B	I	40
Cessna Conquest	B	I	26
Cessna Citation Ultra	D	II	14
Cessna Citation Excel	D	II	10
	B (678 ops)	II (764 ops)	

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Itinerant Parking

- > 7 ADG I positions
- > Need for ADG II
- > Fuel Access
- > Need
- > Options



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Open Discussion

- Issues
- Users
- Airfield Capabilities
- Terminal/Hangar Needs



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Next Steps

- Complete Airport Inventory
- Outreach to Stakeholders (Mary Lynch)
- Draft Aviation Forecasting
- Draft Facility Requirements
- Next Meeting: Facility Requirements & Airfield Alternatives
- Website: <https://inputcentral.com/mobridge-airport-plan>



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Questions/Comments

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