

Flying Cloud Airport

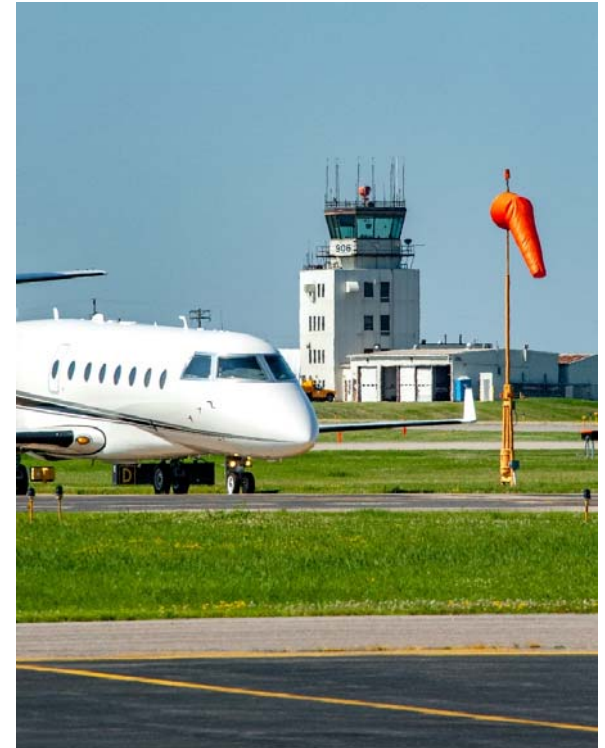
Joint Airport Zoning Board



18 January 2018
JAZB Meeting #3

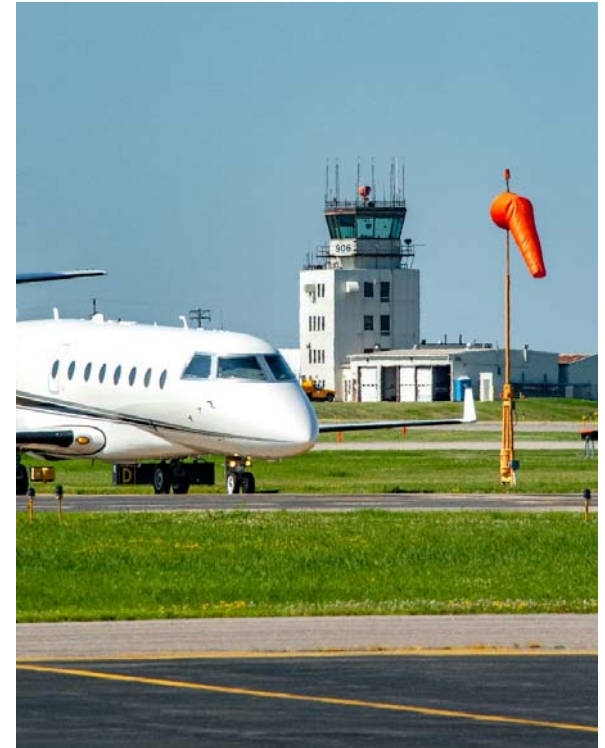
Meeting Agenda

- Chair Opening/Remarks
- Approval of Minutes from October 26, 2017 JAZB Meeting
- Results of updates to 2010 Draft FCM Airport Zoning Ordinance
 - Safety/Risk Study update
 - Economic Impact Study update
 - Zoning Ordinance and Exhibit update
- Board Member input on updates
- Timeline for Public Review and Public Hearing
- Next Meeting Date



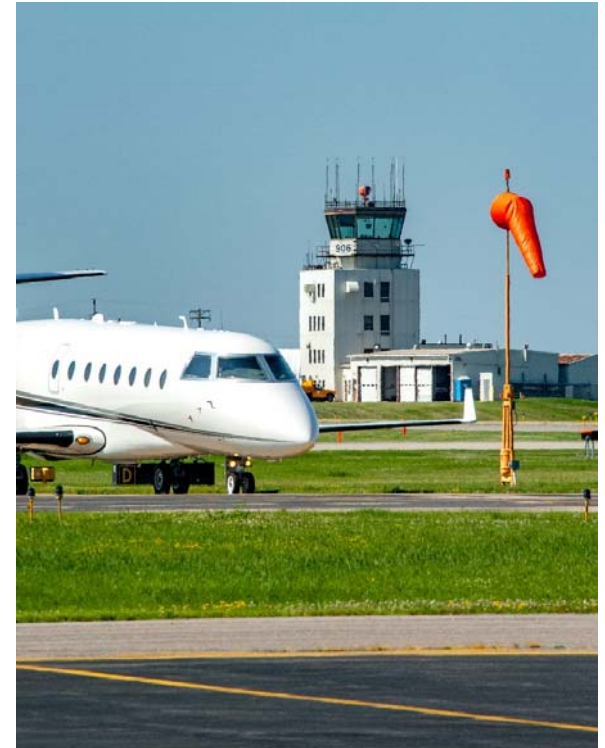
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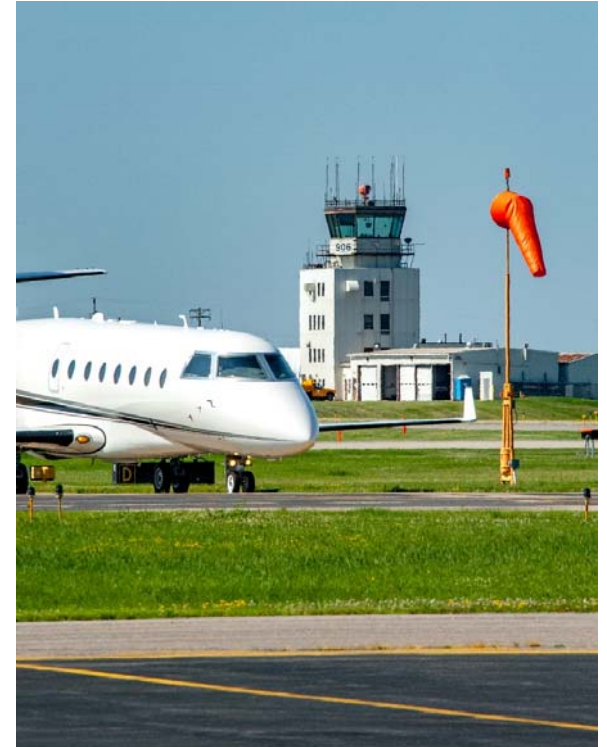
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JAZB Purpose & Goals

Through a collaborative process, the JAZB seeks to develop an airport zoning ordinance that achieves a balance between a reasonable level of public safety and compatible community development.

In determining what minimum airport zoning regulations to adopt, Minnesota State Statutes guide the JAZB to consider the social and economic costs of restricting land uses versus the benefits derived from a strict application of the standards of the commissioner (the State's Model Zoning Ordinance).

Goals for the FCM JAZB include:

- Develop an FCM zoning ordinance for review and approval by the Commissioner of Transportation for subsequent adoption by the Board and then by local communities
- Update relevant sections of 2010 draft Zoning Ordinance to reflect current conditions
- Ensure appropriate level of stakeholder/community engagement



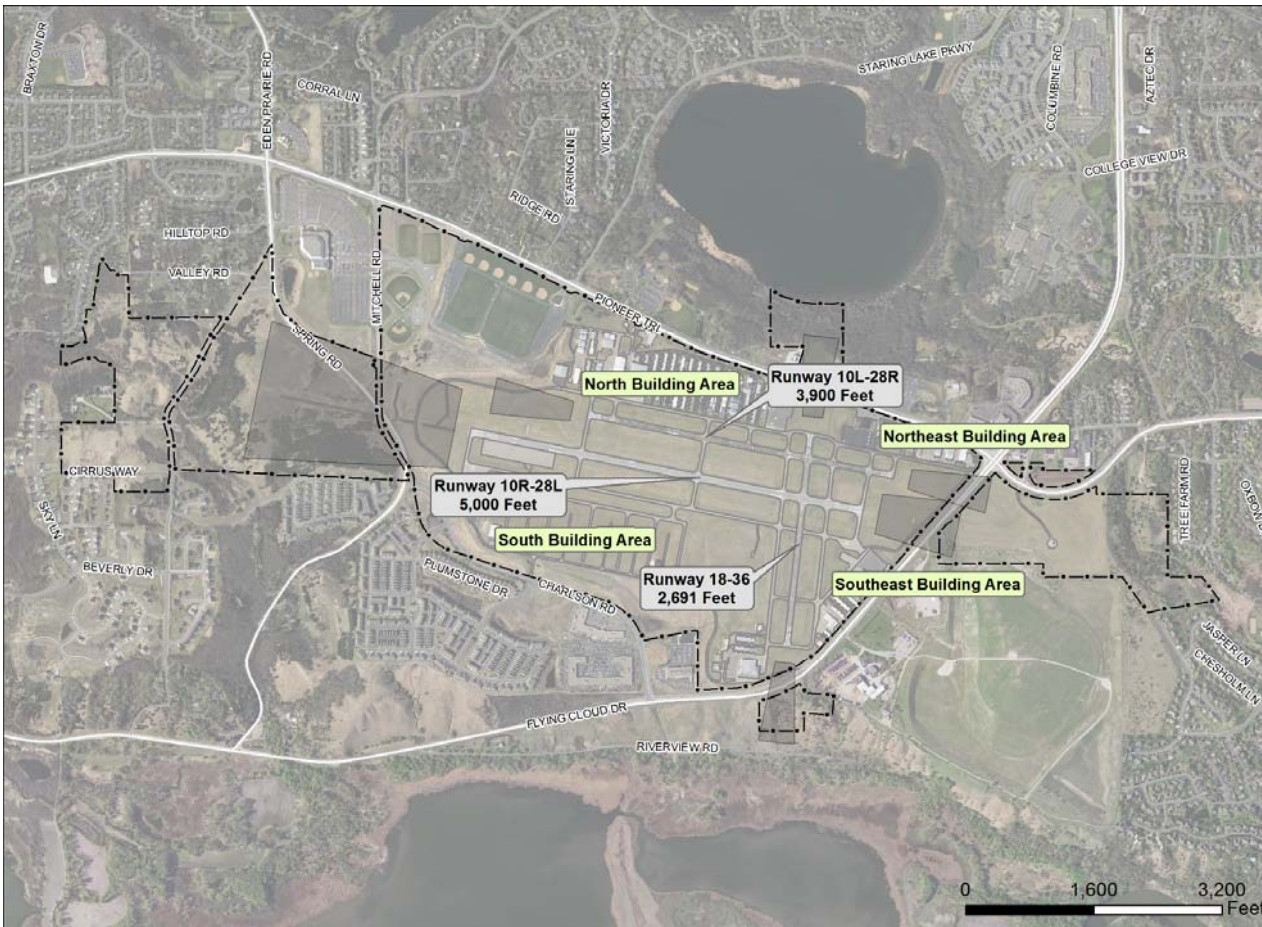
Airfield Configuration

Runway 18-36 Length

- Draft Zoning Ordinance – 2,800 feet
- Updated Zoning Ordinance – 2,691 feet (existing length)

Runway 10L–28R Designation

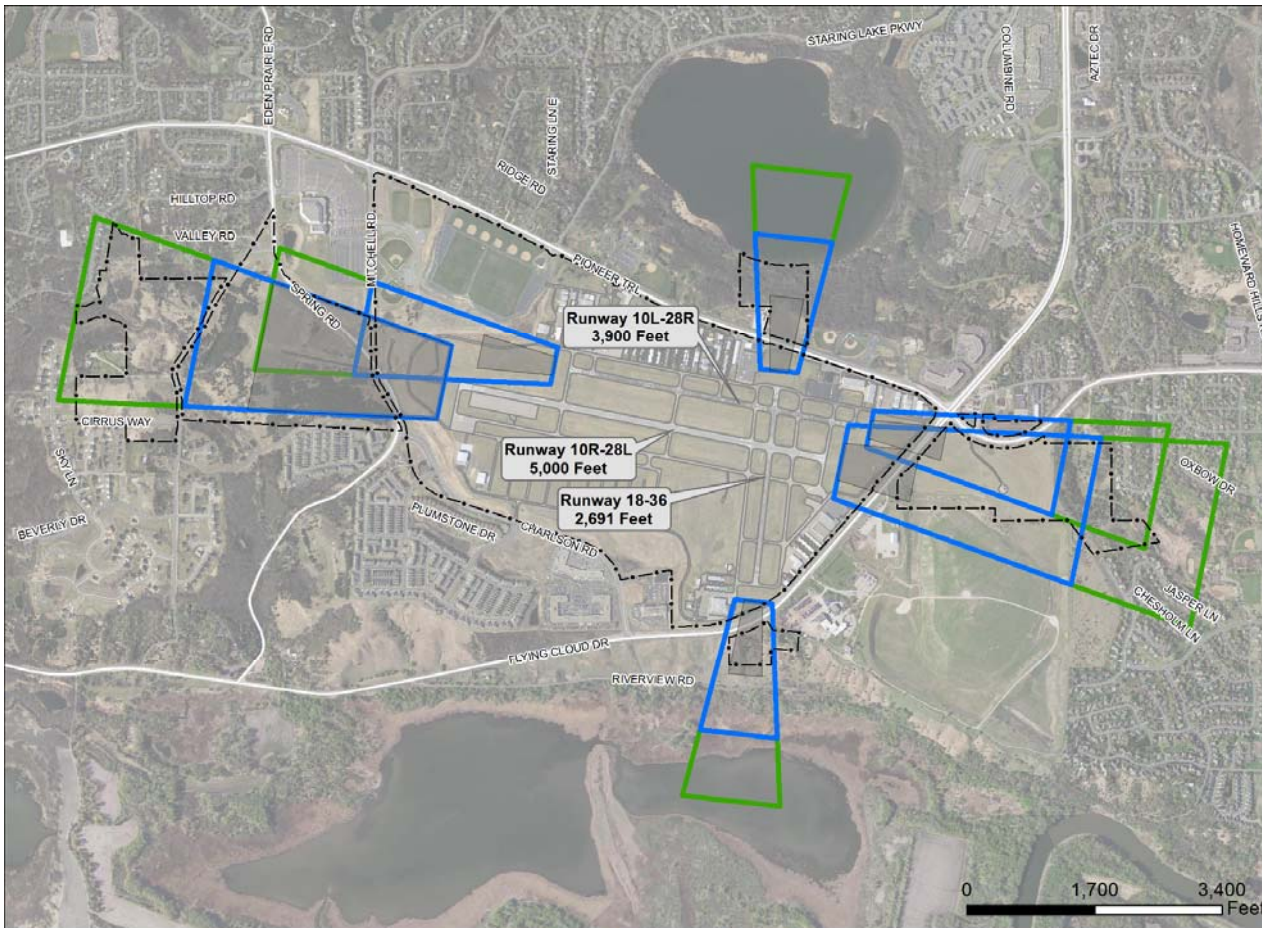
- Draft Zoning Ordinance – “Other Than Utility”
- Updated Zoning Ordinance – “Utility”



Safety/Risk Study Analysis Areas

Analysis Areas

- On Airport
- Runway Protection Zones
- Model State Safety Zone A Outside RPZ
- Model State Safety Zone B
- Off Airport (Beyond Model State Safety Zones A & B)

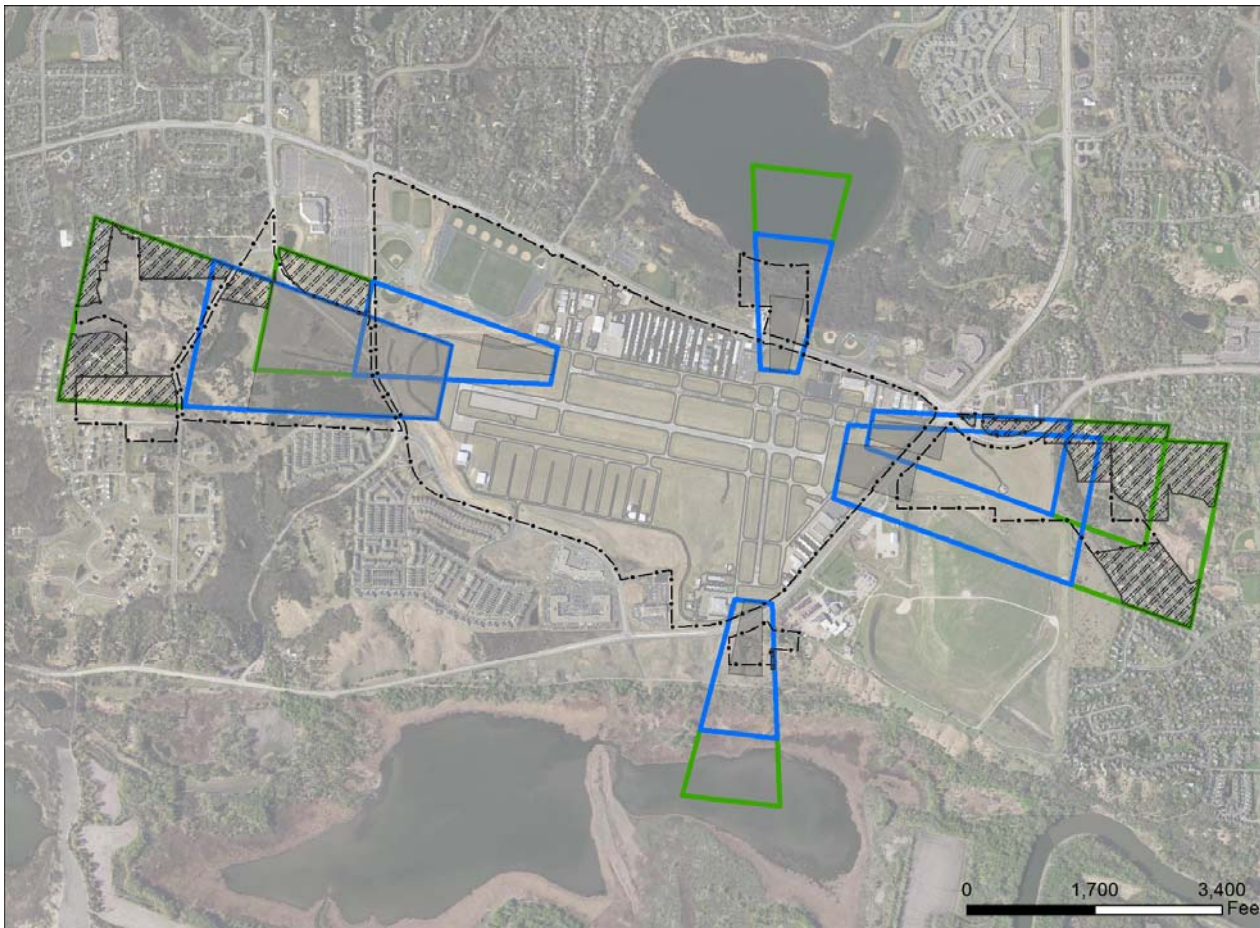


FCM Property Line Runway Protection Zones (RPZ) Model Zone A Model Zone B

Safety/Risk Study Occupant Areas

Occupant Areas

- Land that is or could likely be developed to accommodate congregations of people in Safety Zones
- Off-Airport (non-MAC property) guided by City of Eden Prairie planning documents
- On-Airport (MAC property) guided by MAC non-aeronautical development concepts



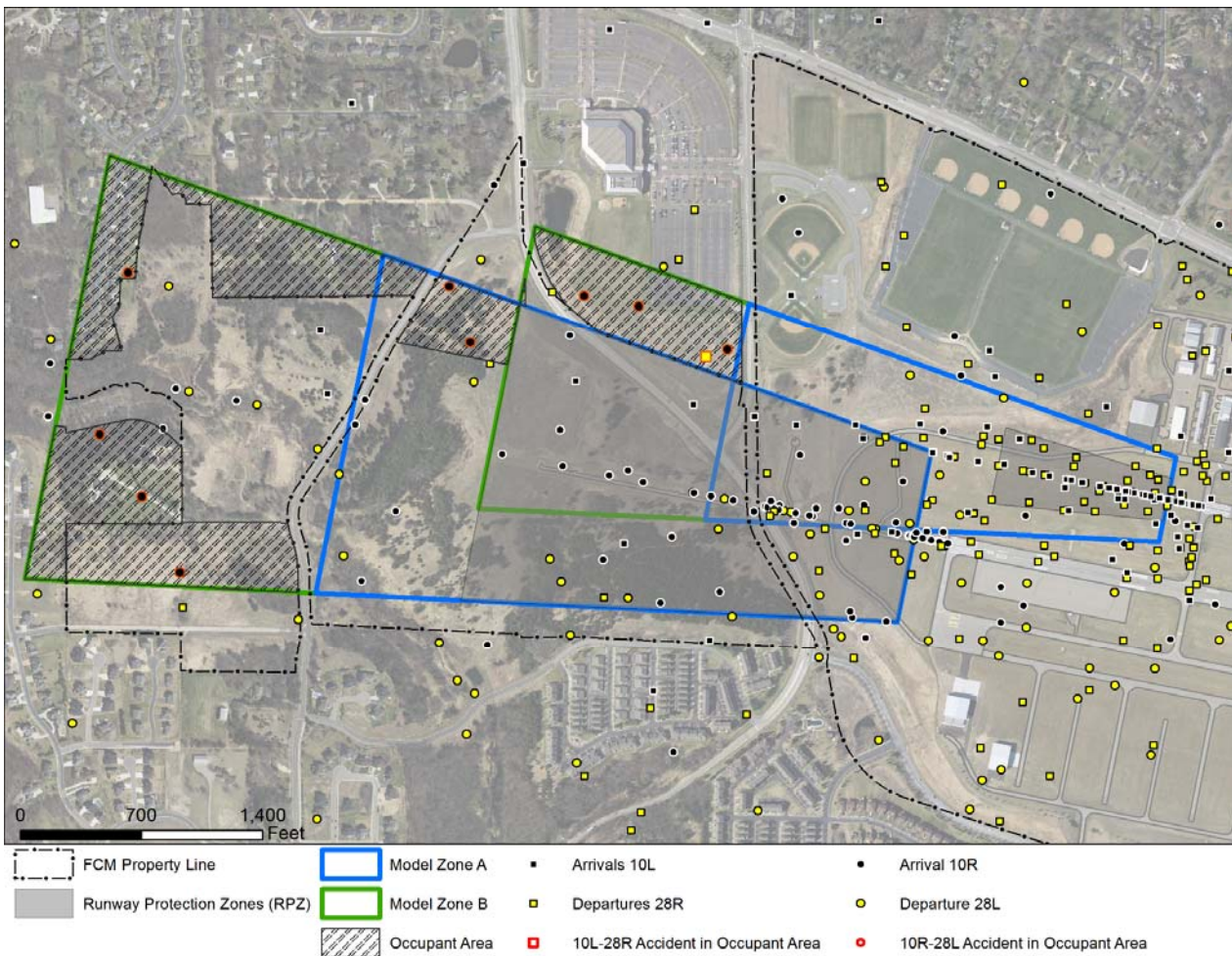
FCM Property Line Runway Protection Zones (RPZ) Model Zone A Model Zone B Occupant Area

Safety/Risk Study Accident Distribution

Example – Runway 10L/10R

Accident locations from California Study superimposed on Runway 10L and 10R ends

- Arrivals – black
- Departures – yellow
- North Parallel – squares
- South Parallel - circles
- Occupant Area – red outline
- Shows locations where accidents have occurred nationwide
 - NOT actual accidents at FCM!
- Used to count accident locations by analysis area



Safety/Risk Study Accident Location Counts

RWY 10L & 10R ENDS COMBINED

LOCATION AREA	RWY 10L& 10R ARRIVALS			RWY 28L& 28R DEPARTURES			TOTAL		
	ARR	% CATEGORY	% TOTAL	DEP	% CATEGORY	% TOTAL	TOTAL	% CATEGORY	% TOTAL
TOTAL	303	---	48%	322	---	52%	625	---	100%
ON AIRPORT PROPERTY	221	---	73%	245	---	76%	466	---	75%
RPZ	89	40%	29%	65	27%	20%	154	33%	25%
SSZ A NOT IN RPZ	19	9%	6%	27	11%	8%	46	10%	7%
SSZ B	4	2%	1%	6	2%	2%	10	2%	2%
Other On Airport	109	49%	36%	147	60%	46%	256	55%	41%
Subtotal	221	100%	73%	245	100%	76%	466	100%	75%
OFF AIRPORT PROPERTY	82	---	27%	77	---	24%	159	---	25%
RPZ	2	2%	1%	2	3%	1%	4	3%	1%
SSZ A NOT IN RPZ	1	1%	0%	0	0%	0%	1	1%	0%
SSZ B	5	6%	2%	4	5%	1%	9	6%	1%
Other Off-Airport	74	90%	24%	71	92%	22%	145	91%	23%
Subtotal	82	100%	27%	77	100%	24%	159	100%	25%
Total	303	100%	48%	322	100%	52%	625	100%	100%
RPZ	91	---	30%	67	---	21%	158	---	25%
On Airport	89	98%	29%	65	97%	20%	154	97%	25%
Off Airport	2	2%	1%	2	3%	1%	4	3%	1%
Subtotal	91	100%	30%	67	100%	21%	158	100%	25%
SSZ A	111	---	37%	94	---	29%	205	---	33%
RPZ	91	82%	30%	67	71%	21%	158	77%	25%
Not in RPZ	20	18%	7%	27	29%	8%	47	23%	8%
Subtotal	111	100%	37%	94	100%	29%	205	100%	33%
On Airport	108	97%	36%	92	98%	29%	200	98%	32%
Off Airport	3	3%	1%	2	2%	1%	5	2%	1%
Subtotal	111	100%	37%	94	100%	29%	205	100%	33%
SSZ B	9	---	3%	10	---	3%	19	---	3%
On Airport	4	44%	1%	6	60%	2%	10	53%	2%
Off Airport	5	56%	2%	4	40%	1%	9	47%	1%
Subtotal	9	100%	3%	10	100%	3%	19	100%	3%
OCCUPANT AREA	5	---	2%	5	---	2%	10	---	2%
SSZ A	1	20%	0%	1	20%	0%	2	20%	0%
SSZ B	4	80%	1%	4	80%	1%	8	80%	1%
Subtotal	5	100%	2%	5	100%	2%	10	100%	2%

2 Occupant Area accident locations in SSZ A beyond RPZ

8 Occupant Area accident locations in SSZ B boundary

Safety/Risk Study Occupant Area Accident Probabilities

FCM Runway	Occupant Areas								
	State Safety Zone A Beyond RPZ			State Safety Zone B			Combined		
	Accident Locations	Years Between	Per 10m	Accident Locations	Years Between	Per 10m	Accident Locations	Years Between	Per 10m
10R	2	1,866	0.3	4	933	0.5	6	622	0.8
28L	2	1,962	0.3	5	785	0.7	7	561	0.9
10L	0	---	0.0	1	2,704	0.2	1	2,704	0.2
28R	1	3,862	0.1	2	1,931	0.2	3	1,287	0.4
18	0	---	0.0	0	---	0.0	0	---	0.0
36	0	---	0.0	0	---	0.0	0	---	0.0
All	7	712	0.1	20	249	0.4	27	185	0.5
10L+10R	2	1,663	0.1	8	416	0.5	10	333	0.7
28L+28R	5	927	0.3	9	515	0.5	14	331	0.8

Notes:

Targeted risk standard is 1 accident per 10,000,000 aircraft operations.

Values in red text exceed the targeted risk standard.

Values in green text are at or below the targeted risk standard

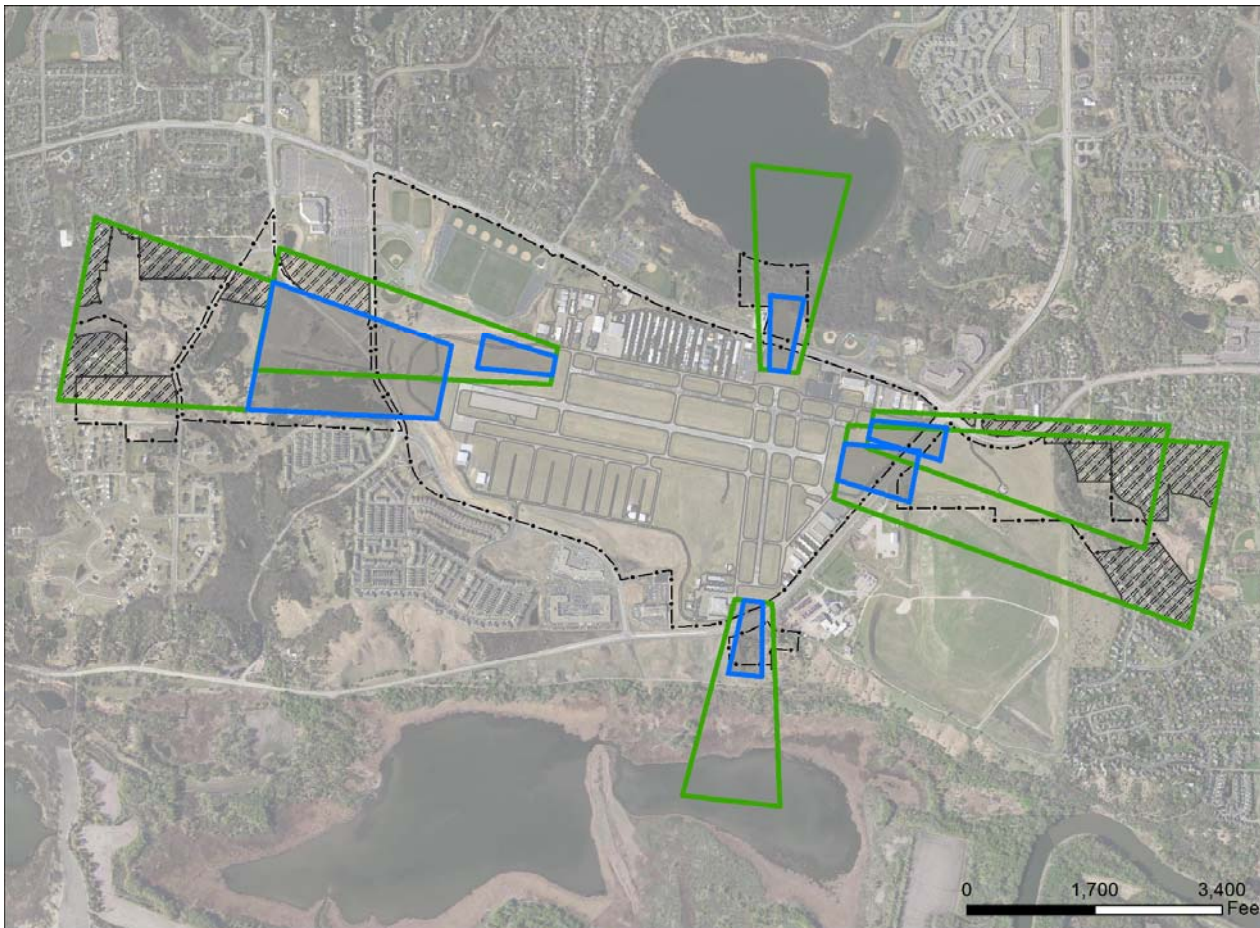
Accident risk probability is below the 1 in 10 million standard

Source: MAC analysis using methodology from 2009 Safety/Risk Study prepared by HNTB

Proposed JAZB Safety Zones

Carry-Over Findings:

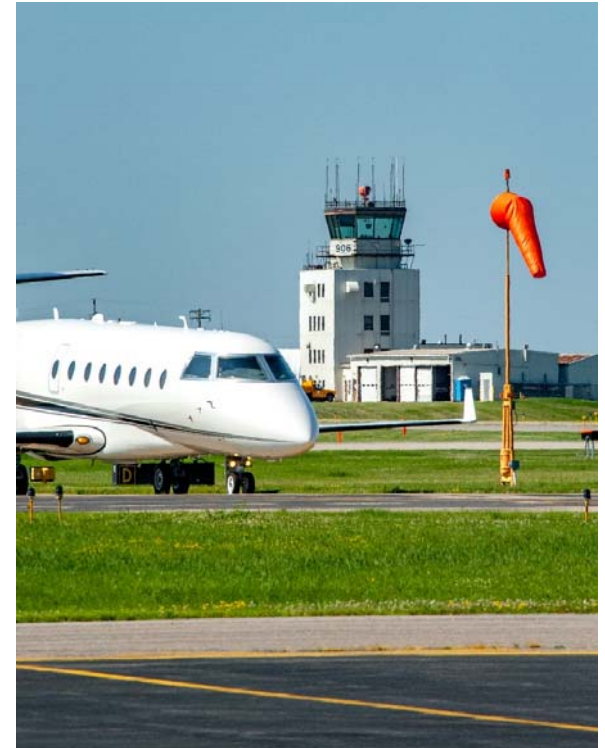
- JAZB Zone A = FAA RPZ
- JAZB Zone B = Balance of SSZ A+B footprint
 - Removed site acre/structure limitations
 - Identified Permitted Residential Areas to allow for improvement, expansion and development of new residential uses in existing and planned residential areas (treated as conforming uses)
 - Added a provision that a minimum of 20% of the total Zone B acreage or 20 acres, whichever is greater, is contiguous open space as an added margin of safety



FCM Property Line Runway Protection Zones (RPZ) JAZB Zone A JAZB Zone B Occupant Area

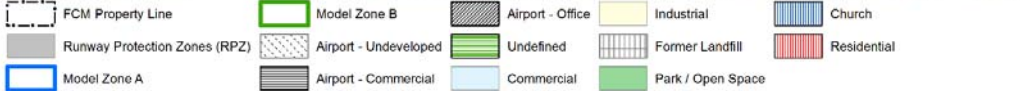
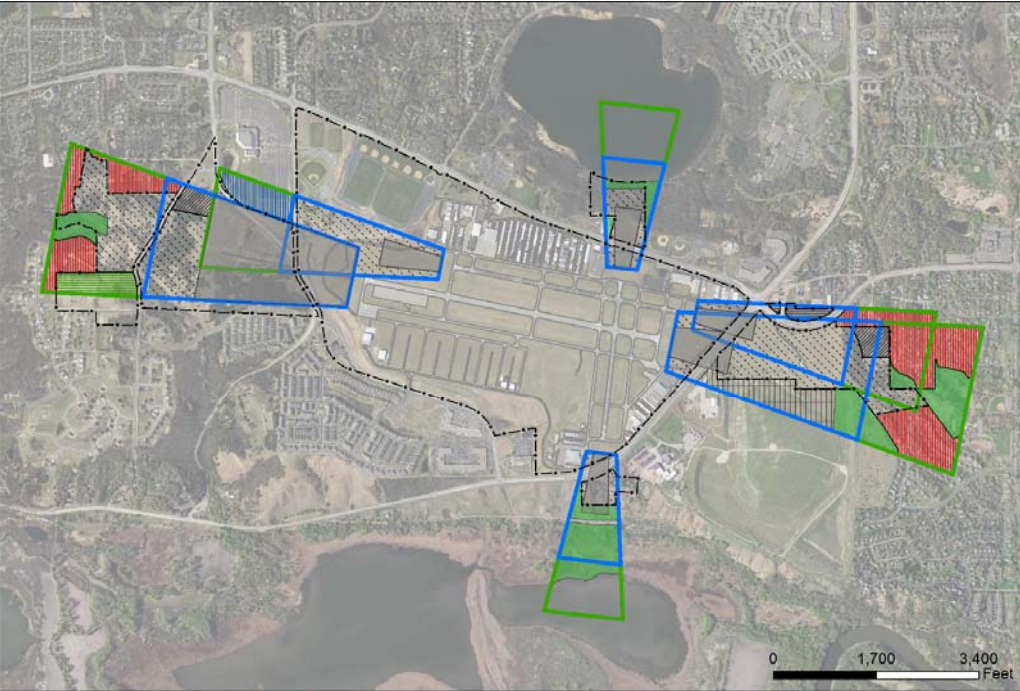
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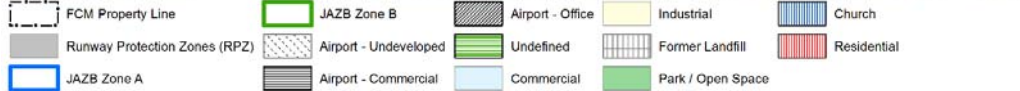
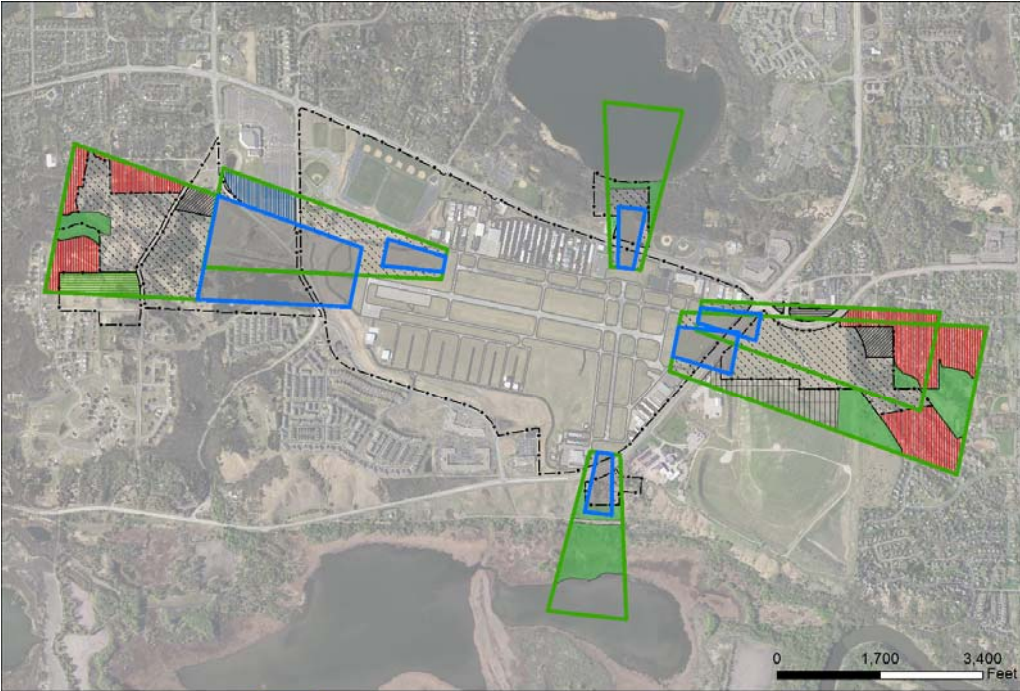


Economic Impact Study Land Uses

State Model Safety Zone Scenario



JAZB Safety Zone Scenario



Economic Impact Study Update

Estimated economic impact of implementing State Model vs. JAZB Scenario

- Value of building development, both residential and commercial
- Value of city real estate taxes, both residential and commercial
- Number of potential jobs associated with proposed development

Evaluated two land use cases per scenario

- Residential vs. commercial/office for MAC-owned parcel on west side of FCM



*MAC undefined
land use parcel*

- Also evaluated high and low ranges for building square footage in commercial land use areas

Economic Impact Study Update

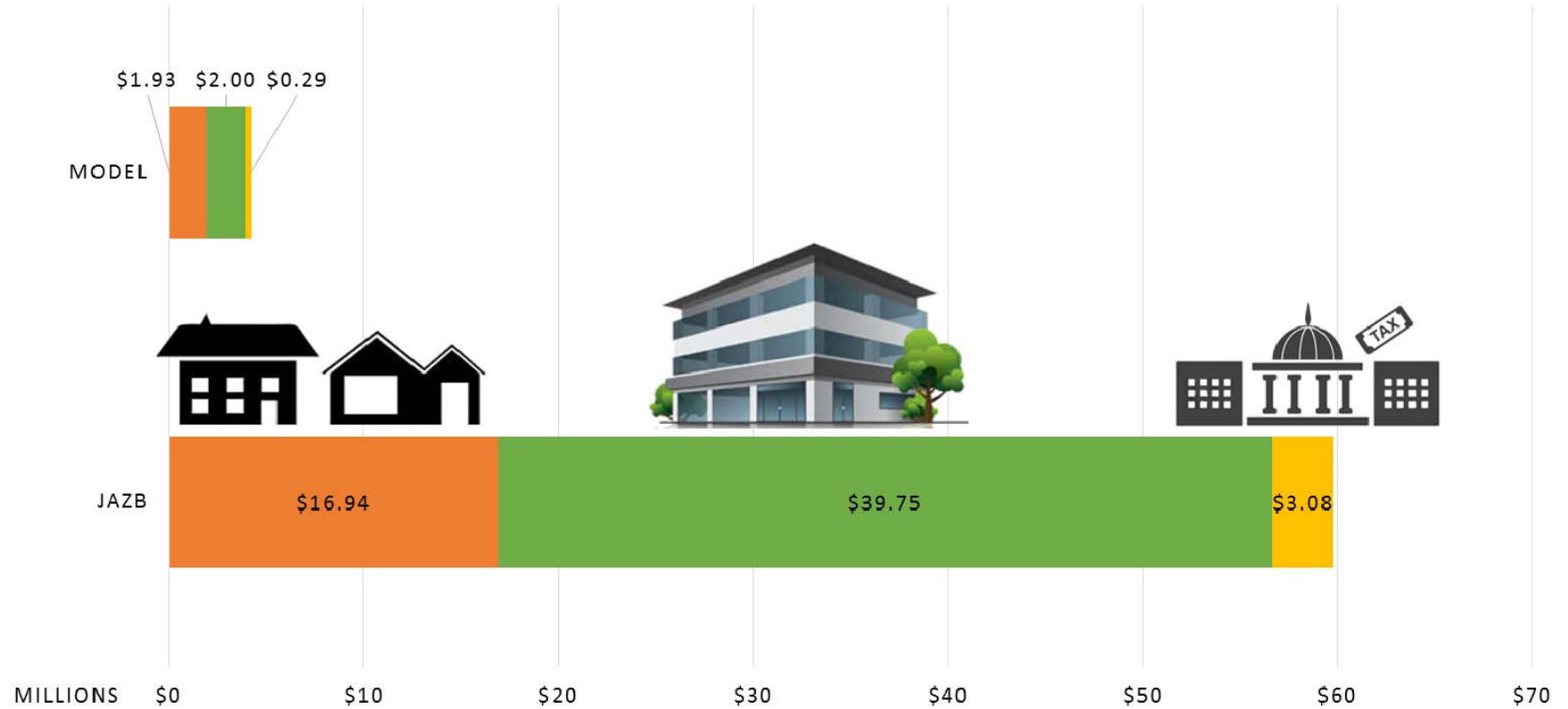
Economic impact of strictly implementing State vs. JAZB scenario:

- Residential
 - Reduction in total residential development of \$6-15 million
 - Reduction in annual residential real estate taxes of \$20-50 thousand
- Commercial
 - Reduction in total commercial development of \$38-58 million
 - Reduction in annual commercial real estate taxes of \$89-237 thousand
- Combined Residential & Commercial
 - Reduction in total combined development of \$53-64 million
 - Reduction in annual combined real estate taxes of \$139-257 thousand
 - 20-year long-term economic impact value of \$56-69m

Combined Development Scenario	Total Development Value	Total Annual Real Estate Tax Value	20-Year Value
<u>JAZB Scenario Case 1</u>			
Range Midpoint	\$56,682,550	\$153,948	\$59,761,503
<u>State Model Scenario Case 1</u>			
Range Midpoint	\$3,925,758	\$14,632	\$4,218,405
<u>Differential Case 1</u>			
Range Midpoint	\$52,756,792	\$139,315	\$55,543,098
<u>JAZB Scenario Case 2</u>			
Range Midpoint	\$75,242,077	\$304,226	\$81,326,601
<u>State Model Scenario Case 2</u>			
Range Midpoint	\$11,583,668	\$47,303	\$12,529,722
<u>Differential Case 2</u>			
Range Midpoint	\$63,658,409	\$256,924	\$68,796,879

Economic Impact Study Update

CASE 1



	JAZB	MODEL
RESIDENTIAL DEVELOPMENT	\$16,935,040	\$1,927,473
COMMERCIAL DEVELOPMENT	\$39,747,510	\$1,998,285
REAL ESTATE TAXES	\$3,078,953	\$292,647

Economic Impact Study Update

CASE 2



	JAZB	MODEL
RESIDENTIAL DEVELOPMENT	\$6,483,592	\$527,584
COMMERCIAL DEVELOPMENT	\$68,758,485	\$11,056,084
REAL ESTATE TAXES	\$6,084,524	\$946,054

Economic Impact Study Update

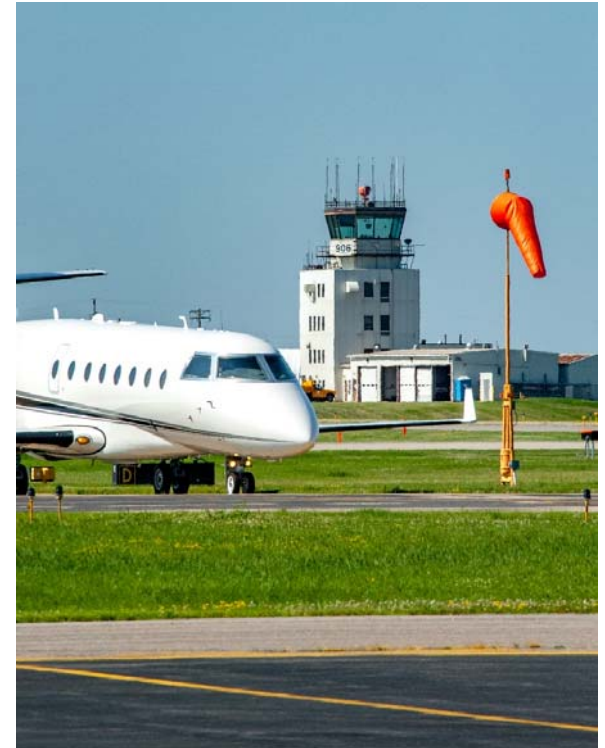
Economic impact of strictly implementing State vs. JAZB scenario:

- Employment generation potential:
 - Reduction in employment generation potential of 600 to 1,000 jobs

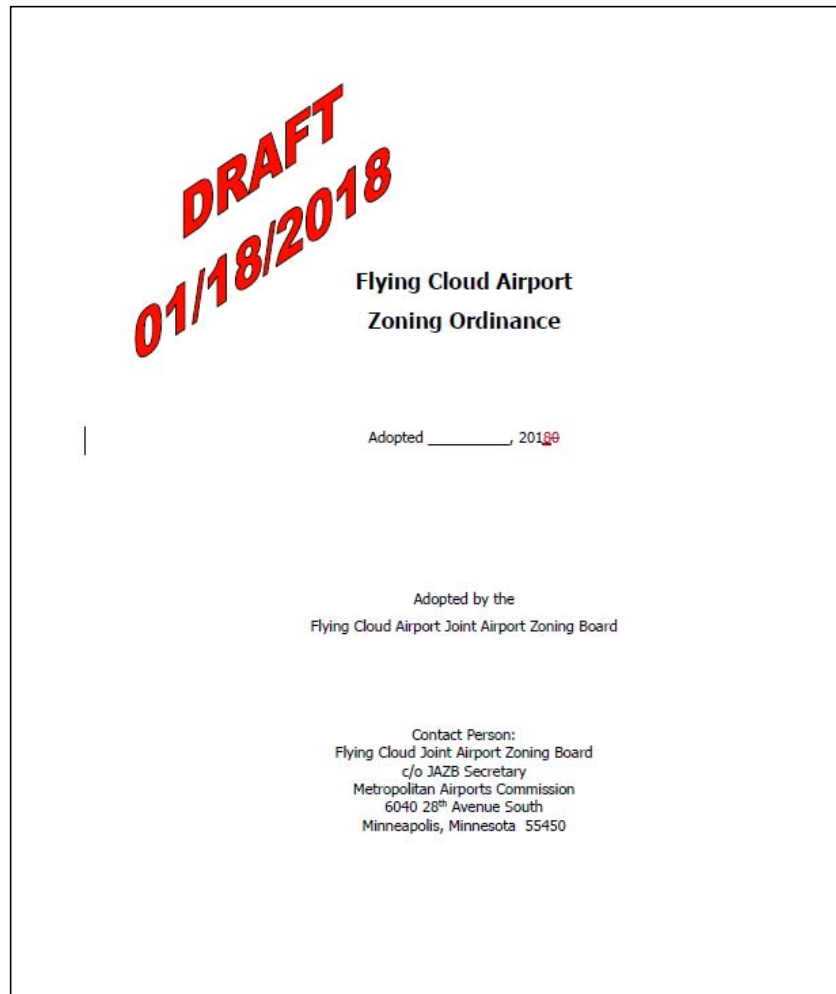
Development Scenario	Employment Potential
<u>JAZB Scenario Case 1</u>	
Range Midpoint	641
<u>State Model Scenario Case 1</u>	
Range Midpoint	37
<u>Differential Case 1</u>	
Range Midpoint	604
<u>JAZB Scenario Case 2</u>	
Range Midpoint	1,173
<u>State Model Scenario Case 2</u>	
Range Midpoint	203
<u>Differential Case 2</u>	
Range Midpoint	970

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FCM Draft Zoning Ordinance Language

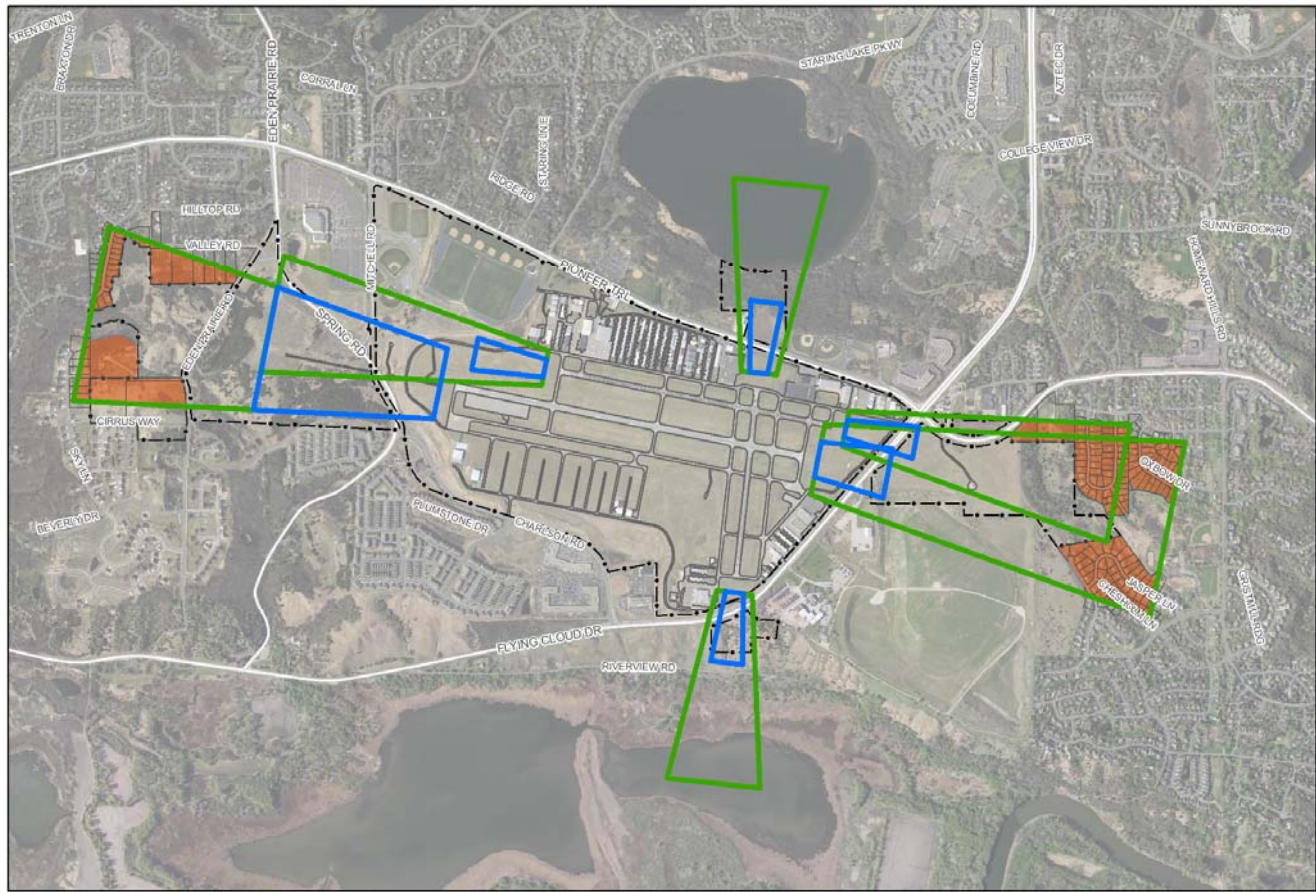


Minor changes and updates from 2010 draft language

- Mostly updates to zone descriptions and dimensions that have changed
- Removed City of Bloomington from the list of JAZB participants
- Adding clarifying language about airspace evaluation process
- Clarified judicial review language
- Track-changed version of the ordinance language is included in **Appendix 7** of the technical report

FCM Zoning Permitted Residential Areas

FCM Zoning Ordinance
Exhibit C - Permitted Residential Areas

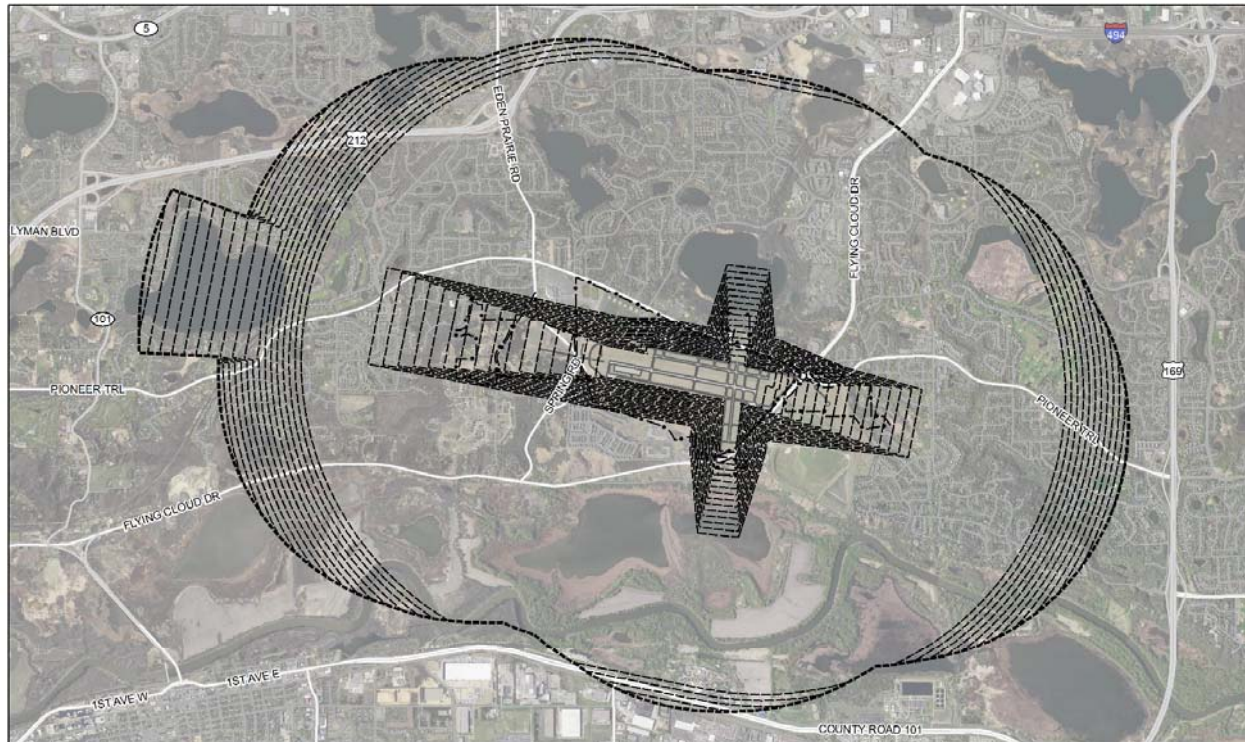


--- FCM Property Line JAZB Zone A JAZB Zone B Parcel Boundary Permitted Residential 0 1,375 2,750 Feet

Residential parcels that will be treated as conforming land uses

- Existing and future
- Allows for improvement, expansion, and development of new residential uses

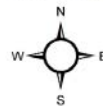
FCM Zoning Airspace Surface Height Grid Map



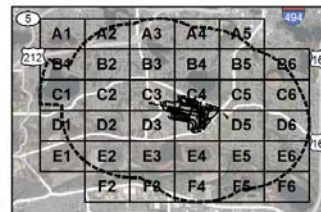
FCM Airspace Zones Within Zoning Limits

A - Index Sheet

-  FCM Property Line
-  Airspace Zoning Limit
-  Part 77 Contours



0 3,200 6,400 Feet

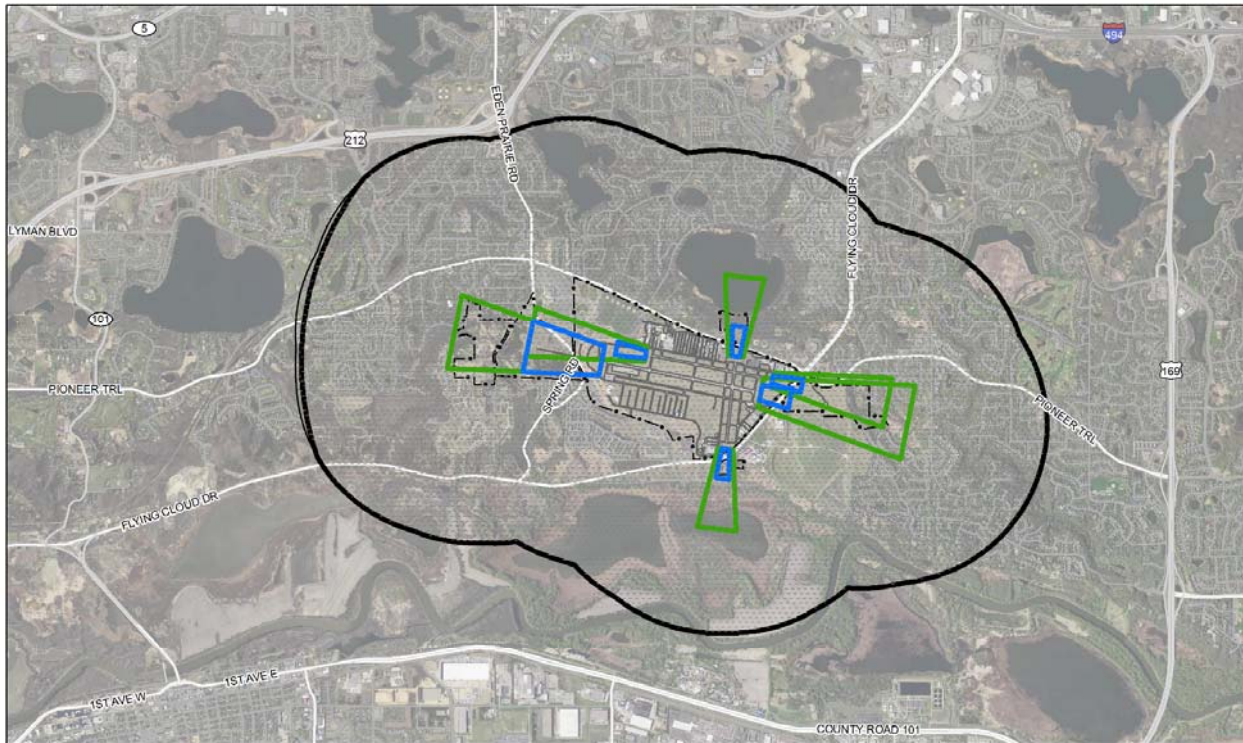


Depicts height limitations imposed by Zoning Ordinance

Based on FAA Part 77 criteria

- Used updated 1-foot airspace contours
- Airspace zones for north parallel runway are based on a steeper approach surface slope due to designation change
- Updated ordinance grid map plates are included in **Appendix 8** of the technical report

FCM Zoning Safety Zone Grid Map

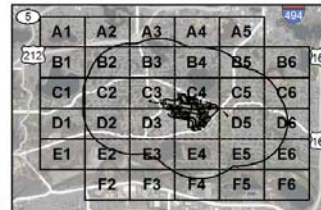
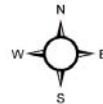


Depicts JAZB Safety Zones

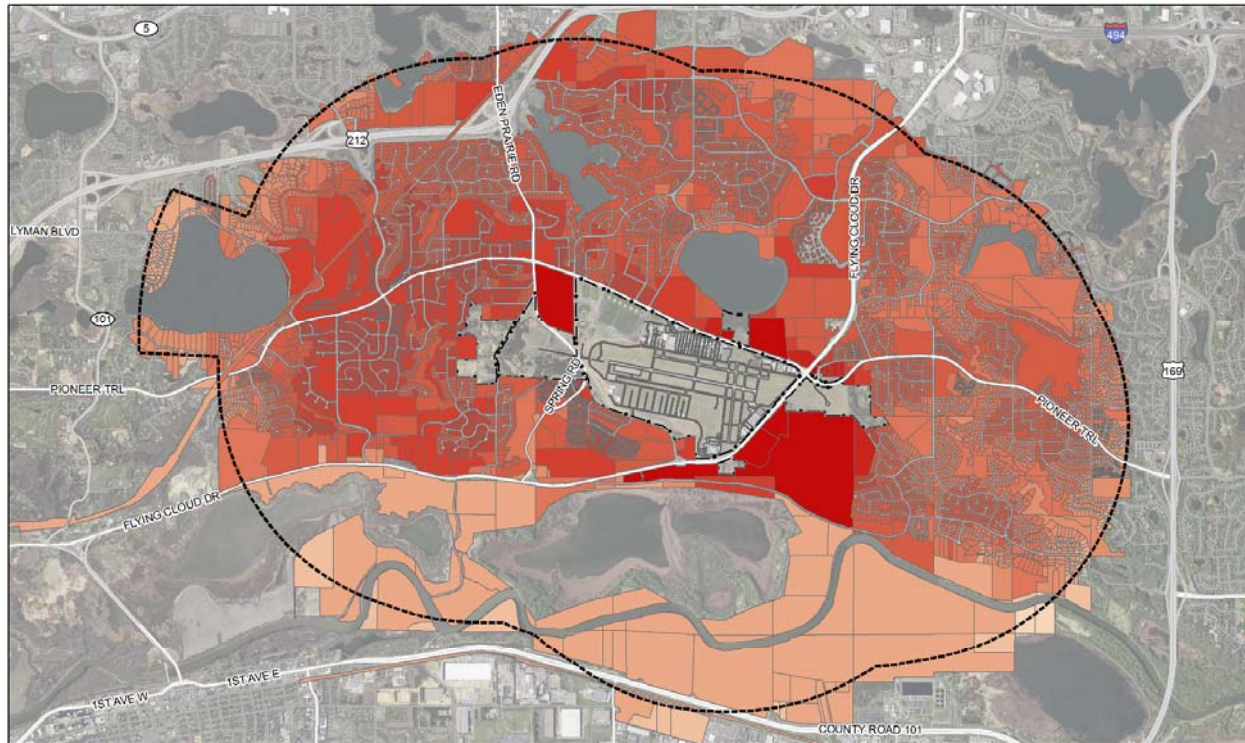
- JAZB Zone A = FAA RPZ
- JAZB Zone B = Balance of State Zone A+B footprint
- JAZB Zone C = State Zone C (within zoning limits)
- Updated ordinance grid map plates are included in **Appendix 9** of the technical report

FCM Airspace Zones Within Zoning Limits

SZ - Index Sheet

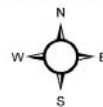
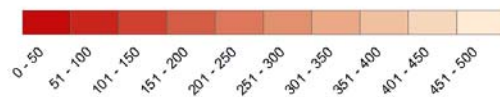


FCM Zoning Maximum Construction Height Without Permit Grid Map

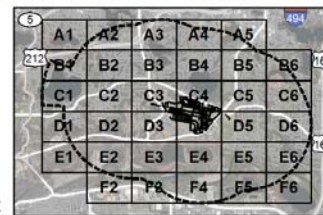


FCM Maximum Construction Heights Without Permit Within Zoning Limits

MCH - Index Sheet



0 3,200 6,400 Feet

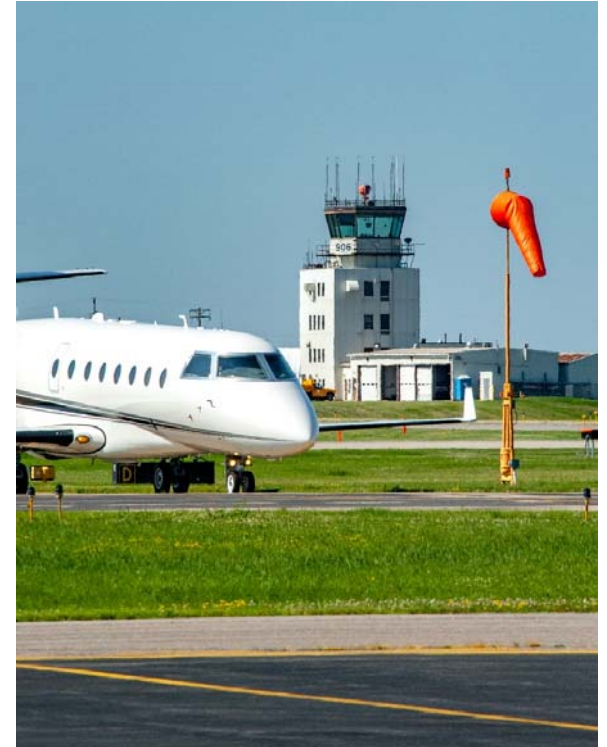


Establishes a height per parcel up to which an airport zoning permit is not needed

- Used updated 1-foot airspace contours and more precise ground elevation contours
 - Identifies the location on each parcel where the highest ground elevation underlies the lowest airspace zoning elevation
 - Subtracts the ground elevation from the airspace zoning elevation
 - Rounds down to the nearest 10 feet
- Updated ordinance grid map plates are included in **Appendix 10** of the technical report

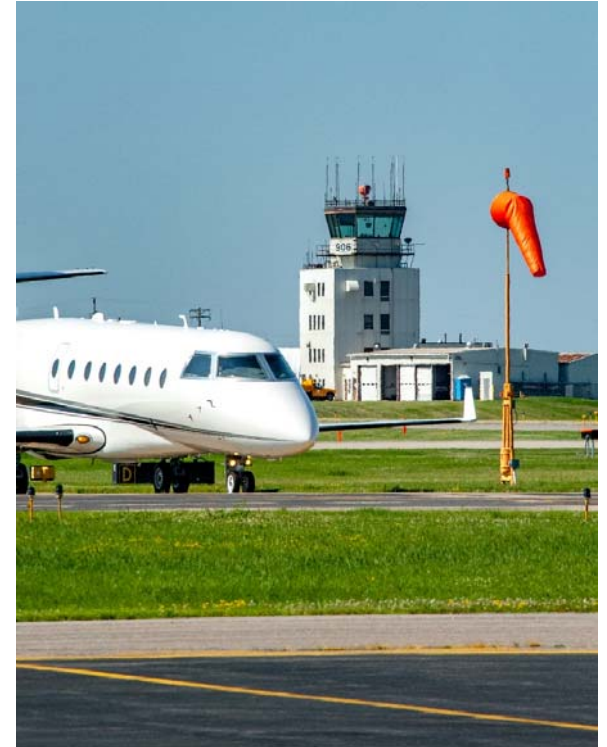
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Next Steps / Timeline

Next Steps

- JAZB Approval of Draft Ordinance for Public Review/Hearing
- Initiate 30-Day Public Comment Period
- Hold Public Hearing #1
- Review comments submitted during public comment period
- Hold JAZB Meeting To:
 - Review public comments and proposed responses
 - Request approval to submit Updated Draft FCM Airport Zoning Ordinance to MnDOT Commissioner of Transportation



Sample Timeline for First Public Hearing

JAZB Approval of updated Draft FCM Zoning Ordinance

- Thursday, February 8

Public Comment Period (30 days):

- Opens week of Monday, February 26
- Closes week of Wednesday, March 26
- Public Hearing: Week of March 12, 5-8pm, Eden Prairie City Hall

Public Newspaper Notices (5-15 days before hearing):

- Star Tribune (general circulation): two times
- Eden Prairie News: one time
- Eden Prairie Sun Current: one time
- State Register: one time

Written Notices (15 days before hearing):

- Governing Boards of affected cities, Hennepin County, Scott County
- MAC GovDelivery distribution list
- Postcard to property owners in JAZB Zones A and B
- MAC website (FCM JAZB page)

Locations to View Draft Documents (15 days before hearing):

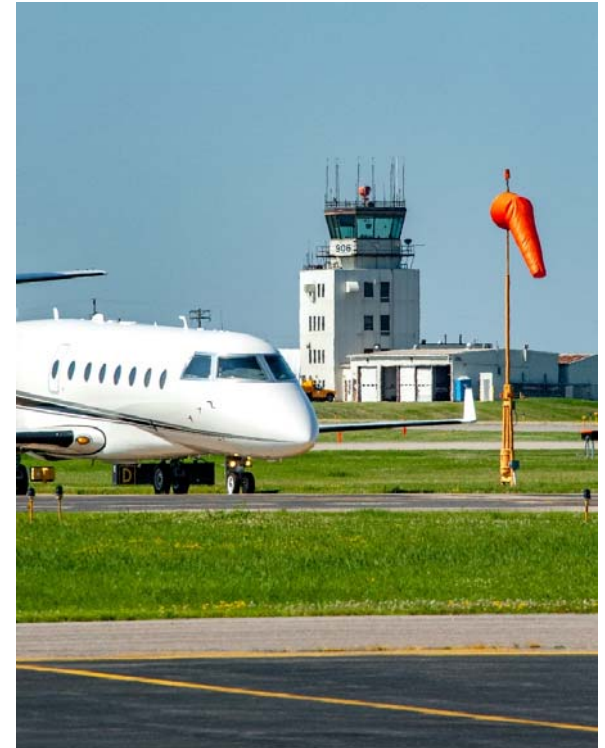
- MAC General Office
- City Hall of each JAZB city member
- MAC website (FCM JAZB page, downloadable PDF)
- Library

All listed dates are +/- and subject to change based on JAZB availability

Eden Prairie schools spring break starts April 2, Shakopee schools spring break starts March 26, Chanhassen schools spring break starts March 23

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Flying Cloud Airport

Joint Airport Zoning Board



Thank you for your participation!