

## Section 5 • Airport Element

### 5.1 Introduction

The close proximity of Minneapolis-St. Paul International Airport (MSP) creates both positive and negative impacts for the City of Bloomington. Urban growth has long been driven by proximity to transportation infrastructure such as water ports, railroads, and highways. In today's global economy, proximity to an airport has become an important economic driver for both national and international success.

MSP is instrumental in the success of many Bloomington businesses including hotels, remote airport parking facilities, offices, some residential projects and the Mall of America. The airport is one of the region's largest employers and many airport employees call Bloomington home.

### 5.2 Context

While MSP is a major economic engine for Bloomington, its proximity brings with it noise, land use restrictions and building height limits. Bloomington lost several businesses and over 160 living units to the construction of MSP's new north-south runway. However, the benefits of having MSP as a close neighbor outweigh the negative impacts and is a net positive for Bloomington. The City supports retaining MSP as the region's one major passenger and cargo airport. At the same time, the City will continue to work actively to reduce and contain the adverse impacts of MSP on Bloomington.

#### Reliever Airports

Figure 5.1 illustrates Bloomington in context to MSP and other regional airports. While MSP is designed primarily for regularly scheduled commercial flights, there are ten other airports in the metropolitan airport system designed to serve personal and private business aviation needs and to relieve MSP of general aviation traffic. The closest reliever airport to Bloomington is Flying Cloud Airport in Eden Prairie. Along with Airlake Airport in Lakeville, Flying Cloud serves the travel needs of Bloomington businesses and residents that cannot be met by scheduled airline service. Although air traffic departing and arriving at Flying Cloud Airport frequently passes over the west edge of Bloomington, the associated noise impacts on Bloomington are limited. Noise contours around Flying Cloud Airport do not extend into Bloomington. The City supports continued improvements for general aviation needs at the Flying Cloud Airport.



#### Future Changes at MSP

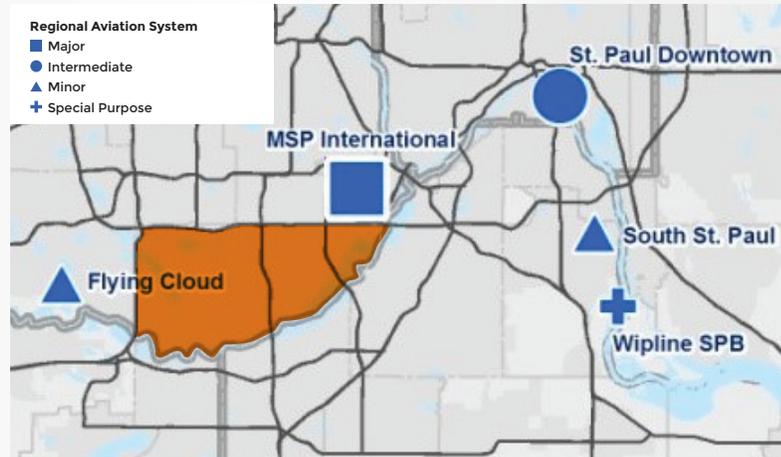
Looking forward, several airport related changes have the potential to impact Bloomington, including:

- MSP's forecast continued growth in passengers and flights.
- Fluctuating aviation fuel costs.
- Major investment in Airport facilities including
  - Onsite parking facilities
  - Hotel
  - Gate Expansion
- The evolution of commercial aircraft fleets toward newer, quieter models.

## MSP Zoning Board of Adjustment (ZBA)

Bloomington coordinates with the MSP Zoning Board of Adjustments in cases where an applicant requests a variance to land use restrictions or height (usually for temporary structure such as a crane).

Figure 5.1 Bloomington Context to Regional Aviation System



## Safety Regulations

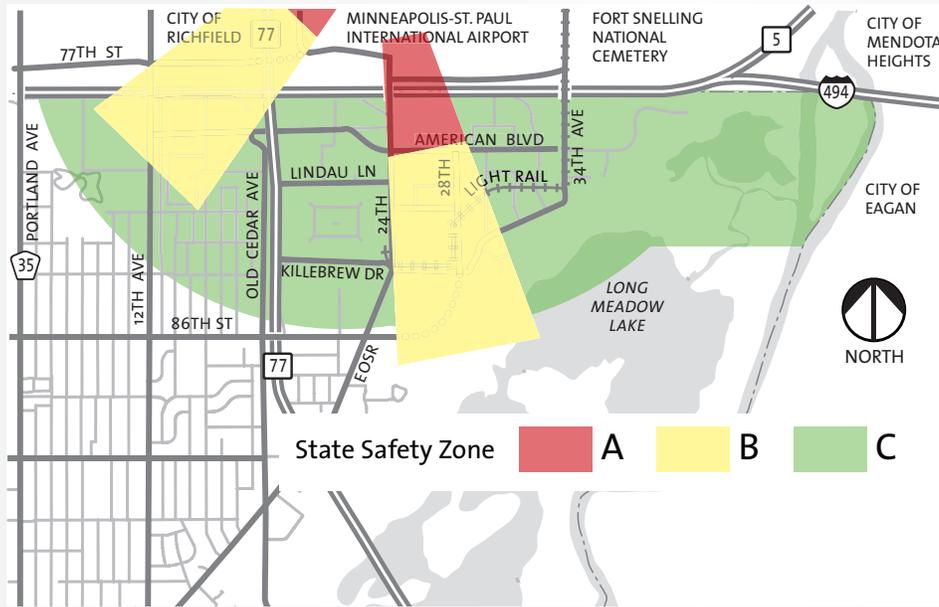
Public safety and aircraft operation safety are overriding considerations in achieving compatibility between the airport and its surroundings. To protect the safety of the flying public and those on the ground, federal and state governments as well as the MSP Zoning Board of Adjustment (ZBA) have instituted a variety of controls that include limits on use and structure height near MSP.

## Runway Safety Zones

After considerable study and public input, in 2004 the MSP Zoning Board of Adjustment adopted the *MSP International Airport Zoning Ordinance* which includes the safety zones depicted in *Figure 5.2*. The ordinance designates the City as zoning administrator for land in Bloomington. The City adopted zoning controls in accordance with the MSP International Airport Ordinance. The ZBA retains power to hear and decide appeals to grant or deny variances.

Safety Zone A corresponds with the Federal Runway Protection Zone (RPZ) within which few uses are allowed. In Safety Zone B, various types of use are prohibited including, residential uses, campgrounds, above ground fuel storage, and ponds that may attract waterfowl or other birds. Safety Zone C regulates activities and structures that would interfere with airport communications or with a pilot's view of the airport.

Figure 5.2 Runway Safety Zones

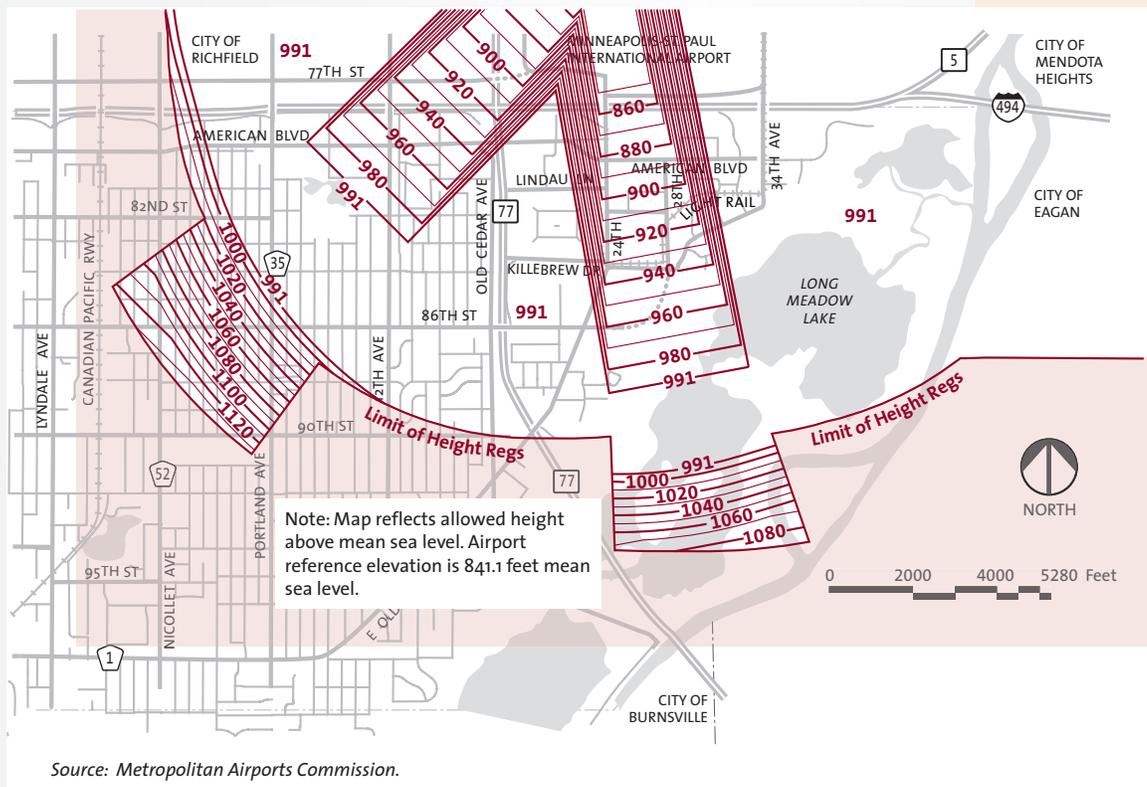


Source: Metropolitan Airports Commission

### Height Limits

Development near MSP is subject to height restrictions to ensure the flight path and air space remains clear of potential obstructions. *Figure 5.3* depicts the height limits allowed in both the Federal Aviation Administration (FAA) and the *MSP International Airport Zoning Ordinance*. Bloomington has implemented the safety and height restrictions of the *MSP International Airport Zoning Ordinance* through adoption and implementation of the AR-17 and AR-22 overlay districts and by rezoning parcels.

Figure 5.3 Airport Building Height Restrictions



Source: Metropolitan Airports Commission.

## Section 5.3 Opportunities and Challenges

### South Loop Development District

The City of Bloomington, and particularly, the South Loop District are significantly influenced and impacted by Minneapolis-St. Paul International Airport (MSP). The City is home to over 9,000 hotel rooms, which is directly correlated with its proximity to the MSP. Convenient access to an airport that serves destinations across the country and world is an amenity that attracts international corporations, conventions and conferences, and air freight businesses.

Forecast increases in air travel through MSP may increase local tourism and business, particularly at the Mall of America and other South Loop District destinations. The METRO Blue Line LRT provides a seamless connection between MSP and the South Loop's many hotels and businesses, terminating at the Mall of America.

Major infrastructure investments underway at MSP will accommodate increased operations. Improvements include additional gates, a hotel, improved terminal amenities, and additional on-site parking facilities. Currently, two large off-site airport parking facilities operate in the South Loop District. These facilities – comprised mostly of large surface parking lots - occupy large properties near the intersection of American Boulevard and 34th Avenue. If demand for off-site parking declines as a result of increased on-site parking at MSP, market interest in redeveloping these sites may increase. Given their adjacency to a METRO Blue LRT station these sites offer an excellent opportunity for new transit-oriented development. The South Loop District Plan identifies this area for a mixed use, residential neighborhood centered on the American Boulevard LRT Station.

One of the challenges for residential development in the South Loop District is mitigating aircraft noise. Operations (flight volumes) are projected to increase up to 20% by 2030. This in turn may increase noise impacts as well as vehicle traffic in the South Loop District. The central portion of the South Loop District is located directly under the flight path for runway 17/35, which coincides with the City's Airport Runway Overlay zoning districts. Restrictions on certain uses and building heights apply within the runway overlay districts. As a result, residential development is only allowed – and planned - in portions of the South Loop located outside of the runway zones A and B.

Infrastructure improvements have also been made to address the projected increase in vehicle traffic and congestion resulting from increased airport operations. The interchange of I-494 and 34th Ave S. was reconstructed in a diverging diamond configuration that incorporates the METRO Blue Line LRT tracks. This unique design increased the capacity of the interchange to accommodate access to MSP Terminal 2. It also serves as a primary entrance to the South Loop District.

## Noise

Noise is the most widespread environmental impact associated with MSP and perhaps the most difficult airport-related problem to mitigate. While all of Bloomington is exposed to noise from overhead aircraft, noise levels are most intense in portions of eastern Bloomington near the airport and under flight paths. Figure 5.4 depicts 2017 runway flight activity at MSP and Figure 5.5 depicts the 2017 aircraft noise exposure levels, which affect the South Loop District.

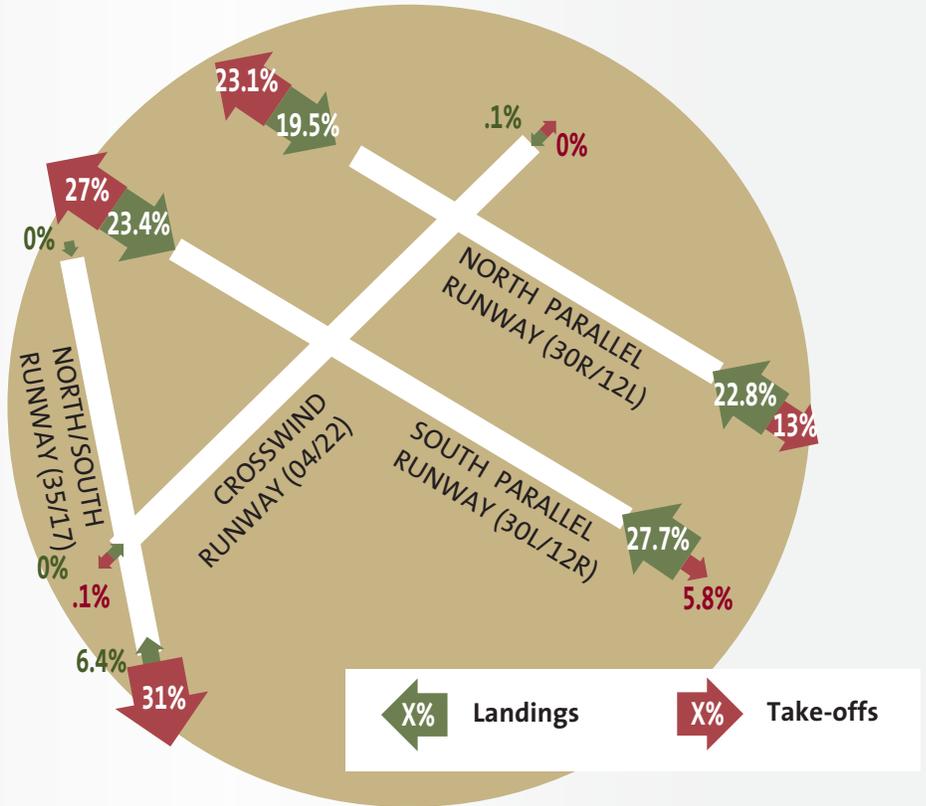
The FAA identifies land use compatible near airports based on yearly average Day-Night Levels (DNL). Noise impacts at DNL 75 and above are considered severe. Residential, most public and quasi-public, and hotel uses are incompatible with these high noise levels. Other non-industrial land uses are appropriate only when adequately insulated. Sustained noise impacts at DNL 70-75 can interfere with speech and sleep. Thus, residential land uses and most public and quasi-public uses are incompatible with these noise levels. Depending on their nature, other uses may be deemed compatible if adequate noise insulation is provided. There are currently no residences in Bloomington exposed to noise at or above DNL 70. Noise impacts at DNL 65 to DNL 70 are still considered significant while noise impacts at DNL 60 to DNL 65 are considered moderate.

The Metropolitan Council identifies similar incompatible land uses based on sound level measurements inside a building. This approach provides developers more latitude regarding mitigation of noise through building techniques such as insulation and specialized windows. To mitigate noise impacts around airports, the Metropolitan Airports Commission (MAC) implemented a program to install noise mitigation features in residences experiencing noise at or above DNL 60. This program was used to assist several properties in Bloomington. Mitigation measures ranged from adding air conditioning to window replacement and wall and attic insulation. In addition, the MAC purchased several properties in the South Loop District where structural mitigation measures were not sufficient to reduce noise to acceptable levels. The MAC is in the process of marketing these properties for redevelopment.

### Day-Night Average Sound Level (DNL)

The Day-Night Average Sound Level (DNL) metric is currently the standard noise descriptor specified by the Federal government for transportation noise sources. The DNL is the sound level measured in decibels on a weighted scale. The DNL represents noise exposure over a 24 hour period. Noise events that occur between the hours of 10 pm and 7 a.m. receive a “penalty” because the human ear is more sensitive to noise during this period.

Figure 5.4 Airport Runway Use at MSP International Airport, 2017



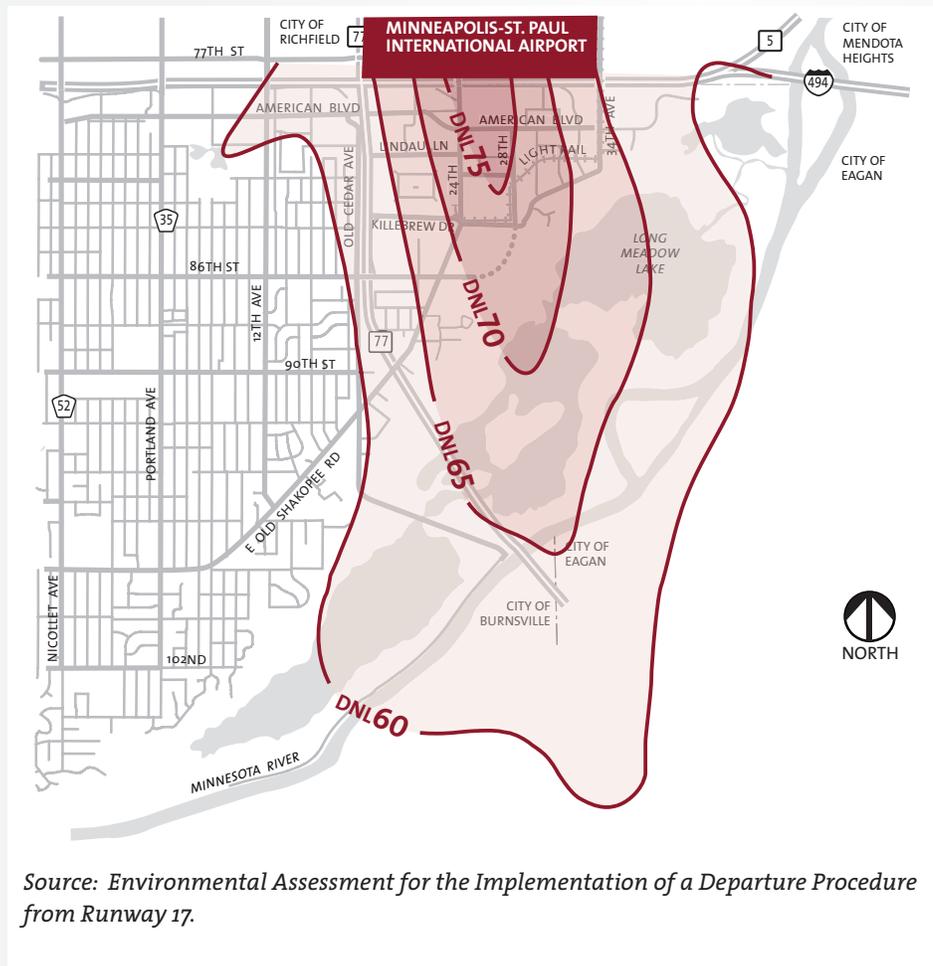
Source: Metropolitan Airports Commission, Annual Noise Contour Analysis - 2017, Table 2.2.

Figure 5.5 Day-Night Sound Level, 2017



Source: Environmental Assessment for the Implementation of a Departure Procedure from Runway 17.

Figure 5.6 Day-Night Sound Level, 2005



Source: Environmental Assessment for the Implementation of a Departure Procedure from Runway 17.

The MAC estimates noise levels and updates its noise contour maps annually. The 2017 contours shown in Figure 5.5 are substantially different from noise contours defined just ten years ago. In 2005, much of the South Loop District was under the 70 DNL, (see Figure 5.6) whereas in 2017, the 70 DNL contour covers just a small area located in the Runway Protection Zone (Safety Zone A) where development is prohibited.

Noise levels fluctuate overtime and are greatly affected by changes in flight volumes and improvements to aircraft design. New aircraft engines are substantially quieter and more precise flight patterns, reduces the size of the area impacted by noise. However, with flight traffic projected to increase at MSP over the next 20 years, the noise contours depicted for 2017 will likely change.

## 5.4 Goals, Strategies, Actions

**Goal 1: Support MSP as the region's one major passenger and cargo airport through continued investment designed to preserve MSP's status as a first class international airport.**

***Strategy 1.1: Advocate for and support infrastructure and safety improvements to improve operations and encourage continued growth at MSP.***

- Continue to review and evaluate impacts of airport operations on transportation and other infrastructure in and adjacent to the City of Bloomington.

***Strategy 1.2: Continue to participate in joint airport advisory boards, committees, and planning efforts.***

- Consult with the Metropolitan Airports Commission during consideration of amendments to the South Loop District Plan.
- Request Bloomington involvement in MSP master planning efforts.
- Assist the MAC with sale or development of properties in Bloomington purchased as part of the 17/35 runway mitigation project.

***Strategy 1.3: Ensure new development does not negatively impact airport operations.***

- Enforce the Minneapolis-St. Paul International Airport Zoning Ordinance
- When required under federal law, encourage applicant submittal of a Notice of Proposed Construction or Alteration (FAA Form 7460) to the Federal Aviation Administration during the development review process.

**GOAL 2: Minimize MSP's adverse impacts on Bloomington.**

***Strategy 2.1: Encourage continued improvements at the regional airports for general aviation needs and relieving general aviation traffic from MSP.***

***Strategy 2.2: Support aggressive mitigation of aircraft noise impacts.***

- Advocate for strategies to reduce impacts of aircraft noise such as timing, flight path, and equipment.
- Implement insulation standards for new development in areas exposed to high levels of aircraft noise.
- Encourage appropriate noise mitigation in conjunction with changes to airport operations to minimize noise exposure to Bloomington homes.

**GOAL 3: Capitalize on the unique benefits of adjacency to the airport.*****Strategy 3.1: Support changes at MSP airport that reduce demand for remote airport parking facilities.***

- Review remote parking facility interim use permits upon expiration for consistency with the South Loop District Plan and Comprehensive Plan.
- Work with property owners on redevelopment of existing remote airport parking facilities.

***Strategy 3.2: Promote development and redevelopment in the South Loop District.***

- Promote development consistent with the South Loop District Plan.
- Increase awareness of development applications in the South Loop District.

***Strategy 3.3: Support tourism, business, and hospitality uses by capitalizing on proximity to an international airport.***

- Collaborate with Chamber of Commerce, Bloomington Convention and Visitors Bureau, and others to market Bloomington as an employment center and tourist destination.

***Strategy 3.4: Work with the Joint Airport Zoning Board to routinely evaluate use compatibility standards.***

- Evaluate compatibility standards as airport operations and aircraft noise contours change.

