3.0 ACTIVITY PROJECTIONS

This chapter presents projections of passenger and aircraft activity used as the basis for the General Mitchell International Airport Master Plan Update. These projections are essential for:

- *Determining the future role of the Airport in both the type of aircraft to be accommodated and the type of aviation demand to be served;*
- *Evaluating the capability of existing Airport facilities and their ability to absorb projected aviation demand; and*
- *Estimating the extent to which airside and landside facilities should be provided at the Airport in future years.*

The development of the projections is discussed in the following sequence:

- *Air Transportation Technology and Trends*
- *Annual Passenger Projections*
- *Annual Cargo Poundage Projections*
- *Annual Operations and Fleet Mix Projections*
- *Peak Hour Projections*

The discussion of air transportation technology and trends describes the aviation environment in which the Airport will operate over the next twenty years. It is presented first because it is against this background that the projections were developed.

3.1 AIR TRANSPORTATION TECHNOLOGY AND TRENDS

In planning for future growth at the Airport it is important to understand the context within which the potential increases in air traffic will occur. Trends in aircraft, airline and airport technology routinely affect how airports deliver services. Perhaps the most significant example of how changes in the environment can impact the delivery of airport services is the evolution of security issues since the institution of security screening in the 1970s. Passengers suddenly had to flow through new single points of

processing to reach the departure gate after arriving at the airport. Security measures after the crash of a TWA flight off the coast of New York expanded to include the requirement for one-on-one identity checking and eliminated the issuance of advanced boarding passes, necessitating further changes in airline and airport procedures. Since September 2001, security measures have become even more stringent, significantly changing how passengers travel by air.

This section discusses some of the changes on the horizon for the next twenty years that may have an impact on how passengers travel through airports and how airlines process these travelers. The section is organized as follows:

- *Future Patterns of Air Services*
- *Nation-wide Projections of Passenger and Cargo Growth*
- *Future Growth of General Aviation*
- *Technological Trends in Aircraft Development*
- *Future Air Traffic Control Technology*
- *Pertinent Airport Facility Trends*

3.1.1 Future Patterns of Air Services

The profitability of the 1990s in the aviation industry fostered the emergence of a new round of small carriers. These operators are larger than the regional carriers that have been acquired and/or allied with the major carriers, feeding hub systems from small spoke cities. These new carriers, such as AirTran, Spirit, JetBlue, Pan Am are, in some cases, reincarnations of previous carriers, and in some cases, brand new. They tend to operate with the low-fare, no-frills model, and they start out by concentrating on small parts of the country. The degree to which these carriers go head-to-head with major carriers varies, but each is attempting to carve out its own unique sphere. In many cases these carriers are serving smaller cities, carrying connecting traffic through their own mini-hubs or "focus cities." The advent of these new carriers is expanding service across the country and giving travelers a variety of options for fares, routings and carriers. In many cases these carriers are operating with newer aircraft and are

appealing to masses of travelers seeking low fares. Several of these carriers have fared well in the recent nine-month period following September 2001. Their emergence is an indication that competition in the industry continues.

The industry is still suffering from the after-effects of the September 11 terrorist attacks. This, combined with a weak economy is depressing traffic, even in the face of low fares. Business travelers have started balking at high fares, and are either traveling at discounted fares, or not traveling at all. Major carriers are wrestling with how to restructure their fare systems to attract these lucrative customers while still achieving yields that will assure profitable operations. Meanwhile, those customers who have returned to the skies in the last few months have done so at low fares.

Regional carriers are continuing the transition to jet aircraft, making them an appealing product for the customer, as well as a cost-efficient business component for their major carrier partners/owners. This trend is very evident at an airport like GMIA. Several carriers at the Airport have transitioned almost completely to the regional jets. American Eagle and its fleet of regional jets has completely replaced American at the Airport. Continental Express provides service for Continental with regional jets. USAirways Express provides several frequencies with regional jets in complement to the major partner's jet operations at the Airport. Delta has maintained its level of service in large jet aircraft and also provides service on its Comair and Atlantic Southeast partners.

American Trans Air has converted to regional service using Chicago Express on turboprop aircraft. Skyway (soon to become Midwest Connect) has begun transitioning to a regional jet fleet. It still operates primarily turboprop aircraft, but that will change in the next few years. However, there will always be small markets around Wisconsin and Michigan that will support service only on very small aircraft. Therefore, it is unlikely that the turboprop will disappear from scheduled service at GMIA during the forecast period. Whether it will be Midwest Connect providing the service, or another, smaller operator remains to be seen.

3.1.2 Nation-wide Projections of Passenger and Cargo Growth

Strong economic growth drove total domestic passenger growth in the United States by 3.4 percent annually 1990 through 2000. In 2001, passenger traffic declined 6.0 percent. The effects of terrorism and the slow economy will depress total domestic traffic growth in the U.S. until 2003, but it is expected to rebound, growing at 3.6 percent annually between 2001 and 2021. Regional carrier activity in the United States has grown at 8.3 percent annually from 1990 through 2000 while the major carriers grew at 2.9 percent per year. Over the 2001 through 2021 forecast period, regional traffic will grow at 5.0 percent per year, while major carrier enplanements will increase 3.4 percent per year. At GMIA, enplanements grew at 3.2 percent annually from 1990 through 2000, slightly below the 3.4 percent U.S. average. Over that time period, there has been a significant shift from service by major carriers to their regional partners at the Airport.

Domestic cargo on U.S. carriers, as measured by revenue ton miles, grew 5.1 percent per year from 1993 through 2000, and fell 10.1 percent in 2001. Domestic volume is expected to increase at 3.8 percent annually from 2001 through 2021. This lower growth expectation is driven somewhat by the increased security regulations governing the carriage of air cargo.

The year 2001 indicated that the aviation industry was beginning to see a turn-around in its strong financial performance, even before the disastrous happenings of September 11. Total traffic was down in the first quarter, and high-yielding business traffic was falling off. The U.S. and world economic activity slowed in 2001, and aviation suffered accordingly. The outlook is that a rebound will begin in 2003 or 2004.

3.1.3 Future Growth of General Aviation

General aviation has made an extraordinary recovery from its severely depressed state in the early 1990s. Substantial increases in liability costs due to incidents involving aging general aviation aircraft had virtually halted aircraft production. Following the passage of the General Aviation Revitalization Act in 1994, all measures of general aviation activity have increased. According to the FAA, shipments of general aviation aircraft increased from a low of 928 units in 1994 to 2,220 units in 1998, an average annual growth of over 24 percent.

Programs by all segments of the industry are aimed at continuing healthy growth in activity. Manufacturers such as Cessna, Raytheon, Mooney and Piper are introducing new models of general aviation aircraft. Boeing, Airbus, and Fairchild are all marketing business jets. The FAA is promoting safety in general aviation in a variety of areas. Industry and government groups are joining efforts to improve technology in safety, engine reliability and efficiency, dissemination of weather information and navigational improvements.

The concept of "fractional ownership" of business jet aircraft is also expanding that segment of general aviation activity. Fractional ownership allows a corporation or individual to own an interest in an aircraft in a time-share situation. None of the fractional owners is required to provide pilots, maintenance or scheduling of the aircraft. Each fractional owner is entitled to a portion of the aircraft's time. This allows for use of a business jet without the need for a flight department in a corporation, and without the hassles of ownership for an individual. This concept could increase the use of corporate jets in the future. There is still some debate in the industry as to whether these operations should occur under Federal Aviation Regulation (FAR) Part 91, as they currently do, or under the more demanding FAR Part 135. Upgrading the regulatory classification to FAR Part 135 may dampen the growth of this activity.

Increases in fuel costs and the struggling economy caused a decline in aviation activity in the last two years. Restrictions after September 11 negatively impacted general aviation activity even further. From 1990 through 2000 general aviation activity in the United States grew at an annual rate of 2.4 percent. In

2001 there was a 6.4 percent decline in activity. Nationally, it is expected that general aviation operations will increase at an average annual rate of 1.5 percent 2001 through 2021. General aviation operations at GMIA declined fairly steadily over 1990 through 2001 period, trending downward at an average of 4.9 percent annually. General aviation operations at GMIA declined 13 percent in 2001.

3.1.4 Technological Trends in Aircraft Development

Among the most significant changes in recent years in aircraft development in commercial service in the United States is the emergence and growing role of regional jets. Coupled with partnerships between major and regional carriers the growing use of regional jets, has significantly restructured the route systems of both types of carriers. Regional jets allow longer-range capability, a higher degree of passenger comfort, and a perception of increased safety on the part of travelers relative to non-jet aircraft previously flown by commuters. The regional jet has freed up capacity for the majors, better rationalized fleet mix to market demand, and helped to increase load factors across the domestic system. According to Boeing's Current Market Outlook, the number of these jets in service is projected to grow almost 9 percent annually worldwide over the next twenty years. This is approximately twice the growth rate expected for all commercial passenger aircraft.

Over the forecast period, demand for large, long-range aircraft like the 747 is expected to decline as airlines choose to take advantage of the operational efficiencies offered by intermediate-sized, usually two-engine, newer aircraft. This aircraft type, such as the 757, 767 and Airbus 319/320 has the range to serve U.S. transcontinental markets and many international markets. In addition to the fuel efficiencies of only two engines, these aircraft require a cockpit crew of only two, further contributing to improved operating economics. Also, new versions of aircraft such as the 737 and A318, with seating in the 120-175 seat range, have provided major carriers with the option to economically offer high frequency, which has stimulated additional traffic in the past decade.

3.1.5 Future Air Traffic Control Technology

The FAA has initiated several major programs over the last several years aimed at near-, intermediate- and long-term solutions to increasing congestion and delays. Chief among these programs is the Free Flight Program. This program allows pilots and controllers to work together to manage air traffic more efficiently. It will allow pilots in the future to fly the most direct, cost-effective routes, reducing costs and delays. Some of the developments on-going in the FAA to support Free Flight are:

- *Enhanced Traffic Management System*. This system provides data on National Airspace System (NAS) facilities, airspace structures, airport differences and aircraft distances. It enables traffic management specialists to regulate the flow of air traffic to minimize delays and congestion while maximizing the use of the NAS.

- *Departure Spacing Program*. This program assists air traffic controllers in sequencing departure times for a runway, sequencing departures across departure coordinates, and coordinating arrivals and departures when a common runway is in use. It also provides departure predictions to the traffic management system for use in predicting resource demand.

- *Host Oceanic Computer System Replacement*. This enroute center automation system is the foundation of the FAA's Automated Air Traffic Control environment. It receives, processes, coordinates, distributes and tracks information on aircraft movements throughout the NAS.

- *Weather Assistance Radar Program*. This program is intended to provide next generation weather radar information to air traffic controllers.

In addition to these programs, the FAA is working with the commercial aviation industry on a regular basis to address issues such as delays during peak summer activity periods and during periods of severe weather in large areas of the country.

There has been talk in the industry over the last several years about the potential benefits of privatizing the operation of the nation's airspace. However, at this time there are no signs that indicate a move towards that direction.

3.1.6 Pertinent Airport Facility Trends

Airport facility requirements will be affected by many of the changes discussed above. Additionally, facility requirements at airports today are significantly affected by increasing security provisions, rapid growth in regional jet activity, and improved technologies.

New security provisions are revolutionizing the way which facility requirements are determined. Security requirements will affect all aspects of airport passenger and cargo handling and processing.

Increased service by regional carriers may require different types of ramp and connecting capabilities. As regional equipment evolves, and the desire by carriers to provide a "seamless" travel experience increases, ground-level boarding and unloading of passengers from the ramp become less desirable. The increasing predominance of airline alliances, which can be redefined frequently, may require increased flexibility in the location of carriers at an airport. When an alliance is formed, the involved carriers desire proximate, if not adjacent, ticketing/gating/baggage operations, club facilities, office space, etc. This will increase the need for flexibility in airport signage, assignment of space to carriers by airport management, and lease agreements between airports and carriers.

At large hubs and airports where heavy international traffic continues to grow, there may be an increased demand by air carriers to use technology to help manage their operations and facilitate the flow of customers from curb to plane. Technology such as the following may be considered in order to better manage airport staffing and improve the passenger's experience:

- *Passive video displays or interactive kiosk set-ups for improved communication with passengers regarding flight status, stand-by list status, weather and flight alternatives.*

- *Increased automated check-in capability in the ticket counter area, gate area, and parking lots; and*

- *Automatic recording of passenger information such as: arrivals at the ticket counter; service times at counters, gates and checkpoints; and* overall throughput time of outbound passengers.

3.2 ANNUAL PASSENGER PROJECTIONS

The Master Plan Update Study's projections for the Airport were developed for the years 2006, 2011 and 2021. The base year for passenger volume projections is 2001. For peaking analysis and 24-hour daily schedule development, 2002 data were used. The actual schedule for 2002 was adjusted to represent the most current pattern and distribution of activity. The primary source of data was from GMIA staff and records. Other sources used were Official Airline Guide (OAG) schedule data, U.S. Department of Transportation (DOT) data on origin/destination traffic and activity by carrier, Federal Aviation Administration annual forecasts, and Woods & Poole Economics data on historical and forecast county level socio-economic parameters.

This section is organized as follows:

- *Passenger Projection Methodology*
- *Passenger Projections*
- *O&D Domestic Passenger Market Analysis*
- *Summary of Passenger Projections*

3.2.1 Passenger Projection Methodology

General Mitchell International Airport draws passengers from the greater Milwaukee area, southeastern Wisconsin, and several counties in northern Illinois that are situated as near to GMIA as they are to Chicago O'Hare Airport.

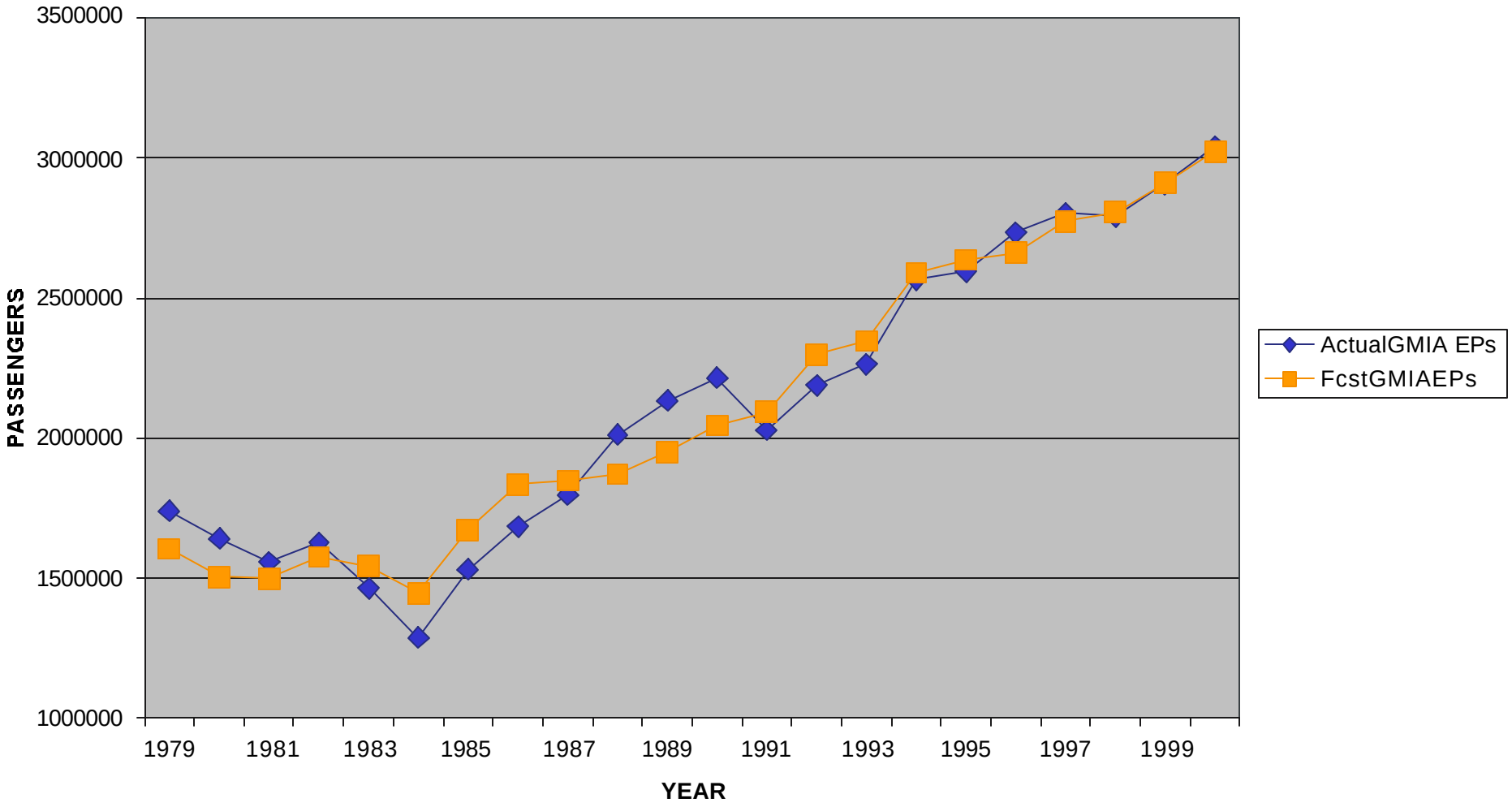
Historical activity at the Airport from 1979 through 2000 served as the basis for projecting passenger traffic through 2021. 2001 data were not included because of the distortions caused by the events of September 11. Adjustments were made later in the forecasting process to account for those changes. Projections were made using regression analysis relating the volume of travel at the Airport to socioeconomic factors in the surrounding region and the cost of air travel at GMIA. In formulating the relationships among these factors, several different measures were used to represent the demand for air travel, the cost of air travel, and the socio-economic activity in the surrounding area.

Air travel demand was represented as total enplaned passengers, and as origin/destination (O&D) passengers. The cost of air travel was represented by airline yield at the Airport. Airline yield is the revenue collected by the airline for carrying one paying passenger one mile. Variables were also included in the analysis to reflect the start-up of service by Midwest Express in 1984, and to account for the impact of the Gulf War.

The socioeconomic factors that were analyzed included population, personal income, per capita income, and employment. The counties analyzed for inclusion in the analysis included the seven counties comprising the area covered by the Southeastern Wisconsin Regional Planning Commission (Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington and Waukesha), and three neighboring counties in Illinois (Lake, McHenry and Winnebego).

In developing the statistical relationships among these variables, both linear and logarithmic formulations were considered. Linear formulations imply that the absolute growth in traffic is related to the absolute growth in the other variables. Logarithmic formulations imply that the rates of traffic growth are related to the rates of growth in the other variables.

The equation chosen was selected for its statistical goodness of fit to the historical data, and for its reasonableness in the implied relationships. This goodness to fit is graphically presented in **Exhibit 3.2-1**. This exhibit displays the



GENERAL MITCHELL INTERNATIONAL AIRPORT MASTERPLAN UPDATE

ACTUALvsFORECASTENPLANEMENT

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close agreement between the actual history, and the passenger traffic predicted for the 1979 through 2000 time period by the chosen equation. The equation and its statistics are as follows:

LN (GMIA Enplaned Passengers) =
- 2.450
+ 2.347 * LN (10-County Population)
- 0.536 * LN (GMIA Airport Yield)

R-Squared = .945
F Statistic = 162.25
T Statistics:
Population= 5.05
GMIA Yield = -3.35

The positive coefficient of the population variable indicates that Airport traffic increases as the 10-county area's population increases. The negative coefficient for yield indicates that increasing yields at GMIA exert a downward pressure on enplanements, while declining yields exert an increasing pressure on traffic.

Use of this equation without adjustment would have implied that traffic would have continued to grow as population was growing without considering the impacts of the terrorist attacks. Therefore, the forecast of enplanements derived from this formula was adjusted to compensate for this event. Enplanements in 2001 were down 7.5 percent below 2000. Given the state of the economy after September 11, it is assumed that aviation activity will not resume its normal growth until 2003 or 2004. GMIA's 2002 through 2004 traffic was assumed to decline and rebound in the same fashion forecast for the United States as a whole. After 2004, traffic was grown at a rate equivalent to that embodied in the regression analysis.

This preliminary forecast was then adjusted to account for two developments that were not included in historical activity at GMIA; initiation of service by low-fare carrier AirTran, and the expectation that the increased growth of Midwest Express and Skyway will result in an increase in connecting percentages at GMIA.

3.2.2 Passenger Projections

Over the last ten years, passenger activity at GMIA has grown at an average annual rate of 3.3 percent, compared with 3.5 percent for the nation as a whole. Historical data for passenger activity at the Airport is presented in **Table 3.2-1**. The history and forecast are presented graphically in **Exhibit 3.2-2**. Immediately after deregulation in 1978, GMIA traffic declined. It rebounded significantly when Midwest Express began service in June of 1984. From 1984 through 2001 traffic grew at an average annual growth rate of 4.7 percent, largely on the basis of Midwest activity. Over that same period traffic in the U.S grew just under 3 percent annually.

3.2.2.1 Major Carriers

Major carrier enplanements actually declined from 1996 through 2001 as carriers shifted to providing service to Milwaukee using commuter partners. From 1996 through 2001 major carrier traffic declined 1.8 percent per year. Among the shifts that have occurred are:

- *American to American Eagle*
- *Continental to Continental Express*
- *American Trans Air to Chicago Express*
- *United to United Express*

AirTran initiated service in June 2002 with non-stop service to Atlanta and Orlando. Tampa non-stop service was initiated in fall of 2002. The carrier expects to add service to Fort Lauderdale February of 2003, and to increase service moderately throughout the forecast period after that. The level of traffic expected for the AirTran start-up is consistent with air service studies previously done for the Airport estimating the impact of potential new service by AirTran.

Midwest Express plans to increase connecting traffic at GMIA over the forecast period. Currently, Midwest connects approximately 20

TABLE 3.2-1

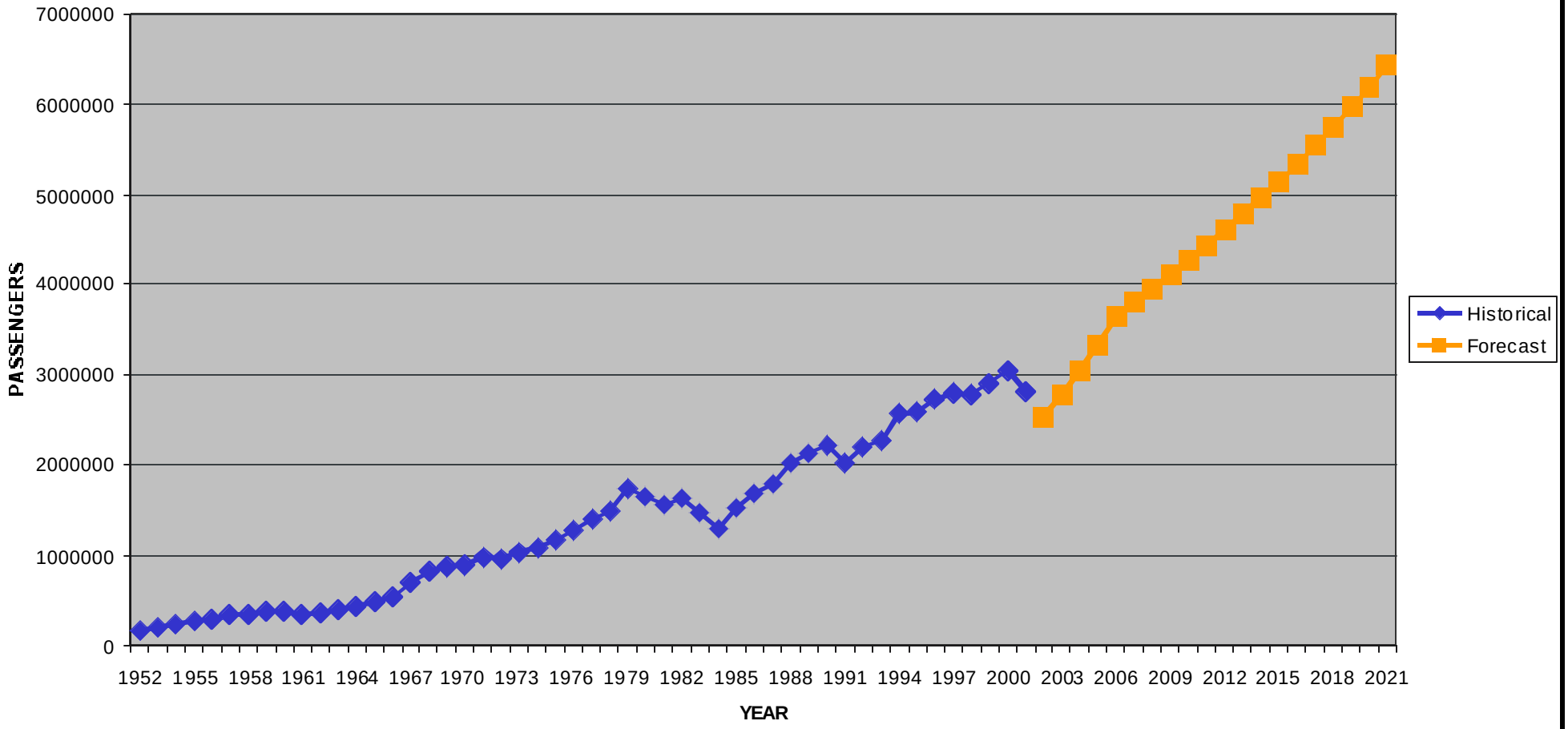
General Mitchell International Airport

PASSENGER ACTIVITY

Year	Total Enplanements	Majors	Commuters	Charter*	Connections Included	Connecting %
1979	1,740,282					
1980	1,642,532					
1981	1,558,549					
1982	1,627,335					
1983	1,463,227					
1984	1,287,663					
1985	1,530,169					
1986	1,682,739					
1987	1,798,679					
1988	2,012,727					
1989	2,132,541					
1990	2,213,672					
1991	2,027,689					
1992	2,189,052					
1993	2,264,402					
1994	2,563,293					
1995	2,593,359					
1996	2,732,965	2,234,052	494,222	4,691	206,693	7.6%
1997	2,804,596	2,232,808	561,616	10,162	199,869	7.1%
1998	2,790,837	2,147,859	636,705	6,273	204,185	7.3%
1999	2,906,189	2,251,887	644,199	10,103	221,291	7.6%
2000	3,039,962	2,327,560	708,415	3,987	234,518	7.7%
2001	2,811,954	2,041,492	735,082	35,380	269,823	9.6%
Forecasts						
2006	3,658,480	2,530,543	1,079,362	48,576	353,585	9.7%
2011	4,434,172	3,064,365	1,313,299	56,508	534,533	12.1%
2021	6,427,713	4,421,221	1,931,108	75,385	1,011,481	15.7%
Average Annual Growth Rates						
1979-1984	(5.8)%					
1984-2001	4.7%					
1996-2001		(1.8)%	8.3%	49.8%	5.5%	
1979-2001	2.2%					
2001-2006	5.4%	4.4%	8.0%	6.5%	5.6%	
2006-2011	3.9%	3.9%	4.0%	3.1%	8.6%	
2011-2021	3.8%	3.7%	3.9%	2.9%	6.6%	
2001-2021	4.2%	3.9%	4.9%	3.9%	6.8%	

* Charter activity not occurring on scheduled carriers such as American Trans Air, Sun Country, or majors.

Source: General Mitchell International Airport
PB Aviation Inc. Analysis



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GMIAENPLANEMENTS
HISTORICALAND FORECAST

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percent of its enplanements at the Airport. The carrier anticipates this connecting percentage growing to 40 percent by 2021.

3.2.2.2 Regional Carriers

The growth in regional passengers has been driven by the shifts in service mentioned above, as well as the strong growth of Skyway (soon to become Midwest Connect). Skyway has grown over 12 percent annually in the last five years at GMIA, its market share increasing from 5.3 percent to 9.2 percent over that time. As it transitions its fleet from 19-seat turboprop aircraft to regional jets with 32-50 seats, its strong growth will continue. Over time, Skyway's fleet will be totally regional jet aircraft. However, there will always be small markets in Wisconsin and Michigan that will be fed into Midwest Express' system at GMIA, that will support only a 19-seat type of plane. While it is uncertain exactly who the operator will be, such service will continue to be present at GMIA. It may be operated under contract to Midway Express or Skyway, or it may be an independent operator. Regardless of the specific name of the carrier operating it, Midway Express feels that it will still provide feed to its system at GMIA.

The share of passenger traffic carried by regionals at GMIA has been, and is projected to be, as follows:

- *1996 18.1 percent*
- *2001 26.1 percent*
- *2006 29.5 percent*
- *2011 29.6 percent*
- *2021 30.0 percent*

3.2.2.3 Charter Carriers

Charter activity at GMIA is operated by carriers under contract to tour operators. The specific carriers fluctuate over time as contracts

change. Carriers such as American Trans Air and Sun Country have operated both scheduled and charter activity at the Airport over the past several years. Occasionally some of the major carriers will fly unscheduled operations. The service tends to be seasonal, and to vacation destinations such as Las Vegas, Caribbean and Mexican resort areas.

Discussions with operators of these services have resulted in the projections in Table 3.2.1. Traffic volume on charter activities is expected to grow at 3.9 percent per year over the forecast period, which is similar to the growth expected from major carriers at the Airport.

3.2.3 O&D Domestic Passenger Market

The top 30 Origin/Destination (O&D) markets for GMI are presented in **Table 3.2-2**. O&D passengers as recorded by the U.S. DOT are listed for 1979, 1990, 1995 2000 and 2001 for each of these markets. The cities are listed in order of 2001 passenger volume.

Those cities currently receiving non-stop service are marked with an asterisk (*). Those whose non-stop service is seasonal are noted with an "S". Twenty-three of the top markets have non-stop service; three more of the markets have non-stop service on a seasonal basis only. There are four markets that had no non-stop service in 2001.

AirTran initiated non-stop service to Tampa in the fall of 2002. Fort Lauderdale service will start in February, 2003. Miami and Fort Myers are also on AirTran's system, and may ultimately receive non-stop service from that carrier. However, there is no announced plan to do so now.

TABLE 3.2-2

General Mitchell International Airport

ORIGIN / DESTINATION CITY ANALYSIS

2001 Rank		Total Origin / Destination Passengers 1979	1990	1995	2000	2001	Average Annual Growth (%) 1990-1995	1995-2001	Estimated Potential One-Way Passengers per Day 2001	2006	2011	2021
1 Las Vegas	*	41,490	78,730	141,230	341,350	312,450	12.4	14.1	439	571	692	1,003
2 Orlando	*	44,880	144,290	269,630	332,790	293,010	13.3	1.4	412	535	649	941
3 Minneapolis/St. Paul	*	105,640	141,690	184,910	261,820	217,750	5.5	2.8	306	398	482	699
4 Phoenix	*	10,630	85,340	179,990	185,840	198,370	16.1	1.6	279	362	439	637
5 Los Angeles	*	100,990	141,870	137,410	180,470	175,420	(0.6)	4.2	246	321	389	563
6 LaGuardia	*	131,210	162,000	148,220	172,130	158,200	(1.8)	1.1	222	289	350	508
7 Atlanta	*	49,820	93,730	116,360	149,540	144,670	4.4	3.7	203	264	320	464
8 Dallas/Fort Worth	*	44,880	83,370	111,450	146,500	127,870	6.0	2.3	180	234	283	411
9 Denver	*	63,140	91,880	113,850	131,720	126,890	4.4	1.8	178	232	281	407
10 San Francisco	S	61,830	95,610	111,470	172,350	124,300	3.1	1.8	**175**	**227**	**275**	**399**
11 Boston	*	51,930	94,140	139,490	131,650	122,680	8.2	(2.1)	172	224	272	394
12 Ronald Regan N'tl	*	57,790	95,430	110,580	139,370	113,790	3.0	0.5	160	208	252	365
13 Newark	*	21,550	85,940	99,910	123,200	112,540	3.1	2.0	158	206	249	361
14 Philadelphia	*	37,660	75,940	91,030	117,030	106,670	3.7	2.7	150	195	236	342
15 Tampa	S	61,060	105,930	107,290	120,410	96,810	0.3	(1.7)	136	**177**	**214**	**311**
16 Detroit	*	94,030	92,600	102,740	168,120	92,300	2.1	(1.8)	130	169	204	296
17 Ft Myers	S	0	54,280	121,930	99,360	88,910	17.6	(5.1)	125	**162**	**197**	**285**
18 Kansas City	*	41,690	12,360	96,190	77,790	74,080	50.7	(4.3)	104	135	164	238
19 Seattle		20,230	40,740	61,110	82,780	72,080	8.4	2.8	101	132	**160**	**231**
20 Cleveland	*	56,290	56,940	92,980	79,820	65,190	10.3	(5.7)	92	119	144	209
21 Fort Lauderdale		23,570	44,970	80,760	66,930	64,590	12.4	(3.7)	91	118	**143**	**207**
22 San Diego		17,000	49,720	69,270	58,290	53,680	6.9	(4.2)	75	98	119	**172**
23 Cincinnati	*	15,160	19,880	59,670	58,980	48,240	24.6	(3.5)	68	88	107	155
24 St. Louis	*	52,780	40,930	73,110	60,170	48,030	12.3	(6.8)	67	88	106	154
25 Miami		42,210	56,060	60,520	63,720	44,820	1.5	(4.9)	63	82	99	**144**
26 Pittsburgh	*	29,750	36,860	44,870	51,110	43,760	4.0	(0.4)	61	80	97	140
27 Charlotte	*	5,470	25,340	39,250	49,400	43,480	9.1	1.7	61	79	96	140
28 Hartford	*	12,830	25,180	28,310	48,100	43,400	2.4	7.4	61	79	96	139
29 Houston	*	18,490	16,170	26,620	43,030	40,760	10.5	7.4	57	74	90	131
30 Columbus	*	16,550	22,060	51,420	47,750	39,690	18.4	(4.2)	56	73	88	127
Top 30 Markets % of Total		67.9%	68.5%	68.9%	73.1%	72.2%						

* Indicates non-stop service
S Indicates seasonal non-stop service

Bold indicates level of activity to support non-stop service

Source: USDOT O&D Survey
PB Aviation, Inc. Analysis

Seattle is the largest O&D market with no non-stop service. If Seattle were to grow at the average rate embodied in the passenger forecast, it would reach a level where it might support non-stop service by 2011. This assumes two daily departures on 100-seat aircraft, with a 70 percent load factor, or 140 departing passengers per day. Of course there would be the potential for connections adding to this total. On the other hand, this estimate would be offset by the fact that not all of the passengers in a market are likely to be captured by a single carrier.

San Francisco, with seasonal non-stop service, showed strong growth in 2000, but declined in traffic in 2001. Growing at the average rate embodied in the

forecast, this market would average 227 departing passengers per day by 2006. This market appears to be able to support year-round daily non-stop service. Several of the carriers at GMIA serve San Francisco via a hub connection, so there is strong competition in this market, even with no non-stop service. Some carriers feel that this competition via hubs would allow carriers to reduce fares in the Milwaukee to San Francisco market to compete with any year-round non-stop service. This fear of cutthroat fare competition is deterring some carriers from providing this non-stop service.

San Diego, the smallest market in the top 30 without non-stop service, might grow to support non-stop service by the end of the forecast period.

Non-stop service at GMIA from 1997 to 2002 is presented in **Table 3.2-3**. There are 50 markets with non-stop service as of April 2002:

- *32 markets are served by only Midwest and/or Skyway (20 by Skyway alone)*
- *13 are served by multiple carriers*

Table 3.2-4 presents the characteristics of some of this service. The cities are listed alphabetically. (Because Skyway reports its statistics to the U.S.DOT under as a 298 C carrier rather than T-100, the detailed statistics are not available for Skyway.) For each carrier in each market (except Skyway), annual departures, seats and load factors are recorded for 1997 and 2000. (AirTran, which recently initiated service at GMIA, is not included in this data.)

Service at GMIA has been fairly consistent in these markets in that carriers have not dropped service to any of these to markets over this period. Some markets have seen a transition from the larger carrier to a regional partner, but the service in the markets has remained. Stability of service contributes to customer loyalty over time, possibly deterring passengers from traveling from Milwaukee to Chicago to fly.

TABLE 3.2-3

General Mitchell International Airport

MARKETS SERVED NON-STOP

	1997	1998	1999	2000	2001	2002	2001 O&D Rank
Appleton	ZW YX YX*	ZW YX YX*	ZW YX YX*	ZW YX YX*	ZW YX YX*	YX YX*	
Atlanta	DL YX	DL YX	DL YX	DL YX	DL YX EV	DL YX EV FL	7
Baltimore						YX*	44
Boston	YX	YX	YX	YX	YX	YX	11
Cedar Rapids				YX*			
Charlotte	US	US	US	US	US	US	28
Chicago MDW	TZ	TZ	TZ	TZ	TZ*	TZ*	
Chicago ORD	ZW AA* UA	ZW AA* UA	ZW AA* UA	ZW AA* UA	ZW AA* UA	ZW AA*	75
Cincinnati	DL YX*	DL YX*	DL YX*	DL OH YX*	DL OH YX*	DL OH YX*	23
Cleveland	YX CO* YX*	YX CO* YX*	YX CO* YX*	YX CO* YX*	YX CO* YX*	YX* CO*	21
Columbus	YX YX*	YX YX*	YX YX*	YX YX*	YX YX*	YX*	29
Dallas/Ft. Worth	YX	YX	YX	YX AA*	YX AA*	YX AA*	9
Dayton			YX*	YX*	YX*	YX*	
Denver	ZW YX	ZW YX	ZW YX	ZW YX	ZW YX	ZW YX	8
Des Moines	YX*	YX*	YX*	YX YX*	YX*	YX*	62
Detroit City	P9	P9					
Detroit Metro	NW	NW	NW	NW	NW	NW	16
Escanaba			YX*	YX*	YX*	YX*	
Flint	YX*	YX*	YX*	YX*	YX*	YX*	41
Fort Wayne				YX*			
Ft Meyers	TZ	TZ	TZ	SY	SY	YX	17
Grand Rapids	YX YX*	YX YX*	YX YX*	YX*	YX*	YX*	42
Green Bay	YX*	YX*	YX*	YX*	YX*	YX*	
Hartford		YX	YX	YX	YX YX*	YX YX*	27
Houston IAH	CO	CO	CO	CO CO*	CO CO*	CO*	30
Indianapolis	YX*	YX*	YX*	YX*	YX*	YX*	36
Kansas City	YX	YX	YX	YX	YX	YX	19
La Crosse	YX*	YX*	YX*	YX*	YX*	YX*	
LaGuardia	YX	YX	YX	YX	YX	YX	6
Lansing	YX*	YX*	YX*	YX*	YX*	YX*	84
Las Vegas	HP	HP YX	HP YX SY	HP YX SY	HP YX SY	YX*	1
Los Angeles	YX	YX	YX SY	YX	YX	YX	5
Louisville	YX*	YX*	YX*	YX*	YX*	YX*	60
Madison	YX YX*	YX YX*	YX YX*	YX YX*	YX YX*	YX YX*	
Marquette	YX*	YX*	YX*	YX*	YX*	YX*	
Memphis	NW	NW	NW	NW	NW	NW	43
Minneapolis	YX NW	YX NW	YX NW SY	YX NW SY	YX NW SY	NW YX*	3
Moline, IL			YX*	YX*	YX*	YX*	
Muskegon	YX*	YX*	YX*	YX*	YX*	YX*	
Nashville	YX*	YX*	YX*	YX*	YX*	YX*	35
Newark	YX CO*	YX CO*	YX CO*	YX CO*	YX CO*	YX* CO*	13
Omaha	YX YX*	YX YX*	YX YX*	YX	YX	YX	39
Orlando	YX	YX	YX SY	YX SY	YX SY	YX FL	2
Philadelphia	YX	YX	YX	YX	YX	US* YX* YX	14
Phoenix	YX HP	YX HP	YX HP	YX HP	YX HP	YX HP	4
Pittsburgh	US	US	US	US YX*	US YX*	US YX*	26
Raleigh/Durham	YX	YX	YX	YX	YX	YX*	32
San Francisco	YX	YX	YX	YX	YX		10
South Bend	YX*	YX*					
St Petersburg	TZ	TZ	TZ				
St. Louis	TW YX*	TW N9N YX*	TW YX*	TW YX*	TW YX*	AA* YX*	25
Tampa		YX	YX	YX	YX	YX	15
Toronto				YX*	YX*	AC YX*	
Traverse City		YX*	YX*	YX*	YX*		
Washington DCA	YX	YX	YX	YX	YX YX*	YX	12
Washington IAD			YX US	YX US	YX YX*	YX*	37
Wausau	YX*	YX*	YX*	YX*	YX*	YX*	

Source: General Mitchell International Airport Data
PB Aviation, Inc. Analysis

Legend:

AA* - American Eagle	HP - America West	TZ - ATA Connection
AC - Air Canada	NW - Northwest	UA - United
CO - Continental	N9N - Trans States Airlines	US - US Airways
CO* - Continental Express	OH - Comair	US* - US Airways Express
DL - Delta	P9 - Pro Air	YX - Midwest Express

TABLE 3.2-4

General Mitchell International Airport

AIR SERVICE CHARACTERISTICS

		Midwest Express			Air Wisconsin			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Appleton	1997	608	32,210	35.8%	359	32,210	13.2%			
	2001	505	52,708	43.8%	654	52,708	18.0%			

		Midwest Express			Delta			Atlantic Southeast		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Atlanta	1997	848	65,216	61.3%	1,086	154,218	75.3%			
	2001	964	77,996	61.8%	1,036	147,153	73.9%	337	16,820	39.0%

		Midwest Express		
Destination	Year	Departures	Seats	Load Factor
Boston	1997	1,229	91,300	67.4%
	2001	1,076	97,532	64.6%

		USAirways		
Destination	Year	Departures	Seats	Load Factor
Charlotte	1997	725	73,734	75.5%
	2001	716	85,585	71.3%

		American Trans Air			Chicago Express		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Chicago MDW	1997	789	15,806	52.4%			
	2001				2,052	69,768	62.9%

		United			American Eagle			Air Wisconsin		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Chicago ORD	1997	1,182	143,222	53.9%	3,397	206,345	65.0%	1,935	177,150	51.3%
	2001	378	50,233	57.6%	2,443	119,696	62.4%	1,650	148,362	52.9%

		Delta			Comair			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Cincinnati	1997	1,079	153,183	56.2%						
	2001	1,019	144,698	64.8%	842	42,090	60.1%			

		Midwest Express			Continental (Continental Express)			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Cleveland	1997	776	50,616	53.7%	1,872	76,060	55.8%			
	2001	487	36,480	24.7%	1,668	71,411	57.5%			

		Midwest Express			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Columbus	1997	481	29,436	51.6%			
	2001	282	17,640	35.2%			

		Midwest Express			American Eagle		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Dallas/Ft.Worth	1997	1,234	95,232	60.6%			
	2001	1,182	101,220	54.2%	1,288	64,153	10.3%

		Midwest Express			Air Wisconsin		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Denver	1997	682	42,524	71.5%	1,229	110,978	62.6%
	2001	656	68,492	59.5%	1,072	92,964	69.5%

		Northwest		
Destination	Year	Departures	Seats	Load Factor
Detroit	1997	2,532	386,489	68.3%
	2001	2,369	359,269	54.6%

TABLE 3.2-4 (Continued)

General Mitchell International Airport

AIR SERVICE CHARACTERISTICS

		Midwest Express								
Destination	Year	Departures	Seats	Load Factor						
Ft.Myers	1997	124	10,368	77.8%						
	2001	140	15,760	84.2%						
		Midwest Express			Sun Country			American Trans Air		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Hartford	1997									
	2001	487	35,268	51.7%						
		Continental			Continental Express					
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor			
Houston	1997	362	40,094	52.8%						
	2001	265	31,239	54.0%	422	21,087	76.0%			
		Midwest Express								
Destination	Year	Departures	Seats	Load Factor						
Kansas City	1997	1,272	82,400	56.9%						
	2001	1,594	129,324	55.8%						
		Midwest Express								
Destination	Year	Departures	Seats	Load Factor						
LaGuardia	1997	1,349	98,368	75.1%						
	2001	1,257	129,708	63.6%						
		Midwest Express			America West			Sun Country		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Las Vegas	1997	34	2,912	86.1%	361	46,817	64.4%			
	2001	340	38,640	72.4%	247	30,934	59.2%	350	77,498	87.0%
		Midwest Express								
Destination	Year	Departures	Seats	Load Factor						
Los Angeles	1997	608	68,068	80.0%						
	2001	595	67,388	72.4%						
		Midwest Express			Skyway					
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor			
Madison	1997	610	50,824	40.0%						
	2001	537	58,716	37.0%						
		Northwest								
Destination	Year	Departures	Seats	Load Factor						
Memphis	1997	1,055	135,421	69.1%						
	2001	1,040	135,327	58.6%						
		Midwest Express			Northwest			Sun Country		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Minneapolis	1997	610	50,824	40.0%	2,258	403,360	66.5%			
	2001	537	58,716	37.0%	2,338	393,525	63.7%	448	76,980	40.9%
		Midwest Express			Continental Express					
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor			
Newark	1997	1,241	88,668	62.0%	708	35,400	53.5%			
	2001	1,131	85,360	54.2%	1,122	55,944	43.5%			
		Midwest Express			Skyway					
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor			
Omaha	1997	956	73,008	49.8%						
	2001	1,189	90,916	52.6%						

TABLE 3.2-4 (Continued)

General Mitchell International Airport

AIR SERVICE CHARACTERISTICS

		Midwest Express			Sun Country		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Orlando	1997	469	38,656	72.5%			
	2001	600	69,392	81.0%	294	51,450	62.9%

		Midwest Express		
Destination	Year	Departures	Seats	Load Factor
Philadelphia	1997	749	55,556	68.7%
	2001	966	73,080	54.3%

		Midwest Express			America West		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Phoenix	1997	130	11,732	71.7%	717	93,359	81.8%
	2001	630	72,976	67.2%	704	94,354	72.5%

		USAirways			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Pittsburgh	1997	1,383	155,816	59.5%			
	2001	1,339	157,277	47.5%			

		Midwest Express		
Destination	Year	Departures	Seats	Load Factor
Raleigh Durham	1997			
	2001	502	32,952	47.3%

		Midwest Express		
Destination	Year	Departures	Seats	Load Factor
San Francisco	1997	222	24,612	80.0%
	2001	239	26,804	77.9%

		American Eagle (TWA)			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
St. Louis	1997	2,320	247,638	55.7%			
	2001	2,013	216,233	48.3%			

		Midwest Express		
Destination	Year	Departures	Seats	Load Factor
Tampa	1997	115	9,636	61.7%
	2001	129	11,348	59.1%

		Midwest Express			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Washington DCA	1997	1,052	85,320	65.3%			
	2001	1,019	101,412	57.9%			

		Midwest Express			Skyway		
Destination	Year	Departures	Seats	Load Factor	Departures	Seats	Load Factor
Washington IAD	1997						
	2001	216	18,356	45.6%			

Source: T100 Statistics
PB Aviation, Inc. Analysis

Several markets have registered load factors above 70 percent; Charlotte, Fort Myers, Los Angeles, Orlando and San Francisco. This indicates that these markets may be able to sustain more service. In order to average a load factor this high across a year, many flights must be departing full, and there were passengers who could not be accommodated.

Table 3.2-5 presents the market shares held by the carriers serving GMIA 1996 through 2001. Carriers are listed in order of their percentage share of GMIA's market in 2001. At the lower part of the table is a list of carriers combining major and regional partners. Midwest Express has held the largest share of traffic at the Airport over this period. Skyway's share has grown significantly, representing an average annual growth in traffic of 12.3 percent over this period. The combination of Midwest Express and Skyway represented 36.6 percent of GMIA enplanements in 2001. Northwest's share has declined. Delta's share has remained relatively constant at around 7 percent, and the combined share of Delta and its regional partners has remained constant at 8.0 to 8.6 percent. Sun Country no longer operates as a scheduled carrier at GMIA.

Travel agents serving clients who travel out of GMIA were surveyed to obtain qualitative information on air service at the Airport. The agencies surveyed serve a mix of business and pleasure travelers, with approximately 60 to 65 percent of their business being pleasure travel. They indicated that they frequently experience a shortage of seats in the Ft Myers, Las Vegas and Phoenix markets. Seattle and Miami headed the list of cities where the agents felt that non-stop service was most needed. Their reaction to the start-up of service by AirTran was mixed. The agents indicated that they were uncertain whether service by the low fare carrier would stimulate much new travel that would not have happened otherwise. All of the agents interviewed indicated a high degree of satisfaction with many aspects of travel into and out of GMIA. They liked the cost and convenience of parking, the Airport location and easy access, the range of carriers offering service and, generally, the range of service offered. Many liked the curbside drop-off and pick-up convenience, although it was mentioned that this had become less convenient since September 11.

TABLE 3.2-5

General Mitchell International Airport

CARRIER MARKET SHARE

Carrier	1996	1997	1998	1999	2000	2001
Midwest Express	25.5%	26.2%	26.8%	28.4%	26.9%	27.4%
Northwest	22.5%	22.3%	19.8%	20.8%	21.7%	19.2%
Skyway	5.3%	5.3%	6.2%	6.5%	7.4%	9.2%
Delta	7.1%	7.2%	6.9%	7.1%	6.8%	7.2%
Sun Country	0.2%	0.2%	0.4%	4.0%	7.5%	5.6%
Air Wisconsin	5.2%	5.6%	6.1%	5.8%	5.2%	5.1%
US Airways	5.2%	5.3%	5.2%	4.3%	4.6%	5.0%
American Eagle	4.8%	4.8%	4.9%	3.4%	4.1%	4.1%
TWA	4.7%	4.9%	4.8%	4.8%	4.4%	3.7%
America West	3.8%	3.8%	3.4%	2.8%	2.6%	2.9%
Continental Express	0.7%	2.0%	2.0%	1.9%	2.3%	2.9%
Chicago Express	0.1%	0.5%	0.6%	0.8%	0.9%	1.6%
Other	0.0%	0.0%	0.0%	0.2%	0.0%	1.2%
Mesa	0.0%	0.0%	0.5%	0.9%	0.9%	1.0%
Comair	1.0%	1.0%	1.4%	1.5%	1.3%	0.9%
Air Canada	0.0%	0.1%	0.7%	0.7%	0.8%	0.9%
United	2.4%	2.5%	2.6%	1.7%	1.4%	0.9%
Continental	1.8%	1.0%	0.8%	0.8%	0.7%	0.6%
Atlantic Southeast	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
US Airways Express	0.5%	0.4%	0.4%	0.3%	0.2%	0.1%
Casino Express	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
Scott Aviation	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
American Trans Air	8.5%	6.3%	6.3%	2.8%	0.0%	0.0%
Metrojet	0.0%	0.0%	0.0%	0.4%	0.2%	0.0%
Mexicana Airlines	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pro Air	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
TWA Express	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%
United Express	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Selected Carriers combined with affiliates						
Midwest Express + Skyway	30.8%	31.5%	33.0%	34.9%	34.3%	36.6%
Delta + Comair + Atlantic Southeast	8.1%	8.3%	8.3%	8.6%	8.0%	8.4%
US Airways + US Airways Express	5.7%	5.7%	5.6%	4.6%	4.9%	5.1%
Continental + Continental Express	2.5%	3.0%	2.8%	2.7%	3.0%	3.5%
American Trans Air + Chicago Express	8.6%	6.8%	7.0%	3.6%	0.9%	1.6%
United + United Express	2.6%	2.5%	2.6%	1.7%	1.4%	0.9%

Source: General Mitchell International Airport Data
PB Aviation, Inc. Analysis

3.3 ANNUAL CARGO POUNDAGE PROJECTIONS

Freight and mail at GMIA have exhibited strong growth over the last few decades. The activity is domestic, as international cargo is usually flown out of Chicago on international flights. Changes to the security environment after September 11 have had an impact on cargo volume at GMIA, as at most airports in the country. However, conversations with several carriers at the Airport indicate that there is still a strong interest by both all-cargo and passenger carriers to pursue freight and mail as valuable business enterprises for the airlines.

Historical and forecast freight and mail volumes are presented in **Table 3.3-1**.

3.3.1 Freight Poundage

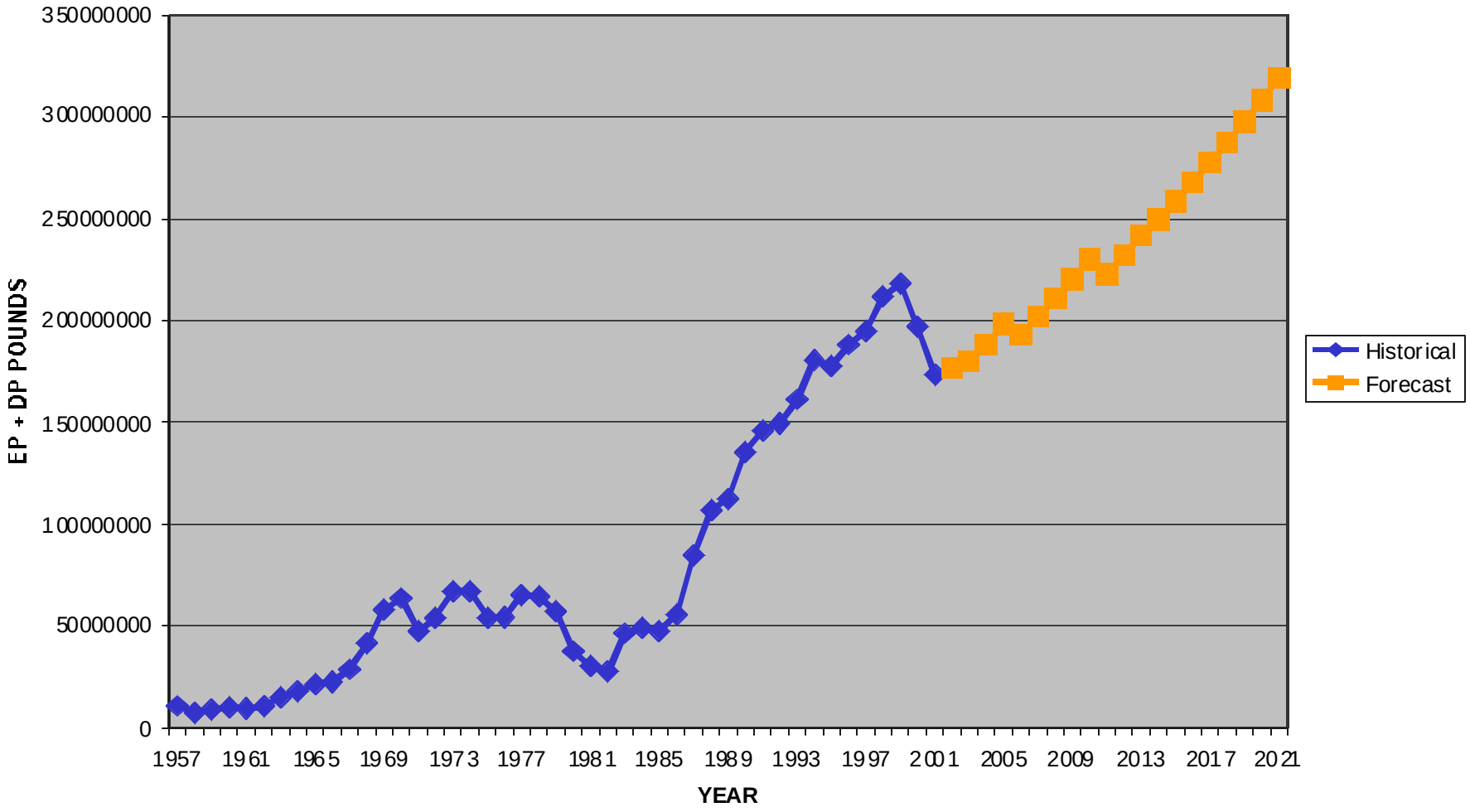
As indicated in **Exhibit 3.3-1**, freight poundage growth at GMIA has followed several different patterns over the years. Freight poundage grew steadily from 1957 through 1971, then fluctuated through 1983, and took off rapidly from 1983 through 1999. From 1999, cargo volume has declined significantly. This erratic pattern made it difficult to fit a socio-economic regression equation to the historical data.

Following the terrorist attacks of September 11, security procedures regarding the carriage of freight changed significantly, as they did on the passenger side of aviation. Passenger carriers wanting to carry freight in the bellies of passenger aircraft were required to conduct background checks on their freight customers. The passengers carriers are restricted to doing business with "known shippers", i.e., customers with whom they have a working history and whose credit is in good standing. Passenger carriers can no longer accept packages from the unknown walk-up customer. However, in spite of the added security costs associated with carrying belly cargo, and the fact that some of the freight market has simply been placed out of bounds for passenger carriers, these carriers are still interested in carrying as much belly cargo as they can accommodate. Belly cargo is a high profit margin product for the carriers.

TABLE 3.3-1
General Mitchell International Airport
CARGO ACTIVITY

							By Carrier Type			
	Freight			Mail			Freight		Mail	
Year	Enplaned	Deplaned	Total	Enplaned	Deplaned	Total	All Cargo	Passenger	All Cargo	Passenger
1990	72,690,804	62,834,659		16,780,597	25,779,825	42,560,422				
1991	77,835,884	68,238,449	146,074,333	27,288,661	34,701,191	61,989,852				
1992	77,036,035	72,521,625	149,557,660	22,038,296	31,374,522	53,412,818				
1993	85,588,839	75,435,831	161,024,670	17,990,738	25,695,571	43,686,309				
1994	97,793,513	82,718,731	180,512,244	22,786,375	26,224,580	49,010,955				
1995	96,297,410	81,191,395	177,488,805	27,867,893	27,754,699	55,622,592				
1996	99,607,603	88,685,587	188,293,190	29,777,555	28,544,463	58,322,018	169,751,820	18,541,370	5,819,850	52,502,168
1997	103,230,939	91,434,835	194,665,774	27,966,907	27,285,550	55,252,457	173,642,730	21,028,011	4,879,807	50,372,950
1998	115,620,552	96,270,174	211,890,726	26,856,266	24,551,572	51,407,838	192,262,215	19,628,511	6,563,304	44,844,534
1999	115,256,731	102,845,579	218,102,310	23,766,135	20,933,145	44,699,280	199,963,438	18,138,872	6,577,202	38,122,078
2000	102,146,826	94,714,469	196,861,295	23,948,825	20,246,232	44,195,057	181,786,161	15,075,134	6,048,619	38,146,438
2001	88,903,206	84,615,354	173,518,560	18,194,107	14,490,864	32,684,971	162,558,225	10,960,335	3,830,646	28,854,325
Forecasts										
2006	103,546,838	89,637,562	193,184,400	11,866,401	13,762,974	25,629,375	183,774,400	9,410,000	19,222,031	6,407,344
2011	119,299,128	103,273,872	222,573,000	13,557,238	15,724,054	29,281,292	213,814,500	8,758,500	21,960,969	7,320,323
2021	171,163,517	148,171,403	319,334,920	17,696,022	20,524,328	38,220,350	308,691,719	10,643,201	28,665,263	9,555,088
Average Annual Growth Rates										
1996-2001	(2.2)%	(0.9)%	(1.6)%	(9.4)%	(12.7)%	(10.9)%	(0.9)%	(10.0)%	(8.0)%	(11.3)%
2001-2006	3.1%	1.2%	2.2%	(8.2)%	(1.0)%	(4.7)%	2.5%	(3.0)%	38.1%	(26.0)%
2006-2011	2.9%	2.9%	2.9%	2.7%	2.7%	2.7%	3.1%	(1.4)%	2.7%	2.7%
2011-2021	3.7%	3.7%	3.7%	2.7%	2.7%	2.7%	3.7%	2.0%	2.7%	2.7%

Source: General Mitchell International Airport Data
PB Aviation, Inc. Analysis



GENERAL MITCHELL INTERNATIONAL AIRPORT MASTERPLAN UPDATE

GMIAFREIGHT
HISTORICALAND FORECAST

EXHIBIT
3.3-1

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Domestic belly space is available to the carriers at virtually no incremental cost. Space for belly cargo is produced by virtue of flying the aircraft for passenger operations.

3.3.1.1 Freight Poundage Methodology

Various socioeconomic variables were reviewed to determine which best correlated with the historical growth of freight at GMIA. None of the relationships proved statistically strong enough to use to project freight volume. Therefore, recent freight activity at GMIA was compared to cargo activity in the U.S. to see how the Airport had grown relative to the nation as a whole. Historical and forecast data for U.S. cargo is available for revenue ton miles (RTMs) rather than tonnage, so that variable was used. in **Table 3.3-2:**

TABLE 3.3-2

General Mitchell International Airport

RATIO OF GMIA FREIGHT POUNDS TO U.S. CARGO ACTIVITY

Year	All-Cargo Flights (Lbs.)	Passenger Flights (Lbs.)
1996	0.21	0.007
1997	0.20	0.008
1998	0.22	0.007
1999	0.22	0.007
2000	0.19	0.006
2001	0.17	0.005

Source: General Mitchell International Airport
PB Aviation , Inc. Analysis

Given that GMIA freight has declined relative to U.S. cargo activity since 1996, it was assumed that this decline would continue, albeit slowly. By 2006 the ratio of GMIA all-cargo carrier freight pounds to U.S. cargo activity was forecast to be 0.016, and fall to 0.15 by 2011. It is forecast to stay at .015 through 2021. The ratio of GMIA freight on passenger carriers was assumed to fall to .004 by 2006, to .003 by 2011, and to remain there through 2021. Table 3.3-1 indicates that this pattern brings GMIA freight back up to its 2000 level by 2006, and past its 1999 peak by 2011.

3.3.1.2 Freight Poundage Projections

This projection relative to U.S. totals results in an increase in the share of total freight carried by all-cargo carriers. All cargo carriers flew 93.7 percent of total freight in 2001. This share increases to 95.1 percent in 2006, 96.1 percent in 2011, and 96.7 percent in 2021. Passenger carriers' share of freight falls from 6.3 percent in 2001 to 3.3 percent in 2021. Passenger carriers barely return to 2001 volumes by 2021.

Enplaned freight was assumed to be 53.4 percent of total freight as it has been historically, with deplaned freight representing 46.6 percent.

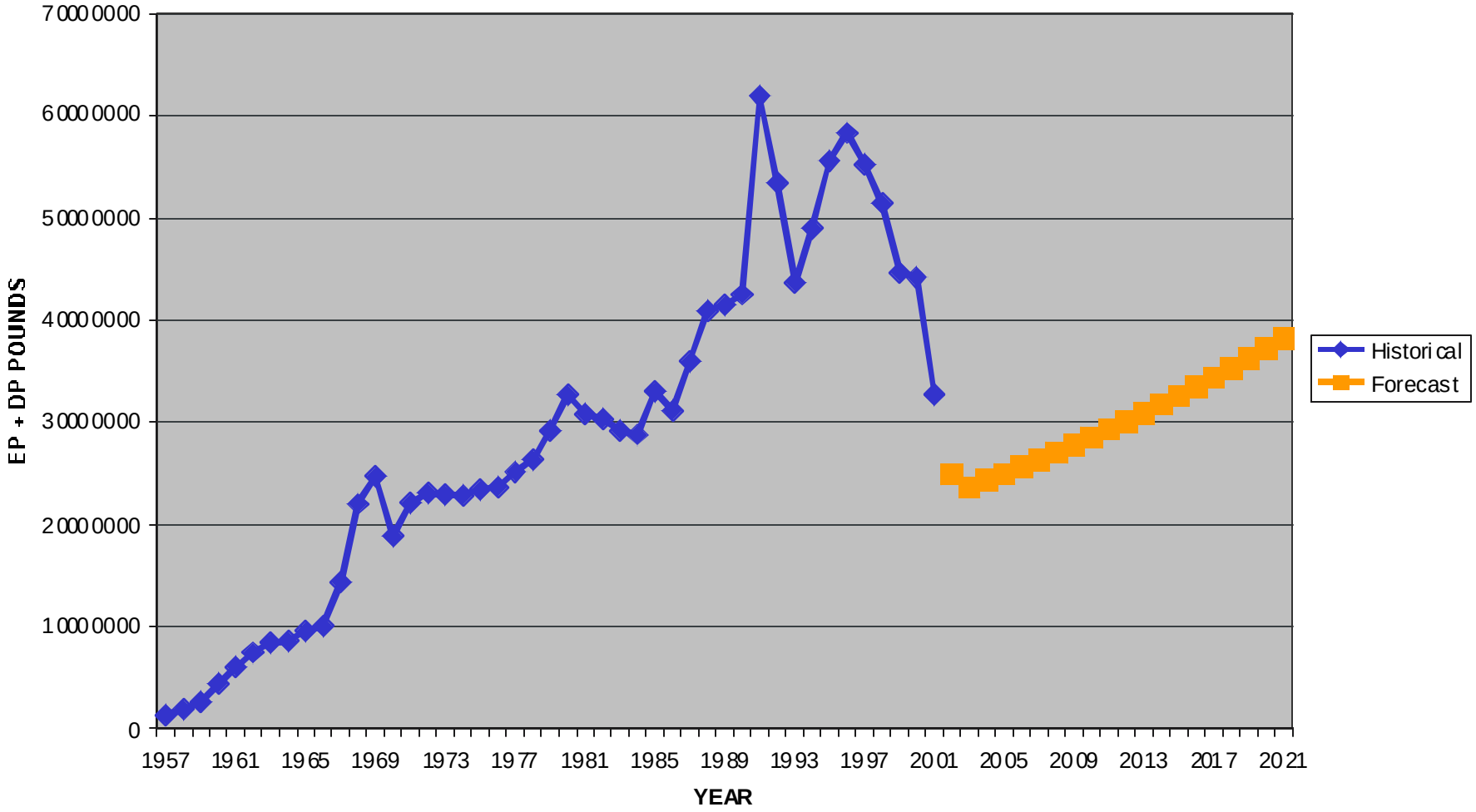
3.3.2 Mail Poundage

As indicated in **Exhibit 3.3-2**, mail volume reached its peak at GMIA in 1991 when it spiked upward for a two-year period. It has been trending down since 1997, and dropped over 26 percent in 2001 from 2000. Overall in the U.S., the FAA is forecasting a 23.8 percent decline in domestic air mail RTMs in fiscal year 2002 versus 2001, and a further decline of 5.0 percent in 2003. This is on top of a 15.2 percent decline in 2001 versus 2000.

The U.S. Postal service has shifted delivery of mail from air to ground for distances up to 1000 miles. Security concerns have caused them to shift all but first class mail under 16 ounces in weight from passenger carriers to all-cargo carriers. These factors have significantly altered the outlook for mail volumes and mode of transit at GMIA for the forecast period.

The erratic behavior of GMIA mail volumes over the last 10 years makes it impossible to relate mail to any socioeconomic variables. Trending volume the way it has been moving since 1996 would result in virtually no mail at GMIA before the end of the forecast period. The FAA forecast of mail assumes a decline in domestic mail carried by air through 2003. The growth that is forecast to resume after that will result in a 2011 domestic mail volume that is over 10 percent below 2001. Thus, the outlook for mail is not a growth scenario.

GMIA mail has been projected using growth rates similar to those in the FAA's projections for domestic mail carried by air. This projection results in a 2006 mail volume that is 21.6 percent below 2001. By 2011, the projection anticipates that mail volume has resumed growing and is only 10.4 percent below 2001. The projection expects that mail volumes will recover to their 2001 volume by 2015.



GENERAL MITCHELL INTERNATIONAL AIRPORT MASTERPLAN UPDATE

GMIAMAIL
HISTORICALAND FORECAST

EXHIBIT
3.3-2

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Historically, most of the mail at GMIA, 88 percent, has been carrier by passenger carriers. However, recent security measures allow passenger carriers to carry only first class mail, with all mail over 16 ounces going on all-cargo carriers. Thus, the percentage of mail going to passenger carriers has been reduced to 25 percent, which has been the experience at GMIA in recent months.

3.4 ANNUAL OPERATIONS AND FLEET MIX PROJECTIONS

The volume projections discussed in the preceding were used to forecast the number of aircraft operations at GMIA through 2021. Along with the operations projections, the mix of aircraft types expected to perform these operations is also projected. As with the volume projections, the primary source of data was GMIA records. Information from aviation industry sources and aircraft manufacturers was used in determining the future configuration of the aircraft fleet.

This section is organized as follows:

- *Passenger Carrier Operations and Fleet Mix*
- *All Cargo Operations and Fleet Mix*
- *General Aviation Operations and Fleet Mix*
- *Military Operations and Fleet Mix*
- *Summary of Operations and Fleet Mix Projections*

3.4.1 Passenger Carrier Operations and Fleet Mix

Passenger carrier operations are presented in **Table 3.4-1**. The table indicates that departures on major carriers have declined since 1996, while commuter departures have grown at an average rate of 6.2 percent annually. This reflects the transition of the major carriers to service on regional jets provided by their respective partners. American has transitioned entirely to American Eagle service at GMIA. Continental has shifted service to Continental Express, United has shifted to United Express, and ATA provides service to Chicago using Chicago Express. Midwest Express continues to expand both major carrier service and service on Skyway. Midwest Express enplanements have grown at an

average annual rate of 4.0 percent 1996 through 2001, while Skyway has averaged 12.3 percent growth annually. Charter departures have exhibited erratic growth patterns. This is partly due to reporting conventions that do not separate charter operations on scheduled carriers from their scheduled operations. The charter departures reported in Table 3.4-1 are only those performed by charter carriers. Charter services performed by ATA or Sun Country are included in their respective scheduled operations.

Departures were projected by reviewing historical enplanements per departure, projecting this statistic, and applying it to the enplanement forecast to project departures. On the major carriers, the number of enplanements per departure has declined since 1996. This has been driven by the emergence of Midwest Express as an increasingly larger player in the GMIA markets. Midwest Express' equipment has fewer seats and, therefore, carries fewer passengers per departure than the other major carriers. As Midwest continues to expand at GMIA using its 717 fleet, the number of passengers per departure is expected to grow at the Airport. This assumption is consistent with those made by the FAA in its annual forecasts. Applying this rate of growth in enplanements per departure to the enplanement forecast for the majors results in a departure forecast for the major carriers that increases 2.8 percent annually 2001 through 2006, 2.5 percent per year 2006 through 2011, and 2.4 percent annually thereafter.

Commuter enplanements per departure have grown at 0.3 enplanements per year over the past five years. As Skyway transitions from its fleet of 19-seat aircraft to regional jets, it is expected that this enplanement per year growth will increase to 0.6 enplanements per year. This growth produces a commuter departure forecast growth of 4.8 percent annually 2001 through 2006, 1.4 percent 2006 through 2011, and 1.7 percent thereafter.

TABLE 3.4-1

General Mitchell International Airport

PASSENGER OPERATIONS

	Departures				Enplanements Per Departure			Operations			
Year	Majors	Commuters	Charter*	Total	Majors	Commuters	Charter*	Majors	Commuters	Charter*	Total
1996	33,355	28,882	1,334	63,571	67	17	4	66,710	57,764	2,668	127,142
1997	32,969	31,393	1,494	65,856	68	18	7	65,938	62,786	2,988	131,712
1998	33,266	33,814	1,248	68,328	65	19	4	66,532	67,628	2,496	136,656
1999	34,787	34,666	1,381	70,834	65	19	7	69,574	69,332	2,762	141,668
2000	34,971	37,921	995	73,887	67	19	4	69,942	75,842	1,990	147,774
2001	31,760	38,991	780	71,531	64	19	45	63,520	77,982	1,560	143,062
Forecasts											
2006	36,527	49,393	1,034	86,953	69	22	47	73,054	98,786	2,067	173,907
2011	41,255	52,844	1,130	95,229	74	25	50	82,510	105,687	2,260	190,457
2021	52,460	62,591	1,371	116,422	84	31	55	104,919	125,183	2,741	232,843
Average Annual Growth Rates					Annual Change in the Number of Enplanements Per Departure						
1996-2001	(1.0)%	6.2%	(10.2)%	2.4%	(0.5)	0.3	8.4	(1.0)%	6.2%	(10.2)%	(10.2)%
2001-2006	2.8%	4.8%	5.8%	4.0%	1.0	0.6	0.3	2.8%	4.8%	5.8%	4.0%
2006-2011	2.5%	1.4%	1.8%	1.8%	1.0	0.6	0.6	2.5%	1.4%	1.8%	1.8%
2011-2021	2.4%	1.7%	1.9%	2.0%	1.0	0.6	0.5	2.4%	1.7%	1.9%	2.0%

* Charter activity not occurring on scheduled carriers such as American Trans Air, Sun Country, or majors.

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

The net result as presented in Table 3.4-1 is a passenger operations total growing at 4 percent annually 2001 through 2006, with slower growth thereafter.

The passenger fleet mix forecast is presented in **Table 3.4-2**. The BE1-type aircraft declines significantly as Skyway transitions to regional jets. However, there will always be small cities in Wisconsin and Michigan that will be fed to Midwest Express at GMIA using small equipment, so this type of aircraft will not disappear from the fleet entirely. Regional jets grow from 33 percent of total passenger operations in 2002 to 54.4 percent by 2021. The Boeing 717 will become the workhorse of the GMIA fleet by 2021, with almost 22 percent of total passenger operations. This equipment will be flown by Midwest Express and AirTran. The transition of Skyway to Embraer regional jets and Air Wisconsin to Canadair regional jets will increase this segment of aircraft activity at the Airport. Charter operations are expected to increase seat size by transitioning from 150-seat aircraft to 175-seat aircraft. It is expected that charter operations will be conducted with narrow body aircraft.

3.4.2 All Cargo Carrier Operations and Fleet Mix

Operations by all-cargo aircraft were forecast using freight volume as a base, and projecting all-cargo share of the total volume and all-cargo pounds per operation based upon historical relationships. **Table 3.4-3** presents the history and forecast of these operations.

All-cargo operations increased at 5.1 percent annually from 1996 through 2001. Over this same time period, the volume carried per operation declined 5.8 percent per year. In projecting cargo operations, the average pounds per operation experienced over the last six years was used as the projected pounds per operation. It is believed that cargo carriers will seek improvements to efficiency following the declines in cargo activity in 2001 and continuing into 2002. Therefore, it was assumed that poundage carried per operation would revert to the higher levels carried in the late 1990s. This volume was estimated to be 11,536 pounds per operation. Applying this to the poundage forecast for all-cargo

TABLE 3.4-2

General Mitchell International Airport

PASSENGER FLEET MIX

Equipment	Departures Average Day of the Peak Month				Distribution by Equipment Type			
Type	2002	2006	2011	2021	2002	2006	2011	2021
BE1	54	27	18	18	22.3%	10.8%	6.6%	5.4%
FRJ	37	37	37	37	15.3%	14.9%	13.6%	11.1%
SF3	7	7	7	0	2.9%	2.8%	2.6%	0.0%
ER3	5	15	20	29	2.1%	6.0%	7.4%	8.7%
ERD	5	14	18	24	2.1%	5.6%	6.6%	7.2%
ERJ	8	9	11	22	3.3%	3.6%	4.0%	6.6%
CRJ	18	20	31	41	7.4%	8.0%	11.4%	12.3%
ER4	7	17	21	28	2.9%	6.8%	7.7%	8.4%
DC9	8	0	0	0	3.3%	0.0%	0.0%	0.0%
D9S	30	3	3	3	12.4%	1.2%	1.1%	0.9%
146	8	6	0	0	3.3%	2.4%	0.0%	0.0%
319	2	2	5	9	0.8%	0.8%	1.8%	2.7%
D95	4	4	4	4	1.7%	1.6%	1.5%	1.2%
733	5	5	5	6	2.1%	2.0%	1.8%	1.8%
72S	2	2	2	2	0.8%	0.8%	0.7%	0.6%
M80	22	22	22	22	9.1%	8.8%	8.1%	6.6%
734	1	1	1	2	0.4%	0.4%	0.4%	0.6%
320	2	2	2	2	0.8%	0.8%	0.7%	0.6%
757	4	4	4	4	1.7%	1.6%	1.5%	1.2%
717	10	49	55	73	4.1%	19.7%	20.2%	21.9%
73G	3	3	6	7	1.2%	1.2%	2.2%	2.1%
Total	242	249	272	333	100.0%	100.0%	100.0%	100.0%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

TABLE 3.4-3					
General Mitchell International Airport					
ALL CARGO OPERATIONS					
	Poundage on All Cargo Carriers			All Cargo	Pounds Per
Year	Freight	Mail	Total	Operations	Operation
1996	169,751,820	5,819,850	175,571,670	13,298	13,203
1997	173,642,730	4,879,807	178,522,537	16,030	11,137
1998	192,262,215	6,563,304	198,825,519	16,802	11,833
1999	199,963,438	6,577,202	206,540,640	16,596	12,445
2000	181,786,161	6,048,619	187,834,780	17,360	10,820
2001	162,558,225	3,830,646	166,388,871	17,022	9,775
Forecasts					
2006	183,774,400	19,222,031	202,996,431	17,597	11,536
2011	213,814,500	21,960,969	235,775,469	20,439	11,536
2021	308,691,719	28,665,263	337,356,982	29,245	11,536
Average Annual Growth Rates					
1996-2001	(0.9)%	(8.0)%	(1.1)%	5.1%	(5.8)%
2001-2006	2.5%	38.1%	4.1%	0.7%	3.4%
2006-2011	3.1%	2.7%	3.0%	3.0%	0.0%
2011-2021	3.7%	2.7%	3.6%	3.6%	0.0%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

carriers results in the forecast operations in Table 3.4-3. Cargo operations grow very slowly in the 2001 through 2006 time frame as the carriers use existing capacity more efficiently. After 2006, when pounds per departure have reached the 11,536 level, cargo operations begin to grow again at 3.0 and 3.6 percent annually throughout the forecast period.

The cargo operations fleet mix is presented in **Table 3.4-4**. Larger equipment types, such as the A300 through the DC-9 are currently estimated to conduct 36 percent of all-cargo operations. This does not change significantly through the forecast period. Airbus 300 and Boeing 757 types of equipment are expected to replace the Boeing 727, DC-8 and DC-9 fleets of Federal Express and UPS.

TABLE 3.4-4 *General Mitchell International Airport* *CARGO OPERATIONS FLEET MIX*								
Equipment Type	Departures Average Day of the Peak Month				Distribution by Equipment Type			
	2002	2006	2011	2021	2002	2006	2011	2021
A300	1	3	5	9	4.0%	11.1%	16.1%	20.0%
B-757		1	3	6		3.7%	9.7%	13.3%
B-727-200	4	3			16.0%	11.1%		
DC-8	1				4.0%			
B-727-100	1				4.0%			
DC-9	1	1			4.0%	3.7%		
330-200	1	1	1	2	4.0%	3.7%	3.2%	4.4%
SA-227-AT	1	1	2	2	4.0%	3.7%	6.5%	4.4%
C-208	7	8	10	12	28.0%	29.6%	32.3%	26.7%
C-402	1	1	1	3	4.0%	3.7%	3.2%	6.7%
PA-31	1	1	2	3	4.0%	3.7%	6.5%	6.7%
CE-310R	3	4	4	4	12.0%	14.8%	12.9%	8.9%
BE-58	3	3	3	4	12.0%	11.1%	9.7%	8.9%
Total	25	27	31	45	100.0%	100.0%	100.0%	100.0%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

However, the large aircraft represent a 37 percent share of total all-cargo operations by 2021, similar to their share today. The smaller types of aircraft are expected to continue operating as they do today, feeding the larger carriers and dispersing inbound cargo to smaller cities in the Wisconsin and Michigan area.

3.4.3 General Aviation Operations and Fleet Mix

Historical and forecast general aviation operations are presented in **Table 3.4-5**. General aviation operations at GMIA have been trending downward since 1990. Throughout the U.S. this activity declined through the 1980s and into the early 1990s as product liability costs discouraged manufactures from building new aircraft. In 1994 the General Aviation Revitalization Act was signed, limiting this liability exposure for aging general aviation aircraft. There was some rebound in activity following the passage of this Act, but GMIA did not

TABLE 3.4-5

General Mitchell International Airport

GENERAL AVIATION OPERATIONS

General Aviation Operations			GMIA %	General Aviation	
Year	GMIA	U.S.Total	of U.S.	Itinerant	Local
1990	65,768	35,293,519	0.19%		
1991	67,519	38,910,962	0.17%		
1992	65,237	38,354,750	0.17%		
1993	63,370	36,600,990	0.17%		
1994	62,336	36,253,861	0.17%		
1995	55,174	35,926,520	0.15%		
1996	48,336	35,298,290	0.14%	41,862	6,474
1997	49,579	36,833,396	0.13%	43,619	5,960
1998	48,809	38,046,632	0.13%	42,279	6,530
1999	45,592	39,999,547	0.11%	39,846	5,746
2000	39,695	39,878,536	0.10%	35,671	4,024
2001	34,520	37,620,027	0.09%	30,883	3,637
Forecasts					
2006	33,379	41,724,000	0.08%	29,374	4,006
2011	35,495	44,369,300	0.08%	31,236	4,259
2021	38,956	48,694,640	0.08%	34,281	4,675
Average Annual Growth Rates					
1990-2001					
2001-2006	(0.7)%	2.1%		(1.0)%	1.9%
2006-2011	1.2%	1.2%		1.2%	1.2%
2011-2021	0.9%	0.9%		0.9%	0.9%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis
FAA Aerospace Forecasts, Fiscal Years 2002-2013, U.S. DOT

rebound as strongly as the rest of the country. Table 3.4-5 indicates that GMIA's share of total U.S. general aviation activity has declined steadily since 1990. The forecast assumes that this decline will level off at 0.08 percent of the U.S. activity throughout the forecast period. This results in a level of activity that does not rebound to the 2000 level by the end of the 2021 forecast period. Activity declines through 2006 as the share continues down from 0.09 percent in 2001 to 0.08 percent. After 2006, there is slight growth, 1.2 percent annually through 2011, and 0.9 percent per year through 2021.

GMIA general aviation operations represent a small percentage of general aviation activity in southeastern Wisconsin. **Table 3.4-6** presents FAA reports of

general aviation operations at seven area airports around GMIA, 2000 actuals and FAA Terminal Area Forecasts (TAF) for 2015. GMIA general aviation operations represented 8.2 percent of the area's general aviation operations in 2000, and is forecast to represent 6.7 percent in 2015. Only Hartford Municipal Airport has a smaller share of area activity. If a policy decision were to dictate that GMIA capacity could no longer accommodate general aviation activity, only 6.7 percent of the area's general aviation operations would have to be redistributed among other facilities.

TABLE 3.4-6

General Mitchell International Airport

MILWAUKEE AND GMIA AREA GENERAL AVIATION OPERATIONS

			GA Operations		Share of Area Operations	
			Actuals	FAA TAF	Actuals	FAA TAF
Airport	Code	City	2000	2015	2000	2015
West Bend Municipal Airport	ETB	West Bend	51,300	51,300	10.6%	9.3%
Hartford Municipal Airport	HXF	Hartford	15,500	15,500	3.2%	2.8%
Waukesha County Airport/Crites Field	UES	Waukesha	93,828	134,622	19.4%	24.4%
Capitol Airport - Brookfield	02C	Brookfield	53,646	52,590	11.1%	9.5%
Lawrence J. Timmerman Field	MWC	Milwaukee	79,379	89,873	16.4%	16.3%
Kenosha Regional Airport	ENW	Kenosha	92,789	113,566	19.2%	20.6%
John H. Batten Field	RAC	Racine	57,460	57,460	11.9%	10.4%
General Mitchell International Airport	MKE	Milwaukee	39,695	36,841 *	8.2%	6.7% *
		Total	483,597	551,752	100.0%	100.0%

Source: FAA Terminal Area Forecasts (TAF) for all airports except GMIA.

* GMIA Master Plan Forecast

Table 3.4-7 presents the fleet mix forecast for general aviation activity at GMIA. Currently, two-engine jet aircraft dominate the mix at GMIA. This dominance will increase throughout the forecast period. The FAA projects that the size of the U.S. fleet in this category will grow significantly and that utilization of this aircraft type will increase. Some of this growth is driven by increasing trends toward fractional ownership. The presence of piston aircraft in the fleet mix is expected to decline from 46.7 percent in 2002 to 34.7 percent by 2021. The piston fleet in the U.S. is not growing as fast as other equipment types,

and surveys indicate that utilization of these aircraft is declining. The same is true for the use of turboprop aircraft.

TABLE 3.4-7

General Mitchell International Airport

GENERAL AVIATION FLEET MIX

Equipment	Departures (Average Day of the Peak) Month				Distribution by Equipment Type			
Type	2002	2006	2011	2021	2002	2006	2011	2021
Single Engine Piston	12	11	11	11	21.7%	20.6%	19.2%	16.4%
Twin Engine Piston	14	13	13	12	25.0%	23.6%	21.8%	18.3%
Single Engine Jet/Turboprop	0	0	0	0	0.7%	0.6%	0.6%	0.5%
Twin Engine Jet/Turboprop	7	7	7	6	13.1%	12.5%	11.7%	10.0%
Twin Engine Jet	21	23	26	34	38.2%	41.2%	45.1%	52.9%
ThreeEngine Jet	1	1	1	1	1.3%	1.4%	1.6%	1.9%
Total	55	55	59	64	100.0%	100.0%	100.0%	100.0%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

3.4.4 Military Operations and Fleet Mix

Military operations and fleet mix are presented in **Table 3.4-8**. Operations have fluctuated, declining 1996 through 1998, increasing slightly, then declining significantly from 1999 to 2000, and growing again in 2001. Military operations were forecast to be the average annual operations experienced 1996 through 2000. It was felt that 2001 may be an aberration due to activities surrounding September 11. Historically, all of the military operations have been itinerant operations. The military activity tends to occur on aircraft such as the C-130 and the KC-135.

TABLE 3.4-8			
General Mitchell International Airport			
MILITARY OPERATIONS AND FLEET MIX			
		Fleet Mix	
Year	Operations	C-130	KC-135
1996	5,629		
1997	5,187		
1998	5,030		
1999	5,183		
2000	4,223		
2001	4,885		
Forecasts			
2006	5,050	62.5%	37.5%
2011	5,050	62.5%	37.5%
2021	5,050	62.5%	37.5%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

3.4.5 Other Air Taxi Operations and Fleet Mix

Records submitted by operators at the Airport and those maintained by the tower on operations have different definitions of category of operation. For example, a large cargo operator such as Fed Ex would be included in the Air Carrier category by the tower, and in the Cargo category by the Airport. A small cargo carrier would be classified as Air Taxi by the tower, but as Cargo by the Airport. The tower classifies the operations of Skyway as Air Taxi, but the commuter operations of American Eagle are classified as Air Carrier.

In order to account for all of the operations reported by the tower, it is necessary to estimate a number of "Other Air Taxi" operations. These operations are estimated to have accounted for 5.7 percent of total operations over the last few years. Therefore, the sum of previously estimated operations is increased by this amount to insure that all operations are taken into account. These operations are assumed to have a fleet mix distribution similar to general aviation operations. The projection of other air taxi operations is presented in **Table 3.4-9**.

TABLE 3.4-9

General Mitchell International Airport

OTHER AIR TAXI OPERATIONS

Year	Other Air Taxi	Total Operations	Other as % of Total	Equipment Type	2006	2011	2021
1996	6,558	200,963	3.3%	Single Engine Piston	20.6%	19.2%	16.4%
1997	10,101	212,609	4.8%	Twin Engine Piston	23.6%	21.8%	18.3%
1998	11,790	219,087	5.4%	Single Engine Jet/Turboprop	0.6%	0.6%	0.5%
1999	12,827	221,866	5.8%	Twin Engine Jet/Turboprop	12.5%	11.7%	10.0%
2000	12,803	221,855	5.8%	Twin Engine Jet	41.2%	45.1%	52.9%
2001	12,023	211,512	5.7%	Three Engine Jet	1.4%	1.6%	1.9%
Forecasts							
2006	13,796	243,730	5.7%				
2011	15,087	266,529	5.7%				
2021	18,366	324,460	5.7%				
Average Annual Growth Rates							
1996-2001	12.9%	1.0%					
2001-2006	2.8%	2.9%					
2006-2011	1.8%	1.8%					
2011-2021	2.0%	2.0%					

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

3.4.6 Summary of Operations and Fleet Mix

The summary of operations is presented in **Table 3.4-10**, and graphically in **Exhibit 3.4-1**. Total operations increase at 2.9 percent annually 2001 through 2006. Commuter operations are the largest contributor to this growth. These operations increase from 36.9 percent of total operations in 2001 to 38.6 percent in 2021. While passenger operations show strong growth through 2006, as they rebound from reduced activity in 2001, cargo and general aviation operations do not exhibit this strong rebound. Cargo growth is slow over that period as carriers work to improve the pounds per departure carried to get it to late 1990s levels. General aviation continues its decline through 2006, and rebounds somewhat thereafter.

The fleet mix at the Airport for the forecast period is presented in **Table 3.4-11**. The Boeing 717, flown by Midwest Express and AirTran, will generate the highest share of operations, 15.7 percent, by 2021. Twin-engine jets will conduct 9.4 percent of total operations, these being in the general aviation category. Aging aircraft such as the Boeing 727, DC-8 and DC-9 will be phased out of the fleet at GMIA over the forecast period. Regional jets will grow from an estimated 24 percent of total GMIA operations in 2002 to 39 percent in 2021.

3.5 PEAK HOUR PROJECTIONS

Peak activity for passengers and operations are presented in this section. These peaks will vary for different elements of activity at the Airport, such as passenger carriers, cargo activity, and general aviation operations. Each element of activity is discussed in the following sections.

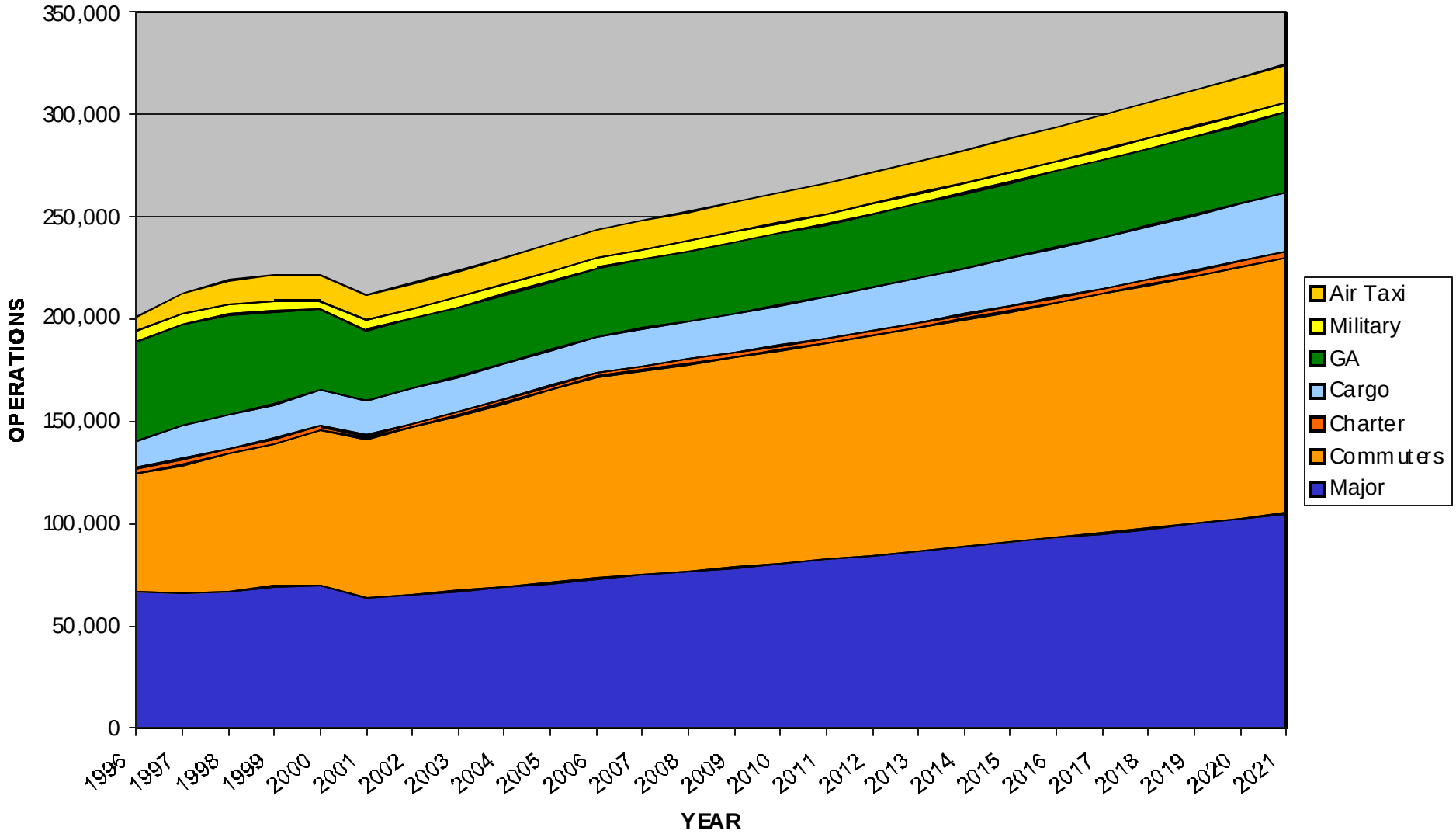
TABLE 3.4-10

General Mitchell International Airport

AIRCRAFT OPERATIONS SUMMARY

	Passenger				General		Other	
Year	Major	Commuter	Charter	Cargo	Aviation	Military	Air Taxi	Total
1996	66,710	57,764	2,668	13,298	48,336	5,629	6,558	200,963
1997	65,938	62,786	2,988	16,030	49,579	5,187	10,101	212,609
1998	66,532	67,628	2,496	16,802	48,809	5,030	11,790	219,087
1999	69,574	69,332	2,762	16,596	45,592	5,183	12,827	221,866
2000	69,942	75,842	1,990	17,360	39,695	4,223	12,803	221,855
2001	63,520	77,982	1,560	17,022	34,520	4,885	12,023	211,512
Forecasts								
2006	73,054	98,786	2,067	17,597	33,379	5,050	13,796	243,730
2011	82,510	105,687	2,260	20,439	35,495	5,050	15,087	266,529
2021	104,919	125,183	2,741	29,245	38,956	5,050	18,366	324,460
Average Annual Growth Rates								
1996-2001	(1.0)%	6.2%	(10.2)%	5.1%	(6.5)%	(2.8)%	12.9%	1.0%
2001-2006	2.8%	4.8%	5.8%	0.7%	(0.7)%	0.7%	2.8%	2.9%
2006-2011	2.5%	1.4%	1.8%	3.0%	1.2%	0.0%	1.8%	1.8%
2011-2021	2.4%	1.7%	1.9%	3.6%	0.9%	0.0%	2.0%	2.0%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis



GENERAL MITCHELL INTERNATIONAL AIRPORT MASTERPLAN UPDATE

GMIAAIRCRAFTOPERATIONSSUMMARY

EXHIBIT 3.4-1

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PBAVIATION,INC.

TABLE 3.4-11

General Mitchell International Airport

AIRCRAFT FLEET MIX SUMMARY

Equipment Type	Annual Operations 2002	2006	2011	2021	Distribution by Equipment Type 2002	2006	2011	2021
BE1	29,855	18,857	12,604	12,586	14.9%	7.7%	4.7%	3.9%
FRJ	20,456	25,842	25,908	25,871	10.2%	10.6%	9.7%	8.0%
SF3	3,870	4,889	4,901	0	1.9%	2.0%	1.8%	0.0%
ER3	2,764	10,476	14,004	20,278	1.4%	4.3%	5.3%	6.2%
ERD	2,764	9,778	12,604	16,781	1.4%	4.0%	4.7%	5.2%
ERJ	4,423	6,286	7,702	15,383	2.2%	2.6%	2.9%	4.7%
CRJ	9,952	13,968	21,707	28,668	5.0%	5.7%	8.1%	8.8%
ER4	3,870	11,873	14,704	19,578	1.9%	4.9%	5.5%	6.0%
DC9	4,423	0	0	0	2.2%	0.0%	0.0%	0.0%
D9S	16,586	2,095	2,101	2,098	8.3%	0.9%	0.8%	0.6%
146	4,423	4,191	0	0	2.2%	1.7%	0.0%	0.0%
319	1,106	1,397	3,501	6,293	0.6%	0.6%	1.3%	1.9%
D95	2,211	2,794	2,801	2,797	1.1%	1.1%	1.1%	0.9%
733	2,764	3,492	3,501	4,195	1.4%	1.4%	1.3%	1.3%
72S	1,106	1,397	1,400	1,398	0.6%	0.6%	0.5%	0.4%
M80	12,163	15,365	15,405	15,383	6.1%	6.3%	5.8%	4.7%
734	553	698	700	1,398	0.3%	0.3%	0.3%	0.4%
320	1,106	1,397	1,400	1,398	0.6%	0.6%	0.5%	0.4%
757	2,211	2,794	2,801	2,797	1.1%	1.1%	1.1%	0.9%
717	5,529	34,223	38,512	51,044	2.8%	14.0%	14.4%	15.7%
73G	1,659	2,095	4,201	4,895	0.8%	0.9%	1.6%	1.5%
Single Engine Piston	9,922	9,732	9,723	9,379	4.9%	4.0%	3.6%	2.9%
Twin Engine Piston	11,393	11,117	11,033	10,504	5.7%	4.6%	4.1%	3.2%
Single Engine Turboprop	305	300	301	292	0.2%	0.1%	0.1%	0.1%
Twin Engine Turboprop	5,992	5,894	5,909	5,738	3.0%	2.4%	2.2%	1.8%
Twin Engine Jet	17,439	19,452	22,818	30,347	8.7%	8.0%	8.6%	9.4%
Three Engine Jet	610	680	798	1,062	0.3%	0.3%	0.3%	0.3%
A300	925	1,955	3,297	5,849	0.5%	0.8%	1.2%	1.8%
B-757	0	652	1,978	3,899	0.0%	0.3%	0.7%	1.2%
B-727-200	2,544	1,955	0	0	1.3%	0.8%	0.0%	0.0%
DC-8	694	0	0	0	0.3%	0.0%	0.0%	0.0%
B-727-100	535	0	0	0	0.3%	0.0%	0.0%	0.0%
DC-9	559	652	0	0	0.3%	0.3%	0.0%	0.0%
330-200	467	652	659	1,300	0.2%	0.3%	0.2%	0.4%
SA-227-AT	632	652	1,319	1,300	0.3%	0.3%	0.5%	0.4%
C-208	4,536	5,214	6,593	7,799	2.3%	2.1%	2.5%	2.4%
C-402	406	652	659	1,950	0.2%	0.3%	0.2%	0.6%
PA-31	705	652	1,319	1,950	0.4%	0.3%	0.5%	0.6%
CE-310R	2,333	2,607	2,637	2,600	1.2%	1.1%	1.0%	0.8%
BE-58	1,863	1,955	1,978	2,600	0.9%	0.8%	0.7%	0.8%
C-130	3,157	3,157	3,157	3,157	1.6%	1.3%	1.2%	1.0%
KC-135	1,894	1,894	1,894	1,894	0.9%	0.8%	0.7%	0.6%
Total	200,706	243,730	266,529	324,460	100.0%	100.0%	100.0%	100.0%

Source: General Mitchell International Airport
PB Aviation, Inc. Analysis

3.5.1 Passenger Peaking

In planning airport facilities it is important to identify the times of peak activity and the levels of activity that occur during those time frames. Facilities are designed to accommodate an average day during the peak month, rather than the absolute peak level of activity. Passenger activity on the average day of the peak month, and during the peak hour of activity on that day, is presented in **Table 3.5-1**.

TABLE 3.5-1

General Mitchell International Airport

PASSENGER PEAKING

	Average Day of the Peak Month			Peak Hour			Peak Hour
	2006	2011	2021	2006	2011	2021	(All Years)
Enplanements	11,419	13,840	20,063	1,901	2,045	2,382	0700-0759
Deplanements	11,419	13,840	20,063	1,930	2,171	2,689	2000-2059
Connections (EP)	1,104	1,668	3,157	184	247	375	0700-0759
Connections (DP)	1,104	1,668	3,157	186	262	423	2000-2059

Source: PB Aviation, Inc. Analysis

March has historically been the month of peak passenger activity at GMIA. Over the past several years, just under 9.7 percent of GMIA passengers have traveled in March. This percentage was applied to the annual forecasts to yield the expected passenger volume in March. The March total was divided by 31 to estimate the passenger volume on the average day of the peak month. This process was also followed to estimate connecting passengers on the average day of the peak month.

The peak hour of passenger activity is assumed to coincide with the peak hour of seats arriving and seats departing. The peak hour for departing seats (and enplaning passengers) is 7:00 AM to 7:59 AM. The peak hour for arriving seats (and deplaning passengers) is 8:00 PM to 8:59 PM. These seats were assumed to be filled at 25 percent above the average load factor because this is a period of

peak activity. The load factor at GMIA from 1997 through 2000 averaged approximately 61.5 percent, so the load factor used to determine peak passengers was 77 percent. This load factor was applied to the departing seats calculated from the schedules.

3.5.2 Operations Peaking

Various types of activity at the Airport exhibit different peaking characteristics. Passenger and cargo activity, for example, peak in different months and at different times of the day. It is important to identify each of the peaks individually, as each activity element requires its unique set of facilities, as well as some shared facilities.

The peaks for all activity elements are summarized in **Table 3.5-2**, and each element is discussed further in the following sections. It is important to note that operations in the peak hour or on the average day of the peak month are not additive across different activity elements. This is because the peak months differ among elements, and the peak hours differ even within elements. For example, the peak hour for passenger carrier arrivals is 8:00 PM to 8:59 PM. The peak hour for passenger carrier departures is 7:00 AM to 7:59 AM. However, the hour in 2002 with the highest total passenger operations is 3:00 PM to 3:59 PM.

3.5.2.1 Passenger Carrier Operations Peaking

Passenger operations peak in March, as do passenger enplanements. On the average day in March, forecast operations range from 498 in 2006 to 666 by 2021. The hourly distribution of activity for passenger operations is presented in **Table 3.5-3**. Throughout the forecast period arrivals peak in the 8:00 PM to 8:59 PM hour, and departures peak in the 7:00 AM to 7:59 AM hour. However, total passenger operations peak in the 3:00 PM to 3:59 PM hour. Peaking percentages range from 12 percent to 14 percent for the forecast period.

This pattern of departures peaking in the early morning and arrivals peaking in the evening implies a business type of travel, out in the morning, back in the evening. Even if a traveler is not completing a round

TABLE 3.5-2

General Mitchell International Airport

OPERATIONS PEAKING

		Peak Month	Average Day Peak Month			Peak Hour		
			2006	2011	2021	2006	2011	2021
Passenger		March						
	Arrivals		249	272	333	30	37	48
	Departures		249	272	333	28	33	42
	Total		498	545	666			
Cargo		Varies						
	Arrivals		27	31	45	7	8	12
	Departures		27	31	45	12	14	22
	Total		54	63	90			
General Aviation		July						
	Arrivals		55	59	64	6	7	7
	Departures		55	59	64	7	7	8
	Total		110	118	128			
Military		Varies						
	Arrivals		8	8	8	1	1	1
	Departures		8	8	8	1	1	1
	Total		16	16	16			
Other Air Taxi		July						
	Arrivals		23	25	30	3	3	4
	Departures		23	25	30	4	5	5
	Total		46	50	60			

Note: The peaks for the various types of operations as shown here are not additive. As the table indicates, different activity elements peak in different months. Therefore, a sum across monthly peaks is not valid. It is also not valid to sum arrivals and departures for hourly peaks, as the peak arrival hour frequently differs from the peak departure hour.

Source: PB Aviation, Inc. Analysis

trip in a single day, this pattern of travel indicates that the GMIA passengers are looking to spend a full day at the other end of the trip rather than in Milwaukee.

3.5.2.2 Cargo Carrier Operations Peaking

Over the past several years, cargo activity has peaked in a variety of different months; November, December, July, twice in August, and in October. However, whatever the peak month has been, it has represented an average of 9.5 percent of annual all-cargo operations. As seen in Table 3.5-2, cargo operations on the average day of the peak month are expected to grow from 54 in 2006 to 90 in 2021.

TABLE 3.5-3

General Mitchell International Airport

24-HOUR PEAKING ACTIVITY PASSENGER OPERATIONS

	2006			2011			2021		
Hour	Arr.	Dept	Total	Arr.	Dept	Total	Arr.	Dept	Total
0000 - 0059									
0100 - 0159									
0200 - 0259									
0300 - 0359									
0400 - 0459									
0500 - 0559	1	9	10	1	9	10	1	8	9
0600 - 0659	7	12	19	8	12	20	11	10	21
0700 - 0759	12	30	42	14	33	47	15	42	57
0800 - 0859	16	20	36	17	20	37	19	23	42
0900 - 0959	12	19	31	12	20	32	17	21	38
1000 - 1059	11	11	22	12	11	23	18	17	35
1100 - 1159	17	6	23	18	7	25	23	12	35
1200 - 1259	19	17	36	22	18	40	27	23	50
1300 - 1359	11	17	28	13	19	32	17	24	41
1400 - 1459	19	11	30	21	12	33	26	18	44
1500 - 1559	17	26	43	20	28	48	21	33	54
1600 - 1659	19	18	37	20	20	40	26	23	49
1700 - 1759	12	15	27	13	18	31	17	23	40
1800 - 1859	16	11	27	16	14	30	21	19	40
1900 - 1959	8	13	21	8	14	22	10	16	26
2000 - 2059	32		32	37	3	40	48	4	52
2100 - 2159	12	14	26	12	14	26	9	17	26
2200 - 2259	6		6	6		6	5		5
2300 - 2359	2		2	2		2	2		2
Total	249	249	498	272	272	544	333	333	666
Peak Hour	32	30	43	37	33	48	48	42	57
Peak Percent	12.9%	12.0%	8.6%	13.6%	12.1%	8.8%	14.4%	12.6%	8.6%

Source: PB Aviation Inc. Analysis

The hourly distribution of cargo activity is presented in **Table 3.5-4**. Cargo flights depart to various cargo hubs and distribution centers in the late evening, from 9:30 PM through midnight. The carriers return in the early morning to disburse cargo for early-in-the-day delivery. The peak arrival hour for cargo operations is 5:00 AM to 5:59 AM, and the peak departure hours are both the 10:00PM to 10:59 PM and 11:00 PM to 11:59 PM hours. Over 25 percent of cargo arrivals occur during the peak, and 45-50 percent of cargo departures occur during the peak hour. Occasionally, unscheduled cargo operations occur during the day. Approximately 10 percent of the cargo operations are of the unscheduled variety.

3.5.2.3 General Aviation Operations Peaking

Table 3.5-5 indicates that general aviation operations at their peak grow from 110 operations in 2006 to 128 in 2010. They generally follow the pattern of passenger operations. The peak departure hour is 7:00 AM to 7:59 AM and the peak arrival hour is 8:00 PM to 8:59 PM. Their peaking percentage ranges from 10 to 13 percent over the forecast period.

3.5.2.4 Military Operations Peaking

Military operations are erratic and demonstrate no peaking patterns. Throughout the forecast period it is assumed that they are scattered throughout the day. This is presented in **Table 3.5-6**.

3.5.2.5 Other Air Taxi Operations Peaking

Hourly air taxi operations are presented in **Table 3.5-7**. Arrivals peak in the 8:00PM to 8:59PM hour, and departures peak in the 3:00PM to 3:59PM hour. Peaking percentages range from 13 percent to 20 percent. Peaking percentages seem high because there are so few flights. Moving a single flight into or out of a particular hour swings the peaking percentages widely.

3.5.2.7 Total Peaking

As discussed earlier, and as noted at the bottom of Table 3.5-2, the peaking activities of these elements are not additive because they occur in different months and at different times of the day. However, for planning purposes for the requirements shared by many of these activity elements (runways, airspace, tower support, etc.) it is useful to construct an hourly scenario for a total day indicating what the absolute peak level of activity would be were these activities to coincide. Such an accumulation is presented in **Table 3.5-8**, and graphically in **Exhibit 3.5-1**. The individual hourly arrivals and departures for each segment of Airport activity we summed in this table. This summary indicates that the peak arrival hour is 8:00 PM to 8:59 PM, and the peak departure hour is 7:00 AM to 7:59 AM. This is a pattern shared by the passenger and general aviation segments of Airport activity.

TABLE 3.5-4

General Mitchell International Airport

24-HOUR PEAKING ACTIVITY CARGO OPERATIONS

	2006			2011			2021		
Hour	Arr.	Dept	Total	Arr.	Dept	Total	Arr.	Dept	Total
0000 - 0059									
0100 - 0159									
0200 - 0259									
0300 - 0359	1		1	1		1	1		1
0400 - 0459	6		6	7		7	8		8
0500 - 0559	7		7	8		8	12		12
0600 - 0659	6		6	6		6	10		10
0700 - 0759	4		4	5		5	6		6
0800 - 0859	1		1	1		1	4		4
0900 - 0959	1		1	1		1	1		1
1000 - 1059							1		1
1100 - 1159		1	1		1	1		1	1
1200 - 1259									
1300 - 1359	1		1	2		2	1	1	2
1400 - 1459									
1500 - 1559		1	1		1	1		1	1
1600 - 1659					1	1			
1700 - 1759							1		1
1800 - 1859									
1900 - 1959								1	1
2000 - 2059									
2100 - 2159		1	1		1	1		3	3
2200 - 2259		12	12		14	14		16	16
2300 - 2359		12	12		13	13		22	22
Total	27	27	54	31	31	62	45	45	90
Peak Hour	7	12	12	8	14	14	12	22	22
Peak Percent	25.9%	44.4%	22.2%	25.8%	45.2%	22.6%	26.7%	48.9%	24.4%

Source: PB Aviation Inc. Analysis

TABLE 3.5-5

General Mitchell International Airport

24-HOUR PEAKING ACTIVITY GENERAL AVIATION OPERATIONS

	2006			2011			2021		
Hour	Arr.	Dept	Total	Arr.	Dept	Total	Arr.	Dept	Total
0000 - 0059									
0100 - 0159									
0200 - 0259									
0300 - 0359									
0400 - 0459									
0500 - 0559		2	2	1	2	3	1	2	3
0600 - 0659	1	3	4	1	3	4	2	3	5
0700 - 0759	3	7	10	4	7	11	4	8	12
0800 - 0859	3	5	8	3	5	8	3	5	8
0900 - 0959	3	4	7	3	4	7	3	4	7
1000 - 1059	2	2	4	2	3	5	3	3	6
1100 - 1159	4	1	5	4	2	6	4	2	6
1200 - 1259	4	4	8	5	4	9	6	4	10
1300 - 1359	3	4	7	3	5	8	3	5	8
1400 - 1459	5	3	8	5	3	8	6	3	9
1500 - 1559	3	6	9	3	6	9	4	7	11
1600 - 1659	4	4	8	4	4	8	4	4	8
1700 - 1759	2	4	6	2	4	6	2	4	6
1800 - 1859	4	2	6	4	2	6	4	3	7
1900 - 1959	2	2	4	2	2	4	2	3	5
2000 - 2059	6		6	7		7	7		7
2100 - 2159	3	1	4	3	2	5	3	3	6
2200 - 2259	2		2	2		2	2		2
2300 - 2359	1	1	2	1	1	2	1	1	2
Total	55	55	110	59	59	118	64	64	128
Peak Hour	6	7	10	7	7	11	7	8	12
Peak Percent	10.9%	12.7%	9.1%	11.9%	11.9%	9.3%	10.9%	12.5%	9.4%

Source: PB Aviation Inc. Analysis

TABLE 3.5-6

General Mitchell International Airport

24-HOUR PEAKING ACTIVITY MILITARY OPERATIONS

	2006			2011			2021		
Hour	Arr.	Dept	Total	Arr.	Dept	Total	Arr.	Dept	Total
0000 - 0059									
0100 - 0159									
0200 - 0259									
0300 - 0359									
0400 - 0459									
0500 - 0559									
0600 - 0659									
0700 - 0759									
0800 - 0859	1		1	1		1	1		1
0900 - 0959									
1000 - 1059	1	1	2	1	1	2	1	1	2
1100 - 1159									
1200 - 1259	1	1	2	1	1	2	1	1	2
1300 - 1359									
1400 - 1459	1	1	2	1	1	2	1	1	2
1500 - 1559									
1600 - 1659	1	1	2	1	1	2	1	1	2
1700 - 1759									
1800 - 1859	1	1	2	1	1	2	1	1	2
1900 - 1959									
2000 - 2059	1	1	2	1	1	2	1	1	2
2100 - 2159									
2200 - 2259	1	1	2	1	1	2	1	1	2
2300 - 2359		1	1		1	1		1	1
Total	8	8	16	8	8	16	8	8	16
Peak Hour	1	1	2	1	1	2	1	1	2
Peak Percent	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%

Source: PB Aviation Inc. Analysis

TABLE 3.5-7

General Mitchell International Airport

24-HOUR PEAKING ACTIVITY OTHER AIR TAXI OPERATIONS

	2006			2011			2021		
Hour	Arr.	Dept	Total	Arr.	Dept	Total	Arr.	Dept	Total
0000 - 0059									
0100 - 0159									
0200 - 0259									
0300 - 0359									
0400 - 0459									
0500 - 0559		1	1		1	1		1	1
0600 - 0659	1	1	2	1	1	2	1	2	3
0700 - 0759	2	2	4	2	2	4	2	3	5
0800 - 0859	2	2	4	2	2	4	2	2	4
0900 - 0959	2	1	3	2	2	4	2	3	5
1000 - 1059	1	1	2	1	1	2	2	1	3
1100 - 1159	2	1	3	2	1	3	3	1	4
1200 - 1259	2	2	4	2	2	4	3	3	6
1300 - 1359	1	2	3	1	2	3	1	3	4
1400 - 1459	2	1	3	2	1	3	2	1	3
1500 - 1559	1	4	5	1	5	6	2	5	7
1600 - 1659	2	2	4	2	2	4	2	2	4
1700 - 1759	1	1	2	1	1	2	1	1	2
1800 - 1859	1	1	2	2	1	3	2	1	3
1900 - 1959		1	1	1	1	2	1	1	2
2000 - 2059	3		3	3		3	4		4
2100 - 2159									
2200 - 2259									
2300 - 2359									
Total	23	23	46	25	25	50	30	30	60
Peak Hour	3	4	5	3	5	6	4	5	7
Peak Percent	13.0%	17.4%	10.9%	12.0%	20.0%	12.0%	13.3%	16.7%	11.7%

Source: PB Aviation Inc. Analysis

3.6 OTHER GROWTH SCENARIOS

It is possible that some of the assumptions underlying this forecast will not come to pass as expected. If assumptions regarding socioeconomic growth in the area or in the United States are incorrect, activity may grow more quickly or more slowly than expected. Such changes would not necessarily change the character of the forecast, but merely the timing at which milestones are reached. However, there are two assumptions that affect the character of GMIA's evolution, and if those assumptions are incorrect, the character of the operations would be somewhat different. Those assumptions are:

- *The initiation and success of service by AirTran, a low fare carrier serving Florida destinations very popular among GMIA travelers*

- *Midwest* Express/Skyway increase in connections at GMIA

Table 3.6-1 presents the contribution of these two assumptions to the base forecast over the planning period. AirTran enplanements are projected to contribute over eight percent of total enplanements from 2006 through 2021 while the incremental growth in connecting enplanements of Midwest Express and skyway increase from 2.6 percent of total enplanements in 2006 to 13.1 percent of total enplanements in 2021. The corresponding number of aircraft operations for each of these assumptions is also presented in Table 3.6-1. This activity would be at risk if AirTran's entrance into the Milwaukee market fails completely or if the percentage of passengers connecting through GMIA on Midwest Express and Skyway does not develop as projected.

3.7 SUMMARY

In summary, GMIA will continue to be a vibrant, growing base of aviation activity throughout the forecast period. Growth in domestic passenger traffic will come through the addition of carriers like AirTran, and the continued expansion of Midwest Express and Skyway. As these carriers expand, new markets will open and current ones will grow.

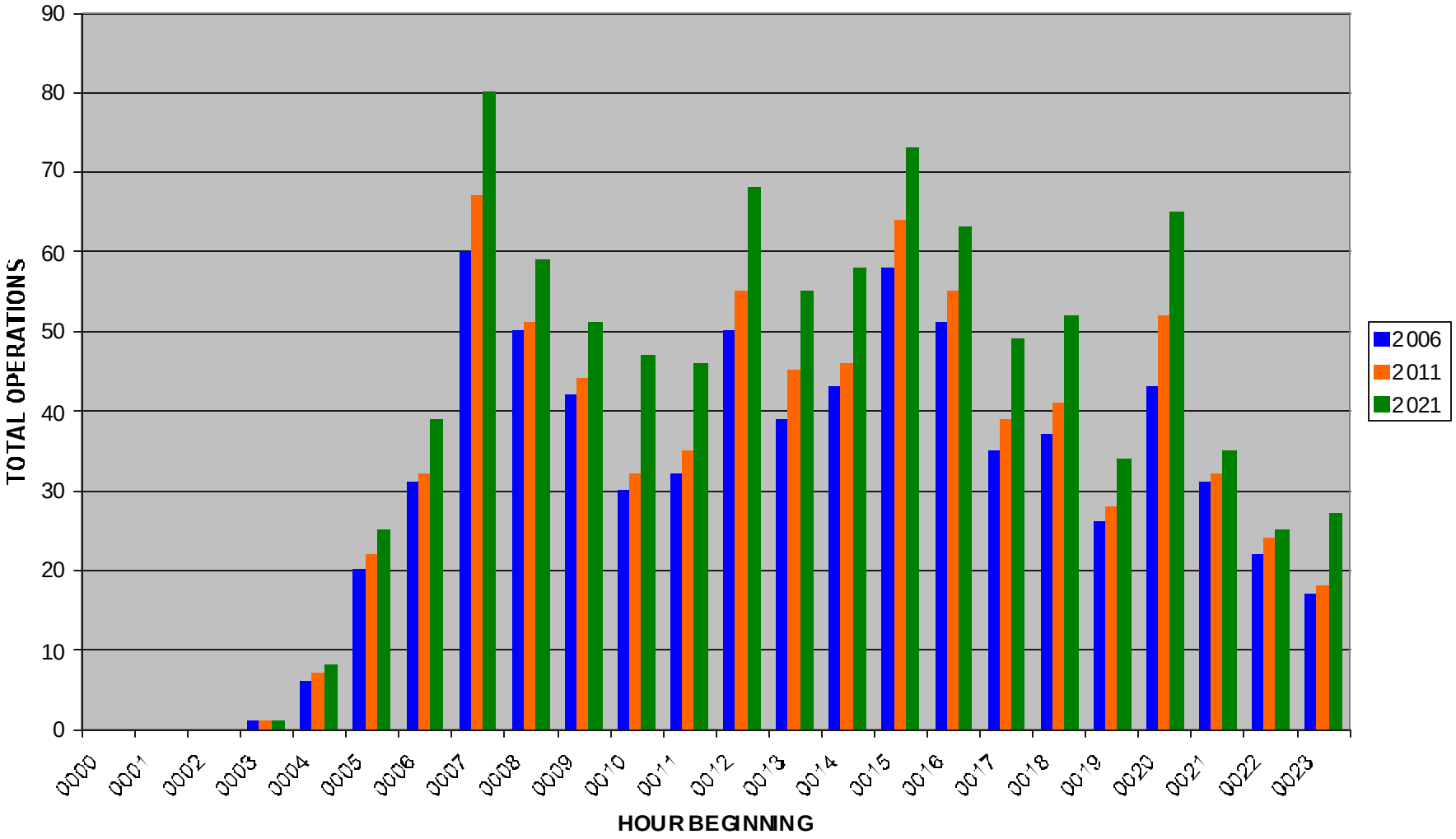
TABLE 3.5-8

General Mitchell International Airport

24-HOUR PEAKING ACTIVITY
SUMMARY OF ALL AIRPORT OPERATIONS

	2006			2011			2021		
Hour	Arr.	Dept	Total	Arr.	Dept	Total	Arr.	Dept	Total
0000 - 0059									
0100 - 0159									
0200 - 0259									
0300 - 0359	1		1	1		1	1		1
0400 - 0459	6		6	7		7	8		8
0500 - 0559	8	12	20	10	12	22	14	11	25
0600 - 0659	15	16	31	16	16	32	24	15	39
0700 - 0759	21	39	60	25	42	67	27	53	80
0800 - 0859	23	27	50	24	27	51	29	30	59
0900 - 0959	18	24	42	18	26	44	23	28	51
1000 - 1059	15	15	30	16	16	32	25	22	47
1100 - 1159	23	9	32	24	11	35	30	16	46
1200 - 1259	26	24	50	30	25	55	37	31	68
1300 - 1359	16	23	39	19	26	45	22	33	55
1400 - 1459	27	16	43	29	17	46	35	23	58
1500 - 1559	21	37	58	24	40	64	27	46	73
1600 - 1659	26	25	51	27	28	55	33	30	63
1700 - 1759	15	20	35	16	23	39	21	28	49
1800 - 1859	22	15	37	23	18	41	28	24	52
1900 - 1959	10	16	26	11	17	28	13	21	34
2000 - 2059	42	1	43	48	4	52	60	5	65
2100 - 2159	15	16	31	15	17	32	12	23	35
2200 - 2259	9	13	22	9	15	24	8	17	25
2300 - 2359	3	14	17	3	15	18	3	24	27
Total	362	362	724	395	395	790	480	480	960
Peak Hour	42	39	60	48	42	67	60	53	80
Peak Percent	11.6%	10.8%	8.3%	12.2%	10.6%	8.5%	12.5%	11.0%	8.3%

Source: PB Aviation Inc. Analysis



GENERAL MITCHELL INTERNATIONAL AIRPORT MASTERPLAN UPDATE

24-HOUR OPERATIONS PEAKING ACTIVITY

EXHIBIT 3.5-1

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PBAVIATION,INC.

TABLE 3.6-1

General Mitchell International Airport

ALTERNATIVE FORECAST

	Base Forecast		Contributions to Base Forecast		Percent of Total Enplanements in Base Forecast		Operations Impact		Percent of Passenger Operations in Base Forecast	
Year	Total Enplanements	Connections Included	AirTran Enplanements	Incremental Connections	AirTran Enplanements	Incremental Connections	AirTran	Connections	AirTran	Connections
1996	2,732,965	206,693								
1997	2,804,596	199,869								
1998	2,790,837	204,185								
1999	2,906,189	221,291								
2000	3,039,962	234,518								
2001	2,811,954	269,823								
Forecasts										
2006	3,658,480	353,585	305,341	94,289	8.3%	2.6%	8,815	4,139	5.1%	2.4%
2011	4,434,172	534,533	388,616	254,540	8.8%	5.7%	10,464	10,271	5.5%	5.4%
2021	6,427,713	1,011,481	527,407	842,901	8.2%	13.1%	12,516	29,285	5.4%	12.6%

Source: PB Aviation, Inc. Analysis

General aviation activity will continue at the Airport, but it will grow very slowly, especially in the early part of the forecast period. Cargo operators, large and small, will also grow at GMIA.

The next chapter assesses the ability of existing airside and landside facilities at GMIA to accommodate the aviation activity levels that are projected in this chapter. The need for improvements and expanded facilities is determined by the projections in this chapter as well as by known changes to occur in the aviation industry.