

Section 4

Traffic Projections

This section covers annual and peak period traffic projections for passengers, cargo, and aircraft movements at GSP. The planning horizon extends through the ultimate development of the GSP site which, based on a two-runway configuration, is projected to occur by 2053.

Traffic projections presented in this report are based on historical trends and expert judgment. These projections have been adjusted for comparisons with Federal Aviation Administration (FAA) and International Air Transport Association (IATA) projections for US domestic traffic. Market studies and airline agreements would be necessary for more detailed forecasts.

Passenger Traffic

Since 1965, the annual growth rate for passenger traffic at GSP has been 5.3 percent. This compares with an annual growth rate of 3.7 percent for US domestic enplanements during the same period. The strength of the Upstate economy has propelled GSP to grow much faster than the average national rate. Historical records and analysis of the 2003 flight schedules for GSP indicated the following statistics:

- Annual passenger traffic reached 1.6 million in year 2000 and has dropped to 1.4 million in 2002, due to the economic slowdown and the effects of the 9-11 events
- Recent average day of the peak month traffic (July 2002) was approximately 4,200 passengers
- Peak hour traffic was 600 passengers, 400-450 of which were either arriving or departing (depending on the hour of the day)

Three traffic growth scenarios have been developed. Their planning horizon extends over 50 years and is characterized by three periods: the short-term (2004-8), the mid-term (2009-23), and the long-term (2024-53). Table 4-1 presents the growth assumptions for each scenario and time period. The principal differences between these scenarios occur in the short-term.

- The low scenario begins with 2002's actual volume (1.4 million) and its growth rate increases slowly from 1% to 3%
- The moderate scenario is a continuation of the long-term trend line, growing at a historical rate of 5.3% between 2004-2023
- The high scenario is the same as the moderate one, but with the introduction of low-cost carriers that expand their market at the rate of two new cities served each year

In the long-term (2024-2053), the growth rate in each scenario drops to 3.8%, which is a more sustainable rate. For comparison, a recent IATA forecast predicts that US domestic traffic will resume its historical growth trend of 3.8%-4% per annum (pa) after 2003.

Table 4-1 GSP Passenger Growth Scenarios

Growth Scenario	2004 – 2008 Short-term	2009 – 2023 Mid-term	2024 – 2053 Long-term
Low	1 - 3%	4.5%	3.8%
Moderate	5.3%	5.3%	3.8%
High	15.0%	5.3%	3.8%

Figure 4-1 presents annual passenger projections for GSP throughout the planning horizon. For planning purposes, the Airport Commission has selected the moderate growth scenario reflecting continued strong growth through 2023. As Figure 4-1 shows, the total traffic at GSP is projected to reach 5.3 million by 2023. As a reference point, the FAA has previously forecasted, GSP's annual traffic volume to reach 3.3 million by year 2010. This falls between the moderate scenario (2.7 million) and the high scenario (4.3 million) for that year.

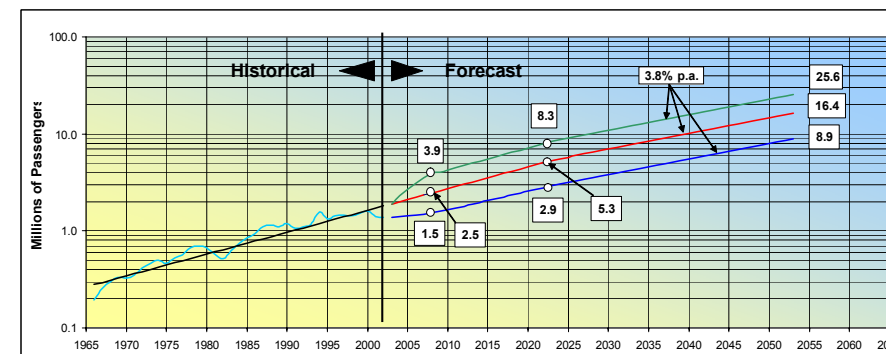


Figure 4-1 GSP Annual Projections for Passenger Traffic

The number of passengers at an airport varies seasonally with changes in business and vacation demands. Designing a facility to accommodate the absolute peak traffic achieves the highest service, but would be too costly. The planning volume most widely accepted by the aviation industry is the peak hour of the average day of the peak month (PH of ADPM). This planning volume should allow the airport to meet more than 95 percent of the design year's hourly traffic demands at the planned level of service.

Based on patterns observed from the 2003 GSP flight schedule, annual forecasts are converted to peak hour traffic projections as shown in Table 4-2. The enplanement and deplanement peaks occur at different times and are not coincident.

Table 4-2 GSP Peak Hour Passenger Projections

Passenger Type	2003 *	2008	2013	2018	2023	2053
Major Airlines						
Enplanement	146	192	283	417	615	2,458
Deplanement	141	158	237	355	533	2,195
Combined	230	317	475	712	1,066	4,390
Regional Airlines						
Enplanement	258	422	473	530	594	978
Deplanement	217	343	387	436	492	828
Combined	427	686	774	873	984	1,655
Total						
Enplanement	304	528	650	800	984	2,759
Deplanement	250	415	529	675	861	2,508
Combined	428	905	1,139	1,433	1,803	5,017

* Estimated

Cargo Traffic

Cargo traffic at GSP has had two distinct growth periods. The first growth period was between 1965 and 1992 when the traffic growth trend was 5.1%, comparable to the overall growth rates for North America. Then in 1993, FedEx and Emery introduced all-freight service, which increased the total freight volume by 150% within a year. In the following period from 1993 to 2002, freight traffic grew to reach a peak of 28,645 tons in 1999 and then decreased to 21,997 in 2002.

Historical records and analysis of the 2003 flight schedules for GSP indicate the following statistics:

- Estimated 2003 cargo traffic will reach 21,000 tons
- Estimated average day of the peak month traffic is 61 tons
- Freight carried in bellies is down to 5%, with the remainder carried by Airborne, UPS, FedEx and Emery in DC9s and B727s
- Peak hour traffic was 20 tons, which represents two freighters arriving or leaving in the same hour

As with passenger traffic, three traffic growth scenarios are developed. Their behavior differs mainly in the short-term period.

- The low scenario starts from the volume of 2002 (22,000 tons) and its growth rate increases slowly from 0.5% to 2.5%
- The moderate scenario follows the long-term trend line, growing at its historical rate of 5.1%
- The high scenario is the same as the moderate one, with the introduction of a new all-freight carrier that expands at the rate one new market served each year with a bi-weekly flight

Table 4-3 presents the growth assumptions for each scenario and time period. In the medium and long-term, freight is assumed to keep growing at its historical 5.1% rate. In the low scenario the rate is limited to 3.5%, which is close to the worldwide growth rate of air cargo.

Table 4-3 Cargo Growth Scenarios

Growth Scenario	2004 – 2008	2009 – 2023	2024 – 2053
	Short-term	Mid-term	Long-term
Low	0.5-2.5%	3.5%	3.5%
Moderate	5.1%	5.1%	5.1%
High	12.6%	5.1%	5.1%

The Airport Commission selected the moderate growth rate for planning purposes. As may be seen in Figure 4-2, traffic is projected to reach 79,000 tons by 2023 under the selected scenario.

Annual forecasts are converted to peak hour traffic projections based on patterns obtained from the 2003 GSP flight schedule. These projections are presented in Table 4-4.

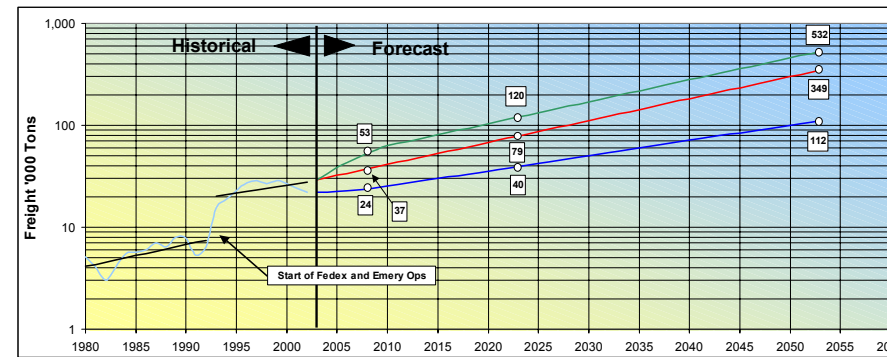


Figure 4-2 GSP Annual Projections for Cargo Traffic

Table 4-4 GSP Peak Hour Cargo Projections (Tons)

Freight Segment	2008	2013	2018	2023	2053
Belly					
Inbound/Outbound	0.6	1.0	1.6	2.6	14.6
Total	1.0	1.6	2.6	4.3	23.8
Freighter					
Inbound/Outbound	31.2	34.1	37.2	40.6	172.6
Total	41.7	47.3	53.7	60.9	258.8
Total					
Inbound/Outbound	31.4	34.4	37.7	41.3	183
Total	43.6	48.7	55.7	63.7	282.4

Aircraft Movements, including General Aviation

Annual passenger and cargo volumes are converted to aircraft movements by considering fleet mix, aircraft configuration, and load factors. These are shown in Table 4-5. Also shown in the same figure are annual general aviation aircraft movements, which are based on the following assumptions:

- Based aircraft are principally corporate aviation using the G/A facilities. For planning purposes, a new tenant is assumed to sign a lease with the fixed-base operator every 5 years. Each of these tenants is assumed to need three covered aircraft parking positions.
- The number of itinerant aircraft that use apron tie-down positions is expected to grow at an annual average of 2.5%. This is equal to

the GDP growth for developed economies as forecasted by Organization for Economic Cooperation and Development.

Table 4-5 GSP Annual Projections for Aircraft Movements

Operation Type	2003 *	2008	2013	2018	2023	2053
Passenger	44,716	84,040	100,627	120,488	144,269	337,955
All Cargo	1,863	3,200	3,810	4,536	5,400	22,000
G/A & Military	16,886	19,200	21,760	24,380	27,180	49,200
Total	63,465	106,440	126,197	149,404	176,849	409,155

* Estimated

Peak hour arrivals and departures are then derived by applying factors obtained from analysis of the GSP 2003 flight schedule. Table 4-6 presents annual and peak hour aircraft movements.

Table 4-6 GSP Peak Hour Projections for Aircraft Movements

Type	2003 *	2008	2013	2018	2023	2053
Non-concurrent						
Major Airlines	3	4	6	8	12	50
Regional Airlines	16	26	29	32	35	59
Freighters	2	4	4	5	5	10
G/A & Military	7	8	9	10	12	18
Concurrent	21	34	39	45	51	107

* Estimated