Forecasts 2009:
Verification Of 2004 Forecasts

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Foreword

The information contained in this comprehensive Executive Summary will provide the reader with a good sense of the difference between the original 2004 forecast for the Inaugural Airport Program (IAP) for the South Suburban Airport (SSA) and the updated 2009 forecast. For all intents and purposes, the forecasts verify the information presented in 2004 and deviate surprisingly little.

The IAP for SSA is a proposal by the Division of Aeronautics of the Illinois Department of Transportation (IDOT) to plan, design, construct and operate a new airport at the SSA site in eastern Will County, IL. This site was approved as a feasible location for an airport by the Federal Aviation Administration (FAA) in their Record of Decision on the Tier 1 Environmental Impact Statement (EIS) for SSA dated July 12, 2002.

In 2004, aviation forecasts were developed to continue the FAA review process of determining airspace impacts, develop an Airport Master Plan (AMP) and prepare a Tier 2 EIS. Regarding these forecasts, Philip M. Smithmeyer, Manager of the Chicago Airport District Office, wrote on June 4, 2004: "Based on consultation with the FAA's Systems Analysis and Policy Division, we agree with your forecast of aeronautical activity for the SSA. We believe the document projects passenger demand and aviation activity at reasonable levels and outlines the risk associated with a proposed new start-up airport such as SSA."

It was not until 2008 that the Airport Layout Plan (ALP) was submitted by IDOT to FAA and, in the spring 2008, FAA requested an update of the forecasts to validate the prospective airport's feasibility due to changing conditions in the economy. The economy continued to worsen from 2008 and into 2009.

It was at that time that the FAA, on April 21, 2008, requested that IDOT update the forecasts for SSA to address the following points:

- Provide letters of support (or some documentation of the research performed) from the cargo carriers and charter airlines supporting the forecast of operations.
- Provide information on what the correct critical aircraft should be. The critical aircraft shown in the 2004 approved forecast are different than that shown on the Preliminary Draft ALP submittal.
- Discuss the assumption of general aviation (GA) traffic going elsewhere at the Date of Beneficial Occupancy (DBO) DBO+20 timeframe. This point will be addressed in the Concept Alternatives Report.
- Verify the market segments assumed in the 2004 approved forecast.
- Justify statement that socio-economic parameters have not changed since the 2004 approved forecast (original research was performed in 2003).

Consequently, it is the purpose of the 2009 Forecast Verification Report to provide this information. The premise that IDOT used to update the original 2004 forecast was to verify the information in that forecast and not redo it. At the same time, significant attention was given to the economic events at every turn that would ostensibly reduce the forecast base and impact growth trends throughout the forecast period. And, this has been the case. However, the key factors that were assessed in the 2009 update were those that went into determining the socio-economic and the aviation forecasts for SSA and how those factors – population, jobs, Propensity to Fly[1], SSA Primary Service Area (PSA) and national aviation forecasts – have changed. Based upon that analysis, it was concluded: the forecasts for SSA were accepted by the FAA as reasonable for DBO+1 (the first full year of occupancy), DBO+5 (the fifth year of occupancy, etc.) and DBO+20 in the original 2004 submission and the relevant factor changes were assessed and deemed as adding to the demand rather than subtracting from it. IDOT

[1] Propensity to Fly is defined as the number of air trips divided by the population. For example, the Propensity to Fly for SSA PSA in 2020 (DBO+5) is defined by dividing the air trips (709,000) (see Table ES-8) by the estimated PSA population in 2020 (2,035,997) (See Table ES-3). For purposes of this study, an "air trip" is a passenger boarding.

maintains that holding the original 2004 forecast constant is the more conservative approach than revising it upward. As will be presented, the results of the 2009 forecasting effort is very similar to the 2004 forecast in all regards. Accordingly, to understand the underlying basis for the forecast, a discussion of demographic and employment characteristics will precede a discussion of the updated forecast.

The forecast addresses three types of aeronautical activity: air carrier passenger, air carrier cargo and GA. The level of activity from each type of aeronautical activity is dependent on a number of factors, including airline service attracted to the airport, facilities provided at the airport, operating costs and supporting infrastructure. The potential for each category of the aeronautical activity to develop at the airport and the likely market segments they will serve, are identified in the forecast document. Due to uncertainty inherent when forecasting activity for a new airport, a range of forecasts for each type of aeronautical activity is produced. These updated forecasts, as driven by market forces, have been labeled low, base and high to reflect certain assumptions regarding the introduction of service at SSA.

One difference between the 2004 original forecast and the updated 2009 forecast is the existence of a reconstructed GA/Corporate facility within the ultimate footprint of SSA. Since 2004, Sanger Field, a privately-owned airfield having about 30 based aircraft, was fully reconstructed by the new owner James Bult to include a 5,000-ft GA/Corporate concrete runway, 132 aircraft hangars and an 18,000 sq. ft fixed base operator (FBO) facility. It is important to note that the FAA National Plan of Integrated Airport Systems (NPIAS) has long recognized the airspace role of Sanger Field as an existing GA airfield and that, since the previous forecast, this existing facility has been substantially upgraded. Therefore, for purposes of the updated 2009 forecasts, IDOT assumes that there is an existing GA/Corporate facility already in existence within the SSA envelope, which it has incorporated into the SSA ALP.

This format of the forecast update will be similar to the *2004 Projections of Aeronautical Activity for the Inaugural Airport Program for the South Suburban Airport* prepared by TAMS Consultants, previously Earth Tech and now AECOM. That report includes historical and detail information regarding the on-going development of documentation relative to SSA since 1989 and contains background information pertaining to the development of supplemental airports in major cities across the U.S. Such information will be referenced in this document, with key portions provided as Appendices.

The remainder of the Executive Summary provides findings presented in subsequent chapters. Generally, these summary chapter sections highlight key details, but often provide capsule discussions that are presented in greater detail in the report.

Section 1 – Socio-Economic and Aviation Forecast

One purpose of the 2009 Forecast Verification Report is to verify the socio-economic and aviation forecasts of the original 2004 forecast. Consequently, the major purpose of Section 1 - Socio-Economic and Aviation Forecast is to update these key forecast indicators, which were originally prepared in May 2004, as an input to the forecast of aeronautical activity for SSA.

In 2004, the original DBO for SSA was approximately 2009, with the original DBO+1, the first year of operation, and the original DBO+5 as key forecast dates. As this 2009 forecast update is now six years later, it is essential to keep in mind that the forecasts being updated have now moved six years along the timeline. DBO+1 is not only five years later than 2004, but at least 12 years later (2016). All of the forecast parameters, changes in population, changes in employment, changes in national Propensity to Fly and other factors need to be adjusted to the new DBO and then forecast out 20 years from that point. Therefore, not only do the forecasts update those of 2004, but start from a larger base of population and employment by virtue of being six years along the timeline. With that in mind, it is important to gauge the impact of the following two factors that have seemingly significant opposite pull on demand:

- Population and household growth in the Will County portion of the South Suburban area being among the highest in the U.S. over the 2003-2009 period; and,
- The current economic downturn as it affects regional economic activity and aviation demand.

For the sake of consistency and comparison, the update methodology employed by these forecasts is essentially the same as that used in the original 2004 Forecast Study[2]. As the proposed airport is one of the few new airports being constructed (Branson, St. George and Ivanpah Valley are others) and is proposed to be built in the largest metropolitan area since the construction of Washington Dulles International Airport (IAD), the methodology employed for the 2004 study was a blend of traditional forecasts and policy directives. The intent was to begin conservatively and to expand as demand materialized. All of these assumptions, forecasts and directives are replicated here.

Assuming the same methodology as in the original report, any change in the forecast of aviation activity for SSA would depend on five major factors:

- Differences in FAA aeronautical forecasts between 2003 and 2009 for the U.S. for passenger, GA and cargo;
- Differences in the Propensity to Fly (at the national level);
- Differences in the forecasts of population and jobs for the Chicago Metropolitan Area and the 11-County SSA study area between the 2004 study and the current update;
- Differences in the study area and service area boundaries of SSA, as defined in the 2004 report, by travel times provided by CMAP; and
- Differences in the population, households and jobs currently contained within the service area and those forecasted at the beginning of service at the airport, the updated DBO+1 and the updated DBO+5. The forecast's far planning horizon is 2035, 20 years beyond DBO. Travel time changes since 2004 and proposed ground transportation improvements represent an integral part of defining the service area and impacts.

The forecast update text describes each of these factors in detail. This Executive Summary provides highlights of the forecast, plus several key tables and graphics of the detail reports.

Population. During the period 2000-2008, the population of the 11-County SSA study region has been growing at an annual rate of 0.59 percent. The rate of regional growth during the last year was higher (0.76 percent), even though this year experienced losses in employment and economic activity. The reason for increased population, at a time of economic recession, is due to the decline in net out-migration. The economic slow-down reduced international migration, a major component of growth for the Chicago Region. However, this slow-down also reduced domestic out-migration from the Chicago region to other areas of the country, especially to Florida and the Southwestern states. Cook County experienced a growth in population during the period of July 1, 2007 to July 1, 2008; this is the first year for such growth since the 2000 Census. The growth of the other counties in the region slowed, but remained robust.

The recommended population forecasts assume continuation of these above-cited patterns. Even with these conservative assumptions for growth, the latest recommended 2030 population forecasts for Will, Kankakee, Lake (IN) and Porter (IN) Counties are higher than those implied in the prior *Socio-Economic Impact Assessment*[3] or the *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*[4].

The recommended forecasts included in **Table ES-1, Forecasted Population by County**, are the "Baseline" for SSA Study – defined as the "No-Build" SSA Scenario.

[2] The studies referenced include: *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.; *Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program*, ACG, in association with TAMS, original draft prepared in 2003, final draft, February 28, 2006 (referred to as the original confirmation report).

[3] *Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

[4] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, TAMS/Earth Tech, May 11, 2004.

Table ES-1 Forecasted Population By County

County Name	2000 Census (04-01-00)	2007 Census Estimate (07-01-07)	2008 Census Estimate (07-01-08)	2030 CMAP, NIRPC & Local Forecasts	2030 W&P Forecast (2008 Series)[a]	2035 W&P Forecast (2008 Series)[a]	Recommended 2030 Forecast	Recommended 2030 Forecast
Cook*	5,376,741	5,271,405	5,294,664	5,952,792[1]	5,368,585	5,398,196	5,680,000	5,765,000
DuPage	904,161	926,228	930,528	1,003,704[1]	1,217,850	1,282,096	1,005,000	1,020,000
Grundy	37,535	46,987	47,958	66,267[2]	69,065	73,893	66,000	70,000
Kane	404,119	498,142	507,579	718,464[1]	711,882	758,422	720,000	763,000
Kankakee*	103,833	111,538	112,524	150,000[3]	127,120	130,897	140,000	146,000
Kendall	54,544	96,566	103,460	190,150[2]	164,787	179,646	190,000	210,000
Lake	644,356	706,386	712,453	841,860[1]	950,657	1,004,026	850,000	865,000
McHenry	260,077	314,669	318,641	457,593[1]	473,955	508,699	465,000	497,000
Will*	502,266	670,663	681,097	1,076,447[1]	1,110,060	1,205,596	1,100,000	1,175,000
Lake (IN)*	484,564	491,238	493,800	504,808[4]	534,460	546,669	557,100	567,000
Porter (IN)	146,798	160,267	162,181	164,915[4]	205,100	215,045	212,900	225,000
6-County CMAP Region	8,091,720	8,387,493	8,444,962	10,050,860[1]	9,832,989	10,157,035	9,820,000	10,085,000
2-County NIRPC Region	631,362	651,505	655,981	669,723[4]	739,560	761,714	770,000	792,000
11-County SSA Study Region	8,918,994	9,294,089	9,364,885	11,127,000	10,933,521	11,303,185	10,986,000	11,303,000

* Four County SSA Immediate Impact Area

Sources:

(1) Northeastern Illinois Planning Commission (also known as CMAP), 2030 Forecasts of Population, Households and Employment for Counties and Municipalities, September 27, 2006, http://www.cmap.illinois.gov/2030_forecasts.aspx.

(2) Prairie Parkway Study, Draft EIS, November 2006, *Socio-Economic Impacts of the Preferred Alignment*.

(3) *Kankakee County Commuter Transit: Phase II Feasibility Study*, Final Report, December 2007.

(4) Northwestern Indiana Regional Planning Commission (NIRPC): Population Forecasts for *Connections 2030: Regional Transportation Plan*, 2007.

Notes:

(a) Woods & Poole Economics, Inc. (W&P) forecasts do not take into consideration land constraints. These counties are not accommodating indicated by high levels of population forecasts. Population not accommodated here will spill over to adjacent counties, where developable land is available. CMAP assumes that some of this spillover will go to Cook County, which is fully developed, but which does offer redevelopment opportunities.

Employment. Total employment for SSA study region was stable between 2000 and 2001; declined thereafter through 2003; grew through 2007; and declined slightly to 2008. Employment in the study region is forecasted to decline through 2009, followed by stabilization in 2010 and growth thereafter.

Table ES-2, Employment Data and Forecasts – Various Available Sources, is the recommended employment forecasts. The recommended 2030 total regional employment is lower than prior forecasts for 2030 and the differences between the two are proportionately higher for intermediate years. However, the recommended employment in the four-County SSA immediate impact area is higher than prior forecasts, due to the higher population forecast and the need to provide local services (i.e., police, fire, educational services, local retail, etc). Other than growth in these non-basic employment sectors, Will, Lake (IN) and Porter (IN) Counties have been experiencing significant growth in logistics employment due to recent and proposed investments in surface transportation (i.e., CN acquisition of EJE, I-355 extensions, past and proposed widening of I-80, proposed Prairie Parkway and the Illiana Expressway, currently undergoing feasibility study). These counties and South Suburban Cook remain employment deficient, implying net commuting to the job-rich areas of the Chicago central area, North Suburban Cook, DuPage and Lake (IL) Counties.

The implied imbalance in the forecast between regional population and employment forecasts, as compared with prior forecasts, is the result of higher unemployment rates for the next few years and an older population than originally forecast in the long-term. The greater numbers of older population are partially the result of the new migration rates. An older population and lesser international migration imply lower participation rates in the labor force.

Verification of the Primary Service Area (PSA). As indicated, it is important to maintain the FAA-approved Tier I EIS definition for the PSA for SSA. The PSA was developed in the 1990's and the historical 2004 definition consists of two conservative conditions which are:

- The SSA Primary Passenger Market must be located beyond a 45-minute average daily travel time from Chicago Midway International Airport (MDW); and
- The SSA Primary Passenger Market does not include any of the overlap with MDW or Chicago O'Hare International Airport's (ORD) 45-minute travel time market areas.

To update and define its current boundaries, travel time data was secured from the regional planning agency, Chicago Metropolitan Agency for Planning (CMAP), as has been the case in the past with predecessor agencies of the Northeastern Illinois Regional Planning Commission (NIRPC) and the Chicago Area Transportation Study (CATS). Two sets of travel times were secured from CMAP: the 2009 existing conditions and existing network and the 2030 conditions with CMAP socio-economic forecasts and officially-adopted Regional Transportation Plan (RTP).

Exhibit ES-1, 2009 Travel Times – Existing Network Changes in SSA Primary Service Area, shows the additions and deletions to the SSA PSA resulting from differences in travel times. These differences are due to increased congestion and/or changes in the transportation network, which are two:

- The addition to the SSA PSA of a strip (averaging two miles wide) of land extending from Goodings Grove/Orland Park (Will/Cook) to Whiting/Hammond (Lake County, IN). The total area of this strip is approximately 90 square miles, with a year 2000 population of approximately 235,000.
- The deletion of approximately four square miles in the vicinity of Lewis University (LOT). The 2000 population of this deletion is approximately 1,000. The deletion is due to the completion of the I-355 extension south of I-80, making this area closer in time to MDW.

Table ES-3, Primary Service Area Population, shows a population growth from 1,339,241 to 1,480,988 between 2000 and 2007, this is a 10.6 percent increase. Between 2010 and 2016, the population is forecasted to grow from

Table ES-2 Employment Data and Forecasts – Various Available Sources

County Name	2000 Actual Employment			2008 Estimated Employment		2030 Employment Forecasts				Recommended Forecasts	
	W&P/BEA[1]	BLS[2]	CMAP/NIRPC[3]	W&P/BEA[4]	BLS[2]	W&P 2008 Series (BEA Def)[1]	CMAP/NIRPC[3]	CMAP in BEA Equivalent Job[5]	Other Local Generated in BEA Equivalent Job[6]	2030 in BEA Equivalent Jobs	2035 in BEA Equivalent Jobs
Cook	3,351,990	2,716,109	2,818,334	3,320,347	2,533,427	3,908,482	3,305,003	4,099,821	n/a	3,732,000	3,865,000
DuPage	702,575	595,749	649,989	735,838	601,437	1,045,657	830,394	1,025,581	n/a	950,000	1,020,000
Grundy	20,025	14,578	n/a	24,471	16,575	34,936	n/a	n/a	36,269	35,000	38,000
Kane	241,766	198,180	206,107	269,832	212,255	388,080	352,208	423,442	n/a	430,000	480,000
Kankakee	54,560	42,915	n/a	56,600	43,855	70,240	n/a	n/a	85,000	71,000	75,000
Kendall	21,667	16,094	n/a	33,938	25,125	46,018	n/a	n/a	91,248	82,000	100,000
Lake	418,842	321,667	352,582	454,863	343,756	639,001	463,509	569,931	n/a	560,000	595,000
McHenry	111,702	89,441	105,118	133,067	106,157	189,250	168,573	207,438	n/a	203,000	227,000
Will	186,145	145,513	165,556	259,823	199,867	381,997	415,549	547,946	n/a	522,000	625,000
Lake (IN)	244,910	195,710	201,321	251,260	195,780	308,820	n/a	n/a	301,150	301,000	317,000
Porter	70,660	54,079	54,126	73,740	58,177	102,740	n/a	n/a	114,450	114,000	127,000
6-County CMAP Region	5,013,020	4,066,659	4,297,686	5,173,770	3,996,899	6,552,467	5,535,236	6,874,159	n/a	6,397,000	6,812,000
2-County NIRPC Region	315,570	249,789	255,447	325,000	253,957	411,560	n/a	n/a	415,600	415,000	444,000
11-County SSA Study Region	5,424,842	4,390,035	4,553,133	5,613,779	4,336,411	7,115,221	n/a	n/a	n/a	7,000,000	7,469,000

NA – Not Available.

Sources:

(1) Woods & Poole Economics, Inc. (W&P), *2008 Complete Economic and Demographic Data Source (CEDDS)*.

(2) Bureau of Labor Statistics (BLS) web site, Quarterly Census of Employment and Wages, IL Counties (2007), http://www.bls.gov/cew/.

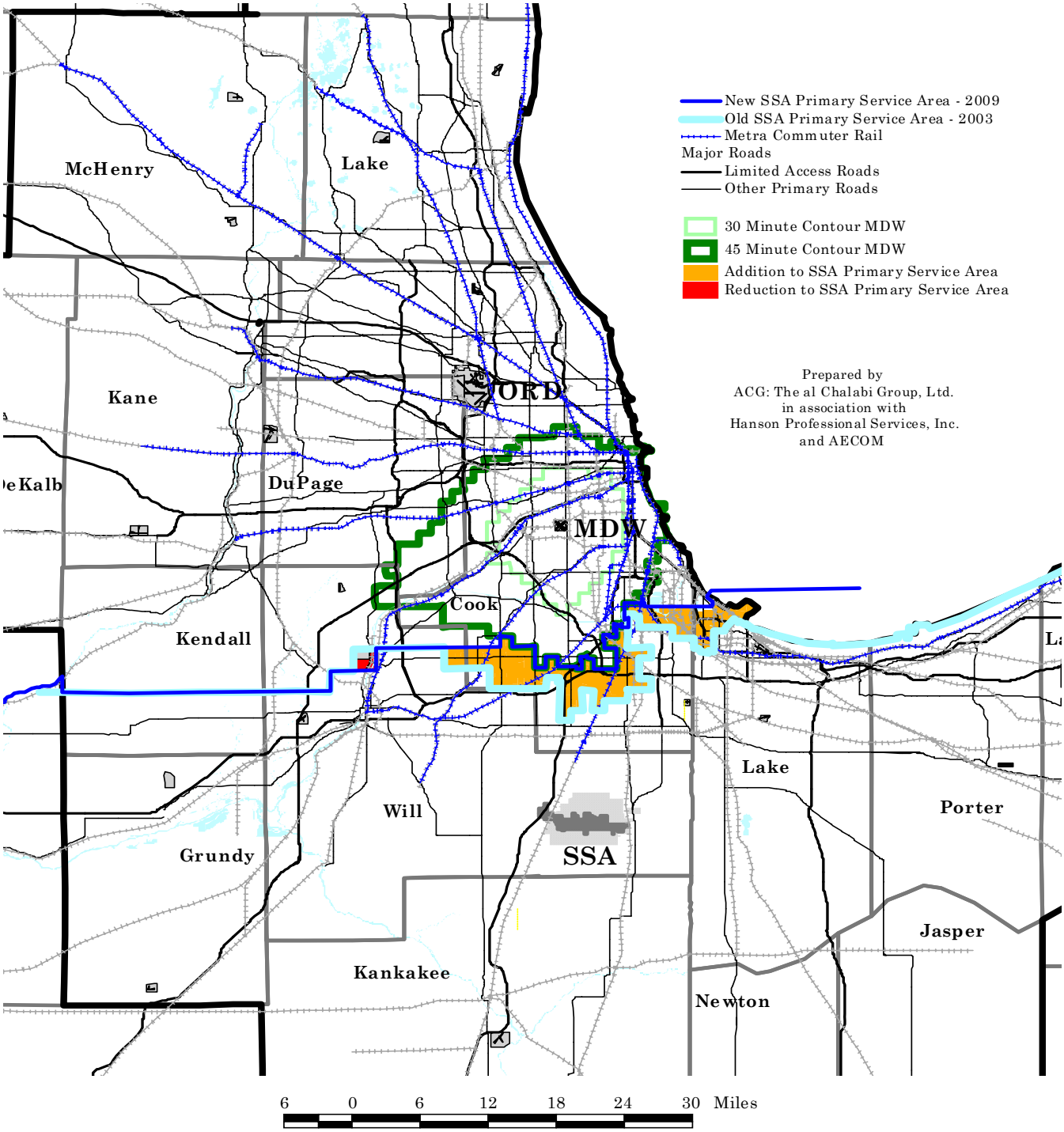
(3) Northeastern Illinois Planning Commission (also known as CMAP), *2030 Forecasts of Population, Households and Employment for Counties and Municipalities*, September 27, 2006, http://www.cmap.illinois.gov/2030_forecasts.aspx; Northwestern Indiana Regional Planning Commission (NIRPC), http://www.cmap.illinois.gov/2030_forecasts.aspx.

(4) The last W&P "actual" statistics are for 2006. The W&P 2008 estimate is derived through comparative analysis with the U.S. Department of Labor, BLS employment data.

(5) This conversion was undertaken as part of the Prairie Parkway Study, Draft Environmental Impact Statement (EIS), November 2006, *Socio-Economic Impacts of the Preferred Alignment*.

(6) The forecasts for Boone and Winnebago Counties are from *Year 2035 Long-Range Transportation Plan for the Rockford Metropolitan Planning Area*, Rockford Area Transportation Study (predecessor agency of the Rockford Metropolitan Agency for Planning), August 2005, Table 9-4, p.98. Forecasts for other IL Counties are from Prairie Parkway Draft EIS noted above. Forecasts for Indiana Counties are from Illiana Corridor Feasibility Study, 2009.

Exhibit ES-1 2009 Travel Times – Existing Network
Changes in SSA Primary Service Area



Source: CMAP April 2009 travel times and agreed-on definitions

1,552,248 to 1,694,767, a 9.2 percent increase. Adding the 241,720 of the area to the PSA increases the total PSA population in 2016 to 1,936,487, a 24.8 percent increase over the 1,552,248 of the original DBO+1 (2010).

Table ES-3 Primary Service Area (PSA) Populations

Populations	2000 Actual	2007 Actual	2010	2015	2016	2020	2030
Population as published in 2004 Report	1,348,898	-	1,605,746	1,734,171	1,759,855	1,862,595	2,119,443
Population as published in 2004 Adjusted to Baseline	1,348,898	-	1,550,809	1,651,764	1,671,955	1,752,719	1,954,630
Population of 2004 PSA – New analysis	1,339,241	1,480,988	1,552,248	1,671,014	1,694,767	1,789,780	2,027,312
Net Population of Areas Added 2004 PSA – New analysis	231,400	231,600	234,973	240,595	241,720	246,217	257,462
Population of 2009 PSA – New analysis	1,570,641	1,712,588	1,787,221	1,911,609	1,936,487	2,035,997	2,284,774

1 *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
2 The population and employment forecasts presented above imply a "build" SSA. The comparison of "build" and "no-build" SSA scenarios are addressed in the report, *Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program*, February 28, 2006, Table 37 (page 65) for population forecasts, and Table 35 (page 63) for employment forecasts.
3 The new population estimates for 2000 are derived by aggregating 2000 Census of Population data by Census block groups. The new employment estimates for 2000 are derived from estimates by Census block groups generated by Tetrad.
4 Net aggregation of the population and employment (added and removed) from the Primary Service Area as result of changing travel times to O'Hare, Midway and South Suburban Airports. The aggregation is of Census block groups.
5 The sum of the preceding two rows.

Table ES-4, Primary Service Area Employment, shows an employment growth from 615,073 to 690,907, between 2000 and 2008, a 12.3 percent increase. Between 2010 and 2016, employment is forecast to grow from 681,000 to 790,000, a 16.0 percent increase. Adding the 104,239 jobs of the area to the PSA increases the total PSA employment in 2016 to 900,000, a 32.1 percent increase over the original DBO+1 (2010) jobs.

Table ES-4 Primary Service Area (PSA) Employment

Employment	2000 Actual	2008 Actual	2010	2015	2016	2020	2030
Employment as published in 2004 Report	624,301	-	-	817,458	830,335	881,843	1,010,614
Employment as published in 2004 Adjusted to Baseline	624,301	-	-	751,108	759,561	793,376	877,914
Employment of 2004 PSA – New analysis	615,073	690,907	681,000	772,000	790,000	864,000	1,045,000
Net Employment of Areas Added 2004 PSA – New analysis	95,010	104,239	104,000	108,000	110,000	111,000	120,700
Employment of 2009 PSA – New analysis	710,084	795,146	785,146	880,000	900,000	975,000	1,165,000

1 Net aggregation of the population and employment (added and removed) from the Primary Service Area as result of changing travel times to O'Hare, Midway and South Suburban Airports. The aggregation is of Census block groups.
2 The sum of the preceding two rows.

As population and employment are major inputs to developing a forecast for SSA's potential market and enplanements, the above-cited findings contribute either to a greatly enhanced and larger market or a much more conservative posture in the present forecasts.

Section 2 - SSA Passenger Enplanements Forecasts Update

The passage of time between preparation of the original 2004 forecast for a DBO+1 of 2010 and the updated 2009 forecast, which projects DBO+1 in 2016, does result in an increase in the national enplanement forecast from use of FAA's forecast at the time of that horizon year. On the other hand, postponement of DBO does not cause people to travel more; it is simply that people travel more in the year n+6 than in year n for any one forecast.

The current air trips (2000 vs. 2007) have increased from 1,725,915 to 2,251,371, a 30 percent increase. The forecasted air trips of the new DBO+1 (2016) versus the original DBO+1 (2010) are 2,711,365 and 2,199,904, respectively; a 23 percent increase.

Notwithstanding this increase in demand within the PSA, it is recommended that the enplanement forecasts for SSA for the original DBO+1, DBO+5 and DBO+20 be retained at the same levels as those published in the 2004 projections. As discussed earlier in the Executive Summary, the premise that IDOT used to update the original 2004 forecasts was to verify the information in that forecast and not redo it.

The remainder of this section outlines forecast parameters and considerations, which were generated during this update evaluation, and lead to the conclusion that SSA demand for future air service is slightly stronger in 2009 than 2004, in the face of current economic woes.

In 2004, an analysis of the existing U.S. airline industry and multi-airport systems was conducted to determine the potential air passenger role SSA would have in the Chicago airport system. Research for that segment of the forecast cited Dr. Richard de Neufville, whose work on airports systems is often quoted by the FAA.[5] Secondary or supplemental airports exist in a number of metropolitan areas in the U.S., including, among others, Los Angeles, Boston, New York, San Francisco and Washington, D.C. In most of these cases, a secondary or supplemental airport was developed through expansion of an existing airport and was documented in those forecasts.[6]

The 2004 forecast concluded that the sector of the air passenger market with the greatest likelihood of growth in the Chicago region would be that of domestic, low-cost carriers (LCCs). LCCs are defined as airlines that primarily operate point-to-point destinations, operate relatively homogeneous aircraft fleets, have low operating costs, tend to use supplemental/secondary airports and generally offer attractively priced fares. Although there are some notable exceptions, such as AirTran in Atlanta and Frontier in Denver, this definition of LCCs was used in the development of the air passenger forecasts. Traditionally, LCCs have attracted leisure travelers, but as amenities have disappeared from the mainline carriers, more and more business travelers are also utilizing LCCs.[7] In addition, LCCs have increased flight frequencies on some routes to make themselves more attractive to business travelers. For these reasons, it is assumed that LCCs would be most attracted to an unconstrained start-up airport with low operating costs.

The 2004, forecasts anticipated that little or no hubbing operations will exist during the IAP, which also means that few connecting enplanements are expected. Since commuter/regional airlines typically feed passengers into hubbing operations, little commuter activity is expected to occur during the IAP. Similarly, international operations by scheduled passenger airlines are not anticipated to develop at SSA during the IAP. If international activity does commence during the IAP, it is anticipated that it would be in the form of charter service on a seasonal basis. Domestic charter service to vacation destinations may also appear during the first years of operation.

[5] Internet source: The Massachusetts Institute of Technology, Engineering Systems Division (ESD), People/ESD Faculty and Technology Staff, Richard de Neufville, Ph.D., 2007, http://esd.mit.edu/Faculty_Pages/deneufville/deneufville.htm.
[6] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, IDOT, May 11, 2004, p. 28.
[7] FAA, *FAA Aerospace Forecasts: Fiscal Years 2003-2014*, March 2003, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/.

The methodologies used for both the original 2004 forecast study and the 2009 Forecast Verification Report are very similar. For the 2004 report, the purpose was to "define and characterize the market area in which SSA would operate, determine potential users and activity that could occur during the IAP and develop a forecast of aeronautical activity to be used in the development of the AMP and EIS. The IAP is a proposal by IDOT to plan, design, construct and operate a new airport at the SSA site in eastern Will County, IL. The site was approved as a feasible location for an airport by the FAA in the Record of Decision on the Tier 1 EIS dated July 12, 2002.

The Inaugural Airport is being planned to serve three separate facets of aeronautical activity, including air passenger, air cargo and GA/Corporate. The level of activity from each type of aeronautical activity is dependent upon a number of factors, including airline service demand, facilities provided at the airport, operating costs and supporting infrastructure. Operating costs for SSA will depend on the facilities constructed and the financing obtained to construct the airport. The original 2004 forecasts explored the potential for each category of aeronautical activity to develop the airport and the likely market segments that they would serve. Due to uncertainty, a range of forecasts for each type of aeronautical activity were provided. Those forecasts, as driven by market forces, were labeled low, base and high to reflect certain assumptions under the appropriate headings. The forecasts were developed to establish facility requirements in the AMP for SSA. The Master Plan would focus on the IAP but also consider long-range forecasts and a potential "ultimate configuration" for SSA. The aircraft operations and enplanement forecasts, together with a breakdown of proposed aeronautical activity, design aircraft and assumptions concerning load facts and average aircraft seating configuration, will provide a measure of the airfield and terminal requirements. These requirements will be described in a separate report and will become part of the Master Plan.[8]

By 2009, Lynn Osmus, the Acting Administrator, stated, "*The downturn facing aviation mirrors the economic situation around the world. Aviation finds itself in economic waters that no one would have predicted a decade ago. In 2009, we expect sizable declines in both domestic and international capacity as carriers respond to the impact of the economic downturn.*" The forecast for the 2009-2025 period dropped precariously as the enplanement forecast for 2009 (at 702.3 million) was 55.1 million lower than the 2008 estimate of 757.4 million (a decrease of 7.8 percent). Enplanement growth for the reminder of the 2009 forecast period was set at 2.7 percent annually, versus long-term forecasts of 2.9 and 3.1 percent for mainline and regional carriers in 2008 and a long-term forecast of 3.5 percent in 2007.

In a brief period (2007-2009), three long-range forecasts have gone from robust, to coming back "with a vengeance", to "strong and driven by a growing U.S. and world economy", to "sizable declines in both domestic and international capacity". This is one of the problems of developing a long-range forecast based on short-term trends and observations. It is for this reason that the aviation forecast, originally prepared for SSA in 1994 and as reconfirmed in 2004 by the consultant team, reviewed trends from 1980 and developed the forecast to 2020. While no forecaster could have predicted the 9/11 attacks or the severity of the current global recession, that extended range has allowed the SSA long-range forecast to remain on-track with the FAA's annually-adjusted forecasts.

The current economic downturn, the most serious since the Great Depression, is a challenge to the aviation industry. The FAA states that "In 2009, we expect sizable declines in both domestic and international capacity as carriers respond to the impacts of the economic downturn. Furthermore, the FAA does not expect "air traffic… (to) rise to prior forecast levels even when the economy recovers…" This forecast environment is precarious and it justifies caution in revisiting the assumptions and forecasts for an airport, particularly a new one.

Comparison of Enplanement Forecasts at Date of Beneficial Occupancy (DBO), DBO+1, DBO+5. One of the first tasks of this study update is the comparison of national domestic and total enplanements as a basis for confirming the reasonableness of forecasts for SSA. This confirmation has two components and these are:

- Comparison of the two national enplanement forecasts for the time of the airport's DBO+1, as originally proposed and as currently estimated. The DBO assumed in the 2004 report was 2009 and the DBO assumed in this update report is 2015. DBO+1 are 2010 and 2016, respectively, for the original and updated forecasts.

[8] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, IDOT, May 11, 2004, p. 28.

- Comparison of the Propensity to Fly.

Although there has been a general downward trend in the FAA's forecast of long-range domestic and total enplanements for the U.S., the six-year postponement in the estimated DBO for SSA compensates with an increase in the base enplanements. **Table ES-5, National FAA Forecasts**, shows the FAA Forecasts of total and domestic enplanements forecasted in 2001, 2003, 2008 and 2009. These forecasts have been extrapolated, where necessary, for one or two years to provide comparative dates.

In 2009, the FAA forecast of domestic enplanements for 2010 (the original DBO+1) is much lower than the 2004 forecast for 2010 (638,900,000 vs. 780,100,000), or a 22.1 percent decline. However, the 2009 FAA forecast for 2016 (the new DBO+1) is 789,100,000, a 1.6 percent increase.

In 2009, the FAA forecast for total enplanements for 2010 (the original DBO+1) is 716,500,000; this is much lower than the 2004 forecast of 854,000,000 for 2010, a decline of 16.1 percent. However, the 2009 forecast for 2016 is 890,700,000, an increase of 36,700,000, or 4.3 percent.

In either respect, the 2009 FAA domestic and total U.S. enplanement forecasts for the updated DBO+1 for SSA are 1.6 percent and 4.3 percent higher, respectively, than the 2004 forecast.

Changes in the Propensity to Fly. The result of the six-year postponement in the original DBO for SSA is an impact on the Propensity to Fly.

Additionally, during that same timeframe, the national population forecasts also increased by an even greater percentage. The passage of time between preparation of the original 2004 forecast for a DBO of 2010 and the updated 2009 forecast, which projects DBO in 2016, does result in an increase in the national enplanement forecast from use of the FAA's own forecast at the time for that horizon year. On the other hand, postponement of DBO does not cause people to travel more; it is simply that people travel more in the year n+6 than in year n for any one forecast.

The net results to the Propensity to Fly is a slight decrease in the Propensity to Fly in 2016 (DBO+1) versus 2010 (the original DBO+1). The Propensity to Fly calculation for the SSA study area was one of the inputs in estimating the range of enplanements generated by the PSA.

Table ES-6, National Propensity to Fly Ratios (2003-2009), adds the forecast of U.S. population to the previous table to calculate national Propensity to Fly ratios assumed by the FAA-approved (2004) forecast and that of the current update. The previous calculation of Propensity to Fly for 2010 for domestic and total enplanements was 2.504 and 2.741, respectively. The 2009 calculation of 2016 domestic and total enplanement Propensities to Fly are 2.397 and 2.705, respectively. These latter ratios imply reductions of 4.3 percent and 1.3 percent, respectively.

These two factors, forecasts of national enplanements (2003 and 2009) for 2010 and 2016, respectively and Propensity to Fly ratios for the same forecast years, were applied, as described above, to redefine the Airport's Service Area, its locally-generated enplanements and the forecasts of population and jobs for 2010 and 2016 to determine whether the results, in terms of the forecast range of enplanements for SSA, are higher or lower than the FAA-approved forecast range of 2004.

Cumulative Change in Passenger Air Trips. The estimation of the SSA Primary Passenger Market in 2004 was based on extensive and detailed data and surveys that had been conducted in 1995, including a comprehensive survey presented in the report, *Market Survey of Potential Users: South Suburban Airport*, which analyzed over 96,000 completed surveys of households across the U.S. The estimate of 2000 demand used in the 2004 study determined that the "1995 enplanement generation rates were stable and produced reasonable results. The long-

Table ES-5 National FAA Forecasts

	2000	2007	2008	2010	2015	2016	2020
U.S. Domestic Enplanements							
2001 FAA Forecasts	641,200,000	816,400,000	847,700,000	913,200,000	-	-	-
2003 FAA Forecasts	641,200,000	700,900,000	726,000,000	780,100,000	943,400,000	980,600,000	-
2008 FAA Forecasts	641,200,000	690,100,000	696,200,000	746,200,000	859,000,000	882,400,000	984,000,000
2009 FAA Forecasts	641,200,000	690,100,000	679,600,000	638,900,000	770,000,000	789,100,000	857,800,000
U.S. Total Enplanements (Domestic Plus International)							
2001 FAA Forecasts	697,600,000	899,100,000	935,200,000	1,010,900,000	-	-	-
2003 FAA Forecasts	697,600,000	764,900,000	793,200,000	854,000,000	1,035,900,000	1,077,400,000	-
2008 FAA Forecasts	697,600,000	765,300,000	776,400,000	836,000,000	973,100,000	1,001,800,000	1,126,500,000
2009 FAA Forecasts	697,600,000	765,300,000	757,400,000	716,500,000	867,300,000	890,700,000	978,300,000

Source: FAA Aeronautical Forecast, 2009.
Note: Black = Actual; Blue = Forecasts

Table ES-6 National Propensity to Fly Ratios (2003-2009)

	2000	2007	2008	2010	2015	2016	2020
U.S. Population Forecasts							
2001 Forecasts	282,171,936	292,370,748	294,795,332	299,644,500	312,023,840	314,550,516	324,657,220
2003 Forecasts	282,171,936	302,783,552	305,713,398	311,573,090	326,997,480	330,205,904	343,039,600
2008 Forecasts	282,171,936	301,290,332	304,059,724	310,603,350	326,038,480	329,234,786	342,020,010
U.S. Total Enplanements (Domestic)							
2001 FAA Forecasts	641,200,000	816,400,000	847,700,000	913,200,000	-	-	-
2003 FAA Forecasts	641,200,000	700,900,000	726,000,000	780,100,000	943,400,000	980,600,000	-
2008 FAA Forecasts	641,200,000	690,100,000	696,200,000	746,200,000	859,000,000	882,400,000	984,000,000
2009 FAA Forecasts	641,200,000	690,100,000	679,600,000	638,900,000	770,000,000	789,100,000	857,800,000
U.S. Total Enplanements (Domestic Plus International)							
2001 FAA Forecasts	697,600,000	899,100,000	935,200,000	1,010,900,000	-	-	-
2003 FAA Forecasts	697,600,000	764,900,000	793,200,000	854,000,000	1,035,900,000	1,077,400,000	-
2008 FAA Forecasts	697,600,000	765,300,000	776,400,000	836,000,000	973,100,000	1,001,800,000	1,126,500,000
2009 FAA Forecasts	697,600,000	765,300,000	757,400,000	716,500,000	867,300,000	890,700,000	978,300,000
U.S. Domestic Enplanements Per Person							
2003 FAA Forecasts	2.272	2.315	2.375	2.504	2.885	2.970	-
2009 FAA Forecasts	2.272	2.290	2.235	2.057	2.362	2.397	2.508
Percentage Change	0.00%	-1.05%	-5.88%	-17.84%	-18.14%	-19.29%	-
U.S. Total Enplanements (Domestic Plus International) Per Person							
2003 FAA Forecasts	2.472	2.526	2.595	2.741	3.168	3.263	-
2009 FAA Forecasts	2.472	2.540	2.491	2.307	2.660	2.705	2.860
Percentage Change	0.00%	0.55%	-3.99%	-15.84%	-16.03%	-17.08%	-

Source: FAA, *FAA Aeronautical Forecast*, 2009, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2009-2025/.
Note: Black = Actual; Blue = Forecasts

distance trip generation and modal split were calibrated using 1995 data and (were) validated using independent 2000 data (NIPC) to reflect 2004 conditions."[9]

The implied imbalance in this report, between regional population and employment forecasts, as compared with prior forecasts, is the result of higher unemployment rates for the next few years and an older population than originally forecast in the long-term. The greater numbers of older population are partially the result of the new migration rates. An older population and lesser international migration imply lower participation rates in the labor force.

This current update uses similar data – updated aeronautical data, population and Propensity to Fly ratios and service area changes – to adjust the total SSA-generated air trips. This calculation is shown on **Table ES-7, Changes in SSA Primary Passenger Market**.

Table ES-7 Changes In SSA Primary Passenger Market

	2000	2007	2010	2015	2016	2020
Air Trips Generated in PSA – As published in 2004 Report	1,725,915	-	-	-	-	-
Implied Air Trip Forecasts Generated in 2004 PSA – given 2003 population and national FAA forecasts	1,725,915	-	2,199,904	2,708,127	2,823,348	-
Air Trips Generated in 2004 PSA – adjusted to new population and FAA 2009 National enplanement forecasts	1,713,559	1,946,909	1,853,185	2,300,531	2,340,981	2,594,661
Air Trips Generated in 2009 PSA – adjusted to new population and FAA 2009 National enplanement forecasts	2,009,635	2,251,371	2,133,713	2,631,766	2,711,365	3,014,015

Sources:

Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport, May 11, 2004.

Socio-Economic and Aviation Forecast Update, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

In conclusion, the commercial enplanement forecast for SSA, presented in the 2004 study, consisted of ranges from low-to-high for the original DBO+1, DBO+5 and DBO+20. These ranges were 19,600-169,400, 471,000-968,000 and 2,226,000-6,680,000, respectively.

The 2004 study estimates of regional air trips were 1,725,915 for 2000. This update establishes a forecast of 2,133,713 air trips for 2010 and a forecast of 2,711,365 for 2016. At these rates, SSA would have serviced 0.9 to 7.9 percent of its market in the original DBO+1 (2010). Those same forecasts would constitute 0.7 to 6.2 percent of its market in the updated DBO+1 (2016).

Furthermore, retaining the FAA-approved 2004 forecasts for the original DBO+5 would imply servicing 17 to 36 percent of SSA's original DBO+5 PSA market in the updated DBO+5. The PSA market continues to increase; retaining 2004 forecasts permits serving smaller shares of that forecast. Retaining the 2004 commercial enplanement forecasts is a conservative approach to building SSA. This can be accomplished by following the original plan of sequencing destinations served (i.e., recreational destinations, first; long-range coastal destinations, next). However, the potential for a stronger-than-anticipated demand exists as a possible scenario.

The three forecast ranges of air passenger activity for the IAP developed by the 2004 forecast and readopted for the 2009 forecast are presented in **Table ES-8, 2004/2009 IAP Air Passenger Aviation Activity Forecasts**. The

[9] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Table ES-8 2004/2009 IAP Air Passenger Aviation Activity Forecasts

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
Air Carrier Operations			***Air Carrier Operations***			***Air Carrier Operations***		
Domestic (includes Charters)	360	9,800	Domestic (includes Charters)	2,400	16.200	Domestic (includes Charters)	3,400	23,500
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	360	9,800	**Total Domestic**	2,400	16.200	**Total Domestic**	3,400	23,500
International	-	-	International	-	-	International	-	-
Total Air Carrier	360	9,800	**Total Air Carrier**	2,400	16.200	**Total Air Carrier**	3,400	23,500
Air Carrier Instrument	180	9,800	Air Carrier Instrument	1,200	16.200	Air Carrier Instrument	1,700	23,500
Air Carrier Enplanements			***Air Carrier Enplanements***			***Air Carrier Enplanements***		
Domestic O&D	19,600	471,000	Domestic O&D	126,000	709,000	Domestic O&D	169,400	968,000
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	19,600	471,000	**Total Domestic**	126,000	709,000	**Total Domestic**	169,400	968,000
International	-	-	International	-	-	International	-	-
Total Air Carrier Enplanements	19,600	471,000	**Total Air Carrier Enplanement**	126,000	709,000	**Total Air Carrier Enplanements**	169,400	968,000

Note: Military and/or other U.S. Government aircraft are expected to use the SSA in the future; however, a projection of aeronautical operations and passengers by type and amount is not quantifiable at this time and is expected to be minimal in nature.
Source: AECOM formerly TAMS an Earth Tech Company, 2004 Report. The Air Passenger Aviation activity forecasts developed for the 2004 forecasts are incorporated in this document as the 2009 air passenger aviation activity forecasts.

forecasts assume that the IAP will serve a Primary Passenger Market consisting of passengers originating within 45-minute travel time from the airport site, with no overlap of the MDW 45-minute travel time passenger market. IDOT believes that these forecasts represent a reasonable expectation of the level of air passenger activity that could develop at SSA during the IAP. As stated previously, the IAP is expected to primarily serve the domestic LCC market, with relatively little connecting, commuter, or international activity.

Section 3 - Forecasts of IAP Air Cargo Aviation Activity

Overviews of Findings and Methodology. Since longer-term economic conditions, the main drivers of air cargo demand are always highly uncertain and difficult to predict, any forecasts that depend on economic drivers are also characterized by a degree of uncertainty. Demand for air cargo does move in tandem with global and national economic growth. The demand for air cargo world-wide also has experienced a strong drop in the current economic downturn. The recovery from the current downturn is expected to be protracted. However, air cargo has recovered from past downturns, as businesses and consumers began to ask for more and more goods. Although the recovery from the current downturn may be protracted, the demand for goods will turn around and with it the demand for air cargo. In the longer term, the capacity for handling air cargo will need to be able to accommodate a higher volume of goods.

The area surrounding the proposed airport site is especially poised for high economic and population growth, as discussed in the socio-economic forecasts. The proposed airport site is located in the second fastest growing county in the State of Illinois - the population of Will County increased by more than a third between 2000 and 2008.[10] The regional growth will generate a demand for more goods and with it a demand for more air cargo handling capacity.

Therefore, SSA has the potential to capture a niche market of air cargo demand in the Chicago area. The share of regional air cargo demand that will be captured by SSA will then depend on the quality and availability of appropriate airport facilities, ground access and the surrounding urban infrastructure. Due to its geographic location, the Chicago area has historically served as a major distribution hub for the U.S. The airport site has good ground access, with several major highways and railroad lines. It is also important to note that the I-80 corridor located north of SSA site and south of the City of Chicago, is one of the busiest truck corridors in the nation.[11]

In order to determine the potential market share of SSA, this study first presents an overview of the national air cargo forecast for both domestic and international cargo. The regional forecast is analyzed next, along with the commodity categories that are expected to be transported by air in the region. The Chicago market area for air cargo is defined as consisting of four airports: Gary/Chicago International Airport (GYY), Chicago Rockford International Airport (RFD), MDW and ORD. Lastly, the forecast for SSA consists of low-, high- and base-case scenarios, based on assumptions of market share that SSA would capture in the Chicago market area.

Current Industry Status: Global Recession and Potential Legislative Impacts. The deepening global recession of 2008 continues into 2009, with an impact on air cargo, greatly reducing both U.S. domestic and international volumes. In 2008, heavy losses were reported by International Air Transport Association (IATA) members, as the combination of high crude oil prices last summer and a falling demand took their toll on air cargo industry profits.

In April 2009, IATA reported that after a dramatic drop in volumes of 22.6 percent in December 2008, further drops of 23.2 percent took place in January and 22.1 percent in February 2009. Air cargo remains an indicator of the global economic crisis.[12] IATA estimates that 35 percent of goods by volume traded internationally are transported by air.

[10] Population Division, U.S. Census Bureau, Table 8 – Resident Population Estimates for the 100 Fastest Growing U.S. Counties with 10,000 or more Population in 2008: April 1, 2000 to July 1, 2008. Release Date: March 19, 2009.
[11] Indiana Department of Transportation, 2005.
[12] Comments by IATA's General Director and CEO Giovanni Bisignani at the World Cargo Symposium, March 2009.

The U.S. government anticipates that stimulus plans will rekindle consumer demand. Suggestions are being made to streamline the traditional administrative paper flow of the industry. Air cargo will continue to be a vital part of the supply chain, especially globally, with U.S. international air cargo volumes returning to 2007 levels and beyond by 2015.

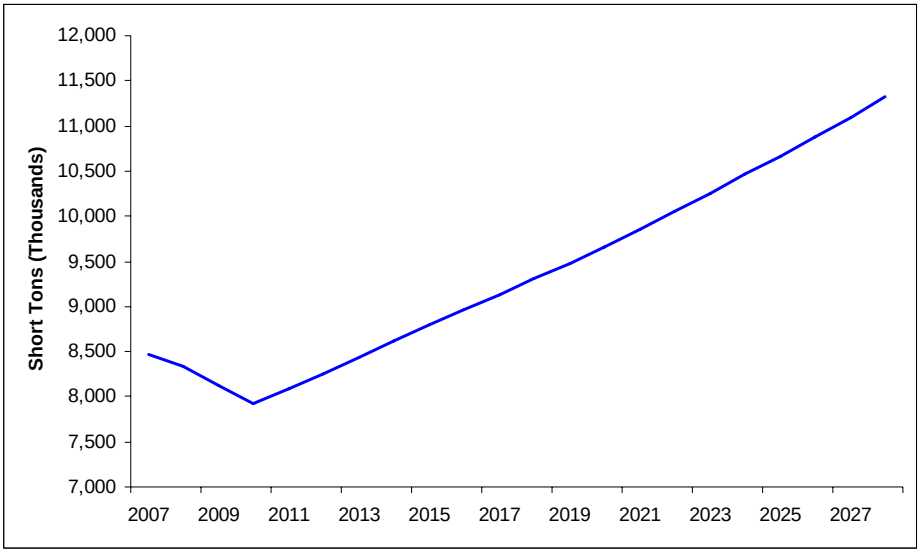
The Transportation Security Administration has mandated that effective February 1, 2009, 50 percent of all air cargo moving on board a passenger-carrying aircraft be screened. Since October 1, 2008, 100 percent of cargo boarded on a narrow-body passenger aircraft has been screened. The screening is conducted by the airline before movement of the cargo. Shippers must provide written consent to screening of cargo movement.

Screening of passenger aircraft cargo could have a negative impact on cargo growth on these airlines. It is anticipated that individual carriers will make their assessment based upon the revenue generated from this traffic. The screening adds both time and expense to the movement of this ancillary revenue stream. The mandate to screen 100 percent of all wide-body cargo by August 2010 makes the future of belly cargo suspect at this point in time.

National Forecasts. Since Chicago's air cargo market is highly dependent on broader global and national economic and air cargo trends, it is important to study the region's forecast within the context of a national forecast.

U.S. Domestic Air Cargo. The following **Exhibit ES-2, U.S. Domestic Air Cargo Forecast (2007-2028)**, presents IHS Global Insight's national forecast for domestic air cargo. This forecast is based on the IHS Global Insight database, which combines data from hundreds of freight data sources and is updated on an annual basis. In 2008, the domestic air cargo market consisted of more than 8.3 million short-tons[13]. A short-ton is another way of referring to the common measure of a ton in the U.S., which is defined as 2,000 pounds. Over the next two years, domestic air cargo will decline by a Compound Annual Growth Rate (CAGR) of -2.5 percent and fall below 8 million short-tons. Recovery will begin after 2010, with the growth rate through 2015 predicted to be about 2.1 percent. After 2015, domestic air cargo will then grow at a slower compound growth rate of about 1.9 percent. At 2015, national domestic volumes are predicted to be at about 8.8 million short-tons and at about 9.7 million short-tons in 2020.

Exhibit ES-2 U.S. Domestic Air Cargo Forecast (2007-2028)



Source: IHS Global Insight, World Trade Services, 2009.

[13] A short-ton is defined as 2,000 pounds which is the same nomenclature used in the United States and Canada to define "ton".

U.S. International Air Cargo. International air cargo in the U.S. market is expected to follow similar trends, although international air cargo will recover stronger than domestic cargo. Overall, U.S. international air cargo will fall by a CAGR of -9.1 percent between 2008 and 2010. The CAGRs between 2010 and 2015 is predicted to be 5.8 percent and will decline to above 5.2 percent between 2015 and 2020. Beyond 2020, the CAGRs are expected to be just below 5.2 percent. In 2008, international air cargo totaled less than 6.5 million short-tons, of which less than 3.8 million, or about 62 percent, were imports. By 2015, international air cargo volumes are expected to be above 7 million short-tons, with more than 4 million short-tons being imports. Total U.S. international air cargo will be at 9.1 million short-tons in 2020.

Table ES-9, International Air Cargo Growth Rates for U.S. Market, summarizes these growth rates and compares the growth rates for exports and imports. Air cargo imports are expected to grow at stronger rates than exports and decline at a milder rate between 2008 and 2010.

Table ES-9 International Air Cargo Growth Rates for U.S. Market

Time Period	Export CAGRs	Import CAGRs	Total CAGRs
2008-2010	-6.0%	-3.6%	-9.1%
2010-2015	5.5%	6.0%	5.8%
2015-2020	4.5%	5.8%	5.2%
2010-2020	5.0%	5.9%	5.5%
2008-2028	2.9%	4.5%	3.8%
2020-2028	4.3%	5.8%	5.2%

Source: IHS Global Insight, World Trade Services, 2009.

Currently, Europe and the Mediterranean region are the largest sources of imports for air cargo. However, China will surpass this region to become the largest source of imports in 2014. Europe and the Mediterranean region are also currently the largest purchaser of U.S. air cargo exports and will remain so over the next two decades. Asia, excluding China and Japan, is the second largest region to purchase U.S. air cargo exports.

FAA and Boeing Forecasts. Between 2008 and 2010, IHS Global Insight's projection for FAA expects domestic and international air cargo Revenue Ton Miles (RTMs) in the U.S. is to shrink at the CAGRs of -3.1 percent and -1.3 percent, respectively. Recovery is expected to begin after 2010, with domestic air cargo growing at a CAGR of 2.9 percent between 2010 and 2015 and international air cargo making a particularly strong recovery with a CAGR of 6.7 percent during the same time period. Between 2015 and 2020, growth rates are expected to level somewhat to 2.2 percent and 6.2 percent for domestic and international air cargo, respectively.

Although Boeing does not provide a year-by-year break-down of its forecasts, its growth rates paint a similar picture for U.S. air cargo. The average annual growth rate between 2007 and 2017 for domestic air cargo is expected to be 2.9 percent. The longer-term domestic growth rate is also expected to taper off somewhat, with the 20-year average annual growth rate between 2007 and 2027 expected to be 2.6 percent.[14] Boeing predicts global air cargo to grow at an average annual growth rate of 5.8 percent between 2008 and 2027. Growth for international air cargo in the U.S. will be particularly driven by trade with Asia, particularly China.

As part of data input, both the FAA and Boeing use IHS Global Insight data to construct their forecasts.

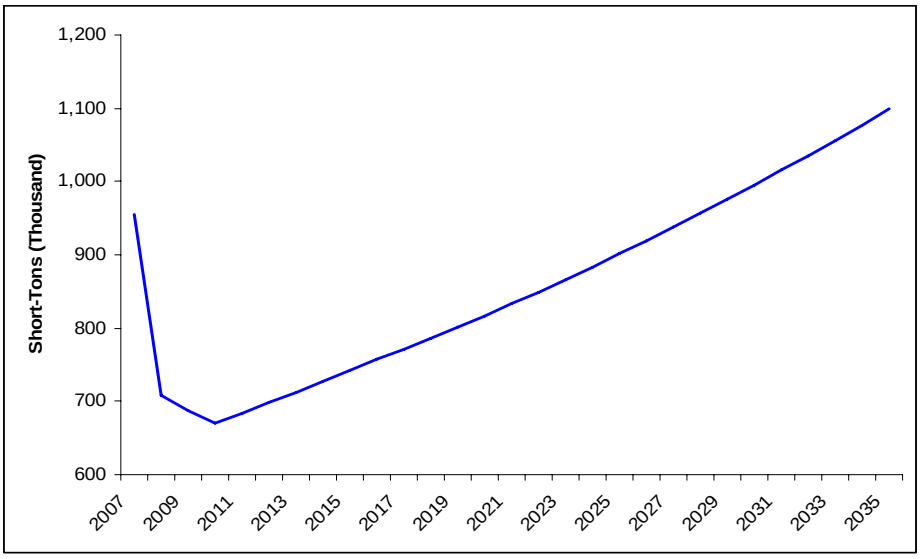
Chicago Regional Forecasts. As stated in the introduction, the Chicago regional market area was defined as comprising of four airports: GYY, MDW, ORD and RFD. Both domestic and international air cargo demand was forecasted for this region in short-tons using a combination of IHS Global Insight proprietary data and publicly available data.

[14] http://www.boeing.com/commercial/cargo/wacf.pdf. The Boeing Company, World Air Cargo Forecast, 2008-2009.

Chicago Area Domestic Air Cargo. The Chicago area domestic air cargo forecast is based on IHS Global Insight's database, which allows for the analysis of current and forecasted freight flows at the county level. The market area was thus defined as consisting of the counties containing the four airports within proximity to SSA site, which are: Cook County, IL; DuPage County, IL; Lake County, IN; and, Winnebago County, IL.

Exhibit ES-3, Chicago Region Domestic Air Cargo Forecast (2007-2035), below presents forecasted air cargo volumes for the Chicago area. In 2008, slightly more than 0.7 million short-tons of air cargo were either enplaned or deplaned at the four airports that comprise the Chicago market area as defined in this study. This volume reflects the effect of the recession, which drove down tonnage from about 0.95 million short-tons in 2007. Forecast volumes were expected to shrink further at a CAGR of -2.7 percent between 2008 and 2010, with much of the decline occurring in the first half of 2009. Between 2010 and 2015, domestic air cargo in the region will recover at a CAGR of 2.1 percent and will continue to grow at a slower CAGR of 1.9 percent through to 2020. After 2020, a growth rate of about 2.0 percent is expected. Domestic volumes in the region will reach about 0.75 million tons in 2015 and less than 0.82 million tons in 2020. A full recovery to 2007 volumes is not expected until 2030 due to the mature nature of the market and headwinds from the recession, as well as security requirements.

Exhibit ES-3 Chicago Region Domestic Air Cargo Forecast (2007-2035)

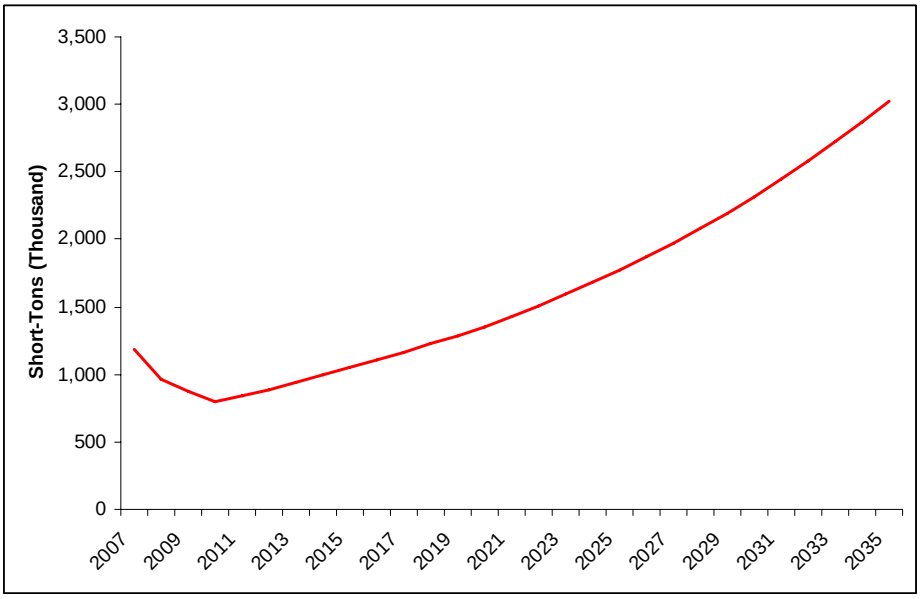


Source: IHS Global Insight, World Trade Services, 2009.

Chicago Area International Air Cargo. The available national air cargo volumes for international air cargo are difficult to distribute down to the regional level with any degree of accuracy. For this reason, national level growth rates were applied to the regional baseline volumes for international air cargo. Airport volumes of international air cargo were taken from the 2008 Form 41 data compiled by the FAA. The volumes from the four airports which comprise the Chicago market area for this study were aggregated to arrive at a regional baseline. Growth rates for U.S. international air cargo from IHS Global Insight's World Trade Service (WTS) were then applied to the regional baseline volume.

As **Exhibit ES-4, Chicago Region International Air Cargo Forecast (2007-2035),** below demonstrates, 2008 international volumes in the region were less than 1 million short-tons, down from about 1.2 million short-tons in 2007. Applying the national CAGR of -9.1 percent between 2008 and 2010 yields international volumes in the region of just under 800,000 short-tons in 2010. Volumes are expected to recover according to the growth rates in **Table ES-9, International Air Cargo Growth Rates for U.S. Market** and reach more than 1.1 million in 2016 and less than 1 million by 2020. Unlike domestic air cargo, international air cargo in the region is expected to recover to 2007 volumes by 2017.

Exhibit ES-4 Chicago Region International Air Cargo Forecast (2007-2035)



Source: FAA, Form 41 Schedule T-100 Data, 2008; IHS Global Insight, World Trade Services, 2009.

The commodity detail for international air cargo in the region, as defined by the four airports in proximity to the SSA site, is also difficult to define accurately. For this reason, we present both the top international air cargo commodities for the entire U.S., as well as the top commodities from U.S. Customs data for the Chicago Custom's District. Note that the Customs definition of the Chicago area[15] differs from the six airport market areas used to define the Chicago air cargo market throughout this study. As with all air cargo, the commodities transported in any region tend to either be perishable or have a high value relative to volume ratio.

In 2007, various types of machinery and equipment were featured prominently in international air cargo for the region. As with domestic air cargo commodities, motor vehicle parts are also a large international air cargo commodity in the region, due to the proximity of the auto industry. In the future, drugs and medicine are expected to become a more commonly flown commodity into and out of the region.

Lastly, **Table ES-10, Top International Air Cargo Trade Partners for the Chicago Customs District, 2007**, presents the top air cargo trading partners for the Chicago Customs District in 2007. Together, China and other Asian and Pacific countries comprise the largest portion of international air cargo in the Chicago area. U.S. bi-directional trade with these partners will exhibit the highest growth rates compared to all other trade regions.

SSA Forecast. In order to develop a forecast for SSA, this study uses the same market share assumptions developed in the 2004 forecast, but applies them to the updated regional forecast volumes presented in this report. The 2004 report conducted a thorough analysis of cities that are comparable to the Chicago area, where one or more smaller airports complement a large international hub, such as ORD.[16] Market shares were developed for low-, high- and base-case scenarios based on the market shares captured by the smaller airports for both domestic and international air cargo.

[15] Airports located in the Chicago Customs District are: Quad City International Airport, Decatur Airport, Chicago Rockford International Airport, Chicago Midway International Airport, Chicago O'Hare International Airport, Peoria International Airport and Gary/Chicago International Airport.

[16] The five Metropolitan areas selected as case studies in the 2004 SSA air cargo forecast are: Boston, Miami-Fort Lauderdale, Houston, Los Angeles and San Francisco.

Table ES-10 Top International Air Cargo Trade Partners for the Chicago Customs District, 2007

Trade Region	Short-Tons
Europe	446,541
China	328,397
Other Asia and Pacific	187,952
Japan	136,318
India and Subcontinent	38,954
Middle East and Africa	34,501
Latin America	18,321
Mexico	6,274
Canada	986

Source: U.S. Customs and Border Patrol, 2007, IHS Global Insight, World Trade Services, 2009.

Market share assumptions for domestic air cargo are as follows:

- *Low-Case Scenario: No cargo activity until the original DBO+5, then accounting for 2 percent of the total regional market;*
- *Base-Case Scenario: Starting with 2 percent at the original DBO+1, then going to 4 percent at the original DBO+ 5; and*
- *High-Case Scenario: Starting with 3 percent at the original DBO+1, then going to 6 percent at the original DBO+5.*

Market share assumptions for international air cargo are as follows:

- *Low-Case Scenario: No international air cargo activity during the IAP;*
- *Base-Case Scenario: No international air cargo activity until after the original DBO+1, then accounting for 2 percent of the total regional market; and*
- *High-Case Scenario: Starting with 2 percent at the original DBO+2, then going to 5 percent at the original DBO+5.*

Since the 2004 forecast, the original DBO has shifted to 2015.

Applying these market share assumptions to the regional forecasts for domestic and international air cargo leads to the results presented in **Table ES-11, SSA Air Cargo Forecast Base-Case Scenario**.

As indicated, SSA would become part of the Chicago Region to include the airports of GYY, ORD, RFD and MDW. The implications of the air cargo forecasts for SSA in the updated DBO+5, which would comprise about 3 percent of the Chicago Region's total air freight, is generally equivalent in 2007 to 4 percent of the landed weight handled by Indianapolis International Airport (IND), 5 percent of ORD or 15 percent of RFD.[17]

[17] Passenger Boarding (Enplanement) and All-Cargo Data: CY 2007, http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/index.cfm?year=2007.

Table ES-11 SSA Air Cargo Forecast Base-Case Scenario

Low-Case Scenario			Base-Case Scenario			High-Case Scenario		
	DBO+1	DBO+5		DBO+1	DBO+5		DBO+1	DBO+5
Market Share			***Market Share***			***Market Share***		
Domestic	0%	2%	Domestic	2%	4%	Domestic	3%	6%
International	0%	0%	International	0%	2%	International	2%	5%
Short-Tonnage			***Short-Tonnage***			***Short-Tonnage***		
Domestic	0	16,460	Domestic	15,140	32,700	Domestic	22,360	49,390
International	0	0	International	0	27,130	International	33,860	69,200
Total	0	16,460	Total	15,140	59,830	Total	56,220	118,590

Source: IHS Global Insight, World Trade Services, 2009.

The Base-Case Scenario in the 2004 forecast predicted 28,900 short-tons in the original DBO+1 and 103,600 short-tons in the original DBO+5. The difference between the updated base-case and the original base-case can be explained by the six-year postponement in the original DBO but in particular by the more protracted nature of the recovery in air cargo that has currently become apparent in the current study. The postponement in the original DBO increases the forecasted tonnage, as there is more time for air cargo to recover. However, by far the greater influence is the current downturn in air cargo, together with the protracted nature of the recovery, which drives down the growth rates for air cargo. In the updated DBO+1, the postponement in the original DBO does not outweigh the effect of lower growth rates. In the updated DBO+5, the effect of the economy on forecasting largely lower forecasts compared to the results in 2004.

Specifically, the original 2004 and the 2009 Forecast Verification numbers are considerably different, especially in the forecast of domestic air cargo, due to the severe recession and the anticipated protracted recovery. The total air cargo tonnage forecast for 2009 is slightly more than half of that projected in 2004 for the updated DBO+1 (2016) and 42 percent less for DBO+5 (2020). The difference is projected domestic air cargo for DBO+5 between the original 2004 forecast and the 2009 forecast is 48 percent less whereas the forecast for international air cargo is approximately 22 percent less, which is due to the forecast methodology (i.e., share of Chicago market since the Chicago Region had a greater percentage of international air cargo as opposed to domestic). There are similar differences for forecast air cargo operations - 29 percent less for the updated DBO+1 and 48 percent less for the updated DBO+5. The differences in the air cargo operations are greater than air cargo tonnages due to the conservative approach to air cargo load factors (i.e., 90 percent for all arrivals and departures).

Determining the belly and all-cargo split of the air cargo demand for SSA is difficult, as neither national nor regional forecasts provide this type of information. Belly cargo is cargo hauled by passenger aircraft. However, a combination of factors makes a low assumption for belly cargo more prudent. Firstly, as the passenger forecast explains, the expectation is that primarily low-cost and regional airlines will operate at SSA. These airlines generally have limited belly cargo capacity. Secondly, cargo-screening requirements will make belly cargo less cost-effective. The 2004 air cargo forecast for SSA expected the share of belly cargo to be approximately 15 percent. In light of current screening requirements, IHS Global Insight believes this number to be in the upper limit and a range of 5 to 15 percent to be more representative in 2009. The original 2004 forecast assumed a range between 10 to 15 percent. Thus, if 10 percent of air cargo at SSA proves to be belly cargo, 3,303 short-tons in the updated DBO+1 and 10,062 short-tons in the updated DBO+5 will be transported by passenger plane. Ultimately, the split between all-cargo and belly cargo at the airport will be determined by the type of operations and carriers attracted.

The base-range, all-cargo forecast (i.e., excluding belly cargo) for updated DBO+1 is approximately 12,500 short-tons. This level of tonnage will require movement by narrow-body aircraft. The updated DBO+5 forecast includes international air cargo as well. However, it is not assumed that SSA would attract larger cargo operators (UPS and FedEx) until after the updated DBO+5.

The critical assumptions used to develop this air cargo fleet mix forecast are conservative:

- Domestic air cargo routes would be served by the B737-700 and B757-200 aircraft;
- International routes would be served by the B767-300, the A300-600, the B787 series aircraft, as well as extended range MD-11 and the A350-900F. The B787 is a place holder, since there are, as yet, no defined air cargo variations for that model which have been identified as the B787-300, B787-800 and B787-900. Due to their size, one might speculate that either the -800 or -900 model would see an air cargo variant model;
- Enplaned and deplaned cargo each represent 50 percent;
- Landed weights are assumed to be the sum of enplaned and deplaned air cargo;
- Each aircraft arrives fully loaded and deplanes fully loaded. The annual total cargo represents 50 percent enplaned/50 percent deplaned air cargo; and
- Load factors are calculated at 90 percent, even for the updated DBO+1.

A similar air cargo fleet mix, as was assumed in 2004, is also assumed in 2009. In 2004, the analysis indicated that SSA would attract operators with B737-300 and B757-200 aircraft, as well as A300B4F, A310-300F, B767-300F and A300-600F aircraft, which are used for higher volume domestic cargo operations. In terms of international activity, the fleet could include increasing numbers of air cargo operations, which could bring B747-200, DC10-40F, B747-400F and/or MD11 freighter operations.

Table ES-12, SSA Air Cargo Operations Forecast, provides the air cargo fleet mix and operations forecast for SSA at updated DBO+1 and updated DBO+5. The 2009 air cargo fleet mix assumes many of these same fleet characteristics, but assumes the possibility of new generation aircraft. It is anticipated that the SSA air cargo fleet mix would include B737-700 and B757-200 aircraft, as well as the A300/A310 variants and B767-300F. Another aircraft of this size that may be a future consideration is the new B787 series; as yet no cargo models have specifically been identified relative to the -300, -800 and -900 aircraft. At some point, the large freighters might be introduced to SSA, like the MD-11, B777-200LR, or B747-400F/B747-400ER and potentially the new generation Airbus A350, a smaller, but longer range aircraft. Airbus' marketing materials promotes the A350 as providing better customer service than the larger B747-400F aircraft while enabling five weekly departures for the same cost and operation as three weekly departures by the B747-400F[18].

Table ES-12 SSA Air Cargo Operations Forecast

Low-Case Scenario			Base-Case Scenario			High-Case Scenario		
	DBO+1	DBO+5		DBO+1	DBO+5		DBO+1	DBO+5
Domestic Aircraft			***Domestic Aircraft***			***Domestic Aircraft***		
B737-700	-	806	B737-700	628	804	B737-700	1,176	1,719
B757-200	-	88	B757-200	157	334	B757-200	119	448
B767/B787/A300	-	-	B767/B787/A300	-	171	B767/B787/A300	-	114
International Aircraft			***International Aircraft***			***International Aircraft***		
B767/B787/A300	-	-	B767/B787/A300	-	405	B767/B787/A300	730	870
MD-11/A350-900F	-	-	MD-11/A350-900F	-	81	MD-11/A350-900F	-	291
Total Operations	-	894	Total Operations	785	1,795	Total Operations	2,025	3,442

Source: Hanson Professional Services Inc., 2009.

Growth Potential for SSA. As the forecasts in this study demonstrate, the Chicago region has enough increasing demand for air cargo to allow SSA to capture a share.

[18] "Air Freight Products in the Context of Crisis," a presentation by Oliver von Ronchin, Consumer Marketing Director of Focal Point Freighter Aircraft, Airbus Industries, at the 2009 FAA Annual Forecast Conference, April 1, 2009.

Demographic projections see the south Chicago area rapidly expanding into a populated area. Already, the convergence of interstate highways, as well as other logistics facilitators, like rail and intermodal capacity, is shifting outside traditional Chicago areas. The proposed site for SSA is ideal to capture this potential air cargo capacity for the Greater Chicago marketplace. Additionally, given SSA's central U.S. geographical location, it is ideally positioned to capture global air cargo that is then disbursed via other modes to final destinations.

Accordingly, the potential for international air cargo activity exists at SSA, as shown in the multi-airport systems case studies of 2004 forecasts, where more than one airport provides international air cargo service. Over the course of master planning for SSA in the past 20 years, there has been a consistent history of inquiries by airlines, both passenger and air cargo, regarding their potential operation at the airport. However, all, except Spirit Airlines, chose not to make their intentions in writing[19]. Airlines are reluctant to indicate interest publicly. Similarly, during the development of the 2009 Forecast Verification Report, there has been significant overtures expressed to the IHS Global Insight team regarding potential usage of SSA about the time of DBO should it exist. As with the case of recent research by IHS Global Insight, there have been discussions with prospective air cargo forwarders and airlines, including international forwarders and airlines. All insist that their comments be held confidential, which is typical, regardless of market. Such businesses do not wish to be subject to political pressures or to pursuits from competing airports or airlines for any expansion. Most importantly, they do not wish to disclose their considerations to competitors.

Since both forwarders, as well as air cargo carriers, will likely recognize this potential, it is important for SSA to be prepared to serve the soon-to-be recovering and growing global air freight market.

As consumer demand returns to normal and an ever-increasing driver of the U.S. economy, the vital import markets from the Asian Pacific area will look to an efficient, well-positioned alternative. SSA should be prepared to assume this shift with a "forwarder and carrier-friendly" infrastructure in place.

Section 4 - Updated Forecasts of IAP General Aviation/Corporate Aviation Activity

In 2004, SSA was expected to play an important role in serving the GA/Corporate aviation needs of the region surrounding the site. The expectations were that at the original DBO+1 through the original DBO+5, SSA would serve general aviation and corporate aviation users that either live or desire to access the central and eastern portions of Will County.

The 2004 forecast for SSA also considered how GA would be accommodated within the IAP footprint. Since the inception of the SSA site selection study in 1989, an existing GA facility was located in the inaugural footprint of the selected airport site known as Peotone, which became SSA. Sanger Field, a privately-owned airfield, having about 30 based aircraft, was included in the FAA NPIAS, which recognized its airspace role as an existing GA airfield. For purposes of the updated 2009 forecasts and to remain consistent with the FAA's approved Record of Decision (ROD) for the Tier 1 EIS, IDOT assumes that there is an existing GA facility already in existence and incorporates it into the SSA site.

Since 2004, much has changed. There is now a functioning GA facility within the ultimate IAP site with 87 based aircraft, 76 single, eight multi-engine piston aircraft and three helicopters. The new owner, James Bult, constructed a replacement airport on the site of the old Sanger Field, where he learned to pilot an aircraft. The facility has a 5,000-ft concrete runway, 132 hangar units and a large 18,000 sq. ft FBO/residence. According to interviews, approximately 35 of the 90 based aircraft are owners who remained on site after the conversion of Sanger Field to a full service GA facility, whereas most of the rest have relocated from nearby airfields. In addition, several new aircraft owners have relocated to the site from CA, MI, and IN.

[19] Letter from Spirit Airlines, Inc. dated August 13, 1998.

Three GA/Corporate aviation forecast scenarios were developed for the IAP at SSA: low-case, base-case and high-case. Socio-economic parameters for Will County and the townships in the vicinity of the airport are anticipated to grow substantially over the next few years and throughout the 20-year forecast period beyond DBO (i.e., about 2035). Will County's population is projected to grow 72 percent over this period and the population of six Illinois townships in the vicinity of SSA (Crete, Green Garden, Monee, Peotone, Washington and Will) is anticipated to grow 231 percent over the same period. At the same time, the projected increase for employment in Will County until 2035 is 141 percent. These forecasts indicate the potential for fast growth in aviation. Yet the number of aircraft in the U.S. GA fleet is forecast to grow slowly based upon the most recent FAA Forecasts, *FAA Aerospace Forecasts - Fiscal Years 2009-2025*.

Consequently, these GA/Corporate activity forecasts presume three scenarios for growth:

- *Low-Case - Equivalent to the FAA national's rate of growth for GA aircraft;*
- *Base-Case - Equivalent to twice the FAA's national growth rate for GA aircraft; and*
- *High-Case - Equivalent to three times the FAA's national growth rate for GA aircraft.*

This forecast adopts the high-case as the base-case for these reasons[20]:

- Continued fast rate of population growth in Will County and an even faster rate of growth in the townships that abut the airport site;
- Continued fast rate of employment growth in Will County;
- Facility availability to accommodate GA/Corporate growth on the existing GA corporate runway;
- Potential for additional private-use facilities to close with some portion of those aircraft relocating to the GA/Corporate facility; and
- Potential for new owners to move into the area and base their aircraft at the GA/Corporate facility.

Table ES-13, IAP General Aviation/Corporate Aviation Activity Forecasts, presents a summary of the forecasts of GA/Corporate aviation activity and projected based aircraft at the updated DBO+1 and the updated DBO+5 for the GA/Corporate facility. The analysis assumes 380 operations per based aircraft in order to estimate annual operations, an accepted standard planning ratio used for forecasting. This estimated level of aviation activity was based upon obtaining a weighted average of the based aircraft and operations data for three nearby public-use airports: LOT, Lansing Municipal Airport (IGQ) and Greater Kankakee Airport (IKK). The weighted average for these airports is 380.

Forecasts for based aircraft by type for the three scenarios were trended toward FAA's U.S. fleet mix forecast averages. For each scenario year for each aircraft type, the forecast percentage of based aircraft increased for helicopters and turboprop/turbojet aircraft, whereas single-engine and multi-engine aircraft percentages decreased. In addition, the percentage differences by aircraft type within the forecast followed the same rationale. For example, the updated DBO+5 forecast for helicopters at the GA/Corporate facility presents a greater percentage of the GA/Corporate fleet in the high scenario, as compared to the percentage estimated for the base scenario and the percentage of the single-engine piston aircraft for the high scenario is lower in the updated DBO+5 than the percentage estimated for the base scenario.

The itinerant/local split of GA operations is assumed to be similar to that of other airfields in close proximity to the IAP. The weighted average method for this parameter, based upon the combination of operations at LOT, IGQ and IKK was used, which is 43 percent itinerant and 57 percent local.

Based upon the General Aviation Manufacturers (GAMA) list of aircraft deliveries for 2008, approximately 11 percent of aircraft deliveries (35 of 313 delivered in the U.S.) fall into the category of large corporate jets (i.e.,

[20] See Chapter 4, Section 5 for the rationale of selecting the high-case scenario as the base-case for general aviation.

Table ES-13 IAP General Aviation/Corporate Aviation Activity Forecasts

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
General Aviation/Corporate Aviation Operations			***General Aviation/Corporate Aviation Operations***			***General Aviation/Corporate Aviation Operations***		
Single and Multi-Engine Piston/Helicopter	35,000	35,300	Single and Multi-Engine Piston/Helicopter	36,500	38,400	Single and Multi-Engine Piston/Helicopter	38,400	41.000
Turbine	400	400	Turbine	800	1,100	Turbine	1,100	1,500
Large Turbojet	500	500	Large Turbojet	500	800	Large Turbojet	500	900
Total General Aviation/ Corporate Operations	35,900	36, 200	**Total General Aviation/ Corporate Operations**	37,800	40,300	**Total General Aviation/ Corporate Operations**	40,000	43,400
Based General Aviation/Corporate Aviation Aircraft			***Based General Aviation/Corporate Aviation Aircraft***			***Based General Aviation/Corporate Aviation Aircraft***		
Single and Multi-Engine Piston/Helicopter	92	93	Single and Multi-Engine Piston/Helicopter	96	101	Single and Multi-Engine Piston/Helicopter	101	108
Turbine	1	2	Turbine	2	3	Turbine	3	4
Total Based General Aviation/Corporate Aircraft	93	95	**Total Based General Aviation/Corporate Aircraft**	98	104	**Total Based General Aviation/Corporate Aircraft**	104	112

Source: Hanson Professional Services Inc., 2009.

aircraft weighing 60,000 pounds or more). For purposes of these forecasts, it will be assumed over the 20-year master plan period from the updated DBO that this level of activity will approximate the percentage of large general aviation aircraft operating at fields across the U.S. From the updated DBO+1, it will be assumed the number of large jet operations is equal to 3 percent of itinerant operations, increasing to 11 percent of itinerant operations over the first 20 years of operation.

Section 5 – Summary of IAP Forecasts of Aeronautical Activity

The forecasts of aeronautical activity developed in this report will be used to establish the facility requirements in the AMP for SSA. The Master Plan will focus on the IAP, but will also consider long-range projections and a potential "ultimate configuration" for SSA. The aircraft operations and passenger enplanement forecasts, together with a breakdown of proposed aeronautical activity, design aircraft, assumptions concerning load factors and average aircraft seating configuration, will provide a measure of the airfield and terminal requirements. These requirements will be described in a separate report and will become part of the AMP.

For comparison purposes, **Table ES-14, Summary of IAP Forecasts (2004)**, repeats the low-, base- and high-case forecasts developed in 2004 for air passenger, air cargo and GA/Corporate aviation activity that will be used to develop the facility requirements for the IAP at SSA. **Table ES-15, Summary of IAP Forecasts (2009)**, provides the updated 2009 forecasts. In conclusion, these forecasts are very similar:

- Air Carrier Enplanement and Operations Forecast - The 2009 forecasts have adopted the 2004 forecasts.
- Air Cargo Tonnage and Operations Forecast - The forecast difference in total air cargo tonnage between the two forecasts is a decrease of approximately 50 percent in the updated DBO+1 from 2004 and a decrease from the original DBO+5 by about 44 percent. The differences are also reflected in the operations forecasts, which are approximately 350 lower (-32 percent) for the dated DBO+1 and 1,750 lower (-51 percent) for the updated DBO+5. While the economy is the primary reason for the great change in the air cargo tonnages, there is also the factor of the higher load factors used by the 2009 forecast to calculate air cargo operations than was used in 2004 (i.e., 90 percent).
- GA Based Aircraft and Operations Forecast - While the 2009 forecast adopts the high-scenario, the projected number of increased based aircraft in the updated DBO+1 and the updated DBO+5 are 21 and 22 aircraft, respectively. This comes from the fact that IDOT recommends the high-case GA forecast in 2009 versus the base-case in 2004. Also, there is now a much higher level from which to forecast (i.e., an existing 87 based aircraft, which is the same number as the original forecast DBO+1).

Table ES-14, Summary of IAP Forecasts (2004) and **Table ES-15, Summary of IAP Forecasts (2009)**, enable comparison of the two forecasts. The estimated difference in total aircraft operations comparing 2009 with 2004 for air carrier passenger, air cargo and GA is 11 percent higher for the updated DBO+1 and 9 percent higher for the updated DBO+5. For both, the difference is the same, an increase in estimated GA activity. The operations forecast for air passenger activity is the same and is less for air cargo.

Section 6 – Summary of Long-Range IAP Forecasts of Aeronautical Activity for the Updated DBO+20

Updated forecasts for DBO+20 were developed for air passenger, air cargo and GA/Corporate activity. **Table ES-16, Comparison of Long-Range Forecasts Ranges for DBO+20: 2004 Original Forecast and 2009 Update Forecast** below provides a summary of these forecasts. The differences in comparing the original DBO+ 20 and the updated DBO+20 are few. Both air passenger enplanements and air passenger operations for the original 2004 forecasts were adopted for use in the updated forecast, so these are the same. Total air cargo tonnage estimated for DBO+20 is approximately 3 percent less. The projection of air cargo operations is about 20 percent less, which has to do with the methodology used in these forecasts to calculate load factors. The range of general aviation/corporate activity for the original forecasts is far greater than for the updated forecasts. However, the top end of the range for the updated DBO+20 is less than for the original forecast. In total, when taking into

Table ES-14 Summary of IAP Forecasts (2004)

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
Air Carrier Operations			***Air Carrier Operations***			***Air Carrier Operations***		
Domestic (includes Charters)	360	9,800	Domestic (includes Charters)	2,400	16,200	Domestic (includes Charters)	3,400	23,500
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	360	9,800	**Total Domestic**	2,400	16,200	**Total Domestic**	3,400	23,500
International	-	-	International	-	-	International	-	-
Total Air Carrier	360	9,800	**Total Air Carrier**	2,400	16,200	**Total Air Carrier**	3,400	23,500
Air Cargo Operations			***Air Cargo Operations***			***Air Cargo Operations***		
Domestic	-	1,262	Domestic	1,118	2,520	Domestic	1,700	3,783
International	-	-	International	-	931	International	902	1,760
Total Air Cargo	-	1,262	**Total Air Cargo**	1,118	3,451	**Total Air Cargo**	2,602	5,543
General Aviation/Corporate Aviation Operations			***General Aviation/Corporate Aviation Operations***			***General Aviation/Corporate Aviation Operations***		
SEL/MEL/Helicopter	16,000	16,000	SEL/MEL/Helicopter	33,600	34,000	SEL/MEL/Helicopter	52,000	52.800
Turbine	400	800	Turbine	1,200	2,000	Turbine	2,000	2,800
Total GA/Corporate	16,400	16,800	**Total GA/Corporate**	34,800	36,000	**Total GA/Corporate**	54,000	55,600
Total Aircraft Operations	16,760	27,862	**Total Aircraft Operations**	38,318	55,651	**Total Aircraft Operations**	60,002	84,643
Air Carrier Enplanements			***Air Carrier Enplanements***			***Air Carrier Enplanements***		
Domestic O&D	19,600	471,000	Domestic O&D	126,000	709.000	Domestic O&D	169,400	968,000
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	19,600	471,000	**Total Domestic**	126,000	709,000	**Total Domestic**	169,400	968,000
International	-	-	International	-	-	International	-	0
Total Enplanements	19,600	471,000	**Total Enplanements**	126,000	709,000	**Total Enplanements**	169,400	968,000
Air Cargo Tonnage (Short-Tons)			***Air Cargo Tonnage (Short-Tons)***			***Air Cargo Tonnage (Short-Tons)***		
Domestic	-	32,700	Domestic	28,900	68,700	Domestic	46,800	106,800
International	-	-	International	-	34,900	International	28,200	88,000
Total Air Cargo Tonnage	-	32,700	**Total Air Cargo Tonnage**	28,900	103,600	**Total Air Cargo Tonnage**	75,000	194,800
Based General Aviation/Corporate Aviation Aircraft			***Based General Aviation/Corporate Aviation Aircraft***			***Based General Aviation/Corporate Aviation Aircraft***		
SEL/MEL/Helicopter	40	40	SEL/MEL/Helicopter	84	85	SEL/MEL/Helicopter	130	132
Turbine	1	2	Turbine	3	5	Turbine	5	7
Total Based Aircraft	41	42	**Total Based Aircraft**	87	90	**Total Based Aircraft**	135	139

SEL – Single-Engine Land Piston Aircraft; MEL – Multi-Engine Land Piston Aircraft.
A combination of 2004 for air carrier and passenger data and 2009 for GA and air cargo.
The highlighted portions of the forecast – base-case air carrier passenger and air cargo plus GA high-case operations is the recommended 2009 forecast total operations.

Table ES-15 Summary of IAP Forecasts (2009)

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
Air Carrier Operations			***Air Carrier Operations***			***Air Carrier Operations***		
Domestic (includes Charters)	360	9,800	Domestic (includes Charters)	2,400	16,200	Domestic (includes Charters)	3,400	23,500
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	360	9,800	**Total Domestic**	2,400	16,200	**Total Domestic**	3,400	23,500
International	-	-	International	-	-	International	-	-
Total Air Carrier	360	9,800	**Total Air Carrier**	2,400	16,200	**Total Air Carrier**	3,400	23,500
Air Cargo Operations			***Air Cargo Operations***			***Air Cargo Operations***		
Domestic	-	894	Domestic	790	1,310	Domestic	1,300	2,280
International	-	-	International	-	490	International	730	1,160
Total Air Cargo	-	894	**Total Air Cargo**	790	1,800	**Total Air Cargo**	2,030	3,440
General Aviation/Corporate Aviation Operations			***General Aviation/Corporate Aviation Operations***			***General Aviation/Corporate Aviation Operations***		
SEL/MEL/Helicopter	35,000	35,300	SEL/MEL/Helicopter	36,500	38,400	SEL/MEL/Helicopter	38,400	41,000
Turbine	400	800	Turbine	800	1,100	Turbine	1,100	1,500
Large Turbojet	500	800	Large Turbojet	500	800	Large Turbojet	500	900
Total GA/Corporate	35,900	36,900	**Total GA/Corporate**	37,800	40,300	**Total GA/Corporate**	40,000	43,400
Total Aircraft Operations	36,260	47,594	**Total Aircraft Operations**	40,990	58,300	**Total Aircraft Operations**	45,430	70,340
Recommended Aircraft Operations = Base-Case Air Carrier + Base-Case Air Cargo + High-Case General Aviation/Corporate. DBO+1 = 43,190; DBO+5 = 61,400.								
Air Carrier Enplanements			***Air Carrier Enplanements***			***Air Carrier Enplanements***		
Domestic O&D	19,600	471,000	Domestic O&D	126,000	709.000	Domestic O&D	169,400	968,000
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	19,600	471,000	**Total Domestic**	126,000	709,000	**Total Domestic**	169,400	968,000
International	-	-	International	-	-	International	-	0
Total Enplanements	19,600	471,000	**Total Enplanements**	126,000	709,000	**Total Enplanements**	169,400	968,000
Air Cargo Tonnage (Short-Tons)			***Air Cargo Tonnage (Short-Tons)***			***Air Cargo Tonnage (Short-Tons)***		
Domestic	-	16,460	Domestic	15,140	32,700	Domestic	22,360	49,400
International	-	-	International	-	27,130	International	33,860	69,200
Total Air Cargo Tonnage	-	16,460	**Total Air Cargo Tonnage**	15,140	59,830	**Total Air Cargo Tonnage**	56,220	118,600
Based General Aviation / Corporate Aviation Aircraft			***Based General Aviation / Corporate Aviation Aircraft***			***Based General Aviation / Corporate Aviation Aircraft***		
SEL/MEL/Helicopter	92	93	SEL/MEL/Helicopter	95	101	SEL/MEL/Helicopter	101	108
Turbine	1	2	Turbine	2	3	Turbine	3	4
Total Based Aircraft	93	95	**Total Based Aircraft**	97	104	**Total Based Aircraft**	104	112

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.
Hanson Professional Services Inc., 2009.

consideration the mid-range of both forecasts for purposes of estimating total airport operations activity, the updated forecast is less than 6 percent higher, or appreciably the same.

Table ES-16 Comparison of Long-Range Forecast Ranges for DBO+20, 2004 Original Forecast and 2009 Update Forecast

Forecast Item	2004 Original Forecast	2009 Update Forecast
Air Carrier Passenger Enplanements		
Domestic	2,200,000 – 6,100,000	2,200,000 – 6,100,000
International	0 – 500,000	0 – 500,000
Total Enplanements	2,200,000 – 6,600,000	2,200,000 – 6,600,000
Air Carrier Operations		
Domestic	56,200 – 140,300	56,200 – 140,300
International	0 – 9,800	0 – 9,800
Total Air Carrier Operations Range	56,200 – 150,100	56,200 – 150,100
Air Cargo Tonnage (Short-Tons)		
Total Tonnage Operations[(1)]	402,800	146,100 – 350,500
Total Operations[(2)]	8,100	3,400 – 6,600
General Aviation		
Based Aircraft	44 – 146	106 - 144
Operations	18,900 – 62,700	42,400 – 57,600
Total Operations (Assume Mid-Range)	**148,000**	**155,000**

Source: Hanson Professional Services Inc., 2009.
Notes: (1) Includes tonnage projections from all air cargo types.
(2) Operations are for all cargo aircraft only.

Chapter 1 – Socio-Economic and Aviation Forecast

Section 1 - Background

The IAP for SSA is a proposal by the Division of Aeronautics of IDOT to plan, design, construct and operate a new airport at the SSA site in eastern Will County, IL. This site was approved as a feasible location for an airport by the FAA in their Record of Decision on the Tier 1 EIS for SSA dated July 12, 2002.

In 2004, aviation forecasts were developed to continue the FAA review process of determining airspace impacts, develop an AMP and prepare a Tier 2 EIS. Regarding these forecasts, Philip M. Smithmeyer, Manager of the Chicago Airport District Office, wrote on June 4, 2004: "Based on consultation with the FAA's Systems Analysis and Policy Division, we agree with your forecast of aeronautical activity for the SSA. We believe the document projects passenger demand and aviation activity at reasonable levels and outlines the risk associated with a proposed new start-up airport, such as SSA."

In early 2008 IDOT submitted the SSA ALP to FAA. In spring 2008, the FAA requested an update of the forecasts to validate the prospective airport's feasibility due to changing conditions in the economy. The economy continued to worsen from 2008 and into 2009.

Accordingly, the premise that IDOT used to update the original 2004 forecasts was to verify the information in that forecast and not redo it. At the same time, significant attention was given to the economic events at every turn that would ostensibly reduce the forecast base and impact growth trends throughout the forecast period. However, the key factors that were assessed in the 2009 update were those that went into determining the socio-economic and the aviation forecasts for SSA and how those factors (i.e., population, jobs, Propensity to Fly, SSA PSA and national aviation forecasts) have changed. Based upon that analysis, it was concluded: FAA accepted as reasonable the SSA forecasts for DBO+1, DBO+5 and DBO+20 in the original 2004 submission. Relevant forecast factors were assessed and deemed as adding to demand rather than subtracting from it. IDOT maintains that holding the original 2004 forecast constant is the more conservative approach than revising the forecasts upward.

To understand the underlying basis for the forecasts, a discussion of demographic and employment characteristics will precede a discussion of the updated forecasts.

The forecast addresses three types of aeronautical activity: air carrier passenger, air carrier cargo and GA. The level of activity from each type of aeronautical activity is dependent on a number of factors, including airline service attracted to the airport, facilities provided at the airport, operating costs and supporting infrastructure. The potential for each category of aeronautical activity to develop at the airport and the likely market segments they will serve, are identified in the forecast document. Due to uncertainty inherent when forecasting activity for a new airport, a range of forecasts for each type of aeronautical activity is produced. These updated forecasts, as driven by market forces, have been labeled low-, base- and high- to reflect certain assumptions regarding the introduction of service at SSA.

Since 2004, Sanger Field, a privately-owned airfield having about 30 based aircraft, was fully reconstructed by the new owner James Bult to include a 5,000-ft general aviation/corporate concrete runway, 132 aircraft hangars and an 18,000 square ft FBO facility. It is important to note that the FAA NPIAS has long recognized the airspace role of Sanger Field as an existing GA airfield and that, since the previous forecasts, this existing facility has been substantially upgraded. Therefore, for purposes of the updated 2009 forecasts, IDOT assumes that there is an existing GA/Corporate facility already in existence within the SSA envelope.

Format of the forecast update will be similar to the *2004 Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport* prepared by TAMS Consultants, an Earth Tech Company and now AECOM. That report includes historical and detail information regarding the on-going development of documentation relative to SSA, since 1989 and contains background information pertaining to the development of

supplemental airports in major cities across the U.S. Such information will be referenced in this document with key portions provided as Appendices.

Section 2 – Update of the 2004 SSA Aviation Activity Forecasts

In 2004, the anticipated DBO for SSA was approximately 2009, with DBO+1, the first year of operation, and DBO+5 as key forecast dates. As this 2009 forecast update is now five years later, it is essential to keep in mind that the forecasts being updated have now moved five years along the timeline. DBO+1 is not five years later than 2004 but at least 10 years later. All of the forecast parameters, changes in population, changes in employment, changes in Propensity to Fly and other factors need to be adjusted to the new DBO and then forecast out 20 years from that point. Therefore, not only do the forecasts update those of 2004, but start from a larger base of population and employment by virtue of being five years along the timeline.

With that in mind, it is important to gauge the impact of the following two factors that have seemingly significant opposite pull on demand:

- Population and household growth in the South Suburban area being among the highest in the U.S. over the 2003-2009 period; and
- The current economic downturn, as it affects regional economic activity and aviation demand.

For the sake of consistency and comparison, the update methodology employed by these forecasts is the same as that used in the original 2004 Forecast Study[21]. As the proposed airport is one of the few new airports being studied (Branson, St. George and Ivanpah Valley are others) and is proposed to be built in the largest Metropolitan area since the construction of IAD, the methodology employed for the 2004 study was a blend of traditional forecasts and policy directives. The intent was to begin conservatively and to expand as demand materialized. All of these assumptions, forecasts and directives are replicated here.

Assuming the same methodology as in the original report, any change in the forecast of aviation activity for SSA would depend on five major factors:

- Differences in the forecasts of population and jobs for the Chicago Metropolitan area and the 11-County SSA Study area between the 2004 study and the current update.
- Differences in the population, households and jobs currently contained within the service area and those forecasted at the beginning of service at the airport, DBO+1 and DBO+5. The forecast's far planning horizon is 2035, 20 years beyond DBO. Travel time changes since 2004 and proposed ground transportation improvements represent an integral part of defining the service area and impacts.
- Differences in FAA aeronautical forecasts between 2003 and 2009 for the U.S. for passenger, GA and cargo.
- Differences in the Propensity to Fly (at the national level).
- Differences in the study area and service area boundaries of SSA, as defined in the 2004 report, by travel times provided by CMAP.

Subsequent text describes each of these factors in detail. The first two are described in this chapter and the final three will be addressed in Chapter 2 – SSA Passenger Enplanement Forecasts.

[21] The studies referenced, here, are 2003 and 2004, include: *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004; *Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program*, ACG, in association with TAMS, original draft prepared in 2003, final draft, February 28, 2006 (referred to as the original confirmation report).

Section 3 – Background Information to the Socio-Economic and Aviation Forecast

This section, a Socio-Economic and Aviation Forecast, is being completed in response to a request by the FAA to address several demand factors critical to the development of the proposed SSA in Will County. Prime among these factors are:

- The fact that population and household growth in the South Suburban area has been among the highest in the U.S.; and
- The current economic downturn has affected, or is expected to affect, regional socio-economic activity (current losses and forecasted growth).

Socio-economic factors in an airport service area are key determinants of future usage, as well as the distribution of the economic impacts of the airport. The 11-County Study Region of SSA includes the seven CMAP Counties of Cook, DuPage, Kane, Kendall, Lake (IL), McHenry and Will, plus the adjoining Illinois counties of Grundy and Kankakee and the Indiana counties of Lake (IN) and Porter.

The study area, as defined in this report, is the same as the study area of the 2004 report it is updating. In addition to Will County, identified as the "fifth fastest growing county in terms of numerical population growth in the U.S.", in the 2004 study, it includes the rapidly-growing counties of Kendall and Grundy, which border the original six-county NIPC region. NIPC is one of the predecessor agencies of CMAP. When CMAP was established, its jurisdiction was expanded to include Kendall County. Grundy County is the recipient of major development expansion out of Will County[22].

Since the completion of the May 11, 2004, *Projection of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, the counties in the proximity of SSA (especially Will, Kendall, Grundy and Lake (IN)) have experienced significant residential growth through June 2008. This growth was followed by the recent economic downturn, which has made its impact on the entire Study Region, albeit less precipitous and slightly less severe than that on the nation as a whole. Consequently, the demographic and economic forecasts for the 11-County SSA Study Region have been revised to reflect, to the extent known, the probable impacts of both of these trends. These impacts are more evident on the region's employment and economy, both current and long-term, than on its population. The impacts on the region of prior economic downturns are well known; however, the depth and duration of the current downturn remain uncharted, therefore, less predictable.

Section 4 – Service Area Characteristics

The 11-County SSA Study Region has a combined 2008 (last year for which U.S. Census estimates, by county, are available) population of approximately 9.365 million. This represents an increase of slightly more than 0.446 million persons (5.0 percent, or an annual rate of 0.59 percent) over that of the 2000 Census population. The largest and most populous county within the Study Region is Cook County, with a 2008 Census population estimate of 5.295 million, representing a slight decrease (1.5 percent) from its 2000 level. Cook County, which includes the City of Chicago, is a mature, fully-developed county. The decline in population is due primarily to reductions in average household size. The second most populous county is DuPage County, with a 2008 population estimate of 930,528. DuPage County is approaching full development. Accordingly, its rates of growth are starting to decrease; its 2000-2008 growth was 2.92 percent lower than the Study Region as a whole.

Two counties within the Study Region are among the fastest growing U.S. Counties with 10,000 or more population for the period 2000-2008[23]. These counties are: Kendall, with a 2000-2007 growth of 89.6 percent (ranked as the fastest growing county in the U.S.); and Will, ranked 68th, with a growth of 35.6 percent. For selected years within

[22] Kendall and Grundy Counties were not included in the report, "Socio-Economic Impact Assessment of Alternative Build/No Build Forecasts for the South Suburban Airport".

[23] Table 8: Population Estimates for the 100 Fastest Growing U.S. Counties with 10,000 or More Population in 2008: April 1, 2000 to July 1, 2008 (CO-EST2008-08), Population Division, U.S. Census Bureau, March 19, 2009.

the period 2000-2008, Grundy County was also among the 100 fastest growing counties. Will County experienced the largest numeric growth in population, 178,831 during the period 2000-2008, among the Study Region's 11 counties. The other counties within the Study Region with significant (more than 20,000) numeric population growth are: Kane County – 103,460, Lake County - 68,097, McHenry County - 58,564, Kendall County - 48,916 and DuPage County - 26,367. As Cook and DuPage Counties have approached full development, the region's population growth has pushed outward to Will, Kendall, Grundy, Lake and McHenry Counties in Illinois and to the central parts of Lake County in Indiana.

Exhibit 1-1, 2000-2007 Population Change by Minor Civil Division (MCD), shows the 2000-2007 population growth in the SSA Study Region by Minor Civil Division (MCD). The year 2007 is the last year for which sub-county population estimates by the U.S. Bureau of the Census are available. The City of Chicago is identified as a single MCD. With few exceptions, the other MCDs are of approximately equal size (36 square miles). Population estimates for 2007 are the latest available from the U.S. Bureau of the Census for sub-county areas (cities, villages and MCDs). Within the MCDs showing population losses, especially the City of Chicago, there are many sub areas showing population increases due to new construction, as well as larger households balanced by areas of population decreases due to housing demolition/abandonment or smaller households.

Exhibit 1-2, Population Change per Square Mile 2000-2007 by Block Group – Chicago CSA, shows the 2000-2007 population change by Census block groups. As the areas of Census block groups vary significantly, the population change is shown per square mile. Most growth is occurring within the 30-40 mile ring from the Chicago Central area. Developable land is available in closer proximity to the Region's center in Will and Kendall Counties, rendering these counties among the U.S. fastest growing counties.

Both land use and transportation planning for the six most populous counties (Cook, DuPage, Lake, Will, Kane and McHenry) of the 11-County SSA Study Region are undertaken by the CMAP. Recently, CMAP's jurisdictional responsibility has been expanded to include Kendall County. The NIRPC is responsible for transportation planning for Lake (IN) and Porter Counties. The Kankakee County Planning Department is responsible for the County's comprehensive planning activities and functions as the staff for the Kankakee Area Transportation Study (KATS).

Population Forecasts. Population forecasts for the 11-County SSA Study Region were obtained from two categories of sources: the public planning agencies referenced in the preceding paragraph and Woods & Poole Economics, Inc. (W&P), specifically the *2008 Complete Economic and Demographic Data Source – W&P: CEDDS*, released in the fall 2008. The CMAP forecasts for Cook, DuPage, Kane, Lake, McHenry and Will Counties were completed and officially approved on September 27, 2006 by the NIPC (a CMAP predecessor agency). These forecasts were used as the input into the preparation of the *2030 Regional Transportation Plan for Northeastern Illinois* whose latest update was approved on October 9, 2008. Currently, CMAP is in the process of preparing the *2040 Comprehensive Regional Plan* and its component plans, including the *2040 Regional Transportation Plan*. However, these plans and their underlying forecasts are not scheduled for completion until 2010. The CMAP 2030 population forecasts are presented, together with the other forecasts, later in this section.

The latest officially adopted forecasts undertaken by the NIRPC for Lake (IN) and Porter Counties were those prepared for its *2030 Regional Transportation Plan*. The 2030 RTP was adopted on June 21, 2007. Recent reviews, by NIRPC staff and INDOT consultants regarding the Illiana Expressway Feasibility Study, revealed that the 2007 actual population in 13 of the 23 MCDs in Lake (IN) and Porter Counties exceeded the 2030 adopted population forecasts. These MCDs are clustered, primarily in central Lake (IN) and Porter Counties. NIRPC has asked the State of Indiana for higher population forecasts for its region so that it can produce more realistic small area forecasts within the region. The existing NIRPC and the Illiana recommended forecasts are presented later in this section. NIRPC will be updating its small area forecasts within one to two years as part of its 2040 RTP process.

Exhibit 1-1 2000-2007 Population Change
by Minor Civil Division (MCD)
Source: U.S. Bureau of the Census

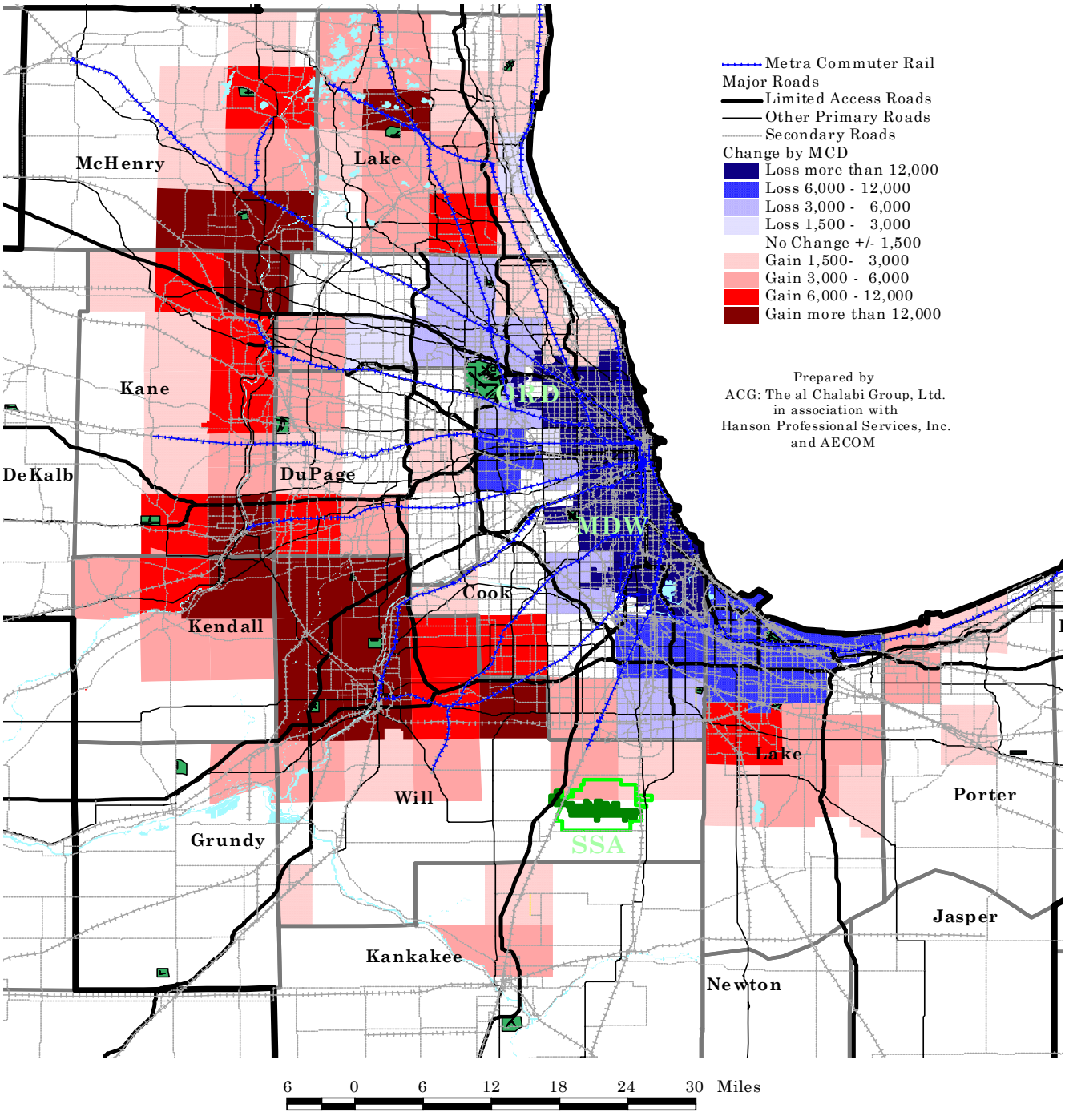
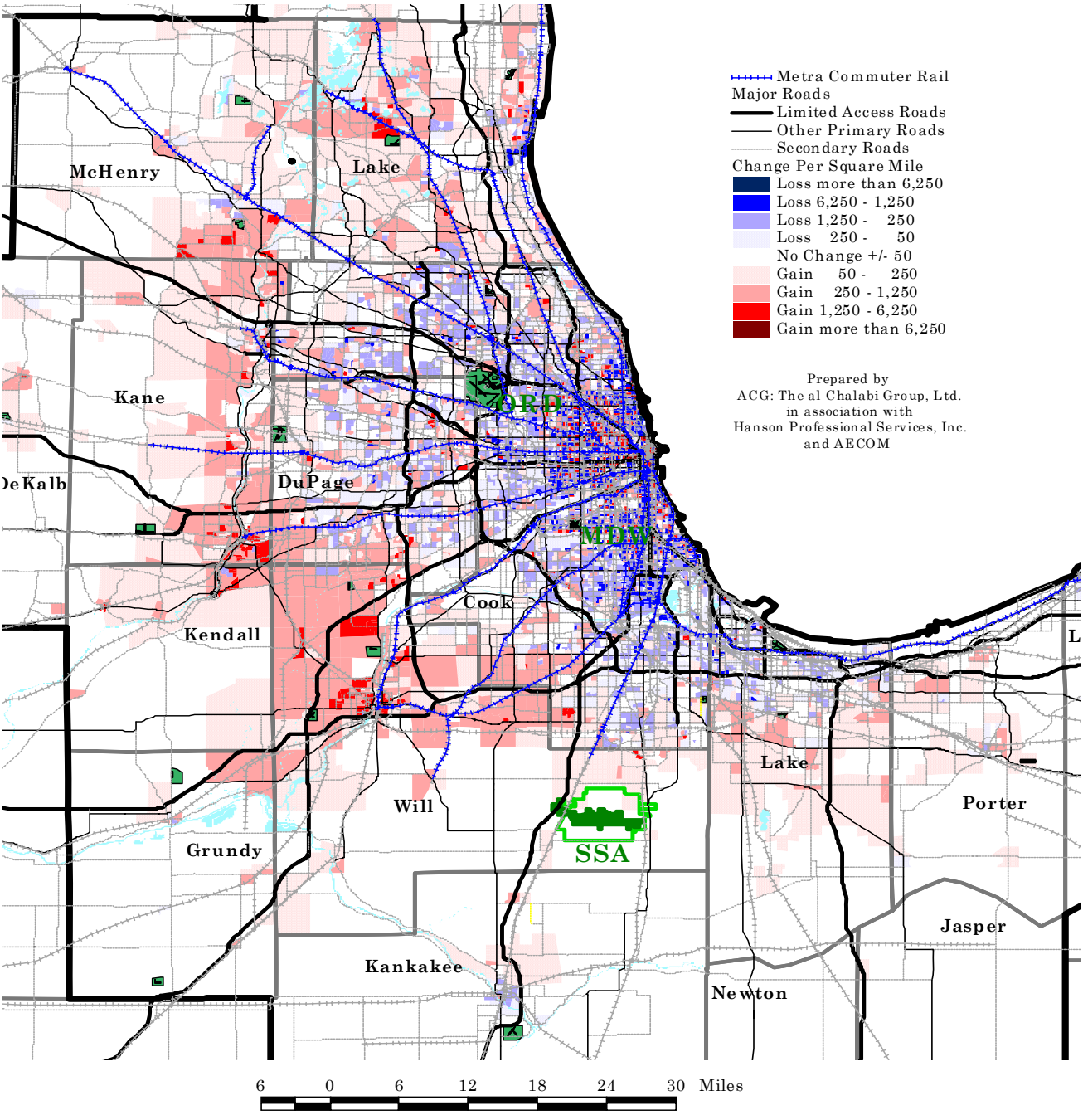


Exhibit 1-2 Population Change per Square Mile
2000-2007 by Block Group – Chicago CSA
Source: Tetrad Business Facts 2007 and 2000 Census



The comprehensive compilation and analyses of population forecasts for Kendall and Grundy were undertaken as part of the EIS for the proposed Prairie Parkway. The Prairie Parkway links the I-88 (Reagan Memorial Tollway) with I-80. The Final Record of Decision for this EIS was issued in September 2008. However, most of the demographic analyses for this study were undertaken in 2006 and 2007. These forecasts are presented later in this section.

Kankakee County has developed population forecasts in support of a study for rail transit extension from eastern Will County. This study was completed in December 2007 by the Kankakee County Planning Department. This population forecast is presented later.

None of the population forecasts by the public agencies referenced above reflect the economic downturn conditions experienced in 2008 and early 2009; the base year data for most of these forecasts was 2005 or earlier. In October 2008, W&P released its latest forecasts. The demographic base year for the 2008 W&P forecasts is the July 1, 2007 population estimates, by county, as published by the U.S. Bureau of the Census on March 20, 2008.

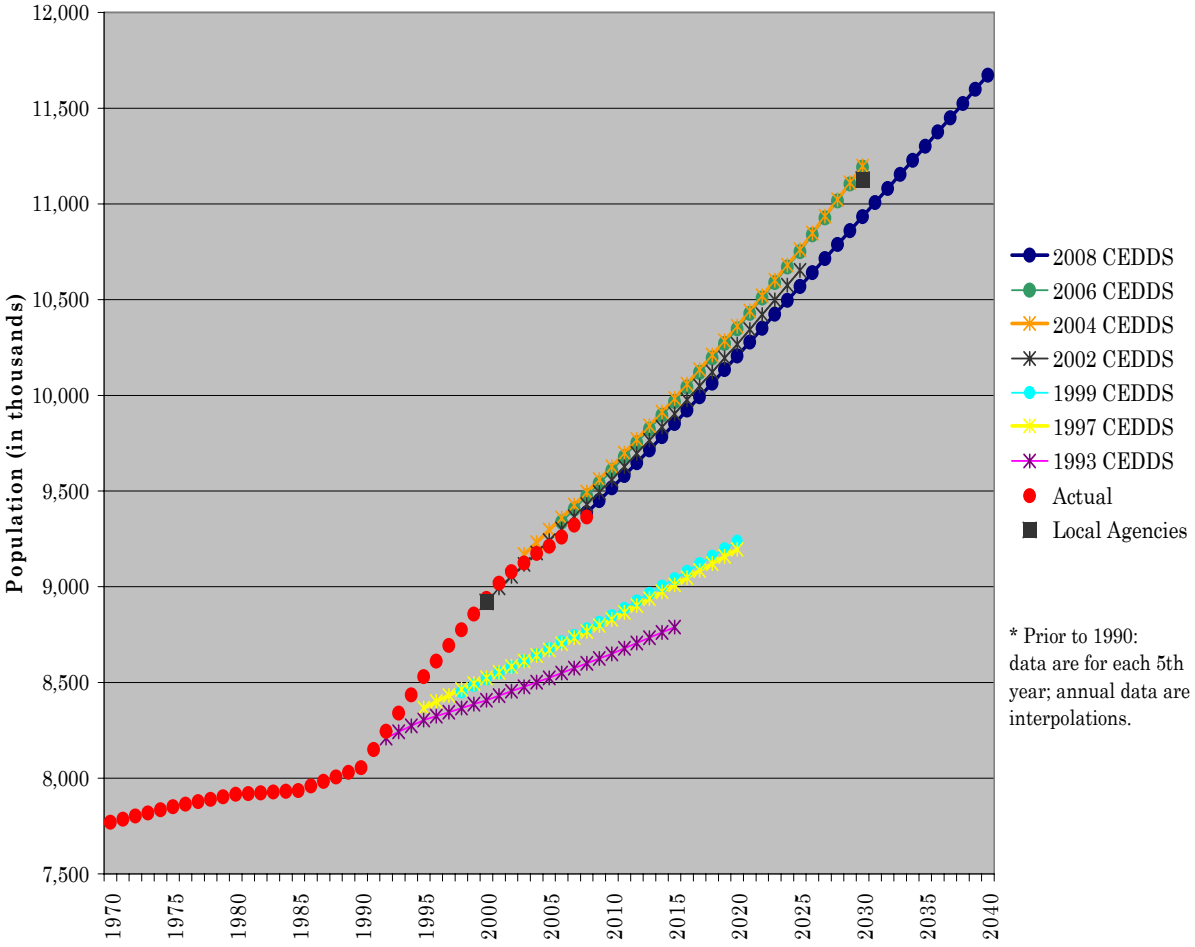
Exhibit 1-3, Woods & Poole (W&P) Various Population Forecast Series 11–County SSA Study Region, shows various W&P population forecasts dating back to 1993 for the 11-County SSA Study Region. W&P publishes its demographic and economic forecasts annually for each of the 3,091 U.S. Counties. **Exhibit 1-3, Woods & Poole (W&P) Various Population Forecast Series 11-County SSA Study Region**, shows that W&P has been increasing its forecasts for the 11-County Region, starting with its 1993 forecasts and continuing through 2007. The 2008 forecast series represents the first year, among those shown, indicating a reduced forecast. However, this reduction was begun in 2007. For 2030, the last common year, the 2008 forecast series is 2.3 percent lower than the 2007 forecast series and 2.4 percent lower than the 2006 forecast series. These reductions are within the margin of error of such long-range forecasts; however, this reversal reveals a concern that the dynamics influencing and impacting population growth may be changing. The sum of CMAP and other locally generated forecasts appears to be consistent with the 2004-2006 W&P series; but it is higher than the 2008 W&P series.

The W&P demographic forecast is generated through the traditional cohort-survival-migration model, based on calculated fertility and mortality in each county or economic region. The migration component of the population model is estimated by balancing the demand for labor (generated through the employment model) with the supply derived from the population forecasts. The employment forecast model is described in the next section.

The 2008 W&P forecast series are the lowest among those reviewed and which have been prepared after the 2000 Census. Since the release of these latest W&P forecasts, the U.S. Bureau of the Census released (on December 22, 2008) the July 1, 2008 population estimates by state. Analysis of the Illinois components of change (birth, deaths, international migration and domestic migration) reveal that, as the economic conditions worsened, international migration into Illinois slowed down. However, this decline in international in-migration was more than balanced by a slow-down in domestic out-migration from Illinois to the other states (most notably to the southwestern and southeastern states). The net result is that the population of Illinois grew by more persons during the period of July 1, 2007 to July 1, 2008 than that of the average of the period 2000-2008.

On March 19, 2009, the U.S. Bureau of the Census released its July 1, 2008 population estimates by county. Preliminary analysis of these estimates and their components of change revealed the same trends referenced above for the State of Illinois. **Table 1-1, Annual Average of the Components of Population Change for Counties of 11-County SSA Study Region – April 1, 2000 to July 1, 2007** and **Table 1-2, Estimates of the Components of Resident Population Change for Counties of 11-County SSA Study Region – July 1, 2007 to July 1, 2008**, show the components of change for the period of April 1, 2000 to July 1, 2007 (average annual change) and for the period July 1, 2007 to July 1, 2008, respectively, as published by the U.S. Bureau of the Census. The total population change for the 11-County SSA Study Region, for the last year, is higher than the average annual increase for the first seven years of the post-2000 Census period by almost 15,000. Almost all of this increase is due to the decrease in net total migration from minus 15,413 to plus 345. It also is worth noting that, for the first time since 2000, Cook County experienced net growth in population during the last year of this period, from 2007 to 2008.

Exhibit 1-3 Woods & Poole (W&P) Various Population Forecast Series 11-County SSA Study Region



Prepared by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM February 2009

Another interesting observation gathered from comparing the components of population change tables is the change in total migration and internal migration in Lake County, IL. It appears that Lake County (IL) is approaching its development capacity. One sign of such capacity constraint is the reversal of net migration from positive (in-migration) to negative (out-migration or inability to accommodate natural increases). Cook County reached this point during the mid-decades of the last century and DuPage County reached this tipping point in the 1990's. Internal migration in Lake County (IL) reached this point in 2005 and total migration reached it in 2008. As noted earlier, a significant portion of the out-migration from DuPage County is moving to Will, Kendall and Kane Counties. Spillovers from Lake County and Northern Cook County are being directed to McHenry and Boone Counties, in Illinois and adjacent border counties in Wisconsin. Spillovers from southern Cook County are directed, primarily, to Will and Kankakee Counties, in Illinois and Lake and Porter Counties, in Indiana.

Table 1-1 Annual Average of the Components of Population Change for Counties of 11-County SSA Study Region – April 1, 2000 to July 1, 2007

Geographic Areas	Total Population Change	Natural Increase	Vital Events		Net Migration		
			Births	Deaths	Total	International	Internal
Illinois	***59,710***	***77,806***	***182,661***	***104,855***	***-18,105***	***57,938***	***-76,043***
Indiana	***36,520***	***31,657***	***87,079***	***55,422***	***7,366***	***9,633***	***-2,266***
Cook County	-12,650	37,410	81,159	43,749	-50,572	39,750	-90,322
DuPage County	3,454	7,085	12,766	5,681	-3,593	5,304	-8,897
Grundy County	1,325	273	605	332	1,080	37	1,043
Kane County	13,366	5,876	8,469	2,593	7,346	2,901	4,446
Kankakee County	948	460	1,554	1,094	372	136	236
Kendall County	5,829	958	1,306	347	4,790	70	4,720
Lake County (IL)	9,056	6,589	10,455	3,866	2,319	3,392	-1,073
McHenry County	7,703	2,646	4,294	1,647	4,826	748	4,077
Will County	23,636	6,349	9,648	3,299	17,573	1,101	16,472
Lake County (IN)	1,077	2,265	7,213	4,949	-891	615	-1,506
Porter County (IN)	1,969	724	1,933	1,209	1,337	143	1,193
11-County SSA Study Region	**55,713**	**70,635**	**139,402**	**68,766**	**-15,413**	**54,197**	**-69,611**

Sources: Population Division, US Census Bureau, Table 1: Annual Estimates of the Resident Population for Counties of Illinois: April 1, 2000 to July 1, 2008, Release Date: March 19, 2009.
Population Division, US Census Bureau, Table 1: Annual Estimates of the Resident Population for Counties of Indiana: April 1, 2000 to July 1, 2008, Release Date: March 19, 2009.
Population Division, US Census Bureau, Table 4: Cumulative Estimates of the Components of Population Change for Counties of Illinois: April 1, 2000 to July 1, 2007, Release Date: March 20, 2008.
Population Division, US Census Bureau, Table 4: Cumulative Estimates of the Components of Population Change for Counties of Indiana: April 1, 2000 to July 1, 2007, Release Date: March 20, 2008.

Table 1-2 Estimates of the Components of Resident Population Change for Counties of 11-County SSA Study Region – July 1, 2007 to July 1, 2008

Geographic Areas	Total Population Change	Natural Increase	Vital Events		Net Migration		
			Births	Deaths	Total	International	Internal
Illinois	***75,754***	***83,476***	***186,726***	***103,250***	***-6,440***	***45,909***	***-52,349***
Indiana	***40,930***	***34,321***	***89,921***	***55,600***	***5,583***	***7,562***	***-1,979***
Cook County	23,259	38,035	79,854	41,819	-11,854	31,177	-43,031
DuPage County	4,300	6,255	11,977	5,722	-2,053	4,094	-6,147
Grundy County	971	463	801	338	491	29	462
Kane County	9,437	6,314	9,057	2,743	3,064	2,263	801
Kankakee County	986	613	1,686	1,073	319	109	210
Kendall County	6,894	1,678	2,073	395	5,177	60	5,117
Lake County (IL)	6,067	6,312	10,327	4,015	-344	2,977	-3,321
McHenry County	3,972	2,679	4,594	1,915	1,455	577	878
Will County	10,434	7,394	11,001	3,607	2,908	845	2,063
Lake County (IN)	2,562	2,408	7,118	4,710	160	478	-318
Porter County (IN)	1,914	807	2,000	1,193	1,022	108	914
11-County SSA Study Region	**70,796**	**72,958**	**140,488**	**67,530**	**345**	**42,717**	**-42,372**

Sources: Population Division, US Census Bureau, Table 1: Annual Estimates of the Resident Population for Counties of Illinois: April 1, 2000 to July 1, 2008, Release Date: March 19, 2009.
Population Division, US Census Bureau, Table 1: Annual Estimates of the Resident Population for Counties of Indiana: April 1, 2000 to July 1, 2008, Release Date: March 19, 2009.
Population Division, US Census Bureau, Table 4: Cumulative Estimates of the Components of Population Change for Counties of Illinois: April 1, 2000 to July 1, 2007, Release Date: March 20, 2008.
Population Division, US Census Bureau, Table 4: Cumulative Estimates of the Components of Population Change for Counties of Indiana: April 1, 2000 to July 1, 2007, Release Date: March 20, 2008.

Accordingly, given these trends and provided that the current economic downturn does not last more than the predicted one to three years, there should be no significant lowering of the population forecasts for the 11-County SSA Study Region or its component sub-regions.

Table 1-3, Forecasted Population Change by County, shows the population trends and forecasts, by county, within the 11-County SSA Study Region as developed by the public agencies and W&P. As noted earlier, the W&P forecasts are derived through demographic and econometric models and are not constrained by land availability. Accordingly, the W&P forecasts are reasonable at the level of an economic region (i.e., Metropolitan Area, CMAP Region), but not at the county level within a metropolitan area. For example, W&P forecasts do not take into consideration that DuPage County has, for all intents and purposes, reached full development. Accordingly, DuPage County cannot accommodate the full growth forecasted for it by the W&P models. Developments which cannot be accommodated by DuPage are being pushed to adjacent counties (i.e., Will, Kane and Kendall). Also shown in **Table 1-3, Forecasted Population Change by County**, are recommended population forecasts, by county, for 2030 and 2035. The recommended 2035 forecasts are constrained by the W&P regional totals, but reflect the planning principles implied in the CMAP, NIRCP and other locally-generated forecasts. Accordingly, the 2008 W&P series forecast is the recommended regional control total.

Appendix 1, SSA Socio-Economic Forecast Update Table A, Population Trends and 2030 Forecasts by Minor Civil Division (MCD), shows the population trends and forecasts by MCD. The distribution of the regional control total to counties and MCDs was based on the above-referenced land constraints, the planning policies of the referenced local planning agencies (as reflected by their forecasts) and the actual 2000-2007 trends, most of which were not known to these planning agencies. As noted earlier, 13 of the 23 MCDs in the NIRPC region achieved, by 2007, the population forecasted in 2030. In the CMAP Region, 8 of the 114 MCDs exceeded, by 2007, their 2030 population forecasts. The recommended forecasts adjust for these facts, as well as recognizing that some of the anticipated redevelopment in the mature inner communities of the region had not occurred, as yet. The policy of achieving such redevelopment is retained, but adjusted to reflect realistic implementation schedules. Finally, the current CMAP forecast assumed an SSA in operation by now, with a 2030 enplanement level significantly higher than those implied by the Inaugural Airport. The recommended forecasts, included in **Table 1-3, Forecasted Population Change by County** and **Appendix 1 - SSA Socio-Economic Forecast Update Table A, Population Trends and 2030 Forecasts by Minor Civil Division (MCD)**, are the "Baseline" for the SSA Study, defined as the "No-Build" SSA Scenario.

Exhibit 1-4, 2007 Population Density per Square Mile by Minor Civil Division (MCD) and **Exhibit 1-5, 2030 Population Density per Square Mile by Minor Civil Division (MCD)**, following, shows the distribution of the 2007 and the recommended 2030 population density, per square mile, by MCD, respectively. **Exhibit 1-6, 2007-2030 Change in Population Density per Square Mile by Minor Civil Division (MCD)**, shows the 2007-2030 population change, per square mile, by MCD.

Employment Forecasts. The employment forecasts in this report use the same sources as are used for the population forecasts. There is one significant factor, however, that must be considered when comparing employment estimates and forecasts. Unlike population, there are varying definitions of employment (jobs). Employment estimates, in particular, are released on frequent bases by various sources; however, they are likely to be using different employment definitions. This makes comparisons difficult and, even more serious, it may distort them. The first step in any comparison, therefore, is to confirm the data to a common base. The employment data forecasts use three sources and, therefore, three definitions of employment. These sources are:

- **Bureau of Economic Analysis (BEA)** of the U.S. Department of Commerce - used by W&P. This source provides the most complete measure of the number of jobs; it includes all full-time and part-time jobs by place of work. This employment data covers wage and salary workers, proprietors, private household employees and miscellaneous workers. The BEA data and the W&P forecasts are available only at the county level. The BEA definitions are also used by the IMPLAN® Input/Output (I/O) Model, which is used for calculating the economic impacts of SSA.

Table 1-3 Forecasted Population Change by County

County	2000 Census (04-01-00)	2007 Census Estimate (07-01-07)	2008 Census Estimate (07-01-08)	2030 CMAP, NIRPC & Other Local Forecasts	2030 W&P Forecast (2008 Series)[a]	2035 W&P Forecast (2008 Series)[a]	Recommended 2030 Forecast	Recommended 2035 Forecast
Cook County	5,376,741	5,271,405	5,294,664	5,952,792[1]	5,368,585	5,398,196	5,680,000	5,765,000
DuPage County	904,161	926,228	930,528	1,003,704[1]	1,217,850	1,282,096	1,005,000	1,020,000
Grundy County	37,535	46,987	47,958	66,267[2]	69,065	73,893	66,000	70,000
Kane County	404,119	498,142	507,579	718,464[1]	711,882	758,422	720,000	763,000
Kankakee County	103,833	111,538	112,524	150,000[3]	127,120	130,897	140,000	146,000
Kendall County	54,544	96,566	103,460	190,150[2]	164,787	179,646	190,000	210,000
Lake County (IL)	644,356	706,386	712,453	841,860[1]	950,657	1,004,026	850,000	865,000
McHenry County	260,077	314,669	318,641	457,593[1]	473,955	508,699	465,000	497,000
Will County	502,266	670,663	681,097	1,076,447[1]	1,110,060	1,205,596	1,100,000	1,175,000
Lake County (IN)	484,564	491,238	493,800	504,808[4]	534,460	546,669	557,100	567,000
Porter County (IN)	146,798	160,267	162,181	164,915[4]	205,100	215,045	212,900	225,000
6-County CMAP Region	**8,091,720**	**8,387,493**	**8,444,962**	**10,050,860[1]**	**9,832,989**	**10,157,035**	**9,820,000**	**10,085,000**
2-County NIRPC Region	**631,362**	**651,505**	**655,981**	**669,723[4]**	**739,560**	**761,714**	**770,000**	**792,000**
11-County SSA Study Region	**8,918,994**	**9,294,089**	**9,364,885**	**11,127,000**	**10,933,521**	**11,303,185**	**10,986,000**	**11,303,000**

Sources:

(1) Northeastern Illinois Planning Commission (also known as CMAP), *2030 Forecasts of Population, Households and Employment for Counties and Municipalities*, September 27, 2006. Retrieved from CMAP's web site, February 2, 2009, http://www.cmap.illinois.gov/2030_forecaasts.aspx.

(2) Prairie Parkway Study, Draft EIS, November 2006, *Socio-Economic Impacts of the Preferred Alignment*.

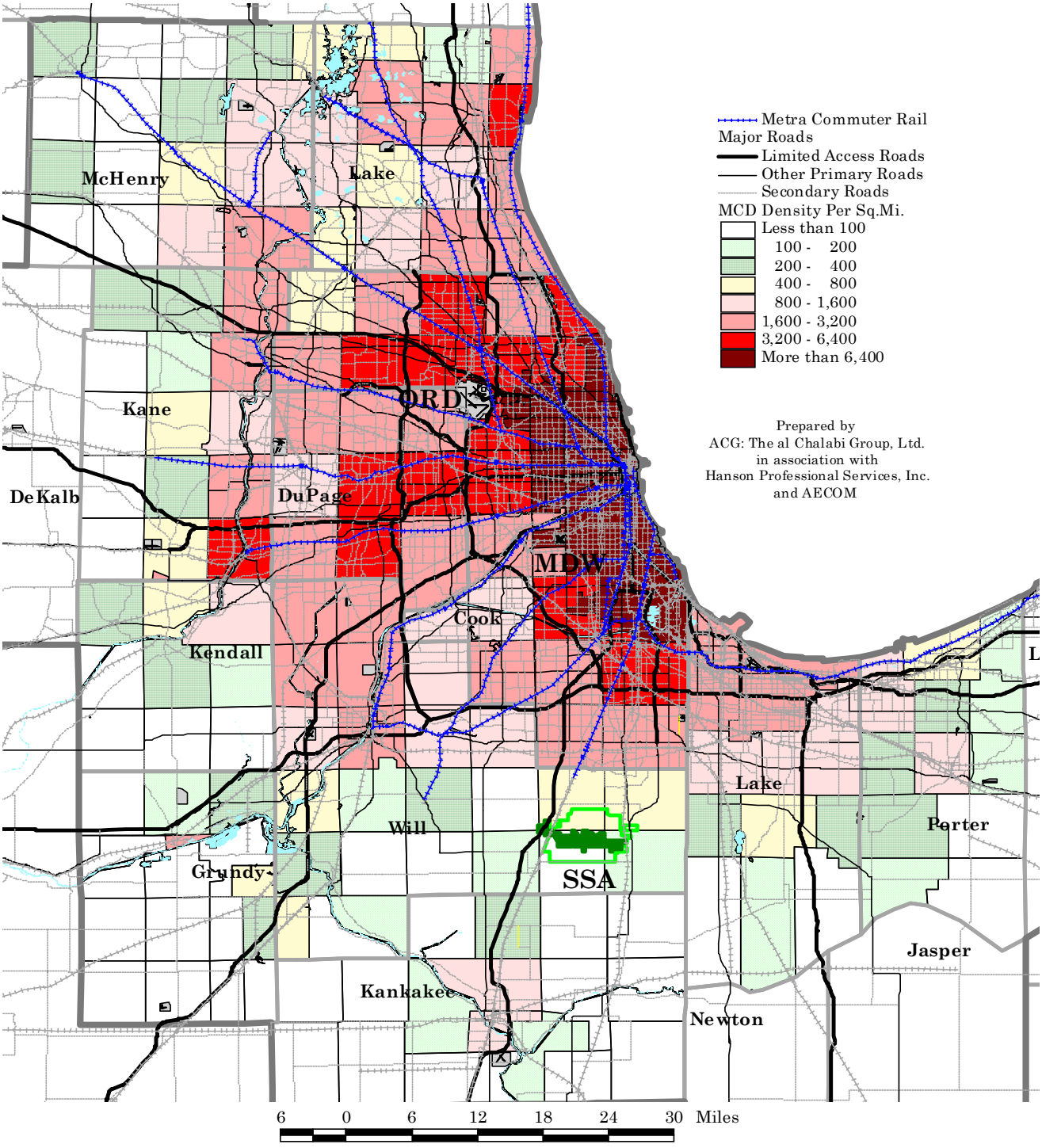
(3) *Kankakee County Commuter Transit: Phase II Feasibility Study*, Final Report, December 2007.

(4) Northwestern Indiana Regional Planning Commission: Population Forecasts for *Connections 2030: Regional Transportation Plan*, 2007.

Notes:

(a) W&P forecasts do not take into consideration land constraints. These counties are not accommodating indicated high levels of population forecasts. Population not accommodated here will spill over to adjacent counties, where developable land is available. CMAP assumes that some of this spillover will go to Cook County, which is fully developed, but which does offer redevelopment opportunities.

Exhibit 1-4 2007 Population Density per Square Mile by Minor Civil Division (MCD)



Data Source: US Bureau of the Census

Exhibit 1-5 2030 Population Density per Square Mile by Minor Civil Division (MCD) Source: ACG: The al Chalabi Group, Ltd.

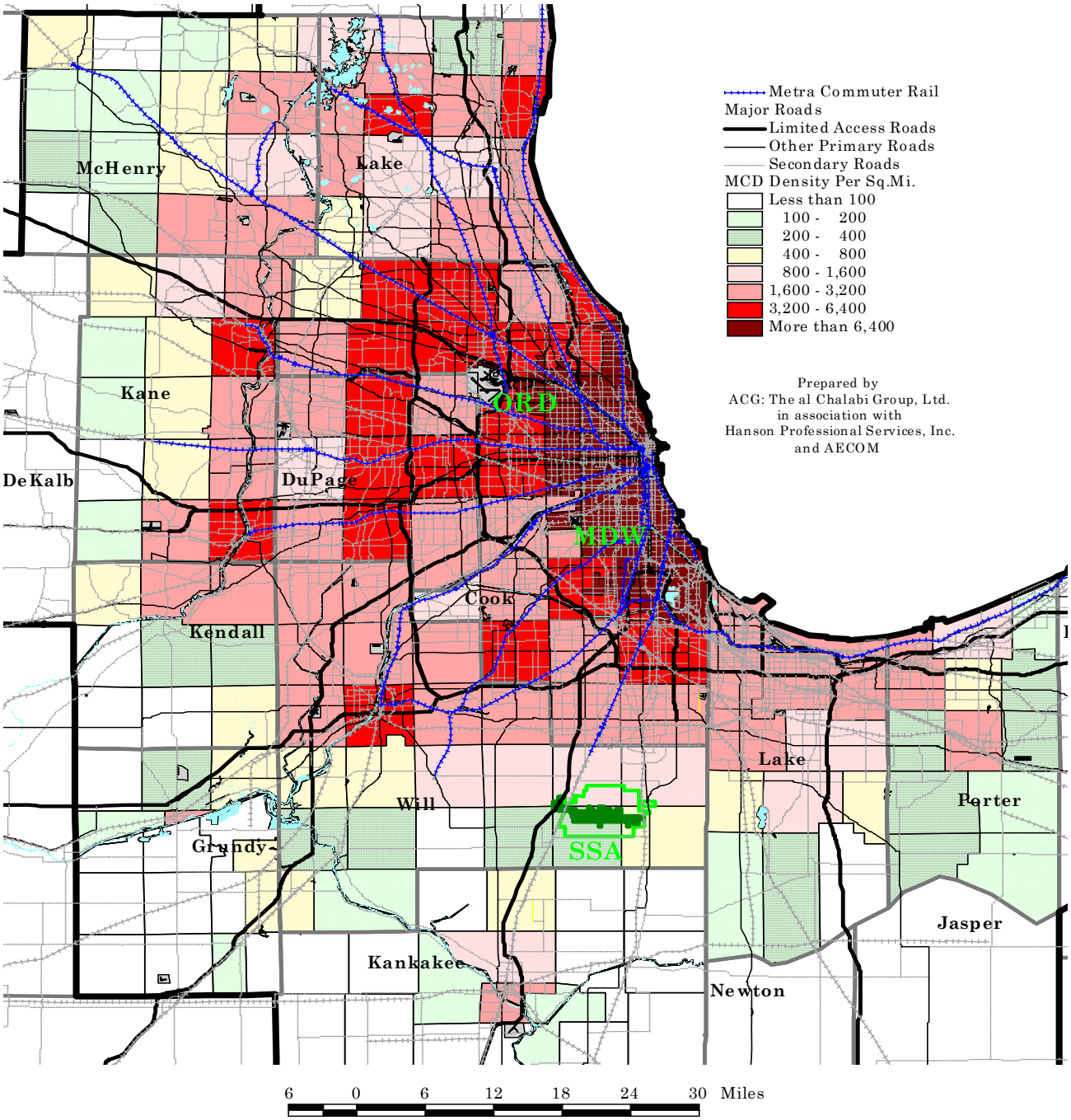
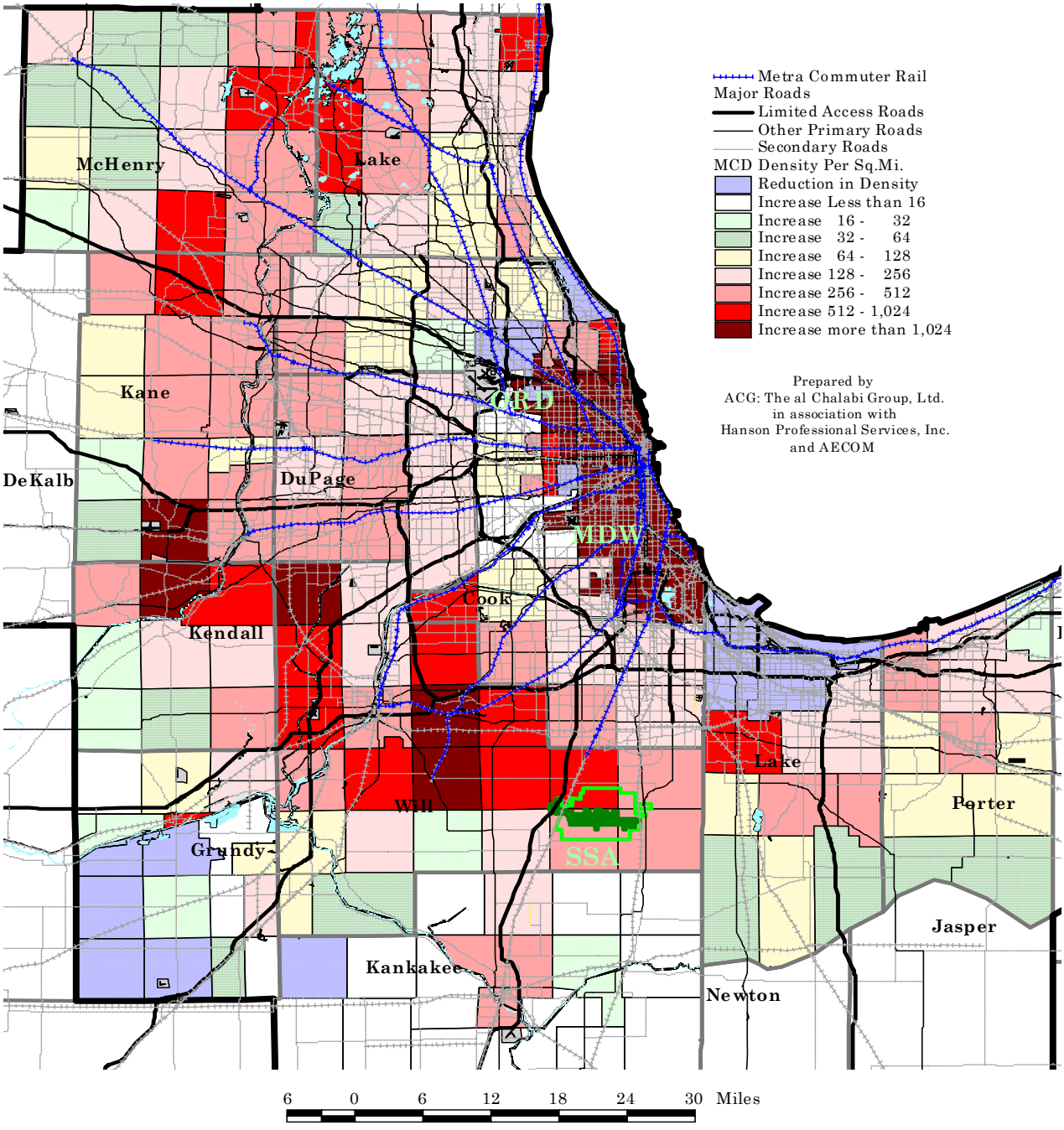


Exhibit 1-6 2007-2030 Change in Population Density per Square Mile by Minor Civil Division (MCD) Source: ACG: The al Chalabi Group, Ltd.



- **Bureau of Labor Statistics (BLS)** of the U.S. Department of Labor - The BLS employment data is generally much lower than the BEA data. The BLS data do not include farm workers, military, proprietors (self-employed), household and miscellaneous employment. For June 2006, the employment, as reported by BLS, was 77 percent of that reported by W&P; furthermore, the gap is increasing. The BLS data is available by state, Metropolitan Statistical Area (MSA) and county; and is more current than BEA data.
- **Chicago Metropolitan Agency for Planning (CMAP)** and the **Northwestern Indiana Regional Planning Commission (NIRPC)** - The regional control total for CMAP is the BLS data, expanded to include farm and partial proprietor (self) employment. Small area estimates are generated using Illinois Department of Employment Security (IDES) data, supplemented by other sources. At the county level, the CMAP data and forecasts are lower than W&P, but higher than BLS. CMAP data are available at five-year intervals, dating back to 1970, at small levels of geography. NIRPC uses equivalent Indiana data to generate its small area employment data and forecasts.

Exhibit 1-7, Woods & Poole (W&P) Various Employment Forecast Series 11-County SSA Study Region, shows the employment trends and forecasts for the 11-County SSA Study Region, as published by W&P. Various series of W&P employment forecasts, dating back to 1993, are presented in this exhibit. Also shown on this exhibit are the sum of CMAP/NIRPC and other locally-generated forecasts (BEA equivalents), as well as the recommended forecast.

Unlike population statistics, annual fluctuation in employment is apparent in **Exhibit 1-7, Woods & Poole (W&P) Various Employment Forecast Series 11-County SSA Study Region**. The fluctuation is clear in post-2000 actual data; in pre-2000 data, the curve has been smoothened, as noted in the exhibit. W&P, in its latest available data, 2008 series, has lowered its 2030 employment forecasts for the 11-County SSA Study Region by 4.2 percent from its 2006 series and by 4.4 percent from its 2004 series. The CMAP and other locally-generated forecasts were developed in 2005-2006 and, therefore, are consistent with the W&P 2006 and 2004 series. The recommended forecast shows further lowering to reflect the continued decline in employment (latest available BLS data is for February 2009) assumed to continue to 2010.

Exhibit 1-8, Employment Change per Square Mile 2002-2007 by Block Group – Chicago CSA, shows the 2002-2007 change in employment by Census block group. As block groups are of differing sizes, the data is normalized and is presented per square mile.

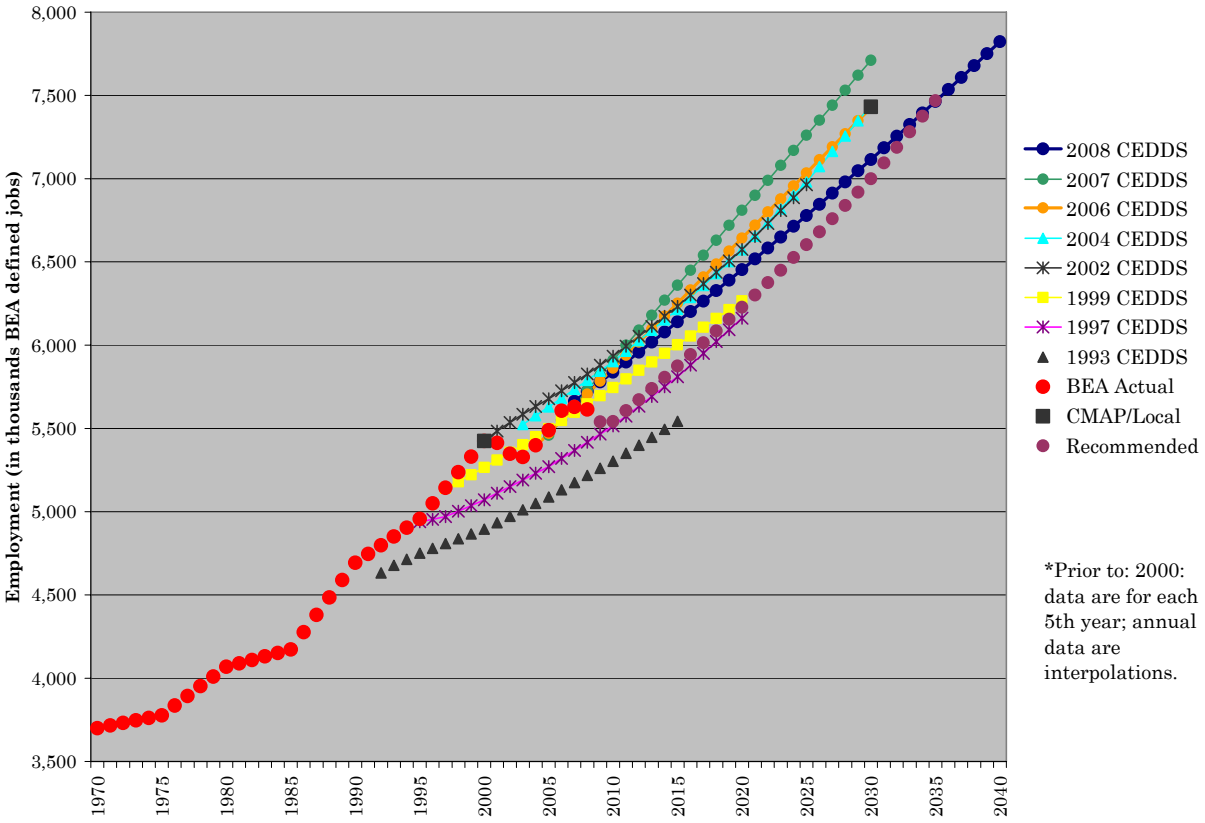
The specific W&P economic forecasting methodology follows the standard "export-base" approach. Certain industrial sectors, at the regional level, are considered "basic", producing output that is not consumed locally, but which is exported to national and international markets. This methodology links the basic industries to the national economy. Growth in a regional basic sector is linked to the growth in the corresponding national sector. The W&P forecasts, in generating this 2008 series of forecasts, were cognizant of the economic slowdown, which had started in late 2007. However, the magnitude of the slow-down has increased during the last few months and future W&P forecasts may reflect this change by lowering interim or final forecast totals. The recommended employment forecasts assume continuation of the decline in employment through 2009, followed by recovery beginning in 2010. The latest FAA forecasts, released on March 31, 2009, show the economic recovery, measured in Gross Domestic Product (GDP) growth, starting in the fourth quarter of 2009.[24]

Table 1-4, Employment Data and Forecasts – Various Available Sources, presents 2000 and 2008 actual/estimated employment, the W&P forecasts (2008 series), the CMAP forecasts (September 2006) and other locally-generated county forecasts (for counties outside the CMAP Region). These forecasts are presented, as published and in BEA-equivalent jobs, if different. The sources of the data and forecasts are noted in the table. The 2030 and 2035 recommended employment forecasts are shown in the last two columns (highlighted) and are in BEA-equivalent jobs. The 2035 forecasts are constrained by the 2008 W&P regional totals, but reflect the planning principals implied in the current CMAP, NIRPC and other locally-generated forecasts. Regional control totals for 2030 and

[24] *FAA Aerospace Forecasts: Fiscal Years 2009-2025*, FAA, March 31, 2009, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2009-2025/.

earlier years are those shown in **Exhibit 1-9, 2008 Employment Density per Square Mile by Minor Civil Division (MCD)** and are lower than the latest W&P forecasts.

Exhibit 1-7 Woods & Poole (W&P) Various Employment Forecast Series
11-County SSA Study Region



Prepared by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM - March 2009

Appendix 1, SSA Socio-Economic Forecast Update Table B, Employment Trends and 2030 Forecasts by Minor Civil Division (MCD), shows the employment trends and forecasts by MCD. The distribution of the regional and county control totals to MCDs was based on the same principles presented earlier, the population forecasts and the 2000-2008 trends. The employment forecasts, as shown in **Table 1-4, Employment Data and Forecasts – Various Available Sources** and **Appendix 1, SSA Socio-Economic Forecast Update, Table B, Employment Trends and 2030 Forecasts by Minor Civil Division (MCD)**, are "Baseline" for the SSA Study, defined as the "No-Build" SSA Scenario.

Exhibit 1-9, 2008 Employment Density per Square Mile by Minor Civil Division (MCD) and **Exhibit 1-10, 2030 Employment Density per Square Mile by Minor Civil Division (MCD)** show the distribution of the 2008 and the recommended 2030 employment density per square mile by MCD. **Exhibit 1-11, 2007 - 2030 Change in Employment Density per Square Mile by Minor Civil Division (MCD)**, shows the 2007-2030 forecasted employment change, per square mile, by MCD.

Exhibit 1-8 Employment Change per Square Mile
2002-2007 by Block Group – Chicago CSA
Source: Tetrad Business Facts 2007 and 2002

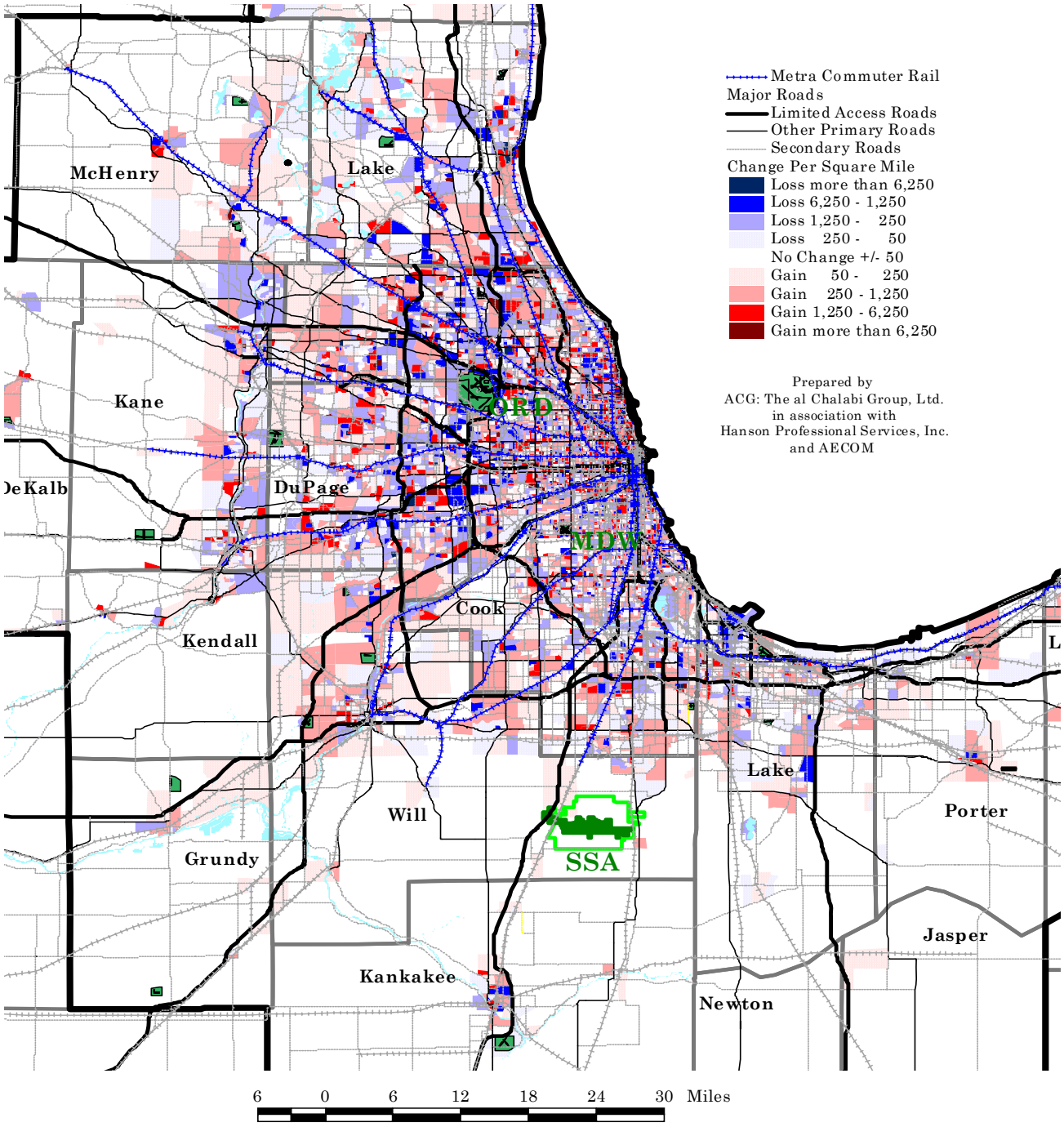


Table 1-4 Employment Data and Forecasts – Various Available Sources

County	2000 Actual Employment			2008 Estimated Employment		2030 Employment Forecast				Recommended Forecast	
	W&P/BEA [1]	*BLS* [2]	*CMAP/NIRPC* [3]	*W&P/BEA* [4]	*BLS* [2]	*W&P 2008 Series (BEA Def)* [1]	*CMAP/NIRPC* [3]	*CMAP in BEA Equivalent Jobs* [5]	*Other Local Generated in BEA Equivalent Jobs* [6]	*2030 in BEA Equivalent Jobs*	*2035 in BEA Equivalent Jobs*
Cook County*	3,351,990	2,716,109	2,818,334	3,320,347	2,533,427	3,908,482	3,305,003	4,099,821	NA	3,732,000	3,865,000
DuPage County	702,575	595,749	649,989	735,838	601,437	1,045,657	830,394	1,025,581	NA	950,000	1,020,000
Grundy County	20,025	14,578	n/a	24,471	16,575	34,936	NA	NA	36,269	35,000	38,000
Kane County	241,766	198,180	206,107	269,832	212,255	388,080	352,208	423,442	NA	430,000	480,000
Kankakee County*	54,560	42,915	n/a	56,600	43,855	70,240	NA	NA	85,000	71,000	75,000
Kendall County	21,667	16,094	n/a	33,938	25,125	46,018	NA	NA	91,248	82,000	100,000
Lake County (IL)	418,842	321,667	352,582	454,863	343,756	639,001	463,509	569,931	NA	560,000	595,000
McHenry County	111,702	89,441	105,118	133,067	106,157	189,250	168,573	207,438	NA	203,000	227,000
Will County*	186,145	145,513	165,556	259,823	199,867	381,997	415,549	547,946	NA	522,000	625,000
Lake County (IN)*	244,910	195,710	201,321	251,260	195,780	308,820	NA	NA	301,150	301,000	317,000
Porter County (IN)	70,660	54,079	54,126	73,740	58,177	102,740	NA	NA	114,450	114,000	127,000
6-County CMAP Region	**5,013,020**	**4,066,659**	**4,297,686**	**5,173,770**	**3,996,899**	**6,552,467**	**5,535,236**	**6,874,159**	**NA**	**6,397,000**	**6,812,000**
2-County NIRPC Region	**315,570**	**249,789**	**255,447**	**325,000**	**253,957**	**411,560**	**NA**	**NA**	**415,600**	**415,000**	**444,000**
11-County SSA Study Region	**5,424,842**	**4,390,035**	**4,553,133**	**5,613,779**	**4,336,411**	**7,115,221**	**NA**	**NA**	**NA**	**7,000,000**	**7,469,000**

*4 County SSA Impact Area.
NA – Not Available.

Sources:

(1) Woods & Poole Economics, Inc. (W&P), *2008 Complete Economic and Demographic Data Source (CEDDS)*.
(2) Bureau of Labor Statistics Website, Quarterly Census of Employment and Wages, Illinois Counties, http://www.bls.gov/cew/.
(3) Northeastern Illinois Planning Commission (also known as CMAP), *2030 Forecasts of Population, Households and Employment for Counties and Municipalities*, September 27, 2006, http://www.cmap.illinois.gov/2030_forecasts.aspx; Northwestern Indiana Regional Planning Commission (NIRPC) Actual Employment in 2000, http://nirpc.org/data/economicfactsandfigures.htm.
(4) The last W&P "actual", statistics are for 2006. The W&P 2008 estimate is derived through comparative analysis with BLS employment data.
(5) This conversion was undertaken as part of the Prairie Parkway Study, Draft EIS, November 2006, *Socio-Economic Impacts of the Preferred Alignment*.
(6) The forecasts for Boone and Winnebago Counties are from *Year 2035 Long-Range Transportation Plan for the Rockford Metropolitan Planning Area*, Rockford Area Transportation Study (predecessor agency of the Rockford Metropolitan Agency for Planning), August 2005, Table 9-4 p.98. Forecasts for other Illinois Counties are from Prairie Parkway Draft EIS noted above. Forecasts for Indiana Counties are from Illiana Corridor feasibility study, 2009.

Exhibit 1-9 2008 Employment Density
per Square Mile by Minor Civil Division (MCD)
Source: Tetrad Business Facts, W&P, BLS and ACG

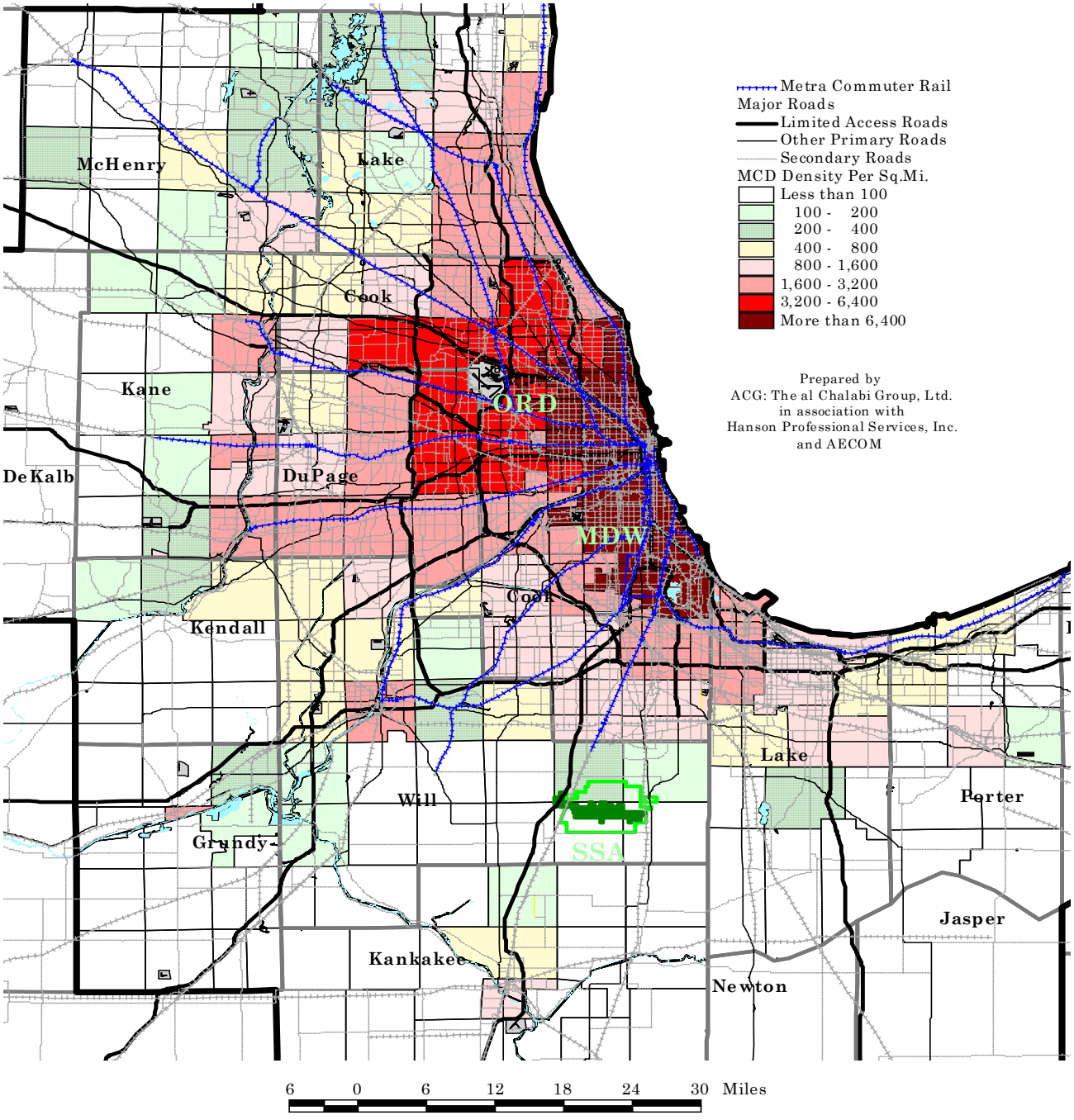


Exhibit 1-10 2030 Employment Density per Square Mile by Minor Civil Division (MCD) Source: ACG: The al Chalabi Group, Ltd.

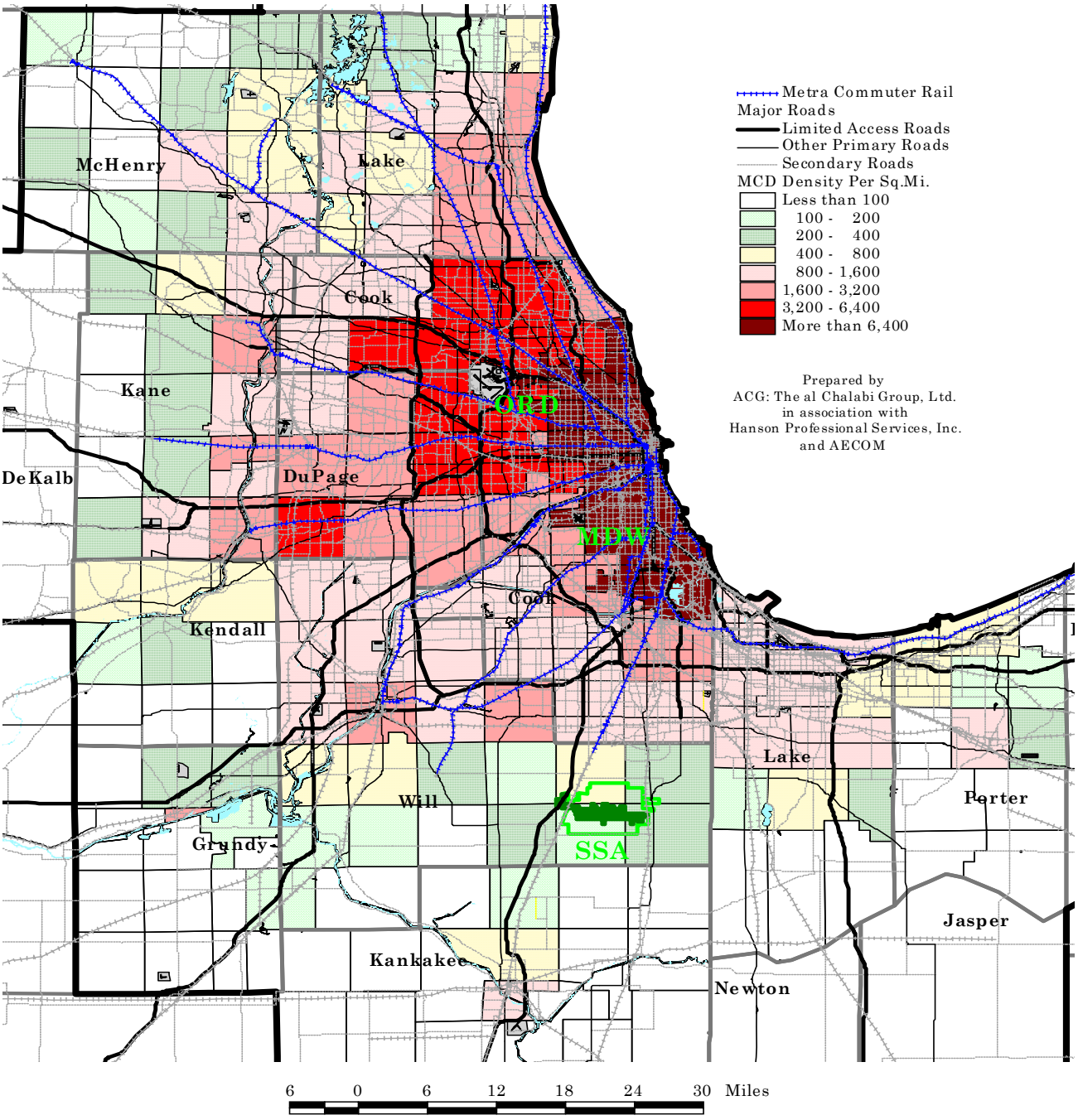
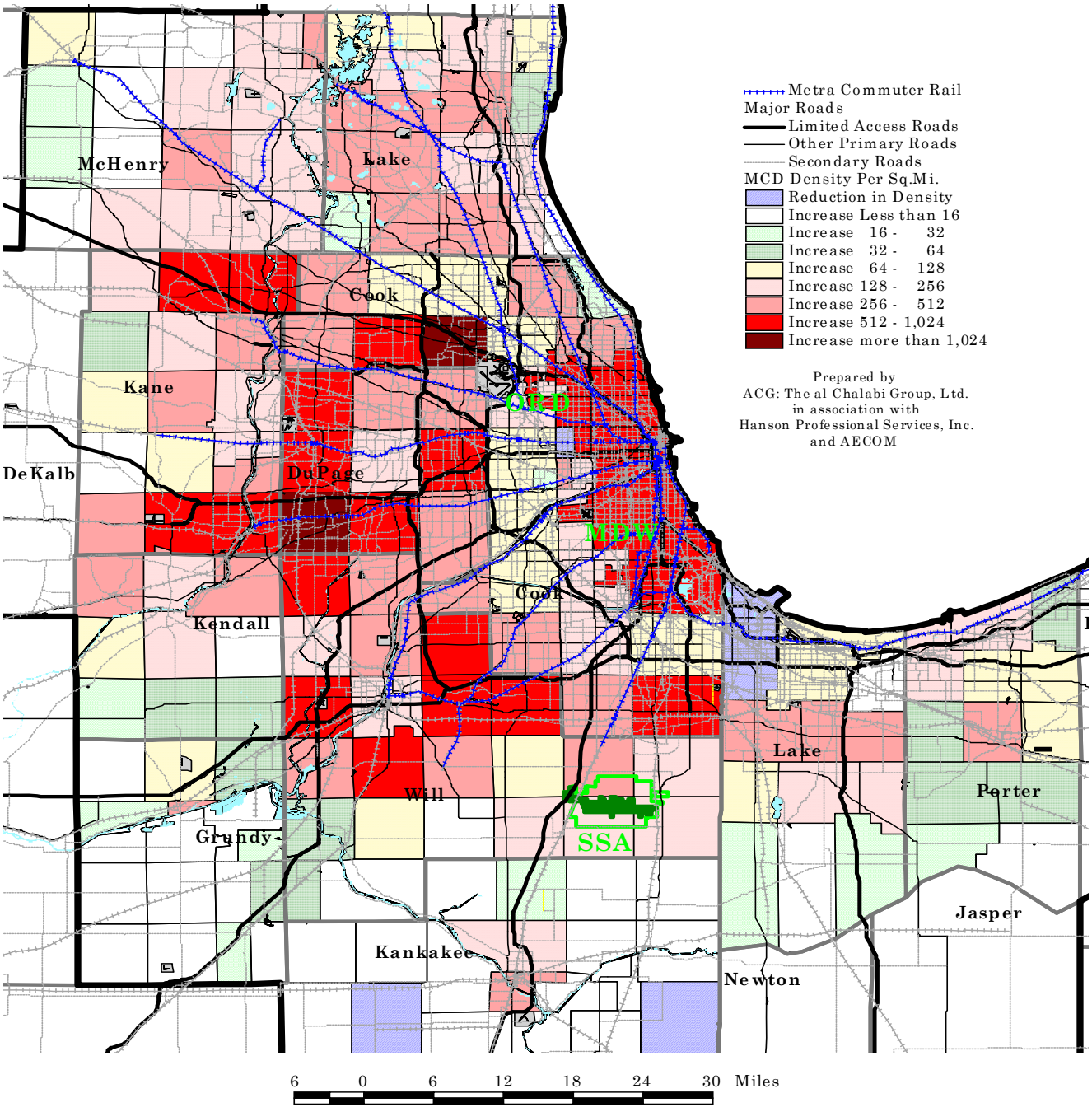


Exhibit 1-11 2007-2030 Change in Employment Density per Square Mile by Minor Civil Division (MCD) Source: ACG: The al Chalabi Group, Ltd.



Section 5 – Comparison of New Forecasts with those Presented in the *Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program*, February 2, 2005, published February 28, 2006

A comparison of the population and employment forecasts of 2006 and those prepared for this forecast update indicates relatively small differences in the aggregate totals. However, there is a significant increase in the growth of the south and southeast sub-areas of the Study Region.

The overall 11-County Study Area has grown from 8,918,994 in 2000, to 9,364,835 in 2008, a 5 percent increase. Over the same period, the four counties of SSA's immediate influence (Will, Kankakee, Lake and Porter) increased from 1,237,461 to 1,449,602, a 17.1 percent increase. Based on data between 2000 and 2007 (the latest available for small areas), the population of South Cook County remained stable.

Current forecasts to 2030 reflect this growth, with the four-County SSA area growing by 39 percent versus the 17 percent growth for the 11-County region. Current forecasted growth to 2030 is higher for all areas (original nine-County Area, total 11-County and the four-County SSA Area) than forecasted in 2005.[25] This increase is small (approximately 1.0 percent) for the original nine-County Area, but is approximately 9.3 percent higher for the four-County SSA Area. These estimates are shown on **Appendix 1, SSA Socio-Economic Forecast Update Table C, SSA Comparative Population Forecasts**.

Due to a substantial increase in employment in all areas of the region (original 9-County, 11-County and 4-County SSA area between 2000 and 2008, it is expected that forecasted job growth in the region will be dampened by the current economic slow-down, especially during the early years of the forecast period. However, due to the greater increase in population by 2030 than originally forecast for the 4-County SSA area, job increase at the residential service level (non-basic) in that area also is expected to increase. This is shown on **Appendix 1, SSA Socio-Economic Forecast Update Table D, SSA Comparative Employment Forecasts**.

Section 6 – Conclusions Regarding Demographic and Socio-Economic Characteristics

During the period 2000-2008, the population of the 11-County SSA Study Region has been growing at an annual rate of 0.59 percent. The rate of regional growth during the last year was higher (0.76 percent), even though this year experienced losses in employment and economic activity. The reason for increased population, at a time of economic recession, is due to the decline in net out-migration. The economic slow-down reduced international migration, a major component of growth for the Chicago Region. However, this slow-down also reduced domestic out-migration from the Chicago Region to other areas of the country, especially to Florida and Southwestern states. Cook County experienced a growth in population during the period of July 1, 2007 to July 1, 2008; this is the first year for such growth since the 2000 Census. The growth of the other counties in the region slowed, but remained robust.

The recommended population forecasts assume continuation of these above-cited patterns. The population of Cook County (especially the City of Chicago) is forecasted to grow during 2008-2030 at annual rates of 0.5 percent, compared to a growth of 0.4 percent during last year and a decline of 0.2 percent per year for 2000-2008. The recommended population forecasts for the collar and outer counties imply an annual growth rate (2008-2030) of 1.1 percent, compared to annual growth rates of 1.7 percent for the period 2000-2008 and 1.2 percent for the last year of that period. Even with these conservative assumptions for growth, the latest recommended 2030 population forecasts for Will, Kankakee, Lake (IN) and Porter (IN) Counties are higher than those implied in the

[25] ACG: The al Chalabi Group, Ltd., in association with TAMS/Earth Tech (now AECOM), *Socio Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Inaugural Airport Program*, February 2005. (Published February 2006).

prior *Socio-Economic Impact Assessment*[26] or the *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*[27].

The total employment for the SSA Study Region was stable between 2000 and 2001, declined thereafter through 2003, grew through 2007, and declined slightly in 2008. Employment in the Study Region is forecasted to decline through 2009, followed by stabilization in 2010 and growth thereafter. The recommended 2030 total regional employment is lower than prior forecasts for 2030; and the differences between the two are proportionately higher for intermediate years. However, the recommended employment in the four-County SSA immediate impact area is higher than prior forecasts, due to the higher population forecast and the need to provide local services (i.e., police, fire, educational services, local retail, etc.). Other than growth in these non-basic employment sectors, Will, Lake (IN) and Porter (IN) Counties have been experiencing significant growth in logistics employment, due to recent and proposed investments in surface transportation (i.e., Canadian National (CN) acquisition of Elgin, Joliet & Eastern Railway (EJE), I-355 Extensions, past and proposed widening of I-80, proposed Prairie Parkway and the Illiana Expressway, currently undergoing a feasibility study). These counties and South Suburban Cook remain employment-deficient, implying net commuting to the job-rich areas of the Chicago Central Area, North Suburban Cook, DuPage and Lake (IL) Counties.

The implied imbalance in this report, between regional population and employment forecasts, as compared with prior forecasts, is the result of higher unemployment rates for the next few years and an older population than originally forecast in the long-term. The greater numbers of older population are partially the result of the new migration rates. An older population and lesser international migration imply lower participation rates in the labor force.

The impacts of the recommended population and employment forecasts on aviation activities will be presented, in detail, in a future report; they are discussed, briefly, in the following section as they relate to the specific population and employment of the SSA PSA.

Section 7 – Changes in the SSA Primary Service Area (PSA: Boundary and Population)

Background and Assumptions. The PSA for SSA was defined as follows in the May 11, 2004 report, *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*.

> "The potential passenger market for SSA is composed of segments of the Chicago Consolidated Metropolitan Statistical Area (CMSA) to the south and southwest of the City of Chicago, as well as northwestern Indiana. In order to define and delineate a distinct passenger market for SSA, two conservative conditions were used:
>
> - The SSA Primary Passenger Market must be located beyond a 45-minute average daily travel time from MDW; and
> - The SSA Primary Passenger Market must always be located closer to SSA than to either MDW or ORD."

This forecast update uses the same definition of the PSA. To update and define its current boundaries, travel time data was secured from the regional planning agency, the CMAP.

Travel Time Data and Contours. Two sets of travel times were secured from CMAP. These are:

- 2009 existing conditions and existing network; and
- 2030 conditions, with CMAP socio-economic forecasts and officially-adopted RTP.

[26] *Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

[27] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, TAMS/Earth Tech (now AECOM), May 11, 2004.

Each set included four travel times: peak, off-peak, to and from. From these travel times, weighted average daily travel times were generated. The weights used for developing these averages are the same as those used for the 2003/2004 reports and reflect a typical distribution of enplanements through an average day. For purposes of delineating the SSA PSA, only the 2009 travel times are used. The 2030 travel times will be used, later, for the EIS update and economic impact analyses.

Exhibit 1-12, 2009 Travel Times – Existing Network Weighted Average Daily from Chicago Midway International & SSA, shows the travel time contours from MDW and SSA. This exhibit also shows the PSA for SSA, as determined by the latest travel times data, as well as the PSA as included in the May 11, 2004 report, *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*. The same criteria used for defining the PSA in the 2004 Report are those used now.

Exhibit 1-13, 2009 Travel Times – Existing Network Changes in SSA Primary Service Area, shows the additions and deletions to the SSA PSA resulting from the differences in travel times. These differences are due to increased congestion and/or changes in the transportation network. There are two differences:

- The addition to the SSA PSA of a strip (averaging two miles wide) of land extending from Goodings Grove/Orland Park (Will/Cook) to Whiting/Hammond (Lake County, IN). The total area of this strip is approximately 90 square miles, with a 2000 population of approximately 235,000; and
- The deletion of approximately four square miles in the vicinity of LOT. The 2000 population of this deletion is approximately 1,000. The deletion is due to the completion of the I-355 extension south to I-80, making this area closer, in time, to MDW.

Changes in PSA Population and Jobs: 2004-2009. The 2004 report indicated that, according to the 2000 Census, SSA PSA contained:

- 490,000 households;
- 1,300,000 persons; and
- 624,000 jobs.

It was forecasted to grow by 2030 to:

- 762,000 households;
- 2,100,000 persons; and
- 1,000,000 jobs.

Since the preparation of the original 2004 report, the consultants have reviewed and incorporated estimates of population (for 2007 and 2008) and employment (for 2002 and 2007) and have worked closely with CMAP to produce 2030 forecasts of population and employment. These estimates and forecasts, by MCD, were described for the entire SSA Study Area in a previous section, Section 4 – Service Area Characteristics. These updates indicate that both population and employment have increased substantially since the 2000 Census. Furthermore, forecasts for the original and current DBO+1 show similar increases. In addition, the expansion of the PSA also adds to the increased population and employment.

Table 1-5, Primary Service Area Population, shows a population growth from 1,339,241 to 1,480,988 between 2000 and 2007, a 10.6 percent increase. Between 2010 and 2016, the population is forecasted to grow from 1,552,248 to 1,694,767, a 9.2 percent increase. Adding the 241,720 of the area to the PSA increases the total PSA population in 2016 to 1,936,487, a 24.8 percent increase over the 1,552,248 of the original DBO+1 (2010).

Table 1-6, Primary Service Area Employment shows an employment growth from 615,073 to 640,907 between 2000 and 2008, a 12.3 percent increase. Between 2010 and 2016, employment is forecast to grow from 681,000 to

Exhibit 1-12 2009 Travel Times – Existing Network
Weighted Average Daily from Midway & SSA
Source: CMAP April 2009

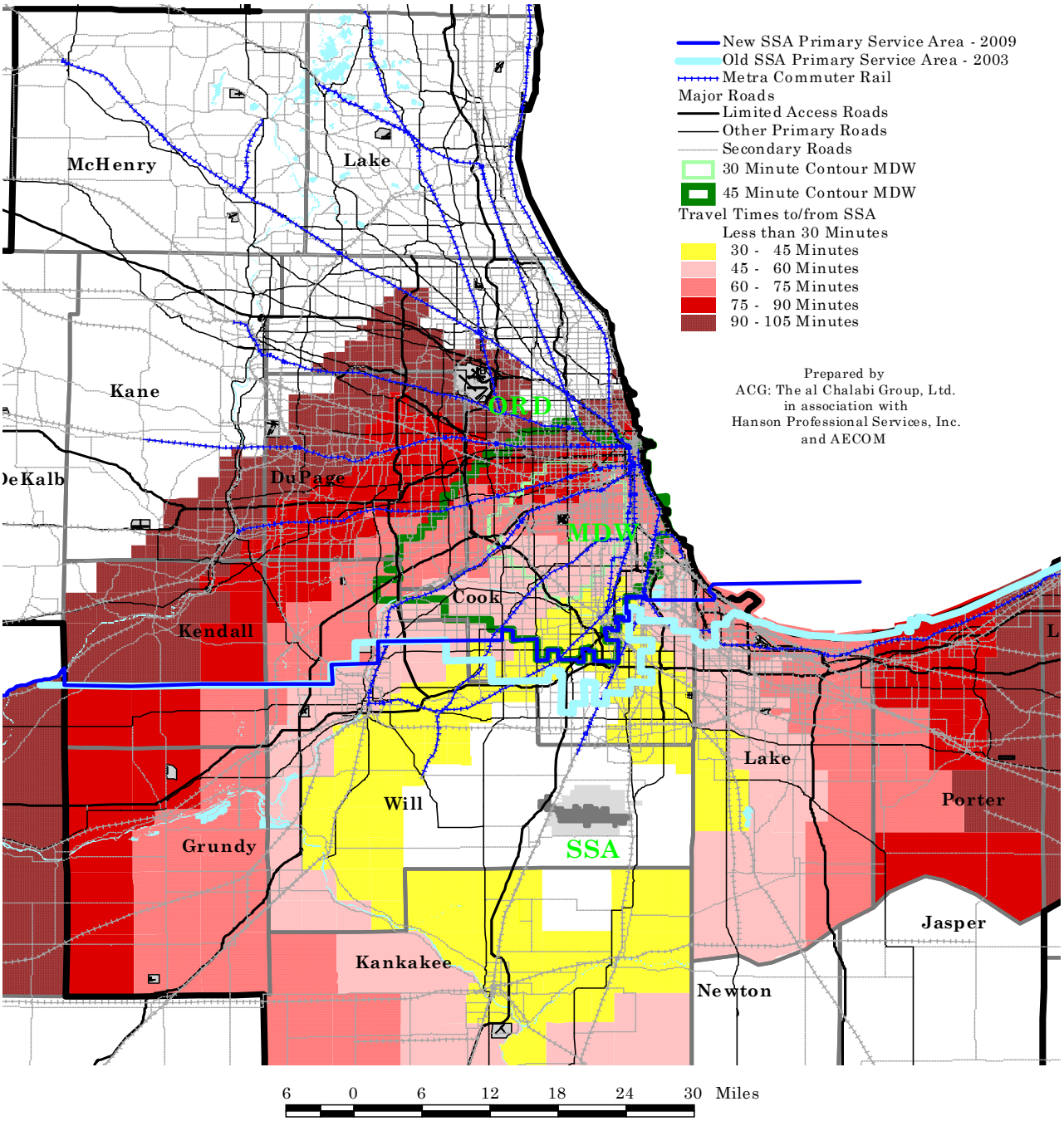


Exhibit 1-13 2009 Travel Times – Existing Network
Changes in SSA Primary Service Area
Source: CMAP April 2009 Travel Times and Agreed-on Definitions

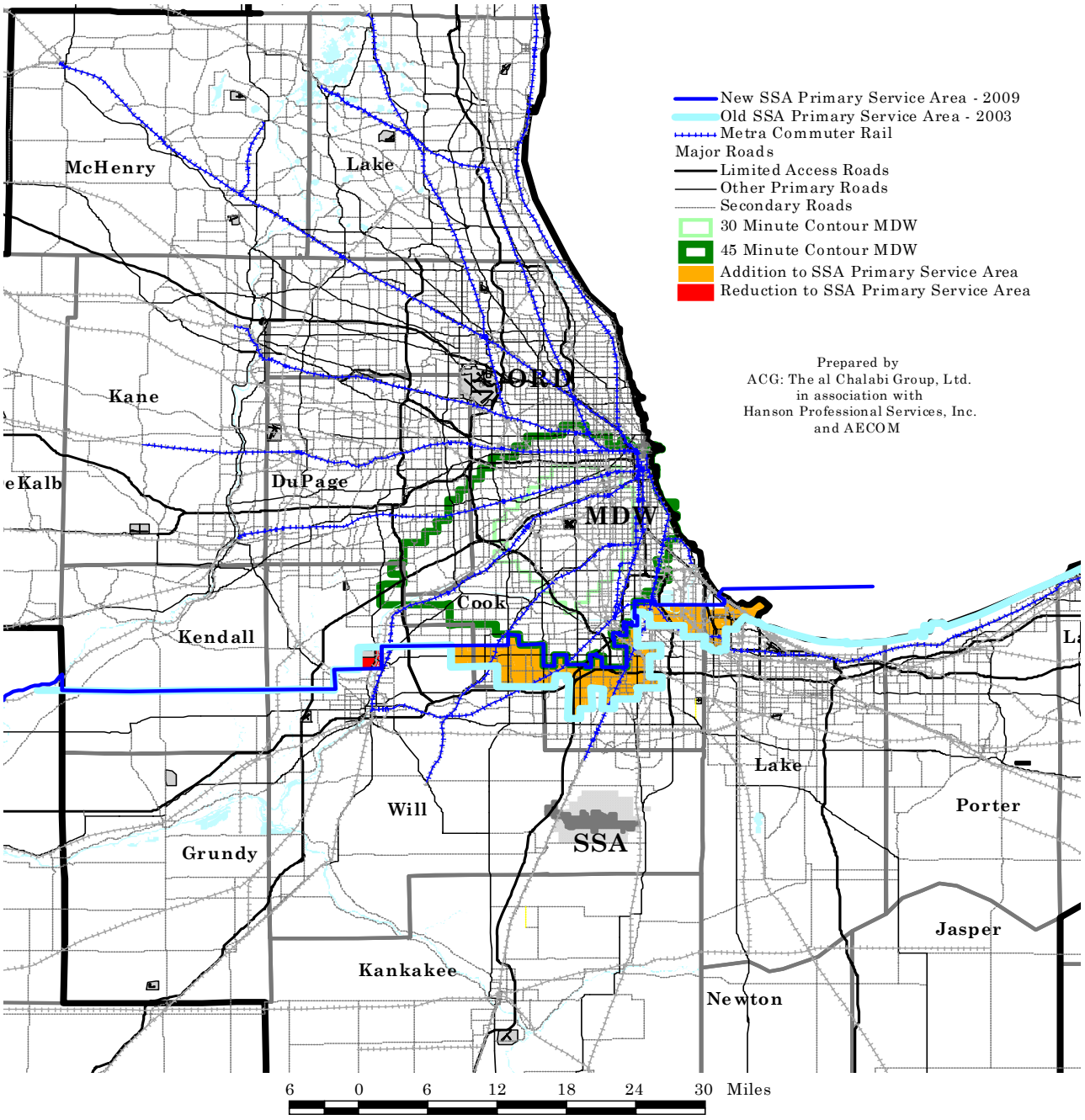


Table 1-5 Primary Service Area Population

Population	2000 Actual	2007 Actual	2010	2015	2016	2020	2030
Population as published in 2004 Report[1]	1,348,898	NA	1,605,746	1,734,171	1,759,855	1,862,595	2,119,443
Population as published in 2004 Adjusted to Baseline[2]	1,348,898	NA	1,550,809	1,651,764	1,671,955	1,752,719	1,954,630
Population of 2004 PSA – New analysis[3]	1,339,241	1,480,988	1,552,248	1,671,014	1,694,767	1,789,780	2,027,312
Net Population of Areas Added 2004 PSA – New analysis[4]	231,400	231,600	234,973	240,595	241,720	246,217	257,462
Population of 2009 PSA – New analysis[5]	1,570,641	1,712,588	1,787,221	1,911,609	1,936,487	2,035,997	2,284,774

Sources: (1) *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
(2) The population and employment forecasts presented above imply a "build" SSA. The comparison of "build" and "no-build" SSA scenarios are addressed in the report, *Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program*, February 28, 2006, Table 37 (page 65) for population forecasts, and Table 35 (page 63) for employment forecasts.
(3) The new population estimates for 2000 are derived by aggregating 2000 Census of Population data by Census block groups. The new employment estimates for 2000 are derived from estimates by Census block groups generated by Tetrad.
(4) Net aggregation of the population and employment (added and removed) from the PSA as result of changing travel times to ORD, MDW and SSA. The aggregation is of Census block groups.
(5) The sum of the preceding two rows.

Table 1-6 Primary Service Area Employment

Population	2000 Actual	2007 Actual	2010	2015	2016	2020	2030
Employment as published in 2004 Report	624,301	NA	NA	817,458	830,335	881,843	1,010,614
Employment as published in 2004 Adjusted to Baseline	624,301	NA	NA	751,108	759,561	793,376	877,914
Employment of 2004 PSA – New analysis	615,073	690,907	681,000	772,000	790,000	864,000	1,045,000
Net Employment of Areas Added 2004 PSA – New analysis	95,010	104,239	104,000	108,000	110,000	111,000	120,700
Employment of 2009 PSA – New analysis	710,083	795,146	785,000	880,000	900,000	975,000	1,165,700

NA – Not Available.

790,000, a 16.0 percent increase. Adding the 104,239 jobs of the area to the PSA increases the total PSA employment in 2016 to 900,000, a 32.1 percent increase over that of the original DBO+1 (2010) jobs.

As population and employment are major inputs to developing a forecast for SSA's potential market and enplanements, the topic of Chapter 2, the above-cited findings contribute either to a greatly enhanced and larger market or a much more conservative posture in the present forecasts.

Chapter 2 – Air Passenger Enplanement Forecasts

During the period between the development of the original 2004 forecasts and the 2009 Forecast Verification Report, the aviation industry continued to distance itself from the downturn associated with the events of September 11, 2001. In 2007, there were signs that the economy was unstable and 2008 was a period of great economic upheaval and recession. During the same five-year period, Will County was one of the fastest population growth counties in the U.S. with considerable economic growth occurring in the rail and trucking sectors relative to the huge infrastructure expansion along the I-80 corridor in the northern part of the County. Nevertheless, the worsening economy that moved into the most severe recession since the 1930's was cause to re-evaluate the work that was prepared for SSA in 2004.

As a consequence, on April 21, 2008, the FAA requested that IDOT update the forecasts for SSA to address the following points:

- Letters of support (or some documentation of the research performed) should be obtained from the cargo carriers and charter airlines supporting the forecast of operations.
- Information on what the correct critical aircraft should be. The critical aircraft shown in the 2004 approved forecast are different than that shown on the Preliminary Draft ALP submittal.
- Discuss the assumption of GA traffic going elsewhere at the DBO+20 timeframe (see Chapter 4, Sections 4 and 5).
- Verify the market segments assumed in the 2004 approved forecast.
- Justification that socio-economic parameters have not changed since the 2004 approved forecast (original research was documented in Chapter 2).

Consequently, it is the purpose of the 2009 Forecast Verification Report to provide this information.

In the vicinity of the proposed SSA, the population had been increasing rapidly and, in the period after the 2000 Census, growth had been among the highest in the U.S. Forecasts between 2002-2007 did not increase quite as fast as earlier, but remained robust. Forecasts then declined slightly each year (2002-2007), but remained robust. An earlier pattern of year-over-year small change (1994-2001) was abruptly altered in 2001 with the 9/11 attacks. That incident, a major disruption in the U.S. aviation system, was a significant incentive for the earlier forecast update and confirmation of 2003. The national and worldwide economic downturn of the past several years (2008-2009) has produced a similar abrupt break with past patterns. This fact makes a review and comparison of past and current forecasts essential.

Evaluation of population and employment trends of Chicago's Will County south suburbs, re-verification of the SSA PSA and the finding that it has grown since 2004, coupled with national forecast trends, including adjustments to the Propensity to Fly, resulted in concluding that the potential market demand for SSA is slightly stronger in 2009 as compared to 2004.

Therefore, IDOT recommends that the 2004 air passenger forecasts be retained. Those forecasts were judged by the FAA to represent a "reasonable level that outlines the risk associated with a proposed new start-up airport."[28]

Accordingly, this chapter is a mix of updated 2009 information pertinent to indicate changes in market demand between the two forecasts, but brings forward much information from the 2004 forecast document to present the case for air passenger forecast activity.

[28] Philip M. Smithmeyer, Manager, Chicago Airports District Office, June 4, 2004, in letter to Ms. Chris Cochrane, IDOT.

This chapter addresses the following primary topics:

- Information supporting the IDOT decision to retain the 2004 Air Passenger Enplanement Forecasts in Section 1 and Section 2, such as:
  - Recent change in FAA Long-Range Forecasts as they relate to forecasting air passenger activity;
  - Comparison of enplanement forecasts at the DBO, DBO+1 and DBO+5;
  - Change in the National Propensity to Fly;
  - Cumulative impacts of factor changes on the size of the SSA PSA and passenger markets; and
  - Passenger destination markets.
- Information pertaining to the development of a passenger enplanement and operations forecasts for the IAP at SSA in Sections 2-4.

Section 1 - Comparison of National Aeronautical Activity and Long-Range Forecasts (2003 and 2009) at the National Level/Changes in Propensity to Fly

Recent FAA Long-Range Forecasts. The FAA's recent (2007-2009) forecasts of domestic and international enplanements have taken a dramatic turn. A review of the introductory remarks to the respective Aerospace Forecasts in the "Message from the Administrator" in 2007, 2008 and 2009 makes this point clear.

Administrator Marion Blakey, in her message of 2007, stated in the report, *FAA Aerospace Forecast: Fiscal Years 2007-2020*, "Aviation is indeed back and it has done so with a vengeance. More passengers are flying more than ever. Profits of $5.5 billion for the industry and $2.9 billion for passenger carriers are not the entire story. Commercial aviation is on track to reach a billion passengers by 2015."

By April 2008, the downturn in the national economy was observable and the acting Administrator, Bobby Sturgell, in the 2008-2025 forecasts stated, "The business climate in which aviation finds itself could not have been anticipated a decade ago. Record oil prices, congestion and environment are changing and challenging the entire industry." Within the report, the FAA stated "…concerns about the economy are dampening near-term prospects, but long-term outlook remains favorable. We see strong growth in business aviation demand driven by a growing U.S. and world economy".

By 2009, Lynn Osmus, the Acting Administrator, stated, "The downturn facing aviation mirrors the economic situation around the world. Aviation finds itself in economic waters that no one would have predicted a decade ago. In 2009, we expect sizable declines in both domestic and international capacity as carriers respond to the impact of the economic downturn." The forecast for the 2009-2025 period dropped precariously, as the enplanement forecast for 2009 (at 702.3 million) was 55.1 million lower than the 2008 estimate of 757.4 million (a fall of 7.8 percent). Enplanement growth for the remainder of the 2009 forecast period was set at 2.7 percent annually; versus long-term forecasts of 2.9 and 3.1 percent for mainline and regional carriers in 2008 and a long-term forecast of 3.5 percent in 2007.

In a brief period (2007-2009), three long-range forecasts have gone from robust, to coming back "with a vengeance", to "strong and driven by a growing U.S. and world economy", to "sizable declines in both domestic and international capacity". This is one of the problems of developing a long-range forecast based on short-term trends and observations. It is for this reason that the aviation forecast, originally prepared for SSA in 1994 and as reconfirmed in 2004, reviewed trends from 1980 and developed the forecast to 2020. While no forecaster could have predicted the 9/11 attacks or the severity of the current global recession, specifically, that extended range has allowed the SSA long-range forecast to remain on-track with the FAA's annually-adjusted forecasts.

Exhibit 2-1, FAA U.S. Domestic Enplanement Forecasts, shows the historical FAA forecasts for U.S. domestic enplanements between March 1994 and March 2009 and the forecasts prepared for IDOT of U.S. domestic enplanements for the period 1993-2020.

Exhibit 2-1: Federal Aviation Administration (FAA)
U.S. Domestic Enplanement Forecasts

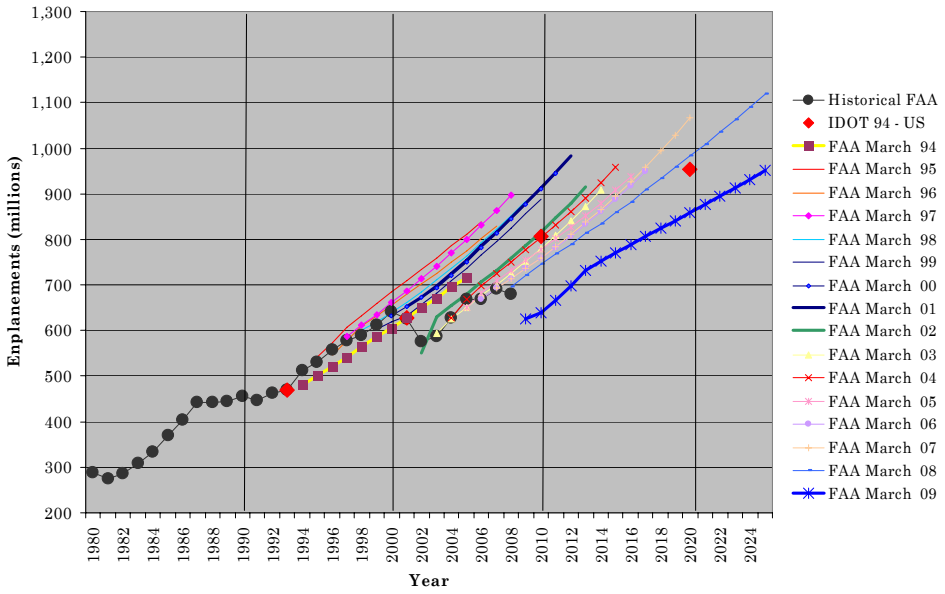
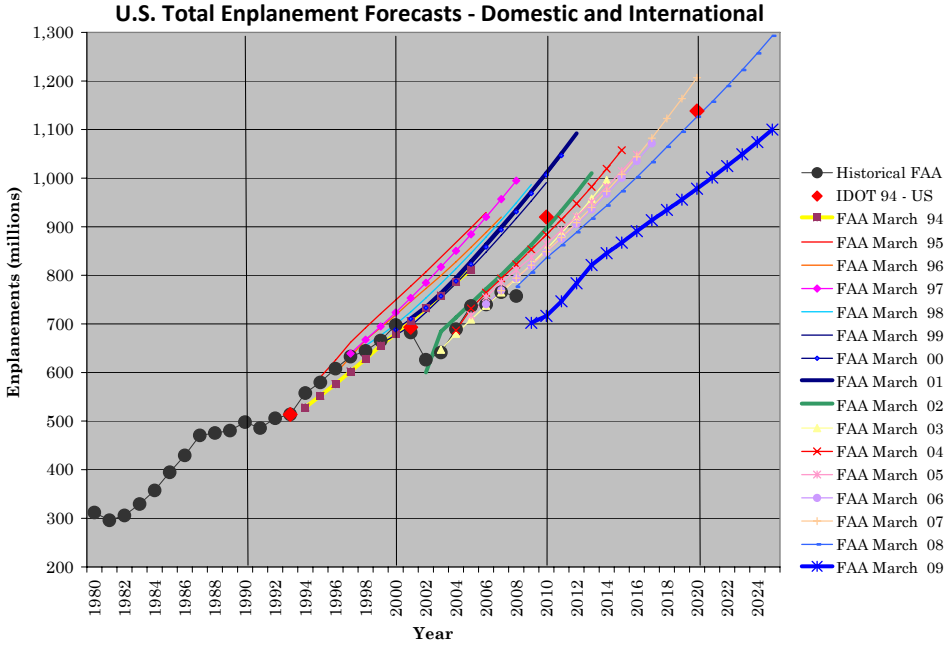


Exhibit 2-2, FAA U.S. Total Enplanement Forecasts – Domestic and International, shows historical FAA and forecasts prepared for IDOT for the same period for total (domestic and international) U.S. enplanements. The steep decline between 2008 and 2009 and the distinctly flatter slope of the FAA long-range 2009-2025 forecast are readily apparent.

Exhibit 2-2: Federal Aviation Administration (FAA)
U.S. Total Enplanement Forecasts - Domestic and International



Consequently, the key concern of the FAA in requesting this forecast update recently has focused on the change in the existing and forecasted aeronautical activity between that of the original update and confirmation report (2004 data) and that is currently provided as part of the FAA's latest long-range forecast series (2009-2025). The current economic downturn, the most serious since the Great Depression, is a challenge to the aviation industry. The FAA states that, "In 2009, we expect sizable declines in both domestic and international capacities as carriers respond to the impacts of the economic downturn. Furthermore, the FAA does not expect air traffic…(to) rise to prior forecast levels, even when the economy recovers…" This forecast environment is precarious; and it justifies caution in revisiting the assumptions and forecasts for an airport, particularly a new one.

Comparison of Enplanement Forecasts at Date of Beneficial Occupancy (DBO), DBO+1, DBO+5. One of the first tasks of this study update is the comparison of national domestic and total enplanements as a basis for confirming the reasonableness of forecasts for SSA. This confirmation has two components and these are:

- Comparison of the two national enplanement forecasts for the time of the airport's DBO+1, as originally proposed and as currently estimated. The DBO assumed in the 2004 report was 2009; the DBO assumed in this update report is 2015. DBO+1 are 2010 and 2016, respectively.
- Comparison of the Propensity to Fly.

While there is a general downward trend in the FAA's forecast of long-range domestic and total enplanements for the U.S., the six-year slippage in the estimated DBO for SSA compensates with an increase in the base enplanements. **Table 2-1, National FAA Forecasts**, shows the FAA forecasts of total and domestic enplanements forecasted in 2001, 2003, 2008 and 2009. These forecasts have been extrapolated, where necessary, for one or two years to provide comparative dates.

In 2009, the FAA forecast of domestic enplanements for 2010 (the old DBO+1) is much lower than the 2004 forecast for 2010 (638,900,000 vs. 780,100,000), or a 22.1 percent decline. However, the 2009 FAA forecast for 2016 (the new DBO+1) is 789,100,000, a 1.6 percent increase.

In 2009, the FAA forecast for total enplanements for 2010 (the old DBO+1) is 716,500,000. This is much lower than the 2004 forecast of 854,000,000 for 2010, a decline of 16.1 percent. However, the 2009 forecast for 2016 is 890,700,000; this is an increase of 36,700,000, or 4.3 percent.

In either respect, the 2009 FAA domestic and total U.S. enplanement forecasts for DBO+1 for SSA are 1.6 percent and 4.3 percent higher, respectively, than the 2004 forecast.

Changes in the Propensity to Fly. The passage of time between preparation of the original 2004 forecast for a DBO of 2010 and the updated 2009 forecast which projects DBO+1 in 2016, does result in an increase in the national enplanement forecast from use of FAA's forecast at the time of that horizon year. On the other hand, postponement of DBO does not cause people to travel more; it is expected that people will travel more in the future. For example, the Propensity to Fly, six years (n+6) from today (n) is expected to be greater as opposed to today.

However, that same slippage increases the national population forecast by an even greater percentage. The result of applying the former to the latter is a slight decrease in the Propensity to Fly in 2016 (DBO+1) versus that of 2010. The Propensity to Fly calculation for the SSA Study Area was one of the inputs in estimating the range of enplanements generated by an airport service area.

Table 2-2, National Propensity to Fly Ratios (2003-2009), adds the forecast of U.S. population to the previous table to calculate national Propensity to Fly ratios assumed by the former (2004) forecast and that of the current update. The 2004 calculation of Propensity to Fly is based on the FAA 2003 forecast. For 2010, the domestic and

Table 2-1 National FAA Forecasts

	2000	2007	2008	2010	2015	2016	2020
U.S. Domestic Enplanements							
2001 FAA Forecasts	641,200,000	816,400,000	847,700,000	913,200,000	-	-	-
2003 FAA Forecasts	641,200,000	700,900,000	726,000,000	780,100,000	943,400,000	980,600,000	-
2008 FAA Forecasts	641,200,000	690,100,000	696,200,000	746,200,000	859,000,000	882,400,000	984,000,000
2009 FAA Forecasts	641,200,000	690,100,000	679,600,000	638,900,000	770,000,000	789,100,000	857,800,000
U.S. Total Enplanements (Domestic Plus International)							
2001 FAA Forecasts	697,600,000	899,100,000	935,200,000	1,010,900,000	-	-	-
2003 FAA Forecasts	697,600,000	764,900,000	793,200,000	854,000,000	1,035,900,000	1,077,400,000	-
2008 FAA Forecasts	697,600,000	765,300,000	776,400,000	836,000,000	973,100,000	1,001,800,000	1,126,500,000
2009 FAA Forecasts	697,600,000	765,300,000	757,400,000	716,500,000	867,300,000	890,700,000	978,300,000

Source: *Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

Note: Black = Actual; Blue = Forecasts

Table 2-2 National Propensity to Fly Ratios (2003-2009)

	2000	2007	2008	2010	2015	2016	2020
U.S. Population Forecasts							
2001 Forecasts	282,171,936	292,370,748	294,795,332	299,644,500	312,023,840	314,550,516	324,657,220
2003 Forecasts	282,171,936	302,783,552	305,713,398	311,573,090	326,997,480	330,205,904	343,039,600
2008 Forecasts	282,171,936	301,290,332	304,059,724	310,603,350	326,038,480	329,234,786	342,020,010
U.S. Total Enplanements (Domestic)							
2001 FAA Forecasts	641,200,000	816,400,000	847,700,000	913,200,000	-	-	-
2003 FAA Forecasts	641,200,000	700,900,000	726,000,000	780,100,000	943,400,000	980,600,000	-
2008 FAA Forecasts	641,200,000	690,100,000	696,200,000	746,200,000	859,000,000	882,400,000	984,000,000
2009 FAA Forecasts	641,200,000	690,100,000	679,600,000	638,900,000	770,000,000	789,100,000	857,800,000
U.S. Total Enplanements (Domestic Plus International)							
2001 FAA Forecasts	697,600,000	899,100,000	935,200,000	1,010,900,000	-	-	-
2003 FAA Forecasts	697,600,000	764,900,000	793,200,000	854,000,000	1,035,900,000	1,077,400,000	-
2008 FAA Forecasts	697,600,000	765,300,000	776,400,000	836,000,000	973,100,000	1,001,800,000	1,126,500,000
2009 FAA Forecasts	697,600,000	765,300,000	757,400,000	716,500,000	867,300,000	890,700,000	978,300,000
U.S. Domestic Enplanements Per Person							
2003 FAA Forecasts	2.272	2.315	2.375	2.504	2.885	2.970	-
2009 FAA Forecasts	2.272	2.290	2.235	2.057	2.362	2.397	2.508
Percentage Change	0.00%	-1.05%	-5.88%	-17.84%	-18.14%	-19.29%	-
U.S. Total Enplanements (Domestic Plus International) Per Person							
2003 FAA Forecasts	2.472	2.526	2.595	2.741	3.168	3.263	-
2009 FAA Forecasts	2.472	2.540	2.491	2.307	2.660	2.705	2.860
Percentage Change	0.00%	0.55%	-3.99%	-15.84%	-16.03%	-17.08%	-

Source: *Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

Note: Black = Actual; Blue = Forecasts

total enplanements were 2.504 and 2.741, respectively. The 2009 calculation of 2016 domestic and total enplanement Propensities to Fly are 2.397 and 2.705, respectively. These latter ratios imply reductions of 4.3 percent and 1.3 percent, respectively.

These two factors, forecasts of national enplanements (2004 and 2009) for 2010 and 2016 and Propensity to Fly ratios for the same forecast years, are applied, later in this update, to the redefined SSA PSA, its locally generated enplanements and the forecasts of population and jobs for 2010 and 2016 to determine whether the results, in terms of the forecast range of enplanements for SSA, are higher or lower than the forecast range of 2004.

Certainly, one of the issues considered in the 2009 Forecast Verification Report is the impact of the current economic downturn on air travel. Accordingly, this document was prepared with the latest (March 2009) FAA national forecasts to determine the impact of today's slowing economy and the future recovery on air travel. Changes in the Propensity to Fly (air trips per person) for each of the forecast years were derived from these latest FAA national forecasts. These, taken together, imply greater demand for travel from the SSA PSA. Notwithstanding this finding, the recommendation has been to retain the 2004 forecasts.

It should be noted that the number of direct flights and non-stop flights have increased. However, the impact of these changes on the total travel pattern is small, well within the margin of error of any forecast. The number of coupons[29] per origin-destination trip has not decreased significantly between 2000 and 2008, indicating that the growth in direct flights is more a reflection of increased population and economic activities among markets that can support direct flights, rather than a structural change in service patterns. There are more than 50,000 potential air markets in the U.S. Only a small fraction of these markets can be served economically by direct flights.

Section 2 – Cumulative Impact of Factor Changes on the Size of the SSA PSA and Passenger Market

Cumulative Change in Passenger Air Trips. In 2004, the estimation of the SSA Primary Passenger Market was based on extensive and detailed data and surveys that had been conducted in 1995, including a comprehensive survey presented in the report, *Market Survey of Potential Users: South Suburban Airport*, which analyzed over 96,000 completed surveys of households across the U.S. The estimate of 2000 demand, used in the 2004 study, determined that the "1995 enplanement generation rates were stable and produced reasonable results. The long-distance trip generation and modal split were calibrated using 1995 data and (were) validated using independent 2000 data (NIPC) to reflect 2004 conditions."[30]

This current update uses similar data, updated aeronautical data, population and Propensity to Fly ratios and service area changes to adjust the total SSA-generated air trips. This calculation is shown on **Table 2-3, Changes in the SSA Primary Passenger Market**.

The cumulative effect of changes, including lower forecasted enplanements, greater population, slightly larger service area, lower Propensity to Fly and the six-year slippage in DBO, results in a larger Primary Passenger Market, currently and at DBO+1, than originally estimated.

The FAA-generated national enplanement forecasts take into consideration economic variables – specifically, gross national products, fuel costs and consumer price indexes. **Table 2-3 - Changes in the SSA Primary Passenger Market**, applies the changes in the FAA-generated 2003 and 2009 national propensity for air travel (i.e., air trips per person) to adjust downward the enplanement forecasts for the SSA, due to deteriorating economic conditions. Disposable income was not used to adjust the enplanement forecasts because disposal income data and forecasts, by county or sub-county, are not available from reliable and acceptable sources. Average household income data and forecasts are available (W&P, CMAP). The average household income for the Chicago CSA, as a ratio of the

[29] A coupon is a boarding pass, a discrete flight segment for an origin-destination trip. If one connects and changes aircraft, then one would have two "coupons" or boarding passes for the trip.

[30] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

U.S. average, has been relatively stable for the last 30 years (1.20 in 1980, increasing to 1.21 in 2007) and is forecasted by W&P to remain relatively stable through 2040 (1.22 by 2040). The Will County average household income is approximately 0.90 of that for the Chicago CSA. The CMAP forecasts show this gap being reduced by 2030. Accordingly, introducing income into the adjustment process would yield minimal changes to the SSA enplanement forecasts and, if any, would be upward.

Table 2-3 Changes in the SSA Primary Passenger Market

	2000	2007	2010	2015	2016	2020
Air Trips Generated in PSA – As published in 2004 Report	1,725,915	-	-	-	-	-
Implied Air Trip Forecasts Generated in 2004 PSA – given 2003 population and national FAA forecasts	1,725,915	-	2,199,904	2,708,127	2,823,348	-
Air Trips Generated. In 2004 PSA – adjusted to new pop & FAA 09 National enplanement forecasts	1,713,559	1,946,909	1,853,185	2,300,531	2,340,981	2,594,661
Air Trips Generated. In 2009 PSA – adjusted to new population & FAA 09 National enplanement forecasts	2,009,635	2,251,371	2,133,713	2,631,766	2,711,365	3,014,015

Sources: *Socio-Economic and Aviation Forecast Update*, Prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs and IDOT, May 2004 Report.

The current air trips (2000 vs. 2007) have increased from 1,725,915 to 2,251,371, a 30 percent increase. The forecasted air trips of the new DBO+1 (2016) versus the original DBO+1 (2010) are 2,711,365 and 2,199,904, respectively. This is a 23 percent increase.

Notwithstanding this increase in demand within the PSA, it is recommended that the enplanement forecasts for SSA for DBO+1, DBO+5 and DBO+20 be retained at the same levels as those published in the 2004 projections. The main rationale for such a recommendation is that prior (2004) enplanement projections were driven more by policy assumptions, as to what constitute reasonable forecasts for a "start-up airport", than by actual demand generated by the SSA Service Area.

Passenger Destination Markets. One of the major inputs to the development of the enplanement forecast for SSA was the identification of passenger destination markets. Earlier studies determined that, "38 percent of all long-distance trips generated within the SSA Primary Passenger Market are completed by air…"[31] Long-distance trips were trips greater than 150 miles. Total air trips generated within 45 minutes of SSA were estimated at 2,739,920 in 1995 and 3,250,055 in 2000.[32]

Passenger destinations for the region were identified by examining data from the *U.S. Department of Transportation (USDOT) Onboard T-100/T-3's and the Origin/Destination (O/D) Surveys of Airline Passenger Traffic for ORD and MDW*. From this data, a table was constructed identifying the "destinations that are most likely to develop at SSA during the initial years of operation."[33]

For this current analysis, the consultants obtained the O/D Survey of Airline Passenger Traffic (10 percent sample) for the four quarters of FY 2008, as well as the T-100 Onboard Data. From these sources, the ORD and MDW data

[31] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, TAMS/Earth Tech (now AECOM), May 11, 2004.
[32] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, TAMS/Earth Tech (now AECOM), May 11, 2004.
[33] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, TAMS/Earth Tech (now AECOM), May 11, 2004.

Table 2-4 Comparison of FY 2008 and FY 2000 Surveys: Summary of Domestic O-D (10-Percent Sample) Survey for Combined Chicago O'Hare International & Chicago Midway International Airports, Destination Airports with Total Annual O-D Enplanements in Excess of 200,000

Rank	Origin	Destination	Destination State	2008 Airport O&D Passengers (10% Sample)	2008 Regional Sum of O-D Passengers (10% Sample)	Average Non-Stop Miles	2000 Regional Sum of O-D Passengers (10% Sample)	Sequence in Service Introduction (2003 Study)	Percent Change in O-D Passenger 2000-2008	Market Rank for SSA Primary Service Area (PSA) per 1995 Home Interview Survey / Comment
1	ORD + MDW	LGA	NY	91,323	181,677	732	154,615	5th	17.5%	1st-Part of NY CSA
2	ORD + MDW	LAX	CA	72,288	113,823	1,746	102,155	4th	11.4%	2nd-Part of Los Angeles CSA
3	ORD + MDW	LAS	NV	72,109	72,109	1,517	62,008	1st	16.3%	5th
4	ORD + MDW	MCO	FL	66,140	66,140	997	58,653	2nd	12.8%	6th
5	ORD + MDW	PHX	AZ	62,833	62,833	1,441	57,255	3rd	9.7%	9th
6	ORD + MDW	DEN	CO	61,398	61,398	891	50,497	-	21.6%	13th
7	ORD + MDW	ATL	GA	57,276	57,276	600	68,519	8th	-16.4%	10th
8	ORD + MDW	MSP	MN	57,104	57,104	339	61,340	-	-6.9%	11th-Too close for viability
9	ORD + MDW	DFW	TX	54,968	61,827	802	57,569	-	7.4%	12th-Part of Dallas/Fort Worth CSA
10	ORD + MDW	EWR	NJ	52,156	Incl. in above	719	Incl. in above	5th	-	1st-Part of NY CSA
11	ORD + MDW	PHL	PA	51,545	51,550	676	41,234	-	25.0%	16th
12	ORD + MDW	BOS	MA	48,239	73,050	867	67,672	9th	7.9%	17th-Part of Boston CSA
13	ORD + MDW	SFO	CA	47,562	77,660	1,847	74,320	10th	4.5%	4th-Part of San Francisco CSA
14	ORD + MDW	DCA	DC	43,719	102,329	611	100,966	6th	1.3%	3rd-Part of Baltimore/Washington CSA
15	ORD + MDW	DTW	MI	40,053	41,554	233	67,177	-	-38.1%	14th - Too close for viability
16	ORD + MDW	TPA	FL	39,680	43,352	1,005	40,170	-	7.9%	18th - Part of Tampa MSA
17	ORD + MDW	FLL	FL	37,199	66,897	1,176	55,810	7th	19.9%	8th-Part of Miami MSA
18	ORD + MDW	MCI	MO	36,536	36,536	404	44,068	-	-17.1%	15th
19	ORD + MDW	BWI	MD	35,674	Incl. in above	616	Incl. in above	6th	-	3rd-Part of Baltimore/Washington CSA
20	ORD + MDW	STL	MO	33,034	33,034	255	48,696	-	-32.2%	Too close for viability
21	ORD + MDW	RSW	FL	32,281	32,281	1,115	19,198	-	68.1%	Potential New Market
22	ORD + MDW	SAN	CA	32,026	32,026	1,725	23,303	-	37.4%	Potential New Market
23	ORD + MDW	SEA	WA	31,574	31,574	1,724	25,132	-	25.6%	Potential New Market
24	ORD + MDW	MIA	FL	29,698	Incl. in above	1,196	Incl. in above	7th	-	8th-Part of Miami MSA
25	ORD + MDW	IAH	TX	27,801	40,641	925	35,062	-	15.9%	19th-Part of Houston CSA
26	ORD + MDW	CMH	OH	26,711	26,711	290	31,591	-	-15.4%	Too close for viability
27	ORD + MDW	BNA	TN	26,238	26,238	400	22,687	-	15.7%	-
28	ORD + MDW	PIT	PA	24,812	24,812	407	19,260	-	28.8%	-
29	ORD + MDW	CLE	OH	23,248	24,444	311	47,045	-	-48.0%	17th-Too close for viability
30	ORD + MDW	IAD	DC	22,936	Incl. in above	583	Incl. in above	6th	-	3rd-Part of Baltimore/Washington CSA
31	ORD + MDW	SNA	CA	22,558	Incl. in above	1,726	Incl. in above	4th	-	2nd-Part of Los Angeles CSA
32	ORD + MDW	RDU	NC	22,547	22,547	642	21,169	-	6.5%	-
33	ORD + MDW	CLT	NC	21,898	21,898	598	12,654	-	73.1%	-

Source: Prepared by The al Chalabi Group, Ltd. (ACG) in association with Hanson Professional Services Inc., April 2009.
Note: Black = Actual; Blue = Forecasts

were analyzed in a manner identical to the 2004 analysis. **Table 2-4, Comparison of FY 2008 and FY 2000 Surveys: Summary of Domestic O-D (10 Percent Sample) Survey for Combined Chicago O'Hare International & Chicago Midway International Airports, Destination Airports with Total Annual O-D Enplanements in Excess of 200,000**, compares the 2000 data of the 10 percent sample (used in the 2004 study) with the most recent (2008) 10 percent sample data for combined ORD and MDW. This table covers destination airports with total O/D enplanements in excess of 200,000. For multi-airport regions (i.e., New York City, Baltimore/Washington, etc.) data is shown for individual airports and also is summed for all major airports in the region.

Several trends are apparent from a comparison of the 2000 and 2008 O/D data. These are:

- First, the top five markets (in service introduction) identified for SSA in 2003 have all grown by double digits. These are: Las Vegas, Orlando, Phoenix, Los Angeles and New York.
- Several markets identified in the original second-tier group (10-19) have shown declining enplanements. With the exception of Atlanta, these markets are within approximately 400 miles of the Chicago region. The "hassle-factor" imposed by airport security, as well as continued airport congestion and increased fare/reduced service, has extended the distance that travelers are willing to drive instead of flying. Dropping out for these reasons are the Minneapolis, Detroit, Kansas City and Cleveland markets. St. Louis and Columbus also are too close for viability and were excluded in the 2004 study, as well.
- Several potential new markets have emerged. These include: Fort Meyers, FL, San Diego, CA and Seattle, WA where their 2008 enplanements now rank them above destinations identified in 2000.

Based upon the assumptions used to develop forecast markets, there is little change in the destination markets between the original 2004 forecast and the 2009 Forecast Verification Report:

- The primary, second-tier exception is Atlanta. There are no expectations for anything to be adjusted in the original 2004 forecast report, including fleet mix and load factor assumptions.

Table 2-5, SSA Primary Passenger Market Potential Passenger Enplanements shows the SSA Primary Passenger Market from the 2004 study, with fiscal year 2000 and 2008 regional enplanements added, declining markets noted and emerging markets added.

Conclusion and Recommendation for Retention of the 2004 Air Passenger Enplanement Forecast. The commercial enplanement forecast for SSA given in the 2004 study consisted of ranges from Low-to-High for DBO+1, DBO+5 and DBO+20. These ranges are 19,600-169,400, 471,000-968,000 and 2,226,000-6,680,000, respectively. While, the PSA market continues to increase, retaining 2004 forecasts permit serving smaller shares of that forecast. Retaining the 2004 commercial enplanement forecasts is a conservative approach to building SSA.

Section 3 – Context of a New Airport in South Chicago's Suburbs

As a new supplemental airport to be located in the Chicago area, the 2004 SSA passenger forecast addressed issues relating to potential demand, including demand generated by induced development. Historically, airport activity induces new development around an airport due to demand for hotels, car rentals and restaurants, as well as attracting businesses to its vicinity that are dependent on air travel or services. While IDOT believes that SSA will eventually induce development in the area surrounding the airport site, the level of induced development anticipated within the first five years of airport operation is expected to be relatively minimal. Thus, the aviation forecasts that were developed through DBO+5 did not consider induced demand. However, long-range projections (beyond DBO+5) did take into account varying levels of induced demand.

Forecasts for passenger service relied on an examination of the existing and projected socio-economic conditions of the area, having documented the changes from 2004 to 2009, available market surveys in 2004 and an analysis of the U.S. airline industry to determine the types of airlines and passenger markets that would potentially utilize SSA during its initial years of development.

Table 2-5 SSA Primary Passenger Market Potential Passenger Enplanements

Passenger Destination Market	*	SSA PSA (2004)		Regional Enplanements	
		Fiscal Year 2000 Actual	Fiscal Year 2010 Forecast	Fiscal Year 2000 Actual	Fiscal Year 2010 Forecast
1. New York City CMSA	5	120,535	162,143	1,546,150	1,816,770
2. Los Angeles	4	100,182	134,764	1,021,550	1,138,230
3. Baltimore/Washington	6	98,498	132,499	1,009,660	1,023,290
4. San Francisco/Bay	10	78,501	105,599	743,200	776,600
5. Las Vegas	1	71,491	96,169	620,080	721,090
6. Orlando	2	66,729	89,764	586,530	661,400
7. Boston	9	65,503	88,114	676,720	730,500
8. Miami/Ft. Lauderdale CMSA	7	64,953	87,375	558,100	668,790
9. Phoenix	3	60,933	81,967	572,550	628,330
10. Atlanta	8	60,160	80,927	685,190	572,760
11. Minneapolis/St. Paul	-	59,841	80,497	613,400	571,040
12. Dallas - Ft. Worth CMSA	-	47,993	64,560	575,690	618,270
13. Denver	-	44,336	59,641	504,970	613,980
14. Detroit CMSA	-	44,028	59,468	671,770	415,540
15. Kansas City	-	38,692	52,048	440,680	365,360
16. Philadelphia	-	38,421	51,684	412,340	515,500
17. Cleveland	-	32,441	43,639	470,450	244,440
18. Tampa	-	32,139	43,233	401,700	433,520
19. Houston CMSA	-	30,401	40,895	350,620	406,410
20. Fort Meyers	-	-	-	191,980	322,810
21. San Diego	-	-	-	233,030	320,260
22. Seattle	-	-	-	251,320	315,740

* Sequence of Destinations Added

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Note: The term CMSA indicates Metropolitan areas with more than one air carrier airport serving the area.

The 2004 forecast methodology was based on surveys of potential passengers, which were used to identify the potential market area for SSA. In 1995, IDOT conducted a home-interview survey to determine the size and characteristics of the aviation market in the Chicago Region and, more specifically, in the areas adjacent to the proposed SSA. The findings of this survey were used as a tool to generate a bottom-up forecast reflecting existing travel behavior in the south suburbs of Chicago. The results of the survey were updated in 2004 based on the changing demographics of the area, as indicated by the 2000 U.S. Census.

Existing Regional Air Passenger Market. The 2004 forecast identified three airports which had significantly enough passengers from the southern half of the Chicago region for them to be considered as having an impact for attracting passengers. While also in the Chicagoland Region, two others, General Mitchell International Airport (MKE) and RFD, were judged not to impact the southern half of the region.

ORD is primarily served by the mainline carriers, with passenger hub operations by both United Airlines and American Airlines. ORD also serves as the international airport for the Chicago region. In 2008, MDW had limited scheduled/international service[34] [35], but served as the region's primary airport for domestic LCC's. Historically, passenger service at GYY has been offered on an intermittent basis.

[34] Porter Airlines, Inc., *Porter Airlines sees Chicago on horizon, Midway International Airport welcomes Toronto Airline Nov. 12*, www.flyporter.com.

[35] Chicago News, "*Despite the difficult economic times, a new addition is taking off at Midway Airport-Toronto-based Porter Airlines, Nov. 12*", www.abc7chicago.com.

It is instructive in the context of adding a new airport into the Chicagoland region to look at the recent histories of several of the smaller commercial service airports that are roughly on the order of size of the SSA in its first years of operation, (i.e., the GYY, the SBN and the RFD).

- Gary/Chicago International Airport -- Enplanements at GYY have fluctuated over the past ten years. In 2000, there were 17,537 enplanements that increased in 2001 to 23,058, a recent peak. Enplanement levels decreased to 17,537 in 2004 and 16,223 in 2007.
  - Airlines that once served GYY included PanAm, Hooters Air, SkyValue Airlines, Southeast Airlines and Skybus Airlines (which was the last commercial passenger service provided that ceased operations in 2008). The airport currently has no scheduled passenger service or third party air cargo service provider.
- South Bend Regional Airport – In recent years, SBN's enplanement levels have fluctuated. In 2000 SBN had 445,734 enplanements, decreasing to 357,937 and then rebounding to 388,237 by 2007.
  - Since 2004, SBN had passenger service to various hub and vacation destinations. Allegiant Air has provided service from SBN to Clearwater/St. Petersburg (PIE) from 2007 to present, to Las Vegas (LAS) from 2005 to present, to Tampa Bay (TPA) from 2006 to present and to Sanford/Orlando (SFB) from 2005 to present.
  - ATA/Chicago Express provided service from SBN to MDW in 2004 and to Indianapolis in 2005. Cape Air provided service from SBN to IND from 2007 through 2008. Continental Connection has provided service from SBN to Cleveland/Hopkins International Airport (CLE) from 2004 to present. Delta Connection has provided service from SBN to Hartsfield-Jackson Atlanta International Airport (ATL) from 2004 to present, to Cincinnati/Northern Kentucky International Airport (CVG) from 2004 to present, to Minneapolis-St. Paul International Airport (MSP) from early 2009 to present and to Detroit Metropolitan Wayne County Airport (DTW) from early 2009 to present. Northwest provided service from SBN to MSP from 2004 through 2009 and to DTW from 2004 to 2009. United has provided service from SBN to ORD from 2004 to present. And US Airways provided service from SBN to Pittsburg International Airport (PIT) that ceased in 2004.
  - In addition to passenger service, SBN currently has multiple air cargo service providers. They include: ABX Air from 2008 to present, Delta Air Lines from 2006 to present, DHL from 2004 to 2009, Express Mail/USPS from 2006 to present, Federal Express from 2004 to present, Flying Tigers Air Cargo from 2006 through 2007, Mountain Air Cargo from 2006 to present, Towne Air Freight from 2006 to present; and UPS from 2004 to present.
- Chicago/Rockford International Airport -- In the early part of this decade, RFD initiated a concerted program to successfully solicit LCC to service the airport in many leisure markets. Through this program, passenger enplanements have steadily grown from 28,680 in 2000, to 50,390 in 2003, to 109,657 in 2007.
  - Since 2000, RFD had passenger service to various hub and vacation destinations. Northwest Airlink provided service from RFD to MSP from 1986-2000 and to DTW from 1996-2001. Transmeridian Airlines provided service from RFD to SFB and LAS from August 2003 through September 2005. Hooters Air provided service from RFD to ATL, Denver International Airport (DEN), LAS, Myrtle Beach (MYR) and PIE from February 2004 through December 2005. Suntrips provided service from RFD to Cancun International Airport (CUN) from February 2005 through July 2005. Vacation Express provided service from RFD to Mexico and the Caribbean (connecting service) through SFB from February 2005 through September 2005. Northwest provided service from RFD to DTW from May 2005 through January 2006. Allegiant Air has provided service from RFD to LAS and SFB from November 2005 to present. Apple Vacations has provided service from RFD to CUN from February 2006 to present. United Airlines provided service from RFD to DEN from March 2005 through June 2008. DirectAir has provided service from RFD to Ft. Myers/Punta Gordo (PGD) from 2008 to present. Southern Skyways provided service from RFD to DEN from June 2008 through August 2008. And FlyBranson Travel LLC/ExpressJet has provided service from RFD to Branson Airport (BBG) from November 2009 to present. Ryan International Airlines is a 14CFR Part 121 domestic, flag and supplemental air carrier and is based at RFD.
  - In addition to passenger service, RFD currently has air cargo service via UPS (second largest sorting hub in UPS domestic system) and DB Schenker since 1994 and 2000, respectively.

Table 2-6, Comparative Airport Areas, provides information about the comparative sizes of the South Bend and Rockford communities. It is difficult to disaggregate Gary in the same manner as it is included as part of Chicago's Metropolitan area statistics.

A review of forecasts published by Boeing Corporation and FAA are presented below for their implications to the potential fleet of aircraft that potentially could operate at SSA. There has been appreciably no change since 2004 to alter the assumptions made regarding the fleet that would initially operate at SSA.

Boeing Forecasts. Boeing Commercial Airplanes publishes an annual assessment of the demand for world air travel. In its *Current Market Outlook 2008*, Boeing discusses the future of air passenger activity over the next 20 years.[36] The forecasts refer to the challenges facing the aviation industry recently, such as two world recessions, high oil prices, terrorist acts, the Asian financial crisis of 1997, Severe Acute Respiratory Syndrome (SARS) in 2003, as well as two Gulf Wars. Demand for air travel growth grew at 4.8 percent until 2008. More recently, Boeing forecasts indicate that over the next 20 years, there will be a 5 percent annual growth in air passenger traffic and 5.8 percent annual growth in air cargo. More important than the annual growth rate is that Boeing projects that "more productive, new airplanes will play a greater role and there will be relentless pursuit of environmental progress."[37]

In terms of worldwide fleet mix growth, an increase in the fleet size by 88 percent over the next 20 years is forecasted. The greatest absolute increase will be in the single-aisle aircraft, which will constitute 66 percent of the entire fleet, as opposed to 60 percent today. The greatest percentage of growth comes in the twin-aisle category, as those aircraft will increase by 138 percent over today's level. Not surprising, the only category projected to lose aircraft is regional jets. Regional jets are projected to decrease 17 percent. The other category identified in the Boeing forecasts is B747 and larger aircraft. These aircraft are forecasted to increase by 47 percent over the period.

Asia requires the most new aircraft; and, for the first time, the value of the aircraft market of Europe will be equivalent to North America. By 2028, there will be fairly equitable geographic dispersion of the fleet, with Asia, Pacific and North America each having about 30 percent of the fleet and Europe 25 percent. The forecasts indicate that new trade routes and global sourcing will drive the air cargo markets and that the U.S.'s emphasis is already shifting toward international routes. Freighters, in general, will become larger and there will be greater dependence upon air freight, as ground infrastructure is lacking in many areas of the world. In the next 20 years, air cargo traffic worldwide will triple as the number of freighters in the fleet doubles. The fleet share of large freighters will increase from 26 percent today to 35 percent by 2027.

> *"Air transport sustains many developing world economies by making it possible to ship perishable products, such as fresh flowers, fruits and live animals to distant markets. Reliable, regularly-scheduled air freight flights make pharmaceuticals, life-saving blood and tissue products and emergency equipment available and affordable. Prompt delivery actually adds to the value of a variety of products, including fashion items and leading-edge consumer electronics."*[38]

FAA Forecasts. A major source of forecast information is the annual document published by FAA, which is *FAA Aerospace Forecasts: Fiscal Years 2009-2025*, March 31, 2009. **Table 2-7, U.S. Large Air Carriers and Regionals / Commuters Total Scheduled U.S. Passenger Traffic**, is a compilation of historical U.S. enplanements (from 2000) and forecast enplanements (to 2025) for U.S. domestic and international sectors for large air carrier and regional/commuter enplanements.

[36] Boeing Commercial Airplanes, Current Market Outlook 2008, June 2008, http://www.boeing.com/news/frontiers/archive/2008/september/cover.pdf.
[37] Boeing Commercial Airplanes, Current Market Outlook 2008, June 2008, http://www.boeing.com/news/frontiers/archive/2008/september/cover.pdf.
[38] Boeing Commercial Airplanes, Current Market Outlook 2008, June 2008, http://www.boeing.com/news/frontiers/archive/2008/september/cover.pdf.

Table 2-6 Comparative Airport Areas

Year	Will County		South Bend MSA (2 Counties) IN - SBN		St. Joseph County IN – SBN	Rockford MSA (4 Counties) IL - RFD	
	Latest CMAP Population	Adjusted CMAP Population	Latest (08) FAA TAF	Latest W&P (08) Population	State of Indiana	Latest (08) FAA TAF	Latest W&P (08) Population
2000 Census (April 1)	502,266	502,266	-	316,663	265,559	-	320,204
2000 Actual	508,029	508,029	445,734	316,353	265,834	28,680	321,003
2005 Actual	632,173	632,173	357,939	315,464	264,532	79,055	339,194
2007 Actual	670,663	670,663	388,237	316,233	265,757	109,657	351,260
2008 Actual	681,097	681,097	-	316,865	266,680	-	354,394
2015 Forecast	789,356	801,133	520,721	327,970	265,461	164,496	374,090
2020 Forecast	885,053	900,755	588,899	335,810	269,948	187,238	388,550
2025 Forecast	980,749	1,000,378	666,981	343,950	277,305	208,640	403,340
2030 Forecast	1,076,446	1,100,000	-	352,180	283,837	-	418,240
% Annual 00-07	4.05%	4.05%	-1.95%	-0.01%	0.00%	21.12%	1.30%
% Annual 00-08	3.73%	3.73%	-	0.02%	0.04%	-	1.24%
% Annual 07-15	2.06%	2.25%	3.74%	0.46%	-0.01%	5.20%	0.79%
% Annual 07-20	2.16%	2.29%	3.26%	0.46%	0.12%	4.20%	0.78%
% Annual 07-25	2.13%	2.25%	3.05%	0.47%	0.24%	3.64%	0.77%
% Annual 07-30	2.10%	2.20%	-	0.48%	0.28%	-	0.76%

Source: *Socio-Economic and Aviation Forecast Update*, Prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

The current recession had a major impact upon the FAA forecasts from 2008 to 2009. The trend line for enplanements dropped precipitously. The impact is that about six years of growth was lost. By these forecasts, total U.S. enplanements would eclipse the one billion mark in 2021.

Table 2-7 U.S. Large Air Carriers and Regionals / Commuters
Total Scheduled U.S. Passenger Traffic

Fiscal Year	Revenue Enplanements (Millions)						
	Domestic			International			
	Large Air Carrier	Regional / Commuter	Total	Large Air Carrier	Regional / Commuter	Total	Grand Total
Historical Activity							
2000	561.5	79.7	641.2	53.3	3.1	56.4	697.6
2001	546.3	80.4	626.7	53.5	3.1	56.6	683.3
2002	485.9	88.6	574.5	48.4	2.8	51.2	625.7
2003	482.2	105.0	587.2	50.6	2.8	53.4	640.6
2004	502.6	125.9	628.5	57.3	3.1	60.4	688.9
2005	523.0	146.4	669.4	64.2	3.3	67.5	736.9
2006	516.3	152.2	668.5	68.1	3.5	71.6	740.1
2007	533.9	156.2	690.1	71.9	3.4	75.3	765.4
2008E	522.3	157.4	679.7	74.3	3.4	77.7	757.4
Forecast Activity							
2009	476.2	150.3	626.5	72.6	3.3	75.9	702.4
2010	485.1	153.8	638.9	74.3	3.4	77.7	716.6
2011	505.0	160.6	665.6	77.6	3.5	81.1	746.7
2012	530.5	168.1	698.6	81.3	3.7	85.0	783.6
2013	555.9	176.3	732.2	85.1	3.9	89.0	821.2
2014	569.0	183.4	752.4	89.1	4.0	93.1	845.5
2015	580.2	189.8	770.0	93.1	4.2	97.3	867.3
2016	593.1	196.0	789.1	97.3	4.3	101.6	890.7
2017	605.0	202.3	807.3	101.7	4.4	106.1	913.4
2018	615.1	208.8	823.9	106.1	4.6	110.7	934.6
2019	624.8	215.5	840.3	110.8	4.7	115.5	955.8
2020	635.3	222.5	857.8	115.7	4.9	120.6	978.4
2021	645.9	229.8	875.7	120.6	5.0	125.6	1,001.3
2022	656.7	237.3	894.0	125.7	5.2	130.9	1,024.9
2023	666.7	245.2	911.9	131.9	5.4	137.3	1,049.2
2024	678.8	253.4	932.2	136.5	5.5	142.0	1,074.2
2025	690.2	261.9	952.1	142.2	5.7	147.9	1,100.0

Source: FAA, *FAA Aerospace Forecasts: Fiscal Years 2008-2025*, Tables 10 and 24 March 2009, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2008-2025/, Forms 41 and 298-C, USDOT. Revenue Enplanements are defined as the number of passengers boarding an aircraft (USDOT, BTS).

In terms of the overall fleet mix[39], the domestic mainline carriers are anticipated to reduce in size by 0.2 seats/year over the next 20 years from an average seating configuration of 150.4 to 147.7. On the other hand, the out years of the forecast anticipates a reversal of that trend with a 0.1 seat/year increase from 2020-2030 with an average seating configuration size of 148.6. The rationale for these forecasts is the increased impact of low-fare carriers' purchase of new, smaller, narrow-body aircraft, followed by a maturation effect in the long-term, with growth occurring in the average seating configuration from the introduction of generally larger aircraft seating configurations. While there is a reduction in the fleet of regional jets, the trend in the average size of those aircraft in the fleet is much larger. Over the intermediate term, the average regional jet configuration is anticipated to increase from 50 seats to 59.9 seats and then to 64.0 seats by 2030.

[39] Boeing Commercial Airplanes, Current Market Outlook 2008, June 2008.

The *FAA Aerospace Forecasts Fiscal Years 2009-2025* forecast slightly increasing load factors from today, growing from a system average of 80.1 percent to 80.8 percent over the forecast period.[40] International load factors are anticipated to remain virtually unchanged over the period, as domestic load factors are projected to increase from 80.2 percent in 2008 to 81.5 percent by 2025.

For the mainline carriers, the FAA Aerospace Forecasts project an average load factor of 80.4 percent (1 percent higher than the Long-Range) increasing over the next 10 years to 81.4 percent (0.7 percent greater than the Long-Range) and to 82.2 percent (1.4 percent greater than Long-Range) in 2025. Load factors for regional jets/commuters are lower than for mainline carriers. The baseline 2008 load factor is estimated to be 75.8 percent by the FAA Aerospace Forecasts (greater than Long-Range by 1.7 percent) increasing to 77.8 percent within 10 years (0.6 greater than Long-Range) and to 78.3 percent by 2025 (0.6 percent greater than Long-Range for 2030).

The FAA Long-Range Forecasts predict that overall U.S. commercial aircraft operations will increase from 28.3 million in FY 2006 to 37.3 million in FY 2020 and to 45.4 million in FY 2030. This translates to an average annual growth rate in commercial aircraft operations of 2.0 percent for both the Intermediate and Long-Range scenarios.

Regional Air Passenger Market Summary. The Chicago region, which has a large existing air passenger market, is projected to have continued air passenger growth. The 2004 forecast document provided historical data for ORD, MDW, MKE and GYY. Forecasts for regional airports, based upon 2004 data, indicated that the region's domestic air passenger activity is expanding at a rate less than the national rate. The following sections discuss the potential air passenger market for the IAP and the formulation of market demand forecasts.

Potential SSA Passenger Market. Throughout its history, the Chicago area has served as a major transportation hub: first, as a waterway portage between the Great Lakes/St. Lawrence River and the Mississippi River systems; second, as a railroad center; and, eventually, as an interstate highway link and a major aviation hub of North America.[41] Through the 1950's, the growth of the Chicago region was concentrated around the Chicago Central Business District, the focal point of the railroad network. During this period, the south side of Chicago and the southern suburbs had a stronger employment base than Chicago's north side or the north and northwest suburbs. This changed when the ORD opened in 1955, with all scheduled operations at MDW transferring to ORD by 1962, making it the world's busiest airport.[42] For many years thereafter, limited service was provided at MDW. Following airline deregulation and the return of regular service, the airport has grown to levels exceeding those of the 1950's.[43]

Meanwhile, ORD became a magnet for attracting businesses and jobs and, eventually, a major center of urban growth. The Chicago Central Business District remained vibrant; however, its growth did not match the development in DuPage, northwestern Cook and southern Lake Counties. Due to a number of factors, the south side of Chicago, as well as the southern suburbs, experienced lower employment growth rates than the overall greater Chicago region, although they still continued to experience growth in population.[44]

As land around ORD became fully developed, the areas surrounding the airport became either urbanized or suburbanized.[45] Eventually, significant residential development reached Will, Kendall and south Cook Counties, in Illinois and Lake and Porter Counties, in Indiana.[46,47]

[40] *FAA Aerospace Forecasts: Fiscal Years 2009-2025*, March 31, 2009, Table 11, p.70, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2009-2025/.
[41] Johnson, Elmer. Chicago Metropolis 2020, Preparing Metropolitan Chicago for the 21st Century, 1999.
[42] O'Hare International Airport, http://www.flychicago.com/Aboutus/oharehistory.shtm.
[43] Fly Chicago.com, "History of Midway International Airport", http://www.flychicago.com/Aboutus/midwayhistory.shtm.
[44] Northeastern Illinois Planning Commission, now CMAP http://www.nipc.cog.il.us/aboutreg.htm#snapshots, 2004.
[45] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[46] CMAP, http://www.nipc.cog.il.us/aboutreg.htm#snapshots, 2004.
[47] Northwestern Indiana Regional Planning Commission, http://www.nirpc.org/Census-DemoIntro.html, 2004.

Will County contributes significantly to Chicago's economy. Starting with early river trade on the Illinois & Michigan (I&M) Canal in the 1800's through the development of transcontinental railroads, the Federal highway system and its emergence as a true "Global Port" with operating and planning railroad and airport facilities, Will County has thrived on its location and transportation advances. Over two-thirds of the nation's population is within a two-day drive and Will County has recently become an important part of the new global economy. Manufactured goods arriving to the U.S. from the Pacific Rim are finding their way from the Pacific seaports to new intermodal "ports" inland for distribution to U.S. markets. Most of these goods arrive in shipping containers on huge cargo vessels and are delivered to the inland ports on unit trains. Today, Will County finds itself as a critical terminus in this new global supply chain.[48]

Will County has seen significant population growth since the 2000 Census, as has been documented in Chapter 1: Population and Socio-Economic Characteristics. Much of this growth can be attributed to the County's unique location advantages.[49] Forecasts by CMAP, as long ago as 2003, assume that the ORD will be expanded in accordance with the ORD Master Plan, that SSA will be developed in the forecast period by 2030 and predict that Will County will become the second-most populous county in Illinois, surpassing DuPage County by 2030.[50]

Existing Demand for Air Travel Within Potential SSA Passenger Market. Since the onset of the Master Plan process in the early 1990's, the potential passenger market for SSA has been defined as being composed of segments of the Chicago CMSA to the south and southwest of the City of Chicago, as well as northwestern Indiana. In order to define and delineate a distinct passenger market for SSA, two conservative conditions were developed and have been used consistently over the final site selection, master planning and environmental documentation periods, as have been described, which are:

- The SSA Primary Passenger Market must be located beyond a 45-minute average daily travel time from MDW; and
- The SSA Primary Passenger Market must always be located closer to SSA than to either MDW or ORD.

As part of the Illinois-Indiana Regional Airport Program Site Selection Study conducted between 1989 and 1992, a methodology was formulated to determine residents' air travel patterns in the Chicago region, particularly for the southern portion of the Metropolitan area. This methodology consisted of the preparation of airport and home surveys. The home survey included a long-distance travel portion and was used to corroborate the results of airport surveys taken at the ORD, MDW, and MKE. The surveys provided an overview of travel patterns of residents of the Chicago region relating trip generation with various regions of the greater Metropolitan area, along with their socio-economic characteristics.[51]

In 1995, IDOT conducted more comprehensive home interview surveys to estimate the existing demand for air services that might be accommodated at the proposed SSA. Initially, more than 135,000 households across the U.S. were contacted to determine if they met the profiles for follow-up questionnaires. Four sets of more detailed surveys followed:

- A national survey mailed to 100,000 representative households across the country with 6,025 responding households containing relevant information on travel to/from the Chicago region;
- An Illinois-Indiana survey mailed to 9,569 households outside the nine-County Chicago Area with 7,317 responding households;
- A more detailed survey containing two components first mailed to 18,000 households, then to 8,587 households, with 5,996 responding households in the nine-County Chicago Area (Cook, DuPage, Kane, Kankakee, Lake (IL), McHenry, Will, Lake (IN) and Porter); and

[48] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[49] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[50] Northeastern Illinois Planning Commission (also known as CMAP), *2030 Forecasts of Population, Households and Employment for Counties and Municipalities*, September 30, 2003, http://www.cmap.illinois.gov/2030_forecasts_ORIGINAL.aspx.
[51] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

- A month-long, long-distance travel log maintained and completed successfully by 5,013 households in the above nine-County Area.

The national survey provided information on both the frequency of travel and the socio-economic characteristics of the out-of-town visitor, as well as the resident user of the airports. The survey also provided information on the distribution of resident users and visitor enplanements by state of residence.[52] The long-distance travel log survey had several objectives which are listed below:

- Determine the detailed and actual long-distance travel behavior for all members of the sampled households and their overnight guests during a specific one-month period (May 1995);
- Determine if there are sub-regional variations in long-distance travel behavior and if such variations exist, determine the magnitude and reasons for them;
- Determine the existence and magnitude, if any, of demand for air travel in the southern part of the study region;
- Provide an elaboration on and corroboration of the preliminary results of the national survey as to the size and dynamics of the market for SSA; and
- Provide a comparison with the benchmark 1990 Long-Distance Travel Log.

The methodology and results of the above surveys are presented in the report, *Market Survey of Potential Users: South Suburban Airport* (The al Chalabi Group, Ltd., 1995). The surveys questioned respondents on travel behavior and measured the number of air trips by a household over a specific period of time.

The survey's statistical accuracy was limited to relatively large sub-regions of the greater Chicago region. The nine-County Chicago Region was divided into 14 sub-regions. Cook County was subdivided into six sub-regions (three within the City of Chicago and three for suburban Cook). Each of the other eight counties (DuPage, Kane, Kankakee, Lake (IL), McHenry, Will, Lake (IN) and Porter (IN)) constituted a separate sub-region.

The results of the long-distance log survey indicated that total long-distance travel rates are a function of income. In other words, wealthier households have higher travel rates. Long-distance travel was defined in the surveys as any trip longer than 150 miles from downtown Chicago. Long-distance travel (all modes) per $100,000 aggregate household income (product of households and income) was almost constant throughout the region. The mode (air vs. auto) of long-distance travel varies inversely with distance to existing airports. In other words, people who live farther away from an airport tend to utilize automobiles for long-distance travel more frequently than those people who live closer to that airport.

Using NIPC, now the CMAP and the State of Illinois planning data prepared in 1995, the model allocated long-distance travel done by household members and their visitors for each sub-region. The long-distance travel rates, as well as the modal split for each sub-region, were applied to all planning zones. Travel generated by hotel guests and day visitors was derived from the national survey and added to the above results to estimate total air travel generated by each planning zone.[53]

Estimating the travel characteristics of the area defined as the SSA Primary Passenger Market required subdividing the survey sub-regions into smaller units. The strong and stable relationship between long-distance travel (total and by mode) and socio-economic and spatial characteristics formed the basis for sub-allocating the survey results to planning zones within each of the 14 sub-regions. The survey results for each sub-region formed the necessary control totals.[54]

[52] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004
[53] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004
[54] *Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

The division of the sub-regions resulted in 411 planning zones within the 13-County Chicago CMSA. The sum total of all enplanements generated by the 411 planning zones equaled the O/D enplanements boarding at ORD and MDW in 1995.[55] An origin enplanement is defined as one passenger boarding an aircraft beginning their air trip at that airport.

As described in Chapter 1 and shown on **Exhibit 1-12, 2009 Travel Times – Existing Network Weighted Average Daily from Midway & SSA**, methodology for identifying the market service area have long been tracked and input variables were updated for this 2009 forecast. That re-verification identified that the Primary Passenger Market service area has grown significantly since 2004 and with general population and employment increases associated with the former market area, the potential demand for SSA is slightly stronger today than five years ago.

Estimating Demand for Air Travel. The 2004 forecasts illustrated significant growth in population, households and income occurred in the SSA Primary Passenger Market between 1995 and 2000 and was updated in Chapter 1. Originally, the appropriate long-distance travel rates generated in 1995 for each planning zone were applied to the socio-economic and land use characteristics of 2000 to generate a new set of O/D enplanements. Then, the sum of all enplaned passengers, by planning zone, was compared to the O/D enplanements for ORD and MDW that were independently estimated by the USDOT.[56] A comparison of the two sets of data established that the estimates were within one-half of 1 percent of each other. Therefore, it was concluded in 2004 that the enplanement generation rates were stable and produced reasonable results. The long-distance trip generation and modal split were calibrated using 1995 data and validated using independent 2000 data[57] to reflect 2004 conditions.

Table 2-8, Socio-Economic and Travel Data SSA Primary Passenger Market, shows the number of households, population and average household income (in 1989 dollars), as well as trips by mode and land use (residence, hotel and employment centers for day visitors). In addition to 1995 and 2000 comprehensive data, the table depicts summary socio-economic data for 1990 and the latest available socio-economic forecast for 2030. These socio-economic summaries provide a measure of past and future growth.

The air trips in **Table 2-8, Socio-Economic and Travel Data SSA Primary Passenger Market**, are those generated from within the Chicago CMSA and are also located within the SSA Primary Passenger Market. According to this table, the SSA Primary Passenger Market generated more than 1.7 million air trips in 2000. **Table 2-9, Socio-Economic and Travel Data – Chicago CMSA by Areas within 45 Minutes of Chicago O'Hare International, Chicago Midway International & SSA**, was prepared for comparison purposes. It shows the same data for areas within 45 minutes of ORD, MDW and SSA. It should be noted that these areas overlap and, collectively, do not cover the entire Chicago CMSA or enplanements generated from outside the Chicago CMSA.

Table 2-9, Socio-Economic and Travel Data – Chicago CMSA by Areas within 45 Minutes of Chicago O'Hare International, Chicago Midway International & SSA, offers a good comparison between the various markets. For example, the total air trips per household for the SSA Primary Passenger Market are 3.76, compared to 6.31 for ORD and 6.23 for MDW. The air modal split (number of long-distance trips done using air transportation) for the SSA Primary Passenger Market is 33 percent, compared to 40 and 42 for ORD and MDW, respectively. Another area of comparison is the growth in households, population and income forecasted by CMAP (2000-2030) for each market. CMAP has projected that the PSA (i.e., Will County) will experience faster growth than the rest of the region.[58] This was verified with the 2009 update and it has been confirmed that the growth in population and income would most likely result in an increased demand for air travel within the Primary Market Area.

[55] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[56] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[57] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[58] Northeastern Illinois Planning Commission, now CMAP, 2030 Forecast Numbers for Northeastern Illinois, September 30, 2003, http://www.cmap.illinois.gov/2030_forecasts_ORIGINAL.aspx.

Table 2-8 Socio-Economic and Travel Data SSA Primary Passenger Market

Data Category	1995	2000
Households	464,466	492,374
Total Population	1,291,261	1,348,898
Average Household Income (1989 dollars)	49,425	55,174
Aggregate Household Income (1989 dollars)	22,956,308,139	27,166,201,993
Total Employment	577,883	624,301
Hotel Rooms	6,287	7,947
Household Generated Long-Distance Trips – All	4,027,763	4,748,142
Household Generated Long-Distance Trips – Air	1,084,857	1,282,808
Household Generated Long-Distance Trips – Auto	2,748,129	3,235,733
Hotel Generated Air Trips	252,333	319,117
Other Air-Trips - Day Visitors	114,772	123,997
Total Generated Air-Trips	***1,451,958***	***1,725,915***
Total Air-Trips Per Household	3.13	3.51
Total Air-Trips Per $100,000 Aggregate Income	6.32	6.35
Total Air-Trips Per Job	2.51	2.76
Air Modal Split - Household Generated Long-Distance Trips	27%	27%
Data Category	**1990**	**2030**
Households	436,813	762,123
Total Population	1,236,995	2,119,443
Average Household Income (1989 dollars)	47,400	95,455
Aggregate Household Income (1989 dollars)	20,704,829,713	72,748,702,420
Total Employment	545,205	1,010,614
Hotel Rooms	4,621	Unknown

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

The original 2004 forecast methodology resulted in the SSA Primary Passenger Market Area forecast being a significantly smaller forecast than previous SSA studies had predicted since the assumption that potential air service will start with only a few destinations and slowly build over time. The five-year passenger forecast of SSA based upon the Inaugural Airport concept is approximately 1.3 percent of the regional total (ORD and MDW). This small ratio identifies a major demand scenario supported by a population of 1.35 million. Chapter 1 indicates that this population has since grown to 1.48 million in 2007 and with the adjustment in size, will represent 1.94 million in 2016, which is DBO+1 (2009). In 2004, the 1.35 million population ranked the area as the 37th largest U.S. Metropolitan Statistical Area (MSA), slightly larger than the Charlotte-Gastonia-Concord, NC-SC MSA.[59]

[59] U.S. Census Bureau, Census 2000 and 1990 Census. Census 2000 PHC-T-29, Ranking Tables for Population of MSAs, Micropolitan Statistical Areas, Combined Statistical Areas, New England City and Town Areas, and Combined New England City and Town Areas: 1990 and 2000. Table 3a. Population in the Metropolitan and Micropolitan Statistical Areas Ranked by 2000 Population for the United States and Puerto Rico: 1990 and 2000. Release Date: December 30, 2003.

Table 2-9 Socio-Economic and Travel Data – Chicago CMSA by Areas within 45 Minutes of Chicago O'Hare International, Chicago Midway International & South Suburban Airports
(Does Not Include Data from Outside Chicago CMSA)

Data Category	Within 45 Minutes of ORD		Within 45 Minutes of MDW		Within 45 Minutes of SSA	
	1995	2000	1995	2000	1995	2000
Households	1,446,898	1,495,963	1,178,596	1,210,372	835,712	863,564
Total Population	4,058,471	4,213,993	3,370,363	3,447,022	2,375,624	2,421,841
Average Household Income (1989 dollars)	70,077	80,587	56,052	65,021	51,677	58,642
Aggregate Household Income (1989 dollars)	101,393,830,851	120,555,463,375	66,062,289,026	78,699,751,567	43,187,251,527	50,641,446,884
Total Employment	2,522,808	2,844,138	2,099,524	2,194,766	845,732	887,891
Hotel Rooms	37,061	44,847	38,128	46,072	7,362	10,057
Household Generated Long-Distance Trips - All	14,079,435	16,714,238	9,816,722	11,688,208	6,899,468	8,083,586
Household Generated Long-Distance Trips - Air	5,668,990	6,713,279	4,128,913	4,920,640	2,258,246	2,649,193
Household Generated Long-Distance Trips - Auto	7,726,705	9,199,316	4,985,127	5,938,259	4,179,126	4,893,766
Hotel Generated Air Trips	1,708,171	2,066,486	1,754,847	2,114,167	307,527	418,685
Other Air-Trips - Day Visitors	590,693	665,728	483,519	505,057	174,147	182,174
Total Generated Air-Trips	***7,967,854***	***9,445,493***	***6,367,279***	***7,539,864***	***2,739,920***	***3,250,052***
Total Air-Trips Per Household	5.51	6.31	5.40	6.23	3.28	3.76
Total Air-Trips Per $100,000 Aggregate Income	7.86	7.83	9.64	9.58	6.34	6.42
Total Air-Trips Per Job	3.16	3.32	3.03	3.44	3.24	3.66
Air Modal Split for Household Generated Long-Dist. Trips	40%	40%	42%	42%	33%	33%
Data Category	1990	2030	1990	2030	1990	2030
Households	1,386,054	1,653,862	1,136,352	1,443,635	804,950	1,159,750
Total Population	3,857,592	4,576,153	3,252,626	3,973,748	2,318,888	3,238,512
Average Household Income (1989 $)	65,572	109,011	51,140	96,106	48,457	95,042
Aggregate Household Income (1989 $)	90,886,132,443	180,288,832,922	58,112,880,460	138,741,995,702	39,005,462,070	110,225,215,130
Total Employment	2,286,661	3,420,456	2,086,623	2,670,067	838,434	1,296,685
Hotel Rooms	29,243	-	30,171	-	4,654	-

Source: *Socio-Economic and Aviation Forecast Update*, Prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

Methodology for Deriving the SSA Enplanement Forecast. SSA enplanements were forecast by examining data from the USDOT Onboard T-100[60]/T-3[61] and O/D Surveys of Airline Passenger Traffic for ORD and MDW. The data details the O/D enplanements from Chicago to every airport in the U.S. A table was prepared listing the total O/D enplanements from ORD and MDW and selected airports for Federal fiscal year 2000.

The percentage of O/D enplanements traveling between Chicago and a specific airport was used to calculate the total O/D enplanements potentially traveling to that airport from the SSA Primary Passenger Market, by multiplying the total enplanements for the SSA Primary Passenger Market with the percentage for that airport. The potential number of enplanements to various destinations within the SSA PSA was based on the results of the long-distance survey. O/D enplanements traveling to airports within the same CMSA were then consolidated into single market. For example, the New York CMSA includes JFK International (JFK), LaGuardia (LGA), Newark Liberty International (EWR), Long Island-MacArthur (ISP) and Westchester (HPN) Airports, among others. Thus, enplanements originating from within the SSA Primary Passenger Market to those airports were added together to determine the potential demand from the SSA Primary Passenger Market to the New York CMSA.

Table 2-5, SSA Primary Passenger Market Potential Passenger Enplanements, in Section 2 of this chapter identifies the updated destinations that are likely to develop at SSA during the initial years of operation. For purposes of both the 2004 and 2009 updates, it is assumed that a minimum of 40,000 annual enplanements in the SSA Primary Passenger Market is required for a destination to be considered viable for service from SSA. This level of enplanements roughly equates to one departure a day by a Boeing 737-700, or two flights a day by a Boeing 717, or future equivalent like the Embraer 195.

As indicated, the PSA for SSA has been updated as is provided in Chapter 1, **Exhibit 1-12, 2009 Travel Times – Existing Network Weighted Average Daily from Midway & SSA**.

Expected SSA Air Passenger Role. The 2004 forecast conducted an analysis of the existing U.S. airline industry and multi-airport systems to determine the potential role SSA would have in the Chicago airport system. Secondary or supplemental airports exist in a number of metropolitan areas in the U.S., including Los Angeles, Boston, New York, San Francisco and Washington, D.C., among others. In most cases, a secondary or supplemental airport developed through expansion of an existing airport, with some exceptions.

The 2004 forecast report and the 2009 forecast update assumes that the existing Chicago area airports have established markets. These reports also assume that airlines will continue serving those locations as today. ORD is dominated by mainline and foreign flag carriers, while MDW is dominated by domestic LCCs. Historically, GYY has had intermittent commercial passenger service. Most recently, Skybus Airlines operated at GYY, but the airline ceased operation on April 5, 2008; the service was terminated after 23 days.[62]

For 2009 and like 2004, the same assumption about carriers serving SSA is made. The supplemental airport would not likely attract any mainline carriers that serviced ORD, since these carriers have established markets and have considerable amounts of money invested at that airport. Similarly, it is assumed that airlines serving MDW would not likely be attracted to SSA due to their substantial time and monetary investments.

L.E.K. Consulting's preliminary financial/market analysis in 2004 for the Chicago region concluded that the sector of the air passenger market with the greatest likelihood of expanding in the Chicago region would be that of domestic LCCs. LCCs are defined as airlines that primarily operate point-to-point destinations, operate relatively homogeneous aircraft fleets, have low operating costs, tend to use supplemental/secondary airports and generally offer attractively priced fares. However, there are some notable existing exceptions, such as AirTran in ATL and

[60] This table combines domestic and international T-100 segment data by U.S. and foreign air carriers, and contains non-stop segment data by aircraft type and service class for passengers transported, freight and mail transported, available capacity, scheduled departures, departures performed, and aircraft hours. - BTS, USDOT.

[61] This table contains scheduled and non-scheduled passenger and freight information by carrier and airport, and provides such items as departures performed, freight, mail, passengers, U.S. mail, foreign mail, and a domestic/foreign activity indicator. - BTS, USDOT.

[62] "Gary Airport Keeps Hanging Hopes on LCCs", The New Yorker Digital Edition, May 12, 2008.

Frontier in DEN. Traditionally, LCCs have attracted leisure travelers, but as amenities have disappeared from the mainline carriers, business travelers are frequently utilizing LCCs.[63] In addition, LCCs have increased flight frequencies on some routes to attract business travelers. For example, JetBlue Airways increased flights between LGB and JFK from three each way to five each way in 2002.[64] Some LCCs, like JetBlue, experimented with added unique amenities, such as DirectTV, to create greater appeal to passengers.[65]

In the 2004 forecasts, a preliminary financial/market analysis examined the routes served by airlines in Chicago and determined that only 19 percent of the routes in June 2001 were served by LCCs.[66] However, on those routes that LCCs were operating, LCCs captured 26 percent of the air passenger traffic.[67] In 2002, that capture rate had increased to nearly 30 percent. Between 1998-2003, LCCs, such as AirTran Airways and Spirit, experienced annual passenger growth rates between 20.5 and 28.4 percent.[68]

For these reasons, it is assumed that LCCs would be most attracted to an unconstrained start-up airport with low operating costs. Thus, in order to attract LCCs to the IAP at SSA, airline operating costs must be kept low relative to other area airports. There is not likely to be any hubbing operations at the IAP at SSA, which also means that few connecting enplanements are expected. Additionally, since commuter/regional airlines typically feed passengers into hubbing operations, little commuter activity is expected to take place during the IAP at SSA. Similarly, international operations by scheduled passenger airlines are not anticipated to develop at SSA during the IAP. If international activity does commence during the IAP, it is anticipated that it would be in the form of charter service on a seasonal basis to North American resort destinations. Domestic charter service to vacation destinations may also appear during the first years of operation.

Anticipated Aircraft Fleet and Load Factors. The air carriers expected to be attracted to SSA are LCCs, as discussed previously. LCCs typically operate nearly homogeneous aircraft fleets in order to save money on training, maintenance and facilities. If an airline operates only one or two types of jets, then all of their pilots and crew are easily transferred from one route to another and can work on any aircraft operated by the airline. Since SSA is expected to be predominantly served by LCCs on domestic routes, the expected aircraft fleet mix will be narrow-body jets, with some regional jets, as is the case at some supplemental airports where LCCs handle a large portion of the air passenger activity (i.e., Theodore Francis Green State Airport (PVD), Manchester Airport (MHT) and Metropolitan Oakland International Airport (OAK)[69]). However, in lieu of the dramatic escalation in fuel prices, which occurred in 2008 followed by the equally dramatic drop at the end of the year, it remains to be seen how many regional jets would actually be a part of SSA's fleet. If gasoline costs remain at end of 2008 prices, it would be a distinct possibility. On the other hand, if there is a spike like was experienced earlier in 2008, regional jets may not be cost-effective for the SSA market. For purposes of these forecasts, it will be assumed that fuel costs will be higher than at the end of 2008, but not over $140 per barrel. Consequently, the fleet may well have some regional jet representation. **Table 2-10, Aircraft Fleet Mix of Low-Cost Carriers, updated for 2009**, provides the fleet mixes for nine traditional U.S. LCCs.

Based upon the most recent data provided in the *FAA Aerospace Forecasts: Fiscal Years 2009-2025*, load factors at SSA could exceed the levels cited in 2004. For the U.S., the FAA forecasts a slight increase in load factors over 2008, growing from a system average of 80.1 percent in 2008 to 80.8 percent in 2025.[70] For the same period, international load factors are anticipated to remain virtually the same at around 79.8 percent.

IDOT assumes that scheduled passenger aircraft larger than the B737-800 or Airbus A320, which average 150 seats, would not operate at SSA during the first five years of operation (see **Appendix 3, Passenger Aircraft Fleet**

[63] FAA, *FAA Aerospace Forecasts: Fiscal Years 2003-2014*, March 2003, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/.
[64] Onboard Database Products, 2003, courtesy of The al Chalabi Group, Ltd.
[65] JetBlue Airways, http://www.jetblue.com/about/whyyoulllike/index.html, 2004.
[66] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[67] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[68] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[69] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[70] *FAA Aerospace Forecasts: Fiscal Years 2009-2025*, March 31, 2009, Table 11, p. 70, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2009-2005/.

Table 2-10 Aircraft Fleet Mix of Low-Cost Carriers, 2009

Airline	Aircraft	Number of Aircraft	Number of Seats Per Aircraft
AirTran Airways	Boeing 717-200 Series	90	117
	Boeing 737-700 Series	74*	137
Allegiant Air	Boeing (Douglas) MD 82/83/88	39	162
	Boeing (Douglas) MD 87	2	130
Frontier Airlines	Airbus A318-100 Series	11	118
	Airbus A319-111	49	136
	Airbus A320-214	8*	162
JetBlue	Airbus A320-232	141*	156
	Embraer ERJ-190	47*	100
Southwest Airlines	Boeing 737-300 Series	194	137
	Boeing 737-500 Series	25	122
	Boeing 737-700 Series	350*	137
Spirit Airlines	Airbus A-319-132	47*	144
	Airbus A-321-231	2	198
Sun Country	Boeing 737-700	1	124
	Boeing 737-800	9	162
USA 3000 Airlines	Airbus A320-214	12	168
Virgin America	Airbus A319-112	13	110
	Airbus A320-214	20	141

Source: jp Airlines – Fleet International, Edition 2008/09 Database Rights 2008, Reed Business Information, Ltd.
Notes: *Includes aircraft scheduled for delivery in 2008/2009.

Projections for the IAP at the SSA). The most common aircraft assumed in the forecast are the B737-700 (132 seats), B717-200 and A319 (117 seats), Bombardier CRJ 700 and Embraer 170 (70 seats), Bombardier CRJ 900 and Embraer 190 (90 seats) (see **Appendix 4, Commercial Passenger Aircraft Models**). The aircraft fleet assumptions are based on a review of the introduction of service by JetBlue at Ft. Lauderdale International Airport (FLL) in FL and LGB, as well as Southwest Airlines at MHT in NH. These airports were chosen since they are part of a multi-airport system and air passenger service at SSA could be expected to develop in a similar manner.

Since 1990, a number of airlines that were formerly classified strictly as commuter airlines (carriers that operate only aircraft of 60 seats or less) became Form 41 airlines[71] during this time period. The end result has been that airlines that were not included in the passenger fleet statistics before are now included. Since these new Form 41 airlines tend to have fleets dominated by smaller regional jets and commuter aircraft, the average number of seats per aircraft decreased in the U.S. passenger fleet. Concurrently, airlines were replacing B727-200 aircraft with smaller planes like the B737-700. Most LCCs tend to use aircraft, with seating configurations between 101 to 160 seats. For these reasons, IDOT assumes that the passenger fleet at SSA will be dominated by B717, B737 and A320/310, along with some regional jets.

Based on the load factors and aircraft fleet mix of U.S. LCCs (discussed above), IDOT assumes that the regional jets[72] [Bombardier CRJ 700 and Embraer 170 (70 seats), Bombardier CRJ 900 and Embraer 190 (90 seats)] will be mainly used for business destinations within a flight range of 1,000 nm (i.e., Baltimore/Washington International Thurgood Marshall Airport (BWI), ATL, General Edward Lawrence Logan International Airport (BOS), MSP and Dallas/Fort Worth International Airport (DFW), with load factors of 70-75 percent. For leisure vacation markets, such as Las Vegas and Orlando, IDOT expects the use of larger aircraft B737-800 or Airbus 320 (150 seats), with higher load factors (75-80 percent). For destinations containing a mixture of business and leisure travelers and low

[71] A reference to the schedule of forms submitted by large certificated air carriers to the BTS.
[72] JetBlue has 100 Embraer 190 (90 seats) on order; SkyWest and U.S. Airways have 30 and 75, respectively, Bombardier CRJ 700 on order. Source: Embraer and Bombardier websites, Airlines operating Embraer aircraft are available at: http://www.embraercommercialjets.com/#/en/clients, January 2009. Airlines operating Bombardier aircraft and orders are available at: http://www.bombardier.com/files/en/supporting_docs/BBA_2009_Market_Forecast.pdf.

flight frequencies, IDOT assumes that these would be served by either B737-700 (132 seats) or B717-200 (117 seats) aircraft. Those markets located more than 1,000 nm from SSA will tend to use larger aircraft, since they are expected to have lower frequencies.

For the 2004 forecast, IDOT analyzed trends in aircraft load factors for departing passenger aircraft. Based on USDOT T-100 data at the time, the overall domestic departure load factor has risen since 1990, from an average of 55.9 percent to 66.8 percent in 2002.[73] As mentioned above, the 2009 FAA Aerospace Forecasts cite that the overall U.S. system load factor has surpassed 80 percent (80.2 percent).

In summary, IDOT assumed in 2004 that for business, short-range and medium-range markets, the maximum average load factor would be about 75 percent; current data suggests that this might be higher. For longer range and leisure destinations, the maximum average load factors are assumed to be 80 percent. As shown in Section 2, the load factors proposed for the SSA forecasts are consistent with the load factors recently being realized by the airline sector that are expected to be predominate at SSA.

Section 4 – Forecasts of IAP Air Passenger Aviation Activity

In 2004, three air passenger forecast scenarios were developed for the IAP at SSA: base-case, low-case and high-case. These same forecasts are recommended for use in 2009 as the air passenger activity forecasts. The primary difference between the forecast scenario ranges is the assumption on how quickly air passenger service will develop at SSA. The assumptions on aircraft fleet, load factors, markets served and flight frequencies are consistent between the base-, low- and high-ranges. For some of the business-oriented markets, the ranges have different frequencies to the same destination.

The range of enplaned passengers forecasted for each potential destination during the first five years of operation does not surpass the total potential enplanements for that destination market within the 2010 SSA Primary Passenger Market as forecasted in 2004. This information has been updated for this 2009 forecast and is presented above in Chapter 2 listed in **Table 2-5, SSA Primary Passenger Market Potential Passenger Enplanements**. The enplaned passengers forecasted are only those originating within the SSA Primary Passenger Market. No originating passengers are assumed to utilize SSA from outside the SSA Primary Passenger Market. While some passengers originating outside the SSA Primary Passenger Market may begin their air trips at SSA during the first five years of operation, IDOT assumes that these enplanements would be relatively minimal. These were not factored into the forecasts for DBO+1 through DBO+5.

At DBO, it is anticipated that scheduled passenger service would be offered first to leisure markets, such as Las Vegas, NV and Orlando, FL. After DBO, air passenger scheduled service could be initiated to the business/leisure destinations of Los Angeles and New York, the top two passenger destinations within the SSA Primary Passenger Market, as shown in **Table 2-5, SSA Primary Passenger Market Potential Passenger Enplanements**. The introduction of new passenger markets is assumed to gradually increase during the early years of airport operation. The proposed daily airline schedules, which are the foundation for the IAP air passenger forecasts between DBO+1 to DBO+5, assume a gradual development of the Passenger Service Market.

The assumptions used in developing the schedules in 2004 were considered conservative compared to some examples where LCCs aggressively introduced operations into new markets. For instance, JetBlue at LGB and Southwest Airlines at MHT were very assertive when they initiated operations, starting at the outset with high-frequency to several destinations and then adding new destinations.[74] Short- and medium-range flights (i.e., less than 1,000 miles) are common. However, it is hard to predict how passenger service will develop at a new airport; therefore, the forecasts use conservative assumptions to predict potential activity at the new airport.

[73] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[74] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

The forecast assumed that the top markets east of the Mississippi River would initially have greater likelihood of attracting air passenger service at SSA due to their geographic proximity. Because of longer distances, travel times and time zone changes, west coast destinations (i.e., San Francisco and Los Angeles) were incorporated later in the proposed flight schedule, even though they have potentially greater market demand within the SSA Primary Passenger Market. For scheduled aircraft operations, leisure destination flight frequencies were limited to two per day, while in markets with a mix of business and leisure passengers, flight frequencies are initially assumed to be three per day in order to attract business travelers.

The assumed load factors are based upon industry trends where long-range markets (greater than 1,000 nm) tend to have higher load factors than medium- and short-range (less than or equal to 1,000 nm) destinations. This is because less flight frequency is typically associated with long-range markets due to longer travel times. In some of the larger destination markets, the flight frequency is expected to increase during the IAP due to potential passenger demand within the SSA Primary Passenger Market. After a new flight is introduced in a market, the forecast assumes that the aircraft load factor would decrease by 5 percent, gradually increasing as the market matures.

Base-Case Air Passenger Forecast. This 2009 Forecast Verification Report for air passenger forecasts was built upon an historical analysis of enplanement markets in the U.S. and is the same methodology contained in the original 2004 Forecast Report. In essence, a national passenger forecast matrix was created; the Chicago region's market share was then determined from that matrix; and finally a specific subset of the Chicago market was then identified for the SSA. This "top-down" forecast approach, previously outlined, does not assume that there will be a new passenger market entry within each quarter between DBO+1 to DBO+5. However, the forecasts do include the addition of very selectively chosen passenger markets over that timeframe. The variables used in choosing those markets include:

- Probable first markets are sun and resort destinations; and
- Probable next markets are major business destinations similar to other Chicago airports:
  (New markets are only added when the number of enplanements generated is sufficient to warrant frequency and load factors to sustain service and ensure airline profitability.)

As indicated in the FAA's approved SSA 2004 forecasts, the potential slow and methodical addition of new markets from DBO+1 to DBO+5 could be done in the following sequence:

- Opening Day = LAS, MCO. The most likely sun and resort destinations, based upon Chicago markets trends, as well as increasingly important business and convention locations;
- DBO to DBO+1 = LAS, MCO, PHX;
- DBO+1 to DBO+2 = LAS, MCO, PHX, LA*;
- DBO+2 to DBO+3 = LAS, MCO, PHX, LA*, NY*, DC*;
- DBO+3 to DBO+4 = LAS, MCO, PHX, LA*, NY*, DC*, MIA, ATL; and
- DBO+4 to DBO+5 = LAS, MCO, PHX, LA*, NY*, DC*, MIA, ATL, BOS, SFO*.
  (New airport market additions for the DBO year labeled in blue. *Designates metropolitan locations.)

While new markets are identified on a quarterly basis, there are no more than two new destinations added on an annual basis over the projected first five years of airport operation. These new markets are consistent within the context of the Chicago market, are added in probable statistical order based upon the market forecasts and represent approximately 1.3 percent of Chicago's market (SSA DBO+5 Base-Case).

For example, the Base-Case Forecast, in 2004, assumed IAP will serve two destinations at DBO, increasing to three by DBO+1. A total of 10 destination markets were forecasted by the end of DBO+5. Case studies of airlines introducing service into new markets were reviewed in the development of that forecast. For instance, JetBlue, which began operations in 2000, was examined for guidelines concerning frequency and load factors.[75]

In some markets, JetBlue started with an average of two flights per day.[76] Similarly, in 2002 on the FLL - IAD route, the airline averaged two daily flights in each direction, with a load factor of 78.1 percent.[77] Likewise, JetBlue introduced two departures per day in each direction on the LGB - IAD market in 2002. The average load factor on this route was 82.9 percent.[78] Also in 2002, Spirit Airlines started service on the LAS – DTW route, with one departure per day, increasing to two by the end of the year. The average load factor during this period was 82.4 percent (see Appendix 3).[79] Using the assumptions outlined above, a daily air carrier schedule was developed to estimate the annual enplaned passengers for the base forecast scenario. The Base-Case Forecast is presented in **Table 2-11, Base-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5** and includes the following information:

- Potential Destination;
- Quarter after DBO;
- Flight frequency;
- Aircraft size;
- Load factor; and
- Enplanements.

Table 2-11, Base-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5 denotes a change in frequency or the introduction of a new passenger destination.

Low-Case Air Passenger Forecast. The Low-Case Forecast assumes that air passenger service at SSA will develop slower than the Base-Case Forecast. It assumes that no passenger service will materialize at SSA until the end of the first year. It also assumes that passenger service will develop at a slower rate, with fewer destinations than the Base-Case Forecast. By the end of DBO+5, this forecast assumes that SSA would have flights to six different domestic destinations, with approximately 15 daily departures. **Table 2-12, Low-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5**, presents the Low-Case Forecast by quarter. The information highlighted in blue italics on **Table 2-12, Low-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5**, denotes a change in frequency or the introduction of a new passenger destination.

High-Case Air Passenger Forecast. The High-Case Forecast assumes that passenger airlines will introduce new routes at a slightly faster rate than under the Base-Case Forecast. This forecast assumes that passenger airlines realize high-load factors and demand faster than under the Base-Case Forecast. Four destinations would be served at the end of DBO+1, which would grow to 14 destinations by the end of DBO+5. Otherwise, the same assumptions utilized in the Base-Case Forecast are incorporated into this forecast. **Table 2-13, High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5**, shows the destinations, flight frequencies, aircraft size, load factor and enplanements for the High-Case Forecast.

The information highlighted in blue italics on **Table 2-13, High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5**, denotes a change in frequency or the introduction of a new passenger destination.

[75] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[76] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[77] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[78] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[79] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Table 2-11 Base-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
DBO+1									
LAS	NV	***Las Vegas***	Q1	1	***1***	150	150	75%	10,125
MCO	FL	***Orlando***	Q1	1	***1***	150	150	70%	9,450
		Sum/Average	Q1	**2**	***2***	**150**	**300**	**73%**	**19,575**
LAS	NV	Las Vegas	Q2	1	1	150	150	80%	10,800
MCO	FL	Orlando	Q2	1	1	150	150	75%	10,125
		Sum/Average	Q2	**2**	**2**	**150**	**300**	**78%**	**20,925**
LAS	NV	***Las Vegas***	Q3	1	***2***	150	300	70%	18,900
MCO	FL	Orlando	Q3	1	1	150	150	75%	10,125
PHX	AZ	***Phoenix***	Q3	1	***1***	132	132	70%	8,316
		Sum/Average	Q3	**3**	***4***	**144**	**582**	**72%**	**37,341**
LAS	NV	Las Vegas	Q4	1	2	150	300	75%	20,250
MCO	FL	***Orlando***	Q4	1	***2***	150	300	70%	18,900
PHX	AZ	Phoenix	Q4	1	1	132	132	75%	8,910
		Sum/Average	Q4	**3**	***5***	**144**	**732**	**73%**	**48,060**
		Total							**125,901**
DBO+2									
LA+	CA	***Los Angeles CMSA***	Q5	1	***1***	132	132	65%	7,722
LAS	NV	Las Vegas	Q5	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q5	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q5	1	1	132	132	80%	9,504
		Sum/Average	Q5	**4**	***6***	**141**	**864**	**75%**	**59,076**
LA+	CA	Los Angeles CMSA	Q6	1	1	132	132	70%	8,316
LAS	NV	Las Vegas	Q6	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q6	1	2	150	300	75%	20,250
PHX	AZ	***Phoenix***	Q6	1	***2***	132	264	70%	16,632
		Sum/Average	Q6	**4**	***7***	**141**	**996**	**74%**	**66,798**
LA+	CA	***Los Angeles CMSA***	Q7	1	***2***	132	264	70%	16,632
LAS	NV	Las Vegas	Q7	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q7	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q7	1	2	132	264	75%	17,820
		Sum/Average	Q7	**4**	***8***	**141**	**1,128**	**75%**	**76,302**
LA+	CA	Los Angeles CMSA	Q8	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q8	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q8	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q8	1	2	132	264	75%	17,820
		Sum/Average	Q8	**4**	**8**	**141**	**1,128**	**78%**	**78,678**
		Total							**280,854**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-11 Base-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
DBO+3									
NY+	NY	***New York CMSA***	Q9	1	***3***	117	351	65%	20,534
LA+	CA	Los Angeles CMSA	Q9	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q9	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q9	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q9	1	2	132	264	80%	19,008
		Sum/Average	Q9	**5**	***11***	**136**	**1,479**	**76%**	**100,400**
NY+	NY	New York CMSA	Q10	1	3	117	351	70%	22,113
LA+	CA	Los Angeles CMSA	Q10	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q10	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q10	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q10	1	2	132	264	80%	19,008
		Sum/Average	Q10	**5**	**11**	**136**	**1,479**	**77%**	**101,979**
NY+	NY	New York CMSA	Q11	1	3	117	351	75%	23,693
LA+	CA	Los Angeles CMSA	Q11	1	2	132	264	80%	19,008
WS+	DC	***BWI/IAD CMSA***	Q11	1	***3***	70	210	70%	13,230
LAS	NV	Las Vegas	Q11	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q11	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q11	1	2	132	264	80%	19,008
		Sum/Average	Q11	**6**	***14***	**125**	**1,689**	**77%**	**116,789**
NY+	NY	New York CMSA	Q12	1	3	117	351	75%	23,693
LA+	CA	Los Angeles CMSA	Q12	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q12	1	3	70	210	75%	14,175
LAS	NV	Las Vegas	Q12	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q12	1	2	150	300	80%	21,600
PHX	AZ	Phoenix	Q12	1	2	132	264	80%	19,008
		Sum/Average	Q12	**6**	**14**	**125**	**1,689**	**78%**	**119,084**
		Total							**438,251**
DBO+4									
NY+	NY	***New York CMSA***	Q13	1	***4***	117	468	65%	27,378
LA+	CA	Los Angeles CMSA	Q13	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q13	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q13	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q13	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q13	1	2	132	264	80%	19,008
MIA+	FL	***MIA/FLL CMSA***	Q13	1	***1***	117	117	70%	7,371
		Sum/Average	Q13	**7**	***16***	**127**	**1,983**	**75%**	**132,840**
NY+	NY	New York CMSA	Q14	1	4	117	468	70%	29,484
LA+	CA	Los Angeles CMSA	Q14	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q14	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q14	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q14	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q14	1	2	132	264	80%	19,008

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-11 Base-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
MIA+	FL	MIA/FLL CMSA	Q14	1	1	117	117	75%	7,898
		Sum/Average	Q14	**7**	**16**	**127**	**1,983**	**76%**	**135,473**
NY+	NY	New York CMSA	Q15	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q15	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q15	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q15	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q15	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q15	1	2	132	264	80%	19,008
ATL	GA	***Atlanta***	Q15	1	***2***	90	180	65%	10,530
MIA+	FL	MIA/FLL CMSA	Q15	1	1	117	117	75%	7,898
		Sum/Average	Q15	**8**	***18***	**122**	**2,163**	**76%**	**148,109**
NY+	NY	New York CMSA	Q16	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q16	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q16	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q16	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q16	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q16	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q16	1	2	90	180	70%	11,340
MIA+	FL	***MIA/FLL CMSA***	Q16	1	***2***	117	234	70%	14,742
		Sum/Average	Q16	**8**	***19***	**122**	**2,280**	**76%**	**155,763**
		Total							**572,184**
DBO+5									
NY+	NY	New York CMSA	Q17	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q17	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q17	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q17	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q17	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q17	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q17	1	2	90	180	75%	12,150
MIA+	FL	MIA/FLL CMSA	Q17	1	2	117	234	75%	15,795
		Sum/Average	Q17	**8**	**19**	**122**	**2,280**	**77%**	**157,626**
NY+	NY	New York CMSA	Q18	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q18	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q18	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q18	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q18	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q18	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q18	1	2	90	180	75%	12,150
BOS+	MA	***Boston CMSA***	Q18	1	***3***	90	270	65%	15,795
MIA+	FL	MIA/FLL CMSA	Q18	1	2	117	234	75%	15,795
		Sum/Average	Q18	**9**	***22***	**119**	**2,550**	**76%**	**173,421**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-11 Base-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
NY+	NY	New York CMSA	Q19	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q19	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q19	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q19	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q19	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q19	1	2	132	264	80%	19,008
ATL	GA	***Atlanta***	Q19	1	***3***	90	270	70%	17,010
BOS+	MA	Boston CMSA	Q19	1	3	90	270	70%	17,010
MIA+	FL	MIA/FLL CMSA	Q19	1	2	117	234	75%	15,795
		Sum/Average	Q19	**9**	**23**	**119**	**2,640**	**76%**	**179,496**
NY+	NY	New York CMSA	Q20	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q20	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q20	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q20	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q20	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q20	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q20	1	3	90	270	75%	18,225
SFO+	CA	***SFO/OAK CMSA***	Q20	1	***2***	132	264	70%	16,632
BOS+	MA	Boston CMSA	Q20	1	3	90	270	75%	18,225
MIA+	FL	MIA/FLL CMSA	Q20	1	2	117	234	75%	15,795
		Sum/Average	Q20	**10**	***25***	**120**	**2,904**	**76%**	**198,558**
		Total							**709,101**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-12 Low-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
DBO+1									
			Q1	0	0	0	0	0%	0
		Sum/Average	Q1	**0**	**0**	**0**	**0**	**0%**	**0**
			Q2	0	0	0	0	0%	0
		Sum/Average	Q2	**0**	**0**	**0**	**0**	**0%**	**0**
			Q3	0	0	0	0	0%	0
		Sum/Average	Q3	**0**	**0**	**0**	**0**	**0%**	**0**
LAS	NV	***Las Vegas***	Q4	1	***1***	150	150	75%	10,125
MCO	FL	***Orlando***	Q4	1	***1***	150	150	70%	9,450
		Sum/Average	Q4	**2**	***2***	**150**	**300**	**73%**	**19,575**
		Total							**19,575**
DBO+2									
LAS	NV	Las Vegas	Q5	1	1	150	150	80%	10,800
MCO	FL	Orlando	Q5	1	1	150	150	75%	10,125
		Sum/Average	Q5	**2**	**2**	**150**	**300**	**78%**	**20,925**
LAS	NV	***Las Vegas***	Q6	1	***2***	150	300	70%	18,900
MCO	FL	Orlando	Q6	1	1	150	150	75%	10,125
		Sum/Average	Q6	**2**	***3***	**150**	**450**	**73%**	**29,025**
LAS	NV	Las Vegas	Q7	1	2	150	300	75%	20,250
MCO	FL	***Orlando***	Q7	1	***2***	150	300	70%	18,900
PHX	AZ	***Phoenix***	Q7	1	***1***	132	132	75%	8,910
		Sum/Average	Q7	**3**	***5***	**144**	**732**	**73%**	**48,060**
LAS	NV	Las Vegas	Q8	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q8	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q8	1	1	132	132	80%	9,504
		Sum/Average	Q8	**3**	**5**	**144**	**732**	**78%**	**51,354**
		Total							**149,364**
DBO+3									
LAS	NV	Las Vegas	Q9	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q9	1	2	150	300	75%	20,250
PHX	AZ	***Phoenix***	Q9	1	***2***	132	264	70%	16,632
		Sum/Average	Q9	**3**	***6***	**144**	**864**	**75%**	**58,482**
LA+	CA	***Los Angeles CMSA***	Q10	1	***1***	132	132	65%	7,722
LAS	NV	Las Vegas	Q10	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q10	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q10	1	2	132	264	75%	17,820
		Sum/Average	Q10	**4**	***7***	**141**	**996**	**74%**	**67,392**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-12 Low-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
LA+	CA	Los Angeles CMSA	Q11	1	1	132	132	75%	8,910
LAS	NV	Las Vegas	Q11	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q11	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q11	1	2	132	264	75%	17,820
		Sum/Average	Q11	**4**	**7**	**141**	**996**	**76%**	**68,580**
LA+	CA	***Los Angeles CMSA***	Q12	1	***2***	132	264	70%	16,632
LAS	NV	Las Vegas	Q12	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q12	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q12	1	2	132	264	80%	19,008
		Sum/Average	Q12	**4**	***8***	**141**	**1,128**	**76%**	**77,490**
		Total							**271,944**
DBO+4									
LA+	CA	Los Angeles CMSA	Q13	1	2	132	264	75%	17,820
LAS	NV	Las Vegas	Q13	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q13	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q13	1	2	132	264	80%	19,008
		Sum/Average	Q13	**4**	**8**	**141**	**1,128**	**78%**	**78,678**
LA+	CA	Los Angeles CMSA	Q14	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q14	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q14	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q14	1	2	132	264	80%	19,008
		Sum/Average	Q14	**4**	**8**	**141**	**1,128**	**79%**	**79,866**
NY+	NY	***New York CMSA***	Q15	1	***3***	117	351	65%	20,534
LA+	CA	Los Angeles CMSA	Q15	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q15	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q15	1	2	150	300	80%	21,600
PHX	AZ	Phoenix	Q15	1	2	132	264	80%	19,008
		Sum/Average	Q15	**5**	***11***	**136**	**1,479**	**77%**	**101,750**
NY+	NY	New York CMSA	Q16	1	3	117	351	70%	22,113
LA+	CA	Los Angeles CMSA	Q16	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q16	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q16	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q16	1	2	132	264	80%	19,008
		Sum/Average	Q16	**5**	**11**	**136**	**1,479**	**77%**	**101,979**
		Total							**362,273**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-12 Low-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
DBO+5									
NY+	NY	New York CMSA	Q17	1	3	117	351	75%	23,693
LA+	CA	Los Angeles CMSA	Q17	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q17	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q17	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q17	1	2	132	264	80%	19,008
		Sum/Average	Q17	**5**	**11**	**136**	**1,479**	**78%**	**103,559**
NY+	NY	***New York CMSA***	Q18	1	***4***	117	468	70%	29,484
LA+	CA	Los Angeles CMSA	Q18	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q18	1	2	150	300	80%	21,600
LAS	NV	Las Vegas	Q18	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q18	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q18	1	2	132	264	80%	19,008
		Sum/Average	Q18	**6**	***12***	**139**	**1,896**	**78%**	**130,950**
NY+	NY	New York CMSA	Q19	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q19	1	2	132	264	80%	19,008
WS+	DC	***BWI/IAD CMSA***	Q19	1	***3***	90	270	70%	17,010
LAS	NV	Las Vegas	Q19	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q19	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q19	1	2	132	264	80%	19,008
		Sum/Average	Q19	**6**	***15***	**129**	**1,866**	**77%**	**128,466**
NY+	NY	New York CMSA	Q20	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q20	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q20	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q20	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q20	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q20	1	2	132	264	80%	19,008
		Sum/Average	Q20	**6**	**15**	**129**	**1,866**	**78%**	**129,681**
		Total							**492,656**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-13 High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
DBO+1									
LAS	NV	***Las Vegas***	Q1	1	***1***	150	150	75%	10,125
MCO	FL	***Orlando***	Q1	1	***1***	150	150	70%	9,450
PHX	AZ	***Phoenix***	Q1	1	***1***	132	132	60%	7,128
		Sum/Average	Q1	**3**	***3***	**144**	**432**	**68%**	**26,703**
LAS	NV	***Las Vegas***	Q2	1	***2***	150	300	70%	18,900
MCO	FL	Orlando	Q2	1	1	150	150	75%	10,125
PHX	AZ	Phoenix	Q2	1	1	132	132	65%	7,722
		Sum/Average	Q2	**3**	***4***	**144**	**582**	**70%**	**36,747**
LAS	NV	Las Vegas	Q3	1	2	150	300	75%	20,250
MCO	FL	***Orlando***	Q3	1	***2***	150	300	70%	18,900
PHX	AZ	Phoenix	Q3	1	1	132	132	70%	8,316
		Sum/Average	Q3	**3**	***5***	**144**	**732**	**72%**	**47,466**
LA+	CA	***Los Angeles CMSA***	Q4	1	***1***	132	132	65%	7,722
LAS	NV	Las Vegas	Q4	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q4	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q4	1	1	132	132	75%	8,910
		Sum/Average	Q4	**4**	***6***	**141**	**864**	**74%**	**58,482**
		Total							**169,398**
DBO+2									
LA+	CA	Los Angeles CMSA	Q5	1	1	132	132	75%	8,910
LAS	NV	Las Vegas	Q5	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q5	1	2	150	300	75%	20,250
PHX	AZ	***Phoenix***	Q5	1	***2***	132	264	70%	16,632
		Sum/Average	Q5	**4**	***7***	**141**	**996**	**75%**	**67,392**
LA+	CA	***Los Angeles CMSA***	Q6	1	***2***	132	264	70%	16,632
LAS	NV	Las Vegas	Q6	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q6	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q6	1	2	132	264	75%	17,820
		Sum/Average	Q6	**4**	***8***	**141**	**1,128**	**75%**	**76,302**
NY+	NY	***New York CMSA***	Q7	1	***3***	117	351	60%	18,954
LA+	CA	Los Angeles CMSA	Q7	1	2	132	264	75%	17,820
LAS	NV	Las Vegas	Q7	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q7	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q7	1	2	132	264	80%	19,008
		Sum/Average	Q7	**5**	***11***	**136**	**1,479**	**74%**	**97,632**
NY+	NY	New York CMSA	Q8	1	3	117	351	65%	20,534
LA+	CA	Los Angeles CMSA	Q8	1	2	132	264	80%	19,008
LAS	NV	Las Vegas	Q8	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q8	1	2	150	300	75%	20,250

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-13 High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
PHX	AZ	Phoenix	Q8	1	2	132	264	80%	19,008
		Sum/Average	Q8	**5**	**11**	**136**	**1,479**	**76%**	**100,400**
		Total							**341,726**
DBO+3									
NY+	NY	New York CMSA	Q9	1	3	117	351	75%	23,693
LA+	CA	Los Angeles CMSA	Q9	1	2	132	264	80%	19,008
WS+	DC	***BWI/IAD CMSA***	Q9	1	***3***	90	270	65%	15,795
LAS	NV	Las Vegas	Q9	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q9	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q9	1	2	132	264	80%	19,008
		Sum/Average	Q9	**6**	***14***	**129**	**1,749**	**76%**	**119,354**
NY+	NY	***New York CMSA***	Q10	1	***4***	117	468	65%	27,378
LA+	CA	Los Angeles CMSA	Q10	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q10	1	3	90	270	70%	17,010
LAS	NV	Las Vegas	Q10	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q10	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q10	1	2	132	264	80%	19,008
		Sum/Average	Q10	**6**	***15***	**129**	**1,866**	**75%**	**124,254**
NY+	NY	New York CMSA	Q11	1	4	117	468	70%	29,484
LA+	CA	Los Angeles CMSA	Q11	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q11	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q11	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q11	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q11	1	2	132	264	80%	19,008
MIA+	FL	***MIA/FLL CMSA***	Q11	1	***2***	117	234	65%	13,689
		Sum/Average	Q11	**7**	***17***	**127**	**2,100**	**75%**	**141,264**
NY+	NY	New York CMSA	Q12	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q12	1	2	132	264	80%	19,008
WS+	DC	BWI/IAD CMSA	Q12	1	3	90	270	75%	18,225
LAS	NV	Las Vegas	Q12	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q12	1	2	150	300	80%	21,600
PHX	AZ	Phoenix	Q12	1	2	132	264	80%	19,008
MIA+	FL	MIA/FLL CMSA	Q12	1	2	117	234	70%	14,742
		Sum/Average	Q12	**7**	**17**	**127**	**2,100**	**77%**	**145,773**
		Total							**530,645**
DBO+4									
NY+	NY	New York CMSA	Q13	1	4	117	468	75%	31,590
LA+	CA	***Los Angeles CMSA***	Q13	1	***3***	132	396	70%	24,948
WS+	DC	***BWI/IAD CMSA***	Q13	1	***4***	90	360	70%	22,680
LAS	NV	Las Vegas	Q13	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q13	1	2	150	300	75%	20,250

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-13 High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
PHX	AZ	Phoenix	Q13	1	2	132	264	80%	19,008
ATL	GA	***Atlanta***	Q13	1	***2***	90	180	65%	10,530
MIA+	FL	MIA/FLL CMSA	Q13	1	2	117	234	75%	15,795
		Sum/Average	Q13	**8**	***21***	**122**	**2,502**	**74%**	**166,401**
NY+	NY	New York CMSA	Q14	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q14	1	3	132	396	75%	26,730
WS+	DC	BWI/IAD CMSA	Q14	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q14	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q14	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q14	1	2	117	234	80%	16,848
ATL	GA	Atlanta	Q14	1	2	90	180	70%	11,340
BOS+	MA	***Boston CMSA***	Q14	1	***3***	90	270	65%	15,795
MIA+	FL	MIA/FLL CMSA	Q14	1	2	117	234	75%	15,795
		Sum/Average	Q14	**9**	***24***	**117**	**2,742**	**74%**	**184,248**
NY+	NY	New York CMSA	Q15	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q15	1	3	132	396	80%	28,512
WS+	DC	BWI/IAD CMSA	Q15	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q15	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q15	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q15	1	2	132	264	80%	19,008
ATL	GA	***Atlanta***	Q15	1	***3***	90	270	65%	15,795
SFO+	CA	***SFO/OAK CMSA***	Q15	1	***2***	132	264	65%	15,444
BOS+	MA	Boston CMAS	Q15	1	3	90	270	70%	17,010
MIA+	FL	MIA/FLL CMSA	Q15	1	2	117	234	75%	15,795
		Sum/Average	Q15	**10**	***27***	**120**	**3,126**	**74%**	**209,304**
NY+	NY	New York CMSA	Q16	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q16	1	3	132	396	80%	28,512
WS+	DC	BWI/IAD CMSA	Q16	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q16	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q16	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q16	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q16	1	3	90	270	75%	18,225
SFO+	CA	SFO/OAK CMSA	Q16	1	2	132	264	75%	17,820
BOS+	MA	Boston CMSA	Q16	1	3	90	270	75%	18,225
MIA+	FL	MIA/FLL CMSA	Q16	1	2	117	234	75%	15,795
		Sum/Average	Q16	**10**	**27**	**120**	**3,126**	**77%**	**215,325**
		Total							**775,278**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-13 High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
DBO+5									
NY+	NY	New York CMSA	Q17	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q17	1	3	132	396	80%	28,512
WS+	DC	BWI/IAD CMSA	Q17	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q17	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q17	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q17	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q17	1	3	90	270	75%	18,225
MSP	MN	***Minneapolis/St Paul***	Q17	1	***2***	70	140	65%	8,190
SFO+	CA	SFO/OAK CMSA	Q17	1	2	132	264	80%	19,008
BOS+	MA	Boston CMSA	Q17	1	3	90	270	75%	18,225
MIA+	FL	MIA/FLL CMSA	Q17	1	2	117	234	75%	15,795
		Sum/Average	Q17	**11**	***29***	**115**	**3,266**	**76%**	**224,703**
NY+	NY	New York CMSA	Q18	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q18	1	3	132	396	80%	28,512
WS+	DC	BWI/IAD CMSA	Q18	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q18	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q18	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q18	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q18	1	3	90	270	75%	18,225
MSP	MN	Minneapolis/St Paul	Q18	1	2	70	140	70%	8,820
SFO+	CA	SFO/OAK CMSA	Q18	1	2	132	264	80%	19,008
DFW+	TX	***DFW CMSA***	Q18	1	***2***	90	180	65%	10,530
BOS+	MA	Boston CMSA	Q18	1	3	90	270	75%	18,225
MIA+	FL	MIA/FLL CMSA	Q18	1	2	117	234	75%	15,795
		Sum/Average	Q18	**12**	***31***	**113**	**3,446**	**75%**	**235,863**
NY+	NY	New York CMSA	Q19	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q19	1	3	132	396	80%	28,512
WS+	DC	BWI/IAD CMSA	Q19	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q19	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q19	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q19	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q19	1	3	90	270	70%	17,010
MSP	MN	Minneapolis/St Paul	Q19	1	2	70	140	75%	9,450
SFO+	CA	SFO/OAK CMSA	Q19	1	2	132	264	80%	19,008
DFW+	TX	DFW CMSA	Q19	1	2	90	180	70%	11,340
DEN	CO	***Denver***	Q19	1	***2***	90	180	65%	10,530
BOS+	MA	Boston CMSA	Q19	1	3	90	270	75%	18,225
MIA+	FL	MIA/FLL CMSA	Q19	1	2	117	234	75%	15,795
		Sum/Average	Q19	**13**	***33***	**112**	**3,626**	**75%**	**246,618**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

Table 2-13 High-Case Forecast of Air Passenger Aviation Activity IAP from DBO+1 to DBO+5

Location	State	City/Region	Quarter	Destinations Served	Departures Per Day	Seats Per Departure	Total Seats	Load Factors	Enplanements
NY+	NY	New York CMSA	Q20	1	4	117	468	75%	31,590
LA+	CA	Los Angeles CMSA	Q20	1	3	132	396	80%	28,512
WS+	DC	BWI/IAD CMSA	Q20	1	4	90	360	75%	24,300
LAS	NV	Las Vegas	Q20	1	2	150	300	80%	21,600
MCO	FL	Orlando	Q20	1	2	150	300	75%	20,250
PHX	AZ	Phoenix	Q20	1	2	132	264	80%	19,008
ATL	GA	Atlanta	Q20	1	3	90	270	75%	18,225
MSP	MN	***Minneapolis/St Paul***	Q20	1	***3***	70	210	65%	12,285
SFO+	CA	SFO/OAK CMSA	Q20	1	2	132	264	80%	19,008
DFW+	TX	DFW CMSA	Q20	1	2	90	180	75%	12,150
DEN	CO	Denver	Q20	1	2	90	180	70%	11,340
DTW+	MI	***Detroit CMSA***	Q20	1	***2***	70	140	65%	8,190
BOS+	MA	Boston CMSA	Q20	1	3	90	270	75%	18,225
MIA+	FL	MIA/FLL CMSA	Q20	1	2	117	234	75%	15,795
		Sum/Average	Q20	**14**	***36***	**109**	**3,836**	**75%**	**260,478**
		Total							**967,662**

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
Note: ***Blue*** highlights denote change in frequency or introduction of new destination.

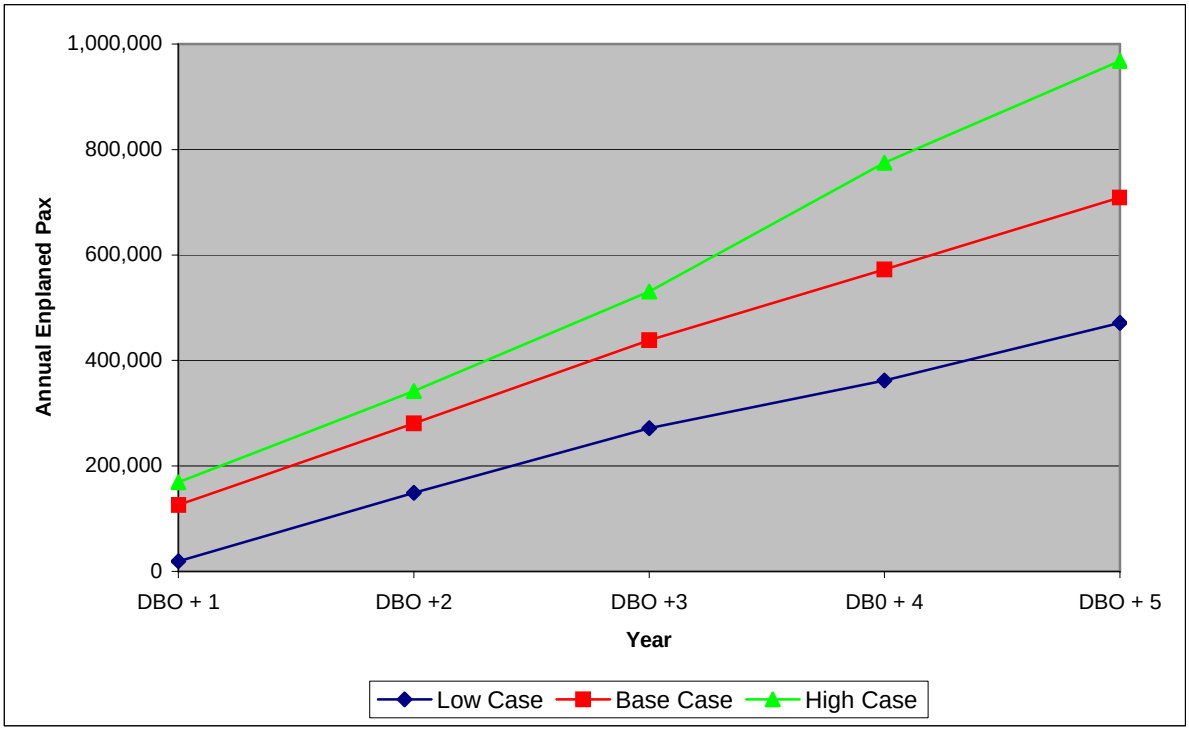
Summary of IAP Air Passenger Aviation Activity Forecasts. A summary of the three forecast ranges developed in 2004 is presented in **Table 2-14, Summary of Air Passenger Aviation Activity Forecast Ranges IAP from DBO+1 to DBO+5** and **Exhibit 2-3, Summary of IAP Air Passenger Aviation Activity Forecast Ranges, 2004**. The number of destinations represents the markets served by the end of the planning horizon year. The average annual growth rate under each forecast case is also presented. The Low-Case Forecast has the highest average annual growth rate due to the low number of enplanements that the forecast realizes in DBO+1.

Table 2-14 Summary of Air Passenger Aviation Activity Forecast Ranges IAP from DBO+1 to DBO+5

Planning Horizon Year	Low-Case		Base-Case		High-Case	
	Destination	*Enplaned Passengers*	*Destination*	*Enplaned Passengers*	*Destination*	*Enplaned Passengers*
DBO + 1	2	19,575	3	125,901	4	169,398
DBO + 2	3	149,364	4	280,854	5	341,726
DBO + 3	4	271,944	6	438,251	7	530,645
DBO + 4	5	362,273	8	572,184	10	775,278
DBO + 5	6	471,056	10	709,101	14	967,662
Average. Annual Growth (5 Years)		121.5%		54.1%		54.6%
Annual Growth (DBO+5)		30.0%		23.9%		24.8%

Source: FAA, *FAA Aerospace Forecasts: Fiscal Years 2008-2025*, Tables 10 and 24 March 2009, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2008-2025/, Forms 41 and 298-C, USDOT. Revenue Enplanements are defined as the number of passengers boarding an aircraft (USDOT, BTS).

Exhibit 2-3 Summary of IAP Air Passenger Aviation Activity Forecast Ranges, 2004



Source: AECOM, formerly TAMS, an Earth Tech Company, 2004.

Table 2-15, IAP Air Passenger Aviation Activity Forecasts, presents the three forecast ranges of air passenger activity for the IAP. The forecasts assume that the IAP at SSA will serve the Primary Passenger Market as identified for 2004 as being within 45-minute travel time from the airport site and with no overlap of the MDW 45-minute travel time passenger market. These 2004 aviation forecasts represent a reasonable expectation of the level of air passenger activity that could develop at SSA during the IAP. As stated previously, it is assumed that SSA is expected to primarily serve the domestic LCC market, with relatively little connecting, commuter and international activity during initial years.

Long-Range Projections of Air Passenger Aviation Activity

Domestic Air Passenger Aviation Activity. IDOT recognizes that it is difficult to accurately estimate long-range passenger forecasts for a new airport. The three-passenger activity forecast scenarios (low, base and high) for the first five years of operation presented above were formulated by defining a PSA that could support an airport within the South Suburban area of the greater Chicago region. The underlying assumption is that the service area boundary is within 45-minutes travel time of the proposed site, excluding areas that overlapped with MDW's service area. The expected passenger demand at SSA, beyond DBO+5 will greatly depend upon:

- Type of airline service that develops at the new facility;
- Airside and landside facilities that are constructed as part of the IAP;
- Ability of SSA to adapt to potential airline requirements; and
- Vitality of the local and national economy.

IDOT assumes that after DBO+5, the airport could begin to compete with other commercial airports and that market forces will drive aviation demand at SSA.

The SSA domestic passenger forecast considers the long-term growth that could occur at SSA in order to assess future potential airport requirements. Long-term projections of air passenger aviation activity were calculated, using the low-case and high-case IAP forecasts as foundations to develop a potential range of activity that could occur at SSA in the future.

For purposes of determining long-range projections at SSA, the low, long-range projection assumes that domestic passenger enplanements could be inclined to follow the FAA long-term annual growth rates. The potential long-range passenger forecasts used as a benchmark the historical rates of growth at several airports located in multi-airport systems that have accommodated commercial passenger activity for several years and also have capacity to expand (2004). The growth rates of historical activity at these airports were considered relevant in estimating the long-term passenger potential at SSA, since it will operate under similar circumstances (in a multi-airport system) and could reflect what may occur at SSA in the future. Using USDOT T-100 data during the preparation of the 2004 forecast, domestic passenger activity was reviewed at FLL, BWI, PVD, OAK and San Jose International (SJC) Airports from 1990 to 2002. All of these airports have had both mainline and LCC service for several years[80] (2004). This study also calculated growth rates at each airport from 1990 to 2000 and compared them with the growth rates for 1990 to 2002 to isolate the effects of the terrorist attacks of September 11, 2001 and the downturn in the global economy. **Table 2-16, Average Annual Growth Rates of Airports within Multi-Airport Systems**, shows the average annual growth rates for the above-mentioned airports at the time the forecasts were developed.

As depicted in **Table 2-16, Average Annual Growth Rates of Airports within Multi-Airport Systems**, these rates of growth have been greater than the U.S. average for at least 12 years (2004), a relatively long period of time. All of the airports included in the analysis are located in multi-airport systems. The low IAP forecast scenario identified

[80] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Table 2-15 IAP Air Passenger Aviation Activity Forecasts

Passenger Activity Item	DBO+1	DBO+5
High-Case Forecast		
Air Carrier Operations		
Domestic (Includes Charters)	3,400	23,500
Domestic Connections		
Total Domestic	3,400	23,500
International		
Total Air Carrier	**3,400**	**23,500**
Air Carrier Instrument	1,700	23,500
Air Carrier Enplanements		
Domestic O&D	169,400	968,000
Domestic Connections		
Total Domestic	169,400	968,000
International		
Total Air Carrier Enplanements	**169,400**	**968,000**
Base-Case Forecasts		
Air Carrier Operations		
Domestic (Includes Charters)	2,400	16,200
Domestic Connections		
Total Domestic	2,400	16,200
International		
Total Air Carrier	**2,400**	**16,200**
Air Carrier Instrument	1,200	16,200
Air Carrier Enplanements		
Domestic O&D	126,000	709,000
Domestic Connections		
Total Domestic	126,000	709,000
International		
Total Air Carrier Enplanements	**126,000**	**709,000**
Low-Case Forecasts		
Air Carrier Operations		
Domestic (Includes Charters)	360	9,800
Domestic Connections		
Total Domestic	360	9,800
International		
Total Air Carrier	**360**	**9,800**
Air Carrier Instrument	180	9,800
Air Carrier Enplanements		
Domestic O&D	19,600	471,000
Domestic Connections		
Total Domestic	19,600	471,000
International		
Total Air Carrier Enplanements	**19,600**	**471,000**

Source: TAMS, an Earth Tech Company, 2004.

Note: Military and/or other U.S. Government aircraft are expected to use the SSA in the future, however, a projection of aeronautical operations and passengers by type and amount is not quantifiable at this time and is expected to be minimal in nature.

above assumes that domestic passenger activity at DBO+5 will be 471,000 enplanements. Since the low-case scenario forecasts 121.5 percent average annual growth between DBO+1 and DBO+5 and 30.0 percent between DBO+4 and DBO+5, IDOT assumes there will be a gradual transition of 10 years to reduce to the FAA national levels, which is expected to average 3.3 percent per year. Based on these assumptions, the low-case, long-range projections are 2.23 million enplanements at DBO+20.

Table 2-16 Average Annual Growth Rates of Airports within Multi-Airport Systems

Airport	1990-2002	1990-2000
Ft Lauderdale International	5.9%	6.2%
Baltimore/Washington International	5.9%	7.2%
Providence – TF Green	7.4%	9.0%
Oakland International	7.0%	7.1%
San Jose International	4.0%	6.7%
National Domestic Average	1.9%	3.4%

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

The high, SSA long-range projections are also based on case studies of airports where LCC airlines established commercial service to multiple destinations from an originating airport within a multi-airport system. In particular, MDW, MHT, NH and PVD, RI Airports were examined. Some of the airports included in this discussion have already been addressed beforehand, but this analysis considers different time periods at these airports for the high-case, long-range projections.

Southwest Airlines initiated service at MDW in 1992, shortly after the original Midway Airlines declared bankruptcy and withdrew from the Chicago market. According to USDOT T-100 statistics, MDW experienced an average annual passenger growth of 14 percent from 1992 to 2002[81], a much higher growth rate than the national average. Domestic air passenger activity at MDW went from 2.2 to 8.1 million enplaned passengers during this time period.[82]

In the case of MHT, it is important to note that Southwest was already providing service to the Boston CMSA from PVD. MHT experienced an average annual growth of 25.8 percent from 1996 to 2002, even with a decrease in activity over the last two years.[83] Between 1996 and 2000, the domestic air passenger activity growth rate at MHT was 39.9 percent.[84]

PVD had an average annual growth of 14.5 percent between 1995 and 2002[85], which is similar to the growth rate experienced at MDW, but over a shorter time period. Other airports were also examined where some LCC activity exists, such as BWI and OAK Airports. These two airports include a mix of scheduled commercial service provided by LCCs and mainline carriers.[86] BWI experienced an average passenger growth rate between 1992 and 2002 of 9.8 percent per year, while OAK experienced an average annual increase of 7.0 percent[87] between 1990 and 2002, still significantly above national averages.

The general intent of the discussion regarding benchmark airports in the original 2004 forecasts is to identify where such airports exist and the type of services to be potentially offered at SSA. The premise, notwithstanding the specific locations within a community, is that the initial airline service that would begin at a new passenger carrier airport would not be one of the legacy carriers because, presumably, those carriers would be serving the

[81] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[82] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[83] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[84] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[85] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[86] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[87] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

primary airport. However, as noted below in **Long-Range Projections of Air Passenger Aviation Activity Summary**, conditions have changed greatly in the aviation industry since 2004 and there can be a legitimate question about the potential for sustained growth as assumed by the 2004 forecast.

On the other hand, the dynamics of airline selection of an airport that were integral in the discussion of the original 2004 forecasts, which apply to LCCs, still remain in the 2009 Forecast Verification Report. These factors include:

- Operation of point-to-point service;
- Use of relatively homogeneous aircraft fleets;
- Attraction of airlines with low operation costs; and
- Attraction of airlines that tend to use supplemental/secondary airports and airlines that offer attractive fares.

Generally, the location of the airport may no longer be as important as its capacity or the ability to negotiate a favorable operating agreement. In many ways, Southwest Airlines now performs like a legacy carrier for some locations (i.e., Dallas Love Field (DAL), Lambert-St. Louis International Airport (STL), Pittsburgh International Airport (PIT), BWI, Philadelphia International Airport (PHL) and MDW). Today, LCCs are no longer found at only one airport in a metropolitan area. For example, Southwest has several instances where it operates at multiple airports within a CMSA:

- New York (LGA and ISP);
- Chicago (MDW and Milwaukee (MKE));
- San Francisco (San Francisco International SFO, SJC and OAK);
- Los Angeles (Los Angeles International Airport (LAX), Bob Hope Airport (BUR), John Wayne-Orange County Airport (SMA) and Ontario International Airport (ONT)); and, most recently,
- Boston (BOS, PVD and MHT).

Interestingly, Southwest's service of BOS is the "third airport" service in the area. When the SSA study was initiated in 1984 (Peat, Marwick and Main Feasibility Study) and throughout most of its 26-year history, there was never any thought to the opportunity for an international LCC being a potential candidate for service at the airport. Nowadays, there are several locations in the world that have multi-airport communities, with airports that have international service, domestic service, or both. For example, London has five international airports and their third international airport, London Stansted (STN), is the location for their low-cost international carriers.

These forecasts do not speculate which carriers might serve SSA, but presents potential characteristics of the carriers that make the most sense to initiate service for the airlines at SSA, such as:

- The airport existing at the right time and location to take advantage of serving a particular carrier;
- The ability of the owner to negotiate an operating agreement that will enable the airline to make a profit;
- The airport having a potential demand profile, which a particular airline identifies as being significant enough for that airline to serve that market;
- Recognizing the potential interaction between that airline and other airlines within the market area itself (code share agreements or politics); and,
- Fuel costs at the time.

In summary, there are a wide variety of factors which are considered in the decision-making process of an airline to seek service at a particular market with a particular type of aircraft. Given all of these intangibles, it is important to note the factors which would make SSA an excellent candidate – underserved portion of a world market, a large service area population and excellent accessibility within its region.

Twenty years ago, the proposed SSA site was on the south edge of the Chicago Metropolitan area that stretched from Hoffman Estates to Milwaukee, southwest to Orland Park, south to Chicago Heights and east as far as

Gary/Hammond/East Chicago. Today, there is virtually no perceptible gap in urban land use south along the I-355 corridor, with Joliet, Frankfort, Crete and Crown Point integrated into the greater Chicago area as is the SSA site. By DBO+5, the community will extend, via I-57, and include Manteno/Kankakee. By 2020, the SSA PSA is estimated to have a population of 2,285,000 people which will be the 33rd largest metropolitan area in the U.S. between #32 Cleveland/Loran/Elyria (2,286,385) and #33 Indianapolis (2,280,118)[88].

As to high-growth versus low-growth periods, the 2009 Forecast Verification Report uses national demand as generated by the FAA. Also, by 2016, it is expected that the economy will have recovered and pent-up demand will be accommodated. FAA national forecasts indicate a rapid increase in demand between 2010 and 2013, with a 4.6 percent growth per year.

Based on these benchmark airport examples, for the high, long-range projection, IDOT predicted a decrease in growth rate between DBO+4 and DBO+5, which is 24.8 percent (**see Table 2-14, Summary of Air Passenger Aviation Activity Forecast Ranges IAP from DBO+1 to DBO+5**). From DBO+6 to DBO+9, the long-range projections assume a gradual drop in the growth rate of 2 percentage points annually until reaching 14.8 percent in DBO+9, then the projections assume a decrease of 1 percent per year, resulting in an annual growth rate of 5.8 percent in DBO+20. The average annual growth for the 15-year period would be 13.1 percent[89], with a decreasing trend over time. Using that projected growth rate, domestic enplaned passenger activity at SSA in DBO+20 could reach 6.14 million enplanements, assuming the airport opens in 2010. **Exhibit 1-6, 2007-2030 Change in Population Density per Square Mile by Minor Civil Division (MCD)**, shows the low and high, long-range projections for domestic air passenger aviation activity for SSA. IDOT expects the base, long-range domestic passenger activity at SSA to be between the low and high points shown on **Exhibit 2-4, Domestic Enplanements at SSA Low and High Long-Range Projections**.

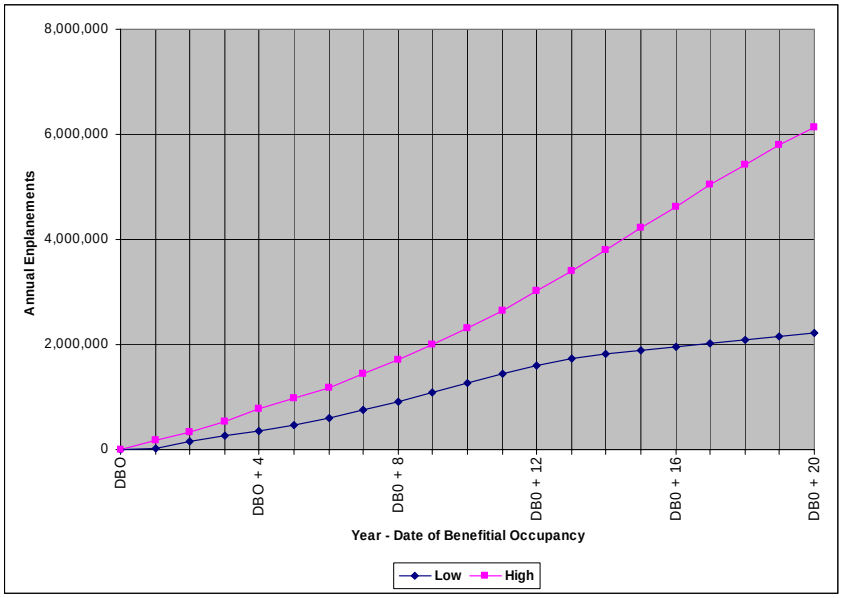
The enplaned passengers at DBO+20 were converted into aircraft operations assuming average aircraft seats per departure and load factors for that point in time. IDOT assumes that the airlines at SSA would remain using narrow-body aircraft and regional jets, with a few wide-body airplanes on long-range, high-density routes. Based on the potential airline schedule developed for the IAP low, base and high forecast scenarios, shown in **Tables 2-11 through 2-13**, the assumed aircraft seats per departure and load factors at DBO+5 are shown in **Table 2-17, Aircraft Seats per Departure and Load Factor at DBO+5**.

As shown in **Table 2-17, Aircraft Seats per Departure and Load Factor at DBO+5**, the average numbers of seats per aircraft departure at DBO+5 for the low-case scenario is larger than for the base and high-case domestic forecast scenarios. This is because the low-case forecast only includes service to the largest markets within the IAP PSA and larger aircraft are expected to serve those markets; therefore, the average number of seats per aircraft departure is higher. In any case, IDOT assumes that the average number of aircraft seats per departure for the long-range projections will gradually increase to 130 seats per departure by DBO+20.

IDOT recognizes that the assumption concerning the average number of seats per aircraft departure for DBO+20 is provisional since major U.S. airlines have not ordered any new aircraft in the last few years.[90] However, FAA forecasted in 2004 that the overall passenger aircraft size was going to increase in the future and this assumption still holds true in 2009. The estimated load factors for DBO+5 for the three different IAP forecast scenarios (76-77 percent) are higher than the national average. Thus, IDOT assumes that the passenger load factor will level off around 70 percent by DBO+20; this forecast percentage would likely have been higher if forecasted in this 2009 update.

[88] The source for the information is the publication: Forecasting 2020 U.S. County and MSA Populations by Peter Linneman and Albert Saiz, The Wharton School, University of Pennsylvania, Table IV, 2006.
[89] Table 2-22, 2006 http://knowledge.wharton.upenn.edu/papers/1319.pdf.
[90] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Exhibit 2-4 Domestic Enplanements at SSA Low and High Long-Range Projections



Source: AECOM, formerly TAMS an Earth Tech Company, 2004.

Table 2-17 Aircraft Seats per Departure and Load Factors at DBO+5

Forecast Scenario	Average Seats Per Departure	Load Factor
Low-Case	128.4	76.9%
Base-Case	116.6	75.9%
High-Case	109.9	75.9%

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.

Conversely, since 2004, load factors have continued to consolidate and are expected to be higher than was forecast in 2004. The implications of the load factor change would be a reduction in numbers of aircraft operations for the same number of passengers. If, as documented in Chapter 1, the potential air passenger demand is stronger in 2009 than was forecast in 2004, the number of potential enplanements may also be higher, resulting in minimal or no difference in the number of aircraft operations.

The USDOT T-100 data[91] in 2004 assumed passenger flights would have an average of 4 percent in-transit passengers for domestic activity throughout the planning period. This would impact the number of aircraft operations, reducing the number of "available" seats on an aircraft for accommodating a 100 percent enplaning passenger load.

Based on the above assumptions, **Table 2-18, Domestic Passenger Aircraft Operations at SSA Long-Range Projections**, presents the estimated number of domestic, commercial, passenger aircraft operations for DBO+10 and DBO+20 for the low and high, long-range projections.

[91] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Table 2-18 Domestic Passenger Aircraft Operations at SSA Long-Range Projections

Forecast Case	DBO+5			DBO+10			DBO+20		
	Load Factor	*Aircraft Size*	*Aircraft Operations*	*Load Factor*	*Aircraft Size*	*Aircraft Operations*	*Load Factor*	*Aircraft Size*	*Aircraft Operations*
Low-Case	77%	128.4	9,800	74%	129.0	27,600	70%	130.0	50,900
High-Case	76%	109.9	23,500	73%	117.0	56,200	70%	130.0	140,300

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.

International Air Passenger Aviation Activity. Similar to the long-range projections for domestic air passenger activity at SSA, IDOT developed a low and high, long-range projection for international air passenger activity to establish the potential range of international activity that could occur at SSA in the future. The low, long-range projection assumed that SSA would have no scheduled international air passenger activity. However, some seasonal charter flights could be expected, particularly during the winter months, to vacation destinations in the Caribbean and Mexico.

Under the high, long-range projection, IDOT foresaw potential for limited international passenger activity after DBO+5. Using the IAP high-case forecast as a starting point, IDOT assumed that initially-scheduled daily flights to Canadian business destinations (i.e., Toronto and Montreal), using large regional jets (90 seats), could begin in DBO+6. Within 5 years, SSA could start providing weekly service to various Caribbean and Mexican destinations with narrow-body aircraft (see **Table 2-19, Potential International Passenger Schedule Long-Range Projections, DBO+6 to DBO+10**). Scheduled, long-range flights (i.e., Europe or Asia) could be provided if airport activity significantly increases in the future.

Table 2-19 Potential International Passenger Schedule Long-Range Projections DBO+6 to DBO+10

International Destinations	Years	Number of Departures Per Week	Aircraft Size	Load Factor	Passengers Per Week	Annual Enplaned Passengers
Canadian Destinations	DBO+6	13	90	65%	761	39,500
	DBO+7	26	90	65%	1,521	79,000
	DBO+8	26	90	70%	1,638	85,000
	DBO+9	26	90	75%	1,755	91,000
	DBO+10	39	90	75%	2,663	137,000
Caribbean & Mexican Destinations	DBO+8	3	150	70%	315	16,000
	DBO+9	4	150	75%	450	23,000
	DBO+10	5	150	75%	563	29,000
Sum of the international markets	DBO+6	13	90	65%	761	39,500
	DBO+7	26	90	65%	1,521	79,000
	DBO+8	29	96.2	70%	1,953	101,000
	DBO+9	30	98	75%	2,205	114,000
	DBO+10	44	96.8	75%	3,195	166,000

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.

IDOT believes that the potential level of international passenger activity is related to the domestic enplanements. In other words, the greater the domestic demand materializes, the greater is the likelihood for potential for international traffic at SSA. As already stated in this report, IDOT anticipates that LCCs would have a very strong presence at IAP and beyond. In 2004, ATA, a LCC, was already providing service to Mexican and Caribbean

destinations from MDW[92]; and JetBlue submitted a request to fly to the Dominican Republic[93] starting in the summer of 2004. LCCs in other parts of the world already offered international destinations (i.e., Ryanair[94] and easyJet[95] in Europe and AirAsia in Asia[96]). Virgin Atlantic had aspirations of establishing a LCC airline in the U.S. by 2005[97], as they had already done in Australia with their subsidiary Virgin Blue[98]. Most of these international destinations would probably be short- and medium-haul destinations, which is the type of routes that are expected to predominate at SSA.

The high, long-range projections assumed, in 2004, that service to Canadian destinations in DBO+6 and DBO+7 would constitute the scheduled international activity. To make the routes attractive to business travelers, IDOT anticipates that airlines would operate at least two flights per day to each destination. IDOT assumed that the airlines would use regional jets on Canadian routes since they are expected to primarily be short-haul destinations (i.e., eastern Canada).

To estimate international activity after DBO+10, historical growth rates at various U.S. airports with international traffic were reviewed to estimate the potential growth at SSA. Airport Council International (ACI) statistics[99] and various airport websites[100] were used to gather the appropriate international passenger traffic data.

Several airports where international activity has increased over the last 12-14 years (2004) were examined to assess growth rates in international enplanements. For instance, Continental Airlines significantly increased the number of international flights at George Bush Intercontinental/Houston Airport (IAH) and EWR Airports since 2000. The same was true of American Airlines at DFW and Delta Airlines at ATL Airports. The above-mentioned airlines have provided international flights from these airports, since they serve as major domestic hubs for them. **Table 2-20, Historical Average Annual Growth Rates for International Passenger Activity Selected U.S. Airports**, presents the average growth rates for several U.S. airports from 1992 to 2000. International air passenger activity for the years 2001 and 2002 was not included, since international activity was significantly affected by the terrorist attacks of September 11.[101]

Most of the airports reviewed experienced average annual growth of more than 12 percent per year; therefore, the long-range projections use an average increase of 12 percent per year from DBO+10 to DBO+20. IDOT assumed a gradual decline in the rate of growth during the 10-year period. Based on the assumption that the international enplanement activity projected in DBO+10 is expected to be 166,000, the estimate for DBO+20 would be approximately 540,000 enplanements.

Table 2-21, International Passenger Aircraft Operations at SSA Long-Range Projections, presents the expected number of long-range, international aircraft operations at SSA. Based on the tentative international passenger flight schedule from DBO+6 to DB0+10 shown in **Table 2-21, Summary of Air Passenger Aviation Activity at SSA Long-Range Projections**, the average number of seats per aircraft departure would be 90 for the first year of international activity, increasing to 96.8 seats in DBO+10. IDOT predicts that the average number of seats per international departure would increase to approximately 150 at DBO+20, since potential service could include a wide range of destinations, from short- to long-range (i.e., transoceanic) routes. Therefore, the aircraft fleet mix for international operations would probably consist of regional jets, narrow-body and wide-body aircraft. However, the most dominant markets would be short- and medium-haul flights.

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[92] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[93] JetBlue Airways, http://www.jetblue.com/learnmore/pressDetail.asp?newsId=236, 2009.
[94] Ryanair.com Ltd, http://www.ryanair.com/, 2009.
[95] EasyJet Airline Company Ltd, http://www.easyjet.com/asp/EN/routemap, 2010.
[96] "Having fun and flying high," *The Economist*, March 11, 2004, http://www.economist.com/printedition/PrinterFriendly.cfm?story_id=2502539.
[97] Maynard, Micheline, "President of Delta Air Lines to join Virgin," *The New York Times*, March 13, 2004, http://www.nytimes.com/2004/03/13/business/13virgin.html?pagewanted+print.
[98] Middleton, Karen, "Two Airlines Vie to Rule the Skies of Australia" *The New York Times*, March 18, 2004, http://www.nytimes.com/2004/03/18/business/two-airlines-vie-to-rule-the-skies-of-australia.html?pagewanted=1.
[99] World-wide Airport Traffic Report, Annual Reports, Airports Council International, Geneva, Switzerland, (1992-2004).
[100] Airports Council International, http://www.aci.aero/, 2004.
[101] Airports Council International, http://www.aci.aero/, 2004.

Table 2-20 Historical Average Annual Growth Rates for International Passenger Activity Selected U.S. Airports

Airport	Time Period	Average Annual Growth Rates
Atlanta-Hartsfield International (ATL)	1992-2000	12.8%
Dallas-Ft. Worth International (DFW)	1992-2000	14.2%
Denver International (DEN)	1992-2000	19.7%
George Bush Intercontinental (IAH)	1992-2000	12.2%
Newark Liberty International (EWR)	1989-2000	15.7%
SEA-TAC International (SEA)	1992-2000	6.3%
Chicago O'Hare International (ORD)	1990-2000	8.1%
Washington-Dulles International (IAD)	1992-2000	9.3%

Source: Annual World Airport Traffic Report, Airports Council International, 2004.

Table 2-21 International Passenger Aircraft Operations at SSA Long-Range Projections

Forecast Case	DBO+6			DBO+10			DBO+20		
	Load Factor	*Aircraft Size*	*Aircraft Operations*	*Load Factor*	*Aircraft Size*	*Aircraft Operations*	*Load Factor*	*Aircraft Size*	*Aircraft Operations*
High-Case	65%	90	1,350	75%	96.8	4,500	75%	150.0	9,800

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.

Historically, average load factors for international flights are normally higher than domestic[102]; thus, IDOT assumed, in 2004, that the average load factor at DBO+20 for international flights at SSA will be 75 percent. Current FAA forecasts (2009) project that U.S. international load factors, which are near 80 percent, are anticipated to remain almost constant over the forecast period by 2025.

Long-Range Projections of Air Passenger Aviation Activity Summary. **Table 2-22, Summary of Air Passenger Aviation Activity at SSA Long-Range Projections** and **Exhibit 2-5, Summary of Air Passenger Aviation Activity at SSA**, summarize the long-range, commercial passenger projections at SSA, for 2004, including domestic and international activity (there is no international low-case scenario).

Table 2-22 Summary of Air Passenger Aviation Activity at SSA Long-Range Projections

Range	Air Passenger Activity	DBO+5		DBO+10		DBO+20	
		Enplaned Passengers	*Aircraft Operations*	*Enplaned Passengers*	*Aircraft Operations*	*Enplaned Passengers*	*Aircraft Operations*
Low	Domestic	471,000	9,800	1,265,000	27,600	2,226,000	56,200
	International	0	0	0	0	0	0
	Total	471,000	9,800	1,265,000	27,600	2,226,000	56,200
High	Domestic	968,000	23,500	2,308,000	50,900	6,139,000	140,300
	International	0	0	166,000	4,500	540,000	9,800
	Total	968,000	23,500	2,474,000	55,400	6,679,000	150,100

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.

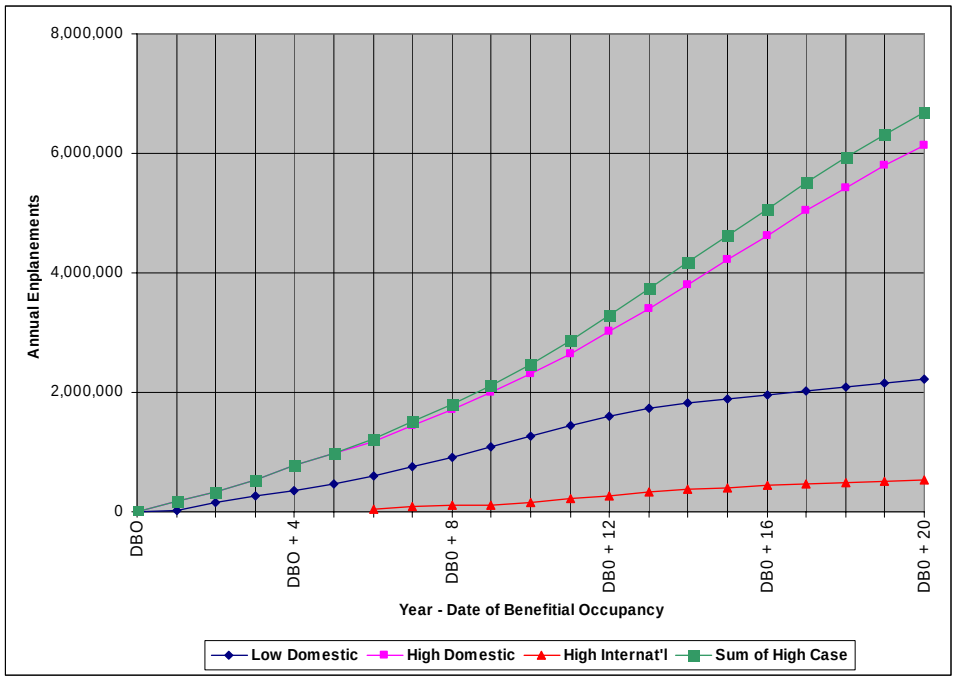
[102] FAA, *Aerospace Forecasts Fiscal Years 2003-2014*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/media/execsum.doc; FAA, Flight Plan 2004-2008.

Table 2-23, Comparison of Low- and High-Range Growth Rates for SSA Enplanement. Provides average annual growth rates for the low and high scenario periods forecast for SSA. As a consequence of the extent of numerical ranges, the growth rates for some scenarios appear to be inconsistent. For example, the growth rate for the period DBO+1 to DBO+5 for the low scenario is more than twice the growth rate forecast for the high scenario.

In terms of a qualitative sensitivity analysis of the average annual growth rates provided in **Table 2-22, Summary of Air Passenger Aviation Activity at SSA Long-Range Projections** and **Exhibit 2-5, Summary of Air Passenger Aviation Activity at SSA**, it merits noting the 13.1 percent over the course of a 15-year period DBO+5 to DBO+20 in the original 2004 forecasts is very aggressive, particularly in view of the context of this report.

In 2004, when the forecasts were developed, examples identified at that time cited airports where LCC airlines had established service and were providing service in multi-airport markets where no LCC service currently existed. Conversely, the SSA would be competing within a market having well-established LCCs. While there is now precedence for LCCs to operate in multiple markets (example of Southwest Airlines in various markets across the U.S., including four locations in greater Los Angeles), the reasonableness of the average annual growth rate for SSA to be sustained at 13.1 percent for 15 years is a legitimate question.

Exhibit 2-5 Summary of Air Passenger Aviation Activity at SSA



Source: AECOM formerly TAMS, an Earth Tech Company, 2004.

The demographic and social characteristics of the south suburbs as presented in Chapter 1 shows population growth exceeding expectations even during the severe recession. The estimate of an annual growth of 13.1 percent over a 15-year period, which would result in over six million enplanements, may be optimistic and sets an upper boundary. While this level of growth rates can be sustained for several years, there has been a fundamental change in the business model in airlines since 2004 due to cost structure, potential for upheavals in fuel prices and cautious approaches toward entering new markets or expanding existing route structures. These changes make the achievement of a 13.1 percent annual growth rate for 15 years and an achievement of six million enplanements DBO+20 at SSA highly improbable.

Table 2-23 Comparison of Low- and High-Range Growth Rates for SSA Enplanement

Average Annual Growth Rate	Values – DBO+1 to DBO+5	Average Annual Percentage Growth DBO+1 to DBO+5	Values DBO+5 to DBO+20	Average Annual Percentage Growth DBO+5 to DBO+20
Enplanements				
Low Scenario	19,600 to 471,000	88.9%	471,000 to 2,200,000	10.8%
High Scenario	169,400 to 968,000	41.7%	968,000 to 6,100,000	13.1%
Total Operations				
Low Scenario	36,260 to 48,312	5.9%	48,312 to 102,900	5.2%
High Scenario	45,463 to 71,958	9.5%	71,958 to 207,700	7.3%

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Chapter 3 – Air Cargo Forecasts

Section 1 – Overview of Findings and Methodology

SSA has the potential to capture a niche market share of air cargo demand in the Chicago area. Since longer-term economic conditions, the main drivers of air cargo demand are always highly uncertain and difficult to predict, any forecasts that depend on economic drivers are also characterized by a degree of uncertainty. One can still state, with certainty, that the demand of air cargo does move in tandem with global and national economic growth. The demand for air cargo world-wide has experienced a strong drop in the current economic downturn. The recovery from the current downturn is expected to be protracted. However, air cargo has recovered from past downturns, as businesses and consumers began to ask for more and more goods. Although the recovery from the current downturn may be protracted, the demand for goods will turn around and with it the demand for air cargo. In the longer-term, the national and regional capacity for handling air cargo will need to be able to accommodate a higher volume of goods.

The area surrounding the proposed airport site is especially posed for high economic and population growth, as discussed in the socio-economic forecasts. The proposed airport site is located in the second fastest growing county in the State of Illinois: the population of Will County increased by more than a third between 2000 and 2008.[103] The regional growth will generate a demand for more goods and with it a demand for more air cargo handling capacity.

The share of regional air cargo demand that will be captured by SSA will then depend on the quality and availability of appropriate airport facilities, ground access and the surrounding urban infrastructure. Due to its geographic location, the Chicago area has historically served as a major distribution hub for the U.S. The airport site has good ground access with several major highways and railroad lines. It is also important to note that the I-80 corridor, located north of the SSA site and south of the City of Chicago, is one of the busiest truck corridors in the nation.[104]

In order to determine the potential market share of SSA, this study first presents an overview of the national air cargo forecast for both domestic and international cargo. The regional forecast is analyzed next, along with the commodity categories that are expected to be transported by air in the region. The Chicago market area for air cargo is defined as consisting of four airports: GYY, RFD, MDW and ORD. Lastly, the forecast for SSA consists of low-, high- and base-case scenarios based on assumptions of market share that SSA would capture in the Chicago market area.

Section 2 – Current Industry Status: Global Recession

The deepening global recession of 2008 continues into 2009, with a dramatic impact on air cargo, with both U.S. domestic and international volumes dramatically reduced.

The air cargo supply chain domestically has suffered widely, with much of the volume simply reduced due to the economic downturn of industries like automotive and high tech leading the drop in shipments. The need for critical inventory replenishments that have traditionally moved via air has suffered most, as manufacturers, wholesalers and retailers struggle to turn their inventory. Additionally, the ground transport providers that substitute two-day service, in lieu of air transport, have seen volumes decline, but not nearly as dramatically as air cargo. It appears that shippers, especially in major market to major market lanes, are inclined to allow forwarders to utilize these "substitute air service providers" or deferred air services, rather than put these shipments in the air.

[103] Population Division, U.S. Census Bureau, Table 8 – Resident Population Estimates for the 100 Fastest Growing U.S. Counties with 10,000 or more Population in 2008: April 1, 2000 to July 1, 2008. Release Date: March 19, 2009.
[104] Indiana Department of Transportation, 2009.

In 2008, heavy losses were reported by IATA members. The combination of high crude oil prices in the summer and a falling demand took their toll on air cargo industry profits. While there has been some relief in oil prices recently, the damage was done when crude pushed up to $140 per barrel. Demand simply has not recovered from 2007 highs, either domestically in the U.S. or internationally. While there are signs of stabilization, a most difficult air cargo environment continues.

IATA reported, in April 2009, that after a dramatic drop in volumes of 22.6 percent in December 2008, further drops of 23.2 percent took place in January and 22.1 percent in February 2009. Air cargo remains a barometer of the global economic crisis.[105]

It is estimated by IATA that 35 percent of goods by volume traded internationally are transported by air. Given the state of global trade in May 2009, IHS Global Insight tends to agree that air cargo volumes will be a first indicator of a return to stabilization.

With the decline, new wide-bodied planes are being added at the annual rate of 200-300 through 2011. However, this increase in supply puts additional pressure on an industry that is forecasting a growth rate less than that of world trade in total. For example, air cargo is estimated to be a $50 billion business, with a projected growth rate of 4 percent in 2008, while global trade was expected to rise 7.5 percent. However, the first part of 2009 saw the largest air cargo group, the Asian carriers, drop 30.7 percent in international air freight traffic due to a loss of market share on long-haul routes combined with the global economic downturn. Japanese exports have fallen by almost one-half from February 2008 levels.

Middle Eastern carriers have the smallest drop in demand, with a 4.8 percent demand decline. Latin American air cargo carriers experienced a drop of 22.9 percent as demand for that region's commodities weakened. European and North American cargo carriers found demand declining 23.1 percent and 21.8 percent, respectively.

While consumption slowly started to recover in the last quarter of 2009, it will take at least another couple of years or more to recover to pre-recessionary levels. Retail sales during the 2009 holiday season were only slightly higher than in 2008. Overall real-consumer spending rose 0.2 percent in November.

The move from air towards other modes of transport has, however, started to reverse in the last quarter of 2009. Inventory to sales ratios have begun to slide again as manufacturers and retailers sell off their inventory stocks. After a devastating collapse, world trade volumes have begun to expand again, growing by 5 percent in August alone. In October, Global air cargo volumes were just 0.5 percent below previous year volumes and were 15 percent above the lowest point of December 2008. Load factors have also risen to levels last seen before the recession.

The first signs of the recovery have also been uneven across regions. Asia Pacific and the Middle East are leading the recovery. North American international volumes were still down 10.3 percent over previous year volumes as of September 2008. Domestic year-on-year volumes were also down albeit by a smaller 0.3 percent.

Suggestions are being made to streamline the traditional administrative paper flow of the industry. Air cargo will continue to be a vital part of the supply chain, especially globally, with U.S. international air cargo volumes returning to 2007 levels and beyond by 2015. The industry sees that there is a compelling need to modernize its paper flow and to enhance its service to the customer. Paper documents and transmittal, tracking and enhanced visibility of air cargo shipments must be improved. New providers, as well as established forwarders and integrators, are adjusting to these market demands. As new air cargo facilities come on board, carriers have an excellent opportunity to enhance speed and quality of information flows.

[105] Comments by IATA's General Director and CEO Giovanni Bisignani at the World Cargo Symposium, March 2009.

Section 3 – Current Industry Status: Legislation

The Transportation Security Administration mandated that effective February 1, 2009, 50 percent of all air cargo moving on board a passenger-carrying aircraft be screened. Since October 1, 2008, 100 percent of cargo boarded on a narrow-body, passenger aircraft has been screened. The screening is conducted by the airline before movement of the cargo. Shippers must provide written consent to screening of cargo movement.

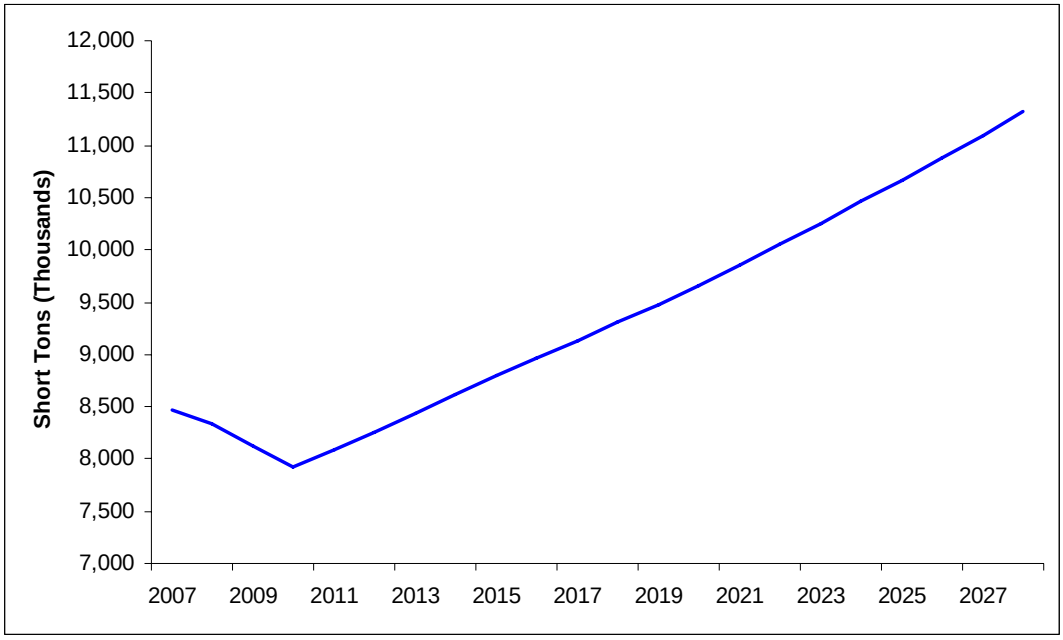
Screening of passenger aircraft cargo will possibly have a negative impact on cargo growth on these airlines. IHS Global Insight expects individual carriers to make that assessment based upon the revenue generated from this traffic. The screening adds both time and expense to the movement of this ancillary revenue stream. The mandate to screen 100 percent of all wide-body cargo by August 2010 makes the future of belly cargo suspect at this point in time.

Section 4 – National Forecasts

Since Chicago's air cargo market is highly dependent on broader global and national economic and air cargo trends, it is important to study the region's forecast within the context of a national forecast.

U.S. Domestic Air Cargo. The following **Exhibit 3-1, U.S. Domestic Air Cargo Forecast (2007-2028)**, present's IHS Global Insight's national forecast for domestic air cargo. This forecast is based on the IHS Global Insight database (see also **Appendix 2, IHS Global Insight Methodology of Proprietary Software SSA Air Cargo Forecast 2009**), which combines data from hundreds of freight data sources and is updated on an annual basis. In 2008, the domestic air cargo market consisted of more than 8.3 million short-tons.[106] Over the next two years, domestic air cargo will decline by a CAGR of -2.5 percent and fall below 8 million short-tons. Recovery will begin after 2010, with the growth rate through 2015 predicted to be about 2.1 percent. After 2015, domestic air cargo will then grow at a slower compound growth rate of about 1.9 percent. At 2015, national domestic volumes are predicted to be at about 8.8 million short-tons and at about 9.7 million short-tons in 2020.

Exhibit 3-1 U.S. Domestic Air Cargo Forecast (2007-2028)



Source: IHS Global Insight, World Trade Services, 2009.

[106] A short-ton is defined as 2,000 pounds which is the same nomenclature used in the United States to define "ton."

U.S. International Air Cargo. International air cargo in the U.S. market is expected to follow similar trends, although international air cargo will recover stronger than domestic cargo. Overall, U.S. international air cargo will fall by a CAGR of -9.1 percent between 2008 and 2010. The CAGR between 2010 and 2015 is predicted to be 5.8 percent and will decline to above 5.2 percent between 2015 and 2020. Beyond 2020, the CAGR is expected to be just below 5.2 percent. In 2008, international air cargo totaled less than 6.5 million metric-tons, of which less than 3.8 million, or about 62 percent, were imports. By 2015, international air cargo volumes are expected to be above 7 million metric-tons, with more than 4 million metric-tons being imports. Total U.S. international air cargo will be at 9.1 million metric-tons in 2020.

Table 3-1, International Air Cargo Growth Rates for U.S. Market, summarizes these growth rates and compares the growth rates for exports and imports. Air cargo imports are expected to grow at stronger rates than exports and to decline at a milder rate between 2008 and 2010.

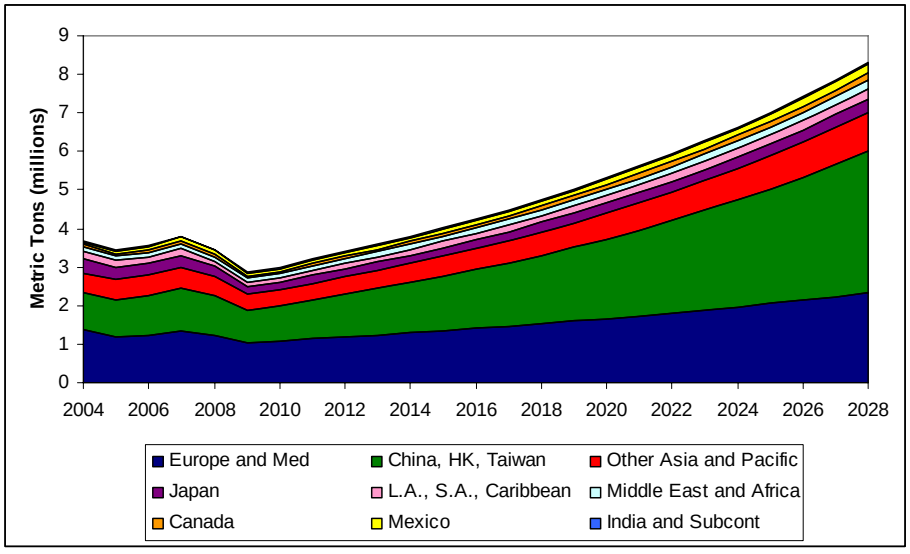
Table 3-1 International Air Cargo Growth Rates for U.S. Market

Time Period	Export CAGRs	Import CAGRs	Total CAGRs
2008-2010	-11.6%	-7.1%	-9.1%
2010-2015	5.5%	6.0%	5.8%
2015-2020	4.5%	5.8%	5.2%
2010-2020	5.0%	5.9%	5.5%
2008-2028	2.9%	4.5%	3.8%
2020-2028	4.3%	5.8%	5.2%

Source: IHS Global Insight, World Trade Services, 2009.

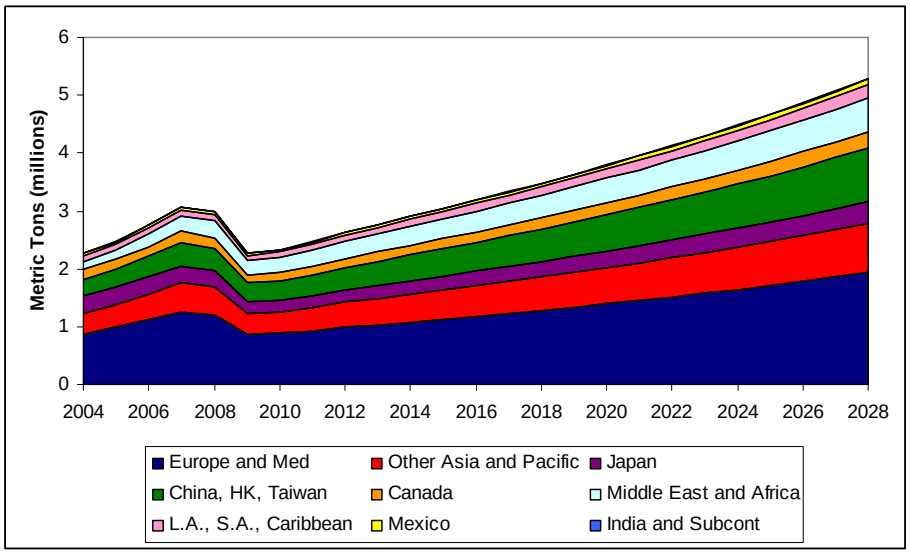
Exhibit 3-2, U.S. Air Cargo Imports by Trading Partner (2004-2028) and **Exhibit 3-3, U.S. Air Cargo Exports by Trading Partner (2004-2028)**, below present U.S. international air cargo trade by trading partner. Currently, Europe and the Mediterranean are the largest source of imports for air cargo. However, China will surpass this region to become the largest source of imports in 2014. Europe and the Mediterranean are also currently the largest purchaser of U.S. air cargo exports and will remain so over the next two decades. Asia, excluding China and Japan, is the second largest region to purchase U.S. air cargo exports.

Exhibit 3-2 U.S. Air Cargo Imports by Trading Partner (2004-2028)



Source: IHS Global Insight, World Trade Services, 2009.

Exhibit 3-3 U.S. Air Cargo Exports by Trading Partner (2004-2028)



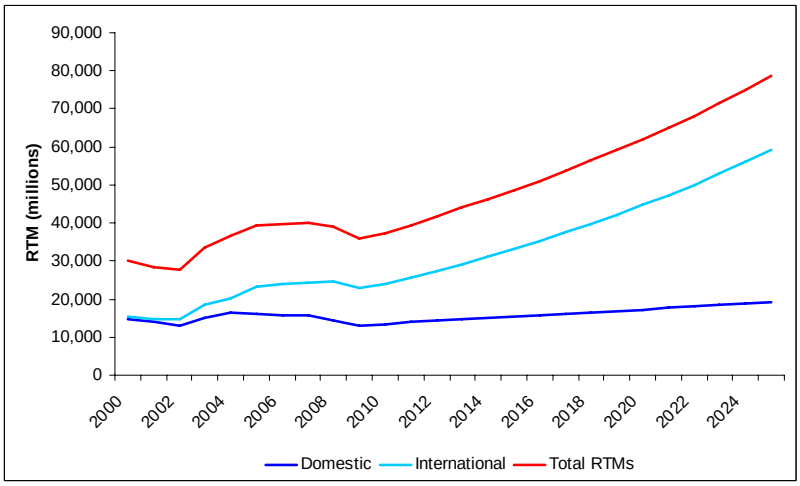
Source: IHS Global Insight, World Trade Services, 2009.

Section 5 – Other National Forecasts

The FAA and Boeing, two established sources that release annual air cargo forecasts at the national level, were reviewed for this study. Both sources predict the decline in air cargo RTM[107] to continue through 2010.

Exhibit 3-4, U.S. Air Cargo RTMs (FY2000-FY2025), below demonstrates the FAA forecast for both domestic and international air cargo. Between 2008 and 2010, the FAA expects domestic and international air cargo RTMs in the U.S. to shrink at the CAGR of -3.1 percent and -1.3 percent, respectively. Recovery is expected to begin after 2010, with domestic air cargo growing at a CAGR of 2.9 percent between 2010 and 2015 and international air cargo making a particularly strong recovery with a CAGR of 6.7 percent during the same time period. Between 2015 and 2020, growth rates are expected to level somewhat to 2.2 percent and 6.2 percent for domestic and international air cargo, respectively.

Exhibit 3-4 U.S. Air Cargo RTMs (FY2000-FY2025)



Source: Federal Aviation Administration, Aerospace Forecast, Fiscal Years 2009-2025, 2009.

[107] Revenue Tons Miles are the industry standard for measuring air cargo activity. However, for the purposes of this study, forecasts are presented in short-tons because a measure of volume is more relevant to determining the required size and types of facilities and infrastructure at an airport, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2009-2025/.

Although Boeing does not provide a year-by-year break-down of its forecasts, its growth rates are similar for U.S. air cargo. The average annual growth rate, between 2007 and 2017, for domestic air cargo is expected to be 2.9 percent. The longer-term domestic growth rate is also expected to taper off somewhat, with the 20-year average annual growth rate, between 2007 and 2027, expected to be 2.6 percent.[108]

Boeing predicts global air cargo to grow at an average annual growth rate of 5.8 percent between 2008 and 2027. Growth for international air cargo in the U.S. will be particularly driven by trade with Asia, particularly China (as discussed in the regional forecast section, Asia is currently the largest trading partner for the Chicago market). Air cargo Revenue Ton Kilometers (RTKs) between North America[109] and Asia are expected to grow at an average annual rate of 6.7 percent between 2007 and 2027. Trade with Europe, another major partner for international air cargo shipments in the Chicago area, is expected to grow at an average annual rate of 5.1 percent over the same time period.[110]

Overall, other major national air cargo forecasts are largely in line with the national air cargo trends predicted in this study.

Section 6 – Chicago Regional Forecasts

As stated in the introduction, the Chicago regional market area was defined as comprising of four airports: GYY, MDW, ORD and RFD. Both domestic and international air cargo demand was forecasted for this region in short-tons, using a combination of IHS Global Insight proprietary data and publicly-available data.

Chicago Area Domestic Air Cargo. The Chicago area domestic air cargo forecast is based on IHS Global Insight's database, which allows for the analysis of current and forecasted freight flows at the County level. The market area was defined as consisting of the counties containing the four airports within proximity to the SSA site, which are Cook County, IL; DuPage County, IL; Lake County, IN; and Winnebago County, IL.

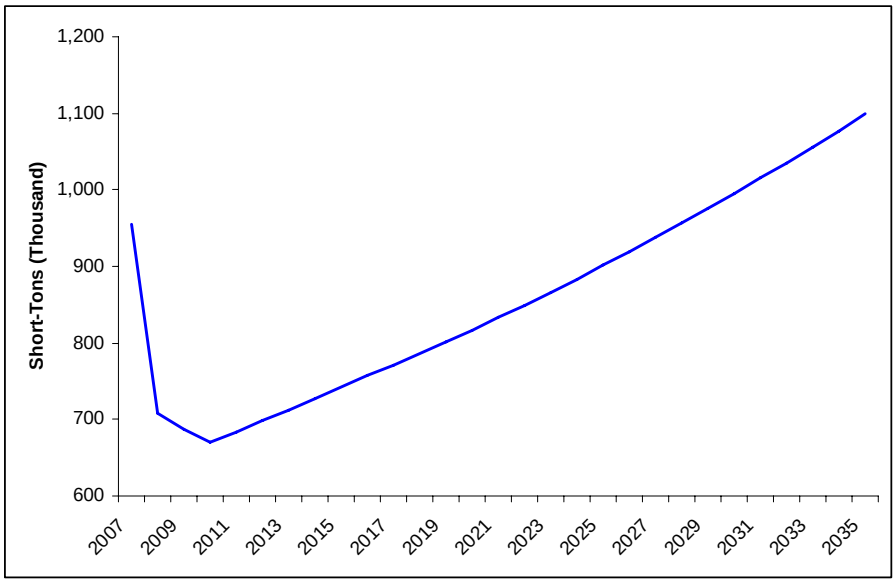
Exhibit 3-5, Chicago Region Domestic Air Cargo Forecast (2007-2035), below presents forecasted air cargo volumes for the Chicago area. In 2008, slightly more than 0.7 million short-tons of air cargo were either enplaned or deplaned at the four airports that comprise the Chicago market area, as defined in this study. This volume reflects the effect of the recession, which drove down tonnage from about 0.95 million short-tons in 2007. Volumes are expected to shrink further at a CAGR of -2.7 percent between 2008 and 2010, with much of the decline occurring in the first half of 2009. Between 2010 and 2015, domestic air cargo in the region will recover at a CAGR of 2.1 percent and will continue to grow at a slower CAGR of 1.9 percent through to 2020. After 2020, a growth rate of about 2.0 percent is expected. Domestic volumes in the region will, thus, reach about 0.75 million tons in 2015 and less than 0.82 million tons in 2020. A full recovery to 2007 volumes is not expected until 2030 due to the mature nature of the market and headwinds from the recession, as well as security requirements.

Twenty (20) percent reductions in total volumes were indeed experienced at many airports between 2007-2008, as shown by the Bureau of Transportations Statistics (BTS) data. The 2009 Forecast Verification Report uses 2008 as the base year, when many of the reductions had already taken place (see **Table 3-2, Historical and Forecast Chicago Region Air Cargo Volumes**). In mid-year 2009, the BTS is reporting a 6.3 percent reduction in domestic freight and mail between 2008 and 2009. It is reasonable to assume that some growth will return between 2009 and 2010. IDOT assumes an average annual growth rate of 2.7 percent from 2008 to 2010.

At the same time, the IDOT forecast is very conservative with respect to the recovery after the recession, with growth of only about 2 percent for domestic cargo. In the long run, the forecast is very conservative.

[108] http://www.boeing.com/commercial/cargo/wacf.pdf. The Boeing Company, World Air Cargo Forecast, 2008-2009.
[109] The United States accounts for 93.6% of air cargo trade with Asia and for 91% of air cargo trade with Europe.
[110] http://www.boeing.com/commercial/cargo/wacf.pdf. The Boeing Company, World Air Cargo Forecast, 2008-2009.

Exhibit 3-5 Chicago Region Domestic Air Cargo Forecast (2007-2035)



Source: IHS Global Insight, World Trade Services, 2009.

The Chicago region air cargo forecasts for individual airports for DBO +1, DBO+5 and DBO+20 were developed from a 2008 base total and extended using national air cargo forecast trends. The SSA forecasted market share of that regional total (combination of domestic and international) as a percentage is 1 percent for DBO+1, 3 percent for DBO+5 and 7 percent for DBO+20. The shared methodology is consistent with the original 2004 approved SSA forecasts.

Table 3-2, Historical and Forecast Chicago Region Air Cargo Volumes, shows a forecast for individual airports analogous with DBO+1, DBO+5 and DBO+20. The assumptions for this extrapolation of the original forecast numbers are:

- 2008 USDOT Form T-100 data for domestic and international air cargo for individual airports is the base;
- Percentages of the regional total for domestic and for international air cargo was calculated for individual airports;
- The regional air cargo forecast total developed by IHS Global Insight for horizon years is the control total for all airports in the market region, including SSA; and
- For forecast years, the SSA share of the regional market was subtracted from the regional total to represent the total for allocation to the remaining airports.

The 2008 percentages for domestic and international air cargo by airport were used to estimate scenario year totals. For example in 2008, domestic air cargo at ORD represented approximately 30 percent of the regional total, as defined. The SSA share of the regional market for DBO+1 is 1 percent (in DBO+1, SSA represents 2 percent domestic and 0 percent international). The forecast for ORD domestic air cargo for the SSA DBO+1 is 30 percent of the residual (i.e., 98 percent of the regional domestic air cargo total). This same process was used for each airport's forecast of domestic and international air cargo for DBO+1, DBO+5 and DBO+20.

Table 3-3, Top Ten Domestic Air Cargo Commodities for the Chicago Region, demonstrates the composition of the forecasted domestic air cargo traffic in the Chicago market area. As expected, the top commodity groups transported by air in and out of the region have a high value relative to volume. Mail and express is the largest air cargo component and is expected to remain so over the next two decades. Motor vehicle parts and accessories also feature prominently in the region. Paper products are in the top ten, due to the presence of a large publishing

Table 3-2 Historical and Forecast Chicago Region Air Cargo Volumes

Time Period	Chicago O'Hare		Chicago Midway		Gary/Chicago		Chicago Rockford		South Suburban		Chicago Region Total	
	Domestic	*International*	*Domestic*	*International*	*Domestic*	*International*	*Domestic*	*International*	*Domestic*	*International*	*Domestic*	*International*
1998	370,632	721,325	19,175	-	-	-	-	39	-	-	389,807	721,364
1999	340,929	778,333	18,980	-	-	35	22	7	-	-	359,931	778,375
2000	324,707	858,452	19,623	-	29	329	145	-	-	-	344,504	858,781
2001	310,161	769,123	17,918	7	41	10	212,613	3	-	-	540,733	769,143
2002	380,012	827,809	21,171	22	95	50	199,467	16	-	-	600,745	827,897
2003	606,764	902,220	26,209	78	266	67	201,223	66	-	-	834,462	902,431
2004	705,399	1,050,026	31,156	50	210	87	231,030	57	-	-	967,795	1,050,220
2005	705,074	1,098,788	36,288	66	231	29	244,230	7	-	-	985,823	1,098,890
2006	689,832	1,131,337	32,457	91	90	11	261,909	334	-	-	984,288	1,131,773
2007	645,537	1,187,269	28,624	97	163	27	280,353	336	-	-	954,677	1,187,729
2008	458,603	960,973	24,860	18	77	2	223,843	133	-	-	707,383	961,126
Growth Rates												
2002-2003	59.67%	8.99%	23.80%	254.55%	180.00%	34.00%	0.88%	312.50%	-	-	38.90%	9.00%
2003-2004	16.26%	16.38%	18.88%	-35.90%	-21.05%	29.85%	14.81%	-13.64%	-	-	15.98%	16.38%
2004-2005	-0.05%	4.64%	16.47%	32.00%	10.00%	-66.67%	5.71%	-87.72%	-	-	1.86%	4.63%
2007-2008	-28.91%	-19.06%	-13.15%	-81.44%	-52.76%	-92.59%	-20.16%	-60.42%	-	-	-25.90%	-19.08%
Chicago Regional Air Cargo Forecasts with inclusion of SSA Base-Case Forecast												
DBO +1	481,051	1,107,345	26,077	21	81	3	234,800	153	15,143	-	757,152	1,107,522
DBO +5	508,079	1,329,144	27,542	24	85	3	247,997	184	32,654	27,130	816,357	1,356,485
DBO +20	655,329	2,846,170	35,523	53	110	7	319,850	394	87,897	181,699	1,098,709	3,028,323

Sources: Historical information is from USDOT T-100 data, 2008.
IHS Global Insight, World Trade Services, 2009.
Hanson Professional Services Inc., 2009.

Table 3-3 Top Ten Domestic Air Cargo Commodities for the Chicago Region

2008		2015		2020		2025	
Commodity	*Short-Tons*	*Commodity*	*Short-Tons*	*Commodity*	*Short-Tons*	*Commodity*	*Short-Tons*
Mail and Express Traffic	274,305	Mail and Express Traffic	270,255	Mail and Express Traffic	274,916	Mail and Express Traffic	281,337
Chemical Preparations[nes]	142,940	Chemical Preparations[nes]	166,314	Chemical Preparations[nes]	183,684	Chemical Preparations[nes]	194,792
Motor Vehicle Parts or Accessories	97,509	Motor Vehicle Parts or Accessories	154,951	Motor Vehicle Parts or Accessories	164,776	Motor Vehicle Parts or Accessories	177,473
Freight of All Kind Shipments	93,995	Freight of All Kind Shipments	97,877	Freight of All Kind Shipments	119,582	Freight of All Kind Shipments	145,548
Men's or Boy's Clothing	66,282	Electronic Data Proc. Equipment	59,599	Electronic Data Proc. Equipment	78,113	Electronic Data Proc. Equipment	103,437
Paper or Building Board	54,033	Paper or Building Board	47,224	Paper or Building Board	47,094	Storage Batteries or Plates	49,844
Electronic Data Proc. Equipment	48,540	Men's or Boy's Clothing	45,116	Misc. Plastic Products	45,966	Misc. Plastic Products	49,560
Misc. Plastic Products	40,126	Misc. Plastic Products	42,408	Storage Batteries or Plates	41,254	Paper or Building Board	45,311
Storage Batteries or Plates	34,038	Storage Batteries or Plates	34,975	Men's or Boy's Clothing	38,708	Radio or TV Receiving Sets	44,956
Paper	32,851	Adhesives	32,055	Drugs and Medicine	35,921	Drugs and Medicine	41,230
TOTAL	**1,597,556**		**1,678,071**		**1,843,662**		**2,035,552**
Top Ten Share of Total	*55.4%*		*56.7%*		*55.9%*		*55.7%*

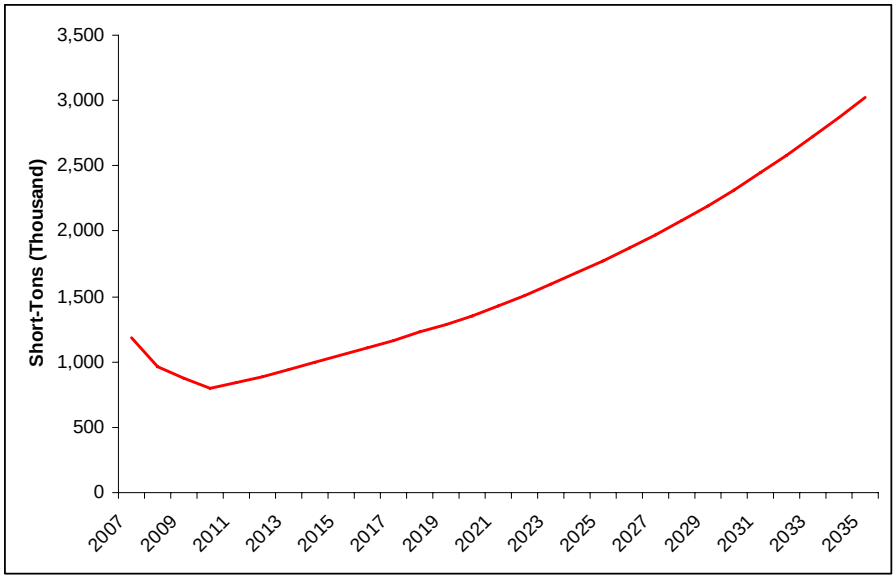
Source: IHS Global Insight, World Trade Services, 2009.
Note: Commodity groupings based on STCC 4-digit classification.
nes = Not Elsewhere Specified.

industry in the area, although the market share of this commodity is expected to decline. Drugs and medicines will capture a larger share of air cargo in the region.

Chicago Area International Air Cargo. The available national air cargo volumes for international air cargo are difficult to distribute down to the regional level with any degree of accuracy. For this reason, national level growth rates were applied to the regional baseline volumes for international air cargo. Airport volumes of international air cargo were taken from the 2008 Form 41 data compiled by the FAA. The volumes from the four airports, which comprise the Chicago market area for this study, were aggregated to arrive at a regional baseline. Growth rates for U.S. international air cargo from IHS Global Insight's WTS (**Appendix 2, IHS Global Insight Methodology of Proprietary Software SSA Air Cargo Forecast 2009**) were then applied to the regional baseline volume.

As **Exhibit 3-6, Chicago Region International Air Cargo Forecast (2007-2035)** demonstrates, 2008 international volumes in the region were less than 1 million short-tons, down from about 1.2 million short-tons in 2007. Applying the national CAGR of -9.1 percent between 2008 and 2010 yields international volumes in the region of just under 800,000 short-tons in 2010. Volumes are expected to recover according to the growth rates in **Table 3-1, International Air Cargo Growth Rates for U.S. Market**, reach more than 1.1 million in 2016 and less than 1.4 million by 2020. Unlike domestic air cargo, international air cargo in the region is expected to recover to 2007 volumes by 2017.

Exhibit 3-6 Chicago Region International Air Cargo Forecast (2007-2035)



Sources: FAA, Form 41 Schedule T-100 Data, 2008; IHS Global Insight, World Trade Services, 2009.

The commodity detail for international air cargo in the region, as defined by the four airports in proximity to the SSA site, is also difficult to define accurately. For this reason, IHS Global Insight presents both the top international air cargo commodities for the entire U.S., as well as the top commodities from U.S. Customs data for the Chicago custom's district. Note that the Customs definition of the Chicago area differs from the four airport market areas used to define the Chicago air cargo market throughout this study.[111] Together, **Table 3-4, Top Ten Chicago Customs District Air Cargo Commodities, 2007** and **Table 3-5, Top Ten International Air Cargo Commodities for the U.S.**, below should provide an overview of international air cargo in the Chicago area. As with all air cargo, the commodities transported in any region tend to either be perishable or to have a high ratio of value relative to volume.

[111] Airports located in the Chicago Customs District are: Quad City International Airport, Decatur Airport, Chicago Rockford International Airport, Chicago Midway International Airport, Chicago O'Hare International Airport, Peoria International Airport and Gary/Chicago International Airport.

In 2007, various types of machinery and equipment featured prominently in international air cargo for the region. As with domestic air cargo commodities, motor vehicle parts are also a large international air cargo commodity in the region, due to the proximity of the auto industry. In the future, drugs and medicine are expected to become a more commonly-flown commodity into and out of the region.

Lastly, **Table 3-6, Top International Air Cargo Trade Partners for the Chicago Custom District, 2007**, presents the top air cargo trading partners for the Chicago Customs District in 2007. Together, China and other Asian and Pacific countries comprise the largest portion of international air cargo in the Chicago area. U.S. bi-directional trade with these partners will exhibit the highest growth rates compared to all other trade regions.

Table 3-4 Top Ten Chicago Customs District Air Cargo Commodities, 2007

Exports		Imports	
Commodity	*Short-Tons*	*Commodity*	*Short-Tons*
Machinery and Equipment[nes]	62,668	Other Communications Equipment	90,257
Professional Equipment	37,126	Machinery and Equipment[nes]	74,533
Iron and Steel	33,462	Office and Computing Machinery	61,994
Parts of Motor Vehicles	32,534	Parts of Motor Vehicles	44,972
Metal Products	23,923	Wearing Apparel	44,278
Electrical Industrial Machinery	22,989	Electrical Industrial Machinery	38,338
Synthetic Resins	21,280	Professional Equipment	27,168
Chemical Products[nes]	17,677	Other Manufacturing[nes]	24,364
Office and Computing Machinery	15,684	Metal Products	21,733
Other Communications Equipment	15,073	Electrical Apparatus[nes]	19,715
Share of Total Exports	**54%**	**Share of Total Imports**	**66%**

Source: IHS Global Insight, World Trade Services, 2009.
nes = Not Elsewhere Specified.

Section 7 – SSA Forecast

In order to develop a forecast for SSA, this study uses the same market share assumptions developed in the 2004 forecast, but applies them to the updated regional forecast volumes presented in this report. The 2004 report conducted a thorough analysis of cities that are comparable to the Chicago area where one or more smaller airports complement a large, international hub, such as ORD.[112] Market shares were developed for low-, high- and base-case scenarios based on the market shares captured by the smaller airports for both domestic and international air cargo.

Market share assumptions for domestic air cargo are as follows:

- *Low-Case Scenario: No cargo activity until the original DBO+5, then accounting for 2 percent of the total regional market;*
- *Base-Case Scenario: Starting with 2 percent at the original DBO+1, then going to 4 percent at the original DBO+ 5; and,*
- *High-Case Scenario: Starting with 3 percent at the original DBO+1, then going to 6 percent at the original DBO+5.*

[112] The five Metropolitan areas selected as case studies in the 2004 SSA air cargo forecast are: Boston, Miami-Fort Lauderdale, Houston, Los Angeles, and San Francisco.

Table 3-5 Top Ten International Air Cargo Commodities for the U.S.

2008		2015		2020		2025	
Commodity	*Metric-Tons*	*Commodity*	*Metric -Tons*	*Commodity*	*Metric -Tons*	*Commodity*	*Metric -Tons*
Machinery and Equipment[nes]	611,455	Other Communications Equipment	774,478	Other Communications Equipment	1,169,129	Other Communications Equipment	1,747,992
Other Communications Equipment	561,297	Machinery and Equipment[nes]	637,580	Office and Computing Machinery	882,481	Office and Computing Machinery	1,286,449
Office and Computing Machinery	440,571	Office and Computing Machinery	595,561	Machinery and Equipment[nes]	767,308	Machinery and Equipment[nes]	909,569
Wearing Apparel	415,334	Wearing Apparel	440,243	Professional Equipment	595,354	Professional Equipment	831,861
Professional Equipment	342,350	Professional Equipment	423,980	Wearing Apparel	541,505	Wearing Apparel	660,213
Electrical Industrial Machinery	309,535	Electrical Industrial Machinery	356,316	Electrical Industrial Machinery	486,458	Electrical Industrial Machinery	647,824
Metal Products	274,841	Other Manufacturing[nes]	293,994	Other Manufacturing[nes]	381,472	Drugs and Medicines	559,442
Other Manufacturing[nes]	268,001	Metal Products	277,805	Drugs and Medicines	365,023	Other Manufacturing[nes]	485,802
Meat/Dairy/Fish Requiring Refrigeration	251,062	Meat/Dairy/Fish Requiring Refrigeration	269,177	Metal Products	336,070	Metal Products	398,444
Iron and Steel	242,545	Drugs and Medicines	230,843	Meat/Dairy/Fish Requiring Refrigeration	313,742	Parts of Motor Vehicles	392,469
TOTAL	**7,317,871**		**8,074,865**		**10,425,735**		**13,389,473**
Top Ten Share of Total	*50.8%*		*53.3%*		*56.0%*		*59.2%*

Source: IHS Global Insight, World Trade Services, 2009.
nes = Not Elsewhere Specified.

Table 3-6 Top International Air Cargo Trade Partners for the Chicago Customs District, 2007

Trade Region	Short-Tons
Europe	446,541
China	328,397
Other Asia and Pacific	187,952
Japan	136,318
India and Subcontinent	38,954
Middle East and Africa	34,501
Latin America	18,321
Mexico	6,274
Canada	986

Source: U.S. Customs and Border Patrol, 2007, IHS Global Insight, World Trade Services, 2009.

Market share assumptions for international air cargo are as follows:

- *Low-Case Scenario: No international air cargo activity during the IAP;*
- *Base-Case Scenario: No international air cargo activity until after the original DBO+1, then accounting for 2 percent of the total regional market; and,*
- *High-Case Scenario: Starting with 2 percent at the original DBO+1, then going to 5 percent at the original DBO+5.*

Since the 2004 forecast, the original DBO has shifted to 2015 from 2009.

Applying these market share assumptions to the regional forecasts for domestic and international air cargo leads to the results presented in **Table 3-7, SSA Air Cargo Forecast**.

Table 3-7 SSA Air Cargo Forecast Base-Case Scenario

Low-Case Scenario			Base-Case Scenario			High-Case Scenario		
	DBO+1	DBO+5		DBO+1	DBO+5		DBO+1	DBO+5
Market Share			***Market Share***			***Market Share***		
Domestic	0%	2%	Domestic	2%	4%	Domestic	3%	6%
International	0%	0%	International	0%	2%	International	2%	5%
Short-Tonnage			***Short-Tonnage***			***Short-Tonnage***		
Domestic	0	16,460	Domestic	15,140	32,700	Domestic	22,360	49,390
International	0	0	International	0	27,130	International	33,860	69,200
Total	0	16,460	Total	15,140	59,830	Total	56,220	118,590

Source: IHS Global Insight, World Trade Services, 2009.

As indicated, SSA would become part of the Chicago Region to include the airports of GYY, ORD, RFD and MDW. The implications of the air cargo forecasts for SSA in the updated DBO+5, which would comprise about 3 percent of the Chicago Region's total air freight, is generally equivalent to 3 percent of the tonnage landed at ORD in 2007, 21 percent of RFD, or twice that of MDW.[113]

[113] Passenger Boarding (Enplanement) and All-Cargo Data: CY 2007, http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/index.cfm?year=2007.

The base-case scenario in the 2004 forecast predicted 28,900 short-tons in the original DBO+1 and 103,600 short-tons in the original DBO+5. The difference between the current base-case and the 2004 base-case can be explained by the severity of the downturn in 2008 and the expectations of a protracted recovery, taking into account the 6-year shift in the DBO. The shift in the DBO increases the forecasted tonnage, as there is more time for air cargo to recover. However, the current downturn in air cargo volumes, together with the protracted nature of the economic recovery, decreases the growth rates for air cargo and outweighs the effect of the shift in the DBO. In addition, the lower volumes are also explained by the conservative nature of the current forecast. The maturity of the domestic market, coupled with screening requirements, will combine to cause growth below expected GDP growth rates. International air cargo, however, is expected to expand faster than GDP and more on par with growth in world trade.

Determining the belly and all-cargo split of the air cargo demand for SSA is difficult, as neither national nor regional forecasts provide this type of information. Belly cargo is cargo hauled by passenger aircraft. However, a combination of factors makes a low assumption for belly cargo more prudent. As the passenger forecast explains, the expectation is that primarily low-cost and regional airlines will operate at SSA. These airlines generally have limited belly cargo capacity. Secondly, cargo-screening requirements will make belly cargo less cost-effective. The 2004 air cargo forecast for SSA expected the share of belly cargo to be approximately 15 percent. In light of current screening requirements, IHS Global Insight believes this number to be in the upper limit and a range of 5 to 15 percent to be more representative in 2009. The original 2004 forecast assumed a range between 10-15 percent. Therefore, if 10 percent of air cargo at SSA proves to be belly cargo, 1,514 short-tons in DBO+1 and 5,978 short-tons in DBO+5 will be transported by passenger plane. Ultimately, the split between all-cargo and belly cargo at the airport will be determined by the type of operations and carriers attracted.

The base-range, all-cargo forecasts, exclusive of belly cargo, for DBO+1 is approximately 13,600 short-tons. This level of tonnage will require movement by narrow-body aircraft. The DBO+5 forecast includes a significant amount of international air cargo, as well. However, it is not assumed that SSA could attract larger cargo operators until after DBO+5.

When one compares the 2004 forecasts in terms of total tonnage freight, express and belly with the total tonnage for domestic and international air cargo, there is a 9 percent difference. It is surmised that this 9 percent differential is mail, which was not forecast in 2004 as a result of the lack of availability of information.

Therefore, for purposes of the 2009 forecast update, total air cargo for domestic and international will be equal to the total freight moved. The 2004 forecast numbers will be recast to proportion the 9 percent difference, according to the ratio of domestic to international so that the two forecasts are comparing like numbers. The 2009 forecast update did not forecast a breakdown by air cargo type into subcategories as freight, express, or belly, but forecast total domestic and international air cargo.

On the other hand, air cargo operations will be calculated for the updated 2009 forecast by considering all cargo only, subtracting belly which is air carrier by definition.

The critical assumptions used to develop the air cargo fleet mix for the updated 2009 forecast are conservative:

- Domestic air cargo routes would be served by the B737-700 and B757-200 aircraft.
- International routes would be served by the B767-300/A300-600/B787 aircraft, as well as extended range MD-11/A350-900F. The B787 has yet to identify air cargo variations within the first three models named, -300, -800 and -900.
- Enplaned and deplaned cargo each represent 50 percent.
- Landed weights are assumed to be the sum of enplaned and deplaned air cargo.
- Each aircraft arrives fully loaded and deplanes fully loaded. The annual total cargo represents 50 percent enplaned/50 percent deplaned air cargo.
- Load factors are calculated at 90 percent, even for DBO+1.

- For purposes of developing a schedule for determining cargo moved, one daily scheduled operation per week is assumed to consist of 6 arrivals and 6 departures.
- Based upon the schedule assumptions, any forecast air cargo that weekly schedules cannot accommodate is assumed to be additional, on-demand, air freight that would be accommodated by individual, non-scheduled flights.
- A schedule of 2 per day means 2 arrivals and 2 departures per day, six days a week for 52 weeks a year, generating 1,248 operations.
- A schedule of 3 per week means 3 arrivals and 3 departures per week for 52 weeks per year, generating 312 annual operations.
- A schedule of 2/3 days means 4 arrivals and 4 departures per week for 26 weeks per year, alternating with 3 arrivals and 3 departures per week for the other 26 weeks of the year. This schedule would generate 1,560 operations per year.

A similar air cargo fleet mix, as was assumed in 2004, is also assumed in 2009. In 2004, the analysis indicated that SSA would attract operators with B737-300 and B757-200 aircraft, as well as A300B4F, A310-300F, B767-300F, A300-600F aircraft, which are used for higher volume domestic cargo operations. In terms of international activity, the fleet could include increasing numbers of air cargo operations, which could bring B747-200, DC10-40F, B747-400F and/or MD11 freighter operations.

The 2009 air cargo fleet mix assumes many of this same fleet, but several of the new generation aircraft that have been introduced or for which designed is contemplated for future introduction to the fleet. It is anticipated that the SSA air cargo fleet mix would include B737-700 and B757-200 aircraft, as well as the A300/A310 variants and B767-300F. Another aircraft of this size that may be a future consideration is the new B787 series. However, there are no specific plans today to develop a cargo model, although there is some speculation that this might occur. At some point, the large freighters might be introduced to SSA, like the MD-11, B777-200LR, or B747-400F/B747-400ER and potentially the new generation Airbus A350, a smaller, but longer range aircraft. Airbus' marketing materials promotes the A350 as providing better customer service than the larger B747-400F aircraft, while enabling 5 weekly departures for the same cost and operation as 3 weekly departures by the B747-400F.[114]

Table 3-8, SSA Air Cargo Operations Forecast and **Table 3-9, SSA Air Cargo Forecast Schedule**, presents the updated 2009 all-cargo operations forecast and schedule.

Table 3-8 SSA Air Cargo Operations Forecast

Low-Case Scenario			Base-Case Scenario			High-Case Scenario		
	DBO+1	DBO+5		DBO+1	DBO+5		DBO+1	DBO+5
Domestic Aircraft			***Domestic Aircraft***			***Domestic Aircraft***		
B737-700	-	806	B737-700	628	804	B737-700	1,176	1,719
B757-200	-	88	B757-200	157	334	B757-200	119	448
B767/B787/A300	-	-	B767/B787/A300	-	171	B767/B787/A300	-	114
International Aircraft			***International Aircraft***			***International Aircraft***		
B767/B787/A300	-	-	B767/B787/A300	-	405	B767/B787/A300	730	870
MD-11/A350-900F	-	-	MD-11/A350-900F	-	81	MD-11/A350-900F	-	291
Total Operations	-	894	Total Operations	780	1,795	Total Operations	2,025	3,442

Source: Hanson Professional Services Inc., 2009.

[114] *Air Freight Products in the Context of Crisis*, a presentation by Oliver von Tronchin, Customer Marketing Director of Focal Point Freighter Aircraft, Airbus Industries, at the 2009 FAA Annual Forecast Conference, April 1, 2009.

Table 3-9 SSA Air Cargo Forecast Schedule

Base-Case Scenario	DBO+1		DBO+5	
Domestic Aircraft	***Operations***	***Schedule***	***Operations***	***Schedule***
B737-700	628	Approx. 1 Per Day	804	1 Per Day + 180 Year
B757-200	157	Approx. 1 Per Week	334	3 Per Week + 24 Year
B767/B787/A300	-	-	171	-
MD-11/A350-900F	-	-	-	-
Domestic Subtotal	*785*	-	*1,309*	
International Aircraft	***Operations***	***Schedule***	***Operations***	***Schedule***
B737-700	-	-	-	
B757-200	-	-	-	
B767/B787/A300	-	-	405	3 Per Week + 93 Year
MD-11/A350-900F	-	-	81	81 Per Year
International Subtotal	-	-	*486*	
Total Operations	*785*		*1,795*	

Source: Hanson Professional Services Inc., 2009.

Section 8 – Air Cargo Questionnaire

As part of the forecast update process, IDOT developed a short air cargo user questionnaire for distribution to readers of correspondence and newsletter publications of 5 major organizations in the Chicago Southland: Will County Center for Economic Development, the Chicago Southland Development Corporation, the Chicago Southland Chamber of Commerce, the Kankakee Regional Chamber of Commerce and the Joliet Chamber of Commerce and Industry. The purpose of the questionnaire was to encourage local business participation for the proposed project and provide a forum of information exchange and documentation. Questionnaire responses were collected in April 2009.

The local region's air freight demand survey was conducted to gauge business demand for air cargo service in the PSA. A total of 27 responses were received. Of the 27 returned questionnaires, 17 indicated they have personnel that travel by air in mostly domestic locations. Four respondents stated they receive freight for their business by air and of these air freight users, half used a freight forwarder, such as UPS or FedEx.

Section 9 – Long-Range Projections of Air Cargo Activity

Domestic Air Cargo Aviation Activity. IDOT recognizes that it is difficult to accurately estimate long-range forecasts for a new airport. The three air cargo activity forecast scenarios (low, base and high) for the first five years of operation, discussed above, were formulated by generating domestic and international air cargo forecasts for the entire Chicago region, based on commodities that are normally transported by air and assuming that SSA would capture a certain percentage of the air cargo activity for the region. The expected air cargo demand at SSA beyond the updated DBO+5 will greatly depend upon:

- Type of airline service that develops at the new facility;
- Ability of SSA to adapt to potential airline and freight forwarder requirements; and,
- Vitality of the local and national economy.

IDOT assumes that after the updated DBO+5, the airport could begin to compete with other commercial airports and that market forces will drive aviation demand at SSA. Based on the multi-airport systems that were originally analyzed in the 2004 forecasts, IDOT has made the following long-range projection assumptions for domestic air cargo activity. These assumptions are adopted by the 2009 forecast update and brought forward:

- *Low-Case Scenario: At the updated DBO+5, SSA would capture 2 percent of the air cargo activity in the Chicago region, gradually increasing to 4 percent by the updated DBO+20;*
- *Base-Case Scenario: At the update DBO+5, SSA would capture 4 percent of the air cargo activity in the Chicago region, gradually increasing to 8 percent by the updated DBO+20; and*
- *High-Case Scenario: At the updated DBO+5, SSA would capture 6 percent of the air cargo activity in the Chicago region, gradually increasing to 10 percent by the updated DBO+20.*

Table 3-10, SSA Domestic Air Cargo Activity in Short-Tons Updated Long-Range Projections, depicts the long-range projections for domestic air cargo activity for these scenarios.

Table 3-10 SSA Domestic Air Cargo Activity in Short-Tons Updated Long-Range Projections

Forecast Scenario	DBO+5 (2020)	DBO+20 (2035)
Low-Case	16,500	46,200
Base-Case	32,700	87,900
High-Case	49,400	96,800

Source: IHS Global Insight, World Trade Services, 2009.

International Air Cargo Aviation Activity. Similar to the long-range projections for domestic air cargo activity at SSA, IDOT developed long-range projections for international air cargo activity to establish the potential range of international activity that could occur at SSA. The market shares for international cargo at DBO+5 are the same as forecasted by the original 2004 forecast. The DBO+5 estimate in the original 2004 base-case was for 34,900 short-tons. The 2009 projection of 27,100 short-tons is lower than the 2004 forecast, due the current downturn and a protracted recovery. At 2008 volumes, 27,100 international tons is below that of Charleston Air Force Base/International Airport (CHS) the 25th largest airport for international cargo in 2008 and above that of Guam International Airport (GUM) ranking 26th. Of course, assuming continued growth in international cargo at these airports, by DBO+5, SSA would rank below these airports.

The potential for international air cargo activity exists at SSA, as shown in the multi-airport systems case studies of 2004 forecasts where more than one airport provides international air cargo service.

In fact, over the course of master planning for SSA in the past 20 years, there has been a consistent history of inquiries by airlines, both passenger and air cargo, regarding their potential operation at the airport. However, all, except one, Spirit Airlines, chose not to make their intentions in writing.[115] Airlines are reluctant to indicate interest publicly. Similarly, during the development of the 2009 Forecast Verification Report, there has been significant overtures expressed to the IHS Global Insight team regarding potential usage of SSA about the time of DBO, should it exist. As with the case of recent research by IHS Global Insight, there have been discussions with prospective air cargo forwarders and airlines, including international forwarders and airlines. All insist that their comments be held in confidence, which is typical, regardless of market. Such businesses do not wish to be subject to political pressures or to pursuits from competing airports or airlines for any expansion. Most importantly, they do not wish to disclose their considerations to competitors.

Based upon this analysis, IDOT has made the following forecast assumptions for international air cargo activity:

- *Low-Case Scenario: No international air cargo activity until the updated DBO+10, then accounting for 2 percent of the total regional market and increasing to 3 percent by the updated DBO+20;*
- *Base-Case Scenario: Starting with 2 percent at the updated DBO+5 and developing to 6 percent by the updated DBO+20; and*

115 Letter from Spirit Airlines, Inc. dated August 13, 1998.

- *High-Case Scenario: Starting with 5 percent at the updated DBO+5 and developing to 10 percent by the updated DBO+20.*

Table 3-11, SSA International Air Cargo Activity in Short-Tons Updated Long-Range Projections, depicts the long-range projections for international air cargo for the three scenarios.

Table 3-11 SSA International Air Cargo Activity in Short-Tons Updated Long-Range Projections

Forecast Scenario	DBO+5 (2020)	DBO+20 (2035)
Low-Case	0	99,900
Base-Case	27,100	181,700
High-Case	69,200	253,700

Source: IHS Global Insight, World Trade Services, 2009.

As passenger operations develop at the airport, belly cargo would account for a greater portion of the air cargo activity. The assumption used for the original 2004 air cargo forecasts relative to belly air cargo was a range of 30-40 percent, with an increasing percentage of belly cargo with greater volumes. Remaining consistent with the original 2004 forecasts, a similar approach is used in 2009, but with a lower range of 20-30 percent. This is considered to be more in line with the type and available capacity of air passenger aircraft that would operate at SSA, plus considering the unknowns relative to future air cargo security regulation requirements.

After DBO+5, it is assumed that SSA could attract the larger air cargo operators, along the line of a UPS or FedEx. The resultant higher volume of cargo flowing through SSA will result in larger, more efficient aircraft being handled. In this phase, the analysis indicates that SSA will continue to attract operators with B737-700 and B757-200 or new generation aircraft and would also attract the A300B4F, A310,300F, B767-300F, A300-600F and potential new generation aircraft (i.e., potential B787F/variants and A350-900F variants), which are used for higher volume domestic or international operations. However, it should be noted that the same conservative assumptions are used for the long-range projections as for the updated DBO+1 and DBO+5 load factors, which are fully loaded enplaned and deplaned aircraft having 90 percent average loads.

As the airport matures, the forecasts indicate that SSA will handle increasing amounts of international air cargo operations, which could bring the new generation B777-200LR (introduced in 2009), B747-400ER and potentially A380-800F freighter operations.

Table 3-12, SSA Air Cargo Aviation Activity Long-Range Projections, presents the Long-Range projections of air cargo aviation activity.

Section 10 – Growth Potential for SSA

As the forecasts in this study demonstrate, the Chicago region has enough increasing demand for air cargo to allow SSA to capture a small share and attract new air cargo freight forwarders to the area. The actual share captured by SSA will depend highly on the type of infrastructure that it can supply to meet this demand.

The new airport would be located in an already existing international origin/destination cargo corridor and one of the world's largest. Already, the convergence of interstate highways, as well as other logistics facilitators, like rail and intermodal capacity, is shifting outside traditional Chicago areas. The SSA site offers many logistics advantages (roads, rail, population and a growing distribution center hub). Some of the advantages include: five major interstate highways (I-94, I-80, I-294, I-57 and I-55); a network of major arterial highways, U.S. and state routes, five Class I railroads (CN, UP, CSX, NS and BNSF); two belt railroads (IHB and CN/EJ&E); existing and proposed intermodal facilities; and marine ports along the Calumet River, Cal-Sag Channel and Des Plaines River.

Table 3-12 SSA Air Cargo Aviation Activity Long-Range Projections

Aeronautical Forecast Category Breakdown by Aviation Type	Planning Horizon Year	
	DBO+5	DBO+20
High-Case Forecast		
Air Cargo Operations[1]		
Domestic	2,281	4,000
International	1,161	2,700
Total Air Cargo	3,442	6,700
Air Cargo Tonnage (Short-Tons)[2]		
Domestic	49,400	96,800
International	69,200	253,700
Total Air Cargo	118,600	350,500
Base-Case Forecasts		
Air Cargo Operations[1]		
Domestic	1,309	2,000
International	486	2,000
Total Air Cargo	1,795	4,000
Air Cargo Tonnage (Short-Tons)[2]		
Domestic	32,700	87,900
International	27,100	181,700
Total Air Cargo	59,800	269,600
Low-Case Forecasts		
Air Cargo Operations[1]		
Domestic	894	2,100
International	0	1,300
Total Air Cargo	894	3,400
Air Cargo Tonnage (Short-Tons)[2]		
Domestic	16,500	46,200
International	0	99,900
Total Air Cargo	16,500	146,100

Source: IHS Global Insight, World Trade Services and Hanson Professional Services Inc., 2009.
Notes: (1) Operations reflect only all cargo tonnage exclusive of belly.
(2) Tonnages include all cargo types.

In addition, freight forwarders are attracted to new businesses that are high-volume shippers. The area is currently attracting new businesses, such as the recent relocation to Will County of Honeywell's Safety Division Headquarters - along with manufacturing and distribution facilities. Because the SSA structure is being designed to be “forwarder friendly” with cargo-accommodating infrastructure, ease of entry, etc., forwarders will be attracted to the facility. For that reason, factors to enhance the appeal to forwarders maximized in the SSA planning process.

DFW, El Paso International Airport (ELP), San Antonio International Airport (SAT) and to a lesser extent Laredo International Airport (LRD) are taking advantage of the logistics associated with being adjacent to other suppliers and freight forwarders. It is significant to note the new logistics center that CenterPoint is developing adjacent to SSA. IDOT will be discussing with CenterPoint the potential plan for a future facility interface with the airport once the economy improves, which their business plan would support.

In additional research of this topic, an air cargo freight forwarder that IHS Global Insight interviewed indicated that they currently have no operation in "upper mid-America" (euphemism for Chicago) and their interest stems from a geographic area just emerging on the global supply chain scene.

There are freight forwarders operating in the SSA market service area. The following table shows that while most of them are near ORD, approximately 2.7 percent of the total is located in Will County (see **Table 3-13, Employment by Freight Forwarders in SSA Market Area (2009)**).

Table 3-13 Employment by Freight Forwarders in SSA Market Area (2009)

County	Employment
DuPage, IL	8770
Cook, IL	8385
Will, IL	486
Grundy, IL	120
Lake, IN	108
Porter, IN	84
Kankakee, IL	5

Source: Business Demographics Statistics for NAICS code 488510, IHS Global Insight, World Trade Services, 2009.

The proposed site for SSA is ideal to capture this potential type of air cargo capacity for the Greater Chicago marketplace. Additionally, given SSA's central U.S. geographical location, it is ideally positioned to capture global air cargo that is then disbursed via other modes to final destinations.

Since both forwarders, as well as air cargo carriers, will likely recognize this potential, it is important for SSA to be prepared to serve the soon-to-be recovering and growing global air freight market.

As consumer demand returns to normal, an ever-increasing driver of the U.S. economy, the vital import markets from the Asian Pacific area will look to an efficient, well-positioned alternative. SSA should be prepared to assume this shift, with a "forwarder and carrier-friendly" infrastructure in place.

Section 11 – Qualitative Risk Analysis – SSA and Selected Other Air Cargo Airports

As part of the documentation for the 2009 Forecast Verification Report, IDOT was asked by FAA to comment on five other airports: Scott Air Force Base/Mid-America-St. Louis Airport (BLV), Rickenbacker International Airport (LCK), Hollister Field Airport (ILN), Bowling Green-Warren County Regional Airport (BWG) and the proposed Hazleton, PA airport.

Location is valid to any discussion regarding an airport's ability to attract international air cargo operations. A robust population base and a significant origin/destination market are critically important. Foreign trade representation is a likely indicator of potential success. Also, a centralized U.S. location with proximity to major east-west truck routes appears to be important. When compared to a global, multi-modal transportation hub, such as Chicago, the five airports mentioned offer less opportunity for success for air cargo operations.

Population base and, hence, a local distribution market is essential. The following are the MSA populations for the mentioned cities [U.S Bureau of the Census, 2008 estimates (July 1, 2008)]: Chicago, IL, 9,569,624; St. Louis, MO, 2,816,710; Columbus, OH, 1,773,120; Hazleton, PA (Luzerne, Schuylkill and Carbon Counties), 512,788; Bowling Green, KY, 117,947; and Wilmington, OH, 43,200.

Foreign trade representation in a community is an indicator of potential interest in serving that country from international destinations. An internet search identified 81 countries having Consul Generals representing their

nation's interests in the Chicago region.[116] St. Louis was next with five countries.[117] The search for Consul Generals located in Columbus, OH, Wilmington, OH, Bowling Green, KY and Hazleton, PA yielded no results.

After the strength of an airport's population base and position in the global economy, each airport location presents a unique story. SSA is located in an area served by five major interstate highways (I-94, I-80, I-294, I-57 and I-55), a network of five Class I railroads (CN, UP, CSX, NS and BNSF) and major existing and proposed distribution centers and intermodal facilities. St. Louis is also a major distribution center with a strong population base.

For business and economic reasons, the anticipated air cargo traffic deal between BLV and STL that was once negotiated to the airport as part of a regional initiative remained at STL as a result of the American Airlines-TWA merger and then American's de-emphasizing of the passenger hub.

LCK, ILN and BWG are not as well situated geographically to significant origin-destination populations. Columbus is a major metropolitan area, but not as large as Chicago or St. Louis, Wilmington and Bowling Green are discrete population centers in rural portions of their respective states. BWG also faced the strong competition of being a short trucking distance between mega air cargo hubs in Louisville and Memphis, as well as being close to Nashville.

The proposed Hazelton, PA facility also faces all of these challenges. This potential airport was proposed as a public-private partnership venture to provide economic stimulus in a community where local officials declared the coal mining industry as "*a thing of the past.*" Due to tough terrain and geography, the community faces difficulties in attracting new industry and potential distribution centers.

116 Chicago Council on Global Affairs, *Chicago's Consular Corps*, http://www.globalchicago.org/consul/, accessed April 20, 2010.

117 Yahoo.com, List of St. Louis Consulates, searched April 20, 2010.

Chapter 4 – General Aviation/Corporate Aviation Forecast

The 2004 forecast for SSA considered how GA would be accommodated within the IAP footprint. Since the inception of the SSA site selection study in 1989, an existing GA facility was located in the footprint of the proposed airport selection site known as Peotone, which became SSA. Sanger Field, a privately-owned airfield, having about 30 based aircraft, was included in the FAA NPIAS, which recognized its airspace role as an existing GA airfield. For purposes of the updated 2009 forecasts, IDOT assumes that there is an existing GA facility already in existence and incorporates it into the SSA ALP.

Previously, in 1999, IDOT undertook a study to determine what initial or inaugural airfield facilities might be necessary at SSA on DBO.[118] That study identified that IAP development could potentially require the closure or incorporation of certain GA facilities, bring about the relocation of GA aircraft operations, introduce potential new airspace procedures and provide new facilities for corporate aviation that presently did not exist in the area. The SSA ALP does include development areas for GA corporate facilities.

In the interim of the original 2004 forecast and the updated 2009 forecast, James Bult purchased Sanger Field and redeveloped the facility into a modern airport open to the public. It consists of a 5,000-ft x 75-ft concrete runway, 132 aircraft hangar units and an 18,000 sq. ft FBO/owner residence. This facility is located on the site of Sanger Field and within the footprint of SSA. Throughout these forecasts, this runway will be referred to as the GA/Corporate runway.

This Chapter will update the GA forecast demand levels developed in 2004.

Section 1 - Overview of General Aviation/Corporate Aviation Forecast Methodology

GA is defined as that portion of Civil Aviation that encompasses all facets of aeronautical activity, except for those carriers certified by IDOT to provide commercial passenger and air cargo service. GA activities include, but are not limited to, business flights, student pilot and advanced pilot flight training, soaring, aerial application (crop duster) flights, cross country, aerial mapping, weather modifications, pipe line and power line patrols, air ambulance flights and other flights that do not come under air carrier qualifications. Corporate aviation typically offers executive air charter services and/or provides services to companies that own or operate GA aircraft as an aid to the conduct of their business. Corporate aviation facilities include, at a minimum, a 5,000-ft runway and a precision instrument approach procedure. The types of GA aircraft vary from small, single-engine, fixed-wing aircraft to helicopters and multi-engine piston or turbine-powered planes.

IDOT acknowledges there was an existing facility in operation in 2009, significantly enhanced from that which existed in 2004 and there is a different dynamic required for forecasting GA activity. In 2004, it was unknown how a new GA facility would affect aircraft patterns within proximity of SSA. In 2009, there is now a good indication of that potential impact, with the airfield accommodating 87 based aircraft, 78 single-engine piston, 6 multi-engine piston and 3 helicopters. Of these, about 50 aircraft, other than those that were already at Sanger, have relocated from other airports in proximity, both public and private airfields. From this base of 87 aircraft, GA forecasts will be projected.

In addition, it is anticipated that the existing GA/Corporate runway, with its airfield facilities, will begin to resemble similar airfields in proximity to SSA. The three public-use airfields identified that this airfield may be somewhat analogous are: LOT in west Will County, IGQ in south Cook County and the IKK in Kankakee County. Weighted averages of operations for these three airports were taken from the FAA Terminal Area Forecasts for those airports and used as a gauge to determine approximate levels of GA activity that might be associated with future GA operations at DBO+1 and DBO+5. This data will also be used to ascertain ratios to estimate itinerant versus local operations.

[118] TAMS Consultants, Inc., South Suburban Airport, Inaugural Airport, 1999.

Section 2 - Discussion of General Aviation/Corporate Aviation Facilities within the IAP Area

This section of the forecast provides an update to the inventory of GA facilities within proximity of SSA. **Table 4-1, Summary of General Aviation/Corporate Aviation Facilities within the IAP Area**, includes a summary of those aeronautical facilities.

Bult Field (C56) (formerly Sanger) is a privately-owned, public-use facility, located approximately 1.1 miles north of the IAP's Airport Reference Point (ARP) and 4 miles southeast of the Village of Monee. C56 is a non-towered facility and its hours of operations are from "dawn-to dusk." The airport has a concrete surface with a visual runway. Runway 09-27 is 5,000 ft long and 75 ft wide, with a 151 ft displaced threshold on the Runway 27 end.

James Bult was interviewed in the update of these forecasts. It was learned that the predominate number of the 87 based aircraft at the airfield were relocated from surrounding airfields, including New Lenox Airport, that has closed since 2004. New aircraft to Illinois also comprise a small percentage of the aircraft based at Bult Field, as several aircraft owners from out-of-state have relocated their aircraft to the airfield.

Table 4-1 Summary of General Aviation/Corporate Aviation Facilities within the IAP Area

Airport Name (FAA Identifier)	ARP*	Runway(s)		Based Aircraft			
		Orientation	*Dimensions*	*Single-Engine*	*Multi-Engine*	*Rotary*	*Other*
Bult Field (C56)	1.1 mi	09-27	5,000' x 75'	76	8	3	3**

Source: FAA, Form 5010, Airport Master Record, Bult Field, December 2007.
*Distance to South Suburban Airport's Reference Point (ARP).
**Aircraft lighter than air; Recreational or sport are excluded from based aircraft numbers for purposes of projections.

Section 3 - Discussion of General Aviation/Corporate Aviation Facilities within Proximity of SSA

Chapter 4, Section 2 identified those GA and corporate aviation facilities within the IAP area. This Section will describe the operational characteristics and status of both privately-owned, private-use airfields impacted by the ultimate SSA boundary and public GA/ corporate aviation facilities. For purposes of this study, the South Suburban Region is *broadly identified* as that area south of Illinois Route 7/US Route 6 through Will and Cook counties in Illinois and Interstate 80 in Lake and Porter counties in Indiana and within a 25-mile radius from the SSA's ARP.

There is one aeronautical facility outside of the IAP area, but within the ultimate footprint for SSA. These facilities are described herein and are summarized in **Table 4-2, Summary of General Aviation/Corporate Aviation Facilities Outside the IAP Area and within the South Suburban Region, 2009**.

Spangler Airport (58IL) is a privately-owned, private-use airfield located approximately 12.3 miles southwest of the Inaugural ARP and about 4 miles northwest of Manteno, IL. The existing runway (03-21) is a 2,200 ft long, 200 ft wide, turf-surfaced, visual runway.[119] There were 3-based aircraft at 58IL, according to the 2009 FAA 5010 Form.

[119] FAA, Form 5010, Airport Master Record, Spangler Airport, April 7, 2009.

Table 4-2 Summary of General Aviation/Corporate Aviation Facilities Outside the IAP Area and within the South Suburban Region, 2009

Airport Name (FAA Identifier)	ARP*	Runway(s)		Based Aircraft					Aeronautical Operations
		Orientation	*Dimensions*	*SE*	*ME*	*Jet*	*Rotary*	*Other*	
Spangler (58IL)	12.3	03-21†	2,200' x 200'	3	0	0	0	0	1,200*
Richard Brandt (55IL)	9.1	18-36†	2,200' x 70'	1	0	0	0	0	400*
Meadow Creek (2IL9)	5.7	04-22	3,400' x 40'	16	2	0	2	0	8,000*
Craig Mussman (7IL0)	9.2	09-27†	2,415' x 75'	3	0	0	0	1‡	1,600*
Von Alvens Airview (IL29)	5.8	18-36†	1,900' x 60'	1	0	0	0	1‡	800*
Hershel Wix (03IL)	6.2	18-36†	2,600' x 105'	1	0	0	0	0	400*
Benoit Airport (IL78)	18	18-36†	2,000' x 105'	3	0	0	0	0	1,200*
Classic Landings (05IL)	23	10-28†	3,200' x 70'	0	0	0	0	0	NA
Frankfort Airport (LL40)	10	09-27	4,203' x 50'	23	1	0	0	0	9,600*
Richard Hawker (12IL)	21	09-27†	1,300' x 100'	1	0	0	0	0	400*
Pat Neiner (19LL)	15	18-36†	1,940' x 70'	0	0	0	0	0	NA
Sunset Acres (LL24)	13	09-27†	2,640' x 70'	1	0	0	0	1‡	800*
Sutton's Field (0II8)	11	01-19†	1,400' x 100'	3	1	0	0	0	1,600*
Sweedler Airport (3IL2)	19	18-36†	2,600' x 135'	1	1	0	0	0	800*
Wietbrock (IN90)	13	09-27†	2,800' x 100'	1	0	0	0	0	400*
Gary/Chicago Regional (GYY)	23	12-30	7,003' x 150'	42	18	20	9	0	35,671
		02-20	3,603' x 100'						
Greater Kankakee (IKK)	24	04-22	5,979' x 100'	96	13	2	3	15‡	50,000
		16-34	4,399' x 75'						
Griffith – Merrillville (05C)	18	08-26	4,900' x 75'	41	14	0	6	0	33,699
Koerner Kankakee (3KK)	25	09-27†	2,644' x 300'	22	1	0	0	2‡	11,000
		18-36†	2,564' x 200'						
Lansing Municipal (IGQ)	15	09-27	3,395' x 75'	142	21	10	13	1‡	54,000
		18-36	4,002' x 75'						
Lake Village (C98)	20	18-36†	2,000' x 140'	16	0	0	0	4‡	6,976
Lowell (C97)	14	18-36†	3,041' x 100'	11	0	0	0	0	4,176

Source: FAA Form 5010, Airport Master Records, 2009.
SE - Single-Engine Piston Aircraft; ME – Multi-Piston Engine Aircraft; NA – Not Available.
† - Turf Runway; ‡ - Ultra Light Aircraft; * - Estimated number of operations = 400 operations per based aircraft.

Richard Brandt Airport (55IL) is a privately-owned, private-use facility located approximately 9.1 miles southwest of the IAP boundary and about 2 miles northeast of Manteno, IL. The existing runway (18-36) is visual, turf-surfaced, 2,200 ft long and 70 ft wide.[120] There was 1-based aircraft at 55IL, according to the 2009 FAA 5010 Form.

[120] FAA, Form 5010, Airport Master Record, Brandt Airport, April 7, 2009.

Meadow Creek Airport (2IL9) is a privately-owned, private-use facility located approximately 5.7 miles northwest of the Inaugural ARP and 1 mile west of Monee, IL. The existing runway is a 3,400 ft long, 40 ft wide, asphalt surface, visual runway.[121] There were 20-based single-engine aircraft at 2IL9, according to the 2009 FAA 5010 Form.

Craig Mussman Airport (7IL0) is a privately-owned, private-use airport located approximately 9.2 miles southeast of the IAP and approximately 3 miles north of Grant Park, IL. It has a visual Runway 09-27 with a turf surface, which is 2,415 ft long and 75 ft wide.[122] There were 4-based aircraft at 7IL0, according to the 2009 FAA 5010 Form.

Von Alvens Airview Airport (II 29) is a privately-owned, private-use facility located 5.8 miles southeast of the IAP boundary and 3 miles southwest of Beecher, IL. The airport has a turf runway, 1,900 ft long and 60 ft wide.[123] There were 2-based aircraft at II 29, according to the 2009 FAA 5010 Form.

Hershel Wix Airport (03IL) is a privately-owned, private-use airport, located approximately 6.2 miles northeast of the IAP boundary and about 6 miles southwest of Monee, IL. There is a 2,600 ft long, 105 ft wide, turf surface, visual runway.[124] There was 1-based aircraft at 03IL, according to the 2009 FAA 5010 Form.

Benoit Airport (IL78) is a privately-owned, private-use airport located approximately 18 miles south-southwest of the IAP boundary. The airport has a single, visual, turf runway, 2,000 ft long by 105 ft wide.[125] There were 3-based aircraft at IL78, according to the 2009 FAA 5010 Form.

Classic Landings Airport (05IL) is a privately-owned, private-use airport located approximately 23 miles southwest of the IAP boundary. This airport contains a single, visual, turf runway that is 3,200 ft long and 70 ft wide.[126] This is a residential airpark; no information on based aircraft at this facility was available.

Frankfort Airport (C18) is a privately-owned, private-use facility located approximately 10 miles northwest of the ARP and about 1 mile southeast of Frankfort, IL. The existing runway (9-27) is non-precision, with an asphalt surface, 4,203 ft long and 50 ft wide.[127] There were 24-based aircraft at C18, according to the 2009 FAA 5010 Form.

Hawker Airport (12IL) is a privately-owned, private-use airport located approximately 21 miles southwest of the IAP boundary. Hawker Airport has one visual, turf runway, 1,300 ft long by 100 ft wide.[128] There was 1-based aircraft at 12IL, according to the 2009 FAA 5010 Form.

Neiner Airport (19LL) is a privately-owned, private-use airport located approximately 15 miles southwest of the IAP boundary. This airport has one visual, turf runway that is 1,940 ft long and 70 ft wide.[129] No information on based aircraft for this facility was available.

Sunset Acres Airport (LL24) is a privately-owned, private-use airport located approximately 13 miles south of the IAP boundary. This airport has a single visual, turf runway, which is 2,640 ft long and 70 ft wide.[130] There were 2-based aircraft at LL24, according to the 2009 FAA 5010 Form.

[121] FAA, Form 5010, Airport Master Record, Meadow Creek Airport, April 7, 2009.
[122] FAA, Form 5010, Airport Master Record, Mussman Airport, April 7, 2009.
[123] FAA, Form 5010, Airport Master Record, Von Alvens Airview Airport, April 7, 2009.
[124] FAA, Form 5010, Airport Master Record, Wix Airport, April 7, 2009.
[125] FAA, Form 5010, Airport Master Record, Benoit Airport, April 7, 2009.
[126] FAA, Form 5010, Airport Master Record, Classic Landings Airport, April 7, 2009.
[127] FAA, Form 5010, Airport Master Record, Frankfort Airport, April 7, 2009.
[128] FAA, Form 5010, Airport Master Record, Hawker Airport, April 7, 2009.
[129] FAA, Form 5010, Airport Master Record, Neiner Airport, April 7, 2009.
[130] FAA, Form 5010, Airport Master Record, Sunset Acres Airport, April 7, 2009.

Sutton's Field (0II8) is a privately-owned, private-use airport located approximately 11 miles east-southeast of the IAP boundary. The airport has a single visual, turf runway that is 1,400 ft long and 100 ft wide.[131] There were 4-based aircraft at 0II8, according to the 2009 FAA 5010 Form.

Sweedler Airport (3IL2) is a privately-owned, private-use airport located approximately 19 miles west of the IAP area. The airport has a single visual, turf runway that is 2,600 ft long by 135 ft wide.[132] There were 2-based aircraft at 3IL2, according to the 2009 FAA 5010 Form.

Wietbrock Airport (IN90) is a privately-owned, private-use airport located approximately 13 miles southeast of the IAP area. Wietbrock contains a single visual, turf runway, 2,800 ft long by 100 ft wide. There is one single-engine aircraft based at this airport.[133] There was 1-based aircraft at IN90, according to the 2009 FAA 5010 Form.

There are seven airports open to the public outside of the SSA Boundary, but located within the South Suburban Region. These facilities are discussed herein.

Gary/Chicago International Airport (GYY) is a publicly-owned, open-to-the-public airport located approximately 23 miles northeast of the SSA Ultimate Acquisition Area. GYY has intermittent commercial service and a contract Airport Traffic Control Tower. There are two active runways at GYY: Runway 12-30 is 7,003 ft long and 150 ft wide. Runway 12 has a non-precision approach, while Runway 30 has a precision instrument approach system. Runway 02-20 is a non-precision runway, 3,603 ft long and 100 ft wide. According to FAA 5010 Form, there were 89 aircraft based at the airport: 42 single-engine, 18 multi-engine, 20 jets and 9 helicopters. GYY had 35,671 total operations in 2007.[134] December 2008 (TAF) estimations indicate that the operational level will decrease to 30,327 total operations in 2010 and increase to 33,036 total operations in 2020. Approximately 57 percent of GA activity at GYY is itinerant, 34 percent local activity, 5 percent military and 4 percent air taxi.[135]

Greater Kankakee Airport (IKK) is a publicly-owned, open-to-the-public airport located about 24 miles southwest of the SSA Ultimate Acquisition Area and 3 miles south of Kankakee, IL. The non-towered airport has two operational runways. Runway 04-22 is asphalt-surfaced, 5,979 ft long and 100 ft wide and has a precision approach on Runway 04 and non-precision on Runway 22; and Runway 16-34 is also asphalt-surfaced, 4,399 ft long and 75 ft wide, with visual approaches at both ends. According to FAA 5010 Form, there were 129-based aircraft at the airport: 96 single-engine airplanes, 13 multi-engine, 2 jets, 3 helicopters and 15 ultra-light aircraft. IKK had 50,000 total operations in 2006.[136] December 2008 (TAF) estimations indicate that the operational level will remain constant in 2010 and in 2020. Approximately 42 percent of GA activity at IKK is itinerant, 50 percent local activity, 6 percent military and 2 percent air taxi.[137]

Griffith-Merrillville Airport (05C) is a privately-owned, open-to-the-public airport located approximately 18 miles northeast of the SSA Ultimate Acquisition Area. 05C has one visual runway, which is asphalt-surfaced, 4,900 ft long and 75 ft wide. According to FAA 5010 Form, there were 61-based aircraft at 05C: 41 single-engine planes, 14 multi-engines and 6 helicopters. 05C had 33,699 total operations in 2006.[138] December 2008 (TAF) estimations indicate that the operational level will remain constant in 2010 and in 2020. Approximately 86 percent of 05C;s activity is itinerant operations, 13 percent is local aviation activity and 1 percent is air taxi.[139]

Kankakee Airport (3KK) is a privately-owned, open-to-the-public airport located approximately 25 miles southwest of the future SSA Ultimate Acquisition Area. The airport has two active runways: Runway 09-27 is 2,644 ft long and 300 ft wide, turf-surfaced; and Runway 18-36 is turf-surfaced, 2,564 ft long and 200 ft wide. According to FAA

[131] FAA, Form 5010, Airport Master Record, Sutton's Field Airport, April 7, 2009.
[132] FAA, Form 5010, Airport Master Record, Sweedler Airport, April 7, 2009.
[133] FAA, Form 5010, Airport Master Record, Wietbrock Airport, April 7, 2009.
[134] FAA, Form 5010, Airport Master Record, Gary/Chicago International Airport, April 7, 2009.
[135] FAA, Terminal Area Forecast Summary: Fiscal Years 2007-2025, Gary/Chicago International Airport, December 2008.
[136] FAA, Form 5010, Airport Master Record, Greater Kankakee Airport, April 7, 2009.
[137] FAA, Terminal Area Forecast Summary: Fiscal Years 2007-2025, Greater Kankakee Airport, December 2008.
[138] FAA, Form 5010, Airport Master Record, Griffith-Merrillville Airport, April 7, 2009.
[139] FAA, Terminal Area Forecast Summary: Fiscal Years 2007-2025, Griffith-Merrillville Airport, December 2008.

5010 Form, there were 25 aircraft based at the airport: 22 single-engine airplanes, 1 multi-engine and 2 ultra-light aircraft. 3KK had 11,000 total operations in 2004. The activity at 3KK is mostly represented by local GA activity (82 percent) and itinerant GA operations (18 percent).[140]

Lansing Municipal Airport (IGQ) is a publicly-owned, open-to-the-public airport located approximately 15 miles northeast of the Ultimate SSA Acquisition Area. IGQ has two operational runways: Runway 09-27 is visual, 3,395 ft long and 75 ft wide, with an asphalt surface; and Runway 18-36 is visual, 4,002 ft long and 75 ft wide, with an asphalt surface. According to FAA 5010 Form, there were 187-based aircraft at IGQ: 142 single-engine, 21 multi-engine, 10 jet aircraft, 13 helicopters and 1 ultra-light aircraft. IGQ had 54,000 total operations in 2007.[141] December 2008 (TAF) estimations indicate that the operational level will remain constant in 2010 and in 2020. Fifty (50) percent of activity at IGQ is represented by local GA activity, 41 percent is itinerant GA and 9 percent is air taxi activity.[142]

Lake Village Airport (C98) is a privately-owned, open-to-the-public airport located approximately 20 miles southeast of the IAP boundary. C98 has one visual, turf runway that is 2,000 ft long and 140 ft wide. According to FAA 5010 Form, there are 20-based aircraft at C98: 16 single-engine and 4 gliders. C98 had 6,976 total operations in 2006, of which 67 percent were local GA and 33 percent were itinerant.[143]

Lowell Airport (C97) is a privately-owned, open-to-the-public airport located approximately 14 miles southeast of the IAP boundary. C97 has one visual, turf runway that is 3,041 ft long and 100 ft wide. According to FAA 5010 Form, there were 11-based aircraft at C97 (all single-engine.) C97 had 4,176 total operations in 2006, of which 93 percent were local GA and 7 percent were itinerant.[144]

All of these facilities are located within a 25-mile radius of the proposed SSA ARP.

Section 4 – Anticipated SSA General Aviation Role

SSA is expected to play an important role in serving the GA/Corporate needs of its region in the vicinity of the site. Already by DBO+1, it is anticipated that the existing GA/Corporate runway will serve GA and corporate aviation users that either live or desire to access the central and eastern portions of Will County.

Until Sanger Field was reconstructed, GA demand for corporate aviation in the south suburbs existed at LOT, near Romeoville IL and IGQ in south Cook County adjacent to the Indiana state line. Practically, it was thought that GA demand in eastern Will County was more oriented to recreational and sport activity than corporate.

With the reconstruction of Sanger Field, which included the construction of 132 hangar units, more than half of those units were occupied almost immediately. Prior to this, it was contemplated that other factors, such as potential closures of private airports, could spur additional relocation to the SSA facility, or there would be further growth at IGQ, which has capacity. Today, there are now 90-based aircraft within the ultimate SSA envelope, giving strong evidence of the corporate aviation need now existing in eastern Will County.

Section 5 - Forecasts of IAP General Aviation/Corporate Aviation Activity

Since 2004 and the reconstruction of Sanger, a local airport has closed. The Howell-New Lenox Airport (1C2) had 63 aircraft when it closed in 2006. The New Lenox Planning Commission rezoned the land for residential and commercial uses. Some of these aircraft likely relocated to the GA/Corporate runway existing within the ultimate envelope of SSA.

[140] FAA, Form 5010, Airport Master Record, Kankakee Airport, April 7, 2009.
[141] FAA, Form 5010, Airport Master Record, Lansing Municipal Airport, April 7, 2009.
[142] FAA, Terminal Area Forecast Summary: Fiscal Years 2007-2025, Lansing Municipal Airport, December 2008.
[143] FAA, Form 5010, Airport Master Record, Lake Village Airport, April 7, 2009.
[144] FAA, Form 5010, Airport Master Record, Lowell Airport, April 7, 2009.

Three GA/Corporate aviation forecast scenarios were developed for the IAP at SSA: low-case, base-case and high-case. Socio-economic parameters for Will County and the Townships in the vicinity of the airport are anticipated to grow substantially over the next few years and throughout the 20-year forecast period beyond DBO (i.e., about 2035). Will County's population is forecast to grow 72 percent over this period and the population of six Illinois Townships in the vicinity of SSA (Crete, Green Garden, Monee, Peotone, Washington and Will) is anticipated to grow 231 percent over the same period. At the same time, the forecast for employment in Will County projects at 141 percent by 2035. These forecasts indicate the potential for fast growth in aviation. Yet the number of aircraft in the U.S. GA fleet is forecast to grow slowly based upon the most recent FAA Forecasts, *FAA Aerospace Forecasts - Fiscal Years 2009-2025*.

Consequently, the SSA GA/Corporate forecasts presume three scenarios for growth:

- *Low-Case – Equivalent to the FAA's national rate of growth for GA aircraft;*
- *Base-Case – Equivalent to twice the FAA's national growth rate for GA aircraft; and*
- *High-Case – Equivalent to three times the FAA's national growth rate for GA aircraft.*

This forecast adopts the high-case as the base-case for these reasons:

- Continued fast rate of population growth in Will County and an even faster rate of growth in the Townships that abut the airport site;
- Continued fast rate of employment growth in Will County;
- Availability of existing facilities within the ultimate SSA envelope to accommodate GA/Corporate growth;
- Potential for additional private-use facilities to close with some portion of those aircraft relocating to SSA; and,
- Potential for new owners to move into the area and base their aircraft at the GA/Corporate facility.

While it is unusual that the forecast base-case would be the high scenario, there are a number of positive factors for continued growth in the SSA vicinity that make this scenario reasonable. These are: success at attracting aircraft to Bult Field, including owners from out-of-state; an availability of a good number of aircraft hangars for immediate occupancy; and the potential for restricted airfields to close where one of those has a relatively large number of aircraft.

Socio-economic factors support forecast aviation growth in GA and these are most always tied to the local and national economies. However, the existence of a popular FBO who offers a wide range of services offered at reasonable prices (fuel and costs, hangar availability and cost) are also important, but harder to quantify. The most readily-used, socio-economic parameter in forecasting is population growth. While there are no readily-available data for comparable U.S. employment forecasts to 2035 (the 2009 Update SSA DBO+20), population forecasts do exist projected to that timeframe. It is noted in Chapter 1 of the 2009 Forecast Verification Report that population growth is the key for understanding the South Suburban market area in 2009. The general population in Will County has grown significantly since the original 2004 forecasts and continues to show the potential for growth through DBO+5 and DBO+20.

Since the socio-economic forecasts for the Chicago region at-large were prepared on a Township basis, it is possible to further segment the Townships that would be considered the market area for SSA GA/Corporate activity. The six Townships identified as this SAA market area are: Crete, Green Garden, Monee, Peotone, Washington and Will.

The attached **Table 4-3, Various Horizon Year Percentage Growth Comparisons in Population and Based Aircraft**, provides percentage growth statistics over time for population of the U.S., Will County and the Will County GA/Corporate service area, as well as based aircraft and the U.S. GA fleet. The forecast difference for the 2000-2010 period is 9.8 percent for the U.S., 43 percent for Will County and 50 percent for the SSA GA market service area. Between 2010 and the updated Forecast DBO+5 (2020), those growth percentages are 8.7 percent for the U.S., 25.5 percent for Will County and 66 percent for the SSA GA market service area. In terms of the FAA forecast

for the U.S. and growth in the GA fleet, the U.S. fleet is projected to grow by 3.95 percent between 2000-2010 and the growth to 2010 for SSA GA is 170 percent. Between 2000 and 2010, the U.S. fleet is projected to grow 5.8 percent, whereas the project growth for the SSA market service area is 25.8 percent.

Table 4-3 Various Horizon Year Percentage Growth Comparisons in Population and Based Aircraft

	2000	2010	2000-2010% Growth	2016	2010-2016 % Growth	2020 (DBO+5)	2016-2020 % Growth	2035 (DBO +20)	2020-2035 % Growth
Population									
U.S.	281,400	308,900	9.8%	325,000	5.2%	336,000	3.4%	377,000	12.2%
Will Co.	502	718	43.0%	827	15.2%	901	8.9%	1,175	30.4%
SSA GA MSA	49	73.5	50.3%	103	40.1%	122	18.5%	195	59.8%
Based Aircraft									
U.S. Fleet	190,426	197,950	3.95%	203,930	3.02%	209,440	2.7%	238,648	13.9%
SSA GA MSA	33	89	169.7%	104	16.9%	112	7.7%	144	28.6%

Source: FAA TAF for Sanger and forecast information by Hanson Professional Services Inc., 2009.

Therefore, with population growth in the SSA GA service area five times greater than the U.S. as a whole, it is reasonable to select the high growth rate scenario as the recommended one for SSA, which is three times the national growth rate from DBO+1 through DBO+5, but decreases to twice the national growth rate of DBO+20. In terms of the absolute numbers of aircraft, the DBO+5 number of based aircraft, 112, is 20 less than the available hangar capacity at Bult Field today. The DBO+20 numbers for the high-range forecasts for both the 2004 and 2009 forecasts are essentially the same, 144 for the 2009 and 146 for the original forecast. The 144 number for the 2009 update is less than 10 percent more than the actual available hangar capacity that exists at Bult Field today.

For purposes of the forecast, 380 operations per based aircraft are assumed as the measure to estimate annual operations. This is an accepted GA planning ratio used for forecasting GA operations per based aircraft. Such estimated level of aviation activity was based upon obtaining a weighted average of the based aircraft and operations data for three nearby public-use airports: LOT, IGQ and IKK. The weighted average for these airports is 380.

Forecasts for based aircraft by type for the three scenarios were trended toward FAA's U.S. fleet mix forecast averages, as depicted in **Table 4-4, U.S. General Aviation Fleet**. For each scenario year for each aircraft type, the forecast percentage of based aircraft increased for helicopters and turboprop/turbojet aircraft, whereas single-engine and multi-engine aircraft percentages decreased. In addition, the percentage differences by aircraft type within the forecast followed the same rationale. For example, as shown in **Table 4-5, General Aviation/Corporate Based Aircraft Forecasts**, the updated DBO+5 forecast for helicopters at the GA/Corporate facility presents a greater percentage of the GA/Corporate fleet in the high scenario, as compared to the percentage estimated for the base scenario and the percentage of the single-engine piston aircraft for the high scenario is lower in updated DBO+5 than the percentage estimated for the base scenario.

The itinerant/local split of operations is assumed to be similar to that of surrounding airfields. The weighted average method for this parameter, based upon the combination of operations at the LOT, IGQ and the IKK, is used, which is 43 percent itinerant and 57 percent local.

Peak hour operations are a factor indicative of airport capacity. The GA/Corporate facility will not have any capacity issues at DBO+1 and DBO+5. Conventional GA parameters were used to estimate peaking activity: peak month, 10 percent of annual; average day of the peak month (average number of days per month), 30.4; and, peak day, 12 percent of average day of peak month (typical range for a facility of this nature is 10-15 percent).

Table 4-4 U.S. General Aviation Fleet

Year	Fleet Total*	SE	SE (%)	Rotary	Rotary (%)	ME	ME (%)	Turboprops Turbojets	Turboprops Turbojets(%)
2000	190,426	149,034	78.20%	6,783	3.50%	18,192	9.55%	14,383	7.55%
2005	194,006	148,101	76.34%	8,728	4.50%	19,412	10.01%	17,765	9.16%
2008E	196,936	146,590	74.44%	10,215	5.19%	19,130	9.71%	21,000	10.66%
2010	197,950	144,960	73.23%	11,300	5.71%	18,795	9.49%	22,895	11.57%
2016	203,930	143,820	70.52%	13,800	6.77%	17,720	8.69%	28,590	14.02%
2020	209,440	144,880	69.17%	15,170	7.24%	16,965	8.10%	32,425	15.48%
2025	218,755	148,545	67.90%	16,795	7.68%	16,005	7.32%	37,410	17.10%
2030	228,485**	155,140	67.90%	17,595	7.70%	16,680	7.30%	39,070	17.10%
2035	238,648**	162,042	67.90%	18,376	7.70%	17,421	7.30%	40,809	17.10%

Source: FAA Aeronautical Forecasts: Fiscal Years 2008-2025 and Hanson Professional Services Inc., 2009.
SE – Single-Engine; ME – Multi-Engine Piston.
Notes: * Does not include experimental, sport or "other" aircraft. **Extrapolated by Hanson Professional Services Inc. using rate of growth 2020-2025, 2009.

Table 4-5 General Aviation/Corporate Based Aircraft Forecasts

Year	SE	SE(%)	ME	ME(%)	Rotary	Rotary(%)	Turboprops Turbojets	Turboprops Turbojets(%)	Total
High-Case									
2009	76	87.36%	8	9.20%	3	3.45%	0	0.00%	87
2016	87	83.65%	8	7.69%	6	5.77%	3	2.88%	104
2020	93	83.04%	8	7.14%	7	6.25%	4	3.57%	112
2025	100	81.30%	8	6.50%	8	6.50%	7	5.69%	123
2035	116	80.56%	9	6.25%	10	6.94%	9	6.25%	144
Base-Case									
2009	76	87.36%	8	9.20%	3	3.45%	0	0.00%	87
2016	83	84.69%	8	8.16%	5	5.10%	2	2.04%	98
2020	87	83.65%	8	7.69%	6	5.77%	3	2.88%	104
2025	91	81.98%	8	7.21%	7	6.31%	5	4.50%	111
2035	102	81.60%	9	7.20%	8	6.40%	6	4.80%	125
Low-Case									
2009	76	87.36%	8	9.20%	3	3.45%	0	0.00%	87
2016	79	84.95%	8	8.60%	4	4.30%	1	1.08%	93
2020	80	84.21%	8	8.42%	5	5.26%	2	2.11%	95
2025	82	82.83%	8	8.08%	6	6.06%	3	3.03%	99
2035	87	82.08%	8	7.55%	7	6.60%	4	3.77%	106

Source: 2009 information is FAA Aeronautical Forecasts – 2016 through 2035 forecasts are from Hanson Professional Services Inc., 2009.
SE – Single-Engine; ME – Multi-Engine Piston.

In addition to the GA/Corporate activity that is forecast to the existing 5,000-ft GA/Corporate runway, there is anticipated to be large corporate aircraft operating on the commercial runway. These are aircraft which cannot operate on the GA/Corporate runway due to their size and need for a longer runway and instrumentation. Based upon the General Aviation Manufacturers Association (GAMA) list of aircraft deliveries for 2008, approximately 11 percent of aircraft deliveries (35 of 313 delivered in the U.S.) fall into the category of large corporate jets (i.e., aircraft weighing 60,000 pounds or more).[145] For purposes of these forecasts, it will be assumed over the 20-year Airport Master Plan period from DBO that this level of activity will approximate the percentage of large GA aircraft operating at fields across the U.S. From DBO+1, it will be assumed the number of large jet operations at SSA is

[145] Internet Source: Global Security.org, *Business Aviation,* statistics provided by the General Aviation Manufacturers Association (GAMA), 2009, http://www.globalsecurity.org/military/world/business-aircraft.htm.

equal to 3 percent of itinerant operations on the GA/Corporate runway, increasing to 11 percent of itinerant operations by DBO+20.

Section 6 – Long-Range Projections of General Aviation/Corporate Aviation Activity

Long-range projections for GA/Corporate activity are based on FAA national forecast rates as presented above. Assuming that the updated DBO+1 for the IAP at SSA is approximately 2016, long-range projections for GA/Corporate aviation activity at SSA have been developed for DBO+5 through DBO+20, as shown on Table 4-5, General Aviation/Corporate Aircraft Forecasts. The potential long-range growth in based aircraft ranges from 93-106 for the low-case scenario, 98-125 for the base-case scenario and 112-144 for the high-case scenario. The high-case scenario is the recommended GA/Corporate forecast for SSA.

Using the same methodology for determining operations for the long-range projections as was used to estimate the updated DBO+1 and DBO+5 forecasts, the ranges of GA/Corporate activity for DBO+20 are: 36,900-42,200 for the low-case scenario, 40,300-49,700 for the base-case scenario and 43,400-57,300 for the high-case scenario.

Section 7 – Summary of General Aviation/Corporate Aviation Activity

Table 4-6, IAP General Aviation/Corporate Aviation Activity Forecast, presents a summary of the forecasts of GA/Corporate aviation activity and projected based aircraft at DBO+1 and DBO+5.

Table 4-6 IAP General Aviation/Corporate Aviation Activity Forecast

Aeronautical Forecast Category Breakdown by Aviation Type	Planning Horizon Year	
	DBO+1	DBO+5
High-Case Forecast (Recommended)		
General Aviation/Corporate Operations		
Single/Multi-Engine/Rotary-Wing	38,400	41,000
Turbine	1,100	1,500
Turbojet	500	900
Total Aircraft Operations	40,000	43,400
Peak Hour Operations	16	17
Based General Aviation/Corporate Aircraft		
Single/Multi-Engine/Rotary-Wing	101	108
Turbine	3	4
Turbojet	0	0
Total Based Aircraft	104	112
Base-Case Forecasts		
General Aviation/Corporate Operations		
Single/Multi-Engine/Rotary-Wing	36,500	38,400
Turbine	800	1,100
Turbojet	500	800
Total Aircraft Operations	37,800	40,300
Peak Hour Operations	15	16
Based General Aviation/Corporate Aircraft		
Single/Multi-Engine/Rotary-Wing	96	101
Turbine	2	3
Turbojet	0	0
Total Based Aircraft	98	104
Low-Case Forecasts		
General Aviation/Corporate Operations		
Single/Multi-Engine/Rotary-Wing	35,000	35,300
Turbine	400	800
Turbojet	500	800
Total Aircraft Operations	35,900	36,900
Peak Hour Operations	14	15
Based General Aviation/Corporate Aircraft		
Single/Multi-Engine/Rotary-Wing	92	93
Turbine	1	2
Turbojet	0	0
Total Based Aircraft	93	95

Source: Hanson Professional Services Inc., 2009.

Chapter 5 – Summary of Forecasts

The IAP at SSA is being planned to serve at least three (3) separate facets of aeronautical activity, including: air passenger, air cargo and GA/Corporate. The level of activity from each of these types of aeronautical activity is dependent on a number of factors, including airline service attracted to the airport, facilities provided at the airport, operating costs and supporting infrastructure. The potential for each category of aeronautical activity to develop at the airport and the likely market segments they will serve, were identified and discussed in the preceding chapters. Due to uncertainty inherent when forecasting activity for a new airport, a range of forecasts for each type of aeronautical activity was produced. These forecasts, as driven by market forces, have been labeled low, base and high to reflect certain assumptions regarding the introduction of service at SSA.

An important part of the 2009 forecast update was the update of demographic and socio-economic characteristics that define the SSA PSA. Chapter 1 of the forecast detailed changes in population and employment that have occurred in the PSA from 2004 to 2009 and updated the long-range forecasts accordingly. In addition, the boundary for the PSA was re-verified by taking a look at 45-minute travel times from SSA, excluding any overlap with 45-minute travel times for MDW. This exercise resulted in determining that the SSA PSA has increased in size, population and employment since 2004. This additional area was incorporated into the updated forecasts. It was concluded from the update of population and employment forecasts and re-verification of the PSA that there is slightly greater demand for aviation activity in the SSA PSA than was forecast in 2004. However, IDOT recommends that the 2004 air passenger activity forecasts be retained as the forecast for air passenger activity in 2009.

The following sections of this report provide a summary of the aviation activity forecasts for this 2009 update. It provides enplanement and operations figures for air passenger activity (which was developed in 2004), which is the subject of Chapter 2; updated air cargo activity, the subject for Chapter 3; and updated GA/Corporate activity, the subject of Chapter 4.

Section 1 – Forecasts of IAP Air Passenger Aviation Activity

In 2004, an analysis of the existing U.S. airline industry and multi-airport systems was conducted to determine the potential air passenger role SSA would have in the Chicago airport system. Secondary or supplemental airports exist in a number of Metropolitan areas in the U.S., including, among others, Los Angeles, Boston, New York, San Francisco and Washington, D.C. In most of these cases, a secondary or supplemental airport was developed through expansion of an existing airport.

A preliminary financial/market analysis of the Chicago region concluded that the sector of the air passenger market with the greatest likelihood of growth in the Chicago region would be that of domestic LCCs.[146] LCCs are defined as airlines that primarily operate point-to-point destinations, operate relatively homogeneous aircraft fleets, have low operating costs, tend to use supplemental/secondary airports and generally offer attractively-priced fares. Although there were some notable exceptions at the time (such as AirTran in Atlanta and Frontier in Denver), this definition of LCCs was used in the development of the air passenger forecasts. Traditionally, LCCs have attracted leisure travelers, but as amenities have disappeared from the mainline carriers, more and more business travelers are also utilizing LCCs.[147] In addition, LCCs have increased flight frequencies on some routes to make themselves more attractive to business travelers.

The study of LCCs, in 2004, examined routes served by airlines in Chicago and determined that only 19 percent of the routes in June 2001 were served by LCCs, however, LCC routes were capturing 26 percent of the air passenger traffic.[148][149] In 2002, that capture rate had increased to nearly 30 percent. Nationally, LCCs, such as AirTran

[146] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[147] FAA, *FAA Aerospace Forecasts: Fiscal Years 2003-2014*, March, 2003, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/.
[148] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[149] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Airways and Spirit, experienced annual passenger growth rates of 20.5 and 28.4 percent, respectively, from 1998 to 2003.[150]

For these reasons, it is assumed that LCCs would be most attracted to an unconstrained start-up airport with low operating costs. Thus, in order to attract LCCs to the IAP at SSA, airline operating costs must be kept low relative to other area airports.

It is anticipated that little or no hubbing operations would exist during the IAP, which also means that few connecting enplanements are expected. Since commuter/regional airlines typically feed passengers into hubbing operations, little commuter activity is expected to take place during the IAP. Similarly, international operations by scheduled passenger airlines are not anticipated to develop at SSA during the IAP. If international activity does commence during the IAP, it is anticipated that it would be in the form of charter service on a seasonal basis. Domestic charter service to vacation destinations may also appear during the first years of operation.

At the DBO, it is anticipated that scheduled passenger service would be offered first to leisure markets, such as Las Vegas, NV and Orlando, FL. After DBO, air passenger scheduled service could be initiated to the business/leisure destinations of Los Angeles and New York, the top two passenger destinations identified within the SSA Primary Passenger Market. The introduction of new passenger markets is assumed to gradually increase during the first years of airport operation.

The three forecast ranges of air passenger activity for the IAP are presented in **Table 5-1, IAP Air Passenger Aviation Activity Forecasts**. The forecasts assume that the IAP will serve a Primary Passenger Market consisting of passengers originating within 45-minute travel time from the airport site, with no overlap of the MDW 45-minute travel time passenger market. IDOT believes that these forecasts represent a reasonable expectation of the level of air passenger activity that could develop at SSA during the IAP. As stated previously, the IAP is expected to primarily serve the domestic LCC market, with relatively little connecting, commuter, or international activity.

Section 2 – Forecasts of IAP Air Cargo Aviation Activity

As demonstrated by the forecasts in this section, SSA has the potential to capture a niche market share of air cargo demand in the Chicago area.

Since longer-term economic conditions, the main drivers of air cargo demand are always highly uncertain and difficult to predict, any forecasts that depend on economic drivers are also characterized by a degree of uncertainty. One can still state, with certainty, that the demand of air cargo does move in tandem with global and national economic growth. The demand for air cargo world-wide has experienced a strong drop in the current economic downturn. The recovery from the current downturn is expected to be protracted. However, air cargo has recovered from past downturns, as businesses and consumers began to ask for more and more goods. Although the recovery from the current downturn may be protracted, the demand for goods will turn around and with it the demand for air cargo. In the longer term, the capacity for handling air cargo will need to be able to accommodate a higher volume of goods.

The area surrounding the proposed airport site is especially posed for high economic and population growth, as discussed in the socio-economic forecasts. The proposed airport site is located in the second fastest growing County in the State of Illinois: the population of Will County increased by more than a third between 2000 and 2008.[151] The regional growth will generate a demand for more goods and with it a demand for more air cargo handling capacity.

[150] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[151] Population Division, U.S. Census Bureau, Table 8 – Resident Population Estimates for the 100 Fastest Growing U.S. Counties with 10,000 or more Population in 2008: April 1, 2000 to July 1, 2008. Release Date: March 19, 2009.

Table 5-1 IAP Air Passenger Aviation Activity Forecasts

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
Air Carrier Operations			***Air Carrier Operations***			***Air Carrier Operations***		
Domestic (includes Charters)	360	9,800	Domestic (includes Charters)	2,400	16.200	Domestic (includes Charters)	3,400	23,500
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	360	9,800	**Total Domestic**	2,400	16.200	**Total Domestic**	3,400	23,500
International	-	-	International	-	-	International	-	-
Total Air Carrier	360	9,800	**Total Air Carrier**	2,400	16.200	**Total Air Carrier**	3,400	23,500
Air Carrier Instrument	180	9,800	Air Carrier Instrument	1,200	16.200	Air Carrier Instrument	1,700	23,500
Air Carrier Enplanements			***Air Carrier Enplanements***			***Air Carrier Operations***		
Domestic O&D	19,600	471,000	Domestic O&D	126,000	709,000	Domestic O&D	169,400	968,000
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	19,600	471,000	**Total Domestic**	126,000	709,000	**Total Domestic**	169,400	968,000
International	-	-	International	-	-	International	-	-
Total Air Carrier Enplanements	19,600	471,000	**Total Air Carrier Enplanement**	126,000	709,000	**Total Air Carrier Enplanements**	169,400	968,000

Military and/or other U.S. Government aircraft are expected to use the SSA in the future; however, a projection of aeronautical operations and passengers by type and amount is not quantifiable at this time and is expected to be minimal in nature.
Source: AECOM formerly TAMS an Earth Tech Company, 2004.

The share of regional air cargo demand that will be captured by SSA will then depend on the quality and availability of appropriate airport facilities, ground access and the surrounding urban infrastructure. Due to its geographic location, the Chicago area has historically served as a major distribution hub for the U.S. The airport site has good ground access, with several major highways and railroad lines. It is also important to note that the I-80 corridor located north of the SSA site and south of the City of Chicago is one of the busiest truck corridors in the nation.

IDOT believes that SSA is ideally suited to handle air cargo for the following reasons:

- The SSA site is located in the largest Metropolitan area in the central U.S.;
- The Chicago region has a large O&D cargo market currently being serviced by ORD and, to a much lesser extent, RFD;
- The Chicago region is an international port of entry; and
- SSA can provide access to a large portion of the U.S. population.

As noted above, the air passenger role of the IAP is expected to be fulfilled, mainly by LCCs. Normally, due to the gauge of aircraft used and the business model that they operate under, LCCs do not typically transport much belly cargo. Therefore, the IAP does not anticipate a large percentage of air cargo activity to be generated by belly cargo; a factor of 10 percent is assumed.

Also, due to present market saturation and potential further consolidation in the express carrier industry, IDOT does not anticipate IAP to grow into a hub-sort facility similar to other regional hubs like RFD, but anticipates the airport to serve a portion of the O-D cargo market in the Chicago region, capturing a 4 percent share of the Chicago region domestic market and 2 percent of the international market by DBO+5 (Base-Case) (see Table 5-2, SSA Air Cargo Forecast). Beyond IAP, the air express market will dictate any potential domestic hub-sort operation at SSA.

In order to develop a forecast for SSA, this study uses the same market share assumptions developed in the 2004 forecast, but applies them to the updated regional forecast volumes presented in this report. The 2004 report conducted a thorough analysis of cities that are comparable to the Chicago area, where one or more smaller airports complement a large international hub, such as ORD.[152] Market shares were developed for low-, high- and base-case scenarios based on the market shares captured by the smaller airports for both domestic and international air cargo.

Market share assumptions for domestic air cargo are as follows, which are the same ones used for the original 2004 forecast:

- *Low-Case Scenario: No cargo activity until DBO+5, then accounting for 2 percent of the total regional market;*
- *Base-Case Scenario: Starting with 2 percent at DBO+1, then going to 4 percent at DBO+ 5; and*
- *High-Case Scenario: Starting with 3 percent at DBO+1, then going to 6 percent at DBO+5.*

The same assumptions for forecasting market shares for international air cargo were used in the updated 2009 forecasts as were used in the original 2004 forecasts:

- *Low-Case Scenario: No international air cargo activity during the IAP;*
- *Base-Case Scenario: No international air cargo activity until DBO+5, then accounting for 2 percent of the total regional market; and*
- *High-Case Scenario: Starting with 2 percent at DBO+2, then going to 5 percent at DBO+5.*

Since the 2004 forecast, DBO has shifted to 2015.

[152] The five Metropolitan areas selected as case studies in the 2004 SSA air cargo forecast are: Boston, Miami-Fort Lauderdale, Houston, Los Angeles and San Francisco.

Applying these market share assumptions to the regional forecasts for domestic and international air cargo leads to the results presented in **Table 5-2, SSA Air Cargo Tonnage Forecast.**

Table 5-2 SSA Air Cargo Tonnage Forecast

Low-Case Scenario			Base-Case Scenario			High-Case Scenario		
	DBO+1	DBO+5		DBO+1	DBO+5		DBO+1	DBO+5
Market Share			***Market Share***			***Market Share***		
Domestic	0%	2%	Domestic	2%	4%	Domestic	3%	6%
International	0%	0%	International	0%	2%	International	2%	5%
Short-Tonnage			***Short-Tonnage***			***Short-Tonnage***		
Domestic	0	16,460	Domestic	15,140	32,700	Domestic	22,360	49,390
International	0	0	International	0	27,130	International	33,860	69,200
Total	0	16,460	Total	15,140	59,830	Total	56,220	118,590

Source: IHS Global Insight, World Trade Services, 2009.

The base-case scenario in the 2004 forecast predicted 28,900 short-tons in DBO+1 and 103,600 short-tons in DBO+5. The difference between the updated 2009 base-case and the original 2004 base-case can be explained by the 5-year shift in the DBO by the more protracted nature of the recovery in air cargo that has currently become apparent in the current study. The shift in the DBO drives up the forecasted tonnage, as there is more time for air cargo to recover. However, the bigger influence is the current downturn in air cargo, together with the protracted nature of the recovery that drives down the growth rates for air cargo. For the updated DBO+5, the shift in the DBO does not outweigh the effect of lower growth rates. For the updated DBO+5, the effect of lower growth rates catches up and leads to a largely lower forecast compared to the results in 2004.

The base-range of all-cargo forecast, exclusive of belly cargo, for DBO+1 is approximately 12,500 short-tons. This level of tonnage will require movement by narrow-body aircraft. The updated DBO+5 forecast includes a significant amount of international air cargo, as well. However, it is not assumed that SSA would attract larger cargo operations until after the updated DBO+5.

Conservative assumptions were used to develop the air cargo fleet mix and are described in detail in Chapter 3, including the development of an air cargo schedule.

Table 5-3, SSA Air Cargo Operations Forecast, provides the updated 2009 air cargo forecasts. As these forecasts demonstrate, the Chicago region has enough increasing demand for air cargo to allow SSA to capture a share. The actual share captured by SSA will depend highly on the type of infrastructure that it can supply to meet this demand.

Demographic projections see the south Chicago area rapidly expanding into a populated area. Already, the convergence of interstate highways, as well as other logistics facilitators, like rail and intermodal capacity, is shifting outside traditional Chicago areas. The proposed site for SSA is ideal to capture this potential air cargo capacity for the Greater Chicago marketplace. Additionally, given SSA's central U.S. geographical location, it is ideally positioned to capture global air cargo that is then disbursed via other modes to final destinations.

Since both forwarders, as well as air cargo carriers, will likely recognize this potential, it is important for SSA to be prepared to serve the soon-to-be recovering and growing global air freight market.

As consumer demand returns to normal, an ever-increasing driver of the U.S. economy, the vital import markets from the Asian Pacific area will look to an efficient, well-positioned alternative. SSA should be prepared to assume this shift, with a "*forwarder and carrier-friendly*" infrastructure in place.

Table 5-3, SSA Air Cargo Operations Forecast, provides the 2009 air cargo operations forecasts.

Table 5-3 SSA Air Cargo Operations Forecast

Low-Case Scenario			Base-Case Scenario			High-Case Scenario		
	DBO+1	DBO+5		DBO+1	DBO+5		DBO+1	DBO+5
Domestic Aircraft			***Domestic Aircraft***			***Domestic Aircraft***		
B737-700	-	806	B737-700	628	804	B737-700	1,176	1,719
B757-200	-	88	B757-200	157	334	B757-200	119	448
B767/B787/A300	-	-	B767/B787/A300	-	171	B767/B787/A300	-	114
International Aircraft			***International Aircraft***			***International Aircraft***		
B767/B787/A300	-	-	B767/B787/A300	-	405	B767/B787/A300	730	870
MD-11/A350-900F	-	-	MD-11/A350-900F	-	81	MD-11/A350-900F	-	291
Total Operations	-	894	Total Operations	785	1,795	Total Operations	2,025	3,442

Source: Hanson Professional Services Inc., 2009.

Section 3 – Forecasts of General Aviation/Corporate Activity

Three GA/Corporate aviation forecast scenarios were developed for the IAP at SSA: low-case, base-case and high-case. Socio-economic parameters for Will County and the Townships in the vicinity of the airport are anticipated to grow substantially over the next few years and throughout the 20-year forecast period beyond DBO (i.e., about 2035). Will County's population is forecasted to grow 72 percent over this period and the population of six Illinois Townships in the vicinity of SSA (Crete, Green Garden, Monee, Peotone, Washington and Will) is anticipated to grow 231 percent over the same period. At the same time, the forecast for employment in Will County projects at 141 percent by 2035. These forecasts indicate the potential for fast growth in aviation. Yet the number of aircraft in the U.S. GA fleet is forecast to grow slowly based upon the most recent FAA Forecasts, *FAA Aerospace Forecasts - Fiscal Years 2009-2025*.

Consequently, these GA/Corporate forecasts presume three scenarios for growth:

- *Low-Case – Equivalent to the FAA's national rate of growth for GA aircraft;*
- *Base-Case – Equivalent to twice the FAA's national growth rate for GA aircraft; and*
- *High-Case – Equivalent to three times the FAA's national growth rate for GA aircraft.*

This forecast adopts the high-case as the base-case for these reasons:

- Continued fast rate of population growth in Will County and an even faster rate of growth in the Townships that abut the airport site;
- Continued fast rate of employment growth in Will County;
- Facility availability to accommodate GA/Corporate growth at the existing facility;
- Potential for additional private-use facilities to close with some portion of those aircraft relocating to the SSA GA/Corporate facility; and
- Potential for new owners to move into the area and base their aircraft at the GA/Corporate facility.

Forecasts for based aircraft by type for the three scenarios were trended toward FAA's U.S. fleet mix forecast averages. For each scenario year for each aircraft type, the forecast percentage of based aircraft increased for helicopters and turboprop/turbojet aircraft, whereas single-engine and multi-engine aircraft percentages decreased. In addition, the percentage differences by aircraft type within the forecast followed the same rationale. Since GA is expected to occur on the existing GA/Corporate facility, the itinerant/local split of operations is assumed to be similar to that of municipal airfields in proximity.

Table 5-4, IAP General Aviation/Corporate Aviation Activity Forecasts, presents a summary of the forecasts of GA/Corporate aviation activity and projected based aircraft at DBO+1 and DBO+5 for the GA/Corporate facility and commercial runway at SSA.

Section 4 – Summary of IAP Forecasts of Aeronautical Activity

The forecasts of aeronautical activity developed in this report will be used to establish the facility requirements in the AMP for SSA. The AMP will focus on the IAP, but will also consider long-range projections and a potential "*ultimate configuration*" for SSA. The aircraft operations and passenger enplanement forecasts, together with a breakdown of proposed aeronautical activity, design aircraft and assumptions concerning load factors and average aircraft seating configuration, will provide a measure of the airfield and terminal requirements. These requirements will be described in a separate report and will become part of the AMP.

Table 5-5, Summary of IAP Forecasts (2004), provides the summary of the low-, base- and high-case forecasts for air passenger, air cargo and GA/Corporate aviation activity that were developed in 2004. This table is provided for those who would want to compare the 2004 forecasts with this 2009 update.

Table 5-6, Summary of IAP Forecasts (2009), is the same forecasts which have been updated to 2009. These forecasts will be used to develop the facility requirements for the IAP at SSA. The primary differences in the 2004 and 2009 forecasts are:

- Air passenger forecasts – These are the same. Information developed in these forecasts concludes that while the aviation demand may be slightly greater in 2009 than 2004, IDOT recommends retaining the 2004 forecasts, as prepared.
- Air cargo forecasts – These forecasts are considerably different, especially in the forecast of domestic air cargo, due to the severe recession and the anticipated protracted recovery. The total air cargo tonnage forecast for 2009 is approximately half of that projected in 2004 for the updated DBO+1 (2016) and 44 percent less for DBO+5 (2020). The difference in projected domestic air cargo for DBO+5 between the original 2004 forecast and the 2009 forecast is 55 percent less, whereas the forecast for international air cargo is approximately 22 percent less. This is attributed to the forecast methodology (i.e., share of Chicago market since the Chicago region has a greater percentage of international air cargo as opposed to domestic). There are similar differences for forecast air cargo operations – 32 percent less for the updated DBO+1 and 51 percent less for the updated DBO+5. The differences in the air cargo operations are greater than air cargo tonnages, due to the conservative approach to air cargo load factors (i.e., 90 percent for all arrivals and departures).
- GA/Corporate forecasts – These, too, are similar. The forecast of based aircraft in the updated DBO+1, Recommended Case is 23 higher in 2009, as was forecasted in 2004 and 22 higher for the updated DBO+5. This comes from the fact that IDOT recommends the high-case GA forecast in 2009 versus the base-case in 2004. There is now a much higher base from which to forecast (i.e., an existing 87 based aircraft, which is the same number as the original forecast DBO+1).
- In total, the estimated number of total aircraft operations forecast for SSA is similar (i.e., about slightly higher for each scenario year). The forecast for 2004 for DBO+1 is 35,460 and 53,586 by the original DBO+5. Forecast operations for 2009 are 43,160 for the updated DBO+1 and 61,290 by the updated DBO+5.

Table 5-4 IAP General Aviation/Corporate Aviation Activity Forecast

Aeronautical Forecast Category Breakdown by Aviation Type	Planning Horizon Year	
	DBO+1	DBO+5
High-Case Forecast (Recommended)		
General Aviation/Corporate Operations		
Single/Multi-Engine/Rotary-Wing	38,400	41,000
Turbine	1,100	1,500
Turbojet	500	900
Total Aircraft Operations	40,000	43,400
Peak Hour Operations	16	17
Based General Aviation/Corporate Aircraft		
Single/Multi-Engine/Rotary-Wing	101	108
Turbine	3	4
Turbojet	0	0
Total Based Aircraft	104	112
Base-Case Forecasts		
General Aviation/Corporate Operations		
Single/Multi-Engine/Rotary-Wing	36,500	38,400
Turbine	800	1,100
Turbojet	500	800
Total Aircraft Operations	37,800	40,300
Peak Hour Operations	15	16
Based General Aviation/Corporate Aircraft		
Single/Multi-Engine/Rotary-Wing	96	101
Turbine	2	3
Turbojet	0	0
Total Based Aircraft	98	104
Low-Case Forecasts		
General Aviation/Corporate Operations		
Single/Multi-Engine/Rotary-Wing	35,000	35,300
Turbine	400	800
Turbojet	500	800
Total Aircraft Operations	35,900	36,900
Peak Hour Operations	14	15
Based General Aviation/Corporate Aircraft		
Single/Multi-Engine/Rotary-Wing	92	93
Turbine	1	2
Turbojet	0	0
Total Based Aircraft	93	95

Source: Hanson Professional Services Inc., 2009.

Table 5-5 Summary of IAP Forecasts (2004)

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
Air Carrier Operations			***Air Carrier Operations***			***Air Carrier Operations***		
Domestic (includes Charters)	360	9,800	Domestic (includes Charters)	2,400	16,200	Domestic (includes Charters)	3,400	23,500
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	360	9,800	**Total Domestic**	2,400	16,200	**Total Domestic**	3,400	23,500
International	-	-	International	-	-	International	-	-
Total Air Carrier	360	9,800	**Total Air Carrier**	2,400	16,200	**Total Air Carrier**	3,400	23,500
Air Cargo Operations			***Air Cargo Operations***			***Air Cargo Operations***		
Domestic	-	1,262	Domestic	1,118	2,520	Domestic	1,700	3,783
International	-	-	International	-	931	International	902	1,760
Total Air Cargo	-	1,262	**Total Air Cargo**	1,118	3,451	**Total Air Cargo**	2,602	5,543
General Aviation/Corporate Aviation Operations			***General Aviation/Corporate Aviation Operations***			***General Aviation/Corporate Aviation Operations***		
SEL/MEL/Helicopter	16,000	16,000	SEL/MEL/Helicopter	33,600	34,000	SEL/MEL/Helicopter	52,000	52.800
Turbine	400	800	Turbine	1,200	2,000	Turbine	2,000	2,800
Total GA/Corporate	16,400	16,800	**Total GA/Corporate**	34,800	36,000	**Total GA/Corporate**	54,000	55,600
Total Aircraft Operations	16,760	27,862	**Total Aircraft Operations**	38,318	55,651	**Total Aircraft Operations**	60,002	84,643
Air Carrier Enplanements			***Air Carrier Enplanements***			***Air Carrier Enplanements***		
Domestic O&D	19,600	471,000	Domestic O&D	126,000	709.000	Domestic O&D	169,400	968,000
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	19,600	471,000	**Total Domestic**	126,000	709,000	**Total Domestic**	169,400	968,000
International	-	-	International	-	-	International	-	0
Total Enplanements	19,600	471,000	**Total Enplanements**	126,000	709,000	**Total Enplanements**	169,400	968,000
Air Cargo Tonnage (Short-Tons)			***Air Cargo Tonnage (Short-Tons)***			***Air Cargo Tonnage (Short-Tons)***		
Domestic	-	32,700	Domestic	28,900	68,700	Domestic	46,800	106,800
International	-	-	International	-	34,900	International	28,200	88,000
Total Air Cargo Tonnage	-	32,700	**Total Air Cargo Tonnage**	28,900	103,600	**Total Air Cargo Tonnage**	75,000	194,800
Based General Aviation/Corporate Aviation Aircraft			***Based General Aviation/Corporate Aviation Aircraft***			***Based General Aviation/Corporate Aviation Aircraft***		
SEL/MEL/Helicopter	40	40	SEL/MEL/Helicopter	84	85	SEL/MEL/Helicopter	130	132
Turbine	1	2	Turbine	3	5	Turbine	5	7
Total Based Aircraft	41	42	**Total Based Aircraft**	87	90	**Total Based Aircraft**	135	139

SEL – Single-Engine Land Piston Aircraft; MEL – Multi-Engine Land Piston Aircraft.
A combination of 2004 for air carrier and passenger data and 2009 for GA and air cargo.
The highlighted portions of the forecast – base-case air carrier passenger and air cargo plus GA high-case operations is the recommended 2009 forecast total operations.

Table 5-6 Summary of IAP Forecasts (2009)

Low-Case Forecast			Base-Case Forecast			High-Case Forecast		
Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5	Planning Horizon Years	DBO+1	DBO+5
Air Carrier Operations			***Air Carrier Operations***			***Air Carrier Operations***		
Domestic (includes Charters)	360	9,800	Domestic (includes Charters)	2,400	16,200	Domestic (includes Charters)	3,400	23,500
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	360	9,800	**Total Domestic**	2,400	16,200	**Total Domestic**	3,400	23,500
International	-	-	International	-	-	International	-	-
Total Air Carrier	360	9,800	**Total Air Carrier**	2,400	16,200	**Total Air Carrier**	3,400	23,500
Air Cargo Operations			***Air Cargo Operations***			***Air Cargo Operations***		
Domestic	-	894	Domestic	790	1,310	Domestic	1,300	2,280
International	-	-	International	-	490	International	730	1,160
Total Air Cargo	-	894	**Total Air Cargo**	790	1,800	**Total Air Cargo**	2,030	3,440
General Aviation/Corporate Aviation Operations			***General Aviation/Corporate Aviation Operations***			***General Aviation/Corporate Aviation Operations***		
SEL/MEL/Helicopter	35,000	35,300	SEL/MEL/Helicopter	36,500	38,400	SEL/MEL/Helicopter	38,400	41,000
Turbine	400	800	Turbine	800	1,100	Turbine	1,100	1,500
Turbojet	500	800	Turbojet	500	800	Turbojet	500	900
Total GA/Corporate	35,900	36,900	**Total GA/Corporate**	37,800	40,300	**Total GA/Corporate**	40,000	43,400
Total Aircraft Operations	36,260	47,594	**Total Aircraft Operations**	40,990	58,300	**Total Aircraft Operations**	45,430	70,340
Recommended Aircraft Operations = Base-Case Air Carrier + Base-Case Air Cargo + High-Case General Aviation/Corporate. DBO+1 = 43,190; DBO+5 = 61,400.								
Air Carrier Enplanements			***Air Carrier Enplanements***			***Air Carrier Enplanements***		
Domestic O&D	19,600	471,000	Domestic O&D	126,000	709.000	Domestic O&D	169,400	968,000
Domestic Connections	-	-	Domestic Connections	-	-	Domestic Connections	-	-
Total Domestic	19,600	471,000	**Total Domestic**	126,000	709,000	**Total Domestic**	169,400	968,000
International	-	-	International	-	-	International	-	0
Total Enplanements	19,600	471,000	**Total Enplanements**	126,000	709,000	**Total Enplanements**	169,400	968,000
Air Cargo Tonnage (Short-Tons)			***Air Cargo Tonnage (Short-Tons)***			***Air Cargo Tonnage (Short-Tons)***		
Domestic	-	16,460	Domestic	15,140	32,700	Domestic	22,360	49,400
International	-	-	International	-	27,130	International	33,860	69,200
Total Air Cargo Tonnage	-	16,460	**Total Air Cargo Tonnage**	15,140	59,830	**Total Air Cargo Tonnage**	56,220	118,600
Based General Aviation / Corporate Aviation Aircraft			***Based General Aviation / Corporate Aviation Aircraft***			***Based General Aviation / Corporate Aviation Aircraft***		
SEL/MEL/Helicopter	92	93	SEL/MEL/Helicopter	95	101	SEL/MEL/Helicopter	101	108
Turbine	1	2	Turbine	2	3	Turbine	3	4
Total Based Aircraft	93	95	**Total Based Aircraft**	97	104	**Total Based Aircraft**	104	112

Source: AECOM formerly TAMS, an Earth Tech Company, 2004.
Hanson Professional Services Inc., 2009.
SEL – Single-Engine Land Piston Aircraft; MEL – Multi-Engine Land Piston Aircraft.
The highlighted portions of the forecast – base-case air carrier passenger and air cargo plus GA high-case operations is the recommended 2009 forecast total operations.
A combination of 2004 for air carrier and passenger data and 2009 for GA and air cargo.

Section 5 – Summary of Long-Range IAP Forecasts of Aeronautical Activity for the Updated DBO+20

Updated forecasts for DBO+20 were developed for air passenger, air cargo and GA/Corporate activity. **Table 5-7, Comparison of Long-Range Forecast Ranges for DBO+20-2004 Original Forecast and 2009 Update Forecast** provides a summary of those forecasts. The differences in comparing the original DBO+20 and the updated DBO+20 are few. Both air passenger enplanements and air passenger operations for the original 2004 forecasts were adopted for use in the updated forecast so these are the same. Total air cargo tonnage estimated for DBO+20 is approximately 36 percent less. The projection of air cargo operations is about 33 percent less, which is attributed to dramatic change in the economy since 2004 as well as the methodology used in these forecasts to calculate load factors. The range of GA/Corporate activity for the original forecasts is far greater than for the updated forecasts. However, the top end of the range for the updated DBO+20 is less than for the original forecast. In total, when taking into consideration the mid-range of both forecasts for purposes of estimating total airport operations activity, the updated forecast is slightly more than 3 percent higher or appreciably the same.

Table 5-7 Comparison of Long-Range Forecast Ranges for DBO+20
2004 Original Forecast and 2009 Update Forecast

Forecast Item	2004 Original Forecast	2009 Update Forecast
Air Carrier Passenger Enplanements		
Domestic	2,200,000 – 6,100,000	2,200,000 – 6,100,000
International	0 – 500,000	0 – 500,000
Air Carrier Operations		
Domestic	56,200 – 140,300	56,200 – 140,300
International	0 – 9,800	0 – 9,800
Air Cargo Tonnage (Short-Tons)		
Total Tonnage(1)	402,800	146,100 – 350,500
Total Operations(2)	8,100	3,400 – 6,600
General Aviation		
Based Aircraft	44 – 146	106 - 144
Operations	18,900 – 62,700	42,400 – 57,600
Total Operations (Assume Mid-Range)	**148,000**	**155,500**

Source: Hanson Professional Services Inc., 2009.
Notes: (1) Includes tonnage projections from all air cargo types.
(2) Operations are for all cargo aircraft only.

Appendix 1 - SSA Socio-Economic Forecast Update

Appendix 1 Table A – Population Trends and 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	April 2000 Census	July 2007 Census Estimate	2030 Recommended Forecast
Chicago	Cook - Chicago	Illinois	2,896,014	2,836,065	3,100,000
Barrington	Cook - North Sub	Illinois	14,026	15,207	21,000
Elk Grove	Cook - North Sub	Illinois	94,969	91,512	92,000
Evanston	Cook - North Sub	Illinois	74,239	75,905	82,000
Hanover	Cook - North Sub	Illinois	83,471	86,502	99,000
Maine	Cook - North Sub	Illinois	135,623	132,320	131,000
New Trier	Cook - North Sub	Illinois	56,716	55,862	54,000
Niles	Cook - North Sub	Illinois	102,638	105,424	114,000
Northfield	Cook - North Sub	Illinois	82,880	85,605	90,000
Palatine	Cook - North Sub	Illinois	112,740	113,932	117,000
Schaumburg	Cook - North Sub	Illinois	134,114	131,618	134,000
Wheeling	Cook - North Sub	Illinois	155,834	151,056	156,000
Bloom	Cook - South Sub	Illinois	93,901	90,781	100,000
Bremen	Cook - South Sub	Illinois	109,575	110,702	117,000
Calumet	Cook - South Sub	Illinois	22,374	21,255	23,000
Lemont	Cook - South Sub	Illinois	18,002	20,412	32,000
Orland	Cook - South Sub	Illinois	91,418	101,597	116,000
Palos	Cook - South Sub	Illinois	53,419	52,825	56,000
Rich	Cook - South Sub	Illinois	67,623	71,765	90,000
Thornton	Cook - South Sub	Illinois	180,802	171,388	180,000
Worth	Cook - South Sub	Illinois	152,239	146,452	153,000
Berwyn	Cook - West Sub	Illinois	54,016	50,334	54,000
Cicero	Cook - West Sub	Illinois	85,616	80,976	76,000
Leyden	Cook - West Sub	Illinois	94,685	89,945	90,000
Lyons	Cook - West Sub	Illinois	109,264	108,845	109,000
Norwood Park	Cook - West Sub	Illinois	26,176	25,288	25,000
Oak Park	Cook - West Sub	Illinois	52,524	49,865	53,000
Proviso	Cook - West Sub	Illinois	155,831	147,947	150,000
River Forest	Cook - West Sub	Illinois	11,635	11,095	12,000
Riverside	Cook - West Sub	Illinois	15,704	14,828	16,000
Stickney	Cook - West Sub	Illinois	38,673	37,799	38,000
Addison	DuPage	Illinois	88,900	90,222	96,000
Bloomingdale	DuPage	Illinois	111,709	111,556	117,000
Downers Grove	DuPage	Illinois	148,110	149,164	157,000
Lisle	DuPage	Illinois	117,604	123,317	133,000
Milton	DuPage	Illinois	118,616	117,235	129,000
Naperville	DuPage	Illinois	85,736	95,265	107,000
Wayne	DuPage	Illinois	63,776	67,650	77,000
Winfield	DuPage	Illinois	45,155	47,975	56,000
York	DuPage	Illinois	124,553	126,215	133,000
Aux Sable	Grundy	Illinois	4,525	9,621	13,800
Braceville	Grundy	Illinois	4,895	5,734	9,800
Erienna	Grundy	Illinois	1,420	1,695	2,100
Felix	Grundy	Illinois	4,009	4,792	6,000
Garfield	Grundy	Illinois	1,543	1,634	2,700
Goodfarm	Grundy	Illinois	392	493	400
Goose Lake	Grundy	Illinois	1,784	1,920	2,100
Greenfield	Grundy	Illinois	940	986	1,100
Highland	Grundy	Illinois	314	383	400
Maine	Grundy	Illinois	242	282	300
Mazon	Grundy	Illinois	1,377	1,551	2,500
Morris	Grundy	Illinois	7,781	8,502	10,900
Nettle Creek	Grundy	Illinois	467	543	600
Norman	Grundy	Illinois	269	313	300

Appendix 1 Table A – Population Trends and 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	April 2000 Census	July 2007 Census Estimate	2030 Recommended Forecast
Saratoga	Grundy	Illinois	4,448	5,343	9,700
Vienna	Grundy	Illinois	638	709	700
Wauponsee	Grundy	Illinois	2,491	2,643	2,600
Aurora	Kane	Illinois	115,553	140,513	154,000
Batavia	Kane	Illinois	30,137	35,604	41,000
Big Rock	Kane	Illinois	1,938	2,669	4,200
Blackberry	Kane	Illinois	6,071	8,577	26,000
Burlington	Kane	Illinois	1,834	2,358	6,000
Campton	Kane	Illinois	14,072	16,506	27,000
Dundee	Kane	Illinois	53,207	66,178	80,000
Elgin	Kane	Illinois	90,384	101,707	117,000
Geneva	Kane	Illinois	23,268	28,373	30,000
Hampshire	Kane	Illinois	4,793	7,307	20,000
Kaneville	Kane	Illinois	1,292	1,791	2,800
Plato	Kane	Illinois	4,018	5,992	15,000
Rutland	Kane	Illinois	3,959	14,420	50,000
St. Charles	Kane	Illinois	42,051	49,139	60,000
Sugar Grove	Kane	Illinois	9,595	17,071	81,000
Virgil	Kane	Illinois	1,947	2,816	6,000
Aroma	Kankakee	Illinois	5,835	5,853	5,900
Bourbonnais	Kankakee	Illinois	33,061	37,160	50,000
Essex	Kankakee	Illinois	1,294	1,490	1,500
Ganeer	Kankakee	Illinois	3,222	3,297	4,000
Kankakee	Kankakee	Illinois	28,029	27,000	32,000
Limestone	Kankakee	Illinois	4,659	4,798	5,000
Manteno	Kankakee	Illinois	7,846	10,053	19,000
Momence	Kankakee	Illinois	3,884	3,873	4,000
Norton	Kankakee	Illinois	1,067	1,162	1,200
Otto	Kankakee	Illinois	2,430	2,509	2,700
Pembroke	Kankakee	Illinois	2,784	2,954	3,000
Pilot	Kankakee	Illinois	2,065	2,243	2,300
Rockville	Kankakee	Illinois	786	863	1,000
Salina	Kankakee	Illinois	1,317	1,402	1,500
St. Anne	Kankakee	Illinois	2,108	2,174	2,200
Sumner	Kankakee	Illinois	879	954	1,100
Yellowhead	Kankakee	Illinois	2,567	2,920	3,600
Big Grove	Kendall	Illinois	1,526	1,909	2,500
Bristol	Kendall	Illinois	7,677	16,102	47,000
Fox	Kendall	Illinois	1,257	1,486	2,500
Kendall	Kendall	Illinois	4,636	8,176	15,500
Lisbon	Kendall	Illinois	851	1,078	2,500
Little Rock	Kendall	Illinois	7,662	13,229	25,000
Na-Au-Say	Kendall	Illinois	1,672	5,374	12,000
Oswego	Kendall	Illinois	28,417	47,414	68,000
Seward	Kendall	Illinois	846	2,050	15,000
Antioch	Lake (IL)	Illinois	21,879	27,449	45,000
Avon	Lake (IL)	Illinois	54,957	69,733	78,000
Benton-Zion	Lake (IL)	Illinois	40,279	45,379	58,000
Cuba	Lake (IL)	Illinois	15,749	16,709	18,000
Ela	Lake (IL)	Illinois	39,688	44,894	50,000
Fremont	Lake (IL)	Illinois	23,955	27,428	42,000
Grant	Lake (IL)	Illinois	17,397	21,221	33,000
Lake Villa	Lake (IL)	Illinois	33,721	39,704	50,000
Libertyville	Lake (IL)	Illinois	48,904	52,776	57,000

Appendix 1 Table A – Population Trends and 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	April 2000 Census	July 2007 Census Estimate	2030 Recommended Forecast
Moraine (Deerfield)	Lake (IL)	Illinois	34,538	35,799	37,000
Newport	Lake (IL)	Illinois	4,142	4,998	12,000
Shields	Lake (IL)	Illinois	43,382	40,885	45,000
Vernon	Lake (IL)	Illinois	65,355	72,013	75,000
Warren	Lake (IL)	Illinois	59,424	62,363	70,000
Wauconda	Lake (IL)	Illinois	16,387	19,255	41,000
Waukegan	Lake (IL)	Illinois	92,805	95,693	100,000
West Deerfield	Lake (IL)	Illinois	31,794	33,942	39,000
Alden	McHenry	Illinois	1,534	1,709	3,000
Algonquin	McHenry	Illinois	86,219	100,537	118,000
Burton	McHenry	Illinois	3,997	5,300	11,000
Chemung	McHenry	Illinois	8,761	10,192	17,000
Coral	McHenry	Illinois	3,020	3,311	10,000
Dorr	McHenry	Illinois	18,157	20,835	29,000
Dunham	McHenry	Illinois	2,375	3,084	4,800
Grafton	McHenry	Illinois	27,547	45,427	70,000
Greenwood	McHenry	Illinois	10,677	12,298	20,000
Hartland	McHenry	Illinois	2,063	2,345	3,600
Hebron	McHenry	Illinois	2,166	2,555	4,000
Marengo	McHenry	Illinois	7,239	8,357	12,000
McHenry	McHenry	Illinois	41,740	48,099	75,000
Nunda	McHenry	Illinois	35,104	39,469	62,000
Richmond	McHenry	Illinois	4,934	7,143	18,000
Riley	McHenry	Illinois	1,811	2,119	3,000
Seneca	McHenry	Illinois	2,733	3,163	4,600
Channahon	Will	Illinois	8,339	14,194	24,000
Crete	Will	Illinois	23,589	26,479	43,000
Custer	Will	Illinois	1,463	1,761	3,000
DuPage	Will	Illinois	71,745	92,472	100,000
Florence	Will	Illinois	642	989	10,000
Frankfort	Will	Illinois	41,292	53,855	83,000
Green Garden	Will	Illinois	2,556	3,095	35,000
Homer	Will	Illinois	28,992	36,338	71,000
Jackson	Will	Illinois	3,541	5,469	27,000
Joliet	Will	Illinois	86,468	104,151	114,000
Lockport	Will	Illinois	42,048	61,931	68,000
Manhattan	Will	Illinois	5,615	9,434	48,000
Monee	Will	Illinois	13,294	17,120	50,000
New Lenox	Will	Illinois	29,730	38,532	82,000
Peotone	Will	Illinois	3,938	5,033	11,000
Plainfield	Will	Illinois	45,691	71,383	100,000
Reed	Will	Illinois	6,051	7,801	9,000
Troy	Will	Illinois	27,970	43,925	73,000
Washington	Will	Illinois	3,948	5,256	20,000
Wesley	Will	Illinois	2,568	2,945	4,000
Wheatland	Will	Illinois	44,349	61,108	100,000
Will	Will	Illinois	1,568	1,999	12,000
Wilmington	Will	Illinois	6,050	7,161	11,000
Wilton	Will	Illinois	819	1,155	2,000
Calumet	Lake (IN)	Indiana	127,800	120,452	117,200
Cedar Creek	Lake (IN)	Indiana	10,649	11,791	15,900
Center	Lake (IN)	Indiana	26,191	30,220	41,600
Eagle Creek	Lake (IN)	Indiana	1,695	2,242	4,800
Hanover	Lake (IN)	Indiana	8,692	10,531	13,900

Appendix 1 Table A – Population Trends and 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	April 2000 Census	July 2007 Census Estimate	2030 Recommended Forecast
Hobart	Lake (IN)	Indiana	39,636	40,464	46,800
North	Lake (IN)	Indiana	165,656	156,940	154,400
Ross	Lake (IN)	Indiana	38,685	42,127	50,500
St. John	Lake (IN)	Indiana	53,701	62,450	85,100
West Creek	Lake (IN)	Indiana	4,981	5,719	8,900
Winfield	Lake (IN)	Indiana	6,878	9,168	17,000
Boone	Porter	Indiana	5,884	6,472	8,000
Center	Porter	Indiana	38,186	40,165	49,600
Jackson	Porter	Indiana	4,592	5,127	9,100
Liberty	Porter	Indiana	6,727	7,593	11,400
Morgan	Porter	Indiana	2,658	3,362	6,400
Pine	Porter	Indiana	2,853	3,144	4,000
Pleasant	Porter	Indiana	3,759	4,708	8,100
Portage	Porter	Indiana	43,956	47,234	60,100
Porter	Porter	Indiana	8,459	9,251	12,300
Union	Porter	Indiana	8,166	8,759	11,000
Washington	Porter	Indiana	3,425	4,151	6,300
Westchester	Porter	Indiana	18,133	20,612	27,600
Sub-Area Summary					
City of Chicago		Illinois	2,896,014	2,836,065	3,100,000
Suburban Cook - North		Illinois	1,047,250	1,044,943	1,090,000
Suburban Cook - South		Illinois	789,353	787,177	867,000
Suburban Cook - West		Illinois	644,124	616,922	623,000
Cook - Total		Illinois	5,376,741	5,285,107	5,680,000
DuPage		Illinois	904,159	928,599	1,005,000
Grundy		Illinois	37,535	47,144	66,000
Kane		Illinois	404,119	501,021	720,000
Kankakee		Illinois	103,833	110,705	140,000
Kendall		Illinois	54,544	96,818	190,000
Lake (IL)		Illinois	644,356	710,241	850,000
McHenry		Illinois	260,077	315,943	465,000
Will		Illinois	502,266	673,586	1,100,000
Lake (IN)		Indiana	484,564	492,104	556,100
Porter		Indiana	146,798	160,578	213,900
CMAP 6-County Region			**8,091,718**	**8,414,497**	**9,820,000**
NIRPC 2-County Region			**631,362**	**652,682**	**770,000**
11-County SSA Study Region			**8,918,992**	**9,321,846**	**10,986,000**

Sources:

Population Division, US Census Bureau, Table 5: Annual Estimates of the Population for Minor Civil Divisions in Illinois and Indiana, Listed Alphabetically Within County and State: April 1, 2000 to July 1, 2007 (SUB-EST2007-05-17 and SUB-EST2007-05-18), Release Date: July 10, 2008.

Socio-Economic and Aviation Forecast Update, Prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

Appendix 1 Table B - Employment Trends & 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	2000 Employment (BEA) Definition	2008 Employment (BEA) Definition	2030 Recommended Forecast (BEA)
Chicago	Cook - Chicago	Illinois	1,774,412	1,661,003	1,857,000
Barrington	Cook - North Sub	Illinois	18,582	24,013	37,500
Elk Grove	Cook - North Sub	Illinois	128,946	121,056	152,000
Evanston	Cook - North Sub	Illinois	52,023	64,672	68,000
Hanover	Cook - North Sub	Illinois	20,062	30,188	41,500
Maine	Cook - North Sub	Illinois	102,739	93,304	95,000
New Trier	Cook - North Sub	Illinois	28,156	28,563	29,000
Niles	Cook - North Sub	Illinois	110,067	109,097	115,000
Northfield	Cook - North Sub	Illinois	105,116	132,923	150,000
Palatine	Cook - North Sub	Illinois	68,037	53,854	57,000
Schaumburg	Cook - North Sub	Illinois	117,663	112,210	140,000
Wheeling	Cook - North Sub	Illinois	104,630	110,487	115,000
Bloom	Cook - South Sub	Illinois	38,033	44,657	69,000
Bremen	Cook - South Sub	Illinois	47,913	51,177	57,000
Calumet	Cook - South Sub	Illinois	9,031	8,491	11,000
Lemont	Cook - South Sub	Illinois	9,332	11,275	17,000
Orland	Cook - South Sub	Illinois	33,999	42,946	53,000
Palos	Cook - South Sub	Illinois	28,035	32,337	35,000
Rich	Cook - South Sub	Illinois	28,768	33,892	50,000
Thornton	Cook - South Sub	Illinois	81,933	87,161	93,000
Worth	Cook - South Sub	Illinois	80,675	83,530	90,000
Berwyn	Cook - West Sub	Illinois	16,894	13,850	15,000
Cicero	Cook - West Sub	Illinois	22,018	20,638	22,000
Leyden	Cook - West Sub	Illinois	93,795	90,200	95,000
Lyons	Cook - West Sub	Illinois	55,472	66,833	70,000
Norwood Park	Cook - West Sub	Illinois	13,355	12,370	13,000
Oak Park	Cook - West Sub	Illinois	24,025	32,426	32,250
Proviso	Cook - West Sub	Illinois	98,071	101,873	105,000
River Forest	Cook - West Sub	Illinois	5,559	6,763	7,000
Riverside	Cook - West Sub	Illinois	6,145	8,672	8,750
Stickney	Cook - West Sub	Illinois	28,505	29,884	32,000
Addison	DuPage	Illinois	152,254	121,603	135,000
Bloomingdale	DuPage	Illinois	72,362	85,310	103,000
Downers Grove	DuPage	Illinois	81,795	90,893	110,000
Lisle	DuPage	Illinois	74,732	71,227	90,000
Milton	DuPage	Illinois	59,162	71,979	77,000
Naperville	DuPage	Illinois	70,706	89,704	150,000
Wayne	DuPage	Illinois	16,440	21,261	40,000
Winfield	DuPage	Illinois	24,602	35,923	70,000
York	DuPage	Illinois	150,522	147,939	175,000
Aux Sable	Grundy	Illinois	3,067	6,244	7,500
Braceville	Grundy	Illinois	1,297	1,454	2,500
Erienna	Grundy	Illinois	693	792	1,200
Felix	Grundy	Illinois	192	220	450
Garfield	Grundy	Illinois	761	772	1,250
Goodfarm	Grundy	Illinois	75	90	100
Goose Lake	Grundy	Illinois	3,162	3,258	3,500
Greenfield	Grundy	Illinois	219	220	400
Highland	Grundy	Illinois	84	98	100
Maine	Grundy	Illinois	207	231	500
Mazon	Grundy	Illinois	677	730	1,200
Morris	Grundy	Illinois	5,877	6,148	7,800
Nettle Creek	Grundy	Illinois	241	268	500
Norman	Grundy	Illinois	135	151	200
Saratoga	Grundy	Illinois	2,928	3,367	7,300

Appendix 1 Table B - Employment Trends & 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	2000 Employment (BEA) Definition	2008 Employment (BEA) Definition	2030 Recommended Forecast (BEA)
Vienna	Grundy	Illinois	213	227	250
Wauponsee	Grundy	Illinois	199	202	250
Aurora	Kane	Illinois	65,148	71,019	90,000
Batavia	Kane	Illinois	19,510	20,601	27,500
Big Rock	Kane	Illinois	1,023	1,244	12,500
Blackberry	Kane	Illinois	3,040	4,606	8,000
Burlington	Kane	Illinois	654	1,262	3,000
Campton	Kane	Illinois	2,286	3,580	12,500
Dundee	Kane	Illinois	27,690	21,091	41,000
Elgin	Kane	Illinois	52,108	54,984	65,000
Geneva	Kane	Illinois	21,431	28,387	32,000
Hampshire	Kane	Illinois	3,784	5,329	10,000
Kaneville	Kane	Illinois	634	1,162	1,500
Plato	Kane	Illinois	769	1,069	9,500
Rutland	Kane	Illinois	3,229	3,790	27,000
St. Charles	Kane	Illinois	32,107	42,304	47,000
Sugar Grove	Kane	Illinois	6,781	8,372	40,000
Virgil	Kane	Illinois	1,572	1,032	3,500
Aroma	Kankakee	Illinois	820	802	900
Bourbonnais	Kankakee	Illinois	19,688	21,576	29,000
Essex	Kankakee	Illinois	170	191	200
Ganeer	Kankakee	Illinois	1,986	1,981	2,100
Kankakee	Kankakee	Illinois	19,075	17,915	23,000
Limestone	Kankakee	Illinois	904	908	950
Manteno	Kankakee	Illinois	4,277	5,343	6,500
Momence	Kankakee	Illinois	1,476	1,435	1,650
Norton	Kankakee	Illinois	245	260	250
Otto	Kankakee	Illinois	1,482	1,492	1,750
Pembroke	Kankakee	Illinois	518	536	500
Pilot	Kankakee	Illinois	735	778	750
Rockville	Kankakee	Illinois	944	1,011	1,000
Salina	Kankakee	Illinois	203	211	200
St. Anne	Kankakee	Illinois	931	936	1,000
Sumner	Kankakee	Illinois	37	39	50
Yellowhead	Kankakee	Illinois	1,069	1,186	1,200
Big Grove	Kendall	Illinois	419	467	1,500
Bristol	Kendall	Illinois	3,491	6,518	13,000
Fox	Kendall	Illinois	394	415	4,000
Kendall	Kendall	Illinois	1,757	2,759	10,000
Lisbon	Kendall	Illinois	171	193	2,500
Little Rock	Kendall	Illinois	4,043	6,214	18,000
Na-Au-Say	Kendall	Illinois	177	505	600
Oswego	Kendall	Illinois	10,901	16,190	30,000
Seward	Kendall	Illinois	314	677	2,400
Antioch	Lake (IL)	Illinois	7,788	9,710	12,500
Avon	Lake (IL)	Illinois	18,098	21,329	32,000
Benton-Zion	Lake (IL)	Illinois	9,184	11,085	14,000
Cuba	Lake (IL)	Illinois	12,522	17,253	18,000
Ela	Lake (IL)	Illinois	28,047	25,551	36,000
Fremont	Lake (IL)	Illinois	5,995	6,048	19,000
Grant	Lake (IL)	Illinois	6,557	6,944	12,000
Lake Villa	Lake (IL)	Illinois	3,586	5,636	9,000
Libertyville	Lake (IL)	Illinois	62,630	64,288	72,500
Moraine (Deerfield)	Lake (IL)	Illinois	20,104	25,823	26,000
Newport	Lake (IL)	Illinois	1,304	1,524	6,000

Appendix 1 Table B - Employment Trends & 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	2000 Employment (BEA) Definition	2008 Employment (BEA) Definition	2030 Recommended Forecast (BEA)
Shields	Lake (IL)	Illinois	44,386	35,999	40,000
Vernon	Lake (IL)	Illinois	70,904	76,847	89,000
Warren	Lake (IL)	Illinois	38,243	40,020	55,000
Wauconda	Lake (IL)	Illinois	11,396	14,151	22,000
Waukegan	Lake (IL)	Illinois	39,057	52,214	53,000
West Deerfield	Lake (IL)	Illinois	39,039	40,442	44,000
Alden	McHenry	Illinois	208	271	500
Algonquin	McHenry	Illinois	38,676	48,806	60,000
Burton	McHenry	Illinois	108	44	3,000
Chemung	McHenry	Illinois	2,594	3,028	6,000
Coral	McHenry	Illinois	603	1,081	6,000
Dorr	McHenry	Illinois	17,454	19,802	29,900
Dunham	McHenry	Illinois	459	335	1,000
Grafton	McHenry	Illinois	4,843	6,835	13,000
Greenwood	McHenry	Illinois	1,032	2,028	9,000
Hartland	McHenry	Illinois	373	400	1,600
Hebron	McHenry	Illinois	1,506	1,576	1,500
Marengo	McHenry	Illinois	8,336	11,155	12,000
McHenry	McHenry	Illinois	15,813	15,922	24,000
Nunda	McHenry	Illinois	15,886	16,221	24,000
Richmond	McHenry	Illinois	3,359	4,557	11,000
Riley	McHenry	Illinois	251	427	500
Seneca	McHenry	Illinois	201	579	1,000
Channahon	Will	Illinois	5,185	6,693	16,000
Crete	Will	Illinois	5,552	7,535	16,000
Custer	Will	Illinois	92	190	500
DuPage	Will	Illinois	32,483	43,276	57,000
Florence	Will	Illinois	554	223	4,000
Frankfort	Will	Illinois	24,940	29,235	60,000
Green Garden	Will	Illinois	392	590	4,500
Homer	Will	Illinois	1,125	3,696	30,000
Jackson	Will	Illinois	724	1,676	22,000
Joliet	Will	Illinois	38,979	54,809	63,000
Lockport	Will	Illinois	11,709	18,334	30,000
Manhattan	Will	Illinois	1,307	1,342	12,000
Monee	Will	Illinois	7,465	9,684	20,000
New Lenox	Will	Illinois	10,755	11,533	34,000
Peotone	Will	Illinois	1,345	1,932	7,500
Plainfield	Will	Illinois	13,851	21,443	30,000
Reed	Will	Illinois	986	1,284	2,000
Troy	Will	Illinois	15,047	22,190	41,000
Washington	Will	Illinois	784	1,293	10,000
Wesley	Will	Illinois	33	232	500
Wheatland	Will	Illinois	10,086	18,638	50,000
Will	Will	Illinois	260	311	6,000
Wilmington	Will	Illinois	2,367	3,585	5,500
Wilton	Will	Illinois	66	96	500
Calumet	Lake (IN)	Indiana	51,671	56,805	62,500
Cedar Creek	Lake (IN)	Indiana	3,369	3,196	4,000
Center	Lake (IN)	Indiana	10,795	13,808	21,000
Eagle Creek	Lake (IN)	Indiana	257	695	2,500
Hanover	Lake (IN)	Indiana	2,560	2,756	5,000
Hobart	Lake (IN)	Indiana	10,756	13,911	14,000
North	Lake (IN)	Indiana	91,523	86,730	80,000
Ross	Lake (IN)	Indiana	50,198	44,696	65,000

Appendix 1 Table B - Employment Trends & 2030 Forecasts by Minor Civil Division (MCD)

Minor Civil Division (MCD)	County/ Sub-County	State	2000 Employment (BEA) Definition	2008 Employment (BEA) Definition	2030 Recommended Forecast (BEA)
St. John	Lake (IN)	Indiana	20,203	24,549	37,000
West Creek	Lake (IN)	Indiana	2,157	2,060	3,500
Winfield	Lake (IN)	Indiana	1,421	2,055	6,500
Boone	Porter	Indiana	1,740	1,753	2,600
Center	Porter	Indiana	26,076	28,657	42,500
Jackson	Porter	Indiana	1,140	424	3,200
Liberty	Porter	Indiana	1,210	1,272	3,000
Morgan	Porter	Indiana	358	288	2,200
Pine	Porter	Indiana	1,355	507	1,500
Pleasant	Porter	Indiana	2,364	2,459	3,000
Portage	Porter	Indiana	16,653	15,693	21,500
Porter	Porter	Indiana	892	754	2,500
Union	Porter	Indiana	1,390	1,083	2,500
Washington	Porter	Indiana	4,000	4,671	8,000
Westchester	Porter	Indiana	13,482	16,177	21,500
Sub-Area Summary					
City of Chicago		Illinois	1,774,412	1,661,003	1,857,000
Suburban Cook - North		Illinois	856,021	880,368	1,000,000
Suburban Cook - South		Illinois	357,719	395,466	475,000
Suburban Cook - West		Illinois	363,838	383,509	400,000
Cook - Total		Illinois	3,351,990	3,320,346	3,732,000
DuPage		Illinois	702,575	735,838	950,000
Grundy		Illinois	20,025	24,471	35,000
Kane		Illinois	241,766	269,832	430,000
Kankakee		Illinois	54,560	56,600	71,000
Kendall		Illinois	21,667	33,938	82,000
Lake (IL)		Illinois	418,842	454,863	560,000
McHenry		Illinois	111,702	133,067	203,000
Will		Illinois	186,087	259,823	522,000
Lake (IN)		Indiana	244,910	251,260	301,000
Porter		Indiana	70,660	73,740	114,000
CMAP 6-County Region			**5,012,962**	**5,173,769**	**6,397,000**
NIRPC 2-County Region			**315,570**	**325,000**	**415,000**
11-County SSA Study Region			**5,424,784**	**5,613,778**	**7,000,000**

Sources:

Compiled and balanced by the al Chalabi Group, Ltd., 2009, from:

-Chicago Metropolitan Agency for Planning (CMAP).

-Northwestern Indiana Regional Planning Agency (NIRPC).

-Illinois Department of Employment Security, *Where Workers Work 2008*.

-Tetrad Computer Applications Inc./Claritas 2007 Business Facts.

-Woods and Poole Economics CEDDS 2008 Series.

Socio-Economic and Aviation Forecast Update, Prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

Appendix 1 Table C - Comparative Population Forecasts

	Actual 2000		2007	SSA Baseline	2030 Forecasts
Sub Area	**2000[1]**	**2000[2]**	**Census Estimate**	**2005 Forecasts**	**Current Forecasts**
City of Chicago	2,896,016	2,896,014	2,836,065	3,227,825	3,100,000
North Cook	1,046,098	1,047,250	1,044,943	1,083,283	1,090,000
West Cook[3]	603,629	644,124	616,922	608,534	623,000
South Cook[3]	830,998	789,353	787,177	935,756	867,000
DuPage	904,313	904,159	928,599	998,727	1,005,000
Kane	404,255	404,119	501,021	670,670	720,000
Lake	644,457	644,356	710,241	827,707	850,000
McHenry	260,154	260,077	315,943	439,365	465,000
Will	502,526	502,266	673,586	1,013,320	1,100,000
Kankakee	103,843	103,833	110,705	123,859	140,000
Lake (IN)	484,610	484,564	492,104	506,490	557,100
Porter	146,833	146,798	160,578	195,677	212,900
Kendall	n/a	54,544	96,818	n/a	190,150
Grundy	n/a	37,535	47,144	n/a	66,267
Original Study Area	8,827,732	8,826,913	9,177,884	10,631,213	10,730,000
Current Study Area	n/a	8,918,992	9,321,846	n/a	10,986,417
4-County SSA Area	1,237,812	1,237,461	1,436,973	1,839,346	2,010,000

Notes:

(1) With 2000 Census and sub-areas, as defined in ACG's February 2005 report (and published 2006).
-*Socio-Economic Impact Assessment of Alternative Build/No-Build Forecasts for the South Suburban Airport: Inaugural Airport Program*, prepared by ACG: The al Chalabi Group, Ltd., in association with TAMS/Earth Tech, February 28, 2006, Table 37.
-Population Division, US Census Bureau, Table 5: Annual Estimates of the Population for Minor Civil Divisions in Illinois and Indiana, Listed Alphabetically Within County and State: April 1, 2000 to July 1, 2007 (SUB-EST2007-05-17 and SUB-EST2007-05-18), Release Date: July 10, 2008.
-*Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation, by ACG: The al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

(2) With 2000 Census revisions and sub-areas, as defined by current report.

(3) Sub-areas for West and South Cook differ between 2005 and current, due to current use of MCDs as the geographic units.

Appendix 1 Table D - Comparative Employment Forecasts

	Actual 2000		2008[4]	SSA Baseline	2030 Forecasts
Sub Area	**2000[1]**	**2000[2]**	**ACG Estimate**	**2005 Forecasts**	**Current Forecasts**
City of Chicago	1,785,391	1,774,412	1,661,003	2,174,599	1,857,000
North Cook	864,655	856,021	880,368	1,008,502	1,000,000
West Cook[3]	340,308	363,838	383,509	365,747	400,000
South Cook[3]	369,788	357,719	395,466	443,618	475,000
DuPage	704,019	702,575	735,838	1,010,434	950,000
Kane	242,351	241,766	269,832	417,244	430,000
Lake	419,409	418,842	454,863	561,588	560,000
McHenry	111,833	111,702	133,067	204,402	203,000
Will	186,316	186,087	259,823	469,087	522,000
Kankakee	54,915	54,560	56,600	71,104	71,000
Lake (IN)	246,323	244,910	251,260	257,013	301,000
Porter	71,210	70,660	73,740	86,859	114,000
Kendall	n/a	21,667	33,938	n/a	82,000
Grundy	n/a	20,025	24,471	n/a	35,000
Original Study Area	5,396,518	5,383,092	5,555,369	7,070,197	6,883,000
Current Study Area	n/a	5,424,784	5,613,778	n/a	7,000,000
4-County SSA Area	558,764	556,217	641,423	884,063	1,008,000

Sources:

(1) *Socio-Economic and Aviation Forecast Update*, prepared for Illinois Department of Transportation by the al Chalabi Group, Ltd., in association with Hanson Professional Services Inc. and AECOM, May 5, 2009. Forecasts reviewed by CMAP and NIRPC staffs.

(2) With 2000 Census revisions and sub-areas, as defined by current report.

(3) Sub-areas for West and South Cook differ between 2005 and current, due to current use of MCDs as the geographic units.

(4) Based on data from Woods & Poole, BLS and Tetrad Business Facts.

Appendix 2 - IHS Global Insight Methodology of Proprietary Software SSA Air Cargo Forecast 2009

IHS Global Insight Methodology

In the 2009 update to the SSA Air Cargo Forecasts, the IHS Global Insight database was used to determine the national and the Chicago regional forecasted demand for air cargo. This Appendix provides an overview of the IHS Global Insight database development methodology, with additional detail on the air cargo mode.

IHS Global Insight is an annual, nationwide database of freight traffic flows between U.S. markets, defined as counties or BEA economic area, with an overlay of flow across infrastructure. The database draws from a wide variety of data sources covering commodity volume and modal flow, including a long-term, proprietary motor carrier traffic sample, proprietary railroad data and numerous commercial and Federal government surveys, samples and census. To compose the database, these multiple and diverse information sources are cast together in a single, consistent format.

Development of the Database

Each annual version of the IHS Global Insight U.S. database begins by establishing State production volumes by industry or commodity. This information is drawn from the Census Bureau's Annual Survey of Manufacturers and the Census of Manufacturers, plus IHS Global Insight's Business Demographics Model. Each of these sources reports production in dollars, which are converted to tons using commodity value/weight relationships maintained by IHS Global Insight.

Once the production volumes are established, tonnages moving by rail, water, air and pipeline are netted from the totals (which serve as control totals), leaving the remaining freight volumes allocated to truck distribution patterns.[153] Since the process begins with production data, which include items produced for both domestic and foreign consumption, export volumes were developed in the same manner. Import volumes, drawn from U.S. Department of Commerce data, are subsequently combined into the traffic flows at the point of importation. Separate databases for North American Free Trade Agreement (NAFTA) traffic are produced and offered in conjunction with the U.S. data set.

Development of Domestic Production Statistics

Production and shipment estimates are developed from the Survey and Census of Manufacturers, which describe industrial activity by state. This information is updated to the base year through industrial production indices and supplemented by trade association and industry reports. Shipments are localized to the level of counties using street-address employment and activity information, population data, industry reports and proprietary traffic information from freight carriers. Relationships between industries are determined with input/output patterns.

Development of Domestic Modal Database Flows

IHS Global Insight constructs the IHS Global Insight database from the most recent set of publicly-available freight traffic flow information. The result is a database of county-level, origin-to-destination flows by commodities for seven modes of transportation: for-hire truckload, less-than-truckload, private truck, conventional rail, rail/truck intermodal, air and water. Volume is presented in terms of tonnage and then translated to units (such as truck counts), value, Vehicle Miles Traveled (VMT) and ton-miles using conversion tables and route distances. For any given county, traffic coverage will include flows that are intra-county (internal), inbound and outbound (external-internal and internal-external) and overhead (external-external). Overhead volumes are estimated with modal routing models applied to the nationwide data.

[153] Pipeline flows were excluded from TranSearch although some of the supporting databases do report information on pipeline flows.

Air Cargo Data

Air cargo represents by far the smallest portion, on a tonnage basis, of the IHS Global Insight database. Air activity is constructed using BTS Airport Activity Statistics.

The BTS enplanement data report the total tonnage originating at each airport. In addition, a separate data series, BTS T-100, reports cover airport-to-airport flow volumes. The origin tonnage is then disaggregated into flows to the destination airport based on this second set of data. The data are then translated from airports to counties, based on airport location information that is maintained by the FAA. In some cases, where there is more than one airport in a county, data are subject to a further aggregation. Because the data are meant to portray domestic freight between origin and destination markets, adjustments are made to account for international traffic and the use of intermediate airport hubs. Consequently, air traffic is captured from source airport market to consuming market and any use of hub facilities enroute is not depicted.

Commodity identification is then introduced. The Commodity Flow Survey (CFS) provides a broad level identification of commodity types. This broader detail is further refined based on the origin at the production region and consumption at the destination region by using full detail commodity information for each market.

IHS Global Insight World Trade Services Methodology

In this update of the 2009 SSA Air Cargo Forecasts, the WTS database is the source of the U.S. international air cargo forecast and provides the growth rates for forecasting the Chicago regional demand for international air cargo, using FAA Form 41 data as the base year. This Appendix provides an overview of the methodology used to construct the WTS database and detail on the regional country groupings used in this study.

The primary purpose of IHS Global Insight's world trade forecasting system is to provide information to assist decision makers involved with international transportation. To meet the needs of users, IHS Global Insight's global trade forecasts include all commodities that have physical volume, but not trade in services or commodities without physical volume, such as electricity. These commodities are grouped into the company's own categories derived from the International Standard Industrial Classification (ISIC) and cover 77 ISIC categories. For all trade partners in the world, the company tracks 54 major countries individually and groups the rest of the world into 16 regions according to their geographic location. Therefore, IHS Global Insight forecasts 77 commodities traded among 70 country/regions. This is a framework of $77 \times 70 \times (70\text{-}1)$, or 371,910 potential trade flows. As every country does not trade every commodity with every other country, IHS Global Insight presently has about 270,000 trade flows in its forecast base. IHS Global Insight forecasts world trade in nominal and real commodity value and then converts to physical volume by transportation mode.

Trade Data Sources

IHS Global Insight's primary international trade history data comes from the United Nations, as processed and published by Statistics Canada. These commodity trade statistics are collected from member countries' customs agencies. Customs departments have records of both the export side and import side of trade flows. Statistics Canada produces export data in free pm board (f.o.b.) terms, which are better to use in estimating the real value of commodity trade. These data cover all UN member countries and non-member economies, such as Taiwan. IHS Global Insight also purchases OECD International Trade by Commodity Statistics for more current data from developed countries. Because international trade statistics collected by different countries usually have discrepancies and because no one source has complete data, the company also uses U.S. Customs data and IMF Direction of Trade data to calibrate and supplement historical commodity trade data. Data from different sources are recorded in different classification systems and units of measurement. IHS Global Insight converts data into thousands of current U.S. dollars and then into 1997 real commodity value.

IHS Global Insight's world trade forecasting models also rely on the company's comprehensive macroeconomic history and forecast databases. Among the data used are population, GDP, GDP deflators, industrial output, foreign exchange rates and export prices by country. These data are exogenous variables in the trade forecast models. For international commodity prices, the company also obtains data from the U.S. BLS on international import and export prices. It also uses other data, such as foreign direct investment and import tariffs, as determinants of a country's export capacity and import costs.

Modeling International Trade

The basic structure of the model for the trade flow of a commodity is that a country's imports from another country are driven by the importing country's demand forces, enabled by the exporting country's capacity of exporting (supplying) the commodity and affected by the exporting country's export price and importing country's import cost for the commodity. A country will import more of a commodity if its demand for this commodity increases. At the same time, the country will import more of this commodity from a particular exporting country if that exporter's capacity to export this commodity is larger and its export price for this commodity is lower than in other exporting countries. Importers will ultimately purchase based on the delivered cost, importing more when the import cost decreases. The distance between two countries is also an important factor in determining the scale of trade between two countries. IHS Global Insight's models are constructed to capture the dynamics of international trade so that geographic distance as a constant is embedded in determining the scale of the base. Demand forces are commodity-specific. Presently, the company groups 77 commodities into two types: those where major demand forces are the importing country's population and income growth; and those where major demand forces are the importing country's production and technology development.

Export capacity for a commodity is estimated based on the country's capacity to produce this commodity and its ability to export it. Infrastructure, the establishments and resources needed for production determine production capacity. For export capabilities, IHS Global Insight pays attention to capacity that exceeds that needed to meet a country's domestic demand. Export capability is also determined by quality and cost of products facing competition in world markets. Import costs are determined by export prices, import tariffs and each importing country's foreign exchange rates. The 77 commodity groups are categorized on the basis of the demand response to import costs as price inelastic, low price elastic and price elastic.

The models are constructed in real value terms. That is, value type variables are in terms of value minus the effect of price inflation. For example, the trade flow of a commodity is measured in the 1997 value of this commodity and GDP of a country is measured in its 1990 value of GDP. IHS Global Insight uses data in real value terms, because only in real terms do the levels of imports and exports show clear respective responses to changes in demand, supply and prices. IHS Global Insight does not simply forecast a country's aggregate imports and exports, but forecast each country's imports and exports with each of its trade partners. Trade between each pair of trading partners is generally quite volatile, with importing behavior exhibiting switching of suppliers on an on-going basis. A very simple example of switching behavior is when the pattern of an exporter's supply dynamic is smaller than the importer's demand dynamic, the exporter's supply dynamic will dominate trade. In the opposite case, when an importer's demand dynamic is smaller than the exporter's supply dynamic, the importer's demand dynamic will dominate trade. To capture such a pattern switch, the company uses multi-stage switch models. The multi-stage switching model approach represents an important improvement on earlier trade model methodologies and better captures the longer term characteristics of individual commodity trade.

Appendix 2 Table A - Trade Partner Regional Groupings Utilized in this Study

China	**Indian Subcontinent**	Suriname	Seychelles	Special Categories
China	Afghanistan	Trinidad and Tobago	Sierra Leone	Tajikistan
Hong Kong	Bangladesh	Turks and Caicos Islands	Somalia	Thailand
Taiwan	Bhutan	Uruguay	South Africa	Tokelau
Europe and Mediterranean	British Indian Ocean Territory	Venezuela	Sudan	Tonga
		Virgin Islands (British)	Syrian Arab Republic	Turkmenistan
Albania	India	**Middle East & Africa**	Tanzania (United Republic of)	Tuvalu
Andorra	Maldives	Algeria		Uzbekistan
Austria	Nepal	Angola	Togo	Vanuatu
Belarus	Pakistan	Bahrain	Tunisia	Viet Nam
Belgium	Sri Lanka	Benin	Turkey	Wallis and Futuna Islands
Luxemburg	**Latin America and Caribbean**	Burkina Faso	Uganda	
Bosnia-Herzegovina		Burundi	United Arab Emirates	
Bulgaria	Anguilla	Cameroon	Western Sahara	
Croatia	Antigua and Barbuda	Cape Verde	Yemen	
Cyprus	Argentina	Central African Republic	Zambia	
Czech Republic	Aruba	Chad	Zimbabwe	
Denmark	Bahamas	Comoros	**Other Asia and Pacific**	
EEU[nes]	Barbados	Congo	Armenia	
Estonia	Belize	Congo (Democratic Republic of)	Areas[nes]	
European Free Trade Association (EFTA) [nes154]	Bermuda		Azerbaijan	
	Bolivia	Côte d'Ivoire	Australia	
	Brazil	Djibouti	British Antarctic Territory	
Faeroe Islands	Caribbean[nes]	Egypt	Brunei Darussalam	
Finland	Cayman Islands	Ethiopia	Cambodia	
France	Central American Common Market[nes]	Eritrea	Christmas Island	
Germany		Equatorial Guinea	Cocos (Keeling) Islands	
Gibraltar	Chile	Gabon	Cook Islands	
Greece	Colombia	Gambia	Developing Market Economies in East Asia[nes]	
Greenland	Costa Rica	Ghana		
Hungary	Cuba	Guinea	East Timor	
Iceland	Dominica	Guinea-Bissau	Fiji	
Ireland	Dominican Republic	Iran (Islamic Republic of)	Free Zones	
Italy	Ecuador	Israel	French Polynesia	
Latvia	El Salvador	Jordan	Georgia	
Lithuania	Falkland Islands (Malvinas)	Kenya	Kazakhstan	
Malta	French Guiana	Kuwait	Korea (Democratic People's Republic of)	
Netherlands	French Southern and Antarctic Territories	Lebanon		
Norway		Liberia	Kribati	
Other Europe[nes]	Grenada	Lybia	Kyrgyzstan	
Poland	Guadeloupe	Madagascar	Lao People's Democratic Republic	
Portugal	Guatemala	Malawi		
Republic of Moldova	Guyana	Mali	Macau	
Romania	Haiti	Mauritania	Malaysia	
Russian Federation	Honduras	Mauritius	Micronesia (Federated States of)	
Slovakia	Jamaica	Morocco		
Slovenia	Latin American Integration Association[nes]	Niger	Mongolia	
Spain		Nigeria	Myanmar	
St. Pierre and Miquelon	Martinique	North Africa[nes]	Nauru	
Sweden	Montserrat	Oman	Neutral Zone	
Switzerland	Netherland Antiles	Other Africa[nes]	New Caledonia	
The Former Yugoslav Republic of Macedonia	Nicaragua	Qatar	New Zealand	
	Panama	Reunion	Niue	
Ukraine	Paraguay	Rwanda	Norfolk Island	
United Kingdom	Peru	Saint Helena	Oceania[nes]	
Yugoslavia	Rest of South America[nes]	Sao Tome and Principe	Papua New Guinea	
	Saint Kitts and Nevis	Saudi Arabia	Philippines	
	Saint Vincent and the Grenadines	Senegal	Pitcairn	
			Samoa	
			Ship Stores and Bunkers	
			Singapore	
			Solomon Islands	

[154] Note: nes = Not Elsewhere Specified

Appendix 3 - Passenger Aircraft Fleet Projections for the IAP at the SSA

Aircraft Fleet Introduction

This Appendix addresses the potential composition of the passenger aircraft fleet that could use the SSA facilities during different planning horizons within the AMP. The aircraft fleet mix provides guidelines for the preparation of facility requirements and development alternatives. Load factors for various aircraft seat configurations are also discussed and estimated herein. Load factors are helpful in determining the potential number of passenger aircraft operations at SSA.

An analysis of recent trends in the U.S. aircraft fleet was undertaken, as well as, an examination of airports with similar (supplemental) characteristics or activity levels that could be expected at SSA during AMP's planning horizon years. The results of this analysis will be used to estimate the number of passenger aircraft operations at SSA during the IAP. Following the tragic events of September 11, 2001 and the downturn in the U.S. economy, most U.S. air carriers have reduced their fleet by retiring older aircraft and, thereby, reducing overall seating capacity.[155]

Using USDOT T-100 data reported by commercial air carriers to the Office of Airline Information of the USDOT's BTS, an evaluation of the changes in the domestic aircraft fleet, since 1990, was completed.[156] Significant changes in the aircraft fleet mix have occurred during this time. Some of the most relevant are:

- The retirement of Stage II aircraft by 2000, particularly B727-200 and B737-100/200.
- The introduction of regional jets in low-density markets, particularly on short- and medium-haul flights. This has a major impact in markets in the Midwest and throughout the entire country. In many cases, airlines have reduced equipment size serving these markets with regional jets while maintaining frequencies.
- The passenger load factors have reached higher levels than ever seen before as a result of substantially–reduced, available seating capacity.
- The significant reduction of the overall aircraft fleet was due to a reduction in travel demand after the terrorist attacks of September 11, 2001. In addition, travel demand also fell due to an economic downturn in 2002 and 2003.

The T-100 data was used to review the operational changes in the domestic aircraft fleet in the last few years. Initially, modifications in the U.S. fleet were identified. Next, changing trends in the Chicago region were identified to confirm if trends at the national level were also occurring in the greater Chicago region. Two air carrier airports, ORD and MDW, were analyzed to identify trends in the region. Following this analysis, the characteristics and composition of U.S. airports with activity levels and aircraft operations similar to those expected at SSA were identified in order to estimate the potential aircraft fleet make-up at the new airport.

As a note, this Forecast Study uses different variables than those used in the annual FAA Aerospace Forecast reports. "FAA's variables" are indicative of the overall aviation national market and not of individual airports. The FAA's average seats per aircraft are estimated by dividing seat miles by aircraft miles.[157][158] The aircraft load factor is determined by dividing revenue passenger miles by available seat miles.[159][160] Among other things, the airlines use these variables to estimate their financial yields. For airport planning purposes, the variable average seats per departure (number of seats divided by aircraft departures), is more appropriate for determining terminal space

[155] FAA, *Aerospace Forecasts Fiscal Years 2003-2014*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/media/execsum.doc.

[156] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

[157] Seat miles are the aircraft miles flown in each inter-airport segment multiplied by the number of seats available on that segment for revenue passenger use – BTS, USDOT.

[158] Aircraft miles are the number of aircraft departures multiplied by the flight stage length - BTS, USDOT.

[159] Revenue passenger miles are computed by summation of the products of the revenue aircraft miles on each interairport segment multiplied by the number of revenue passengers carried on that segment - BTS, USDOT.

[160] Available seat miles are the aircraft miles flown in each inter-airport hop multiplied by the number of seats available on that hop for revenue passenger use – BTS, USDOT.

and facility requirements. The same case applies for departure load factor (number of passengers divided by available seats). The "FAA variables" tend to produce larger figures than the airport planning variables used in this report. For instance, the FAA's average seats per aircraft in CY 2002 were 136.0, while average seats per departure were only 114.5.[161] FAA's load factor was 70.5 percent, while average load factor per departure was only 66.8 percent.[162]

New Aircraft Technology

The two leading aircraft manufacturers in the world, Boeing, based in Chicago, IL and Airbus, based in Toulouse, France, are currently involved in the development of new passenger aircraft. The Boeing Company is developing the B787, Dreamliner. This aircraft is planned to carry approximately 200-250 passengers and be capable of flying long-range flights up to 8,000 nm to meet the requirements of some low- and medium-density, long-range international markets.[163] This aircraft is constructed of composite materials and should significantly improve fuel efficiency when compared to other aircraft of similar capability (B767 and A330). Boeing expects to have the aircraft available to airlines in 2009.[164] The 787, while not currently incorporating a freighter design, is being developed with lower-hold cargo as a key consideration and will afford customers 40 to 60 percent more cargo revenue capacity than current airplanes in the 200-250 seat category.[165] Boeing also continues to manufacture a range of small, mid-size and large wide-body passenger and cargo aircraft including: B717, B737, B767, B777 and B747.

Airbus has brought the A380 to market and is currently developing the new-generation A350-900F. Airbus will produce the A350-XWB in three versions (the A350-800, -900 and -1000), providing a family of aircraft accommodating 270 to 350 passengers – each with a global reach that covers routes on flight distances of up to 8,500 nm.[166] The A350-900 variant will also be developed as an air cargo freighter, A350-900F. Through April 2009, no A350's have been delivered, but there are 182 orders for A350-800, 226 orders for the A350-900 and 75 orders for the A350-1000.[167]

Other aircraft manufacturers have concentrated on building a wide selection of regional jets. Some of the most common found in the U.S. market are Embraer and Bombardier. Embraer is an aircraft manufacturer based in Brazil and focuses on regional, military and corporate aviation. Regional jets produced by Embraer range from the ERJ-135/145 models that seat 37 passengers, to the Embraer 170, 175, 190 and 195 families of aircraft in the 70-110 seat size.[168] Bombardier Aerospace, based in Montreal, Québec, also produces a range of regional passenger, business and defense aircraft. Passenger aircraft include the Canadair CRJ-100, 200, 700 and 900 models.[169] Bombardier Aerospace anticipated the need for larger regional aircraft when it introduced the CRJ700 in 1997 and the CRJ900 in 2000. These aircraft, of which 572 had been ordered as of July 31, 2008, are the backbone of many airline fleets. The CRJ1000 NextGen continues to build on Bombardier's on-going commitment to product innovation. That commitment has continued with the launch in July, 2008 of the 110- to 130-seat CSeries mainline jet, scheduled to enter airline service in 2013.[170] Seats per aircraft for the Canadair's range from 50-90 passengers and have an operating range of up to 2,005 nm. Most of the major U.S. air carriers started using regional jets in the late 1990's for low-density routes on short- and medium-haul markets to improve yield performance.[171] The

[161] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[162] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[163] Boeing, http://www.boeing.com/commercial/787family/background.html, 2009.
[164] Boeing, http://www.boeing.com/commercial/787family/background.html, 2009.
[165] Boeing, http://www.boeing.com/commercial/freighters/index.html.
[166] Airbus, http://www.airbus.com/en/aircraftfamilies/a350/efficiency/index.html.
[167] Airbus, http://www.airbus.com/en/aircraftfamilies/a350/efficiency/in_motion/range.html.
[168] Embraer, http://www.embraer.com, 2004.
[169] Bombardier Aerospace, http://www.bombardier.com, 2004.
[170] Bombardier Aerospace, http://www.bombardier.com/en/aerospace/products/commercial-aircraft/q-series.
[171] FAA, *Aerospace Forecasts Fiscal Years 2003-2014*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/media/execsum.doc.

flight ranges of regional jets are longer than turboprops and air travelers prefer to fly small jets than the "older" turboprop commuter aircraft.[172]

In recent times, there has been a significant improvement in the type of components and materials used to build aircraft, which has improved aircraft performance, fuel efficiency, safety and fire protection. New aviation improvements are also related to the introduction of the new Future Air Navigation System (FANS), which is a part of the Global Navigation Satellite System (GNSS). This new technology, which will considerably enhance air traffic control and air navigation, is expected to be underway later in this decade.[173] Some of the newer aircraft in service already have some of the necessary navigational equipment installed for FANS.

Historical Domestic U.S. Aircraft Fleet Statistics

This section identifies the historical trends in the U.S. domestic aircraft fleet since 1990. As previously mentioned, the information was compiled from USDOT T-100 data, which records the aircraft size by commercial passenger operation for every year since 1990. In the early 1990's, some regional/commuter airlines became Form 41 airlines. Form 41 airlines refer to the schedule of forms submitted monthly, quarterly, semi-annually, and annually to the BTS by each large certificated air carrier subject to the Federal Aviation Act of 1958. It is also defined as a certificated air carrier holding a Certificate of Public Convenience and Necessity issued by DOT to conduct scheduled services interstate. Non-scheduled or charter operations may also be conducted by these carriers. This resulted from a significant increase in activity and resources under code-sharing agreements with the major U.S. air carriers, which became more predominant after deregulation of the airline industry. Beforehand, these airlines were classified as 298-C airlines (298-C Airlines are carriers that operate only commuter aircraft of 60 seats or less), which did not have to report detailed on-board statistics, particularly concerning operational aircraft fleet mix activity. For this reason, **Table A, U.S. Domestic Passenger Aircraft Fleet Mix – Operations by Seat Range**, shows a significant percentage increase in the number of aircraft with 0- to 60 seats between 1990 and 2002.

Table A, U.S. Domestic Passenger Aircraft Fleet Mix – Operations by Seat Range, depicts the composition of the operational aircraft fleet mix divided into 18 separate seat ranges. In 1990, aircraft with between 141 and 160.99 seats dominated operations constituting 32.53 percent of the total domestic activity. The B727-200 and A320 are included in this category. The next largest group was aircraft with seating configurations of 101 to 120.99 seats, which comprised 27.58 percent of operations. Commuter aircraft (seat ranges from 0 to 60.99) only accounted for 7.30 percent. Wide-body aircraft (201 seats and up) made up 4.69 percent of the total activity.

There has been a significant change in the domestic passenger aircraft fleet mix since 1990. The airlines either retired all Stage II aircraft, or they had retrofitted or hushkitted their engines by the year 2000 in compliance with the Airport Noise and Capacity Act of 1990. Most of the Stage II aircraft were retired, except for some cargo aircraft. Furthermore, many older and larger commercial aircraft were grounded after the terrorist attacks of September 11 due to decreased passenger demand that resulted in overcapacity in the commercial aviation system. Most U.S. carriers, due to their difficult financial situations, either cancelled or postponed indefinitely new aircraft orders and options.[174]

According to Onboard from Data Base Products, Inc., in 2002, aircraft with seat ranges between 121 and 140.99 seats handled the most commercial passenger operations, representing 34.31 percent of the total activity, compared to 14.87 percent in 1990. The next largest group includes aircraft having between 41 and 60.99 seats, comprising 13.05 percent of total operations, whereas in 1990 they only accounted for 1.36 percent. In 2002, commuter and wide-body aircraft operations represented 24.13 and 2.93 percent, respectively, of total domestic activity.[175] The commuter share of operations has more than tripled since 1990, while the percentage of

[172] Center for Advanced Aviation System Development, the Mitre Group, http://www.mitrecaasd.org/work/project_details.cfm?item_id=148, http://www.mitrecaasd.org/library/tech_docs/pre1999/mp98w256v3.pdf, 2003.
[173] FAA, http://www.faa.gov/apo/strategicplan/FAA_Flight_Plan.pdf, 2004.
[174] FAA, *Aerospace Forecasts Fiscal Years 2003-2014*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/media/execsum.doc.
[175] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

operations by wide-body aircraft has been considerably reduced. This is at least partially due to the fact that the capabilities of newer narrow-body jets has improved in the last few years, including being able to fly much longer distances, which allows their use on low–density. long-range markets and allows airlines to increase frequency on some of these routes. For air travelers, frequency is typically more important than larger aircraft because it provides more flexibility for their travel plans.

Table B, U.S. Domestic Passenger Aircraft Fleet Mix - Average Number of Seats per Departure by Seat Range, shows that the number of seats per aircraft per departure has been significantly reduced since 1990. The number of seats per domestic departure averaged 128.8 in 1990, compared to 114.5 in 2002, which represents an average decrease of slightly more than one seat per year. According to FAA Aerospace Forecast Reports, the average number of seats per aircraft was 151.7 and 147.9 for fiscal years 1990 and 2002, respectively.[176] As already stated in this report, the actual number of seats per departure is much lower than the FAA figures, since their calculations come from different aviation variables.

In addition, the FAA's Office of Aviation Policy and Plans (APO) in its *2003-2014 Aerospace Forecast Report* has changed the database used to forecast activity for major U.S. air carriers. In previous issues of the forecast report, APO included all air carriers, or all Form 41 airlines. However, the database used in 2003 to forecast future commercial activity was changed to include only Large Air Carriers. According to FAA's APO, large air carriers are those airlines that operate a majority of flights on aircraft having more than 70 seats.[177] In any case, historical data shows that airlines have significantly increased the use of narrow-body and regional aircraft to service domestic passenger demand. Based on the latest JP Fleet issue, U.S. airlines have not made any significant orders for new wide-body airplanes.[178] In fact, some subsidiaries of the U.S. mainline carriers have ordered regional jets to meet the needs of domestic markets.[179] Industry experts anticipate that the average number of seats per aircraft of the operational domestic aircraft fleet will increase in the long run, which has to be taken into account when projecting future aviation activity.[180]

The average aircraft load factor for U.S. domestic air carrier operations has also significantly changed since 1990, as shown in **Table C, U.S. Domestic Aircraft Fleet Mix – Load Factor by Seat Range**. The load factor per domestic aircraft departure has noticeably increased from an annual average of 55.9 percent in 1990 to 66.8 percent in 2002. U.S. air carriers experienced the highest load factors in 2000, with an average of 67.6 percent. As already stated, U.S. air carriers have been able to increase their average load factors in part due to the introduction of regional jets and newer narrow-body jets that are capable of flying farther and can be used in some low- to medium-density markets, where airlines previously were forced to use larger aircraft resulting in a low percentage of occupied seats.[181] Thus, the U.S. commercial aviation industry has balanced a smaller overall aircraft fleet with an increase in load factors within the domestic market.

[176] Various FAA Airspace and Aerospace Forecast Reports.
[177] FAA, *FAA Aerospace Forecasts Fiscal Years 2003-2014*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/media/execsum.doc.
[178] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[179] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[180] FAA, *FAA Aerospace Forecasts Fiscal Years 2003-2014*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/2003-2014/media/execsum.doc.
[181] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Appendix 3 Table A - U.S. Domestic Passenger Aircraft Fleet Mix – Operations by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	3.68%	5.53%	5.19%	4.84%	3.84%	6.01%	7.30%	5.27%	2.38%	2.18%	1.02%	0.35%	0.78%	0-20
21-40	2.26%	3.01%	3.92%	5.70%	6.53%	8.15%	7.73%	8.20%	11.20%	10.84%	11.24%	11.81%	10.30%	21-40
41-60	1.36%	1.58%	2.74%	2.19%	1.73%	2.92%	2.85%	2.90%	3.99%	5.54%	8.26%	9.06%	13.05%	41-60
61-80	4.76%	4.12%	3.54%	3.12%	3.66%	3.85%	3.82%	3.44%	2.91%	3.36%	3.14%	3.30%	3.26%	61-80
81-100	2.86%	2.22%	2.80%	10.48%	11.49%	3.72%	3.91%	3.92%	11.16%	3.59%	8.44%	7.24%	5.55%	81-100
101-120	27.58%	26.16%	23.87%	14.75%	15.26%	22.15%	21.27%	21.07%	12.86%	17.98%	10.80%	10.11%	8.46%	101-120
121-140	14.87%	14.62%	14.13%	30.69%	31.43%	29.68%	29.98%	31.27%	31.52%	32.63%	33.13%	34.37%	34.31%	121-140
141-160	32.53%	32.66%	33.14%	16.75%	15.06%	13.59%	13.00%	13.32%	13.45%	12.97%	12.81%	12.56%	11.90%	141-160
161-180	0.01%	0.00%	0.06%	0.06%	0.02%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	1.35%	161-180
181-200	5.23%	5.41%	5.90%	6.93%	6.95%	6.63%	7.05%	7.61%	7.65%	8.07%	8.40%	8.26%	8.11%	181-200
201-220	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	201-220
221-240	0.00%	0.03%	0.03%	0.00%	0.00%	0.00%	0.71%	0.80%	0.87%	1.09%	1.34%	1.34%	1.72%	221-240
241-260	1.24%	1.03%	0.98%	1.13%	1.16%	0.84%	0.10%	0.25%	0.25%	0.20%	0.29%	0.20%	0.19%	241-260
261-280	0.26%	0.45%	0.54%	0.60%	1.52%	1.27%	0.45%	0.40%	0.36%	0.33%	0.14%	0.15%	0.46%	261-280
281-300	3.06%	2.94%	2.96%	2.55%	1.16%	0.96%	1.67%	1.42%	0.87%	0.71%	0.49%	0.75%	0.45%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	0.00%	0.00%	0.43%	0.34%	0.38%	0.17%	0.10%	301-350
351-400	0.08%	0.08%	0.02%	0.19%	0.03%	0.01%	0.02%	0.04%	0.04%	0.13%	0.10%	0.03%	0.02%	351-400
400+	0.20%	0.16%	0.18%	0.02%	0.16%	0.12%	0.14%	0.08%	0.07%	0.06%	0.01%	0.00%	0.00%	400+
Sum	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.99%	100.02%	100.02%	99.99%	99.99%	100.01%	Sum

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport,* May 11, 2004.

Appendix 3 Table B - U.S. Domestic Passenger Aircraft Fleet Mix- Average Number of Seats per Departure by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	18.49	18.63	18.66	18.45	18.21	18.58	18.86	18.86	18.87	18.91	17.71	14.90	9.80	0-20
21-40	34.08	33.44	34.28	33.39	32.66	32.17	31.82	32.52	33.14	33.22	33.38	33.56	33.47	21-40
41-60	47.82	46.95	47.53	47.44	47.60	46.94	47.38	47.69	48.03	48.93	49.35	49.36	49.03	41-60
61-80	70.91	69.89	68.68	68.18	67.58	67.19	67.09	67.23	66.35	67.54	68.04	67.73	68.56	61-80
81-100	93.65	95.99	97.11	99.11	99.64	97.40	96.92	95.75	97.67	95.80	97.20	96.23	95.59	81-100
101-120	108.33	108.98	109.31	112.77	112.73	109.27	108.94	109.38	114.08	110.15	114.38	114.01	115.29	101-120
121-140	130.52	131.10	131.40	136.32	134.90	135.11	135.41	135.77	135.87	135.32	133.75	132.63	131.89	121-140
141-160	145.66	145.29	145.21	147.31	146.96	148.00	148.75	148.90	148.36	148.55	146.93	146.62	147.73	141-160
161-180	166.57	-	179.05	177.16	172.37	172.00	-	-	-	-	-	169.49	175.51	161-180
181-200	190.68	191.12	188.71	186.83	185.62	185.31	186.31	186.01	186.09	185.64	183.58	182.07	181.27	181-200
201-220	220.32	-	-	-	-	-	-	-	206.75	-	-	-	-	201-220
221-240	0.00	225.11	222.98	-	-	-	240.62	238.82	238.46	238.41	233.79	232.59	230.48	221-240
241-260	253.92	251.94	250.81	247.08	245.96	243.47	254.92	257.80	247.13	245.63	255.44	247.57	242.55	241-260
261-280	271.09	269.28	269.67	267.30	274.61	275.92	272.01	270.74	270.42	272.12	273.87	271.03	277.73	261-280
281-300	291.00	290.06	288.90	287.99	289.61	290.27	287.41	289.15	285.40	289.14	286.92	286.78	283.98	281-300
301-350	0.00	-	-	0.00	-	303.84	-	-	303.59	306.10	309.34	315.16	325.94	301-350
351-400	395.96	396.09	384.39	396.38	374.07	381.38	390.14	382.72	383.62	368.38	366.32	354.11	362.08	351-400
400+	409.57	409.34	409.20	401.83	411.02	424.53	430.34	449.88	462.50	469.57	471.86	-	-	400+
Average Seats per Departure	128.76	126.65	126.13	125.10	123.40	117.16	116.43	118.89	118.51	118.48	116.51	115.59	114.46	Average Seats per Departure
FAA Seats per Aircraft	151.7	151.0	150.5	149.7	146.6	143.4	141.8	142.5	142.3	141.4	139.4	136.5	E 147.9[182]	FAA Seats per Aircraft

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

[182] Between 2001 and 2002, FAA changed the definition of air carriers used in the FAA Aerospace Forecast Fiscal Years 2003 – 2014.

Appendix 3 Table C - U.S. Domestic Aircraft Fleet Mix – Load Factor by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	46.84%	46.86%	47.43%	49.54%	51.60%	45.96%	46.48%	50.92%	55.79%	55.87%	57.53%	53.40%	32.84%	0-20
21-40	45.95%	46.45%	47.28%	49.50%	51.80%	48.66%	52.55%	53.94%	56.05%	56.36%	56.61%	55.62%	58.96%	21-40
41-60	49.71%	47.86%	49.60%	51.37%	52.12%	50.42%	52.96%	56.12%	59.76%	61.57%	63.75%	62.15%	64.55%	41-60
61-80	57.60%	54.59%	54.30%	55.09%	54.73%	54.70%	56.65%	57.66%	59.01%	58.11%	58.89%	57.49%	58.56%	61-80
81-100	48.98%	50.04%	49.55%	53.63%	58.08%	61.08%	62.51%	64.55%	63.80%	62.93%	62.90%	61.63%	61.96%	81-100
101-120	54.85%	54.96%	56.48%	59.16%	62.21%	61.47%	63.36%	64.27%	66.14%	64.79%	67.51%	66.38%	66.03%	101-120
121-140	56.28%	56.79%	57.42%	57.18%	60.89%	61.75%	65.06%	65.01%	66.68%	66.93%	67.66%	65.58%	65.47%	121-140
141-160	54.78%	55.12%	56.46%	56.64%	60.67%	61.61%	64.62%	65.55%	67.31%	65.92%	67.21%	65.94%	68.33%	141-160
161-180	67.03%	-	54.03%	59.83%	50.97%	53.69%	-	-	-	-	-	68.76%	69.74%	161-180
181-200	59.93%	61.80%	62.36%	61.79%	64.44%	65.44%	68.77%	69.76%	70.48%	70.25%	71.88%	69.14%	71.15%	181-200
201-220	59.28%	-	-	-	-	-	-	-	50.96%	-	-	-	-	201-220
221-240	-	56.72%	56.22%	-	-	-	69.82%	71.18%	72.54%	72.29%	74.08%	70.59%	72.93%	221-240
241-260	58.62%	61.13%	62.12%	62.36%	65.04%	63.50%	60.51%	70.29%	75.60%	73.50%	74.17%	70.46%	69.54%	241-260
261-280	65.49%	64.49%	66.17%	64.33%	69.10%	71.19%	73.89%	75.44%	76.99%	76.98%	79.95%	75.49%	78.75%	261-280
281-300	60.54%	61.63%	63.39%	64.34%	66.66%	67.21%	72.13%	74.10%	73.38%	73.39%	75.34%	73.45%	74.02%	281-300
301-350	-	-	-	-	-	69.11%	-	-	77.44%	80.23%	76.27%	77.90%	72.92%	301-350
351-400	60.71%	63.58%	49.25%	68.92%	66.60%	63.60%	69.34%	75.15%	72.25%	71.51%	74.10%	69.85%	82.44%	351-400
400+	61.77%	65.17%	66.18%	58.16%	66.59%	70.87%	70.06%	75.02%	76.15%	76.12%	73.32%	-	-	400+
Average Load Factor	55.87%	56.33%	57.44%	57.96%	61.31%	61.80%	64.65%	65.48%	66.82%	66.55%	67.58%	65.72%	66.75%	Average Load Factor
FAA Load Factor	%	60.8%	62.6%	61.3%	64.2%	65.2%	67.4%	68.9%	70.1%	69.8%	70.9%	69.7%	Estimate 70.0%[183]	FAA Load Factor

Sources: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.
FAA Aviation and Aerospace Forecasts reports going from 1994-2005 to 2003-2014.

[183] Between 2001 and 2002, FAA changed the definition of air carriers used in the FAA Aerospace Forecast Fiscal Years 2003 – 2014.

Existing Chicago Region Airports

O'Hare International Airport (ORD). Tables D to F depict annual ORD domestic aircraft fleet mix composition, average seats per departure, and load factors from 1990 to 2002, as obtained from USDOT T-100 Forms.[184]

A review of the T-100 data indicates that ORD has experienced a trend similar to the U.S. domestic aircraft fleet, as shown in Tables A through C. For instance, the passenger aircraft used for most operations at ORD in 1990 were those with 141 to 160.99 seats, accounting for 47.52 percent of total domestic activity, followed by airplanes between 101 and 120.99 seats with 16.88 percent of operations. Thus, in 1990, aircraft ranging from 101 to 160.99 seats represented 75.4 percent of the domestic commercial passenger operations at ORD (see **Table D, O'Hare Domestic Passenger Aircraft Fleet Mix - Operations by Seat Ranges**).

By 2002, aircraft with between 141 and 160.99 seats only accounted for 1.10 percent of operations at ORD. Passenger aircraft ranging from 121 to 140.99 seats were the most active, representing 31.0 percent of ORD passenger operations, followed by aircraft with 101 to 120.99 seats, accounting for 23.41 percent of operations. The commuter/regional jet categories showed a significant increase throughout the same period.[185] While in 1990, the 41 to 60.99 and 81 to 100.99 seat ranges represented 5.04 and 2.81 percent, respectively, of domestic operations, in 2002, they accounted for 19.47 and 11.73 percent, respectively. This represents approximately a four-fold growth, a considerable increase. Operations by wide-body jets (aircraft with 201 seats and higher) went from 7.3 percent in 1990, to 2.6 percent in 2002, a significant drop in activity. However, it is also important to realize that most commuter/small regional airlines changed classification to Form 41 airlines in the interim, which affected overall aircraft fleet mix composition.

Table E, O'Hare Domestic Aircraft Fleet Mix - Average Number of Seats per Aircraft Departure by Seat Range, shows that the average number of seats per aircraft on domestic operations at ORD dropped from 144.3 in 1990, to 113.3 seats per departure in 2002, a reduction of more than 2 seats per departure per year. In 1990, the number of seats per aircraft at ORD was significantly larger than the average for the U.S. domestic market (144.3 versus 128.8), while in 2002, it was slightly smaller than the national average (113.3 versus 114.5). One of the reasons for this reduction in number of seats per aircraft is that ORD now serves many short- and medium-range flights (i.e., Midwest destinations) with regional jets and narrow-bodies.

Load factors also experienced a significant change at ORD, going from 56.9 percent in 1990, to 66.1 percent in 2002 (see **Table F, O'Hare Domestic Aircraft Fleet Mix - Load Factor by Seat Range**). ORD experienced the highest load factor of the time period in 2000, when the annual average was 67.9 percent, similar to the overall U.S. rate. In 1990, the U.S. domestic fleet load factor was slightly smaller (55.9 percent versus 56.9 percent), while in 2002 the national load factor was a little larger than ORD (66.8 percent versus 66.1 percent).

Midway International Airport (MDW). Tables G to I depict annual MDW domestic aircraft fleet mix composition, average seats per departure, and load factors from 1990 to 2002, as obtained from USDOT T-100 Forms.[186]

The longest runway at MDW is 6,522 ft long, which limits the size of aircraft that can operate at the airport.[187] The largest airplanes used at MDW in 2003 are B757-300, which have a maximum takeoff weight of 272,500 pounds.[188] In 2003, ATA flew the aircraft with a seating configuration of 244 in a single-class layout.[189] For the same aircraft,

[184] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[185] Defined as aircraft with less than 100 seats per aircraft.
[186] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[187] Illinois Flight Information, www.illinoisairport.org, December 25, 2003.
[188] http://www.boeing.com/commercial/757family/pf/pf_300tech.html.
[189] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004

Appendix 3 Table D - O'Hare Domestic Passenger Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.22%	0-20
21-40	0.00%	1.60%	3.43%	1.73%	1.41%	3.11%	0.37%	2.11%	0.73%	0.39%	4.29%	6.85%	1.64%	21-40
41-60	5.04%	4.99%	9.04%	7.52%	7.55%	6.45%	7.82%	7.09%	8.94%	14.03%	13.70%	14.34%	19.47%	41-60
61-80	1.48%	3.58%	5.82%	5.74%	7.29%	6.73%	6.97%	7.02%	7.48%	3.29%	0.15%	0.03%	0.03%	61-80
81-100	2.81%	3.54%	7.78%	10.64%	12.42%	11.65%	11.76%	12.52%	11.53%	10.78%	10.70%	10.45%	11.73%	81-100
101-120	16.88%	15.69%	14.84%	14.94%	15.24%	18.57%	17.07%	15.62%	11.80%	10.29%	11.05%	20.85%	23.41%	101-120
121-140	11.24%	12.06%	9.09%	8.84%	27.04%	25.60%	27.53%	26.68%	28.68%	28.91%	28.99%	28.21%	30.97%	121-140
141-160	47.52%	44.00%	35.55%	34.04%	15.17%	15.66%	16.18%	16.45%	17.59%	17.93%	18.17%	7.83%	1.10%	141-160
161-180	0.00%	0.00%	0.00%	0.00%	0.64%	0.51%	0.00%	0.54%	0.55%	0.41%	0.27%	0.29%	8.81%	161-180
181-200	7.76%	7.31%	7.79%	9.89%	8.53%	8.01%	9.05%	8.65%	8.77%	9.92%	8.84%	8.50%	0.00%	181-200
201-220	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	201-220
221-240	0.37%	0.32%	0.30%	0.45%	0.58%	0.47%	0.33%	0.06%	0.67%	1.32%	1.85%	1.61%	1.38%	221-240
241-260	0.07%	0.04%	0.05%	0.10%	0.12%	0.09%	0.09%	0.10%	0.12%	0.09%	0.04%	0.00%	0.00%	241-260
261-280	0.02%	0.17%	0.28%	0.31%	0.32%	0.25%	0.19%	0.12%	0.19%	0.16%	0.00%	0.87%	0.99%	261-280
281-300	6.55%	6.34%	5.58%	5.13%	3.15%	2.70%	2.33%	2.56%	2.81%	1.94%	1.64%	0.03%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.05%	0.03%	0.01%	0.00%	0.00%	0.00%	0.02%	0.00%	0.15%	0.26%	301-350
351-400	0.26%	0.36%	0.43%	0.61%	0.41%	0.07%	0.06%	0.13%	0.12%	0.46%	0.32%	0.00%	0.00%	351-400
400+	0.00%	0.00%	0.00%	0.00%	0.10%	0.11%	0.27%	0.05%	0.02%	0.05%	0.00%	0.00%	0.00%	400+
Sum	100.0%	100.0%	99.98%	99.99%	100.0%	99.99%	100.02%	99.99%	100.0%	99.99%	100.01%	100.01%	100.01%	Sum

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table E - O'Hare Domestic Aircraft Fleet Mix - Average Number of Seats per Aircraft Departure by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	-	-	-	-	-	-	-	-	-	-	-	-	19.00	0-20
21-40	-	36.01	36.08	35.72	34.00	34.38	34.00	34.00	34.00	35.97	34.24	34.18	32.17	21-40
41-60	50.00	48.34	47.00	46.40	45.99	45.97	45.96	46.00	45.93	48.09	49.33	49.55	48.39	41-60
61-80	65.93	64.66	64.24	64.05	64.07	64.07	64.08	64.28	65.17	64.53	67.90	78.00	78.00	61-80
81-100	100.00	99.55	98.02	97.61	97.55	97.13	96.54	96.53	96.62	96.25	91.43	88.69	89.18	81-100
101-120	109.47	109.28	108.79	108.23	108.87	108.94	109.05	108.69	108.37	108.18	104.58	113.22	116.01	101-120
121-140	127.70	127.83	127.94	127.76	135.43	135.78	135.40	135.32	133.94	132.51	128.34	133.37	133.97	121-140
141-160	145.69	145.42	145.44	144.90	146.72	146.60	146.94	146.93	146.35	146.90	142.11	142.53	145.96	141-160
161-180	-	-	-	172.00	180.44	180.20	-	173.67	172.98	169.67	170.11	170.53	180.43	161-180
181-200	193.80	193.17	189.50	187.60	187.74	187.64	187.61	187.81	187.91	186.67	182.03	181.07	-	181-200
201-220	-	-	-	-	-	-	-	212.44	-	-	-	-	-	201-220
221-240	228.03	226.05	227.50	227.16	230.03	226.40	235.36	240.17	226.71	234.23	229.41	224.72	223.59	221-240
241-260	250.89	243.65	250.43	251.63	252.66	252.91	244.10	242.69	242.06	244.15	-	-	249.00	241-260
261-280	264.61	267.68	269.11	266.70	266.68	266.71	266.62	266.64	266.60	266.55	-	274.32	271.86	261-280
281-300	287.44	287.77	287.80	288.53	286.87	287.48	288.10	288.69	289.26	288.67	289.71	298.00	-	281-300
301-350	-	-	-	302.00	302.00	310.59	-	-	-	302.38	-	338.22	347.00	301-350
351-400	394.43	394.93	384.01	390.56	383.61	390.86	354.75	373.60	380.27	363.76	360.18	360.00	-	351-400
400+	420.00	-	-	-	414.22	409.96	408.40	408.78	450.00	450.12	-	-	-	400+
Seats per Aircraft Departure	144.33	140.42	130.39	132.95	126.96	124.05	125.67	124.44	125.71	125.67	119.48	113.60	113.29	Seats per Aircraft Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport,* May 11, 2004.

Appendix 3 Table F - O'Hare Domestic Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	-	-	-	-	-	-	-	-	-	-	-	-	34.88%	0-20
21-40	-	48.55%	49.49%	49.16%	56.01%	56.58%	57.03%	58.23%	54.08%	62.06%	62.34%	61.47%	63.37%	21-40
41-60	52.57%	51.57%	55.37%	58.31%	56.64%	53.39%	56.71%	59.56%	63.24%	63.42%	64.24%	61.77%	62.23%	41-60
61-80	55.75%	50.68%	51.78%	54.85%	54.80%	52.33%	53.74%	57.18%	57.24%	52.68%	46.78%	54.08%	56.23%	61-80
81-100	50.30%	48.08%	52.52%	54.05%	60.49%	62.89%	63.06%	65.91%	65.42%	63.23%	63.74%	60.57%	59.28%	81-100
101-120	53.52%	55.27%	57.97%	56.60%	62.89%	64.72%	64.63%	64.59%	63.65%	60.24%	62.62%	62.97%	65.02%	101-120
121-140	55.04%	57.27%	59.28%	57.62%	62.63%	65.14%	65.69%	65.15%	67.61%	65.14%	68.82%	67.29%	67.88%	121-140
141-160	56.10%	56.29%	58.42%	56.64%	63.70%	64.51%	67.11%	66.85%	69.00%	65.95%	68.46%	64.02%	58.99%	141-160
161-180	-	-	-	18.60%	65.64%	68.04%	-	72.77%	76.71%	72.47%	75.30%	66.79%	68.72%	161-180
181-200	61.71%	62.66%	65.35%	61.41%	65.96%	68.46%	69.45%	68.16%	70.18%	69.28%	70.67%	69.66%	-	181-200
201-220	-	-	-	-	-	-	-	66.34%	-	-	-	-	-	201-220
221-240	57.51%	63.08%	61.04%	59.59%	57.91%	65.72%	68.56%	42.30%	71.74%	72.56%	72.03%	69.10%	72.08%	221-240
241-260	67.46%	83.84%	67.73%	54.37%	53.54%	50.64%	48.36%	57.66%	48.15%	64.77%	-	-	0.00%	241-260
261-280	58.17%	66.03%	62.18%	59.07%	60.63%	64.09%	64.30%	64.38%	60.69%	63.35%	-	66.65%	69.85%	261-280
281-300	62.01%	62.99%	64.32%	63.71%	71.28%	69.50%	70.26%	72.81%	74.31%	71.86%	72.64%	77.88%	-	281-300
301-350	-	-	-	48.75%	38.95%	76.17%	-	-	-	62.12%	-	65.39%	74.50%	301-350
351-400	58.58%	56.66%	58.81%	60.09%	62.76%	66.13%	77.19%	75.68%	74.73%	75.33%	70.19%	95.28%	-	351-400
400+	37.32%	-	-	-	80.94%	73.63%	73.41%	73.07%	69.14%	70.24%	-	-	-	400+
Average Load Factor	56.88%	57.46%	59.28%	58.02%	63.20%	64.66%	65.70%	65.92%	67.57%	65.68%	67.91%	65.42%	66.10%	Average Load Factor

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

other passenger airlines at MDW use a 210-seating configuration with a two-class arrangement.[190] In any case, the runways at MDW limit aircraft operations to narrow-body jets and regional aircraft. LLCs handle most of the airline activity at MDW. ATA and Southwest were the main operators at MDW in 2003.[191]

In 1990, the most predominant seat range of aircraft operating at MDW included those with between 101 and 120.99 seats, accounting for 65.4 percent of the total activity, followed by the group that included airplanes ranging from 121 to 140.99 seats with 21.9 percent (see **Table G, Midway Domestic Passenger Aircraft Fleet Mix - Operations by Seat Ranges**). At that time, Midway Airlines was the main carrier at the airport, with 128,800 passenger aircraft operations.[192] In 2002, the most active group was aircraft with 121 to 140.99 seats (B737-300/700). totaling 42.3 percent of operations, followed by aircraft with 21 to 40.99 seats (SF 340), accounting for 20.05 percent of the overall domestic activity. The commuter/regional aircraft group (0 to 100.99 seats) accounted for 12.7 percent of operations in 1990 to 24.5 percent in 2002. As previously mentioned, ATA operated B757-300 in 2001 and 2002, accounting for 0.6 and 2.1 percent, respectively, of the total MDW activity during those years. The level of commercial passenger aircraft operations in 2002 was 206,000, a major increase over 1992 figures, which is the year that Midway Airlines pulled out of the airport. This represents a significant average growth rate of 12.9 percent per year, between 1992 and 2002.[193]

MDW has experienced erratic growth in the average number of seats per departure, as shown in **Table H, Midway Domestic Aircraft Fleet Mix - Average Number of Seats per Aircraft by Seat Range**. The figures for 1990 and 2002 were 109.6 and 122.9, respectively. The peak year was 1996, with an average of 133.9 seats per departure. Since 1991, the most predominant seat range operating at MDW has been aircraft with between 121 and 140.99 seats, the most common configuration for LCCs in the U.S.[194] The MDW average is larger than the U.S. average (122.9 versus 114.5 in 2002), but this is a result of the strong presence of LCCs at the airport.

The aircraft departure load factor at MDW also grew during the studied period, increasing from 53.8 percent in 1990 to 64.0 percent in 2002. Interestingly enough, the year with the highest load factor was 2001, with 66.6 percent, despite the terrorist attacks that occurred that year. Commuter/regional aircraft ranging from 21 to 40.99 seats (SF-340 and EMB 135) and from 81 to 100.99 seats (Fokker 100) have had very high load factors since 2000, with some annual figures reaching 78 and 79 percent. In the last few years, average load factors at MDW have followed national trends.

Evaluation of Other U.S. Airports. In order to estimate the potential aircraft fleet mix at SSA, an evaluation of existing airports was undertaken to identify airports that either have passenger activity levels or similar types of airline operations that could be expected to occur at SSA during the IAP. Since various assessments identified the strong likelihood of LCCs providing service at IAP, the study examined airports where LCC airlines have introduced scheduled service within the last 10 years. The analyses evaluated facilities located within multi-airport systems, since IAP would be part of a multi-airport system in the Chicago region. For instance, airports at Manchester, NH (MHT) and Providence, RI (PVD) are two cases where Southwest Airlines initiated scheduled service in the 1990's. Other supplementary airports in major Metropolitan areas were also examined, such as Houston Hobby (TX), Ontario (CA), and Oakland (CA). Tables J through S provide data on various U.S. airports from 1996 to 2002, as compiled from USDOT T-100 data.[195] DAL was not included in this analysis because the airport has limitations (Wright amendment) on where scheduled commercial flights can fly from the airport. The existing legislation restricts non-stop flights to destinations in Texas, contiguous states, plus Alabama and Mississippi. This legislation was originally passed to protect DFW during its early stages of development. Hence, it was not considered to be a good example for IAP.

[190] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[191] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[192] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[193] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[194] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.
[195] *Projections of Aeronautical Activity for the Inaugural Airport Program South Suburban Airport*, May 11, 2004.

Appendix 3 Table G - Midway Domestic Passenger Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	0.00%	0.05%	0.25%	0.31%	0.83%	0.01%	0.00%	5.82%	11.45%	9.09%	3.58%	0.00%	0.00%	0-20
21-40	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.60%	7.69%	16.50%	20.05%	21-40
41-60	0.00%	0.00%	0.22%	0.20%	0.77%	0.38%	0.00%	0.09%	0.00%	0.03%	0.73%	1.81%	2.74%	41-60
61-80	12.66%	6.57%	10.61%	5.86%	2.58%	1.16%	0.66%	0.06%	0.00%	0.07%	0.12%	0.07%	0.03%	61-80
81-100	0.04%	46.77%	1.72%	11.52%	7.47%	2.55%	0.79%	1.64%	1.98%	1.96%	1.65%	1.45%	1.71%	81-100
101-120	65.39%	2.13%	21.74%	1.80%	40.54%	24.19%	17.17%	17.14%	16.72%	37.11%	27.95%	10.75%	9.76%	101-120
121-140	21.85%	44.47%	59.32%	64.50%	34.12%	56.14%	62.49%	59.16%	52.92%	32.74%	38.03%	47.37%	42.32%	121-140
141-160	0.05%	0.01%	6.05%	10.24%	8.06%	11.10%	1.51%	1.61%	0.97%	1.86%	2.15%	1.29%	1.14%	141-160
161-180	0.00%	0.00%	0.00%	3.30%	2.67%	0.39%	12.22%	12.09%	12.78%	11.74%	10.38%	11.17%	12.11%	161-180
181-200	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	181-200
201-220	0.00%	0.00%	0.07%	2.26%	2.96%	4.08%	5.16%	2.38%	3.18%	4.80%	7.71%	9.03%	8.03%	201-220
221-240	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	221-240
241-260	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.57%	2.11%	241-260
261-280	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	261-280
281-300	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	301-350
351-400	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	351-400
400+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	400+
Sum	99.99%	100.0%	99.98%	99.99%	100.0%	100.0%	100.0%	99.99%	100.0%	100.0%	99.99%	100.01%	100.0%	Sum

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table H - Midway Domestic Aircraft Fleet Mix - Average Number of Seats per Aircraft by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	-	19.00	19.00	19.00	19.00	19.00	-	19.00	19.00	19.01	-	-	-	0-20
21-40	-	-	-	-	30.00	30.00	-	-	-	36.97	34.85	34.17	34.01	21-40
41-60	-	-	48.00	48.00	48.00	48.00	-	46.00	-	50.00	50.00	50.00	49.25	41-60
61-80	77.77	78.00	77.69	73.56	73.08	73.91	76.13	78.00	-	78.00	78.00	78.00	78.00	61-80
81-100	86.00	100.01	98.96	98.11	99.82	99.49	98.56	100.02	98.18	97.04	91.80	87.00	87.00	81-100
101-120	108.49	103.41	113.70	113.52	113.91	113.14	113.48	113.32	110.79	116.91	116.56	108.84	111.35	101-120
121-140	131.08	127.59	128.14	127.68	131.72	128.33	128.00	128.43	129.01	135.86	136.11	133.62	135.65	121-140
141-160	146.26	147.33	150.98	146.68	155.66	158.29	146.13	149.40	150.16	147.40	147.91	148.00	148.00	141-160
161-180	-	-	-	161.78	164.20	164.11	161.75	165.46	168.10	170.11	172.89	170.49	173.48	161-180
181-200	-	-	-	-	-	-	-	-	-	-	-	-	-	181-200
201-220	-	-	216.45	217.23	216.72	215.22	215.56	218.00	216.76	211.41	210.04	210.97	212.53	201-220
221-240	-	-	-	-	-	-	-	-	-	-	-	-	-	221-240
241-260	-	-	-	-	-	-	-	-	-	-	-	247.00	247.00	241-260
261-280	-	-	-	-	-	-	-	-	-	-	-	-	-	261-280
281-300	-	-	-	-	-	-	-	-	-	-	-	-	-	281-300
301-350	-	-	-	-	-	-	-	-	-	-	-	-	-	301-350
351-400	-	-	-	-	-	-	-	-	-	-	-	-	-	351-400
400+	-	-	-	-	-	-	-	-	-	-	-	-	-	400+
Seats per Aircraft Departure	109.55	110.86	120.14	125.44	124.33	129.98	133.85	125.84	120.76	124.64	127.00	124.26	122.93	Seats per Aircraft Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport,* May 11, 2004.

Appendix 3 Table I - Midway Domestic Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	-	40.60%	29.12%	30.15%	53.02%	21.05%	-	52.07%	59.45%	63.25%	-	-	-	0-20
21-40	-	-	-	-	33.33%	86.67%	-	-	-	72.38%	63.71%	61.04%	64.10%	21-40
41-60	-	-	69.14%	52.81%	67.59%	56.23%	-	56.56%	-	54.96%	75.18%	74.39%	69.05%	41-60
61-80	56.21%	50.24%	48.04%	48.81%	50.79%	67.10%	64.27%	72.81%	-	64.62%	58.53%	52.21%	58.17%	61-80
81-100	56.26%	51.18%	38.80%	53.68%	43.83%	45.44%	59.50%	55.70%	77.56%	75.38%	79.05%	78.17%	74.29%	81-100
101-120	53.31%	36.93%	60.81%	60.57%	60.48%	59.13%	63.49%	63.33%	63.00%	61.97%	61.62%	66.63%	60.19%	101-120
121-140	54.16%	54.38%	60.94%	68.18%	61.14%	60.00%	61.49%	59.49%	61.75%	65.18%	65.22%	62.21%	59.37%	121-140
141-160	16.39%	38.35%	55.70%	56.11%	58.80%	62.55%	59.51%	54.65%	33.38%	35.20%	62.83%	70.47%	67.40%	141-160
161-180	-	-	-	61.18%	63.88%	51.72%	61.96%	65.26%	69.65%	73.91%	73.11%	76.17%	72.52%	161-180
181-200	-	-	-	-	-	-	-	-	-	-	-	-	-	181-200
201-220	-	-	63.99%	64.62%	66.16%	65.69%	57.68%	69.61%	67.25%	69.18%	70.26%	71.91%	67.82%	201-220
221-240	-	-	-	-	-	-	-	-	-	-	-	-	-	221-240
241-260	-	-	-	-	-	-	-	-	-	-	-	65.61%	71.69%	241-260
261-280	-	-	-	-	-	-	-	-	-	-	-	-	-	261-280
281-300	-	-	-	-	-	-	-	-	-	-	-	-	-	281-300
301-350	-	-	-	-	-	-	-	-	-	-	-	-	-	301-350
351-400	-	-	-	-	-	-	-	-	-	-	-	-	-	351-400
400+	-	-	-	-	-	-	-	-	-	-	-	-	-	400+
Average Load Factor	53.77%	52.49%	59.31%	64.17%	59.83%	60.27%	61.50%	61.21%	63.53%	65.27%	66.15%	66.61%	64.04%	Average Load Factor

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

As already mentioned in this report, LCCs tend to operate relatively homogenous aircraft, particularly using narrow-bodies, such as B737 and A320, with some airlines (i.e., ATA) having regional jets in their fleet for operations on low-density, short- and medium-range markets. The predominant aircraft seat range at the evaluated airports is 121 to 140 seats. For instance, more than 80 percent of the commercial passenger fleet at Houston Hobby (HOU), ONT, and OAK were within that range in 2002. In fact, there has been a significant share increase of aircraft in that seat range for all evaluated airports since 1996. Except for ONT, all of the evaluated airports have some activity of aircraft with 41 to 60 seats in 2002, one of the main categories for regional jets.

Except for HOU, overall average load factors have gone up at the five airports from the levels experienced in 1996. Seat occupancy has reached the upper 60 and low 70 percentiles during the last three years.

Appendix 3 Table J - Manchester, NH
Domestic Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0-20
21-40	7.83%	0.04%	0.00%	0.01%	2.86%	3.92%	0.12%	21-40
41-60	28.93%	24.92%	14.10%	9.63%	17.31%	11.95%	16.14%	41-60
61-80	1.71%	7.27%	1.43%	0.60%	3.89%	0.12%	0.00%	61-80
81-100	10.20%	24.30%	19.29%	20.58%	5.60%	2.42%	1.12%	81-100
101-120	17.70%	18.11%	27.45%	19.12%	11.54%	11.73%	17.68%	101-120
121-140	23.50%	15.83%	25.35%	35.55%	42.00%	48.34%	37.42%	121-140
141-160	6.13%	9.54%	12.38%	11.86%	14.41%	17.56%	21.82%	141-160
161-180	0.00%	0.00%	0.00%	0.00%	0.00%	0.91%	3.27%	161-180
181-200	0.00%	0.00%	0.00%	2.66%	2.39%	3.04%	2.41%	181-200
201-220	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	201-220
221-240	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	221-240
241-260	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	241-260
261-280	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	261-280
281-300	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	301-350
351-400	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	351-400
400+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	400+
Sum	100.00%	100.01%	100.00%	100.01%	100.00%	99.99%	99.98%	Sum
Average Seats per Departure	85.15	94.12	109.09	117.07	111.06	118.89	121.83	Average Seats per Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table K - Manchester, NH
Domestic Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	33.78%	-	-	-	-	-	-	0-20
21-40	30.91%	70.00%	-	86.49%	43.85%	53.60%	77.09%	21-40
41-60	57.68%	55.83%	70.86%	80.88%	74.46%	81.83%	80.55%	41-60
61-80	43.80%	40.78%	40.72%	82.54%	82.97%	76.05%	-	61-80
81-100	72.76%	69.11%	72.27%	76.02%	72.90%	83.85%	78.36%	81-100
101-120	69.94%	66.82%	66.79%	73.52%	77.00%	76.80%	67.19%	101-120
121-140	60.74%	68.10%	66.10%	73.11%	74.32%	71.87%	72.77%	121-140
141-160	61.04%	56.48%	69.71%	80.29%	75.31%	73.62%	70.04%	141-160
161-180	-	-	-	-	-	65.93%	51.81%	161-180
181-200	-	-	-	81.01%	80.48%	76.43%	68.35%	181-200
201-220	-	-	-	-	-	-	-	201-220
221-240	-	-	-	-	-	-	-	221-240
241-260	-	-	-	-	-	-	-	241-260
261-280	-	-	-	-	-	-	-	261-280
281-300	-	-	-	-	-	-	-	281-300
301-350	-	-	-	-	-	-	-	301-350
351-400	-	-	-	-	-	-	-	351-400
400+	-	-	-	-	-	-	-	400+
Average Load Factor	62.31%	63.53%	68.03%	75.41%	74.94%	73.46%	70.57%	Average Load Factor
Enplaned Pax	390,283	425,043	812,173	1,246,060	1,494,009	1,560,640	1,545,538	Enplaned Pax
Aircraft Departures	7,356	7,108	10,943	14,114	17,952	17,870	17,975	Aircraft Departures

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport,* May 11, 2004.

Appendix 3 Table L - Providence, RI
Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0-20
21-40	3.61%	0.00%	4.53%	4.61%	9.54%	12.85%	5.75%	21-40
41-60	11.18%	7.79%	5.35%	6.66%	4.67%	6.41%	7.41%	41-60
61-80	1.35%	1.77%	3.60%	2.81%	1.73%	0.01%	0.01%	61-80
81-100	20.90%	18.81%	7.57%	4.26%	3.83%	1.13%	1.13%	81-100
101-120	23.48%	18.99%	24.71%	19.55%	13.32%	11.74%	4.86%	101-120
121-140	18.83%	31.04%	25.76%	49.98%	54.96%	54.93%	64.53%	121-140
141-160	20.63%	21.31%	25.78%	6.34%	8.62%	7.62%	4.59%	141-160
161-180	0.00%	0.00%	0.00%	0.00%	0.00%	0.37%	1.55%	161-180
181-200	0.02%	0.26%	2.69%	5.79%	3.33%	4.94%	10.16%	181-200
201-220	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	201-220
221-240	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	221-240
241-260	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	241-260
261-280	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	261-280
281-300	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	301-350
351-400	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	351-400
400+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	400+
Sum	100.00%	99.97%	99.999%	100.00%	100.00%	100.00%	100.00%	Sum
Average Seats per Departure	107.86	116.08	118.35	120.93	118.05	115.93	125.92	Average Seats per Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table M - Providence, RI
Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	-	-	-	-	-	-	-	0-20
21-40	38.28%	86.67%	59.32%	63.95%	53.21%	46.91%	59.46%	21-40
41-60	60.82%	71.46%	75.13%	77.23%	74.13%	81.57%	81.26%	41-60
61-80	57.74%	66.62%	71.34%	71.43%	72.39%	67.95%	72.22%	61-80
81-100	62.22%	76.18%	77.53%	76.22%	75.79%	76.03%	75.99%	81-100
101-120	62.42%	76.67%	76.89%	75.94%	72.53%	71.53%	76.44%	101-120
121-140	54.28%	70.94%	69.97%	75.25%	71.10%	69.31%	69.11%	121-140
141-160	57.11%	70.31%	75.33%	76.45%	70.48%	70.84%	67.34%	141-160
161-180	-	-	-	-	-	63.27%	63.46%	161-180
181-200	28.09%	67.93%	71.56%	77.35%	70.35%	75.80%	65.12%	181-200
201-220	-	98.17%	94.61%	-	-	-	71.92%	201-220
221-240	-	62.50%	-	-	-	-	-	221-240
241-260	-	-	-	-	-	-	-	241-260
261-280	-	-	-	-	-	-	-	261-280
281-300	-	-	-	-	-	-	-	281-300
301-350	-	-	-	-	-	-	-	301-350
351-400	-	-	-	-	-	-	-	351-400
400+	-	-	-	-	-	-	-	400+
Average Load Factor	58.72%	72.64%	73.85%	75.53%	70.91%	69.77%	68.89%	Average Load Factor
Enplaned Pax	1,127,489	1,895,598	2,169,444	2,394,402	2,544,099	2,601,306	2,530,421	Enplaned Pax
Aircraft Departures	17,801	22,482	24,823	26,212	30,390	32,159	29,170	Aircraft Departures

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table N - Houston, TX
Passenger Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	0.47%	2.37%	2.58%	2.75%	0.77%	0.00%	0.00%	0-20
21-40	4.08%	4.55%	4.20%	3.53%	4.67%	4.16%	2.86%	21-40
41-60	2.28%	3.44%	0.13%	2.15%	4.68%	3.57%	6.97%	41-60
61-80	7.99%	5.74%	5.89%	2.85%	1.80%	2.94%	0.66%	61-80
81-100	5.94%	6.88%	5.55%	0.00%	0.00%	0.00%	0.00%	81-100
101-120	32.28%	27.83%	26.01%	5.63%	3.80%	3.23%	3.01%	101-120
121-140	46.74%	48.39%	55.55%	83.07%	84.26%	86.08%	86.46%	121-140
141-160	0.23%	0.80%	0.08%	0.02%	0.02%	0.01%	0.03%	141-160
161-180	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	161-180
181-200	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	181-200
201-220	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	201-220
221-240	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	221-240
241-260	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	241-260
261-280	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	261-280
281-300	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	301-350
351-400	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	351-400
400+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	400+
Sum	100.01%	100.00%	99.99%	100.00%	100.00%	99.99%	100.00%	Sum
Average Seats per Departure	115.58	113.88	117.63	120.36	120.83	122.15	122.16	Average Seats per Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table O - Houston, TX
Passenger Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	45.72%	54.63%	47.75%	49.95%	53.71%	-	-	0-20
21-40	49.00%	49.84%	52.50%	63.31%	64.93%	53.37%	61.96%	21-40
41-60	55.87%	46.58%	56.64%	74.93%	68.90%	73.08%	67.74%	41-60
61-80	53.47%	54.34%	60.46%	62.58%	60.01%	55.60%	66.39%	61-80
81-100	64.66%	65.24%	67.16%	69.76%	35.05%	83.91%	-	81-100
101-120	65.44%	64.48%	64.76%	56.98%	66.93%	70.34%	71.79%	101-120
121-140	64.58%	62.59%	63.07%	63.42%	63.72%	61.87%	59.85%	121-140
141-160	35.39%	43.11%	57.73%	58.31%	72.57%	61.94%	69.80%	141-160
161-180	-	-	-	-	-	-	-	161-180
181-200	-	-	-	-	-	-	32.13%	181-200
201-220	-	-	-	-	-	-	-	201-220
221-240	-	-	-	-	-	-	-	221-240
241-260	-	-	-	-	-	-	-	241-260
261-280	-	-	-	-	-	-	-	261-280
281-300	-	-	-	-	-	-	-	281-300
301-350	-	-	-	-	-	-	-	301-350
351-400	-	-	-	-	-	-	-	351-400
400+	-	-	-	-	-	-	-	400+
Average Load Factor	64.02%	62.42%	63.44%	63.14%	63.90%	62.09%	60.45%	Average Load Factor
Enplaned Pax	4,771,408	4,620,203	4,894,862	4,982,298	5,013,338	4,704,157	4,312,694	Enplaned Pax
Aircraft Departures	64,479	65,000	65,595	65,566	64,936	62,021	58,397	Aircraft Departures

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table P - Ontario, CA
Passenger Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	7.02%	2.88%	1.92%	0.00%	0.00%	0.00%	0.00%	0-20
21-40	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	21-40
41-60	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41-60
61-80	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	61-80
81-100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	81-100
101-120	21.73%	19.51%	15.80%	14.97%	16.48%	13.63%	1.64%	101-120
121-140	61.59%	48.84%	73.64%	77.56%	73.29%	75.27%	89.20%	121-140
141-160	7.85%	26.41%	6.84%	5.83%	8.02%	9.13%	6.75%	141-160
161-180	1.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	161-180
181-200	0.00%	2.35%	1.79%	1.64%	2.16%	1.95%	1.88%	181-200
201-220	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	201-220
221-240	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	221-240
241-260	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.13%	241-260
261-280	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	261-280
281-300	0.01%	0.01%	0.01%	0.00%	0.02%	0.00%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.39%	301-350
351-400	0.01%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	351-400
400+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	400+
Sum	99.99%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	Sum
Average Seats per Departure	125.02	131.48	132.95	135.08	134.80	135.18	136.47	Average Seats per Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport,* May 11, 2004.

Appendix 3 Table Q - Ontario, CA
Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	47.87%	58.08%	58.48%	-	-	-	-	0-20
21-40	-	-	-	-	82.35%	44.12%	88.97%	21-40
41-60	-	-	-	-	-	-	-	41-60
61-80	-	-	-	-	97.10%	79.29%	-	61-80
81-100	86.00%	-	-	-	-	-	-	81-100
101-120	69.16%	70.67%	70.53%	74.45%	71.59%	66.20%	70.17%	101-120
121-140	64.17%	61.52%	65.41%	68.69%	68.21%	65.95%	66.60%	121-140
141-160	57.96%	62.22%	65.03%	64.90%	76.29%	75.46%	79.53%	141-160
161-180	77.55%	-	-	-	-	18.02%	51.74%	161-180
181-200	-	72.15%	78.80%	81.64%	69.10%	69.92%	70.46%	181-200
201-220	-	-	-	82.84%	-	-	-	201-220
221-240	-	-	-	-	-	-	-	221-240
241-260	68.55%	-	-	100.00%	84.85%	37.30%	57.50%	241-260
261-280	91.53%	-	94.80%	-	-	-	-	261-280
281-300	58.43%	82.87%	90.09%	93.95%	84.79%	-	-	281-300
301-350	79.14%	-	69.87%	-	-	92.17%	68.10%	301-350
351-400	77.36%	-	67.65%	-	76.68%	-	-	351-400
400+	-	-	-	-	-	-	-	400+
Average Load Factor	64.77%	63.62%	66.40%	69.48%	69.45%	67.05%	67.70%	Average Load Factor
Enplaned Pax	3,231,013	3,135,346	3,140,896	3,222,945	3,298,516	3,224,147	3,073,670	Enplaned Pax
Aircraft Departures	39,901	37,484	35,581	34,341	35,236	35,571	33,267	Aircraft Departures

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport,* May 11, 2004.

Appendix 3 Table R - Ontario, CA
Aircraft Fleet Mix - Operations by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0-20
21-40	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	21-40
41-60	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.57%	41-60
61-80	1.19%	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%	61-80
81-100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	81-100
101-120	25.10%	19.93%	19.60%	21.16%	25.39%	21.33%	3.60%	101-120
121-140	70.39%	75.17%	77.01%	74.75%	70.72%	74.49%	84.29%	121-140
141-160	2.39%	3.53%	2.99%	3.15%	3.48%	3.28%	6.75%	141-160
161-180	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	2.67%	161-180
181-200	0.62%	0.76%	0.38%	0.92%	0.40%	0.88%	0.00%	181-200
201-220	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	201-220
221-240	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	221-240
241-260	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	241-260
261-280	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	261-280
281-300	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	281-300
301-350	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	301-350
351-400	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	351-400
400+	0.29%	0.06%	0.00%	0.01%	0.00%	0.00%	0.00%	400+
Sum	99.99%	100.00%	99.99%	100.00%	100.00%	99.99%	100.00%	Sum
Average Seats per Departure	132.06	133.27	133.92	134.17	132.27	132.28	133.07	Average Seats per Departure

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 3 Table S - Ontario, CA
Aircraft Fleet Mix - Load Factor by Seat Range

Seat Ranges	1996	1997	1998	1999	2000	2001	2002	Seat Ranges
0-20	-	-	-	-	-	-	-	0-20
21-40	-	-	-	-	-	-	79.90%	21-40
41-60	-	-	-	-	-	-	73.31%	41-60
61-80	53.72%	39.49%	-	0.00%	-	-	-	61-80
81-100	-	-	-	-	-	-	-	81-100
101-120	68.94%	67.30%	69.74%	72.36%	75.61%	71.62%	71.65%	101-120
121-140	61.52%	60.09%	63.34%	67.48%	70.58%	69.02%	69.76%	121-140
141-160	64.26%	55.03%	63.33%	68.75%	72.91%	74.52%	77.39%	141-160
161-180	77.38%	-	-	-	-	68.63%	69.56%	161-180
181-200	58.72%	62.68%	76.42%	75.90%	79.23%	61.20%	-	181-200
201-220	96.60%	53.40%	35.29%	48.06%	-	48.73%	91.34%	201-220
221-240	-	-	-	-	52.18%	-	-	221-240
241-260	-	-	25.71%	-	-	-	49.80%	241-260
261-280	-	-	-	-	-	47.83%	98.55%	261-280
281-300	77.96%	77.59%	80.42%	83.61%	91.29%	-	74.56%	281-300
301-350	68.87%	-	-	-	77.59%	-	76.73%	301-350
351-400	93.09%	90.36%	87.80%	91.16%	89.72%	72.01%	-	351-400
400+	60.53%	50.14%	-	85.04%	-	-	-	400+
Average Load Factor	63.14%	61.10%	64.53%	68.56%	71.88%	69.63%	70.45%	Average Load Factor
Enplaned Pax	5,080,090	4,746,183	4,781,546	5,053,190	5,413,017	5,755,728	6,140,782	Enplaned Pax
Aircraft Departures	60,920	58,287	55,334	54,932	56,934	62,489	65,506	Aircraft Departures

Source: *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Conclusions

The purpose of this study was to identify patterns in the U.S., in the Chicago region, and at supplementary airports of major U.S. Metropolitan areas to assess potential commercial passenger aircraft flying to IAP. By identifying the changing trends of the domestic passenger aircraft fleet mix composition since 1990, the analysis corroborated that the trends in the overall U.S. domestic market are also taking place at airports in the Chicago Region.

Based on initial evaluations that determined a greater potential market for LCCs at SSA in its initial years of operation, the typical fleet characteristics and average load factors of LCCs were analyzed. Low fare airlines tend to keep their aircraft fleet homogenous, which helps to optimize their operation and maintenance costs. Most U.S. domestic LCCs operate aircraft within the 121- to 140-seat range. This aircraft group is also becoming the predominant group for U.S. domestic activity, as shown by historical USDOT T-100 statistics.[196] Thus, most of the scheduled commercial aircraft at IAP are forecasted to be narrow-body jets ranging from 101 to 160, seats with some commuter aircraft and regional jets (41 to 100 seats). This fleet mix is very similar to the fleets existing at supplementary airports, such as Manchester, NH (MHT); Providence, RI (PVD); Houston-Hobby, TX (HOU); and OAK in 2002.

Concurrent with the drop in average number of seats per aircraft, the departure load factors have increased to levels not experienced before. As stated previously in this report, airlines have been able to use smaller aircraft in low- and medium-density markets since the newer aircraft have been able to fly longer distances, improving the performance and service in many markets. Appendix 3 includes some tables that show load factors for various markets for LCC airlines over the last three years. For the most part, these airlines have experienced load factors ranging from 65 to 80 percent. Tables K through Q also show load factors experienced at various U.S. airports that could serve as models for the IAP. Load factors at these airports predominantly range from 65 to 75 percent. Thus, it is assumed that average load factors at SSA during the IAP will also be within this range.

[196] *Projections of Aeronautical Activity for the Inaugural Airport Program: South Suburban Airport*, May 11, 2004.

Appendix 4 – Commercial Passenger Aircraft Models

Appendix 4 Table A - Manufacturer Airbus

Status	Model	Version	Max. Seating Capacity (Or Max. Payload Weight)	Max. Range (nm, Approx.)
In Production	A380		525	8200
In Development	A380F		(347,000 lbs.)	5600
In Production	A300	-600	266	4000
In Production	A300	-600F	(120,200 lbs.)	2650
In Production	A310		220	5200
In Production	A318		107	3200
In Production	A319		124	3700
In Production	A320		150	3000
In Production	A321		185	3050
In Production	A330	-200	293	6750
In Development	A330	-200F	(152,000 lbs.)	4000
In Production	A330	-300	335	5650
In Production	A340	-200	239	8000
In Production	A340	-300	295	7400
In Production	A340	-500	313	9000
In Production	A340	-600	380	7900
In Development	A350-900F	-800	270	8300
In Development	A350-900F	-900	314	8100
In Development	A350-900F	-1000	350	8000

Source: Airbus, airplane characteristics, www.airbus.com, accessed May 27, 2009.
Data does not necessarily contain all possible configurations of all possible aircraft.
Data provided for planning purposes only.

Appendix 4 Table B - Manufacturer Boeing

Status	Model	Version	Max. Seating Capacity (Or Max. Payload Weight)	Max. Range (nm, Approx.)
In Production	737	-600	132	3050
		-700	149	3365
		-700C	149	Passenger 3205 or Cargo 2800
		-700ER	126	5510
		-800	189	3060
		-900ER	215	3200 (2 aux. tanks)
	747	-8	467	Intercontinental 14815 or Freight 8130
		-400	524	7260
		-400ER	524	7670
		-400 Freighter	(248,300 lbs.)	4445
		-400ER Freighter	(248,600 lbs.)	4970
		-400 Converted Freighter	(250,200 lbs.)	4100
		-400 Combi	410	7214
		-400 Domestic	568 (246,000 lbs.)	1805
	767	-200ER	255	6385
		-300ER	350	5990
		-400ER	375	5625
		-300 Freighter	(118,300 lbs.)	3125
	777	-200	440	5235
		-200ER	440	7700
		-300	550	6015
		-300ER	365	7930
		-200LR Worldliner	301	9380
		Freighter	(226,000 lbs.)	4885
In Development	787	-3 Dreamliner	330	3050
		-8 Dreamliner	250	8200
		-9 Dreamliner	290	8500
	747	Dreamlifter (modified 747-400 passenger)	Unknown	Dependent on payload
Out of Production	707	-120B	174	
		-320/-420	189	6160
		-320B	189	
		-320C Convertible	194 (74,900 lbs.)	
		-320C Freighter	(94,500 lbs.)	

Appendix 4 Table B - Manufacturer Boeing (Continued)

Status	Model	Version	Max. Seating Capacity (Or Max. Payload Weight)	Max. Range (nm, Approx.)
Out of Production	717	-200	106	2060
	727	-200	189	2500
	747	-100	452	5300
		-200	452	6864
		-300	496	6691
	757	-200	228	3900
		-300	280	3395
		-200 Freighter	(87,700 lbs.)	3150
	DC-8	-43	177	
		-55	189	
		-55F	(92,770 lbs.)	
		-61	259	
		-61F	(88,494 lbs.)	
		-62	189	
		-62F	(91,440 lbs.)	
		-63	259	
		-63F	(119,670 lbs.)	
		-71	259	
		-71F	(81,300 lbs.)	
		-72	189	
		-72F	(90,800 lbs.)	
		-73	259	
		-73F	(111,800 lbs.)	
	DC-9	-10	90	1099
		-21	90	1607
		-30	90	1420
	MD-11	Passenger , GE Engine	410	
		Passenger ER, GE Engine	410	
		Combi, GE Engine	290	
		Freighter, GE Engine	(202,733 lbs.)	
		Convertible Freighter, GE Engine	410 (163,004 lbs.)	
		Passenger, P&W Engine	410	
		Passenger ER, P&W Engine	410	

Appendix 4 Table B - Manufacturer Boeing (Continued)

Status	Model	Version	Max. Seating Capacity (Or Max. Payload Weight)	Max. Range (nm, Approx.)
Out of Production	MD-11	Combi P&W Engine	290	
		Freighter P&W Engine	(202,733 lbs.)	
		Convertible Freighter P&W Engine	410 (163,004 lbs.)	
	MD-80 Series	MD-81	172	1565
		MD-82/-88	172	2052
		MD-83	172	2504
		MD-87	139	2374
	MD-90	-30	172	2085
		-50	172	2785

Source: Boeing, airplane characteristics, www.boeing.com, accessed May 27, 2009.
*(Exception: Models 7E7 and BC-17X under development; data taken from Boeing's website.)
Data does not necessarily contain all possible configurations of all possible aircraft.
Data provided for planning purposes only.

Appendix 4 Table C - Manufacturer Bombardier

Status	Model	Version	Max. Seating Capacity (Or Max. Payload Weight)	Max. Range (nm, Approx.)
In Production	CRJ200	ER	50	1345
		LR	50	1700
	CRJ700	Series 701	78	1434
		Series 701ER	78	1732
		Series 701LR	78	2002
		Series 705	75	1719
		Series 705ER	75	1963
		Series 705LR	75	1999
	CRJ900	(Standard)	90	1350
		ER	90	1593
		LR	90	1828
	Q200		39	925
	Q300	(Standard)	56	841
		(With optional LR fuel tanks)	56	1098
	Q400		78	1362

Source: Bombardier, airplane characteristics, www.bombardier.com, accessed May 27, 2009.
Data does not necessarily contain all possible configurations of all possible aircraft.
Data provided for planning purposes only.

Appendix 4 Table D - Manufacturer Embraer

Status	Model	Version	Max. Seating Capacity (Or Max. Payload Weight)	Max. Range (nm, Approx.)
In Production	EMB120		30	800
	135		37	1750
	ERJ 140		44	1650
	ERJ 145		50	1550
	ERJ145XR		50	2000
	170		80	2100
	175		88	2000
	190		114	2400
	195		122	2200

Source: Data taken from values found on www.embraer.com, May 2009.
Several Aircraft have different Versions for which data could not be gathered.
Data does not necessarily contain all possible configurations of all possible aircraft.
Data is provided for planning purposes only.

Appendix 5 – SSA APO's Response Letter

Illinois Department of Transportation
Division of Aeronautics
1 Langhorne Bond Drive / Springfield, Illinois / 62707-8415

September 3, 2010

Ms. Amy Hanson
Environmental Protection Specialist
Federal Aviation Administration
Chicago Airports District Office
2300 East Devon Avenue
Des Plaines, Illinois 60018

Re: South Suburban Airport
Chicago/Peotone, Illinois
Federal Project Number 3-1 7-0027-08
Illinois Project Number SSA-3931
2009 Forecast Update Report
Responses to FAA APO Comments

Dear Ms. Hanson:

The Illinois Department of Transportation, Division of Aeronautics (Aeronautics) received an email from you on July 26, 2010, that included a review of the Forecasts 2009: Verification of 2004 Forecasts Report for the South Suburban Airport. This review came from the Federal Aviation Administration's (FAA) Office of Aviation Policy and Plans (APO). Below please find our response to APO's comments.

General Comments
The following comments are regarding the presentation of the report itself:

FAA Comment: Pg 12 & pg 68 - Table ES-6 and Table 2-2 appear to have the same mistake where the heading "US Total Enplanements (Domestic plus International)" is repeated twice.

IDOT Response: Yes, there is a typographic error on both tables. A corrected PDF copy of the tables is available for uploading from our FTP site.

FAA Comment: Pg 13 - Table ES-7 appears to have grammatical errors in the first column.

IDOT Response: Yes, the grammatical errors referenced have been revised. A corrected PDF copy of the tables is available for uploading from our FTP site.

FAA Comment: Pg 14 & pg 143 - Table ES-8 and Table 5-1 appear to have the same mistake where the second portion of the chart should read "Air Carrier Enplanements" instead of "Air Carrier Operations".

IDOT Response: Yes, there is a typographic error on both tables. A corrected PDF copy of the tables is available for uploading from our FTP site.

FAA Comment: Pg 70 – The last paragraph quotes "FAA Aerospace Forecasts: Fiscal Years 2008- 2025, March 31, 2009." The forecasts published on that date are the 2009-2025 forecasts.

IDOT Response: Yes, there is a typographic error on both tables. A corrected PDF copy of the tables is available for uploading from our FTP site.

FAA Comment: Pg 81 – Table 2-10 – This table has information that is over seven years old; of the six airlines shown, one is no longer in business and four of the five remaining airlines have fleets that are somewhat to significantly different than what is shown. Consider updating.

IDOT Response: Table 2-10 has been revised. The updated information includes all aircraft through 2009, including orders and options. As before, when ordered or optioned aircraft are included in the totals, the total is qualified with an asterisk. This table contains nine airlines instead of six. There are four airlines different; A TA was deleted and we added Allegiant, Sun Country, USA 3000 (flies to Branson), and Virgin America. A corrected PDF copy of the table is available for uploading from our FTP site.

FAA Comment: Pg 112 – Table 3-1 – For 2008-2010 period export CAGR is -6.0% and import CAGR is - 3.6%. The total CAGR, which presumably should be between the two, is greater than either value in absolute terms at -9.1%.

IDOT Response: Yes, there is a typographic error in the Table. The -9.1% is actually correct. The formula for export and import for 2008-2010 was incorrect. The table should read -11.6% for exports and -7.1% for imports. A corrected PDF copy of the table is available for uploading from our FTP site.

Air Passenger Forecasts

The 2009 Forecast Report's Air Passenger Forecast Section does use the load factor percentages outlined in the APO's comments. It is unfortunate that APO does not concur in the methodology outlined in the 2009 Forecast Report since this is the same methodology used in the 2004 Forecast Report that was approved by APO. It is Aeronautics' position that, in spite of the increased population trends in the airport's service area, it remains prudent to use more conservative (lower percentage) values over the longer term, in comparison to APO's comments. Use of IDOT's lower percentages is considered a forecast insurance against the creation of over-estimated expectations. After the South Suburban Airport passes DBO+5, the airport sponsor will revisit the Forecasts of Aeronautical Activity based on historical operations and future trends in place at that time. Aeronautics' maintains that the published passenger forecasts are valid for the SSA Master Plan. Based on these parameters, it is not necessary to revisit and/or revise the long-term air passenger forecasts.

Air Cargo Forecasts

Unlike the Air Passenger and General Aviation service areas in the Forecasts 2009: Verification of 2004 Forecasts Report, the Air Cargo section of that report is based on a market share analysis that results in a different service area. Aeronautics' does not concur in APO's assertion that Rockford is not part of the Greater Chicago Metropolitan Area. Regarding that issue we offer the following:

Recently, Atlas Air has been conducting test flights from Asia into the Chicago/Rockford International Airport (RFD) using Boeing 747-400's. After these recent tests were conducted an Atlas Airline spokesman was quoted as saying:

> *"Airport officials say a 747 can operate here (RFD) for $10,000 to $15,000 less a flight than at O'Hare, thanks to lower airport fees and virtually no delays that burn expensive fuel. And, they believe, as the Atlas experience has shown so far, that South Suburban Airport cargo that lands in Rockford can be trucked to Chicago in not much more time than it takes for an airplane to land and unload at O'Hare.... Cortez [Atlas' operational manager in Chicago] said Rockford is appealing because there's no congestion, either on the airport and nearby highways. Also, he said, it's tougher for cargo airlines to find parking spots at O'Hare, making the wide-open Rockford airport attractive."*

A leading global financial and economic forecasting firm, IHS Global Insight's database of commodity flows shows air cargo drayage between Cook and Winnebago counties. Cook County is the largest originator and destination for Rockford air cargo that does not pass-through RFD UPS regional cargo hub. Additionally, it is a fact that the vast majority of international air cargo arrives into the Chicago metropolitan area through Chicago O'Hare International Airport.

It should be noted that the service areas for air cargo and passenger service are different. Each segment of the forecast update for SSA was built on specific market service areas. It remains as a backbone of this forecast update that SSA will only be assuming a small portion of the future air cargo growth based on increases in demand for the efficient movement of products. This assumption is already being realized in Rockford and we expect the trend towards increased efficiency to continue well into the future. Finally, in a less technical note, but just as telling, what local citizens call themselves and their surroundings is important. Several years ago the Greater Rockford Airport Authority spent the better part of a year conducting public sounding sessions and ultimately a contest to name RFD. All names that were considered included Chicago in the name. This action points to the fact that the citizens of Rockford consider themselves to be a part of the Chicago metro area.

Aeronautics' does not concur in APO's assertion to use the low case scenario for the air cargo forecasts. Regarding that issue we offer the following. The air cargo forecast baseline was developed using 2008 volumes and economic indicators for the first half of 2009 that were available at the time. The baseline forecast was developed using very conservative assumptions even for the economic environment. A protracted recovery in air cargo was assumed with domestic volumes not reaching 2007 levels until the 2014-2015 time frame.

As the numbers from ACI show, the recovery in air cargo volumes is accelerating with year-on-year monthly growth in domestic North American volumes in the low double digits and international volumes growing above 30 percent. Such growth rates demonstrate the conservative nature of our forecast. However, these growth rates are relative to the lows of 2009 and short-term spikes in growth are expected after a recession. Air cargo volumes have not yet reached the pre- recessionary volumes of 2006-2007. Domestic volumes dropped in excess of 20 percent on some routes, but year-end through June volumes are still up by only 5.2 percent. According to the T100 data, total air cargo in the U.S. increased by 6 percent between 2008 and 2009 from just under 17 million tons to just under 18 million tons. The vast majority of this increase was driven by international air cargo. Domestic cargo grew by only 6,000 tons. Aeronautics' growth rate assumptions for both domestic and international cargo are thus reasonable and conservative.

[1] ACI, http://www.aci.aero/cda/aci_common/display/main/aci_content07_c.jsp?zn=aci&cp=1 5 212 219_666_2.

Given the current headwinds in the domestic and global economies, we believe the conservative nature of our forecast is still warranted, despite the spike in growth in the first half of 2010. Growth rates for U.S. GDP have been revised downward. Current IHS Global Insight forecasts are predicting growth of 2.4 percent in 2011, down from 2.8 percent in 2010. In the long-term, domestic U.S. cargo tends to grow in-line with GDP, despite the typical but temporary high-growth rates exhibited as volumes catch up from recessionary lows.

The baseline scenario is still the most plausible forecast scenario. At DBO+5, it assumes a market share of the region's domestic cargo of 4 percent and 2 percent for the region's international cargo. The Chicago area is viewed as a major hub for international cargo and will continue to attract international flights, especially given the rapid development of air cargo capacity in Southeast Asia, where new and growing airports will be seeking partners in the American Midwest.

IDOT remains resolute in assuming a 3% future market share of domestic and international cargo will come from the Chicago air cargo service area which includes Rockford.

General Aviation Forecast

IDOT acknowledges there are many different ways that one can estimate GA operations per aircraft. In the case of Bult Field, a new 5,000' concrete runway was completed in 2007 which tapped into latent aeronautical demand in central and eastern Will County. This development expanded the capabilities of the airport it replaced, Sanger Field, and significantly elevated its role. IDOT's GA approach is to compare the type of aviation facility that Bult has become and will continue to mature into with other comparable airports within the area south of Chicago (i.e. airports with runways at least 5,000'). Based on the parameter of a regional GA role and runway length, the average number of operations per based aircraft for nearby airports with a runway at least 5,000' long was 380 (an average of the three closest, i.e., Lewis University Airport, Lansing Municipal Airport, and Greater Kankakee Airport). Existing FAA GA forecasts (as contained in the 5010 Form) for Bult Field are carry over's from Sanger Field before the Bult Field construction was completed.

Aeronautics' believes it is inconsistent in terms of airport role and airports with runways of 5,000' or greater in the Chicagoland area to estimate activity at former Sanger levels. Based on the above documentation, it is not necessary to revisit the General Aviation forecasts. Aeronautics' maintains that the General Aviation forecasts are valid for use in the SSA Master Plan.

If you have any questions please feel free to contact me.

Susan R. Shea, Ph.D.

Director
Illinois Division of Aeronautics