



Air Carrier and Commuter Airline Forecasts, Methodologies and Assumptions

**Charles M. Schulz-Sonoma County Airport
Master Plan Update (2006)**



BACKGROUND TO FORECASTS

- **The Sonoma County Airport has had a long history of scheduled airline service, but has been without air carrier or commuter service since late 2001**
- **The 1993 General Plan ATE planned for 286,500 annual passenger enplanements (573,000 total annual passengers) by 2005**

BACKGROUND TO FORECASTS, cont'd

- **Traditional approaches¹ to projecting operational and passenger growth at STS were not suited to the current situation**
- **A more tailored approach to the forecasting was needed**

¹ Methodologies such as Time-Series Analysis (R^2), Market Share of U.S. Domestic Enplanements, Enplanements Per Capita and Historical Growth Rate Projections did not lend themselves to this analysis due to the historically fluctuating nature of air passenger service at the airport.

BACKGROUND TO FORECASTS, cont'd

- **A future (2010) baseline condition was developed based on possible air service scenarios ²**
- **This baseline was then projected through 2030 for two alternative commercial air service demand scenarios:**
 - › **Moderate Growth scenario (based on projections of the FAA's "Aerospace Forecast Fiscal Years 2006-2017") and**
 - › **Low Growth scenario (based on growth rates derived from FAA "Terminal Area Forecast [TAF] Enplanement Data") ^{3, 4}**

² On April 26, 2006, Sonoma County announced that Horizon Air would be providing non-stop air service between STS and Los Angeles and STS and Seattle using 74-seat Q400 high speed turboprop aircraft effective March 20, 2007.

³ The FAA-based load factors and growth rates used in this forecast report were derived from data for airports of comparable size and operations, i.e., non-hub towered airports.

⁴ A "High Growth" scenario was not developed because it would not be consistent with FAA growth factors for comparable airports (i.e., non-hub, towered) in the region.

BACKGROUND TO FORECASTS, cont'd

Each of these two scenarios were broken down into two additional operational subsets:

- › **dominant “Scheduled Airline” fleet mix (up to 14 average daily departures [ADD]), and**
- › **“Commuter Airline” dominant fleet mix (up to 14 ADD) based on limitations published in the ATE.**

The resultant forecasts are compared with ATE limits at the end of this presentation

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Commuter airline dominant scenario

Assumes that scheduled commuter airlines, utilizing aircraft with an average capacity of 76 passenger seats, would use up to fourteen of the twenty-one average daily departure (ADD) allocations allowed by the ATE. Scheduled air carrier airlines would use no more than seven ADD allocations (for a total of no more than 21 ADD).

Air carrier airline dominant scenario

Assumes that scheduled airlines, utilizing aircraft with an average seating capacity of 101 passenger seats, would use up to fourteen of the twenty-one ATE allocated ADD allocations. Commuter airlines would use no more than seven of the twenty-one allocations (for a total of 21 ADD).

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

2010 Baseline Conditions

- Regularly scheduled airline service would resume in early 2007.
- By 2010, airline service would be sufficient enough to project future passenger and operations activity levels using FAA-defined passenger load factors and operational growth rates.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

The 2010 baseline conditions consist of the following projected activity levels:

TABLE 1. 2010 Baseline Scenario		Commuter Airlines Dominant	Scheduled Airlines Dominant
AIR CARRIER AIRLINE(S)	Average Daily Departures (ADD)	3.30	4.60
	Load Factor (101 seats X 75.6%)	76.36	76.36
	Enplaned Passengers Per Day	251.97	351.24
	Total Daily Air Carrier Passengers	503.95	702.48
	Total Annual Air Carrier Passengers	183,941.60	256,403.45
COMMUTER AIRLINE(S)	Average Daily Departures (ADD)	5.70	3.80
	Load Factor (76 seats X 69.0%)	52.44	52.44
	Enplaned Passengers Per Day	298.91	199.27
	Total Daily Commuter Passengers	597.82	398.54
	Total Annual Commuter Passengers	218,202.84	145,468.56
TOTALS	Average Daily Departures	9.00	8.40
	Annual Departures	3,285	3,066
	Annual Operations	6,570	6,132
	Daily Enplaned Passengers	551	551
	Annual Enplaned Passengers	201,072	200,936
	Total Annual Passengers	402,144	401,872

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

2010 Baseline Conditions, cont'd

Table 1 shows that total average daily departures (ADD) for the two 2010 baseline scenarios range between 8.4 and 9.0 ADD.⁴

This is well within the proposed ATE limit of 21.0 ADD by 2020.

The next step was to develop growth projections for the two scenarios for the period 2010 through 2030 in five-year increments.

⁴ For comparison purposes the proposed Horizon Air service to LAX and SEA-TAC beginning in March 2007 is the equivalent of 2.85 ADD.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Scheduled Air Carrier Airline Dominant Forecasts and Assumptions

Assumes growth in commercial air service between 2010 and 2030 would favor scheduled airline operations.

Two forecast scenarios (Moderate Growth and Low Growth) were developed for the scheduled air carrier dominant scenario:

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Moderate Growth Scenario

The following table sets forth the assumptions derived for the moderate growth⁵ scenario of the scheduled air carrier dominant forecast.

Table 2. Scheduled Air Carrier Dominant (Moderate Growth Scenario)		2015	2020	2025	2030
AIR CARRIER AIRLINE(S)	Average Daily Departures (ADD)	5.38	6.17	7.22	8.44
	Annual Air Carrier Departures	1,962.61	2,252.05	2,635.30	3,080.60
	Annual Air Carrier Operations	3,925.21	4,504.10	5,270.60	6,161.20
	Boarding Load Factor (Based on 101 avg. seats X FAA LF growth rates)	76.86	77.27	77.57	77.97
	Enplaned Air Carrier Passengers Per Day	413.28	476.73	560.04	658.08
	Annual Enplaned Air Carrier Passengers	150,847.78	174,004.64	204,414.95	240,200.54
	Total Daily Air Carrier Passengers	826.56	953.45	1,120.08	1,316.17
	Total Annual Air Carrier Passengers	301,695.57	348,009.29	408,829.90	480,401.09
COMMUTER AIRLINE(S)	Average Daily Departures (ADD)	4.00	4.40	4.65	4.89
	Annual Commuter Departures	1,460.00	1,606.00	1,697.25	1,784.85
	Annual Commuter Operations	2,920.00	3,212.00	3,394.50	3,569.70
	Boarding Load Factor (Based on 50 avg. seats X FAA LF growth rates)	53.96	55.02	56.16	57.30
	Enplaned Commuter Passengers Per Day	215.84	242.11	261.16	280.22
	Annual Enplaned Commuter Passengers	78,781.60	88,368.54	95,324.35	102,279.04
	Total Daily Commuter Passengers	431.68	484.21	522.33	560.43
	Total Annual Commuter Passengers	157,563.2	176,737.09	190,648.70	204,558.09
TOTALS	Average Daily Departures	9.38	10.57	11.87	13.33
	Annual Departures	3,423	3,858	4,333	4,865
	Annual Operations	6,846	7,716	8,665	9,731
	Daily Enplaned Passengers	629	719	821	938
	Annual Enplaned Passengers	229,629	262,373	299,739	342,480
	Total Annual Passengers	459,259	524,746	599,479	684,959

⁵ The moderate growth scenario is based on FAA TAF load factors and projected growth rates from the FAA's "Aerospace Forecast Fiscal Years 2006-2017"

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Scheduled Air Carrier Dominant—Moderate Growth Scenario

Table 2 shows that the total ADD through 2020 (10.57) are well within the proposed ATE 2020 limit of 21 ADD, as are the total annual operations (7,716 versus the draft 2020 ATE's 15,200).

2020 commuter airline operations (3,212) are well under the ATE limit of 5,200, and 2020 air carrier operations (4,504) are also well under the ATE's 10,000 annual operations limit.

The 2020 air carrier passenger level of 348,009 would not exceed the ATE's limit of 523,000 annual passengers, but the 2020 commuter passengers (176,737) would exceed the ATE's current limit of 50,000 annual passengers.

Although overall well within the ADD allocations for commercial air service, the size and load factors of the commuter airline aircraft anticipated to serve the airport in 2020 are considerably larger than those assumed in the ATE. ⁶

⁶ The ATE's assumptions in this regard are not consistent with current airline industry trends.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

The following table sets forth the assumptions derived for the low growth⁷ scenario of the scheduled air carrier dominant forecast.

Table 3. Scheduled Air Carrier Dominant (Low Growth Scenario)		2015	2020	2025	2030
AIR CARRIER AIRLINE(S)	Average Daily Departures (ADD)	5.24	5.75	6.36	6.95
	Annual Air Carrier Departures	1,912.60	2,098.75	2,321.40	2,536.75
	Annual Air Carrier Operations	3,825.20	4,197.50	4,642.80	5,073.50
	Boarding Load Factor (Based on 101 avg. seats X FAA LF growth rates)	76.86	77.27	77.57	77.97
	Enplaned Air Carrier Passengers Per Day	402.75	444.27	493.33	541.91
	Annual Enplaned Air Carrier Passengers	147,004.35	162,159.92	180,066.36	197,795.47
	Total Daily Air Carrier Passengers	805.50	888.55	986.66	1,083.81
	Total Annual Air Carrier Passengers	294,008.70	324,319.84	360,132.71	395,590.94
COMMUTER AIRLINE(S)	Average Daily Departures (ADD)	4.00	4.40	4.65	4.89
	Annual Commuter Departures	1,460.00	1,606.00	1,697.25	1,784.85
	Annual Commuter Operations	2,920.00	3,212.00	3,394.50	3,569.70
	Boarding Load Factor (Based on 50 avg. seats X FAA LF growth rates)	53.96	55.02	56.16	57.30
	Enplaned Commuter Passengers Per Day	215.84	242.11	261.16	280.22
	Annual Enplaned Commuter Passengers	78,781.60	88,368.54	95,324.35	102,279.04
	Total Daily Commuter Passengers	431.68	484.21	522.33	560.43
	Total Annual Commuter Passengers	157,563.20	176,737.09	190,648.70	204,558.09
TOTALS	Average Daily Departures	9.24	10.15	11.01	11.84
	Annual Departures	3,373	3,705	4,4,019	4,322
	Annual Operations	6,746	7,410	8,037	8,643
	Daily Enplaned Passengers	619	686	754	822
	Annual Enplaned Passengers	225,786	250,528	275,391	300,075
	Total Annual Passengers	451,572	501,057	550,781	600,149

⁷ The low growth scenario is based on FAA TAF load factors and projected TAF growth rates through 2020, and extrapolated for 2025 and 2030.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Scheduled Air Carrier Dominant — Low Growth Scenario

Table 3 shows that the total ADD through 2020 (10.15) are well within the proposed ATE 2020 limit of 21 ADD, as are the total annual operations (6,746 versus the draft 2020 ATE's 15,200).

2020 commuter airline operations (3,212) are well under the ATE limit of 5,200, and 2020 air carrier operations (4,198) are also well under the ATE's 10,000 annual operations limit.

The 2020 air carrier passenger level of 324,320 would not exceed the ATE's limit of 523,000 annual passengers, but the 2020 commuter passengers (176,737) would exceed the ATE limit of 50,000 annual passengers.

Although overall well within the ADD allocations for commercial air service, the size and load factors of the commuter airline aircraft anticipated to serve the airport in 2020 are considerably larger than those assumed in the ATE.⁸

⁸ The ATE's assumptions in this regard are not consistent with current commuter airline industry trends.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Commuter Airline Dominant Forecasts and Assumptions

This forecast scenario assumes that the growth in commercial air service between 2010 and 2030 will favor commuter airline operations.

Two forecast scenarios (Moderate Growth and Low Growth) were developed for the commuter airline dominant scenario.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Table 4. Commuter Airline Dominant (Moderate Growth Scenario)		2015	2020	2025	2030
AIR CARRIER AIRLINES	Average Daily Departures (ADD)	3.55	4.10	4.65	4.90
	Annual Air Carrier Departures	1,295.75	1,496.50	1,697.25	1,788.50
	Annual Air Carrier Operations	2,591.50	2,993.00	3,394.50	3,577.00
	Boarding Load Factor (Based on 101 avg. seats X FAA LF growth rates)	76.86	77.27	77.57	77.97
	Enplaned Air Carrier Passengers Per Day	272.86	316.79	360.69	382.06
	Annual Enplaned Air Carrier Passengers	99,592.64	115,627.07	131,652.29	139,452.92
	Total Daily Air Carrier Passengers	545.71	602.67	659.33	681.48
	Total Annual Air Carrier Passengers	199,185.28	231,254.15	263,304.58	278,905.84
COMMUTER AIRLINE(S)	Average Daily Departures (ADD)	6.60	7.30	8.20	9.70
	Annual Commuter Departures	2,409.00	2,664.50	2,993.00	3,540.50
	Annual Commuter Operations	4,818.00	5,329.00	5,986.00	7,081.00
	Boarding Load Factor (Based on 50 avg. seats X FAA LF growth rates)	53.96	55.02	56.16	57.30
	Enplaned Commuter Passengers Per Day	356.14	401.68	460.54	555.85
	Annual Enplaned Commuter Passengers	129,989.64	146,611.45	168,098.85	202,884.81
	Total Daily Commuter Passengers	712.27	803.35	921.09	1,111.70
	Total Annual Commuter Passengers	259,979.28	293,222.90	336,197.7	405,769.62
TOTALS	Average Daily Departures	10.15	11.40	12.85	14.60
	Annual Departures	3,705	4,161	4,690	5,329
	Annual Operations	7,410	8,322	9,381	10,658
	Daily Enplaned Passengers	629	718	821	938
	Annual Enplaned Passengers	229,582	262,239	299,751	342,338
	Total Annual Passengers	459,165	524,477	599,502	684,675

The moderate growth scenario is based on FAA TAF load factors and projected growth rates from the FAA's "Aerospace Forecast Fiscal Years 2006-2017"

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Commuter Airline Dominant - Moderate Growth Scenario

Table 4 shows that the total average daily departures (ADD) for 2020 (11.40) are well within the proposed ATE limit of 21 ADD, as are the total annual operations (8,322 versus the draft ATE's limit of 15,200).

However, 2020 commuter airline operations (5,329) would slightly exceed the 2020 ATE limit of 5,200 operations, while 2020 air carrier operations (2,993) are about 30 percent of the ATE's 10,000 annual operations limit.

The 2020 air carrier passenger level of 231,254 is well within the ATE limit of 523,000 passengers, while the 2020 commuter passengers (293,223) would clearly exceed the ATE's limits of 50,000 passengers. ¹⁰

¹⁰ The ATE's assumptions in this regard are not consistent with current airline industry trends

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Table 5. Commuter Airline Dominant

(Low Growth Scenario) ¹¹

		2015	2020	2025	2030
AIR CARRIER AIRLINES	Average Daily Departures (ADD)	3.45	3.90	4.25	4.37
	Annual Air Carrier Departures	1,259.25	1,423.50	1,551.25	1,595.05
	Annual Air Carrier Operations	2,518.50	2,847.00	3,102.50	3,190.10
	Boarding Load Factor (Based on 101 avg. seats X FAA LF growth rates)	76.86	77.27	77.57	77.97
	Enplaned Air Carrier Passengers Per Day	265.17	301.33	329.66	340.74
	Annual Enplaned Air Carrier Passengers	96,787.21	109,986.73	120,327.36	124,369.24
	Total Daily Air Carrier Passengers	530.34	602.67	659.33	681.48
	Total Annual Air Carrier Passengers	193,574.43	219,973.46	240,654.72	248,738.48
COMMUTER AIRLINE(S)	Average Daily Departures (ADD)	6.55	7.00	7.55	8.40
	Annual Commuter Departures	2,390.75	2,555.00	2,755.75	3,066.00
	Annual Commuter Operations	4,781.50	5,110.00	5,511.50	6,132.00
	Boarding Load Factor (Based on 50 avg. seats X FAA LF growth rates)	53.96	55.02	56.16	57.30
	Enplaned Commuter Passengers Per Day	353.43	385.17	424.04	481.35
	Annual Enplaned Commuter Passengers	129,004.87	140,586.32	154,773.94	175,694.06
	Total Daily Commuter Passengers	706.88	770.34	848.08	962.71
	Total Annual Commuter Passengers	258,009.74	281,172.64	309,547.89	351,388.13
TOTALS	Average Daily Departures	10.00	10.90	11.80	12.77
	Annual Departures	3,650	3,979	4,307	4,661
	Annual Operations	7,300	7,957	8,614	9,322
	Daily Enplaned Passengers	619	687	754	822
	Annual Enplaned Passengers	225,792	250,573	275,101	300,063
	Total Annual Passengers	451,584	501,146	550,203	600,127

¹¹ The low growth scenario is based on FAA TAF load factors and projected growth rates from the FAA's "Aerospace Forecast Fiscal Years 2006-2017"

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Commuter Airline Dominant -- Low Growth Scenario

Table 5 shows that the total ADD for 2020 (10.90) are well within the proposed ATE limit of 21 ADD, as are the total annual operations (7,957 versus the draft ATE's limit of 15,200).

2020 commuter airline operations (5,110) are slightly under the 2020 ATE limit of 5,200 operations, while 2020 air carrier operations (2,847) are about 28.5 percent of the ATE's 10,000 annual operations limit.

The 2020 air carrier passenger level of 219,973 is well within the ATE limit of 523,000 passengers, while the 2020 commuter passengers (281,173) would clearly exceed the ATE's limits of 50,000 passengers.¹²

¹² The ATE's assumptions in this regard are not consistent with current airline industry trends

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Table 6.
Enplanement Forecasts Summary

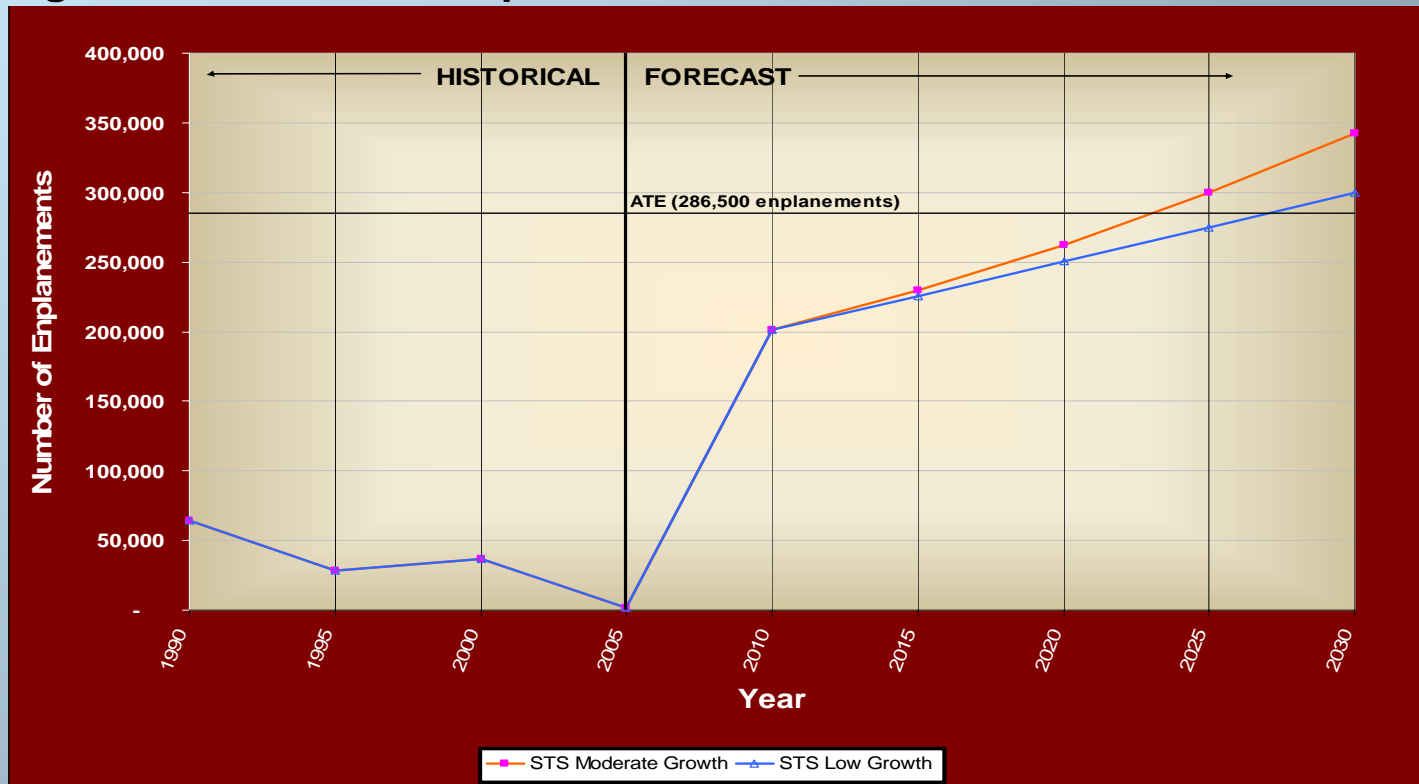
Scenario	2010	2015	2020	2025	2030
Moderate Growth: Air Carrier Dominant	200,936	229,629	262,373	299,739	342,480
Moderate Growth: Commuter Dominant	201,072	229,582	262,239	299,751	342,338
Low Growth: Air Carrier Dominant	200,936	225,786	250,528	275,391	300,075
Low Growth: Commuter Dominant	201,072	225,792	250,573	275,101	300,063

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Summary of Forecasts

Figure 1 is a graphical representation of the historical enplanements and forecast low growth and moderate growth enplanements projections for STS¹³

Figure 1. STS Annual Enplanements



¹³ Only the moderate growth and low growth scenarios are depicted because any differences between the air carrier dominant and commuter airline dominant enplanement figures within these two scenarios are minor.

AIR CARRIER AND COMMUTER AIRLINE FORECASTS

Summary of Forecasts

Figure 1 shows that neither the moderate growth scenario nor the low growth scenario would exceed the County's proposed ATE annual enplanement limit of 286,500 (573,000 total annual passengers) through 2020.

The moderate growth scenario could exceed 286,500 annual enplanements around 2023 and the low growth scenario could exceed this level a little later, around 2027.

¹³ Only the moderate growth and low growth scenarios are depicted because any differences between the air carrier dominant and commuter airline dominant enplanement figures within these two scenarios are minor.

FORECAST EVALUATION

An effective technique used in evaluating demand forecasts is that of the outside view, also known as reference-class forecasting.¹⁴

This technique removes any built-in bias toward the outcome of a project by ignoring the details of the project at hand, as it involves no attempt at forecasting the events that would influence the project's future course.

Instead, it examines the experiences of a class of similar projects, lays out a rough distribution of outcomes for this reference class, and then positions the subject project in that distribution.

¹⁴ Harvard Business Review, "Delusions of Success: How Optimism Undermines Executives' Decisions," Vol. 81, No. 7, July 2003.

FORECAST EVALUATION

This process typically involves five steps: ¹⁵

1. Select a reference class.
2. Assess the distribution of outcomes.
3. Make an intuitive prediction of your project's position in the distribution.
4. Assess the reliability of your prediction.
5. Correct the intuitive estimate.

¹⁵ Daniel Kahneman and Amos Tversky, "Intuitive Predictions: Biases and Corrective Procedures," TIMS Studies in Management Science, Volume 12 (1979).

FORECAST EVALUATION

This process typically involves five steps: ¹⁵

1. Select a reference class.
2. Assess the distribution of outcomes.
3. Make an intuitive prediction of your project's position in the distribution.
4. Assess the reliability of your prediction.
5. Correct the intuitive estimate.

¹⁵ Daniel Kahneman and Amos Tversky, "Intuitive Predictions: Biases and Corrective Procedures," TIMS Studies in Management Science, Volume 12 (1979).

FORECAST EVALUATION

1. Reference Class

To determine the appropriate reference class to evaluate the STS air carrier and commuter airline forecasts, it was first necessary to see where STS would rank among other comparable airports in the region.

Table 7 compares seventeen certificated air carrier airports in Northern and Central California with STS in terms of numbers of runways, the longest runway at each airport, and the number of boarding (enplaned) passengers at each airport for calendar year (CY) 2004.¹⁶

The national ranking for each airport in terms of annual enplaned passengers for CY 2004 is also indicated.

¹⁶ 2005 enplaned passenger limit per County General Plan Air Transportation Element (ATE) for comparison purposes only. STS had no scheduled airline or commuter passengers in 2004.

FORECAST EVALUATION

1. Reference Class, cont'd

For purposes of comparison, Sonoma County's General Plan Air Transportation Element (ATE) 2005 limit of 286,500 passenger enplanements is used to mark STS's anticipated place in the reference class.

In this case, had the ATE expectations been realized, STS would have fallen well below the 2004 enplanement levels for the Fresno Yosemite International Airport (FAT) and the Santa Barbara Municipal Airport (SBA) and above the 2004 enplanement levels for the Monterey Peninsula Airport (MRY) and the San Luis Obispo County Regional Airport (SBP).

These data are also shown graphically in Figure 2.¹⁷ On the basis of this information, it was determined that STS was closest to the reference class represented by the Monterey Peninsula Airport (MRY) and the San Luis Obispo County Regional Airport (SBP).

¹⁷ Note that SFO and OAK have been removed from Figure 2 due to graphical limitations.

TABLE 7.
Northern and Central California Air Carrier Airports

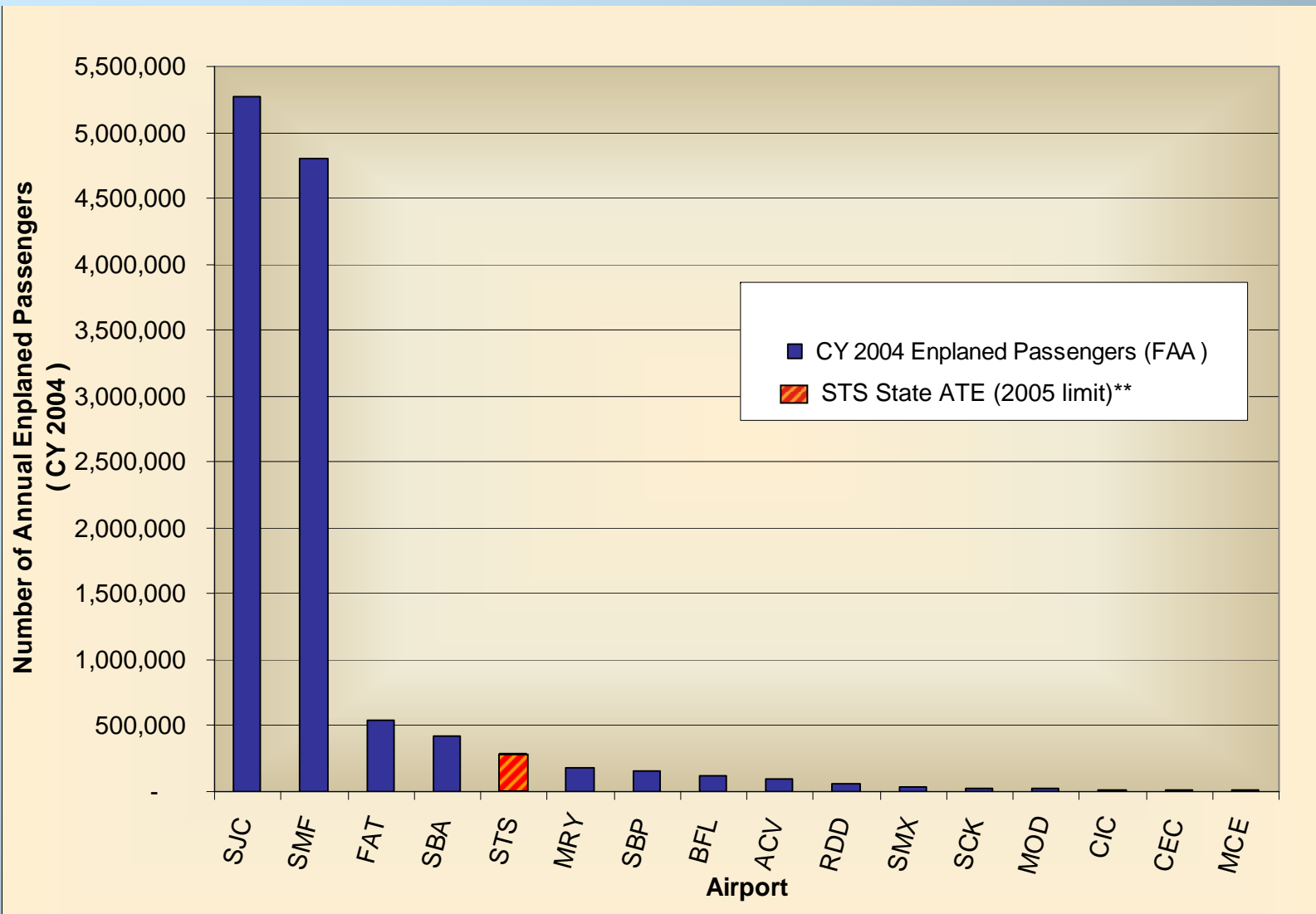
Airport Name (3-Letter Identifier)	Number of Runways (*)	Longest Runway (ft.)	CY 2004 Enplaned Passengers (FAA) ²	National Ranking (2004)
San Francisco International (SFO)	4	11,870	15,605,822	13
Oakland International (OAK)	4, (1)	10,000	6,923,690	31
San Jose International (SJC)	3, (2)	11,000	5,269,849	37
Sacramento International (SMF)	2	8,601	4,795,970	41
Fresno Yosemite International (FAT)	2	9,222	538,394	115
Santa Barbara Municipal (SBA)	3, (1)	6,052	417,285	128
Charles M. Schulz-Sonoma County (STS)¹	2, (1)	5,115	(286,500)	N/A
Monterey Peninsula (MRY)	2, (1)	7,616	183,785	181
San Luis Obispo County Regional (SBP)	2, (1)	6,100 (2007)	158,107	191
Bakersfield Meadows Field (BFL)	2, (1)	10,857	118,046	205
Arcata-Eureka (ACV)	2, (1)	6,000	96,289	213
Redding Municipal (RDD)	2	7,003	60,978	248
Santa Maria Public (SMX)	2, (1)	6,304	38,082	290
Stockton Metropolitan (SCK)	2, (1)	10,650	20,636	DNA
Modesto City-County (MOD)	2, (1)	5,911	19,798	333
Chico Municipal (CIC)	2, (1)	6,724	17,561	345
Crescent City (CEC)	2	5,002	12,472	371
Merced Municipal (MCE)	1	5,903	6,144	447

¹ 2005 enplaned passenger limit per County General Plan Air Transportation Element (ATE) for comparison purposes only. STS had no scheduled airline or commuter passengers in 2004.

² Historical enplanements per Federal Aviation Administration "Primary Airport Enplanements Activity Summary (CY 2004)"

(*) Number of air carrier runways, if all runways not usable by air carriers.

FIGURE 2.
Northern and Central California Air Carrier Airports*



* SFO (15.6 million annual enplanements) and OAK (6.9 million enplanements) omitted due to graphical limitations

** 2005 ATE limit (286,500 annual passenger enplanements)

FORECAST EVALUATION

1. Reference Class

The selected reference class consists of enplanement data and forecasts for the Monterey and San Luis Obispo County airports.

These two 14 CFR Part 139 certificated air carrier airports have comparable catchment area populations, numbers of airlines, and markets served to those projected for the Sonoma County Airport.

Both airports are non-hub towered airports similar to STS.

FORECAST EVALUATION

2. Distribution of Outcomes

The following graph (Figure 3) depicts historical and forecast enplanement data for the two reference class airports as derived from FAA Terminal Area Forecasts from 1990 to 2020.¹⁸

The graph also shows the same data for the two STS commercial air service scenarios.

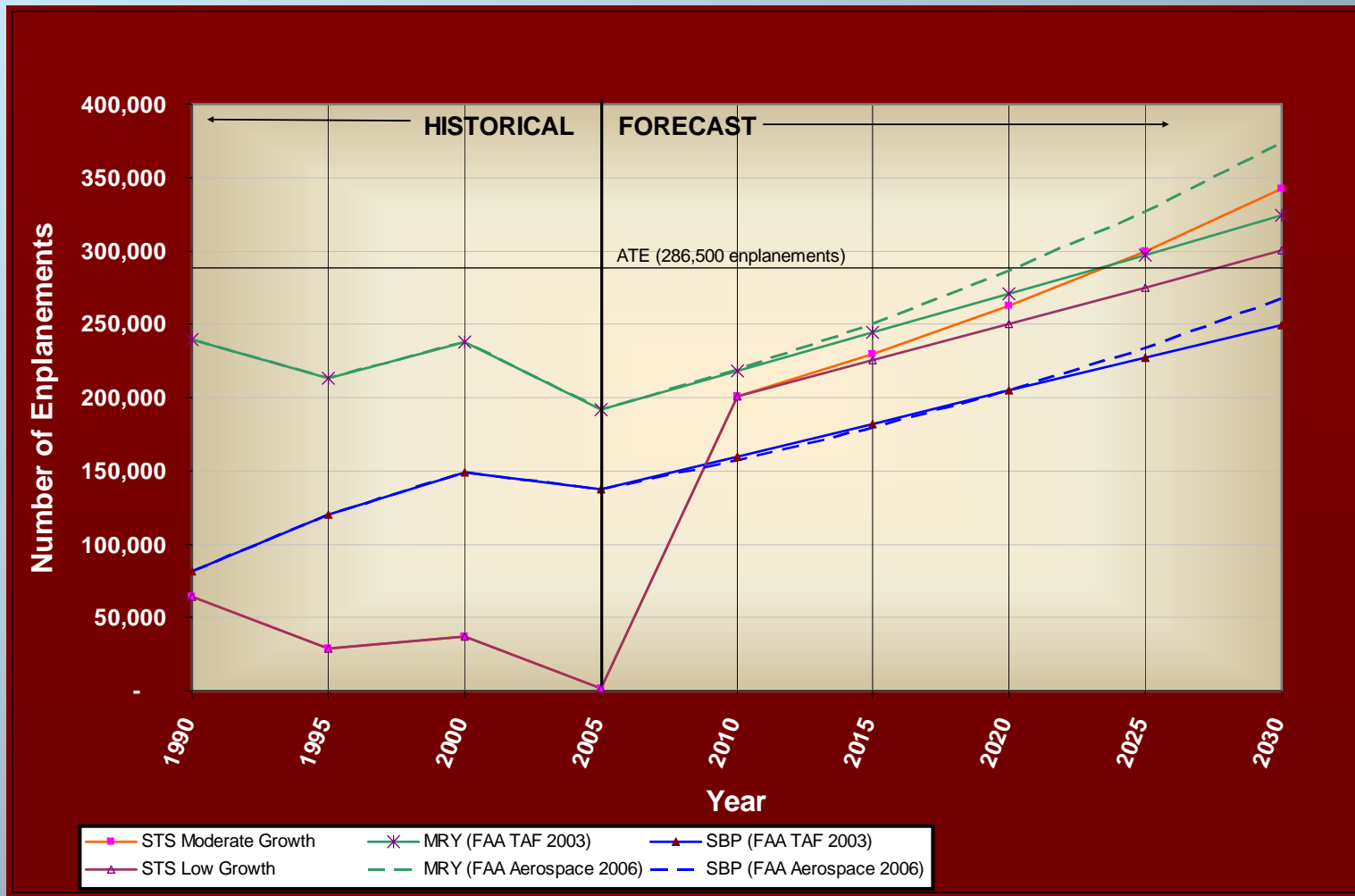
As can be seen from the historical section of the graph, there was no consistent growth pattern for enplanements at the three airports between 1990 and 2005.

Both the Monterey Peninsula Airport and the Sonoma County Airport experienced declining passenger enplanements during this period, while the San Luis Obispo Airport experienced steady growth through 2000 and a small decline between 2000 and 2005.

¹⁸ Federal Aviation Administration, "Terminal Area Forecast Summary, Fiscal Years 2004-2020." March 2005. The TAF growth rates for the two airports were projected through 2030 for purposes of this analysis.

FORECAST EVALUATION

FIGURE 3.
Annual Enplanements Comparison



FORECAST EVALUATION

2. Distribution of Outcomes, cont'd

The FAA TAF and Aerospace forecasts project a consistent rate of enplanements growth for the two reference class airports from 2005 through 2020, and these growth rates have been carried forward through 2030.

The Sonoma County Airport is projected to experience strong resurgent growth between 2005 and 2010, and then taper off with enplanement growth rates comparable to the two other airports.

FORECAST EVALUATION

3. Prediction of Project Position

Figure 3 shows that the STS moderate growth and low growth scenarios are situated about halfway between the curves for the Monterey Peninsula Airport and the San Luis Obispo County Airport.

The two STS enplanement scenarios are within the range established by the two reference class airports and have comparable rates of growth for future conditions.

Of the two STS forecast scenarios, the moderate growth scenario is most closely aligned with that of the Monterey Peninsula Airport as projected from the FAA aerospace forecasts, while the STS low growth scenario remains close to the curve defined by the FAA's TAF forecast for MRY.

FORECAST EVALUATION

4. Reliability Assessment

No two airports are exactly alike, and one should not expect the forecasts for one airport to conform exactly to those of another.

The forecast information depicted on the above graph for Sonoma County Airport places the two enplanement scenarios within the range of forecasts established for the two other comparable air carrier airports.

FORECAST EVALUATION

5. Corrections

Given that the two STS enplanement forecast scenarios fall within the range defined by the two reference class airports, and given that the projected growth rates are roughly comparable, no further modifications or corrections to the forecasts appear warranted.

NEXT STEPS

The next step should be to select the two forecast scenarios as the master plan's commercial air service forecasts.

Following this the ATE needs to be amended to reflect current airline industry trends. Because the currently adopted ATE had forecast certain activity levels for 2005 based on aircraft fleet mix and boarding load factors developed in 1992. Since then many things have changed in the airline industry.

For example, the 15-passenger commuter airliners and 50-passenger regional jets used as the bases for the earlier ATE projections will not likely ever see substantial service at the Sonoma County Airport.

These assumptions are no longer consistent with current commercial air carrier and commuter airline trends, or with the load factors and other assumptions developed for this report.

NEXT STEPS

Similarly, the definition of a commuter airliner set forth in the ATE is not consistent with current terminology.

The ATE classifies any commercial aircraft used in scheduled intrastate service as a commuter airline. This means that any aircraft, including those with as many as 150 passenger seats and capable of using the airport, used in intrastate service would be classified as a commuter airline. This definition also needs to be reevaluated.

For reasons of consistency, the assumptions developed for the Sonoma County Airport Master Plan Update and the 2020 Sonoma County General Plan Update and ATE must be the same.

The ATE should be thoroughly reviewed to ensure that any assumptions or other information projected to the year 2020 are consistent with the operational realities of the airport and current airline trends.

A photograph of a bright blue sky filled with soft, white, fluffy clouds. The clouds are scattered across the frame, creating a serene and open atmosphere. The lighting is bright, suggesting a clear day.

QUESTIONS