

ATTACHMENT ONE

**COMMENTS ON WORKING PAPERS #1 (INVENTORY) AND #2 (FORECASTS)
MAG REGIONAL AVIATION SYSTEM PLAN UPDATE 2000**

Key Comments from Luke Air Force Base Staff*
October 4, 2001

- There needs to be more discussion regarding the recreational flying areas associated with general aviation aircraft.
- The projections of traffic at Luke AFB should be more in line with 2000 traffic levels of about 190,000 operations a year.
- In examining based aircraft at general aviation airports, it is important to recognize that some general aviation airports have inactive aircraft and that those aircraft do not contribute to the operations level at the airport.
- Recognize the operation of Gila Bend Auxiliary Field in the RASP

* Comments provided by Terry Hansen and William Gillies at a meeting with MAG staff on October 4, 2001.

October 9, 2001

Mr. Harry P. Wolfe
Aviation Program Manager
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, AZ 85003

Re: Regional Aviation System Plan Update Inventory – Working Paper 1, September 2001

Dear Mr. Wolfe:

I have reviewed the Working Paper No. draft of the Regional Aviation System Plan Update Inventory. Please make the following changes noted below:

<u>Page No.</u>	<u>Paragraph/Section/Table</u>	<u>Comment</u>
1-5	1	Remove the word Municipal from Scottsdale Airport
1-12	Sentences 4 & 5	Remove the word Municipal from Scottsdale Airport
1-69	Row 3, Scottsdale Airport	Change Total Acreage from 282 to 291 Change Runway Width from 75 to 100
1-72	Table 1.4, Row 13	Remove the word Municipal from Scottsdale Airport
1-75	Table 1.5, Row 13	Remove the word Municipal from Scottsdale Airport
A-35	Airport Sketch	Bullet column for Aircraft Interiors Refer to current ALP for Scottsdale Airport (Attached)
A-36	Scottsdale Airport	Various changes required. Address: 15000 N Airport Drive, 2 nd Floor Telephone: Change from 994-2321 to (480) 312-2321 Email: Add ci. after sgray @...
A-37	Runway Data Commercial Passengers	Total Acreage: Change from 282 to 291 Change width from 75 to 100 Add Enplanements/Deplanement/ Totals for 1996-2000 1996 = 7979; 1997 = 6742; 1998 = 5433; 1999 = 9889; 2000 = 4999

If you have any questions, or require further clarification, please contact me at (480) 312-7735.

Sincerely,

Scott T. Gray
Aviation Director

Attachment



15000 N. Airport Dr. Ste. 2000 Scottsdale, AZ 85260
(480) 312-2321 • Fax (480) 312-8480
www.ci.scottsdale.az.us/airport

October 30, 2001

Mr. Harry P. Wolfe
Aviation Program Manager
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, AZ 85003

**Re: Regional Aviation System Plan Update Inventory – Working Paper 2,
September 2001**

Dear Mr. Wolfe:

I have reviewed the Working Paper No. 2 - Aviation Demand Forecasts, of the Regional Aviation System Plan Update. As was indicated in the comments on Working Paper No. 1 - Inventory, the official name of the our airport is "Scottsdale Airport." Please correct throughout the document by removing all references to "municipal."

Table 2.19, MAG Based Aircraft Fleet Mix – 2000, inaccurately indicates the presence of one glider and one other type aircraft at Scottsdale Airport. I have attached a breakout of our current fleet mix to assist in correcting the aircraft mix. Table 2.20, MAG Based Aircraft Fleet Mix – 2025, will need to be corrected based on the revised 2000 fleet mix.

Of primary concern is the historic operational level used to project general aviation operations at Scottsdale Airport. The year 2000 was used as the base year to project the future operations, however, during that year our runway was closed for the majority of the month of July. As can be seen in Table 2.10, General Aviation Aircraft Operations in MAG Region, 1996-2000, the operational levels at Scottsdale Airport were growing from 1996 through 1999. If the runway was available during July 2000, our operations levels would have been more close aligned with the 1999 operational level, thus, resulting in higher projected operations. The estimated operations without the extended runway closures in July 2000 are approximately 16,500. The base year should reflect this anomaly to more accurately project future operation levels.



Mr. Harry P. Wolfe
October 30, 2001
Page 2 of 2

The last issue is regarding projecting enplanements and commercial operations at Scottsdale Airport. Currently, the draft document does not indicate any commercial activity at Scottsdale Airport. Our 1997 approved Airport Master Plan forecast include such activity during the MAG RASP planning period. I would suggest an acknowledgement of potential activity at Scottsdale Airport within Working Paper No. 2, utilizing the projections from our Airport Master Plan. I have attached the pertinent section from the Master Plan for your use.

As we discussed at the last Policy Committee meeting, I believe it is very important that the draft Working Papers be provided to the MAG technical staff representatives well in advance of the Policy Committee meetings. This will enable the technical staff to review the draft documents and provide corrections and comments to MAG relevant to any technical discrepancies. This will also provide the technical staff time to brief our policy makers as to any other issues prior to their meeting. Following possible corrections to the draft documents, they then could be forwarded to the Policy Committee for action.

Thank you for the opportunity to comment. If you have any questions, or require further clarification, please contact me at (480) 312-7735.

Sincerely,



Scott T. Gray
Aviation Director

Attachments

Scottsdale Airport Based Aircraft History 2000

A/C category	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Helicopter	15	13	13	13	13	13	13	13	13	12	12	16
Jet	64	64	65	64	64	63	64	65	67	69	71	72
Single Piston	277	282	279	282	271	261	260	264	264	267	267	267
Single Turboprop	3	3	3	3	3	3	3	3	3	3	2	2
Twin Piston	54	56	57	55	55	57	54	55	54	54	52	53
Twin Turboprop	19	20	20	19	19	18	17	15	15	13	13	15
TOTAL	432	438	437	436	425	415	411	415	416	418	417	425

Commuter service at Scottsdale Airport is anticipated to have a BLF of approximately 50 percent throughout the planning period. **Table 2K, Commercial Service Fleet Mix and Operations**, depicts the anticipated commercial operations based on various seating

capacities of aircraft. **Exhibit 2D, Operations Forecast Summary**, presented at the end of the chapter illustrates the projected commercial service operations throughout the planning period.

TABLE 2K
Commercial Service Fleet Mix and Operations
Scottsdale Airport

	Existing	Forecast			
	1994	2000	2005	2010	2015
Seating Capacities					
<19 (Cessnas, Twin Otter)	100%	100%	50%	35%	20%
+19 (Beech 1900)	0%	0%	50%	25%	5%
±30 (Brazilia)	0%	0%	0%	30%	50%
±70 (Regional Jet)	0%	0%	0%	10%	25%
Total	100%	100%	100%	100%	100%
Average Seats, Enplanement and Commercial Operations Forecasts					
Average Seats/Departure	5	5	12	23	34
Boarding Load Factor (%)	69	69	60	57	54
Enplanements/Departures	3.45	3.45	7.20	13.10	18.40
Annual Enplanements	6,900	11,200	36,300	65,100	98,000
Annual Departures	2,000	3,250	5,000	5,000	5,350
Annual Commercial Operations	4,000	6,500	10,000	10,000	10,700

ANNUAL INSTRUMENT APPROACHES

Forecasts of annual instrument approaches (AIA) provide guidance in determining an airport's requirements for navigational aid facilities. An instrument approach is defined by FAA as "...an approach to an airport with intent to land by an aircraft in accordance with an Instrument Flight Rule (IFR) flight plan, when the visibility is less

than three miles and/or when the ceiling is at or below the minimum initial approach altitude."

In determining the number of AIA's conducted at the airport, the number of instrument operations needed to be examined. Utilizing the 1994 Airport Traffic Control Tower activity logs, it was determined that 10 percent of the total operations were logged as instrument operations. These operations

October 11, 2001

Harry Wolfe, Senior Project Manager
Maricopa Associates of Governments
302 North 1st Ave, Suite 300
Phoenix, AZ 85003

Dear Mr. Wolfe:

We appreciate the opportunity to provide input on the Draft Inventory Working Paper for the MAG Regional Aviation System Plan Update. The following are our comments.

Study Assumptions

We understand that the Policy Committee adopted the 65 DNL noise contour to define significant airport noise impacts in accordance with FAA standards. However, House Bill 2523/ARS #28-8486 enabled airports to record the 60 DNL for notification/disclosure purposes since these property owners are also effected.

Local Master Plans and FAR Part 150 Studies

FAA approved the Williams Gateway Airport Noise Compatibility Program on August 17, 2001.

Table 1-2 MAG System Airports Selected Characteristics

Williams Gateway Airport – As per the Airport Boundary Survey our Total Acreage is 3,020 acres.

Table 1-5 Airport Services

Williams Gateway – we have no Aircraft Parts, or Aircraft Sales/Leasing Brokerage, but we do have Avgas Sales and Oxygen.

Table 1.10 MAG System Airports Ground Communications Outlet Capability

Williams Gateway - ATCT – 0600 to 2100.

Airspace Overview

Radar Coverage – Fourth sentence – The ASR at IWA needs to be relocated due to future conflicts with the eastside Terminal area. When done, it should be located on property surrounding Williams Gateway Airport to enable a wider range of coverage south of the Phoenix metropolitan area.

Instrument Approach Capability

Last Paragraph – Last number should be Table 1.12

Table 1.12 MAG System Airports Recommended Instrument Approach Capability
Williams Gateway - GPS – 12L-30R.

APPENDIX A - AIRPORTS SKETCHES AND INVENTORIES

Williams Gateway

Address: 5835 S. Sossaman Road

Total Acreage: 3,020

Runway Data - 12L-30R – Lighting – HIRL & REILS

Annual Service Volume (ops): 408,000

Ult ASV (ops): Based upon the 1999 Airport Master Plan Table 3C

Long Term (with three runways) will be 365,000.

I hope that the identification of these issues is useful. If you have any questions or wish to discuss any of these issues in more detail, please call me (480) 988-1013.

Sincerely,

Trish Shaffstall
Planning Manager

October 17, 2001

Harry Wolfe, Senior Project Manager
Maricopa Association of Governments
302 North 1st Ave, Suite 300
Phoenix, AZ 85003

Dear Mr. Wolfe:

We appreciate the opportunity to provide input on the Draft Aviation Demand Forecasts, Working Paper #2 for the MAG Regional Aviation System Plan Update. The following are our comments:

Projections

We understand that the trend is an increase in General Aviation. However, the magnitude of the increase in these numbers compared to those shown in our Williams Gateway Airport Master Plan is just too great. We believe the numbers within our Master Plan are accurate and reflect the future of our Airport. Our recently FAA adopted F.A.R. Part 150 Noise Compatibility Plan is based upon the forecasts in our Master Plan. Therefore, the following changes "**In Bold**" should be made to be consistent with our Master Plan.

Page # 2.38 Table 2.19 (MAG Based Aircraft Fleet Mix – 2000)
Williams Gateway Airport – Had **7** Turbo Prop aircraft at the Airport in 2000.

Page # 2.39 Table 2.20 (MAG Based Aircraft Fleet Mix – 2025)
Williams Gateway Airport Master Plan - Forecasts at the Airport in 2020.
40 Turbo Prop Aircraft
15 Jets
11 Helicopters

Page # 2.42 Table 2.22 (MAG Historic and Preferred General Aviation Aircraft Projections) Williams Gateway - Projections
Master Plan Projections are substantially lower than the MAG Projections.

MAG Projections	WGA Master Plan Projections
2005 - 290,380	2005 - 201,500
2010 - 407,180	2010 - 231,700
2015 - 523,980	2015 - 264,100
2020 - 640,780	2020 - 298,100
2025 - 757,580	

Page # 2.45 Table 2.24 (MAG Local/Itinerant General Aviation Operations – 2025)
Williams Gateway - Projections

Master Plan Projections are substantially lower than the MAG Projections.

MAG Projections	WGA Master Plan
Projections Local Operations 2025 – 507,630	2020 – 123,300
Itinerant Operations 2025 – 249,950	2020 – 174,800

Page # 2.52 Table 2.28 (MAG Historic and Projected Military Operations)
Williams Gateway Airport was not listed in this section. Currently WGA is the fueling agent at the Airport and we have a military fueling contract. Therefore, these numbers should be included.

WGA Historic Operations	WGA Master Plan
Projections	
1997 - 27,990	2005 - 33,000
1998 - 26,921	2015 - 33,000
1999 - 44,586	2020 - 33,000
2000 - 10,626	

In summary, modifications need to be made to be in line with the Williams Gateway Airport Master Plan Forecasts. If you have any questions or wish to discuss any of these issues in more detail, please call me (480) 988-1013.

Sincerely,

Trish Shaffstall
Planning Manager

Susan Palmeri – City of Phoenix

Comments Regarding Working Paper No. 1

Page 1-5: 6th bullet point. Airport name spelled incorrectly.

Page 1-7: 6th Paragraph beginning with Alternatives: Please explain in more detail the capital improvement program that is being suggested.

- Who will define the projects to be included?
- How will projects be funded?
- Who would oversee the program?
- Are you suggesting the CIP will be attached to any Federal or State Program of Grant Funding?
- etc.

Page 1-9: Study Assumptions, 6th Bullet Point beginning with “For regional”. Please be advised that the City of Phoenix just completed and registered earlier this month new noise contour maps for: 1) Phoenix Sky Harbor International Airport, 2) Phoenix Goodyear Airport and, 3) Phoenix Deer Valley Airport. Copies of these maps are attached.

Page 1-11 and 1-12: The Master Plans that are mentioned for the following airports are drafts and not preliminary. Please correct for: 1) Phoenix Sky Harbor International Airport, 2) Phoenix Goodyear Airport and, 3) Phoenix Deer Valley Airport.

Page 1-77: Air Cargo. Not sure how the consultant handled “belly freight?” In May 2000, Landrum & Brown completed an Air Cargo Development Plan for Phoenix Sky Harbor International Airport. A copy of this plan is attached.

Page 1-82: Airspace Classifications Associated with MAG Airports: 3rd line from the bottom. States that Mode C is not normally a requirement for flight under IFR rules. This statement is incorrect. Mode C is a requirement for IFR operations.

Page 1-90: Instrument Approach Chart information needs to be updated.

Page 1-92: Table 1.14 Arrival Procedures Chart needs to be updated.

Appendix A: Airport Sketches and Inventories: Pages A-22 – A-31: Updated Airport Layout Plans and Airport Information is attached for: 1) Phoenix Sky Harbor International Airport, 2) Phoenix Goodyear, and 3) Phoenix Deer Valley Airport.

Comments Regarding Working Paper No. 2

Page 2.1 and 2.2: Industry Trends and Recent Commercial Trends. The working paper states that trends are generally for the U.S. as a whole. Since Maricopa County does not parallel the U.S it might be worth adding additional information about Maricopa County and industry and commercial trends.

October 29, 2001

Harry Wolfe
MAG RASP Project Coordinator
Maricopa Association of Governments
302 North 1st Avenue, Suite 200
Phoenix, Arizona 85003

Re: Draft Working Papers 1 and 2, MAG RASP

Dear Harry:

We have reviewed the referenced documents and have the following comments:

1. Chapter One – Study Framework

a. Documents missing from list – Williams Gateway Part 150 Study – 2001; Northwest 2000 (page 1-12).

2. Chapter One – Regional Profile

a. The NPIAS explanation and definition of Reliever Airports was changed under AIR-21 and should be included or mentioned in this section (page 1-62).

b. Primary, Secondary and Emerging Rural Airport Classifications (page 1-65): This section contains information subsequent to changes approved by the State Transportation Board in January 2001. Emerging Rural Airports is no longer the title of an Airport Category in the State's Aviation system. The current State Aviation System contains two airport systems: Primary and Secondary. There are six (3) airport categories: Commercial Service, Reliever and General Aviation categories. There are four (4) sub-categories of General Aviation Airports: Community, Rural, Emergency and New Urban. The appropriate pages of the Arizona Transportation Board Aviation Policies – 2000 that should be used to obtain additional information to revise this section are attached.

c. Table 1.4, page 1-72 does not clearly identify the "Rating" for Wickenburg Municipal Airport.

d. Appendix A – Airport Sketches: The source of the updated statistical data for each of the airports is not indicated on any of the airports. It would be appropriate to “highlight” in some way, what information has been updated from the previous RASP.

2. Chapter Two: Aviation Demand Forecasts

a. The source year (1997) for the DES population projection data is not indicated on page 2-30. Isn't there more current projections than those indicated?

b. There should be an analysis of the effect of Sept 11, 2001 on these forecasts and whether or not they should be revised or whether a high-low forecast should be projected in this RASP. In either case, the most current data should be included in the text explanation leading up to the selection of the preferred forecast. It would also be helpful if one airport example were provided that indicated the seven different methodologies and their individual effect on the forecasts.

c. Page 2-35, second paragraph, indicates that the FAA and TAF Forecasts did not use Census 2000 population data. It does not appear that any of the DES population projections used Census 2000 data either.

If you have any questions, please call.

Sincerely,

Ray Boucher, Aviation Program Analyst

Enclosures

cc: Pam Keidel, Wilbur Smith Associates

October 29, 2001

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Re: Maricopa Association of Governments Regional Aviation System Plan Update,
Working Paper No. 2 - Comments by the City of Tempe

Dear Mr. Wolfe:

We represent the City of Tempe (ATempe@), a member of the Maricopa Association of Governments. The following are Tempe's comments concerning the Maricopa Association of Governments (AMAG@) Regional Aviation System Plan (ARASP@) Update, Working Paper No. 2 (AWorking Paper No. 2@).

Tempe understands that Working Paper No. 2 is one of seven such papers which will assist the MAG RASP Policy Committee, stakeholders, and the public in understanding the long-term air transportation needs of the region, both commercial and general aviation. As Working Paper No. 2 focuses on Aviation Demand Forecasts@, it is crucial that it reflect accurate historical data and present evidence-based assumptions and projections. However, Working Paper No. 2 fails to consider the economic downturn of the year 2000 to the present, does not acknowledge the effects of the September 11, 2001 tragedy, misrepresents the growth of commercial and general aviation in the country, and its MAG region projections for aviation growth are based on estimates and are not supported by evidence. Unfortunately, because Working Paper No. 2 has not properly represented aviation demand in the MAG region, any analysis and recommendations in Working Papers Nos. 3-5 which are based on Working Paper No. 2 will not be accurate.

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
October 29, 2001
Page 2

I. WORKING PAPER NO. 2 PREDICTS AVIATION GROWTH IN THE MAG REGION WITHOUT TAKING INTO ACCOUNT THE DETRIMENTAL EFFECTS THAT THE RECENT ECONOMIC DOWNTURN AND THE EVENTS OF SEPTEMBER 11, 2001 WILL HAVE ON THE INDUSTRY.

Working Paper No. 2 states that it discusses recent and ongoing aviation industry trends. (pg. 2.1) This conclusion is not accurate. Working Paper No.2 ignores the downturns in the economy that have taken place since the year 2000 and the effects of the September 11, 2001 attacks. In doing so, nearly all of the projections offered in Working Paper No. 2 are questionable.

While Tempe understands that the tragic events of September 11, 2001 could not have been foreseen and continue to unfold, and, therefore, were not included in the RASP Update, the impacts of September 11th, combined with the economic downturn of 2000 may have a more dramatic impact on reducing the numbers of operations at all airports for the foreseeable future than what the MAG states. Indeed, parallels may be drawn to the 1981 air traffic controller's strike which reduced the number of commercial and general aviation operations. After 1981, it took a number of years for the commercial and general aviation segments of the industry to reach their former levels of activity. Like the controller strike, the combined impacts of a weak economy and the events of September 11th have already led airlines to restructure their services, reduce the number and frequency of their flights, and eliminate destinations that are not profitable. In the coming months and years airlines may be allowed to work more closely in providing air services and there may therefore be less head-to-head competition, which may also reduce the number of total operations.

In order to produce a document that accurately presents a realistic current and future scenario of the aviation industry, MAG should acknowledge the events of September 11, 2001.¹

¹ Even if the attacks are not recognized, the integrity of the document is called into question as the study does not include accurate numbers. An obvious example of this is revealed in the Comparison With TAF and FAA Aerospace Forecasts section where Working Paper No. 2 states, Unfortunately, these documents do not incorporate the most current data available that were used to develop the based aircraft in this report. The FAA Aerospace Forecasts, 2001-2012 are based on data up to and including the year 2000, with the year 2000 numbers reflecting estimates of aviation activity. (pg. 2.34) The drafters of Working Paper No. 2 accepted the data knowing that the year 2000 was an estimate. They continued with their projections using these inexact baselines and presented a product that was, from the start, known to be based on estimated numbers. The drafters have relied upon this incomplete analysis throughout Working Paper 2.

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
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II. WORKING PAPER NO. 2 MISREPRESENTS THE GROWTH OF COMMERCIAL OPERATIONS IN THE UNITED STATES.

1. The History of Aviation Growth is not Accurately Represented.

First, Working Paper No. 2's section titled, "Recent Commercial Trends" begins with the blanket statement that, "the United States has experienced unprecedented expansion of air carrier capacity." (pg. 2.2) The phrase "expansion of air carrier capacity" is ambiguous and undefined. For instance, "expansion of air carrier capacity" can mean additional seats through the use of larger aircraft, thereby resulting in fewer operations through the elimination of smaller aircraft. It can also mean additional airport capacity allowing for additional airport operations. Additionally, it can mean an increase in the size of the air carrier fleet. Working Paper No. 2 fails to specify the meaning of this phrase.

Second, Working Paper No.2 cites four major factors that have helped to shape the development of today's commercial airline industry. First, the report states that there is a direct relationship between the Gross Domestic Product (GDP) and passenger enplanements. However, in making this correlation, the drafters fail to recognize two fundamental issues: (a) the downturn in the general economy and, in particular, the airline industry worldwide that has occurred since 2000, and (b) the fact that passenger enplanements do not necessarily equate to increased operations. For instance, "Figure 2.1 B Historic and Forecast U.S. Enplanements" (pg. 2.6), shows a linear increase in passenger enplanements. Passenger enplanements do not automatically increase the number of flights, and passenger activity may not directly relate to an increase in aviation activity. Although passenger increases can point out the need for improvements in infrastructure such as increased terminal space, customer service items, parking, transportation, etc., they are not necessarily an indication of increased aviation activity. Airlines often substitute larger aircraft for smaller aircraft on routes that have higher demand and will schedule a second flight only if that flight can operate at a profit. Few airlines do not have the ability to substitute aircraft and to schedule the size of aircraft required to meet demand. There is also considerable unused capacity on nearly every flight operating in the U.S. and, until that capacity is used, additional flights are not needed.

Working Paper No.2 also refers to the "over-expansion of the airline industry in the 1980s" as a factor helping to shape the development of today's commercial airline industry. The drafters cite all of the actions taken by the airlines to address the astronomical losses suffered in the 1990s but fail to consider the airline's economic status for the 2000s. For instance, airlines are making major adjustments to their route structures, increasing seating capacity while reducing frequency of flights,

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
October 29, 2001
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eliminating some hubs and point to point service, even to overseas destinations, focusing on marketing alliances, and sending many of their aircraft to storage facilities to reduce overall operating costs. Working Paper No.2 has failed to recognize that the airlines are currently in a state of significant change.

2. Working Paper No. 2's Anticipated Commercial Trends Are Not Supported By Evidence.

First, Working Paper No. 2 accurately states that the commercial airline fleet has changed over the past 10 to 15 years. However, it errs in assuming that the changes experienced in the past 15 years will hold true for the next 15 years. Two of the largest aircraft manufacturing companies have opted for different strategies in the next decade. One manufacturer is banking on large, long haul, high passenger aircraft while the other is focusing on smaller, faster aircraft. The larger aircraft option requires additional infrastructure at airports where these New Large Aircraft (ANLA) would operate and the impacts on the airport operations when these NLAs are moving on the airport are unknown at this time. However, the recent downturn in the economy, the reduction in passenger activity, and the issues of airline liability may make these NLA less attractive to the airlines.

Second, Working Paper No.2 cites the widespread adoption of similar, successful strategies by each of the major carriers as another factor shaping the airline industry's development. (pg. 2.3) However, any assumption that the report's stated airline actions will continue to occur is suspect. For example the profitability of the hub fortress concept may be called into question with the demise of United Airlines Shuttle operation.

Third, Working Paper No.2 refers to technological advances including computer reservation systems, yield management, and e-commerce as another factor shaping the airline industry. Although computers have certainly changed the airline industry, the idea that airlines can adjust fares frequently over one million times per day as stated by Working Paper No.2 is unrealistic.

Last, although the FAA Aerospace Forecasts for FY 2001-2012 is used as justification for much of the drafter's conclusions, the data in these forecasts is dated and the conclusions in these reports were developed far in advance of the publication date. The majority of the forecasts were made before the economic downturn began and none of them consider today's economic situation or the current state of the aviation system worldwide. For example, Table 2.1 B Projections of U.S. Carrier Enplanements (pg. 2.4) demonstrates an unrealistic industry prediction. The table is based on the FAA forecast for commercial passenger activity for U.S. carriers and projects a stable and relatively strong growth in domestic and international enplanements at U.S. airports. It forecasts a growth rate of 3.6 % annually from 2000 to 2012. Additionally, Table 2.1 shows international enplanements with a historical

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
October 29, 2001
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2.4% growth rate and predicts that these enplanements will grow at a rate of 6.1% thru 2012. As these projections were completed prior to the economic downturn, these predictions are problematic. Working Paper No. 2 should recognize this deficiency and should re-write the document with data which reflects the true condition of the industry.

3. Working Paper No. 2 Overestimates Projected Commercial Regional Jet Traffic.

The points listed by Working Paper No. 2 in its summarization of regional jet impacts are pure conjecture. There is no basis for a claim that regional jet traffic will continue to grow most rapidly at a capacity-constrained hub.²

Working Paper No. 2 states, A[t]he use of regional jets has been rapidly increasing at nearly all U.S. hubs. However, the nature of the change appears to depend on hub traffic conditions. The increase in regional jet use at capacity-constrained hubs has been dramatic while turboprop flights at these airports have decreased substantially. Carriers are rapidly replacing turboprops with regional jets at these airports.@ (pg. 2.8) However, the use of the regional jets at airports is not directly related to capacity constraints. On the contrary, trip length and demand are the driving factors in determining the types of aircraft that will be assigned to a route. It is not normally cost beneficial to run a jet on a short route segment unless passenger demand exceeds the seat availability on a consistent basis. As such, the trip length of the flight segment is normally the first consideration followed by passenger demand or load factor.³ For instance, on commuter flights between San Diego and Los Angeles, the preferred aircraft is the turbo prop.

² Working Paper No. 2 lists Aincreased customer satisfaction@ as a Atrend affecting commercial aviation@. It states that passengers demonstrate a preference for the regional jet and cites some turbo-prop accidents as a reason people prefer the jet aircraft. These statements are not supported by facts and appear to be the drafters= opinions.

³ Working Paper No. 2 also states that the regional jet Aprovides carriers with a tool to offer increased frequencies on some routes currently served by larger jets, such as 737s.@ (pg. 2.9) This and other statements regarding increased service and frequency appear to be drafters= opinions as there are no concrete examples of this being done. Flight frequency is driven by passenger demand and profitability. Moreover, the drafters make the assumption that the regional jet is less costly to operate than the 737. The age of the aircraft being used, the amounts of money owed on the aircraft, and the cost of operation per hour are only a few of the factors that determine operating cost. The use of an aircraft that has been paid for, even if the per-hour operating cost is higher, will likely be more cost

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
October 29, 2001
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If one were to follow Working Paper No. 2's argument that capacity constrained airports dictate the use of regional jets, one could erroneously assume that there are operational benefits to using regional jets over turbo-props. However, the exact opposite is true. It is often the carriers using the turbo-prop aircraft that can benefit when the airport is experiencing delays since turbo-props are not competing for jet routes. Prop-driven aircraft operate in a different route structure and at a lower altitude than jet aircraft, thereby operating efficiently without competing for airspace used for jet traffic. Moreover, regional jets have to compete with the rest of the jet fleet for a sequence. For instance, smaller aircraft are using the new Phoenix Sky Harbor runway without significant impact on the jet arrivals. The same is true for the turbo-prop departures. Additionally, there will always be a market for the turbo-prop aircraft for air taxi operators. These aircraft have a low hourly operating cost, can be profitable on a route that would be unprofitable or marginally profitable for a larger more expensive aircraft, and many are owned outright by the operators or have a lower purchase cost than the regional jet. In short, the regional jet is not the answer to resolving the problems of a capacity constrained airport, and the substitution of a regional jet for a prop driven aircraft does not result in a reduction in delay or in an increase in operating flexibility. Clearly, operational benefits must be separated from market demand characteristics and it is unreasonable to assume that an operator will transition all of their aircraft to jets and give up locations that were profitable by the turbo-prop operation but not profitable for the regional jet.

Moreover, Working Paper No. 2 states that A[t]he new point-to-point service and extension of hub reach made possible by regional jets will result in a significant overlap of markets between various carriers. The result - increased competition...@ (pg. 2.10) No evidence exists that these overlaps will occur or that there will be competition among the carriers, particularly as it relates to ticket price. The airlines are upgrading service to meet current requirements and to compliment their overall operation. The belief that regional jets will be stopping at small communities is flawed. Small locations that cannot support a flight or a series of flights will not be able to attract service from a regional jet equipped airline, therefore, the smaller prop type aircraft will likely serve these small communities.⁴ The range of the

efficient than a newer aircraft that is not owned by the operator.

⁴ Indeed, airport infrastructure may not support jets and, as such, the projections can be inaccurate. There are also environmental hurdles to clear, funding must be secured for airport improvements and the airports should be required to demonstrate a need which, when considering the events of 2000 and 2001, it may not be possible to demonstrate. For instance, ATable 2.19 B MAG Based Aircraft Fleet Mix B 2000@and ATable 2.20 B MAG Based Aircraft Fleet Mix B 2025@(pg. 2.38 and 2.39) are best guess projections based on an inaccurate baseline and they discount the

Mr. Harry P. Wolfe
Senior Project Manager
Maricopa Association of Governments
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regional jets will not necessitate a stop at an unprofitable airport as Working Paper No. 2 implies, and will not result in an increase in service at an airport without sufficient passenger demand.

Working Paper No. 2 further states that, A[s]maller communities that can only be served profitably with turboprops will find it increasingly difficult to gain access to capacity-constrained hubs, as operators at these hubs transition to regional jet routes. (pg. 2.10) This statement is not supportable. There is no mechanism for keeping turboprops or any other aircraft out of an airport, with the exception of a very few slot controlled airports. The air traffic system is first come, first served. Secondly, as discussed above, the flexibility of the prop driven aircraft can often be a benefit in circumventing the delays encountered by pure jet aircraft. Last, the transition of a majority of aircraft to regional jet routes only benefits the prop aircraft by eliminating the competition for the non-jet routes.⁵

4. Working Paper No. 2 Inaccurately Links Increases in Air Cargo Tonnage with Growth in Aircraft Operations.

Working Paper No. 2 uses Air cargo tonnage as an indicator of additional aircraft operations. (pg. 2.49) An increase in air cargo does not equate to an increase in aircraft operation, as cargo is usually carried in the belly of passenger commercial aircraft. It is not, and should not be used to support airport runway construction or to justify an increase in projected operations.

Additionally, Working Paper No. 2 fails to consider the fact that cargo shipments by aircraft will likely have more restrictions than ever before due to security concerns. It is highly unlikely that any segment of aviation will be allowed to fill the cargo hold of an aircraft and depart an airport without complying with a relatively high level of security checks. It could prove more costly to transport cargo by private aircraft than by commercial means if the security requirements are time consuming and costly. The commercial cargo carriers have their systems in place and the cost of providing security checks will

economic events and the recent impacts on aviation activity. It is highly questionable whether or not the projections for the future will be met.

⁵ Working Paper No. 2 also speculates that A[l]arge ratios of diversion at all but the most isolated small airports may contribute to further retirement of 19-seat aircraft in code-sharing fleets. (pg. 2.10) It then states a number of reasons, all unsupported by evidence, as to what the rationale will be for the fleet changes. Working Paper No. 2, once again, does not consider the potentially long-term economic issues facing the airlines, and the economic conditions in the country.

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Senior Project Manager
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be spread over several customers. Only time will tell what the impacts will be on cargo hauled by private companies and businesses.

III. WORKING PAPER NO. 2 MISREPRESENTS THE GROWTH OF GENERAL AVIATION IN THE UNITED STATES.

Working Paper No. 2 states that the General Aviation Revitalization Act of 1994 served to reduce an aircraft manufacturer's liability for an aircraft mishap to no more than 18 years. It further states that this has shifted the liability from the manufacturers to airport owners and operators. (pg. 2.11) Not only is the rationale for this statement not provided, the conditions under which an owner/operator could be liable are not addressed. Moreover, according to Working Paper No. 2, the General Aviation Revitalization Act resulted in an increase in the number of aircraft added to the general aviation fleet. The report then lists a number of reasons why the growth trend will continue, and cites the *FAA Aerospace Forecasts* and other national (general aviation) groups to support the growth contention. (See pg 2.12.) However, once again, the drafters failed to consider the impact that the economic downturn beginning in 2000 would have on general aviation flying.

Additionally, although Table 2.7 B Historic General Aviation Aircraft Shipments and Billings (pg. 2.13), shows an increase in general aviation purchases, there is no credible evidence to substantiate that the general aviation industry will not encounter the same cancellation of orders and reduction in aircraft purchases that the airline manufacturers are encountering. Moreover, aircraft shipments and billings have no direct impact on the number of operations that will occur in a particular area. Using aircraft deliveries as an indication of activity assumes a minimum number of operations per aircraft, assumes that the operations will occur at a particular airport, and assumes the type of activities that the aircraft will be conducting. Aircraft shipments and billings do not serve as a legitimate basis for developing a forecast of aviation activity.

Currently, Congress is considering a number of measures that, if enacted, will regulate the general aviation segment's freedom to fly unfettered by regulations. Presently, the majority of general aviation flying is conducted under Visual Flight Rules (VFR), and the aircraft can fly whenever and wherever the pilot chooses, with few restrictions. Due to the September 11, 2001 attacks, however, the FAA has implemented communications and transponder requirements, and encouraged pilots not to deviate from their flight paths, such as avoiding circling and curtailing aerobatic maneuvers. Moreover, several proposed new rules would limit VFR flights to only the smallest of general aviation aircraft, those weighing less than 6,000 pounds. Some regulations currently under consideration could render some general aviation airports inoperable, particularly if they are located too near a busy commercial airport or a large city. Moreover, instrumentation requirements, enhanced pilot training, additional Federal Air

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Regulations, security measures and background checks levied on the general aviation industry will likely be imposed. Not only will this increase the costs of maintaining a general aviation aircraft, as well as increase the costs of maintaining pilot currency, general aviation flying (both recreational and business) may become too burdensome and many private pilots may opt for other methods of transportation. These factors may reduce, or at least level, the growth in general aviation operations.

Moreover, Working Paper No. 2 also erroneously assumes that aircraft fleet and aircraft fleet mix are appropriate indicators of number of operations. First, Table 2.8 B Projected Active Aircraft Fleet (pg. 2.14), shows that there will be a steady growth in active aircraft. An aircraft is considered to be an active aircraft if it is registered and is flown one hour per year. Hence, attempting to forecast airport operations from this number is not an accurate method of determining future demand and infrastructure needs.⁶ These numbers only provide an indication of what infrastructure might be needed for aircraft parking, tie downs, hangars, fuel and maintenance type services. Moreover, Figure 2.4 B Projected Growth of General Aviation Aircraft, 2000-2012 (pg. 2.16), projects the various types of aircraft growth expected. However, whether or not this growth takes place, the growth in the number of aircraft does not necessarily mean an increase of noticeable activity at a specific airport.

Although Working Paper No. 2 states that, jet aircraft are anticipated to grow from approximately 3 percent of the active general aviation fleet mix in 2000 to approximately 5 percent of the active fleet by 2012 (pg. 2.18), general aviation jet growth prompted by business use was due to the number and amount of delays encountered in the air traffic control system and at certain airports in 2000. Prior to the September tragedy, airline delays were on the decline as were delays due to volume or capacity. Those delays for the most part do not exist today due to the reductions in air carrier scheduled operations. Incidentally, one must remember that when looking at delays in the air traffic system, that the most common and costly delays are due to weather. Weather delays are charged to the departure airport as an air traffic control delay if the aircraft could have departed but was held on the ground due to weather en-route to the destination airport or for weather at the destination airport. With the reduction in the number of flights at all major airports, air traffic and volume delays will diminish significantly.

⁶ Working Paper No. 2 relies on FAA Aerospace Forecasts, Fiscal Years 2001-2012 (pg. 2.24) This forecast projects the total U.S. active general aviation fleet for the years 2000-2012. In order for an aircraft be included in the forecast, it must have been flown one time a year. Any projection that hinges on a one time per year activity does not provide data that is useful in determining the future aviation policy and initiatives for an area. There is no direct relationship between active aircraft and the numbers of operations.

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Working Paper No. 2 also uses survey information on the use of business aircraft from the National Business Aircraft Association (NBAA), whose goal is to foster the business segment of aviation. The recent downturn in the economy will likely change the data relating to the number of corporate aircraft owned and their use. Moreover, Working Paper No. 2 indicates that the market for corporate aircraft may be saturated as 70 percent of all *Fortune 500* and 90 percent of the Fortune 100 companies already have aircraft. (pg. 2.18) In a down economy, it is unlikely that the companies will be purchasing new aircraft or adding to their fleets as profits are below stockholder expectations. Moreover, a number of air carriers are now providing business lease services on a continuing or on an on-call basis. This is not discussed in Working Paper No. 2 and the impact of this service on business aviation activity is not considered. Furthermore, Working Paper No. 2 does not reveal the source of the bullets listing the benefits of business flying (pg. 2.19). The survey is not a scientific survey and the benefits are only speculative. It provides no basis in fact for justifying several of the supposed benefits.

Similarly, the growth in the number of pilots or student pilots are not indicators that can legitimately be used to determine or forecast the number of future operations.⁷ A pilot may maintain a license and only fly once a week or once a month. Many airmen have their license but do not fly on a consistent basis. Others may be in the military, fly for an airline and not contribute to the general aviation activity. Therefore, counting active pilots and basing growth on any such number is not valid. Additionally, local operations, such as practice approaches or proficiency airport traffic pattern work do not impact airport capacity since those activities can be suspended or moved to accommodate airport demand. Therefore, the inclusion of these operations in determining airport capacity skews and misstates the amount of actual operations.

⁷ Incidentally, the contention that the *Learn to fly* educational and promotional activities within the general aviation industry to foster pilot training will be successful is very speculative. (See pg. 2.12) If the economy does not improve and if opportunities for flyers to become pilots for the airlines diminish, one of the major incentives for obtaining a pilot's license may go away and the number of student pilots may be reduced.

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IV. WORKING PAPER NO. 2'S MAG REGION PROJECTIONS FOR AVIATION GROWTH ARE BASED ON ESTIMATES AND ARE NOT SUPPORTED BY EVIDENCE.

Working Paper No. 2 uses flawed methodology to reach conclusions on MAG Aviation Trends. Among these flawed methods, Working Paper No. 2 uses outdated Terminal Area Forecast (TAF) projections rather than tower counts, and the document incorrectly relies on based aircraft counts as a gauge for operations at MAG airports.

While the drafters of Working Paper No. 2 are entitled to use TAF projections as a source of data, Tempe advocates the use of actual data, especially the data generated from FAA control tower. Generally, Terminal Area Forecast projections are dated and, as in this case, do not consider the events of the year 2000. Rather, this forecast is based on 1990 growth figures.⁸ (pg. 2.24) As was discussed above, pre-2000 data cannot be relied on to provide an accurate assessment of future growth and activity.⁹ Moreover, the remaining MAG system data (non-TAF data) was not derived from a scientific study, records, or documents and is, therefore, not supportable. Some of the data is from air traffic control tower logs, some interpolated from spot-checks on activity, some provided by pilots and airport managers or operators. To use data derived from best educated guess estimates¹⁰ leads not

⁸ Incidentally, Working Paper No. 2 states that within MAG, 12 of the 16 airports (75 percent) are included in the NPIAS. This statement is incorrect. 11 of the 16 airports are included in NPIUS (Buckeye, Chandler, Gila Bend, Glendale, Mesa Falcon, Phoenix - Deer Valley, Phoenix - Goodyear, PHX, Scottsdale, Wickenburg, and Williams Gateway). Therefore, only 69 percent of the airports are included in NPIUS.

⁹ Working Paper No. 2 shows some inconsistencies in its FAA Terminal Area Forecasts (TAF) section. (pg. 2.26) It states that total aircraft operations at the MAG airports that reported to the FAA TAF (50 percent) increased at an average annual rate of 3.0 percent between 1989 and 1999. However, page 2.24 reports it at 1.24 percent.

¹⁰ Working Paper No. 2 states that, at those airports without an FAA air traffic control tower, aircraft operations data represents the best educated guess estimates. These estimates were made by airport managers/operators and, in some instances, through periodic counts, which were extrapolated to obtain annual operations totals. (pg. 2.22) Therefore, as eight out of the 16 airports in the MAG region have FAA operated or contract air traffic control towers (pg. 2.24), the data can only, at a minimum, be 50% accurate.

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Maricopa Association of Governments
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only to unsupported results, but also to misleading ones. Additionally, the lack of actual data seems to justify the report's use of national trends as a basis to determine growth. This approach is simplistic and results in inaccurate assumptions. The likelihood of MAG airports experiencing consistent growth patterns comparable with, and/or greater than the country as a whole is unlikely. There are many variables that have not been considered in the consultant's conclusions. In short, only the FAA control tower data is accurate.¹¹

Not only is the TAF forecast based on pre-2000 figures, **Table 2.12 B Comparison of Operations Growth Rates** shows that Working Paper No. 2 uses FAA Aerospace Forecasts, TAF, and Wilbur Smith Associates (**WSA**) analysis. (pg. 2.25) It is unclear what part of the table comes from WSA analysis and whether or not the WSA analysis has altered the TAF or the Aerospace Forecast figures. If WSA performed some additional analyses, the rationale and the methodology used should be identified.¹²

Another example of an unreliable data source consists of the **based aircraft** numbers which Working Paper No. 2 uses as an indicator of operations at MAG airports.¹³ However, like **aircraft fleet** and **aircraft fleet mix**, **based aircraft** numbers are only viable for determining what infrastructure such as parking, tie downs, ramp space, and hangars might be required in the future.¹⁴

¹¹ However, even if Working Paper No. 2 used **FAA Tower Counts** as part of its data, it erroneously included local air traffic operations in its determination of all airport growth (other than Phoenix Sky Harbor Airport). (pg. 2.26) When determining capacity at an airport, the local or discretionary operations should be subtracted from the total traffic count, since local operations can be suspended, moved to a less busy time or to another location. By including local operations, Working Paper No. 2 misleads the readers by stating higher than actual operations.

¹² The reason why the FAA-Tower Counts (Table 2.12, pg. 2.25) show a 5.8% AAG for **MAG Towered Airport Total Operations** and a 6.8% AAG for **MAG Towered Total Operations excluding PHX** for 1995-2000, is unclear. Does that mean that PHX actually had a decrease in growth during that period? Working Paper No. 2 does not explain this.

¹³ Page 2.27 states that, **based aircraft** are projected to increase from 4,133 in 2000 to 7,288 in the year 2025. However, page 2.20 states it was at 4,317 in 2000. This is a 184 difference.

¹⁴ Working Paper No. 2 uses **Top Down Methodologies** to determine MAG future aviation demand. (pg. 2.27) However, the drafters had to guess as to the number of **based aircraft** at some airports and then add a growth factor. This brings the accuracy of the baseline into question, and

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Nonetheless, even if the number of based aircraft could represent operational activity, Working Paper No. 2 uses tables which are based on invalidated data and which do not consider events since the year 2000. As such, the forecasts presented are not likely to be accurate and may or may not be valid for determining the infrastructure needs for the future. For example, Table 2.9 B MAG Historical Airport Based Aircraft, 1996-2000 (pg. 2.21) includes unverifiable data based on operator estimates¹⁵, as the drafters have also stated that they were unable to determine the exact number of based aircraft at many locations. Similarly, Table 2.13 B Historic and Forecast MAG Based Aircraft is only partially accurate since Working Paper No. 2 could not verify the numbers of based aircraft at many locations. (pg. 2.28) The same is true for Figure 2.9 B Historic and Forecast MAG Based Aircraft (pg. 2.29). Additionally, the historical portion presented in Table 2.18 B MAG Historic and Preferred Based Aircraft Projections (pg. 2.36) was developed through conversations and estimates and not accurate counts.

Moreover, Table 2.10 - General Aviation Aircraft Operations in MAG Region, 1996-2000 (pg. 2.22) seems suspect. For example, a wide variance exists in the activity for Gila Bend Municipal Airport. Total operations increased approximately 12 times over the previous years traffic and Working Paper No. 2 provides no explanation. Other airports such as Deer Valley have increased operations and others such as Scottsdale have suffered a decrease. An explanation should be provided as to why the traffic counts have changed. Likewise, Williams-Gateway Airport lost approximately 80,000 operations. This drop in activity should be explained.

Similarly, according to Working Paper No. 2, the Western-Pacific Region (AWP) showed no growth between 1989 and 1999, while the MAG airport operations are purported to have grown. (See pg. 2-26 first paragraph, and pg. 2.40) As the MAG region is located in the Western-Pacific Region, Working Paper No. 2 should clarify its contention regarding regional growth.

in turn, causes a credibility problem with Working Paper No. 2's projections. Only aircraft operations are an indicator of airport capacity, and, only if the local traffic pattern operations are deducted from the total air traffic operations count.

¹⁵ Table 2.9 (pg. 2.21) is inconsistent with the data contained on page 2.20. The Table states that in 1996 there were 3,350 airport based aircraft at public use airports. Page 2.20 states there were 3,525.

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Furthermore, while Working Paper No. 2 uses ~~A~~Master Plans~~@~~ to determine MAG aviation demand, these airport master plans do not include the downturns in 2000. (pg. 2.27) Furthermore, Working Paper No. 2 admits that Master Plans do not exist for all of the airports. Other airports are presenting their master plans in bits and pieces and, as such, are not valid for projecting growth or forecasting capacity.

In addition, Working Paper No. 2 fails to analyze the commercial aviation activity in the MAG region in terms of hub versus non-hub operations. For instance, the Phoenix Sky Harbor International Airport's operations are based on operations by America West and Southwest Airlines. Southwest Airlines routes a number of their flights through Phoenix and America West uses Phoenix as a hub. There is a difference between routing aircraft through Phoenix and using Phoenix as a hub. Working Paper No. 2 should have clarified this point in its analysis.

Last, the ~~A~~Projections Based on Population~~@~~ (pg. 2.30) erroneously link population to aircraft operations,¹⁶ as there is no specific correlation in commercial operations with population. Additionally, the ~~A~~Projections Based on Total Income~~@~~ and the ~~A~~Projections Based on Per Capita Personal Income~~@~~ (pg. 2.33), erroneously show a linear relationship between income and travel, and show that these projections will support an upward trend. However, Working Paper No. 2, in failing to consider the downturn in the world economy, the impact on high tech industries, and unemployment in Phoenix, fails to present an accurate picture of the relationship. Personal income will, for many, remain the same but another large segment of the population exists that will be unemployed or will take wage cuts as concessions to keep their companies in business. One only has to look at the history of Phoenix's hometown airline for an example.

VI. CONCLUSION.

Tempe understands that the events of September 11, 2001 could not have been foretold and, thus, were not included in Working Paper No. 2. Nonetheless, the document is fatally flawed as it fails to even consider the economic downturn of the year 2000 and its effects on the nation's aviation industry, fails to use updated and accurate data, and uses assumptions which are not appropriate. Working Paper No. 2 does not lay the proper foundation in order to ensure that the subsequent studies

¹⁶ Working Paper No. 2 uses estimate population numbers for 1990-1999. If Working Paper No. 2 was developed and written after the years 1990-1999, should not actual numbers be available?

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are properly conducted. Therefore, any future analysis and recommendations based on Working Paper No. 2 will not be accurate.

Tempe thanks the MAG for the opportunity to comment on Working Paper No. 2 and welcomes the opportunity to comment on the upcoming working papers.

Sincerely,

CHEVALIER, ALLEN & LICHMAN, LLP

Barbara E. Lichman, Ph.D.



TOWN OF WICKENBURG

155 N. Tegner, Ste. A • Wickenburg, Arizona 85390 • (520) 684-5451
Phoenix Line (602) 506-1622 • FAX (602) 506-1580

October 10, 2001

Harry Wolfe, Senior Project Manager
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, AZ 85003

Dear Mr. Wolfe:

I have reviewed the draft Regional Aviation System Plan Update Inventory for the Town of Wickenburg and I am forwarding to you changes that need to be made to the Wickenburg Municipal Airport information provided in the plan. I have listed the changes below and on the attached sheets.

1. This airport does not have an actual FBO. The hangars you refer to are used for airport businesses.
2. There are five hangars at the airport on the south east side of the airport. I have drawn their locations on the enclosed map. A proposed new hangar development is indicated on your map as ⑤.
3. Terminal building is okay.
4. The airport does not currently have a helipad but I have indicated on the map where helicopters are landing at this time. The location for an ultimate helipad and FATO will be determined in the new Airport Master Plan. There are not plans, at this time, to locate the future helipad or FATO on the site as indicated on your map.
5. The correct mailing address is 155 North Tegner Street, Suite A, Wickenburg, Arizona 85390.

The Town is in the process of updating its Airport Master Plan and we will forward any information on to you that you require once this project is complete. If you have any questions, please do not hesitate to contact either Fred Carpenter or myself at 602-506-1622, ext. 211.

Sincerely,
TOWN OF WICKENBURG, ARIZONA

Tinnie Larimer
Administrative Assistant to Town Manager

Enclosures

Cc: Fred Carpenter, Town Manager, w/o encl
Lon McDermott, Vice Mayor w/o encl.

ATTACHMENT TWO

**SUMMARY OF MAJOR REVISIONS TO FORECAST REPORT AND
RESPONSE TO TEMPE COMMENTS**

PREPARED BY WILBUR SMITH ASSOCIATES

Cincinnati, Ohio
November 12, 2001

TO: Harry Wolfe, MAG

FROM: Pam Keidel, WSA

SUBJECT: Significant Revisions

The following summarizes significant proposed revisions to Working Paper No. 2, Aviation Demand Forecasts.

1. Add discussion on September 11, 2001, event; the following will be added on page 2.3 preceding section titled "Anticipated Commercial Trends"

September 11 and Other 2001 Trends

Starting in mid-2000, the U.S. economy began a downturn that has impacted current commercial aviation activity. The impact of the economic downturn was a reduction in business travel, which has a tremendous impact on commercial airline profitability. It is estimated that in 2000, business travelers accounted for 43 percent of the passenger volume, but were responsible for 65 to 70 percent of the airlines' revenues and profits. Airline yields decline at a more rapid rate when business travel declines since business travelers account for a high percentage of airline profitability due to the higher fares typically paid for non-discretionary travel. For the first two quarters of 2000, U.S. airlines were faced with significant losses similar to those experienced in the early 1980s. With these losses, plans were in place to reduce airline service to help the airlines return to profitability.

While the economic downturn was beginning to result in airline industry changes, a more significant impact was on the horizon. On September 11, 2001, terrorists hijacked four U.S. airliners that ultimately crashed. This terrorist act resulted in complete closure of the U.S. aviation system for two days. When the system re-opened, new airport and airline security measures were in place at the commercial airports, but the airline passenger traffic did not immediately rebound. The costs incurred by the airlines as a result of September 11 increased, but with fewer passengers, significant financial losses were experienced by almost all airlines. According to travel statistics, the current break even load factor or the percentage of seats that need to be filled for the airlines to break even with their current costs ranges from 85 to 96 percent for airlines such as America West, Northwest, Delta, and United. Southwest Airlines has also seen a financial impact, but its current (November 2001) break-even load factor is in the 65 percent range.

The long-term impacts of September 11 on the airline and airport industry are unknown at this time. In the short term, many of the airlines have reduced their schedules by as much as 20 percent. These reductions have impacted not only the number of actual aircraft operated, but also have meant layoffs for airline employees. Some airlines have actually parked aircraft, some in Arizona, to help reduce their costs. The airlines received a financial package from the federal government to help offset their losses, but for some airlines the financial package is still not sufficient to keep them solvent. The only airlines

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that have been noted to achieve profitability in 2000 are low-cost carriers such as Southwest, AirTran, and JetBlue. The profits of these airlines are also down, but they continue to make money and are actually considering expansion.

Industry experts have suggested that the current economic environment and September 11 have provided an opportunity for airlines to consider all facets of their operation, including reducing flights and activities that were either not profitable or had small low profit margins. No matter the reason, commercial activity has changed in recent months. Projections of activity by the various industries range from one extreme to another. The long-term impact on commercial activity is difficult to assess at this point in the RASP. Continued changes will be monitored as the plan proceeds with an effort to address the potential impacts in subsequent sections.

2. To address general aviation, the following will be added on page 2.19 preceding section titled “MAG Aviation Trends”

September 11 and Other 2001 Trends

The impacts of the events of September 11, 2001, have also been noted in terms of general aviation activity. While commercial aviation resumed within two days, it was several more days before general aviation activity was permitted. When the skies were reopened, it was on a limited basis, especially in major metropolitan areas. The issue of security at general aviation airports was unclear and methods for dealing with student training and visual flight rule flights were investigated.

Charter activity was one area that saw growth as a result of the events. According to the Air Charter Guide, a database for charter customers, 85 percent of the 98 U.S. charter operators that were interviewed in late October 2001 noted a significant increase in business since September 11. From the issues of knowing the pilots to security at the commercial airports, charter aircraft provide another avenue for business travelers given the current airline environment.

While some general aviation airports have been literally closed off and on as a result of varying FAA rules, most have seen a decline in training, but other activity has been noted to have returned to near normal levels.

3. Scottsdale’s operations were estimated for 2000. The airport’s runway was closed during the month of July and the reported figures did not accurately portray an entire 12-month period. Operations were estimated to be 223,532 for 2000, an additional 16,500 for the month of July.

4. Scottsdale Airport’s name was changed to remove “Municipal” from all tables and text.

5. Operations projections for Williams Gateway were revised to reflect a lower operations per based aircraft (OPBA) ratio.

MEMO

6. Commercial forecasts for Scottsdale Airport were included in the enplanements and commercial operations sections based on data from their Airport Master Plan.
7. Changes were made to operational forecasts including reduced Williams Gateway projections, commercial operations at Scottsdale, military operations at Williams Gateway, and increased projections at Luke AFB.
8. Minor technical adjustments (fleet mix, additional fleet mix tables, text changes) that don't have a major bearing on the outcome of the forecasts have also been made.
9. The following tables have been developed to summarize projected activity levels for the forecast period. It should be noted that Scenario 1 (Table 2.30) reflects the low growth scenario and Scenario 2 (Table 2.31) reflects the high growth from the Phoenix Sky Harbor International Airport forecast. The only columns that are different in the following two tables are the projections for commercial operations and enplanements.

Table 2.30
Summary of MAG Region Historic and Projected Activity – Scenario 1

Years	Based Aircraft	GA Operations	Commercial Operations	Military Operations	Enplanements	Air Cargo
Historical						
1996	3,548	1,445,083	461,324	N/A	15,224,872	312,842
1997	3,682	1,558,097	465,821	179,562	15,411,595	347,370
1998	3,816	1,598,845	482,164	192,609	15,990,053	366,808
1999	3,952	1,758,281	483,553	216,873	16,517,569	366,064
2000	4,317	1,871,943	511,529	208,945	17,606,557	374,936
Forecast						
2005	4,820	2,151,300	564,800	233,000	20,320,800	581,870
2015	6,215	2,775,800	644,100	233,000	25,048,600	1,196,780
2025	7,612	3,338,200	743,300	233,000	31,687,700	2,460,081

Source: Maricopa Association of Governments, Airports, Wilbur Smith Associates

Table 2.31
Summary of MAG Region Historic and Projected Activity – Scenario 2

Years	Based Aircraft	GA Operations	Commercial Operations	Military Operations	Enplanements	Air Cargo
Historical						
1996	3,548	1,445,083	461,324	N/A	15,224,872	312,842
1997	3,682	1,558,097	465,821	179,562	15,411,595	347,370
1998	3,816	1,598,845	482,164	192,609	15,990,053	366,808
1999	3,952	1,758,281	483,553	216,873	16,517,569	366,064
2000	4,317	1,871,943	511,529	208,945	17,606,557	374,936
Forecast						
2005	4,820	2,151,300	600,600	233,000	21,634,400	581,870
2015	6,215	2,775,800	735,500	233,000	29,096,400	1,196,780
2025	7,612	3,338,200	911,000	233,000	39,734,200	2,460,081

Source: Maricopa Association of Governments, Airports, Wilbur Smith Associates

10. The following table summarizing projected activity levels by airport will be added to the working paper.

Table 2.32
Airport Summary of Historic and Projected Activity – Scenario 1

Facility	Based Aircraft 2000	Based Aircraft 2025	Total Operations 2000	Total Operations 2025
Buckeye Municipal	55	132	90,000	215,200
Chandler Municipal	392	807	249,811	514,500
Estrella Sailport	23	23	16,500	16,500
Gila Bend Municipal	1	10	52,000	57,800
Glendale Municipal	208	364	112,570	197,000
Memorial	8	19	2,300	5,500
Mesa Falcon Field	923	1586	274,665	472,100
Phoenix - Deer Valley	1206	2084	370,779	640,600
Phoenix – Goodyear	280	657	142,458	334,200
Phoenix-Sky Harbor International	237	135	579,846	724,400
Pleasant Valley	45	116	52,000	134,300
Scottsdale 1/	425	473	215,585	262,600
Sky Ranch Carefree	84	230	4,732	13,000
Stellar	152	291	40,880	78,400
Wickenburg Municipal	31	60	19,846	38,100
Williams Gateway	63	301	158,489	420,300
System Airports	4,133	7,288	2,382,461	4,124,500
<i>Other Private-Use Airports</i>	<i>184</i>	<i>324</i>	<i>83,077</i>	<i>147,300</i>
System-wide Total	4,317	7,612	2,465,538	4,271,800

1/ Scottsdale's operations for 2000 are estimated for the month of July due to runway closure.
Source: Maricopa Association of Governments, Airports, Wilbur Smith Associates

MEMO

Cincinnati, Ohio
November 12, 2001

TO: Harry Wolfe, MAG

FROM: Pam Keidel, WSA

SUBJECT: Tempe Comments

I. Working Paper No. 2 predicts aviation growth in the MAG region without taking into account the detrimental effects that the recent economic downturn and the events of September 11, 2001 will have on the industry

We acknowledged the events of September 11 and the recent economic downturn as part of the trends section. The effects are not yet known, nor have they been estimated by reliable sources. It is likely that the alternatives analysis will address a low-growth option that can be attributed to these events. An overall reduction in aviation activity could be assumed in this analysis and the impact on the facility needs in the MAG region addressed in this manner.

II. Working Paper No. 2 misrepresents the growth of commercial operations in the U.S.

1. The history of aviation growth is not accurately represented

The section of commercial trends was provided only as a backdrop. It is important to note that the scope of services required the use of existing commercial aviation forecasts for Working Paper No. 2. No new commercial forecasts were prepared, only extrapolations of existing forecasts using updated data and the growth rates contained in the accepted planning documents for Phoenix Sky Harbor International, Williams Gateway, and Scottsdale airports.

2. Working Paper No. 2s “Anticipated Commercial Trends” are not supported by evidence

The FAA’s Forecasts provide a reliable and accepted means of forecasting aviation activity. While the most recent forecasts did not take into account the recent economic downturn and events of September 11, no other forecasts are available at this time that do. Again, commercial activity projections contained in Working Paper No. 2 are extrapolations of existing projections.

MEMO

3. Working Paper No. 2 overestimates projected commercial regional jet traffic

Again, commercial activity projections contained in Working Paper No. 2 are extrapolations of existing projections. The discussion of the potential impact of regional jets is provided only for background.

4. Working Paper No. 2 inaccurately links increases in “air cargo tonnage” with growth in aircraft operations

Air cargo projections were also extrapolations of existing projections.

III. Working Paper No. 2 misrepresents the growth of general aviation in the United States

The impacts of September 11 and the recent economic downturn are not yet known, especially in terms of general aviation activity.

IV. Working Paper No. 2s MAG region projections for aviation growth are based on estimates and are not supported by evidence

Data for the forecasts was provided by MAG, as obtained during the inventory effort. For those airports with air traffic control towers, tower data was used. For other airports, estimates are the only means for obtaining activity information. Based aircraft data is generally considered to be more accurate because facilities are needed for an aircraft to be based at the airport. Again, commercial activity projections contained in Working Paper No. 2 are extrapolations of existing projections.

As noted, several methodologies were tested to determine their outcome in projecting aviation activity in the MAG region. While alone these methodologies may not be supported, the variety of methodologies used presents a range of potential activity from which a preferred methodology is selected for future planning purposes.

No V.

V. CONCLUSION

The impacts of September 11 and the recent economic downturn have not been assessed in terms of the potential long-term impact on aviation activity. It is likely that the alternatives analysis will address a potential reduction in aviation activity in the MAG region.