



**Review of Recommendation on Southwest Airlines' Request for
Expansion of Federal Inspection Facilities at
William P. Hobby Airport
and
The Impact of Dividing International Service Between Two Airports**

by

Carol Abel Lewis, Ph.D.

Charles R. Glass, Ed.D.

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UNITED 

**The Economic Impact of Dividing International
Air Service between Houston Airports**



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Executive Summary

In May 2012, Drs. Carol Abel Lewis and Charles R. Glass began a two-week review of two documents under consideration by City of Houston Mayor Annise Parker and City Council in regards to adding international air service to William P. Hobby Airport. One is the *Economic Impact of International Air Commercial Service at William P. Hobby Airport* by GRA and InterVISTAS (April 4, 2012). The second is the *Economic Impact of Dividing International Air Service between Houston Airports* by United, Swelbar and Smith (May 3, 2012). Hobby Airport (HOU) is one of Houston's two public airports and is located 7 miles south of downtown.

HOU presently serves five scheduled passenger airlines, including Southwest, which is the largest, and one charter service. Intercontinental Airport (IAH) is roughly 23 miles north from downtown and has more than 700 daily departures. It is 7th among other US airports serving domestic and international markets. HOU offers only domestic service; Southwest Airlines has requested the City to add a FIS facility that would allow Southwest and other airlines the capability to offer international flights. United, the largest airline at IAH, opposes the request on the premise that such a decision will negatively impact traveling options to the markets under discussion.

Arguments for or against adding international service to HOU are numerous, but can be winnowed to three essential elements as follows: 1) Projected passenger volumes and impact on the number of scheduled flights, 2) Impact on fares, and 3) Impact on jobs and the economy.

The assessment reviewed federal mandates, examined the methodology and assumptions, conducted a sensitivity assessment, and considered United et al.'s critique. Findings are summarized below.

- Federal regulations require the City provide reasonable accommodation of the FIS facility request if resources exist. If resources are unavailable, the City would need to indicate when it could comply with the request. Given, Southwest Airlines offer to completely finance the facilities, the City would be hard pressed to deny the FIS facility.
- Exhibit 17 of the GRA/InterVISTAS report and the comparison fares compiled by this research team in Table 4 show that fares for some Houston routes seem high compared to other locations. There is a question as to whether fares on flights to the international markets in question are currently well priced when compared to flights to those international markets from other selected US cities.
- GRA/InterVISTAS projections and estimates of passengers are defensible based on methodology and assumptions.
- The sensitivity analysis showed that even if 60% overestimated as suggested by the United et al. report, none of the GRA/InterVISTAS values became negative.
- The HAS master plan developed in 2003 included FIS facilities for international service. The request and move to add this service at HOU should not be unexpected for Houston area airlines who have reviewed the master plan.
- Moody's Investment Services' assessment of Southwest's entrance into several markets is positive about LCC impact on fares in domestic markets. The Law of Elasticity is widely accepted--when competition increases, prices decrease and the reverse. This and the general experience of LCCs on the market is positive and reasonable to expect in the case of expansion of international service from HOU.

The findings of this review confirm the previous position of the HAS about HOU expansion of facilities to enable service to select international markets.

Introduction

In May 2012, Drs. Carol Abel Lewis and Charles R. Glass began a two-week review of two documents under consideration by City of Houston Mayor Annise Parker and City Council in regards to adding international air service to William P. Hobby Airport. One is the *Economic Impact of International Air Commercial Service at William P. Hobby Airport* by GRA and InterVISTAS (April 12, 2012). The second is the *Economic Impact of Dividing International Air Service between Houston Airports* by United, Swelbar and Smith (May 3, 2012). Hobby Airport (HOU) is one of Houston's two public airports and is located 7 miles south of downtown.

HOU presently serves five scheduled passenger airlines, including Southwest, which is the largest, and one charter service. In 2009, airline carriers handled nearly 8.5 million passengers. All airlines at HOU operate from one terminal building. The airport is the City's oldest and operated as the only airport until 1969 when Intercontinental Airport opened (now named for former president, George Bush, and known as IAH). IAH is roughly 23 miles north from downtown and has more than 700 daily departures. It is 7th among other US airports serving domestic and international markets. HOU offers only domestic service; Southwest Airlines has requested the City to add a FIS facility that would allow Southwest and other airlines the capability to offer international flights. United, the largest airline at IAH, opposes the request on the premise that such a decision will negatively impact traveling options to the markets under discussion.

Arguments for or against adding international service to HOU are numerous, but can be winnowed to three essential elements as follows:

- Projected passenger volumes and impact on the number of scheduled flights,
- Impact on fares, and
- Impact on jobs and the economy.

Much analysis has been conducted on the three areas above, and all are important. This report stresses the concept of benefit to the public as the central question to pose for each of the three elements. The parameters for decision making based on federal and public policy mandates and guidelines are laid out and the points in the GRA/InterVISTAS and United et al. document are examined.

Federal Mandates and Public Policy Considerations

Federal Mandates

Several Federal Aviation Regulations (FARs) guide development of commercial air facilities and aircraft. Three of these policies are directly applicable to the HOU international expansion decision. These sections are shown because they reflect that the City is mandated by the Federal government to decide policy in the public interest and to promote competition. In

fact, the City is obligated by these regulations to provide reasonable accommodation for new or expanded services. The three areas are as follows:

1. Public Interest (US DOT, FAR sec 119.36 sec 8): The FAA grants commercial air carriers certificates to operate from U.S. airports if it is determined that the carrier services are in the **public interest**. Southwest Airlines has already met that standard of proof and is granted the right to operate as a registered U.S. flag carrier.

In abbreviated form, the Federal Aviation Regulation also states, “Additional certificate application requirements for commercial operators requires an applicant has sufficient financial resources to conduct his or her operations with the degree of safety required in the public interest” (p. 293).

2. Federal Aviation Administration’s Airport Compliance Manual (Order 5190.6B)

Grant Assurances: The Federal Aviation Administration’s Airport Compliance Manual (Order 5190.6B) provides a list of regulations that governs airport managers that accept federal funds. Under section 3.2: Grant Assurances and Federal Compliance, these airport managers (designated *airport sponsor*) must not craft a lease agreement with a tenant that violates federal grant assurances. Of the 39 grant assurances issued by the federal government, Grant Assurance 7 (Consideration of Local Interest), 8 (Consultation with Users), 22 (Economic Nondiscrimination), and 39 (Competitive Access) apply directly to the airport manager’s mandates in developing and executing agreements/plans at Hobby. Upon examining the William P. Hobby Airport Master Plan 2003 and the recommendations of the Director of the Houston Airport System, it is determined that Hobby’s Airport Master Plan and Director’s recommendations are in compliance of these federal mandates (Crider et al., 2011; FAA, September 2009).

Several additional Grant Assurances are relevant to this research and are described in abbreviated form as follows:

Grant Assurance 7: Consideration of Local Interest. The airport manager (*airport sponsor*) has given fair consideration to the interest of communities in or near where the project may be located.

Grant Assurance 8: Consultation with Users. In making a decision to undertake any airport development project, the airport manager (*airport sponsor*) has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

Grant Assurance 22: Economic Nondiscrimination, addresses the equitable treatment of airport tenants by the airport manager (*airport sponsor*) in assessing rates, charges, and lease terms.

- The airport sponsor will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds, and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.
- Any commercial aeronautical business operating at airport must (1) furnish services on a reasonable basis to all airport users and (2) charge reasonable prices for each unit or service and be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.
- The airport sponsor will not prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees (including, but not limited to maintenance, repair, and fueling).

Grant Assurance 39: Competitive Access addresses a reporting function required of the airport sponsor (at a medium-hub or large-hub airport only) should the airport, due to lack of capacity, be unable to accommodate new or expanded service by a commercial carrier.

- This assurance states that if a large-hub or medium-hub airport sponsor is unable to accommodate one or more requests by an air carrier for access to gates or other facilities, the airport sponsor must report the situation to the FAA. The report must (1) describe the requests; (2) provide an explanation as to why the requests could not be accommodated; and (3) provide a time frame within which the airport **will** be able to accommodate the requests, if at all (Crider et al., 2011, pp. 34 – 48;FAA, September 2009).

3. Deregulation

Upon passing the Airline Deregulation Act of 1978, the House of Representatives of the United States Congress encouraged the development and attainment of an air transportation system which relies on competitive market forces to determine the quality, variety, and price of air services. Upon examining the William P. Hobby Airport Master Plan 2003 and the recommendations of the Director of the Houston Airport System, it is determined that Hobby’s Airport Master Plan and Director’s recommendations are in compliance with this federal mandate. A directive in the act notes that Congress supports and encourages competition for interstate and overseas travel (Public Law 95 – 504).

Public Policy Consideration

The previous section provides background that informs the discussion per the City of Houston responsibility to positively respond to the request for the FIS facility, if fundable. The City reports reflect a method of funding the required infrastructure at HOU. That frames the next question as what is in the public interest per this request. Ideally, a public policy decision is

structured so that the majority of residents are better off with no one being negatively impacted (termed Pareto optimal). Clearly that level of an ideal state is generally unachievable, so the theorists revert to Pareto sub-optimal, which results in most people being better off, but recognizes some may be negatively impacted. In this latter case, the public policy decision is considered appropriate by benefitting most (Henry, Nicholas; 1995). Specifically, the decision should advantage the traveling public and the City of Houston residents and prove a wise investment for City resources,

The GRA/InterVISTAS report indicates the Southwest Airline position is to improve service to the public and lower traveler costs. The United Airlines' et. al position is that public will negatively benefit from expansion of international service to HOU. These represent extreme opposite perspectives and warrant an examination of why the views are so different.

Analysis of Perspectives

GRA/InterVISTAS report presents an Initial Phase that shows inaugural service levels and a developed Scenario that represents a more developed service level. The essence of the GRA/InterVISTAS report is the competition will reduce prices, increase frequency in available seats, and increase jobs. They purport that advantages will accrue to United Airlines, as well as more travelers are attracted to make the trips through either of the Houston airports. The United et al. report disputes GRA/InterVISTAS findings and writes that the GRA group underestimates fares, resulting in overstating the number of travelers and jobs. The United group also suggests that the pressure on the market of new international service at HOU may result in a reduction of United service, because they are operating some current routes either unprofitably or on the fringe of profitability based on a future expectation of profitability. The implication is these routes would be eliminated, lowering the number of available seats and leading to higher prices for travelers.

This projected traveler demand and accompanying fare structure drive the data estimates and, thusly, form the foundation of assessing the accuracy of the components of each report. Table 1 displays the summary of findings for each element. The far right column reflects an assessment rating, positive (+), neutral (0) or negative (-) that reflects the researchers' ability to verify by others or by conventional methodology the perspective put forth by GRA/InterVISTAS or United et al. Note the summary row reflects two positives and one neutral for the GRA/InterVISTAS report (+,+,0) and three neutrals (0,0,0) for the United et. al report. Specifically, the following has been learned about the three essential elements.

- *Projected passenger volumes and impact on the number of scheduled flights:* The methodology and baseline assumptions applied by GRA/InterVISTAS are sound and defensible.
- *Impact on fares:* The methodology and baseline assumptions described by GRA/InterVISTAS are reasonable. Later sections of this report include a sensitivity assessment and anecdotal assessment for the reader's consideration.

- *Impact on jobs and the economy:* This element is directly linked to the previous two elements for GRA/InterVISTAS and based on models and data applied by the United et al. team; this element is the most difficult to confirm. A sensitivity assessment is conducted on the GRA/InterVISTAS values to provide insight into the reader's consideration of this element.

Table 1

Review of Key Assumptions in the GRA/VISTAS Document

Projected Passenger Volumes and Impact on The Number of Scheduled Flights	United et al. Response	Researchers' Assessment	Strength: GRA InterVISTAS	Strength: United et al.
<p>The base model for <i>GRA/InterVISTAS</i> is Sabre Profit Essentials with Quality of Service Index¹. Proxy markets were used for calibration.</p> <ul style="list-style-type: none"> • Profit Essential is the official software of USDOT (Appendix X). • Coefficients and parameters calibrated by Sabre, Inc. (company has been calibrating airline travel demand and mode choice models since the mid-1980s). • Schedules were based on service patterns per US and Mexican carriers and specific market characteristics. • Base Market size and fare data sourced from Sabre Airport Data Intelligence (ADI) database. • Stimulation is market growth resulting from new service (lower prices and improved service quality). 	<p>United confirms the base model strength, but disputes the underlying assumptions.</p> <p>Two components to their response:</p> <ol style="list-style-type: none"> 1) That United will experience growth because of a larger pie; they deny this. 2) Other airports in US and world with split international haven't experience growth in 5 years; unified markets have. 	<ul style="list-style-type: none"> • The base model used by GRA/InterVISTAS is strong and the assumptions seem plausible. • United's response is also reasonable and plausible. • Projections can reflect compounded optimism or compounded pessimism through their assumptions and consequently represent extremes. The GRA/VISTAS assumptions appear defensible. United's response may compound negative inputs. 	+	0
Impact on Fares				
<p>Presents the case that increased competition would result in lower fares. Uses comparison</p>	<p>Regarding the base model, United et al. alleges that the yield equation</p>	<p>Projections such as these always reflect the</p>	+	0

¹Technical Appendix 1, pp. 1-5 explains QSI methodology and pp. 5-7 base model assumptions, including for proxy markets.

<p>from Chicago to proposed international destinations and projects and St. Louis to assess price elasticity(Technical Appendix pp 15-19)</p>	<p>(Exhibit 1-6) of the HAS Hobby Study is low and the projected fares when applied to Houston’s local travel result in fares that are 60% higher than the HAS projected fares</p>	<p>compilation of the best known variables. GRA/InterVISTAS approach is defensible. Still, projections are generally subject to some range of confidence or strength of the forecast. See Sensitivity Discussion section, where the 60% price increase (per United et al.) is applied to the GRA projected fares.</p>		
<p>Impact on Jobs and the Economy</p>				
<p>GRA/InterVISTAS report shows direct, indirect and induced regional jobs as a total of 10,039 for both HOU and IAH in the initial phase of international service and 18, 111 in the developed phase scenario. (Same methodology used by HAS in a 2011 study).</p>	<p>Uses models and projections conducted by Dr. Barton Smith that counter the GRA/InterVISTAS report and predict a loss of 3700 jobs and \$295 M. Input data were from United Airlines’ passenger forecast model. In its analysis, refers to the numbers in the developed phase scenario.</p>	<p>The methodologies used in the two reports are different and cannot be compared with each other. The basis for the United et al. projections were United own database, which is unverifiable. Also time allotted for this assessment does not allow a thorough assessment of the model previously used by HAS. However, its acceptance and application for other COH purposes provides credibility. See Sensitivity Discussion section below, where a 60% decrease is applied to the economic projections for GRA/InterVISTA.</p>	<p>0</p>	<p>0</p>
<p>Summary</p>			<p>+, +, 0</p>	<p>0,0,0</p>

Sensitivity Discussion

The sensitivity discussion presents a range to consider if the GRA/InterVISTAS report has over estimated the key elements of price, which will be directly correlated with passenger volume. United et. al suggest the fares are over projected by 60%. The assessments in Table 2 places a multiplier of 1.6 on the original GRA/InterVISTAS fares and reflects the difference from the average one-way base fare column. In each case the fare is still lower than the averages in the smallest case \$25 and in the highest case \$526. Recognizing that all components of the fare equation do not move equally (that is, the ridership response to higher fares would not yield the same outcomes as the original GRA/InterVISTAS fare levels), the implication is there is room for some variation in the projected fares by GRA/InterVISTAS without moving to a negative situation.

Table 2**GRA/InterVISTAS Exhibit 18 with Fares Increased 60%**

Market	Average One-Way Base Fare	Original GRA/ InterVISTA Projection	Increased 60%	GRA/InterVISTA Reported Fare Decrease	Fare Difference with 60% Increase in Fare
Houston – Bogota	\$739	\$133	\$213	\$606	\$526
Houston – Cancun	207	108	173	99	34
Houston – Caracas	768	134	214	634	554
Houston – Guadalajara	230	108	173	122	57
Houston – Liberia C R	311	122	195	189	116
Houston – Mexico City	233	106	170	127	63
Houston – Monterrey	174	93	149	81	25
Houston – Puerto Vallarta	207	110	176	97	31
Houston – San Jose Costa Rica	323	123	197	200	126
Houston – San Jose del Cabo	266	113	181	153	85
Houston – San Salvador	\$262	\$117	\$187	\$145	\$75

Table 3 assesses a reduction in the jobs and economy table by applying a 60% decrease to each value in the GRA/InterVISTAS jobs table. The 60% value is randomly identified with the rationale being to mirror the percentage used for the fare assessment. The reductions show all values remain positive, so even with the deep decrease, airport and regional jobs increase albeit to a far lesser degree than presented in the GRA/InterVISTAS report.

Table 3

**Decrease of 60% to GRA/InterVISTA Exhibit 21
Developed Phase Scenario Incremental Impacts by Type**

	Direct (On Airport)	Reduced 60%	Indirect (Visitor Spending)	Reduced 60%	Induced (Houston MSA)	Reduced 60%	Total
HOU							
Regional Jobs	2,931 193	1172.4 77.2	3489 72.5	1395 29	10,523 330.4	4209.2 132.2	6777.2 238..4
Earnings (\$ mil)	371.3	148.5	305.5	122.2	794.2	317.7	588
Output (mil)							
IAH							
Regional Jobs	236 17.1	94.4 6.84	225 5.3	90 2.1	707 24.1	282.8 9.64	467.2 18.6
Earnings (\$ mil)	50.5	20.2	17.2	6.8	84.4	33.76	60.8
Output (mil)							
HAS							
Regional Jobs	3167 210	1266.8 84	3714 77.8	1485.6 31.1	11,230 354.5	4492 141.8	7244.4 256.9
Earnings (\$ mil)	421.8	168.7	322.7	129.1	878.6	351.4	649.2
Output (mil)							

Values are rounded

Ancillary Analyses

Moody's Investors Service Report

Moody's Investors Service is a component of the company with the same name that provides international financial research on commercial and government bonds. The group is considered as one of the three highest ranked entities performing this kind of research. A report dated May 1, 2012 by Moody's analyzed Southwest Airlines' entrance into the southeastern United States by way of Greenville and Charleston, South Carolina. The Moody's report call the results "dramatic", writing that fares dropped and enplanements increased immediately. Although the report focuses on domestic flights, it includes a section titled, *Laws of Price Elasticity*. This section notes that total enplanements increased beyond growth at other US

airports, although one regional airport showed a loss. The point is that as prices decrease, passenger demand will increase; the law will hold for international, as well as domestic service. Moody's predicts that this increase in the US southeastern market will lead to continued fare reductions. They write that the greater benefit from their perspective is the growth in concessions and other non-airline revenue because of diversification of the revenue stream, which will help the bond rating for entities involved.

On-Line Fare Comparison

As a way to add breadth to this assessment, the researchers conducted an on-line comparison of fares from Houston and a few city pairs to selected Southwest Airlines' proposed international locations. The methodology was to conduct on-line search of airfares using the official site of any airline fare being sought. One or two examples were selected across a series of days to accommodate day of the week differences for a stay of 6 to seven days. The straight line miles between the city pairs are included as a method of facilitating comparison. A more comprehensive assessment would include far more example days and locations, but Table 4 provides an interesting view of what a traveler searching on-line would find. In none of the examples does Houston have the lowest fares. Particularly interesting is in two examples (San Antonio to Costa Rico and Chicago to Bogota) patrons transfer to United in Houston, but have access to a lower fare at their city of origin. By way of additional comparison the GRA/InterVISTAS document Exhibit 17 shows a more complete fare comparison from Houston and Chicago for the Southwest Airlines' proposed international cities.

Table 4

On-Line Fare Comparison for Selected City Pairs

	Date	Fare Range	Miles between Cities**	Fare per Mile
To Cancun from: <ul style="list-style-type: none"> Houston on <i>United</i> (direct) Ft. Lauderdale on <i>American</i> (direct)* Miami on <i>Spirit</i>* On-line search done 5/18/2012	7/18 to 7/25/12	\$457 – 542	798	\$.57– .67
		\$163 – 338	526	\$.30 –.64
		\$204.26	526	\$.39
To San Jose, Costa Rica from: <ul style="list-style-type: none"> Houston on <i>United</i> (direct and w/stops) San Antonio (with connection at IAH) On-line search done 5/14/12	7/15 to 7/22/12	\$822 – 843	1547	\$.53 –.54
		\$673***	1633	.41
To Bogota, Columbia from: <ul style="list-style-type: none"> Houston on <i>United</i> (direct and w/stops) Chicago on <i>United</i> (direct and with stops) On-line search done on 5/15/12	7/19/12 to 7/25/12	\$1047 – 1589	2256	\$.46 –.70
		\$917 – 1521 *****	2704	\$.34 –.56

* Competitive from two airports within the same region.

** distancecalculator.com

*** A number of fare options were available from San Antonio. This one was the least expensive and is shown because the connection is at IAH.

*****The option for \$917 connects at IAH

Airport Master Plan

An Airport Master Plan is an in-depth study to determine short, medium, and long-term airport development plans. It is an essential tool to reserve adequate financial resources to meet identified needs. Houston Airport System (HAS) submitted the William P. Hobby Airport

Master Plan to the FAA to prepare for growth from 2003-2022. Goals were established to meet anticipated passenger demand and capacity increases. Objectives were formulated to meet the economic development and needs of the community it serves.

Key stakeholders to this plan were Continental Airlines, Southwest Airlines, other tenants, the public, business community, and HAS. After HAS consulted with the FAA and the airlines, a modest growth scenario for the airport was selected. Public participation (recommendations) on the future development of the airport occurred multiple times in 2002 and 2003.

This consensus-building forum envisioned runway, taxiway, and gate additions to support **international travel**. Supplementary parking and rail service was planned to handle the projected passenger demands. Finally, stakeholders were in agreement and the FAA certified that the William P. Hobby (Airport Development Plan) Airport Master Plan 2003 improved the traveler's experience and was in the public's interest.

Transportation Research Board Guidelines

The Airport Cooperative Research Program (ACRP), sponsored by the Federal Aviation Administration, commissioned a Guidebook for Developing and Leasing Airport Property (2011). As part of the Transportation Research Board, the ACRP provides leadership and aviation innovation exchange. The guidebook collects the best practices for developing airports.

A Project Analysis Checklist was created to identify critical areas such as airport planning and stakeholder involvement. As a component of this review, researchers determined that the Houston Airport System Management fulfilled their responsibilities in the performance of their duties planning, informing, and involving all stakeholders in the development of Hobby's Airport Master Plan. The planning and stakeholder involvement sections of the checklist are shown in Appendix 2.

Summary Closing Considerations

These researchers view the primary charge of city government as advocating for the public interest. As part of that mission, three essential elements were the focus of this research: 1) **Projected passenger volumes and impact on the number of scheduled flights**, 2) **Impact on fares**, and 3) **Impact on jobs and the economy**. GRA/InterVISTAS and HAS support expansion of the FIS facility at HOU to allow international service. United et al.'s position is that expanding international service to airlines operating from HOU would be negative for travelers because it would ultimately fragment the market, resulting in lower service overall. It cannot be denied that this is a potential downside risk. On the other hand, the comparative sensitivity assessment shows that if assuming a 60% under prediction on fares and over prediction on job creation, the GRA/InterVISTAS projections would still be favorable.

Governments often choose to create an environment conducive to business growth. Mayor Parker's five priorities include continued support for economic growth and job creation through business friendly policies and practices (Press Release, retrieved May 22, 2012). United et al. write, "Based on the projected fares in the HAS Hobby Study, Southwest Airlines would lose \$75 million and have an operating margin of approximately negative (-50%) on the 11 hypothetical routes". Southwest has emerged as a premier LCC (Low Cost Carrier); their data provides them with confidence that entering the international market will enhance their operation and not lead to an unprofitable venture.

The projections and estimates in both the GRA/VISTAS report and the United et al. report represent the compilation of data from reliable sources, albeit from contradictory assumptions. These researchers' review of the material shows the following:

- Federal regulations require the City provide reasonable accommodation to the FIS facility request if resources exist. If resources are unavailable, the City would need to indicate when it could comply with the request. In essence, the City would be bound to provide the FIS facility at some point.
- Exhibit 17 of the GRA/InterVISTAS report and the comparison fares compiled by this research team in Table 4 show that fares for some Houston routes seem high compared to other locations. There is a question as to whether fares on flights to the international markets in question are currently fairly priced when compared to flights to those international markets from other selected US cities.
- GRA/InterVISTAS projections and estimates of passengers are defensible based on methodology and assumptions.
- The sensitivity analysis showed that even if 60% overestimated as suggested by the United et al. report, none of the GRA/InterVISTAS values became negative.
- The HAS master plan developed in 2003 included FIS facilities for international service. The request and move to add this service at HOU should not be unexpected for Houston area airlines who have reviewed the master plan.
- Moody's Investment Services' assessment of Southwest's entrance into several markets is positive about LCC impact on fares in domestic markets. The Law of Elasticity is widely accepted--when competition increases, prices decrease and the reverse. This and the general experience of LCCs on the market is positive and reasonable to expect in the case of expansion of international service from HOU.

The preponderance of evidence supports the recommendations of the Director of HAS and is consistent with William P. Hobby Airport's Master Plan. According to Federal mandates, the City is in compliance with Federal regulations. The proposal at HOU will support the public interest and competition in a free market.

Biographical Information for Reviewers

Carol Abel Lewis, Ph.D. is an Associate Professor in Transportation Studies and Director of the Center for Transportation Training and Research at Texas Southern University. She is responsible for educating students in fundamentals of transportation and urban transportation issues, as well as conducting operational and policy related transportation research. In March 2008, Lewis was asked to serve as principal investigator for Texas Southern University's designation by the Department of Homeland Security (DHS) as a Petrochemical Transportation Security Center of Excellence. This multidisciplinary initiative conducts research to reduce the nation's vulnerability against potential terrorists' attacks in selected components of the surface transportation system.

Since joining TSU in 1992, Lewis has conducted research for the Texas Department of Transportation (TxDOT) regarding Regionalizing Public Transit, Smart Growth, Land Use and Development, Strategic Planning, and Land Value Effects of Elevated and Depressed Freeways. Her current research projects with TxDOT are on public involvement and the concept of the Texas megaregion. Lewis was the research supervisor for the Federal Highway Administration's (FHWA) Noise Compatible Land Use Brochure and workshop series on this topic. Her funded research also includes corridor feasibility studies for major Houston area freeway corridors, analysis of options to better manage freeway lanes and an assessment of the external influences on transit-oriented development. She is also the principal TSU researcher in the DHS Disasters, Coastal Infrastructure, and Emergency Management Center (DIEM) focusing on evacuation modeling.

Prior to joining Texas Southern University, Lewis spent 15 years as manager and director of planning at the Metropolitan Transit Authority of Harris County. Lewis belongs to a number of professional organizations including the Red Cross Transportation Advisory Committee and has served for more than 10 years on the Transportation Technical Advisory Committee of the local metropolitan planning organization (HGAC). Houston's Mayor Annise Parker appointed Lewis to the Gulf Coast Rail District Board in June 2010. From 2004 to 2009, she served as transportation advisor to Houston Mayor Bill White and as Chair of the City's Planning Commission. She was appointed by Governor Rick Perry to the Governor's Task Force on Emergency Evacuation following the 2005 hurricane season. Lewis served two years on the board of the Metropolitan Transit Authority as an appointee of, then, Houston Mayor Lee Brown and six years as the national academic advisor for the Conference of Minority Transportation Officials. Lewis holds a Ph.D. from the University of Houston in Political Science and M.A. and B.A. degrees from the University of Iowa.

CHARLES R. GLASS, M.S.Ed., M.A., Ed.D., C.S.C., ATPE , is Assistant Professor in Aviation Science and Technology at Texas Southern University. In this capacity he is responsible for educating students in a variety of courses including Airport Management, Introduction to Aviation, Principals of Aviation Property, and Flight Safety. During his last tour of duty in the military, Lieutenant Glass supervised the flight training of Navy Coast Guard and foreign students as a Student Control Officer for Training Air Wing Four at the Navel Air Station Corpus Christie, TX. Prior to employment at Texas Southern University, Charles Glass was instrumental in assisting with the initiation of the school's Aviation Department in the late 1980s, when he contributed to planning and design of the Federal Aviation Program for College Students. Initially, he served as an adjunct professor, while a pilot with Eastern Airlines. Glass became a full time faculty member in 2007. Since that time, he has updated the curriculum and written a proposal to transition the Aviation Science area from a program to a fully functioning department. He spends his community service time recruiting students to aviation careers. For the past three years, he has conducted three summer and Saturday programs introducing high school students to flight simulator, aeronautical, air traffic control and airport management

laboratories in a virtual airport environment. He holds a number of certifications and licensures including:

- Certified School Counselor (TX), Expires October 2014
- Certified Professional Educator (TX), Expires October 2014
- Flight Engineer – Turbojet Powered (US), No expiration, Life
- Airline Transport Pilot – Airplane Multiengine Land (US), No expiration, Life

Dr. Glass' terminal degree is in Counselor Education, with masters' degrees from Texas Southern University and University of Southern California; his bachelor's degree is from Prairie View A & M University.

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Appendix 1

USDOT Confirmation of Profit Essentials Software

The screenshot shows a web browser window with the following elements:

- Address Bar:** https://www.fbo.gov/index?s=opportunity&mode=form&id=1d1eb50c5dcfb1c82f09348dda5763b3&tab=core&_cview=0
- Page Title:** Profit Essentials Model
- Search Bar:** Search [icon] More >>
- Page Content:**
 - Solicitation Number:** DTOS59-11-R-00320
 - Notice Type:** Special Notice
 - Synopsis:**

Added: Jun 30, 2011 4:55 pm

On a SOLE-SOURCE basis, the U.S. Department of Transportation (USDOT), Office of the Under Secretary for Transportation Policy, Office of the Assistant Secretary for Aviation & International Affairs, Office of Aviation Analysis, plans to acquire, from Sabre Airline Solutions, Profit Essentials® proprietary software in order to: (a) evaluate airline schedule issues; and (b) analyze airline codeshare and alliance agreements; and (c) conduct critical assessments of the evolving competitiveness of domestic and international aviation markets; and (d) provide rational economic bases for carrier selection decisions; and (e) develop forecasts on the effects on competition of proposed airline mergers and alliances-all in support of USDOT's strategic policy to enhance competition and growth in domestic and international aviation. The needed Profit Essentials® software is proprietary to Sabre Airline Solutions.

The Profit Essentials® software is required, by DOT, to combine airline schedule data, airline demand data, and a series of historical statistical relationships on passenger choice to model airline services. DOT does not know of any software suitable for the Department's purposes, other than Profit Essentials®.

Appendix 2
Transportation Research Board Project Analysis Checklist

**ACRP Report 47 Guidebook for Developing
and Leasing Airport Property, Sec. 6.3.1**

(Response in **red** based on researcher's review)

Planning:

- Yes Does the project fit within the stated goals listed in the airport visioning documents (Airport Master Plan, Land Use Plan, and Airport Business Plan)?
- Yes Does the project comply with community land use plans, zoning ordinances, and other applicable planning documents?
- Yes Is the proposed development in compliance with the FAA-approved Airport Layout Plan?
- No Does the proposed use of the property violate any grant assurances?
- Pending Is the proposed use of the property in compliance with security and environmental regulation?
- Yes Does this project represent the highest and best use of the property?
- No Is the proposed project in conflict with any current airport agreements such as noncompete or right-of-first-refusal clauses that may be in effect with an existing tenant?
- Not Determined If the property is airside, or has airside access, does the proposed use of the property conform to desired aeronautical uses (airside land being used for aviation purposes)?

Stakeholder Involvement:

- Yes Have all of the potential stakeholders in the project been identified?
- Yes Have the perspectives, concerns, and resources (potential funding sources, marketing resources, and development expertise, for example) of the stakeholders been identified?
- Yes Are plans in place to reach out to the identified stakeholders, and are mechanisms such as public meetings, round-table discussions, and focus groups planned to facilitate communications and dialogue?