

1. Report No. SWUTC/05/167456-1		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle The Development of the Texas Summer Aviation Institute and the Implementation of a Pilot Program in Conroe, Texas				5. Report Date August 2005	
				6. Performing Organization Code	
7. Author(s) Jeffrey D. Borowiec and Debbie Jasek				8. Performing Organization Report No. Report 167456-1	
9. Performing Organization Name and Address Texas Transportation Institute Texas A&M University System College Station, Texas 77843-3135				10. Work Unit No. (TRAIS)	
				11. Contract or Grant No. 10727	
12. Sponsoring Agency Name and Address Southwest Region University Transportation Center Texas Transportation Institute Texas A&M University System College Station, Texas 77843-3135				13. Type of Report and Period Covered	
				14. Sponsoring Agency Code	
15. Supplementary Notes Supported by general revenues from the State of Texas. Research Project Title: Develop and Establish A Texas Summer Aviation Institute					
16. Abstract  <p>Attracting students to the transportation profession can be a difficult task. Attracting them to aviation careers is that much more daunting. Students across the state progress through the public education system with little or no exposure to aviation. Students enter high school and college with little understanding of and appreciation for aviation and the opportunities and challenges that may await them in the future. This summer aviation institute allowed 10<sup>th</sup> and 11<sup>th</sup> graders to experience the effects of science, math, and engineering as they participate in aviation-related activities. They also participated in hands-on activities and problem solving initiatives that incorporated team building and cooperative learning to teach principles of flight, aerodynamics, aerial navigation, Newton's Laws, aircraft instrumentation, Bernoulli's Principle, materials science, general math, and the history of flight.</p> <p>The major objective of this effort was to create a two-week Summer Aviation Institute modeled after the Texas Summer Transportation Institute (TSTI) with a core curriculum that can be easily and economically implemented in any region of the State. This core curriculum included speakers, field trips, videos, and hands on activities highlighting the importance of aviation and exposure to aviation career opportunities. The modules and the related activities will be TEKS based. This project includes conducting a pilot program that includes implementing and demonstrating the two-week program. It is expected that this will take place in the Houston area.</p>					
17. Key Words Educational Outreach, Summer Transportation Institute, Transportation Education, Aviation Education, Rural Summer Programs			18. Distribution Statement No restrictions. This document is available to the public through NTIS: National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161		
19. Security Classif.(of this report) Unclassified		20. Security Classif.(of this page) Unclassified		21. No. of Pages 91	22. Price



# **The Development of the Texas Summer Aviation Institute and the Implementation of a Pilot Program in Conroe, Texas**

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Research Report SWUTC/05/167456-1

Sponsored by the  
Southwest Region University Transportation Center

August 2005

TEXAS TRANSPORTATION INSTITUTE  
The Texas A&M University System  
College Station, Texas 77843-3135



## **ABSTRACT**

Attracting students to the transportation profession can be a difficult task. Attracting them to aviation careers is that much more daunting. Students across the state progress through the public education system with little or no exposure to aviation. Students enter high school and college with little understanding of and appreciation for aviation and the opportunities and challenges that may await them in the future. This summer aviation institute allowed 10<sup>th</sup> and 11<sup>th</sup> graders to experience the effects of science, math, and engineering as they participate in aviation-related activities. They also participated in hands-on activities and problem solving initiatives that incorporated team building and cooperative learning to teach principles of flight, aerodynamics, aerial navigation, Newton's Laws, aircraft instrumentation, Bernoulli's Principle, materials science, general math, and the history of flight.

The major objective of this effort was to create a two-week Summer Aviation Institute modeled after the Texas Summer Transportation Institute (TSTI) with a core curriculum that can be easily and economically implemented in any region of the State. This core curriculum included speakers, field trips, videos, and hands on activities highlighting the importance of aviation and exposure to aviation career opportunities. The modules and the related activities will be TEKS based. This project includes conducting a pilot program that includes implementing and demonstrating the two-week program. It is expected that this will take place in the Houston area.



## EXECUTIVE SUMMARY

Attracting students to the transportation profession can be a difficult task. Attracting them to aviation careers is that much more daunting. Students across the state progress through the public education system with little or no exposure to aviation. Students enter high school and college with little understanding of and appreciation for aviation and the opportunities and challenges that may await them in the future. This summer aviation institute allowed 10<sup>th</sup> and 11<sup>th</sup> graders to experience the effects of science, math, and engineering as they participate in aviation-related activities. They also participated in hands-on activities and problem solving initiatives that incorporated team building and cooperative learning to teach principles of flight, aerodynamics, aerial navigation, Newton's Laws, aircraft instrumentation, Bernoulli's Principle, materials science, general math, and the history of flight.

The major objective of this effort was to create a two-week Summer Aviation Institute modeled after the Texas Summer Transportation Institute (TSTI) with a core curriculum that can be easily and economically implemented in any region of the State. This core curriculum included speakers, field trips, videos, and hands on activities highlighting the importance of aviation and exposure to aviation career opportunities.

The 2005 Texas Summer Aviation Institute was a program designed and developed by an interdisciplinary team with significant experience in summer educational programs, aviation education, and aviation management. The program team consisted of researchers and educational outreach/program specialists from the Texas Transportation Institute in College Station, Texas, a professor and director of the airway science program at Texas Southern University in Houston, Texas, and the airport director at Lone Star Executive Airport in Conroe, Texas.

With the program directors located in the Houston region, there was little debate about where the program should be located. It was based in the greater Houston area, in Conroe, where there were some inherent advantages.

The program developed for the students was planned to take place over a 10-day period and tried to cover all aspects of aviation. It was indeed an aggressive attempt to expose the students to the many career and educational opportunities that avail them today in aviation. Each day had a theme and the themes included aviation education, the Federal Aviation

Administration, meteorology, flight, general aviation, commercial aviation, military aviation, and NASA.

A marketing and recruiting effort was directed toward students at the four high schools in the Conroe Independent School District. Many of the students were a part of the Academy for Science and Health Professions at Conroe High School. In addition, a partnership was established with the Federal Aviation Administration to use their “ACE Academy” moniker in order to gain access to FAA facilities. The program agreed to certain FAA guidelines in carrying out its program in order to become part of the Ace Academy programs.

The evaluations from the students showed the program to be very successful as well as fun and informational. Their self-described highlights ranged from the maintenance hangar at Continental Airlines to the 30-minute discovery flights over Lake Conroe.

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## **DISCLAIMER**

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## **ACKNOWLEDGEMENTS**

The authors recognize that support for this research was provided by a grant from the U.S. Department of Transportation, University Transportation Centers Program to the Southwest Region University Transportation Center, which is funded 50 percent with general revenue funds from the State of Texas.

## **CHAPTER 1 INTRODUCTION**

Attracting students to the transportation profession can be a difficult task. Attracting them to aviation careers is that much more daunting. Across the State students progress through the public education system with little or no exposure to aviation. Students enter high school and college with little understanding of and appreciation for aviation and the opportunities and challenges that may await them in the future. This summer aviation institute will allow 10<sup>th</sup> and 11<sup>th</sup> graders to experience the effects of science, math, and engineering as they participate in aviation-related activities. They will also participate in hands-on activities and problem solving initiatives that incorporate team building and cooperative learning to teach principles of flight, aerodynamics, aerial navigation, Newton's Laws, aircraft instrumentation, Bernoulli's Principle, materials science, general math, and the history of flight.

### **BACKGROUND**

The Texas Transportation Institute has been instrumental in developing successful summer transportation programs for middle school and high school children across the state. These efforts originally targeted students in the state's urban areas. Subsequently, rural summer transportation institutes were created to serve students in the rural and semi-rural parts of the state in order for them to have some exposure to the transportation field and potential career opportunities that may await them.

Just as the rural summer transportation institute sought to expand transportation exposure to students in the more rural parts of the state, the summer aviation institute seeks to expose students to the aviation industry and everything it has to offer. The Federal Aviation Administration cosponsors similar aviation programs across the country but none currently exist in Texas or the Southwest Region. Successful development and implementation of this program may be critical in obtaining future sponsorship and/or co-sponsorship from the FAA for future programs to be held in Texas in both urban and rural location. The aviation industry currently has many important issues to face not the least of which is how it will educate, recruit, and train its next generation workforce. This program helps to that end.

## **OBJECTIVES OF SUMMER AVIATION INSTITUTE**

The major objective of this effort will be to create a two-week Summer Aviation Institute modeled after the Texas Summer Transportation Institute (TSTI) with a core curriculum that can be easily and economically implemented in any region of the State. This core curriculum would include nine days of programs that include speakers, videos, and hands on activities highlighting the importance of aviation and aviation career opportunities. It will also include field trips (day trips) to aviation facilities and a regional college or university campus. The final day will be a half-day program that includes evaluations, a graduation ceremony, and a guest speaker. This project will include conducting a pilot program that includes implementing and demonstrating the two-week program. It was expected that this would take place in the Houston area given the resources in the area and the project support lined up for this particular effort.

## **CHAPTER 2 PROGRAM DEVELOPMENT**

The 2005 Texas Summer Aviation Institute was a program designed and developed by an interdisciplinary team with significant experience in summer educational programs, aviation education, and aviation management. The program team consisted of researchers and educational outreach/program specialists from the Texas Transportation Institute in College Station, Texas, a professor and director of the airway science program at Texas Southern University in Houston, Texas, and the airport director at Lone Star Executive Airport in Conroe, Texas. The team had two meetings at the Lone Star Executive airport in the fall and winter. They also communicated with each other extensively via phone, fax and e-mail. The following embodies the work efforts laid out to develop and implement the summer institute.

### **WORK PLAN**

The work plan consisted of eight tasks. The task descriptions as included in the original detailed proposal are included below.

#### **Task 1: Conduct Existing Programs and Materials Review**

The research team will conduct an extensive review of any existing summer aviation institutes in Texas including their program curriculums and evaluations. The summer aviation program will be developed following a review of both the material and any individuals who planned, coordinated and/or conducted any of the said aviation programs. This input will assist in identifying the most successful modules and activities for use in the program.

#### **Task 2: Develop Prototype Program for Two Week Summer Institute**

The research team will select an initial listing of modules and activities to be included in the two-week summer program. Alternate modules and activities will also be included to recognize the diversity that a standard program in Texas may require. For example, while a field trip to NASA's Johnson Space Center would be appropriate for a program in the Houston area, it would be cost prohibitive for a program located in north or west Texas.

### **Task 3: Develop an Informational File on Possible Pilot Sites**

Information will be gathered on possible host sites for the initial pilot program. An internal plan and budget will be developed for each site. The list of possible sites will be ranked and initial contact will be made according to ranking. Initial contact with schools in the immediate vicinity of a target location will be made and interest and support for the program will be documented. If for some reason the highest ranked site for a program is not interested or there is conflict with other programs, an alternative site in the appropriate geographic location will be selected.

### **Task 4: Selection of Site**

Based on the information gathered in Task 3 as well as cost estimates for conducting the prototype program drafted in Task 2, the pilot site will be selected.

### **Task 5: Recruitment, Marketing, and Preparation Work at Pilot Sites**

The team will then begin recruiting students as well as laying the foundation for the program at the selected site. This will include securing facilities to conduct the program, securing transportation, and tailoring the prototype program to fit the site. The target enrollment will be approximately 20 students.

### **Task 6: Conduct Pilot Institute**

The two-week pilot institute will take place in July of 2005 in the Houston region. As part of the activities, an evaluation will be collected from participants and project members.

### **Task 7: Evaluate the Summer Aviation Institute**

After the institute is completed, an analysis of evaluation data of both the participants and the project staff will be conducted.

### **Task 8: Final Report**

A final report and recommendations regarding future summer aviation institutes will be written and submitted.

Figure 1 below shows the schedule of activities for each of the tasks and gives a timeline for their completion.

Task	S	O	N	D	J	F	M	A	M	J	J	A
1. Conduct Existing Programs and Materials Review	■	■										
2. Develop Prototype Program for Two Week Summer Institute		■	■	■	■	■						
3. Develop an Informational File on Possible Pilot Sites			■	■	■							
4. Selection of Site						■						
5. Recruitment, Marketing, and Preparation Work at Pilot Sites							■	■	■	■		
6. Conduct Pilot Institute											■	
7. Evaluate the Summer Aviation Institute											■	■
8. Final Report												■

**Figure 1. Schedule of Activities (Planned).**

**RELATIONSHIP TO OTHER RESEARCH OR PROJECTS**

During the previous five years, Summer Institutes have been conducted at Texas Southern University and Paul Quinn College. Prairie View A&M has conducted Summer Institutes for the past 4 years and Palo Alto College for the past 2 years. These Institutes have been made possible through partial funding a grant from the National Resource Center at South Carolina State University and a one-time grant from SWUTC to conduct a pilot program in San Antonio in 2001.

These Institutes have proven to be a success in encouraging students to stay in school, to continue their education by attending college after graduation, and to seek careers in transportation, engineering, science, math, and/or computer science. The program has also received considerable in kind contributions from other public and private entities. For the past year, it became apparent that there is an insistent need to expand the current programs, which are primarily located in large metropolitan areas to

include students in smaller cities and rural areas. Last year that end was met as SWUTC funded the establishment of a rural summer transportation institute at multiple locations this summer in south Texas. More will be known about the rural programs once they have been completed and analyzed by the program staff.

### **TECHNOLOGY TRANSFER TO BE CONDUCTED BY THIS PROJECT**

The program that was developed is documented in this final report. This includes the process of developing the program and how it was marketed. Feedback from an evaluation analysis is included in order to accommodate efforts to improve the program. This report is written in such a way to allow others reading it to successfully develop and carryout their own program. Alternative ideas are included in Appendix C in case certain geographical locations are without certain facilities for field trips. At the time of writing, the program was under consideration for presentation at least one state-level annual conference.

### **POTENTIAL BENEFITS OF THE PROJECT**

It was anticipated that the pilot program would take place in one of the larger metropolitan areas of the state. The developed program will be marketed and implemented to serve students in that region initially. However, once developed, the program can be used interchangeably in other regions of the state. While some regions have more aviation facilities and resources than others have, many of the field trips will still be applicable by switching out some airports or businesses in one area with similar facilities in another. Some facilities, like NASA's Johnson Space Center in Houston are not easily replaceable but it is likely that other comparable facilities can be identified to accommodate the same objective for the students. The individual activities presented throughout this program will be useful for classroom teachers throughout the state for introducing or using aviation examples to teach common curriculum elements.

With the program directors located in the Houston region, there was little debate about where the program should be located. It was based in the greater Houston area, in Conroe, where there were some inherent advantages. These included the support and resources that came from having the airport director on the project Team. This included

the airport, the myriad fixed-base operators located on the field, the flight school who provided the discovery flights, the county conference and exposition center across the street where the classroom was located, the FAA Flight Service Station, the Army Reserve Facility, and several high schools in the Conroe Independent School District from which to draw. Additionally, the program directors had contacts in the region that assisted in providing transportation services and recruiting students.



## **CHAPTER 3 THE 2005 TEXAS SUMMER AVIATION INSTITUTE: THE PROGRAM**

The program developed for the students was planned to take place over a 10-day period and tried to cover all aspects of aviation. It was indeed an aggressive attempt to expose the students to the many career and educational opportunities that avail them today in aviation. This chapter outlines the events and activities that comprised the 2005 Texas Summer Aviation Institute. All of the day's activities began and ended at the Lone Star Convention and Expo Center where a classroom was reserved for our use to use as a base. Students signed in and out of the classroom to verify their attendance.

An orientation meeting for the parents was held the week prior to the start of the institute to familiarize the parents with the program and give them an opportunity to meet the program directors.

Each day had a theme and an objective. Together with the day's events, they are outlined below. Lunch was provided for the students each day. This was done to give students time to socialize as well as to prevent the need for students to leave the facility. Breaks were given throughout the day as well. Each day began with a review of the day's schedule and any follow-up from the previous day. It ended with instructions and comments for the next day's activities and event. In order to cover necessary expenses not allowed with project money, participants were charged an \$85.00 fee. No student who was not able to afford the fee was turned down.

### **ORIENTATION MEETING**

#### **Thursday, June 9, 2005: Parent Orientation**

Objective: Meet with parents, discuss program, and take care of administrative details including waivers, permission slips, contact and medical information. Answer questions, accept payment, etc.

- Introduce program directors
- Discuss program and discovery Flights
- Administrative details: sign waivers, permission slips, provide contact/medical information

- Answer questions
- MVP Aero Academy will have a representative present to answer questions pertaining to discovery flight

## **DAY #1 INTRODUCTION**

**Monday, June 13, 2005**

Objective: Familiarize students with the structure of the program; provide a basic understanding of aviation history; expose students to aviation career opportunities in the Federal Aviation Administration and the military.

- Registration, Introduction, and Orientation
- Program description, goals, objectives, and expectations (of directors and students)
- Program structure and schedule
- Aviation History – Peter Dittmer
- Discussion of aviation careers and educational opportunities
- Videos: *Careers in Aviation & Business Aviation – America’s Business Advantage for the 90s and Beyond*
- Careers with the Federal Aviation Administration – Mr. Jim Thomas, FAA
- Presentation by the 99s: Women and Aviation – Martha Newsome

Figures 2 through 4 are pictures of activities from the first day of the Summer Aviation Institute.



**Figure 2. Jeff Borowiec Getting the Summer Institute Started.**



**Figure 3. Jeff Bilyeu Thanks Jim Thomas, FAA After his Speech on FAA Careers.**



**Figure 4. Martha Newsome of the 99s Women Aviation Organization Addresses the Students.**

## **DAY #2 OPPORTUNITIES IN AVIATION EDUCATION**

**Tuesday, June 14, 2005**

Objective: Expose students to aviation careers in Commercial and General Aviation; provide students with some understanding of the educational opportunities in aviation in Texas; expose students to a university setting and, specifically, the aviation-related facilities at Texas Southern University.

- Review of Day's Activities and Relevant Program Rules
- Travel to Texas Southern University
- Basic Aerodynamics – Peter Dittmer
- “CSI Aviation” – Aircraft Accident Investigation
- Tour Airway Sciences Facilities at Texas Southern University
- Flight simulator exercise
- Travel to Conroe Convention Center

Figures 5 and 6 are pictures of Day 2 activities.



**Figure 5. Professor Dittmer Discusses Aviation Safety with the Students.**



**Figure 6. Texas Southern University Student and Flight Instructor, John Shaw, Works with Students in the Flight Simulator.**

## **DAY #3 THE FEDERAL AVIATION ADMINISTRATION**

**Wednesday, June 15, 2005**

Objective: Familiarize students with the role and responsibilities of the Federal Aviation Administration, particularly their role in providing air traffic control from before takeoff to after landing; expose students to the career opportunities at the agency and their educational requirements.

- Travel to Houston Intercontinental Airport: FAA Terminal Radar Approach Control (TRACON) Facility and Air Traffic Control Tower
- Tour of FAA TRACON and Tower Facilities
- Travel to Lone Star Convention and Expo Center
- Tour of FAA Flight Service Station (located at Lone Star Executive Airport)

Figures 7 through 12 are pictures of Day 3 activities.



**Figure 7. The Airport Traffic Control Tower at Houston Intercontinental Airport.**



**Figure 8. Eating Lunch with the FAA.**



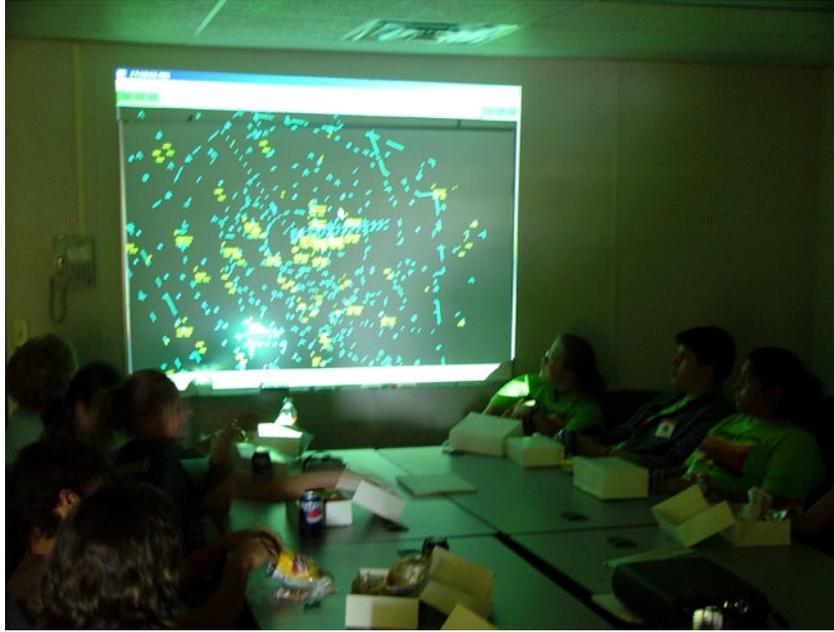
**Figure 9. Bob Myer, FAA, Discusses Airport Operations Before Heading Up to the Tower.**



**Figure 10. The View from the Tower at Houston Intercontinental.**



**Figure 11. Students Getting a Lesson in Controlling Air Traffic.**



**Figure 12. Air Traffic in the Houston Center.**

## **DAY #4 METEOROLOGY**

**Thursday, June 16, 2005**

Objective: Expose students to the basic principles and phenomena of meteorology and familiarize them with the interface/impact of weather on aircraft and the air transportation system.

- Travel to Universal Weather (Houston Hobby Airport)
- Tour of Universal Weather Facility (presentation and tour)  
(Lunch provided by Universal Weather)
- Travel to Lone Star Convention and Expo Center
- Discussion of tomorrow's discovery flights

Figures 13 through 16 are pictures of Day 4 events.



**Figure 13. Students Hear Presentation from Universal Weather Manager, Rich Harper.**



**Figure 14. Students Get a Lesson in Corporate Flight Planning.**



**Figure 15. Getting a Tour of Universal Weather's Facilities.**



**Figure 16. A Universal Weather Meteorologist Explains His Craft.**

## **DAY #5 FLIGHT**

**Friday, June 17, 2005**

Objective: Expose students to the world of flight and the scientific and engineering principles that make it possible; become familiar with basic pre-flight and safety procedures; participate in a 30-minute discovery/demonstration flight.

- Air Navigation: Plotting your Course – Peter Dittmer
- Travel to MVP Aero Academy at Lone Star Executive Airport
- Flight and Safety Briefing/Tour of Flight Training Facilities – MVP Aero Academy
- Discovery Flights
- Lunch/students can eat before/after Discovery Flights
- Travel to Lone Star Convention and Expo Center
- Debriefing: Discussion of Discovery Flights
- Speaker/Activity on Aviation Safety – Bill Gunn, TxDOT—Aviation

The students were given a log book that was later endorsed by the flight instructor that gave them the discovery flight. This documented their first flight. Two special guests joined the group on this day. Ms. Karon Wiedemann, the director of grant administration for the Texas Department of Transportation, Aviation Division came for a visit as did Mr. Jay Carpenter, president of the Texas Aviation Association. Mr. Carpenter was also writing an article on the summer aviation institute for an upcoming edition of *Wingtips*, the official newsletter of the Aviation Division.

Figures 17 through 23 are pictures of Day 5 activities.



**Figure 17. Professor Dittmer Starts the Day with a Flight Planning Activity.**



**Figure 18. Mr. John Van Paasschen Briefs the Students Before Their Discovery Flights.**



**Figure 19. Students and Their Instructors Pre-Flight the Aircraft.**



**Figure 20. The First Airplane is Off the Ground.**



**Figure 21. A Student Returns from His Discovery Flight as Another Prepares for Hers.**



**Figure 22. Program Directors Jeff Bilyeu and Peter Dittmer Discuss the Discovery Flights with John Van Paasschen of MVP Aero Academy and Karon Wiedemann of TxDOT, Aviation Division.**



**Figure 23. Mr. Bill Gunn of TxDOT Aviation, Debriefs the Students After Their Discovery Flights.**

## **DAY #6 GENERAL AVIATION**

**Monday, June 20, 2005**

Objective: Familiarize students with the many elements that comprise general aviation; demonstrate the wide variety of businesses and components of general aviation and their role in our society; expose students to the career opportunities and their educational requirements.

- Model Rocket Activity: Build Rockets
- Wings Over Houston – Rich Welsh
- Tour of Wing Aviation Aircraft Services (Lone Star Executive Airport)

Figures 24 through 29 are pictures of Day 6 activities.



**Figure 24. Students Working on Their Model Rockets.**



**Figure 25. Students Putting Finishing Touches on Their Rockets.**



**Figure 26. Debbie Jasek Thanks Rich Welsh of Wings Over Houston For His Presentation.**



**Figure 27. Students Tour Wing Aviation Services in Conroe.**



**Figure 28. Students Are Treated to a Tour of the Maintenance Hangar at Wing Aviation Services.**



**Figure 29. Students Get a Close-Up View Inside a Gulfstream Business Jet.**

## **DAY #7 COMMERCIAL AVIATION**

**Tuesday, June 21, 2005**

Objective: Familiarize students with the complex components and operations of a major airline and a major airport and the role they play in our society; expose students to the career opportunities at airlines and airports and their educational requirements.

- Travel to George Bush Intercontinental Airport
- Tour of George Bush Intercontinental Airport. Facilities included:
  - Continental Airlines Maintenance Hangar and 767 in the maintenance bay
  - Airside facilities/ramp area
  - Airport Rescue and Firefighting Facility
  - Lunch at Skyroom in passenger terminal A
  - Tour of new international passenger terminal and U.S. Customs and Border Protection facilities including dog search demonstration
- Travel to Lone Star Convention and Expo Center

Figures 30 through 41 are pictures of Day 7 activities. The day's numerous activities were organized and directed by Mr. Jeff Kelly of the Houston Airport System. He is shown in Figure 41.



**Figure 30. A Boeing 767 Sits in a Maintenance Hangar Before a Flight to Amsterdam.**



**Figure 31. Students Look Up into the Electronics Bay of the 767.**



**Figure 32. Students Check Out the Passenger Cabin on the 767.**



**Figure 33. Students at the Controls of the 767.**



**Figure 34. Continental Official Gives a tour of the Spare Engine Room.**



**Figure 35. Houston Intercontinental Operations Staff Escort the Students from the Maintenance Hangar to the Airport Rescue and Fire Fighting Station.**



**Figure 36. City of Houston, Airport Rescue and Fire Fighting Station.**



**Figure 37. Students Get a Demonstration of Fire Fighting Equipment.**



**Figure 38. Students View the Fire Fighting Equipment Up Close.**



**Figure 39. Students Get an Inside Look at an ARFF Vehicle.**



**Figure 40. Students Listen as Fire Fighters Discuss Their Jobs.**



**Figure 41. Students Tour the New Customs and Border Protection Operation at the New International Terminal at Houston Intercontinental Airport.**

## **DAY #8 MILITARY AVIATION**

**Wednesday, June 22, 2005**

Objective: Familiarize students with career opportunities in the military; expose them to the Apache helicopter operations and functions of the Texas Air National Guard.

- Model Rocket Activity: Continue building model rockets
- Video: *Military and Civil Helicopters*
- Tour of Air National Guard Facility and Apache Operations (this activity included a presentation from U.S. Army personnel on careers in the Army. It also included an opportunity to sit in an Apache Helicopter.)
- Tour of Drug Enforcement Agency (aviation services) facilities at Lone Star Executive Airport

Figures 42 through 46 are pictures of activities that occurred on Day 8.



**Figure 42. Students Listen to Chief Warrant Officer Ken Denney Talk about Military Aviation.**



**Figure 43. A Student Tries on Some of the Equipment Worn by Military Helicopter Pilots.**



**Figure 44. Students Are Treated to a Rare, Up Close View of the Apache Attack Helicopter.**



**Figure 45. Students Listen to a Presentation by the Drug Enforcement Agency and the Aviation Services They Provide.**



**Figure 46. Students View a Helicopter Used by the DEA.**

## **DAY #9 NASA**

**Thursday, June 23, 2005**

Objective: Expose students to the world of space exploration; familiarize them with the roles and responsibilities of NASA; expose them to the career opportunities in science, engineering, and aviation at the agency and its related contractors.

- Travel to NASA's Johnson Space Center in Houston
- Tour Space Center (the group took the guided tour of Mission Control and the International Space Station facilities and had the remainder of time available for the movies and other displays and activities in the visitor's center)
- Lunch was at the restaurant at the Space Center
- Travel to Lone Star Convention and Expo Center

Figures 47 through 49 are pictures of activities that occurred on Day 9.



**Figure 47. Students Board the Tram for the NASA Tour.**



**Figure 48. The Mock-Up of the Space Station.**



**Figure 49. The Mock-Up of the Space Shuttle.**

## **DAY #10 GRADUATION CEREMONY**

**Friday, June 24, 2005**

Objective: Celebrate the completion of a learning process; reflect on the experience; provide feedback on the program to the directors.

- Program wrap-up and discussion
- Program evaluations
- Graduation Ceremony
- Graduation speaker: Mr. Mark Whitman, Vice President, Wing Aviation
- Lunch/reception for students and parents/family

Figures 50 through 52 are pictures of activities that occurred on Day 9. Figure 53 is a group picture of the Summer Aviation Institute, including the program directors, taken at the Lone Star Executive Airport terminal building.



**Figure 50. Students and Parents Attend the Graduation Ceremony and Reception.**



**Figure 51. Wing Aviation Vice President Mark Whitman Delivers the Graduation Ceremony Address.**



**Figure 52. Students and Parents Listen to Mr. Whitman's Remarks on His Exciting Career in Aviation.**



**Figure 53. The 2005 Texas Summer Aviation Institute.**

## **CHAPTER 4 MARKETING, RECRUITING, AND PARTNERING**

Once a program of this nature has been developed, the program directors often rely on a network of professional colleagues to assist them in marketing and recruiting students into the program. This effort was no exception and it was successful because of the many partners and partnerships that were established along the way. This chapter summarizes the marketing and recruiting efforts made for the Texas Summer Aviation Institute and discusses the partnerships established along the way.

### **MARKETING AND RECRUITING**

Prior to developing and distributing any marketing materials, members of the project team met with Conroe Independent School District officials regarding our desire to recruit students from the Conroe high schools. Program staff met with Mr. Christopher Hines, assistant superintendent for secondary education and Mr. Jerry Cox, career and technology coordinator for the district. Permission was given and they provided some insight as to where and how we may attempt to publicize our summer program and recruit students. Conroe school officials agreed to assist us in distributing any information materials to the high schools and making announcements during the announcement period over several days. As a side note, it was during this meeting that the district officials offered their transportation services, at cost, for the field trips taking place. From a risk management perspective, this alternative had many advantages including the support of parents and the risk management/legal advisors.

Following that meeting, a marketing brochure was developed and distributed in the schools along with an application. The brochure, application, and other forms required by the program participants are shown in Appendix A. In addition, several poster size brochures were created for each of the high schools to capture those students who may not have been aware of the program through the earlier distribution and announcements. Members of the program staff also actively recruited at Conroe High School for several hours during the lunch periods. An information table was set up for students to pick up applications and ask questions.

Additional assistance for recruiting was provided by Dr. May Jo Parker, headmaster of the Academy of Science and Health Professions at Conroe High School. Dr. Parker's program, aside from catering to students interested in pursuing science careers, has an internship requirement. Her access to motivated students and her support of our summer institute made for a great partnership of mutual benefit.

## **PARTNERING**

### **Federal Aviation Administration – Aviation Career Education (ACE Academy)**

For many years, the Federal Aviation Administration has been partners with universities and non-profit organizations around the country to provide non-monetary support to programs exposing students to aviation. These Ace Academies, as they are known, typically run for a week and involve exposure to some facets of aviation and include an introductory airplane ride. Having an agreement in place with the FAA to use their "Ace Academy" moniker also has its benefits. It allows the use of the FAA logo on promotional material and, more importantly, provides enhanced access to FAA facilities when conditions permit. With the current security environment, access to federal facilities has been curtailed. Partnering with the FAA increases the likelihood that your academy will get in to see the many fascinating facilities under FAA management. Partnering with the FAA also opened the door for FAA officials to come and speak to the academy as well.

Members of the project staff traveled to the FAA Southwest Region Headquarters in Fort Worth, Texas to meet with the regions external programs coordinator, Ms, Debra Myers, who oversees the Ace Academy program in the Southwest Region. The Texas Transportation Institute and the Federal Aviation Administration were able to form a partnership allowing the Texas Summer Aviation Institute to become an Ace Academy and benefit from the support provided by FAA officials in the Southwest Region. The draft guidelines for the Ace Academy set forth by the FAA is located in Appendix B along with the draft of the cooperative agreement.

Because of this partnership, the FAA allowed our program access to the control tower at Houston Intercontinental Airport, the terminal radar approach control facility located at Houston Intercontinental, and the flight service station located at the Lone Star

Executive Airport in Conroe. In addition, the partnership has been invaluable in bringing credibility to our program. There are also the advantages it brought in terms of our ability to gain access to other organization's facilities. There is little doubt that having the support of the FAA assisted us in seeing and visiting many of the places on our schedule.



## **CHAPTER 5 SELECTED ADMINISTRATIVE DETAILS**

Planning the summer institute involves numerous administrative details. These range from providing a base of operation to food services and transportation services to and from field visits. Any program involving minor children also has additional requirements and concerns. The purpose of this chapter is to highlight some of those administrative details and provide costs for use in planning future institutes.

### **ROOM RENTAL**

Among the first concerns is finding a location to base the institute. Room rentals will likely vary from nothing to several hundred dollars for the period of the program. These costs will also be dependent on the size of the facility and any audio/visual needs. In the case of the Summer Aviation Institute, we wanted a location near the airport where students would be dropped off and picked up every day. All of the activities and field trips started at this point to minimize any confusion on where parents needed to be on any given day. We also wanted a location where we could leave materials in the room over night and minimize moving equipment and other resources every night. Room charges for the program were \$800.00 for the two-week program and included many amenities.

### **TRANSPORTATION**

Transportation for the Summer Aviation Institute was provided by the Conroe Independent School District. Travel by school bus is widely acknowledged as the safest way to transport students. To minimize any concerns with this issue, school buses were used for all of the field trips. The charge for using school buses for the field trips was \$2.24 per mile with a downtime charge of \$15.00 per hour. The five field trips to the Houston area cost approximately \$1,500.

### **FOOD SERVICES**

Food for the Summer Aviation Institute consisted of lunch, snacks, and drinks for the students. Charges varied as lunch ranged from \$6.00 to \$8.00 per person depending on what the selection was and whether or not a drink was included. Snacks were also

included for students during breaks throughout the day. This cost was in the \$2.00 to \$3.00 per person range. On field trips, snacks and coolers of drinks were taken with us as the weather was quite hot and the buses were not always air conditioned. On two occasions, lunches were provided by outside organizations that we visited. Project funds were not used for food. Students were charged a registration fee to cover ineligible project expenses.

## **LEGAL/RISK MANAGEMENT**

The project team initiated contact with both legal and risk management functions of the Texas A&M University System. Conversation with a system associate general counsel began in December of 2004. Subsequent to the initial conversation, discussions took place that led to the development of a Texas A&M University System Waiver and Hold Harmless form. Additionally, an application for insurance was filed by the program directors. This application included a detailed program of institute activities. This application led to a meeting of numerous system and TTI risk management officials and was also attended by the associate general counsel who developed the waiver. The waiver form is shown for reference purposes in Appendix A.

### **Insurance**

Insurance for the students in the summer institute was purchased through the Risk Management office of the Texas A&M University System. The insurance coverage included accident medical and general liability. Once sufficient information is provided, the risk management office deems the program low, medium, or high risk. They then provide the coverage. For accident medical, the rates are \$0.30, \$0.40, or \$0.50 cents per student per day. For general liability, the rates are \$0.25 per person per day for a day camp or \$0.30 per person per day for an overnight camp. As shown, insurance coverage for the summer institute was a small cost. Additional information on the coverage and any limits is available from the Texas A&M University System Risk Management Office.

## MISCELLANEOUS FEES/EXPENSES

In addition to the standard expenses associated with the institute that are noted above, there are other expenses that are associated with specific activities in the program. Listed below are some of the additional expenses made for the Summer Aviation Institute's activities.

- National Aeronautics and Space Administration (NASA): Admission \$8.95 per person group rate. Lunch at the visitor's center was \$7 per person and outside food was not allowed;
- Model Rockets and starter set for the rocket build and launch activity: Approximately \$200;
- T-shirts for students: \$10 - \$20 per shirt;
- Plotters/E-6Bs for flight planning exercise: Approximately \$100
- Videos used throughout program: TxDOT Aviation Video Library (Free)  
Call TxDOT at (800) 68-PILOT (687-4568)

## COMMENTS AND QUESTIONS

Any questions about the development and implementation of the 2005 Texas Summer Aviation Institute can be directed to any of the Program Directors listed below.

Jeff Borowiec  
Texas Transportation Institute  
Texas A&M University System  
3135 TAMU  
College Station, TX 77843-3135  
Phone: (979) 845-5200  
Fax: (979) 845-7548  
E-Mail: [j-borowiec@tamu.edu](mailto:j-borowiec@tamu.edu)

Debbie Jasek  
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Texas A&M University System  
3135 TAMU  
College Station, TX 77843-3135  
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Fax: (979) 845-6001  
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Jeff Bilyeu  
Airport Director  
Lone Star Executive Airport  
10260 Carl Pickering Memorial  
Conroe, TX 77303  
Phone: (936) 788-8311  
Fax: (936) 760-6993  
E-Mail: [jbilyeu@co.montgomery.tx.us](mailto:jbilyeu@co.montgomery.tx.us)

Peter Dittmer  
Assistant Professor and Director  
Airway Science Program  
Texas Southern University  
3100 Cleburne Avenue  
Houston, TX 77004  
Phone: (713) 313-1846  
Fax: (713) 313-1821  
E-Mail: [Dittmer\\_pm@tsu.edu](mailto:Dittmer_pm@tsu.edu)

## **EVALUATIONS**

Evaluations for the program were administered by the program staff to the participants on the final day of the summer institute. The results were very positive and two-week program was very well received. The students singled out many of the guest speakers as being their favorite. Some of the biggest highlights, according to students, were the visit to Houston Intercontinental Airport and the Continental Airlines maintenance hangar, the discovery flights, and the Rich Welsh from the Wings Over Houston organization.

## **THANK YOU**

A debt of gratitude is owed to the many people and organizations that made this summer institute possible. They include:

- Southwest University Transportation Center
- Texas Transportation Institute
- Lone Star Executive Airport and Montgomery County, Texas
- Texas Southern University
- Federal Aviation Administration
  - Debra Myers, External Programs, Southwest Region
  - Bob Myer, Houston ARTCC
  - Jim Thomas, Flight Service Station, Conroe
- Texas Department of Transportation, Aviation Division
  - Bill Gunn
  - Karon Wiedemann
- Chris Hines, Conroe Independent School District
- Mary Jo Parker, Academy of Science and Health Professions, Conroe High School
- Martha Newsome, The 99s
- Universal Weather
  - Dave Gorham
  - Scott Moore

- Rich Harper
  - Jim Reed
- John Van Paasschen, MVP Aero Academy
- Wing Aviation
  - John Wing
  - Mark Whitman
- Rich Welsh, Wings Over Houston
- Jay Carpenter, Texas Aviation Association
- Jeff Kelly, Houston Airport System
- Richard Renner, U.S. Department of Homeland Security, Customs and Border Protection
- Ken Denney, U.S. Army Reserve Facility
- U.S. Drug Enforcement Agency



## **APPENDIX A**



# ***Texas Summer Aviation Institute***



**June 13-17 and 20-24, 2005**  
**Conroe, Texas**

*Designed for High School Sophomores*

Sponsored by

**SOUTHWEST UNIVERSITY TRANSPORTATION CENTER  
TEXAS TRANSPORTATION INSTITUTE  
TEXAS SOUTHERN UNIVERSITY  
LONE STAR EXECUTIVE AIRPORT, MONTGOMERY COUNTY, TEXAS  
FEDERAL AVIATION ADMINISTRATION**



This 2-week program exposes students to many aspects of aviation focusing on career and educational opportunities through a multi-faceted approach that includes hand-on activities, field visits, discussions, guest lectures, and a 30-minute discovery flight.



The 2-week program runs daily from 9:00 a.m. to 4:00 p.m. The cost includes lunch, snacks, t-shirt, discovery flight, and more. Activities will begin and end at the Lone Star Convention and Expo Center 9055 Airport Road (FM 1484), Conroe, TX. Participants must complete and return application including the required essay by **June 3, 2005**.

## **Planned activities include:**

- **NASA's Johnson Space Center**
- **Federal Aviation Administration Facilities**
- **Houston's George Bush Intercontinental Airport**
- **Universal Weather**
- **Texas Southern University, Aviation Science Program**
- **Wings Over Houston / Commemorative Air Force**
- **Texas Air National Guard – Apache Helicopter Unit**
- **General Aviation/Corporate Aviation Fixed-Base Operators**
- **30-minute Discovery Flight**
- **And More.....**



**Cost: \$85**

**Questions:** Call Jeff Borowiec (979) 845-5200, Debbie Jasek (979) 845-5239, or Jeff Bilyeu (936) 788-8311

For application, log on to [http://ttiresearch.tamu.edu/j-borowiec/summer\\_aviation\\_institute/](http://ttiresearch.tamu.edu/j-borowiec/summer_aviation_institute/)

Parent Orientation Meeting will take place June 9, 2005 at 6:00 p.m. at the Lone Star Convention and Expo Center, 9055 Airport Road (FM 1484), Conroe, TX 77303 (936) 538-8000



**2005 TEXAS SUMMER AVIATION INSTITUTE  
SECONDARY SCHOOL STUDENT APPLICATION**

(Please Print Clearly)

Name \_\_\_\_\_ SS# \_\_\_\_\_ Gender \_\_\_\_\_

Mailing Address \_\_\_\_\_

Parents/Guardian \_\_\_\_\_

Address (if different) \_\_\_\_\_

Telephone (Home) \_\_\_\_\_ (Work) \_\_\_\_\_

School Attending Spring 2005 \_\_\_\_\_

School Mailing Address \_\_\_\_\_

Guidance Counselor \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_ E-Mail \_\_\_\_\_

Grade Point Average \_\_\_\_\_

List your math and science class for the Spring Semester 2005

Math \_\_\_\_\_ Science \_\_\_\_\_

List your math and science class for the Fall Semester 2005

Math \_\_\_\_\_ Science \_\_\_\_\_

**Awards/Achievements/Organizations**

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**Required Essay:** Describe your career objective(s), your interest in aviation, and how the Summer Aviation Institute can assist you in reaching your goals. Your essay can be under a page and should be about why you want to attend Summer Aviation Institute. Your essay may be hand written if you do not have access to a computer as long as it is legible.

**Additional Information:**

**Applications will not be processed with incomplete information. All materials must be provided to the Project Coordinator or Project director at the addresses below no later than Wednesday, May 15, 2005.**

**Inquiries:**

**Jeff Borowiec**  
Texas Transportation Institute  
Texas A&M University System 3135 TAMU  
College Station, TX 77843-3135  
Phone: (979) 845-5200  
Fax: (979) 845-7548  
E-Mail: [j-borowiec@tamu.edu](mailto:j-borowiec@tamu.edu)

**Debbie Jasek**  
Texas Transportation Institute  
Texas A&M University System 3135 TAMU  
College Station, TX 77843-3135  
Phone: (979) 845-5239  
Fax: (979) 845-6001  
E-Mail: [d-jasek@tamu.edu](mailto:d-jasek@tamu.edu)

**Jeff Bilyeu**  
Airport Director  
Lone Star Executive Airport  
10260 Carl Pickering Memorial  
Conroe, TX 77303  
Phone: (936) 788-8311  
Fax: (936) 760-6993  
E-Mail: [jbilyeu@co.montgomery.tx.us](mailto:jbilyeu@co.montgomery.tx.us)

Please return completed application form to:

**Jeff Borowiec**  
**Texas Transportation Institute**  
**Texas A&M University System**  
**3135 TAMU**  
**College Station, TX 77843-3135**



**PARTICIPANT WAIVER AND HOLD HARMLESS FORM  
THE TEXAS A&M UNIVERSITY SYSTEM**

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1. In consideration for receiving permission to participate in the Summer Institute program (herein referred to as ACTIVITY), which is sponsored by Texas Transportation Institute (the Sponsor), a component member of The Texas A&M University System, I hereby **RELEASE, WAIVE, DISCHARGE, AND COVENANT NOT TO SUE, AND AGREE TO HOLD HARMLESS** for any and all purposes Texas Transportation Institute (TTI), The Texas A&M University System (TAMUS), the Board of Regents for The Texas A&M University System (BOR), and their officers, servants, agents, volunteers, or employees (herein referred to as RELEASEES) **FROM ANY AND ALL LIABILITIES, CLAIMS, DEMANDS, OR INJURY, INCLUDING DEATH**, that may be sustained by my son/daughter while participating in such activity, or while on the premises owned or leased by RELEASEES, including **INJURIES AND/OR DEATH SUSTAINED AS A RESULT OF THE NEGLIGENCE OF RELEASEES**. I acknowledge there may be physically strenuous activities. I know of no medical reason why my son/daughter/ward should not participate. I understand that the Summer Institute program will include at least one introductory airplane flight in a single engine piston airplane and that such airplane flights contain inherent risks which could include severe bodily injury and/or death.

2. I am fully aware that there are inherent risks involved with ACTIVITY, including but not limited to severe bodily injury and/or death and I choose to voluntarily allow my son/daughter/ward to participate in said activity with full knowledge that said activity may be hazardous to them and/or their property. **I VOLUNTARILY ASSUME FULL RESPONSIBILITY FOR ANY RISKS OF LOSS, PROPERTY DAMAGE OR PERSONAL INJURY, INCLUDING DEATH**, that may be sustained by my son/daughter/ward as a result of participating in said activity including **INJURIES AND/OR DEATH SUSTAINED AS A RESULT OF THE NEGLIGENCE OF RELEASEES**. I further agree to indemnify and hold harmless the RELEASEES for any loss, liability, damage or costs, including court costs and attorney's fees that may occur as a result of the participation of my son/daughter/ward in said activity.

3. I understand that RELEASEES do not maintain any insurance policy covering any circumstance arising from the participation of my son/daughter/ward in this activity or any event related to that participation. As such, I am aware that I should review my personal insurance coverage.

4. It is my express intent that this Covenant Not to Sue and Agreement to Hold Harmless shall bind the members of my son's/daughter's/ward's family and spouse, if they are alive, and their heirs, assigns and personal representatives, if they are deceased, and shall be governed by the laws of the State of Texas.

5. In signing this Covenant Not to Sue and Agreement to Hold Harmless, I acknowledge and represent that I have read the foregoing Covenant Not to Sue and Agreement to Hold Harmless, understand it and sign it voluntarily as my own free act and deed; no oral representations, statements, or inducements apart from the foregoing agreement that has been reduced to writing have been made. I execute this document for full, adequate and complete consideration fully intending to be bound by the same, now and in the future. I have the authority as parent and/or legal guardian to execute said document on behalf of my son/daughter/ward.

SIGNED this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Participant Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Parent or Legal Guardian Signature: \_\_\_\_\_  
(If Participant is under 18 years old)

Parent or Legal Guardian Printed Name: \_\_\_\_\_  
(If Participant is under 18 years old)

Witness Signature: \_\_\_\_\_

Witness Printed Name: \_\_\_\_\_

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**INSTRUCTIONS TO SPONSORS**

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1. Complete all blanks in form prior to execution.
2. Provide copy of executed form to Participant.
3. If a special event or other policy of insurance is in effect for the Activity, delete paragraph 3 and initial.
4. Attach additional pages as necessary to describe Activity or Inherent Risks, and have Participant initial all such pages at the time of execution of this document.
5. Keep this release on file in appropriate office of Sponsor.

**MONTGOMERY COUNTY, TEXAS  
AUTHORIZATION, INDEMNIFICATION AND RELEASE OF LIABILITY FORM**

Name of Participant: \_\_\_\_\_

Address: \_\_\_\_\_ Phone No \_\_\_\_\_

Sponsoring Organization Name: Texas A & M University    Name of activity/event: Texas Summer Aviation Institute  
Date(s) of Event: June 13, 2005 through June 24, 2005

**INDEMNIFICATION:** I, \_\_\_\_\_, AND WE, THE UNDERSIGNED PARENT(S) OR GUARDIAN OF \_\_\_\_\_, RECOGNIZE AND VOLUNTARILY ASSUME THE RISKS ASSOCIATED WITH PARTICIPATION IN THE Texas Summer Aviation Institute (ACTIVITY/EVENT), AND AGREE TO INDEMNIFY, HOLD HARMLESS AND RELEASE MONTGOMERY COUNTY, TEXAS, ITS OFFICIALS, AGENTS, EMPLOYEES, ASSIGNS AND VOLUNTEERS FROM AND AGAINST ANY AND ALL ACTIONS, CLAIMS, COSTS, DAMAGES, AND COURT COSTS, INCLUDING ATTORNEYS FEES, ARISING FROM OR IN ANY WAY ASSOCIATED WITH OR ATTRIBUTED TO MY PARTICIPATION IN THE EVENT/ACTIVITY LISTED ABOVE OR THE USE OF ANY COUNTY FACILITY, COUNTY EQUIPMENT OR COUNTY MOTOR VEHICLE WHICH MAY BE USED IN FURTHERANCE OF THE AFORESAID ACTIVITY, INCLUDING MALFEASANCE, MISFEASANCE OR NONFEASANCE WHILE ACTING "IN LOCO PARENTIS."

I, AND WE, UNDERSTAND THAT A PHOTOCOPY OF THIS AUTHORIZATION IS AS VALID AS THE ORIGINAL. I, AND WE, CERTIFY THAT \_\_\_\_\_ HAS NO PHYSICAL OR MENTAL IMPAIRMENT, ILLNESS OR DEFECT, EITHER LATENT OR PATENT, THAT EITHER PRECLUDES ME FROM OR INCREASES THE RISKS TO ME OF PARTICIPATING IN THIS ACTIVITY, THAT I AM NOT UNDER TREATMENT BY ANY PHYSICIAN AND I AM NOT TAKING ANY MEDICATION WHICH WOULD REQUIRE SPECIAL CARE OR ATTENTION. I AM CAPABLE OF FULL PARTICIPATION IN THIS ACTIVITY.

I, AND WE, HAVE CAREFULLY READ THIS RELEASE OF LIABILITY AND FULLY UNDERSTAND ITS CONTENTS. I, AND WE, ARE AWARE THAT THIS IS A RELEASE OF LIABILITY AND A CONTRACT BETWEEN MYSELF AND MONTGOMERY COUNTY AND SIGN IT OF MY OWN FREE WILL.

Participant's Printed Name \_\_\_\_\_ Signature of Participant \_\_\_\_\_ Date \_\_\_\_\_

If participant is a minor, both parents must sign, unless only one parent has legal custody.

Father's Signature \_\_\_\_\_ Date \_\_\_\_\_ Mother's Signature \_\_\_\_\_ Date \_\_\_\_\_

Legal Guardian's Signature \_\_\_\_\_ Date \_\_\_\_\_

**NO ONE WILL BE ABLE TO PARTICIPATE IN ANY COUNTY-AUTHORIZED ACTIVITY OR RIDE IN ANY COUNTY VEHICLE UNLESS THIS AUTHORIZATION, INDEMNIFICATION AND RELEASE OF LIABILITY FORM IS SIGNED AND RETURNED TO THE COUNTY.**

## 2005 TEXAS SUMMER AVIATION INSTITUTE



Texas Southern University • Texas Transportation Institute • Lone Star Executive Airport

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### REGULATIONS

We are excited to have you join use for the 2005 Texas Summer Aviation Institute. We are responsible for your safety and well being at all times. Guidelines, rules, and regulations are important and necessary to meet the objectives of the program. The following are regulations for Institute participants:

1. We expect participants to display courteous and professional behavior toward their peers, faculty, staff, and professionals at all times.
2. Attendance at program activities is expected. Only excused absences from the Institute Director will be accepted. Students must report illness, injury, etc., to the Institute Director and Project Coordinator to be excused from activities. Violations may lead to dismissal from the program.
3. Students are not permitted to leave unescorted. Any student found or reported leaving is subject to immediate dismissal.

I have read and understand the above regulations.

Print Name (Student) \_\_\_\_\_

Signature (Student) \_\_\_\_\_

Date \_\_\_\_\_

Print Name (Parent/Guardian) \_\_\_\_\_

Signature (Parent/Guardian) \_\_\_\_\_

Date \_\_\_\_\_

## 2005 TEXAS SUMMER AVIATION INSTITUTE



Texas Southern University • Texas Transportation Institute • Lone Star Executive Airport

## PERSONAL ITEMS AND DRESS CODE

### LIST OF ITEMS YOU WILL NEED TO BRING:

- Book Bag / Carry-All
- Medication \*

### ITEMS PROVIDED:

- Journal
- Folder
- Penn/Pencil

### DRESS CODE AND RESTRICTIONS

Comfortable clothes and walking shoes are appropriate for most Institute activities. When choosing your clothing please remember that you will be representing the Summer Aviation Institute as well as the Texas Transportation Institute, Texas Southern University and Lone Star Executive Airport. Participants will be notified if business attire (dresses or suits for women and slacks and ties for men) will be required. Additionally some field trips require participants to wear slacks or trousers (no shorts) and closed toe shoes (no sandals), participants will be notified the day prior to the trip.

#### Women:

- Shorts (**Extremely short or mini-skirts are not acceptable**).
- T-shirts, shirts, etc. (all tops must cover entire torso).

#### Men:

- All trousers, jeans, or shorts must fit to waistline with belts (**those falling below waistline are not acceptable**).
- T-shirts, shirts, etc. (All tops must cover entire torso).

- \* All medications must be accompanied by a signed letter from an attending physician explaining dosage and any instructions for Institute staff.

## 2005 TEXAS SUMMER AVIATION INSTITUTE



Texas Southern University • Texas Transportation Institute • Lone Star Executive Airport

### HEALTH HISTORY

Please fill out this form as it is for your child's safety and welfare while on campus and during all activities. The signature of a physician is NOT required. Please print clearly.

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Age \_\_\_\_\_ Gender \_\_\_\_\_

Past and Present History of Illness or Injury:

Does your child have a history of any of the following:

1. Chronic Disease \_\_\_\_\_
2. Heart Disease (Mitral Valve Prolapse, Murmur) \_\_\_\_\_
3. Lung Disease (Tuberculosis, Asthma) \_\_\_\_\_
4. Neurological (Seizures, Migraine) \_\_\_\_\_
5. Mental (Nervousness) \_\_\_\_\_
6. List any recent past injuries or hospitalizations \_\_\_\_\_
7. Has he/she ever passed out? \_\_\_\_\_
8. List any lengthy illness: \_\_\_\_\_
9. List any vision problems: \_\_\_\_\_
10. Sinusitis: \_\_\_\_\_
11. Hearing Loss: \_\_\_\_\_
12. Anemia / Sickle Cell Disease or Trait: \_\_\_\_\_

Texas Transportation Institute • 3135 TAMU • College Station, TX 77843-3135

## 2005 TEXAS SUMMER AVIATION INSTITUTE



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13. Rheumatic Fever: \_\_\_\_\_

14. List any injury or broken bones:

Neck	Elbow	Back
Collar Bone	Wrist	Pelvis
Ankle	Shoulder	Hand
Arm	Ribs	Leg

15. List any physical challenges: \_\_\_\_\_

16. Is he/she on any medications? \_\_\_\_\_

17. List any allergies to food, medications, plants, etc. \_\_\_\_\_

18. Please list any injuries or conditions not included above.

\_\_\_\_\_

\_\_\_\_\_

I certify that the above information is true and that the individual named on this form is in good health and able to take part in all 2004 Texas Summer Transportation Institute activities at Paul Quinn College with the exceptions that I have written in this form.

I also understand that no physician is available on the campus of Paul Quinn College during the summer; however, professional nurses will be available. I give permission for limited treatment for minor illnesses and/or injuries. Emergency illness will be referred to the nearest medical facility for care at the expense of the parent or qualify under insurance provided by the Institute.

Signature (Parent/Guardian) \_\_\_\_\_ Date \_\_\_\_\_

Phone Number to Contact in the Event of an Emergency \_\_\_\_\_

Name Primary Care Physician \_\_\_\_\_ Physician's Phone Number \_\_\_\_\_

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Texas Transportation Institute • 3135 TAMU • College Station, TX 77843-3135

2005 TEXAS SUMMER AVIATION INSTITUTE



Texas Southern University • Texas Transportation Institute • Lone Star Executive Airport

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**RELEASE FORM  
PERMISSION TO TAPE OR PHOTOGRAPH**

I grant written permission to Texas Transportation Institute, Texas Southern University, and Lone Star Executive Airport hosts of the 2005 Texas Summer Aviation Institute, to make videotapes or photographs of the above named child.

I further authorize the use of such photographs or tapes for brochures, press releases, or other recruitment materials without prior inspection on my part.

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Print Name (Student)

Date of Birth

---

Print Name (Parent/Guardian)

---

Signature (Parent/Guardian)

Date

---

Signature of Witness

Date

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## **APPENDIX B**



## **FAA AVIATION CAREER EDUCATION “ACE” ACADEMY ADMINISTRATIVE GUIDELINES**

**BACKGROUND:** FAA developed the ACE Academy program in 1991 under the auspices of the FAA’s Aviation and Space Education Program (FAA Order 1250.2A). ACE academies are programs designed to offer students a behind-the-scenes look at aviation careers. This program encourages diversity and provides young people with opportunities to pursue an interest in aviation careers that might otherwise be unattainable. ACE academies are conducted in partnership with host organizations (public, private, educational, or non-profit).

**PROGRAM MANAGEMENT.** The FAA’s Aviation and Space Education (AVSED) Outreach Program comes under the leadership of the Assistant Administrator for Region and Center Operations. Each region’s AVSED program manager administers FAA’s national program goals and is your contact within FAA for planning, conducting, and evaluating your ACE program.

**CONDITIONS:** To become affiliated with FAA as an ACE academy host, coordination with the AVSED program manager is required, and a partnership agreement is signed. Once the partnership is established, the host may use the FAA and ACE academy logos on ACE promotional materials.

**ACE ACADEMY DIRECTOR.** Each host institution will designate an ACE director as the focal point for coordination of the program with FAA.

**FUNDING.** FAA does not provide funds for ACE academies.

- The program may require an investment on the part of the host institution; however, hosts can offset their expenses through grants, sponsorships from the aviation community, donations in kind, local and state support, and so forth.
- A host may charge a tuition fee, payable to the host institution.
- The possibility of offering a free or low cost program opens the door to disadvantaged youth who might not otherwise have the opportunity to attend.

**REGISTRATION PROCESS.** The registration process is the responsibility of the host organization. FAA can provide assistance with distribution via electronic bulletin boards and mail and advertising on web sites.

**DEMOGRAPHICS.** An FAA goal is to attract a minimum of 50 percent minority and female participants.

**STUDENT SELECTION** A letter of acknowledgement should be sent to the participants and parents with information on rules, agenda, introductory flight, transportation, emergency contact points, and any additional information, such as release forms, medical consent forms and so forth. A parent orientation session is recommended.

**LIABILITY.** Each host is responsible for insurance coverage for students while they are participating in an ACE academy. Educational institutions that sponsor youth programs have broad policies that cover this type of program.

**STAFFING.** The host institution is responsible for providing the ACE academy staff. As workload permits, FAA volunteers can be called upon to assist. To ensure quality leadership, the FAA requires that the host conduct background checks on all staff that will be working with the

students as facilitators, directors and/or chaperones. NOTE: A background check is not required for FAA employees, active duty military personnel, and Civil Air Patrol members with official CAP leadership-approved credentials.

**PUBLICITY.** The FAA will publicize the ACE academy through electronic bulletin boards and web sites. Your own public relations department should be on hand to issue press releases and contact the media and to photograph and document your camp' activities for your own assessment and for your report back to FAA..

**EVALUATIONS.** A program evaluation should be given to each student at the end of the program. ACE staff can also provide comments.

**PROGRAM COMPONENTS.** An ACE academy is typically 3-5 days long. The agenda should include aviation careers; history of flight; principles of flight; and other topics that supplement the aviation theme. The FAA program manager can provide suggestions and resource materials.

- Discovery Airplane Ride. Although not mandatory, offering an airplane ride is an effective way of reinforcing all of the concepts learned in the classroom. The ride can be considered a lab experience on the principles of flight, with students actually seeing how the forces act on the aircraft and how the controls function. In addition, the students can understand why navigation and charts are important and how air traffic control fits into the picture. The experience should include:
  - Preflight inspection. This might be the student's first contact with an airplane.
  - Taxi and pretakeoff. Demonstrate controls, and so forth.
  - Aircraft in flight. Demonstrate aircraft capabilities.
  - Landing. Demonstrate traffic patterns and landing techniques.
- Field Trips. One of the great advantages of aviation is the multitude of resources available to most locations. Field trips allow students the opportunity to ask questions and interact with aviation professionals.

**CLOSING SESSION.** The closing session should include a wrap-up of the activities giving the students an opportunity to reflect on their aviation experience. Students should complete an evaluation form. The closing session could include refreshments, presentation of certificates to students, a group photo, recognition of staff members, or other related activities.

**FOLLOW-UP REPORT TO FAA.** Each host is responsible for providing a summary report to the FAA program manager. The report should include number of students, demographics, evaluation and recommendations, photos, publicity articles, and so forth.

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**AVIATION CAREER EDUCATION “ACE” ACADEMY  
COOPERATIVE AGREEMENT**

**Between  
Federal Aviation Administration  
And  
Texas Transportation Institute**

Purpose: This agreement establishes a collaborative partnership to conduct Aviation Career Education (ACE) Academies in support of:

- FAA’s Aviation and Space Education Outreach Program – reference FAA Order 1250.2A (1/12/05), Goals 4b, 4c, 4f (see attachment 1).
- TTI’s Summer Transportation Institute.

Background: FAA developed the ACE Academy program in 1991 under the auspices of the FAA’s Aviation Education Program. ACE academies are summer programs designed to offer students a behind-the-scenes look at aviation careers. This program encourages diversity and provides young people with opportunities to pursue an interest in aviation careers that might otherwise be unattainable. ACE academies are not funded by the FAA, but implemented through partnerships and aviation community support.

TTI has been successful in developing the Summer Transportation Institute – a program that introduces students, primarily from minority schools, to career opportunities in transportation. FAA and TTI share common goals of promoting aviation and transportation career awareness to ensure a diverse, qualified workforce for the future.

This institution has been selected to participate in the ACE program because of the expertise of the staff in the areas of aviation and transportation-related curriculum, career exploration, resource personnel, and facilities. In addition, TTI can provide an environment that will nurture the interest of students and encourage diversity.

Conditions: To be affiliated as an official FAA ACE Academy partner, coordination and collaboration with the regional aviation education point of contact is required.

Effective Dates: The agreement becomes effective at the time of the last signature below. This document will remain in effect for 2 (two) years. This agreement may be terminated with the consent of both parties and for reasons understood and accepted by both parties.

For the Federal Aviation Administration

For Texas Transportation Institute

\_\_\_\_\_  
Ava L. Wilkerson, Regional Administrator

Date: \_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_



## **APPENDIX C**



**Potential Site Visits for Aviation Summer Institute Participants  
(Tours, Demonstrations, Interactives, etc.)**

**Houston**

1. George Bush Houston Intercontinental Airport
2. Houston Hobby Airport
3. NASA – Johnson Space Center
4. FAA Houston Center
5. Continental Airlines
6. Texas Southern University, Airway Science Facilities
7. Lone Star Executive Airport, Conroe
8. Flight Operations, Memorial Hermann Hospital, Houston
9. Lone Star Flight Museum, Galveston
10. 1940 Air Terminal Museum, Houston

**Dallas-Fort Worth**

1. Dallas-Fort Worth International Airport (noise center)
2. FAA Dallas Approach Control and Center ATC facilities
3. FAA Southwest Region Headquarters
4. Love Field
5. American Airlines Corporate Headquarters and Museum
6. Dallas Addison Airport
7. Fort Worth Meacham Airport
8. Downtown Dallas Vertiport
9. Alliance Airport

10. Southwest Airlines Corporate Headquarters
11. Aviation Heritage Museum, Ft Worth
12. Frontiers of Flight Museum, Dallas
13. Hangar 10 Flying Museum, Denton
14. Cavanaugh Flight Museum, Dallas
15. Vintage Flying Museum, Fort Worth

### **San Antonio**

1. San Antonio International Airport
2. Kelly USA/Former Kelly Air Force Base
3. Swearingen Manufacturing Facility
4. Stinson Field
5. Lackland AFB, San Antonio
6. Museum of Aerospace Medicine, Brooks AFB
7. Texas Air Museum, San Antonio

### **Austin**

1. Austin Bergstrom International Airport
2. Texas Department of Transportation, Aviation Division

### **El Paso**

1. El Paso International Airport

**Amarillo**

1. Amarillo International Airport
2. Boeing V-22 Osprey Manufacturing Facility
3. Amarillo Tradewinds Airport

**Other:**

1. Dyess AFB Linear Air Park, Abilene
2. Texas Transportation Museum, Amarillo
3. English Field Air & Space Museum, Amarillo
4. Hangar 25 Air Museum, Big Spring
5. Breckenridge Aviation Museum, Breckenridge
6. Corpus Christi Museum of Science & Industry
7. USS Lexington Museum, Corpus Christi
8. National Museum of the Pacific War, Fredericksburg
9. Flight of the Phoenix Museum, Gilmer
10. Rio Honda Air Museum near Harlingen
11. Aviation Museum of Texas, Kerrville
12. Vintage Aviation Historical Foundation, Kingsbury
13. Silent Wings Museum, Lubbock
14. American Airpower Heritage Museum, Midland

(Compiled from various sources)