

# **Advanced Transportation Institute 2006**

By

Daniel S. Turner, Marlo Wright, Jakkera Allen and Walter T. Anderson  
Department of Civil and Environmental Engineering  
The University of Alabama  
Tuscaloosa, Alabama

For

# **UTCA**

University Transportation Center for Alabama  
The University of Alabama, The University of Alabama at Birmingham,  
And The University of Alabama in Huntsville

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<b>16. Abstract</b>  <p>The fifth Advanced Transportation Institute was conducted in 2006 (ATI-06) to encourage high school students to pursue careers in the field of transportation engineering. The University Transportation Center for Alabama partnered with the Alabama Department of Transportation (ALDOT) to teach a one-week institute at ALDOT's central office headquarters in Montgomery, Alabama. The headquarters location provided access to practicing transportation professionals who served as lecturers, and it provided a real-life, transportation working environment.</p> <p>ATI-06 was open to rising high school juniors and seniors, with preference given to African Americans and females. Participants came from high schools in west central Alabama from which ALDOT typically recruits. Students were nominated to attend the Institute by their teachers and guidance counselors, using criteria provided by ALDOT.</p> <p>Institute presentations, lab experiences, and field trips were designed to give participants a general overview of ALDOT, an introduction to transportation engineering as a career, and hands-on examples and challenges. The comprehensive evaluation conducted at the end of the Institute indicated that the students enjoyed their experiences, and that they were influenced to consider transportation careers.</p> <p>The 20 student participants indicated that they enjoyed the experience, that they learned about transportation careers and ALDOT, and that (as a group) they were favorably influenced to consider transportation careers.</p>					
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## **Executive Summary**

The fifth Advanced Transportation Institute was conducted in 2006 (ATI-06) to encourage high school students to pursue careers in the field of transportation engineering. The University Transportation Center for Alabama partnered with the Alabama Department of Transportation (ALDOT) to teach a one-week institute at ALDOT's central office headquarters in Montgomery, Alabama. The headquarters location provided access to practicing transportation professionals who served as lecturers, and it provided a real-life transportation working environment.

ATI was open to rising high school juniors and seniors, with preference given to African Americans and females. Participants came from high schools in west central Alabama from which ALDOT typically recruits. They were nominated to attend the Institute by their high school teachers and guidance counselors, using criteria provided by ALDOT.

Institute presentations, lab experiences, and field trips were designed to give participants a general overview of ALDOT, an introduction to transportation engineering as a career, and hands-on examples and challenges. The comprehensive evaluation conducted at the end of the Institute indicated that the students enjoyed their experiences, and that they were influenced to consider transportation careers.

The 20 student participants indicated that they enjoyed the experience, that they learned about transportation careers and ALDOT, and that (as a group) they were favorably influenced to consider transportation careers.

## **Section 1 Introduction**

### **Problem Statement**

The University Transportation Center for Alabama (UTCA) established six goals to guide its development. Two of these goals involve human resources and diversity, and are intended to help Alabama meet its future need for transportation professionals.

The amount of young people entering the transportation profession is far below the number needed to fill the gap left by retiring professionals. Of this population, females and African Americans are extremely underrepresented. African Americans and female students are now experiencing “a closing but continuing gap in degree conferral rates...compared to their percentages in the general population” (Black Issues in Higher Education). The shortage of candidates in these groups hinders the increase in practicing transportation professionals, especially in the upper levels.

### **Project Approach**

After trying other approaches (scholarship, graduate assistantships, etc.), UTCA determined that the most appropriate course of action to expand transportation human resources and to improve diversity was to increase the awareness of high school students about opportunities in the transportation profession, with preference given to minority and female students.

A summer program called the Advanced Transportation Institute (ATI) was created in 2002 to allow representatives of transportation agencies and companies, along with practicing transportation professionals, to interact with students in a “real world” situation, and to provide insight into rewarding transportation careers. The institute was as informative and influential as possible by requiring that Institute staff members, ALDOT speakers and other professionals devote time to classroom and laboratory settings to present information, answer questions, and mentor individual students.

UTCA partnered with the Alabama Department of Transportation (ALDOT). The Personnel Bureau was ALDOT’s designated action group, since it was already charged with recruiting high school students, especially minorities and females. This made the partnership a win-win effort.

The initial ATI was patterned after UTCA transportation institutes conducted by Dr. Kathleen M. Leonard at the University of Alabama in Huntsville (UTCA report 00304 and 01326). The 2006 version of ATI was improved in response to suggestions from previous institute attendees and the availability of ALDOT presenters and facilities with expertise in particular fields. The morning sessions were filled with informative presentations, and the afternoon sessions featured projects, competitions, and field trips. The Alabama Road Builders Association and the Alabama Asphalt Pavement Association served as co-sponsors, and provided mentoring, field trips, mementos, and an award dinner at the conclusion of the week.

## **Section 2**

### **Recruiting Students**

#### **Marketing**

UTCA and ALDOT knew that marketing would be a critical element of the Institute, based on prior efforts. With ATI-06 immediately following the end of the high school academic year, obtaining early student commitments was important. Primary efforts were focused on making the Institute more exciting and memorable for students to increase its marketability.

The approaches utilized in previous Institutes provided good background materials in the development of marketing materials for ATI-06. Well in advance of the initial planning effort, several schools from the ALDOT recruiting area were contacted about their willingness to participate. Initially, the response rate was lower than anticipated. This led to a primary strategy of increasing the amount of written material provided to teachers and guidance counselors for delivery to interested students. An announcement sent to publicize the event, and UTCA and the Personnel Bureau developed and distributed a brochure to show all of the excitement.

Care was taken to make the distributed material straightforward and informative to increase its effectiveness. The material had numerous pictures illustrating the highlights of the program and to show how different and exciting events planned for ATI-06. General information about the Institute included the following topics:

- The overall objective
- The procedure for student nomination and selection
- Transportation career and transportation educational opportunities
- ATI activities, laboratories, and competitions
- Field trips
- Institute staff
- The overall experience

The program was advertised as an opportunity to learn about stimulating careers in the transportation profession and to learn how to prepare for college. ATI-06 was free of charge to participants to increase the program's attractiveness.

#### **Selection of Attendees**

Emphasis was placed on acquiring students who had potential, open minds, and genuine interest in the program. ALDOT took this message to school principals and guidance counselors, as well as county school system superintendents from within the typical ALDOT recruiting area. Focus was placed on schools from Lowndes, Montgomery, Wilcox, and Dallas counties. Each school was allowed to recommend up to five students and one alternate to participate in the Institute.

The idea was to identify a sizeable pool of candidates to increase participation above the previous year's attendance, and to guarantee 20 to 30 ATI-06 participants. The recruiting process proved tedious, because applications were not received by the deadline, and there were difficulties in contacting sponsoring teachers.

### **Contacts with Students**

In contacting the target schools, ALDOT provided an informative letter, a program announcement, a flyer, and an informative brochure. Students selected by the schools completed an application form, which was returned to either ALDOT or UTCA. The application form was a critical element because it allowed UTCA to begin a series of contacts with the students. UTCA contacted the students to inform them of the program's opportunities, to stimulate their interest, and to answer questions. Appendix A contains samples of this correspondence.

First, the participants received a welcoming letter containing information about the Institute and a registration form that they could return to indicate their acceptance of a position in ATI-06. Next, phone calls were made as time was available, to confirm each student's degree of interest in the Institute. During this call, the students' interest in ATI-06 was stimulated, questions were answered, and uncertainties of the students and their parents were addressed. A second letter was later sent, which included an acceptance form, a parental permission form, an overview of planned daily activities, and a map with detailed directions to ALDOT headquarters.

To alleviate the concerns of extensive travel, UTCA made travel arrangements for students from three schools that were located more than an hour from the instructional site. This included housing, travel, meals, and chaperone expenses. Additional letters and updates were sent to the affected students and their school's principals or sponsors.



## **Section 3**

### **Curriculum and Instruction Issues**

#### **Curriculum Development**

A balanced curriculum with informative sessions was desired, to make the Institute meaningful to all of the students and participants. The intent was important to provide a view of the wide range of transportation employment opportunities, and to illustrate how a technical education could put those jobs within reach.

A draft agenda was derived from the 2005 ATI sessions. Each day had a theme, or several related themes. For example, one day might emphasize bridges issues, and the next day might feature design issues. The draft schedule was updated to reflect recommendations from the previous year's students, speakers and facilitators. Once the draft agenda was approved, presenters and facilitators for the topics and field trips were identified and secured. The following list of major topics resulted from several iterations between UTCA, PEED, and other ALDOT bureaus (explained in more detail in Table 3-1):

- bridges/bridge design/underwater inspection of bridges;
- roadway materials;
- environmental;
- intelligent transportation systems;
- professional development/business etiquette
- roadway design and construction;
- traffic engineering;
- transportation career opportunities;
- transportation safety/safety enhancements; and
- University of Alabama/college admissions overview.

The starting and ending times (9:00 a.m. - 4:00 p.m.) were arranged so that commuter students could avoid rush hour traffic, and to keep the Institute short enough to prevent overburdening the participants. Efforts were made to simplify each day as much as possible to prevent confusion and to further streamline the schedule. One of the recommendations from prior years had been to allow students to move outside the ALDOT building for recreation, like a visit the Montgomery Zoo. This was added to the curriculum and was well received by in succeeding years, because it allowed time to relax and encourage further bonding. A copy of each day's finalized agenda, including speakers, may be found in Appendix B.

**Table 3-1: Curriculum topics and session contents**

Session Title	Session Description
ALDOT Careers	This presentation offered an overview of ALDOT, including its mission and career options in many exciting transportation-related fields.
Alabama Traffic Crash Facts	This session reviewed ALDOT's role in traffic safety by examining crash statistics and trends, and by applying them to the participants' lives.
Bridge Overview	This topic reviewed the variety of bridge types, construction methods and materials, and emphasized the importance of bridge inspection.
Computer Bridge Design	This presentation and lab session demonstrated the role of cost-effectiveness in the design of basic truss bridges, using the West Point Bridge Designer® computer software.
Environmental/Archeological Issues	This session addressed how proper road design recognizes and incorporates environmental concerns.
Materials and Testing	This session reiterated roadway construction materials. Demonstrations were given to show ALDOT's role in inspection and materials testing.
Pin and Straw Bridge Design	This lab session was used to show the importance of key design concepts like bridge symmetry, joint placement, and quality of construction.
Professional Development/Business Etiquette	Students were briefed on the importance of using proper etiquette in the business setting. Examples were given to further illustrate key concepts.
Program Overview	The purpose, goals and content of ATI-06 were explained to students in this initial session.
Roadway Design Process	This presentation illustrated the multiple considerations and interactions involved in the long process of road design and construction.
Roadway Safety	The second traffic safety module detailed risks involved in everyday driving, and how barrier and other safety devices reduce crash fatalities and injuries.
Safety Design Lab (Egg Drop Competition)	Students designed a safety container using the principles of energy absorption, to protect an egg dropped from the boom of a utility truck. The winning design achieved a 35-foot drop!
Safety Management	This session answered some of the participant's earlier safety questions. It also outlined cost/benefit warrants for traffic improvements.
Traffic Engineering	This lab session included reviews of signs, signals and pavement markings to illustrate how they are manufactured and used.
Underwater Bridge Inspection	ALDOT divers gave an overview of underwater bridge inspection. Students were able to try on equipment and learn about key requirements and risks.
University Overview	A University of Alabama recruiting specialist gave a short overview detailing college admission procedures, engineering courses, and university life.

## Conducting the Institute

The Institute was held in adjacent conference rooms at ALDOT headquarters. The rooms were easily accessible to the students and their parents. The rooms had excellent audiovisual equipment, and had ample space for presentations and student interaction sessions (breaks, snacks, and meals).

Presenters were transportation professionals from the University of Alabama, ALDOT, and the co-sponsors (the Alabama Road Builders Association and the Alabama Asphalt Pavers Association). Assistance with registration (and for all activities during the week) was provided

by members of the Personnel Bureau. One or more Personnel Bureau employees remained with the students throughout the duration of the Institute. They were available in the classroom each day, encouraged individual students, transported students to and from the field trip sites, distributed lunches and snacks, and provided presentation materials and other “as-needed” resources.

To make the students feel more welcome and appreciated, packets were given to each participant during the initial registration. This consisted of the following items provided by the sponsors and co-sponsors:

- institute agenda;
- t-shirt;
- pens, pencils, folders, etc.; and
- several other gifts.

During the week, the students were allowed to show their school spirit and to congregate throughout the presentations, but they were placed with members of different schools for the group projects. Most of the sessions were interactive, and encouraged students to ask questions and initiate deeper discussion. Some of the presenters even provided additional mementos to increase their impact on the students. A flexible timetable was used to allow extension of individual sessions so that discussions could address all concerns and questions of the students.

All things considered, the week ran rather smoothly. Students genuinely enjoyed interacting with ALDOT professionals in hand-on situations like concrete mix design/concrete cylinder testing, computer bridge design, and field trips. Group bonding occurred, and the students were very receptive to presentations.

### **Closing Session**

The closing session was the culmination of a week of learning, friendship, and excitement. A barbeque dinner was provided by the co-sponsors, who attended the meal along with invited ALDOT representatives and the participants’ parents. Prior to the meal, a slide presentation was shown, featuring highlights of the students in the week’s workshops, presentations, and field trips. (Sample photos may be found in Appendix C).

Following the dinner, certificates and awards were presented for each of the competitions, contributing sponsors, and staff members. Motivational speakers provided insights and accounts of the Institute’s successes. The casual atmosphere and slide show set a positive tone that sent the participants and their parents home with wonderful memories of a week well spent.

## Section 4 Evaluation of the Institute

The last activity on Friday afternoon was distribution of an evaluation form to gather information about the success of the Institute. There were four major portions of the form: presentations, site visits and lab projects, general success of the Institute, and whether AIT-06 influenced students to consider transportation careers.

### Analysis of Evaluations

For analysis purposes, the evaluation scores were converted to numerical values of 1 to 5, where 1 indicated “poor” and 5 indicated “great.” The evaluation form was completed by 17 students. The results for presentations, field trips/laboratories, and general topics are shown in Tables 4-1 through 4-3.

Table 4-1 indicates that there was a wide range in average scores for the various presentations. This implies high acceptance of the presenters and topics by the students. The most popular topic was Road Safety/Barriers, presented by the ATI-06 Director, Dr. Daniel Turner. Presentations that received lower scores will be evaluation for retention and improvement prior to next year’s Institute.

**Table 4-1 Evaluation scores for presentations**

Presentation	Mean
Road Safety/Barriers	4.6
Intro to Straw Bridge Design	4.5
Prof Development/Business Etiquette	4.4
Environmental Issues	4.2
Traffic Engineering	3.8
University/Admission Overview	3.6
Safety Management	3.6
Intro To ALDOT 4th Division	3.6
Preconstruction-Survey/Map/ROW	3.6
Bridges	3.6
Introduction to Material Testing	3.4
Construction of Highways	3.3
Intro to ALDOT careers	3.3
Surveying demonstration	3.2
Emergency Evacuation	2.9
Steps in Roadway Design	2.6

Four of the presentations received high ratings, which imply they were well designed and particularly well suited to this group of participants. Credit must also be given to the presenters. At the same time, other presentations received low scores and need close examination if they are to be retained.

Average evaluation scores for field trips and laboratory work were good (Table 4-2). The students gave the highest average evaluation scores to the “Egg Drop Testing”. After listening to a short presentation on Highway safety barriers, students designed and constructed “safety devices” capable of protecting an un-boiled egg, drop from several heights.

**Table 4-2 Evaluation scores for sites visits and labs**

Presentation	Mean
Egg Drop Testing	4.8
Computer Bridge Design	4.6
Pin & Straw Bridge Design	4.2
Concrete Cylinder Testing	3.7
Sign & Signal Shop	3.5
Materials Lab	3.4
Division Office	3.4
Zoo	3.3

As with the presentations, a few site visits and lab competitions must be examined for improvement if they are to be retained.

For the “general topics” category of the evaluation, the highest evaluation scores were given to the staff members (a perfect score of 5.0), with very high scores also going to the overall experience and the food. This is reflected in Table 4-3.

**Table 4-3 Evaluation scores for general topics**

Topic	Mean
Institute Staff Members Helpful?	5.0
Overall Experience	4.1
Food (Lunch and Breaks)	4.1
Pizza	4.7
Barbeque	4.5
Sandwiches	3.7
Hot Lunch	3.3
At the Zoo	2.9
Session Lengths about Right?	3.3

The most important element of the evaluation was determining the impact ATI-06 had on the students. In other words, did exposure to transportation organizations like ALDOT and ARBA, to transportation professionals and transportation issues influence the students to consider transportation careers? As shown in Table 4-4, there was a slight movement in the preferred direction, toward transportation careers.

**Table 4.4 Impact of ATI-06 on participants**

Considering Transportation Career?	No	Yes
Before ATI-06?	10	8
Transportation After ATI-06?	7	7
Recommend ATI-06 to Friends?	3	15

## **Section 5**

### **Summary and Recommendations**

#### **Noteworthy Areas**

Since its initial offering, the goals of the Advanced Transportation Institute have always been to inform and educate high school students and to encourage them to pursue careers in the field of transportation, to improve transportation human resources and diversity in Alabama. ATI-06 was successful in meeting these goals, with the assistance of the ALDOT Personnel Bureau. Successful elements of the program are detailed below:

- The partnership of UTCA and ALDOT again proved to be a potent method to deliver a successful Institute.
- Feedback from the 2004 and 2005 ATIs was used to improve the 2006 Institute.
- Instructive demonstrations reinforced key concepts.
- Key transportation engineering principals were integrated with business and other non-engineering factors.
- The students interacted daily with transportation professionals.
- Mentoring occurred daily.
- Two professional organizations, the Alabama Road Builders Association and the Alabama Asphalt Pavement Association, cosponsored ATI-06 and enriched the students' experiences during the Institute.
- The end-of-course evaluation showed that students enjoyed the Institute and had been influenced towards careers in transportation.

#### **Areas of Concern**

Overall, the Institute was excellent in its characteristics and quality. There were continuing concerns with recruiting timeliness, and confirming whether accepted students would actually attend. The name, address and other contact information for each participant is needed earlier in the process.

#### **Recommendations**

- 1) The 2006 Advanced Transportation Institute was successful, and it should be repeated.
- 2) The partnership with the ALDOT Personnel Bureau was successful, and a similar partnership should be established for the 2007 year.
- 3) The ALDOT central office was an excellent location for the Institute. The instant access to the job environment, materials labs, computers, and practicing professionals was excellent, and should be retained.

4) Although the Institute was successful, several improvements should be considered:

- The most important improvement should be to start ATI-06 recruiting earlier. Selecting participants earlier will alleviate problems with planning workshops, ordering supplies and materials, determining the costs of transportation and housing, and estimating catering costs.
- Recruiting can be expanded to additional schools to increase the number of applicants. Contacts with the schools should be conducted earlier and the contact persons should be informed of responsibilities to prevent confusion. By doing this, students can be recruited earlier and applications will be forwarded and processed more quickly.
- Course evaluations should continue to be used to modify the curriculum. ATI-06 presentations and lab sessions that were not effective should be deleted or enhanced. Those that were highly effective should be expanded.
- Speakers, lab instructors and field trip guides should be encouraged to provide written materials to the students. This might be as simple as an outline of the presentation, lab or trip. The written materials could be more specific, and can provide names for the students to contact in the future for additional information or for career guidance.

## **Section 6**

### **References**

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## **Section 7**

### **Acknowledgements**

Many individuals participated in the planning and execution of the Advanced Transportation Institute. Special thanks is extended to ALDOT, especially staff members of the Personnel Bureau (Ms. Cleo Daniel, Transportation Recruiting Manager; and Mr. Jerome McReynolds, Recruiting Supervisor; Ms. Jernell Anderson, Mr. Kevin Taylor, Mr. Johnny Brown, Ms. Tasika Fielder, Mr. Chris Thomas, Ms. Shonda Swinney, Mrs. Princess Howard, and others). Ms. Linda Crocket of the ALDOT Public Relations Bureau was the official photographer.

Mr. DeJarvis Leonard, Fourth Division Engineer, arranged informative and educational presentations and a field surveying exercise for the students during the ATI-06 field trip to his Division Office. Special thanks are extended to him and his staff for their efforts in hosting the visit.

The speakers, lab session instructors, and others who assisted in presentations and work sessions were deeply appreciated. The names of many of them may be found in Appendix B of this report. One of these individuals should be singled out for praise. Mr. Greg Singleton, Director of Engineering Student Services at the University of Alabama drove from Tuscaloosa to deliver his presentation on university life, scholarships and career planning (which was extremely well received by the students).

The Alabama Road Builders Association and the Alabama Asphalt Pavement Association cosponsored ATI-06. Mr. Billy Norrell, Executive Director of ARBA, and his staff are thanked for providing keepsakes and an excellent closing dinner.

At the University of Alabama, deep appreciation is extended to Ms. Joy Curry of UTCA and other members of the Civil & Environmental Engineering Department for their assistance with administrative issues.

Special thanks are extended to the superintendents, teachers, guidance counselors, chaperones and parents who helped select the students and who made travel arrangements so that they could attend ATI-06. Finally, as always, we must thank and give our deepest appreciation to the class of students who participated so freely and so fully, and who helped to get the most out of the Institute and to further strengthen its foundation.

## **Section 8**

### **Appendices**

Appendix A: Samples of Correspondence with Student Participants

Appendix B: Institute Daily Curriculum, Instructors, and Locations

Appendix C: Examples of Photos Taken During Institute

## Appendix A: Samples of Correspondence with Student Participants

\*\*\*\* ANNOUNCEMENT \*\*\*\*

### **Advanced Transportation Institute 2006**

June 19-23

Alabama DOT Headquarters

Montgomery, Alabama

*Sponsored by*

**The University Transportation Center for Alabama, University of Alabama  
The Alabama Department of Transportation**

*Co-sponsored by the*

**Alabama Road Builders Association and other organizations**

High school students (rising juniors and seniors) can learn about career opportunities, programs of study, scholarships, internships, work-study jobs, co-operative employment programs, summer jobs and other useful information. The curriculum will include topics like:

- Transportation careers
- University applications, curricula and scholarships
- The Alabama DOT and its programs
- Transportation design and construction, environmental issues, transportation safety, and other related topics.
- Field trips to construction sites and environmental/archeological sites
- Student teams will compete in design contests (bridge analysis and design, vehicle safety, concrete design, etc.
- Awards dinner

***For more information contact either of the following individuals:***

Dr. Daniel S. Turner  
University Trans Center for Ala (UTCA)  
The University of Alabama  
P O Box 870206  
Tuscaloosa, AL 35487  
(206) 348-9925  
(206) 348-6862 fax  
[utca@coe.eng.ua.edu](mailto:utca@coe.eng.ua.edu)

Ms. Cleo Daniel  
Personnel Bureau  
Alabama Department of Transportation  
1409 Coliseum Boulevard  
Montgomery, AL 36130  
(334) 242-6334  
(800) 290-4119  
(334) 353-6521 fax  
[recruiting@dot.state.al.us](mailto:recruiting@dot.state.al.us)

## Appendix A: Samples of Correspondence with Student Participants

June 3, 2006

Parents of Mr \_\_\_\_\_ \_\_\_\_\_,  
323 Tenth Avenue  
Selma, AL 36701

Dear Mr/Mrs. \_\_\_\_\_,

Greetings from the University of Alabama! Your child has been selected to participate in Advanced Transportation Institute 2006. The following information will help you understand our Institute and give you an overview of the activities we have planned for the week.

**Background Information** – The Advanced Transportation Institute is co-sponsored by the University of Alabama and the Alabama Department of Transportation (ALDOT). It is for rising junior and senior high school students.

**Institute Location** The Institute will be taught in Montgomery, at the headquarters complex of ALDOT. The address is shown below, and two maps are included with this letter to help locate the site.

Alabama Department of Transportation  
1409 Coliseum Boulevard  
Montgomery, Alabama

**Institute Dates/Times** The Institute will meet daily, Monday-Friday, June 19-23. Students will need to meet at the ALDOT complex by 8:30 am each morning. Normally, the institute will finish by about 4:00-4:30 each afternoon.

On Friday, we will have a (free) barbeque dinner for the participants and you are also invited. It will last from 5:30 pm - 7:30 pm.

**Contact Person** If you have any questions, please contact the following individuals:

**The University of Alabama**  
Dr. Dan Turner, or Mrs. Joy Curry  
University Transportation Center for Alabama  
(206) 348-9925

**Alabama Department of Transportation**  
Mr. Jerome McReynolds  
Personnel Bureau  
(334) 242-6919

## Appendix B: Institute Daily Curriculum, Instructors, and Locations

Time	Event	Location/Room	Instructor
<b>Monday, June 12, 2006</b>			
8:30 - 9:00 AM	Check-in / Refreshments	ALDOT	
9:00 - 9:15 AM	Program Overview	Conf Room	ALDOT- <i>Cleo Daniel</i>
9:15 - 10:00 AM	Roadway Design Modeling	Conf Room	ALDOT- <i>Steve Griffin</i>
10:00 - 10:15 AM	Refreshments, travel to materials lab		
10:15-11:00 AM	Materials demo (concrete + asphalt)	Mtls & Tests Lab	ALDOT- <i>Lynn Wolfe</i>
11:00 - 11:45 AM	PROJECT 2: - Prepare Concrete Cylinders	Mtls & Tests Lab	ALDOT- <i>Bart Pickett</i>
11:45 - 12:00 PM	Class Photo	Outside	ALDOT- <i>Linda Crockett</i>
12:00 - 12:45 PM	LUNCH	Conf Room	
12:45 - 1:45 PM	ALDOT Speaker - Bridge Bureau	Conf Room	ALDOT- <i>Fred Conway</i>
1:45 - 3:30 PM	PROJECT 1-A: start Computer Bridge Design	Conf Room	UA- <i>Dan Turner</i>
1:45 - 3:30 PM	PROJECT 1-B: start Straw Bridge Design	Conf Room	UA- <i>Wright/Allen</i>
3:30 - 4:00 PM	Wrap Up Discussion - 'What We Learned'		UA- <i>Wright/ALDOT-Anderson</i>
4:00 PM	University of Alabama Speaker - Road Safety/Barriers	Conf Room	UA - <i>Dr. Dan Turner</i>
<b>Tuesday, June 13, 2006</b>			
9:00 - 9:15 AM	Daily Overview and Ice-Breaker	Conf Room	ALDOT – <i>J. McReynolds</i>
9:15 - 10:45 AM	Traffic Engineering (MUTCD, Sign shop visit)	Conf Room	ALDOT - <i>Sean Mobley</i>
10:45-11:00 AM	BREAK (refreshments)	Conf Room	
11:00-11:45 AM	University of Alabama Speaker - Road Safety/Barriers	Conf Room	UA - <i>Dr. Dan Turner</i>
12:00 - 1:00 PM	LUNCH		
1:00-1:45	UA Speaker - University / Admissions Overview	Conf Room	UA - <i>Greg Singleton</i>
1:45 - 2:30 PM	PROJECT 3: Safety project - egg drop	Conf Room	UA- <i>Turner//Wright/Allen</i>
2:30-2:45	Test egg drop devices	Outside	UA- <i>Turner</i> ALDOT- <i>bucket truck</i>
3:00 - 4:00 PM	Depart		
<b>Wednesday, June 14, 2006</b>			
9:00 - 9:15 AM	Arrive at ALDOT headquarters class room	Conf Room	ALDOT -
9:15 AM	Depart for field trip, ALDOT 4 <sup>th</sup> Division, Alexander City		
10:15 - 11 AM	Break, Welcome to Fourth Division	4th Div HQ	ALDOT – <i>DeJarvis Leonard</i>
11:00 - 11:45	Tour of Division Facilities, Highway Software Demo	4th Div HQ	ALDOT - 4th Division Staff
noon - 1:00 pm	Lunch		
1:00-3:00	Field Trip (construction sites, district office)	US 280, I-85	4 <sup>th</sup> Division Construction Engr
3:00 PM	Break, Return to ALDOT headquarters, Montgomery		All ATI staff members
4:00 PM	Depart		

Note: The curriculum was dynamic. Items were added, expanded, or deleted as needed to provide a full day of exciting activities.

## 2006 ATI – Institute Daily Curriculum, Instructors, and Locations (continued)

Time	Event	Location/Room	Instructor
<b>Thursday, June 15, 2006</b>			
9:00 - 9:15 AM	Daily Overview and Ice-Breaker	Conf Room	ALDOT – <i>J. Anderson</i>
9:15 - 10:15 AM	ALDOT Speaker - Safety Management	Conf Room	ALDOT - <i>Craig Thomas</i>
10:15-11:45 AM	Morning entertainment - ZOO	Montgomery Zoo	ALDOT- <i>J.McReynolds</i>
11:45-12:30 AM	LUNCH - (During Zoo Visit)	Montgomery Zoo	ALDOT- <i>J.McReynolds</i>
12:30 - 1:00 PM	Return to ALDOT HQ		
1:00 - 1:45 PM	ALDOT Speaker - ALDOT Careers	Conf Room	ALDOT- <i>T Rose, S. Rice</i>
1:45 - 3:30 PM	Hurricane Evacuations – Reverse Laning an Interstate	Conf Room	ALDOT – <i>George Connor</i>
	BREAK (refreshments)		
3:30 - 4:00 PM	Environmental speaker		ALDOT – <i>James Blanding</i>
<b>Friday, June 16, 2006</b>			
9:00 - 9:15 AM	Daily Overview and Ice-Breaker	Conf Room	ALDOT- <i>C. Robinson</i>
9:15 - 10:15 AM	Professional Development/Business Etiquette	Conf Room	ALDOT - <i>Willie Franklin</i>
10:15-10:30	Break		
10:30-11 :15 AM	Construction of Roadways and Bridges	Conf Room	ALDOT – <i>Terrie McDuffie</i>
11:15-12:00 PM	PROJECT 2: Strength test of concrete cylinders	Mtls & Tests Lab	ALDOT - <i>Bart Pickett</i>
12:00-12:45 PM	LUNCH	Conf Room	
1:45-3:30 PM	PROJECTS 1-A & 1-B: Build and test bridge designs	Conf Room	UA-Turner/Wright/Allen
During Br. Tests	Break		
3:30-4:30 PM	Closure- Summary of Institute, evaluation	Conf Room	UA - <i>Dr. Dan Turner</i>
4:30-5:30 PM	Free time		
5:30-7:30 PM	Closing Session / BBQ Dinner by Alabama Road Builders Association & Ala Asphalt Pavement Assn	Conf Room	Jeff Brown-Dan Turner

**Appendix C: Examples of Photos Taken During Institute**



**Figure C-1: ATI-06 Students at ALDOT headquarters**



**Figure C-2: ATI-06 Students testing “pins and straws” bridge**

**Appendix C: Examples of Photos Taken During Institute (continued)**



**Figure C-3 Egg drop competition**



**Figure C-4 Showing off egg-drop design**