EXHIBIT B

Program Progress Performance Report for University Transportation Centers

COVER PAGE DATA ELEMENTS

- Federal Agency and Organization Element to Which Report is Submitted
- Federal Grant or Other Identifying Number Assigned by Agency
- Project Title
- Program Director (PD) Name, Title and Contact Information (e-mail address and phone number)
- Name of Submitting Official, Title, and Contact Information (e-mail address and phone number), if other than PD
- Submission Date
- DUNS and EIN Numbers
- Recipient Organization (Name and Address)
- Recipient Identifying Number or Account Number, if any
- Project/Grant Period (Start Date, End Date)
- Reporting Period End Date
- Report Term or Frequency (annual, semi-annual, quarterly, other)
- Signature of Submitting Official (signature shall be submitted in accordance with agency- specific instructions)

REPORT LENGTH: The PPPR should not exceed 20 pages in length including cover page.   Shorter lengths are encouraged as long as the content reported is commensurate with the level of effort and expenditures.

SUBMITTAL AND WEBPOSTING: The PPPR shall be submitted by email to the designated Grant Administrator as a Word document or PDF, and shall be posted on the Center's website.

FREQUENCY OF REPORTING: The first report shall cover the first six months of activities and shall be submitted no later than 15 days after the end of the first six months. Subsequent reports shall cover activities for periods ending June 30 and December 31 of each year and shall be submitted no later than 30 days after the end of the reporting period until all grant funds have been fully expended.

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REPORTING CATEGORIES

1. ACCOMPLISHMENTS: What was done? What was learned?
The information provided in this section allows the RITA grants official to assess whether satisfactory progress has been made during the reporting period.

INSTRUCTIONS - Accomplishments

The Program Director is reminded that the grantee is required to obtain prior written approval from the RITA grants official whenever there are significant changes in the project or its direction.

- What are the major goals and objectives of the program?
- What was accomplished under these goals?
- What opportunities for training and professional development has the program provided?
- How have the results been disseminated? If so, in what way/s?
- What do you plan to do during the next reporting period to accomplish the goals and objectives?

What are the major goals of the program?

List the major goals of the program as stated in the approved application or as approved by RITA. If the application lists milestones/target dates for important activities or phases of the program, identify these dates and show actual completion dates or the percentage of completion.

Generally, the goals will not change from one reporting period to the next. However, if RITA approved changes to the goals during the reporting period, list the revised goals and objectives. Also explain any significant changes in approach or methods from the RITA approved application or plan.

What was accomplished under these goals?

For this reporting period describe: 1) major activities; 2) specific objectives; 3) significant results, including major findings, developments, or conclusions (both positive and negative); and 4) key outcomes or other achievements. Include a discussion of stated goals not met. As the program progresses, the emphasis in reporting in this section should shift from reporting activities to reporting accomplishments.

Generally, the activities and expected outputs, outcomes and impacts should not change from one reporting period to the next. However, if there are changes, please list the revisions and explain the reason(s) for the changes.

How have the results been disseminated?

If there is nothing significant to report during this reporting period, state "Nothing to Report." Describe how the results have been disseminated. Include any outreach activities that have been undertaken to reach members of communities who are not usually aware of these program activities, for the purpose of enhancing public understanding and increasing interest in learning and transportation careers.

What do you plan to do during the next reporting period to accomplish the goals?

If there are no changes to the agency-approved application or plan for this effort, state "No Change."

Describe briefly what you plan to do during the next reporting period to accomplish the goals and objectives.

2. PRODUCTS: What has the program produced?
Publications are the characteristic product of research projects funded by the UTC Program. RITA may evaluate what the publications demonstrate about the excellence and significance of the research and the efficacy with which the results are being communicated to colleagues, potential users, and the public, not the number of publications. Many research projects (though not all) develop significant products other than publications. RITA may assess and report both publications and other products to Congress, communities of interest, and the public.

INSTRUCTIONS - Products

List any products resulting from the program during the reporting period. Examples of products include:

- Publications, conference papers, and presentations;
- Website(s) or other Internet site(s);
- Technologies or techniques;
- Inventions, patent applications, and/or licenses; and
- Other products, such as data or databases, physical collections, audio or video products,

software or NetWare, models, educational aids or curricula, instruments, or equipment.

If there is nothing to report under a particular item, state "Nothing to Report."

Publications, conference papers, and presentations

Report only the major publication(s) resulting from the work under this award. There is no restriction on the number. However, RITA is interested in only those publications that most reflect the work under this award in the following categories:

Journal publications: List peer-reviewed articles or papers appearing in scientific, technical, or professional journals. Include any peer-reviewed publication in the periodically published proceedings of a scientific society, a conference, or the like. A publication in the proceedings of a one-time conference, not part of a series, should be reported under "Books or other non-periodical, one-time publications."

Identify for each publication: Author(s); title; journal; volume: year; page numbers; status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no).

Books or other non-periodical, one-time publications: Report any book, monograph, dissertation, abstract, or the like published as or in a separate publication, rather than a periodical or series. Include any significant publication in the proceedings of a one-time conference or in the report of a one-time study, commission, or the like.

Identify for each one-time publication: author(s); title; editor; title of collection, if applicable; bibliographic information; year; type of publication (book, thesis or dissertation, other); status of publication (published; accepted, awaiting publication; submitted, under review; other); acknowledgement of federal support (yes/no).

Other publications, conference papers and presentations: Identify any other publications, conference papers and/or presentations not reported above. Specify the status of the publication as noted above.

NOTE: Please do not send or attach any publications, papers or presentations.

Website(s) or other Internet site(s)

List the URL for any Internet site(s) that disseminates the results of the research and/or program activities. A short description of each site should be provided. It is not necessary to include the publications already specified above in this section.

Technologies or techniques

Identify technologies or techniques that have resulted from the research activities. Describe the technologies or techniques and how they are being shared.

Inventions, patent applications, and/or licenses

Identify inventions, patent applications with date, and/or licenses that have resulted from the research. Submission of this information as part of an interim research performance progress report is not a substitute for any other invention reporting required under the terms and conditions of an award; as of the date of this document, UTC Program inventions may not be submitted to the Federal government's Interagency Edison (*iEdison*) invention-reporting system, but RITA is working to make that available and will notify UTCs. For additional requirements pertaining to Patents and Copyrights, refer to *General Provisions of Grants for University Transportation Centers*, Section III, 14.

Other products

Identify any other significant products that were developed under this program. Describe the product and how it is being shared. Examples of other products are:

- Databases
- Physical collections
- Audio or video products
- Software or NetWare
- Models
- Educational aids or curricula
- Instruments or equipment
- Data & Research Material
- Other

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3. PARTICIPANTS & COLLABORATING ORGANIZATIONS: Who has been involved?

RITA needs to know who has worked on the project to gauge and report performance in promoting partnerships and collaborations.

INSTRUCTIONS - Participants & Collaborating Organizations

Provide the following information on participants:

- What organizations have been involved as partners?
- Have other collaborators or contacts been involved?

What organizations have been involved as partners?

If there is nothing significant to report during this reporting period, state "Nothing to Report." Describe partner organizations – academic institutions, other nonprofits, industrial or commercial firms, state or local governments, schools or school systems, or other organizations (foreign or domestic) – that have been involved with the program.   Partner organizations may provide financial or in-kind support, supply facilities or equipment, collaborate in the research, exchange personnel, or otherwise contribute.

Provide the following information for each partnership:
Organization Name:
Location of Organization: (if foreign location list country)

Partner's contribution to the project (identify one or more)
- Financial support;
- In-kind support (e.g., partner makes software, computers, equipment, etc., available to project staff);
- Facilities (e.g., project staff use the partner's facilities for project activities);
- Collaborative research (e.g., partner's staff work with project staff on the project); and
- Personnel exchanges (e.g., project staff and/or partner's staff use each other's facilities, work at each other's site).

Have other collaborators or contacts been involved?

If there is nothing significant to report during this reporting period, state "Nothing to Report."

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Some significant collaborators or contacts within the lead or partner universities may not be covered by "What people have worked on the project?" Likewise, some significant collaborators or contacts outside the UTC may not be covered under "What other organizations have been involved as partners?" For example, describe any significant:

- Collaborations with others within the lead or partner universities; especially interdepartmental or interdisciplinary collaborations;
- Collaborations or contact with others outside the UTC; and
- Collaborations or contacts with others outside the United States or with an international organization.
    - Country(ies) of collaborations or contacts.

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4. **IMPACT**: What is the impact of the program? How has it contributed to transportation education, research and technology transfer?

Over the years, this base of knowledge, techniques, people, and infrastructure is drawn upon again and again for application to commercial technology and the economy, to health and safety, to cost-efficient environmental protection, to the solution of social problems, to numerous other aspects of the public welfare, and to other fields of endeavor.

The taxpaying public and its representatives deserve a periodic assessment to show them how the investments they make benefit the nation. Through this reporting format, and especially this section, UTCs provide that assessment and make the case for Federal funding of research and education.

DOT uses this information to assess how the research and education programs:
- increase the body of knowledge and techniques;
- enlarge the pool of people trained to develop that knowledge and techniques or put it to use; and,

- improve the physical, institutional, and information resources that enable those people to get their training and perform their functions.

INSTRUCTIONS - Impact

This component should describe ways in which the work, findings, and specific products of the program have had an impact during this reporting period. Describe distinctive contributions, major accomplishments, innovations, successes, or any change in practice or behavior that has come about as a result of the program relative to:

- The development of the principal discipline(s) of the project;
- Other disciplines;
- The development of human resources;
- Physical, institutional, and information resources at the university and/or other partner institution;
- Technology transfer (include transfer of results to entities in government or industry, adoption of new practices, or instances where research has led to the initiation of a start-up company); or
- Society beyond science and technology.

What is the impact on the development of the principal discipline(s) of the program?

If there is nothing significant to report during this reporting period, state "Nothing to Report."

Describe how findings, results, techniques that were developed or extended, or other products from the program made an impact or are likely to make an impact on the base of knowledge, theory, and research and/or pedagogical methods in the principal disciplinary field(s) of the program. Summarize using language that an intelligent lay audience can understand (*Scientific American* style).

How the field or discipline is defined is not as important as covering the impact the work has had on knowledge and technique. Make the best distinction possible, for example, by using a "field" or "discipline", if appropriate, that corresponds with a single academic department (i.e., physics rather than nuclear physics).

What is the impact on other disciplines?

If there is nothing significant to report during this reporting period, state "Nothing to Report."

Describe how the findings, results, or techniques developed or improved, or other products from the program made an impact or are likely to make an impact on other disciplines.

What is the impact on the development of transportation workforce development?

If there is nothing significant to report during this reporting period, state "Nothing to Report." Describe how the program made an impact or is likely to make an impact on transportation workforce development. For example, how has the program:

- Provided opportunities for research and teaching in transportation and related disciplines;
- Improved the performance, skills, or attitudes of members of underrepresented groups that will improve their access to or retention in transportation research, teaching, or other related professions;
- Developed and disseminated new educational materials or provided scholarships; or provided exposure to transportation, science and technology for practitioners, teachers, young people, or other members of the public?

What is the impact on physical, institutional, and information resources at the university or other partner institutions?

If there is nothing significant to report during this reporting period, state "Nothing to Report."

Describe ways, if any, in which the program made an impact, or is likely to make an impact, on physical, institutional, and information resources that form infrastructure, including:

- Physical resources such as facilities, laboratories, or instruments;
- Institutional resources (such as establishment or sustenance of societies or organizations); or
- Information resources, electronic means for accessing such resources or for scientific communication, or the like.

What is the impact on technology transfer?

If there is nothing significant to report during this reporting period, state "Nothing to Report."

Describe ways in which the program made an impact, or is likely to make an impact, on commercial technology or public use, including:

- Transfer of results to entities in government or industry;
- Instances where the research has led to the initiation of a start-up company; or
- Adoption of new practices.

What is the impact on society beyond science and technology?

If there is nothing significant to report during this reporting period, state "Nothing to Report." Describe how results from the program made an impact, or are likely to make an impact, beyond the bounds of science, engineering, and the academic world on areas such as:

- Improving public knowledge, attitudes, skills, and abilities;
- Changing behavior, practices, decision making, policies (including regulatory policies), or social actions; or
- Improving social, economic, civic, or environmental conditions.

5. CHANGES/PROBLEMS
The grantee is required to obtain prior written approval from the RITA grants official whenever there are significant changes in the project or its direction. See agency specific instructions for submission of these requests. If not previously reported in writing, provide the following additional information, if applicable: - Changes in approach and reasons for change - Actual or anticipated problems or delays and actions or plans to resolve them. - Changes that have a significant impact on expenditures. - Significant changes in use or care of animals, human subjects, and/or biohazards

INSTRUCTIONS - Changes/Problems

If not previously reported in writing to RITA through other mechanisms, provide the following additional information or state, "Nothing to Report, if applicable:

Changes in approach and reasons for change

Describe any changes in approach during the reporting period and reasons for these changes. Remember that significant changes in objectives and scope require prior approval of the RITA grant administrator.

Actual or anticipated problems or delays and actions or plans to resolve them

Describe problems or delays encountered during the reporting period and actions or plans to resolve them.

Changes that have a significant impact on expenditures

Describe changes during the reporting period that may have a significant impact on expenditures, for example, delays in hiring staff or favorable developments that enable meeting objectives at less cost than anticipated.

Significant changes in use or care of human subjects, vertebrate animals, and/or biohazards

Describe significant deviations, unexpected outcomes, or changes in approved protocols for the use or care of human subjects, vertebrate animals, and/or biohazards during the reporting period. If required, were these changes approved by the applicable institution committee and reported to the agency? Also specify the applicable Institutional Review Board/Institutional Animal Care and Use Committee approval dates.

Change of primary performance site location from that originally proposed

Identify any change to the primary performance site location identified in the proposal, as originally submitted.

Additional information regarding Products and Impacts
UTCs are encouraged to consider identifying program results by outputs, outcomes or impacts as suggested by the examples below. Impacts should be linked to National goals expressed in the Secretary's Strategic Goals.

Outputs are the direct, tangible products of your research, education/workforce development, and technology transfer activities, such as:
- Research projects awarded;
- Publications, conference papers, and presentations;
- Websites;
- Technologies or technology assessments; databases, software or models;
- Outreach activities;
- Courses and workshops; patents filed and/or issued, licenses.

Outcomes are broader changes that are expected to result from the products, such as:
- Increased understanding and awareness of transportation issues;
- Improved body of knowledge;
- Improved processes, techniques and skills in addressing transportation issues;
- Enlarged pool of trained transportation professionals;

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- Greater adoption of new technology;
- Other impacts.

Impacts are the longer-term, fundamental changes intended as a result of your activities, such as:
- Safer driver behavior;
- Increased travel time reliability;
- Increased intermodal transportation operations;
- Reduction in carbon and other harmful emissions from transportation sources;
- Other impacts.

6. SPECIAL REPORTING REQUIREMENTS
Respond to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.